

Chatham to Lakeshore 230 kV Transmission Line Class Environmental Assessment

Final Environmental Study Report

October 28, 2022

Prepared by:

Hydro One Networks Inc.

Environmental Services

483 Bay Street, North Tower, 12th Floor

Toronto, ON M5G 2P5

Executive Summary

Hydro One Networks Inc. (Hydro One) has prepared this Environmental Study Report (ESR) for the proposed construction of a new double-circuit 230 kilovolt (kV) transmission line (the Project) in southwestern Ontario. The Project will be approximately 49 kilometres (km) in length, and will connect the Chatham Switching Station (SS) in the Municipality of Chatham-Kent to the Lakeshore Transformer Station (Lakeshore TS) in the Municipality of Lakeshore. As the preferred Route Alternative will repurpose approximately 16 km of an existing idle 115 kV transmission corridor between Tilbury and Chatham, the Project will involve dismantling and removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the idle transmission line. The Project will also involve an expansion of the Chatham SS to facilitate the connection of the new transmission line. The purpose of the Project is to reliably supply the forecast load growth in the Windsor-Essex region. This will allow the resources and bulk facilities in this region to operate efficiently for local and system needs, and maintain existing interchange capability on the Ontario-Michigan interconnection.

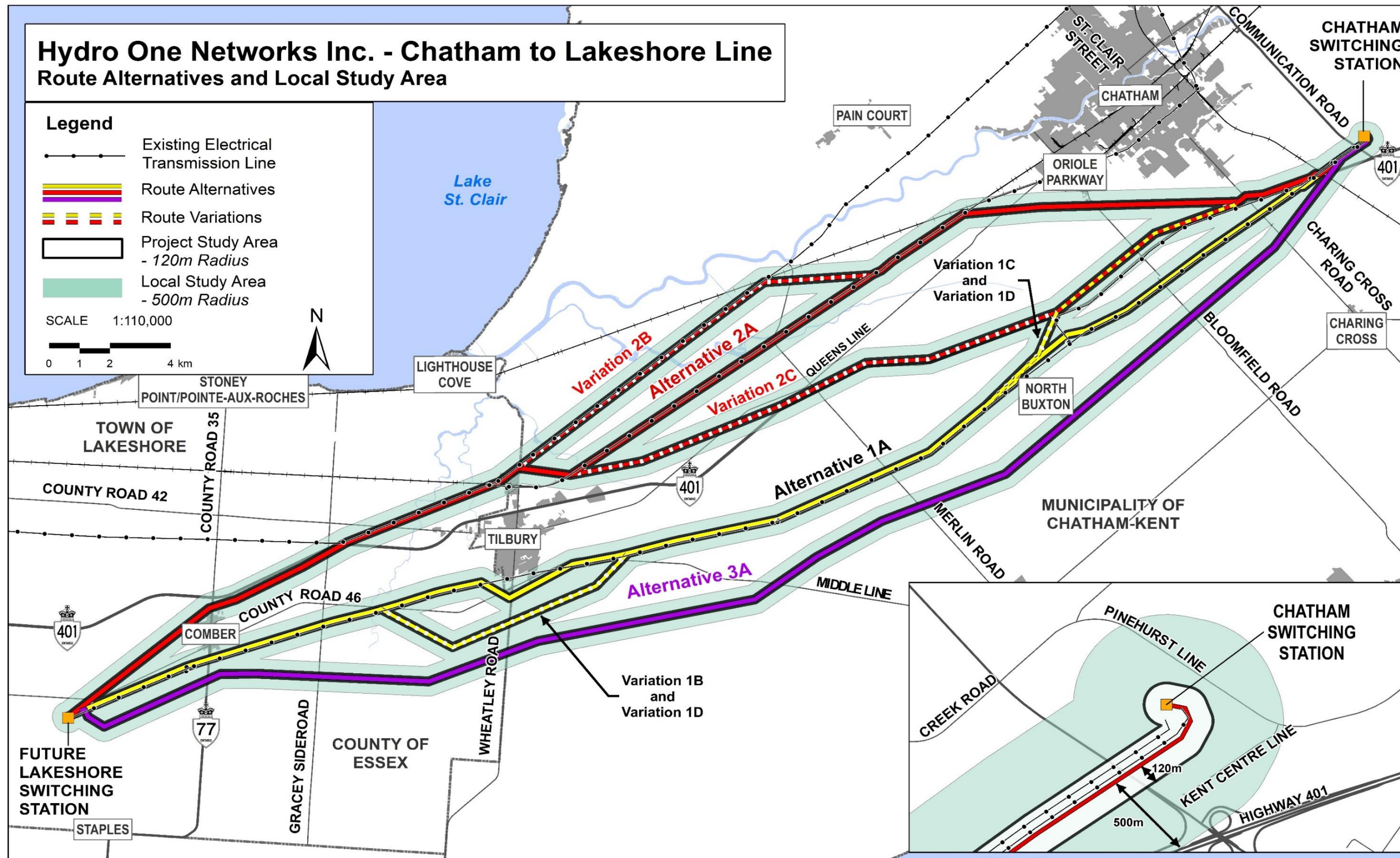
The proposed Project has been subject to the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016), an approved planning process under the *Environmental Assessment Act (EA Act)* designed for proponents to characterize the existing environment, assess potential environmental effects and mitigation, identify and evaluate alternatives, conduct consultation and document study findings. The final ESR was prepared in accordance with the requirements of the *EA Act* and describes the Class Environmental Assessment (EA) process undertaken for the proposed Project.

At the outset of the Class EA, two study areas (Local Study Area and Project Study Area) were identified as a mechanism to assess potential natural environment, socio-economic environment, technical and cultural constraints and potential effects associated with each of the three Route Alternatives and their corresponding variations identified (**Figure E-1-1**). The three Route Alternatives for the Project include:

- **Route Alternative 1**, shown in yellow in **Figure E-1-1**, largely parallels an existing 230 kV transmission line (similar to what will comprise the new line to be constructed). Route Alternative 1 contains a total of four variations (1A, 1B, 1C and 1D). The variations include different combinations of changes to the route, one around the south end of Tilbury and another closer to the City of Chatham, which parallels the Highway 401 corridor.

- **Route Alternative 2**, shown in red in **Figure E-1-1**, largely parallels two existing 115 kV transmission lines (including a portion of one of the lines which is an idle 115 kV transmission line between Tilbury and Chatham). There are a total of three variations (2A, 2B and 2C) associated with Route Alternative 2. Route Alternative 2 variations also parallel portions of the Highway 401 corridor.
- **Route Alternative 3**, shown in purple in **Figure E-1-1**, is a greenfield option. While it does not parallel any existing transmission lines or other linear infrastructure for any significant distance, this was determined to be a feasible Route Alternative for the new 230 kV transmission line. As a result, it was prudent to include for consideration during the Class EA. There are no variations associated with Route Alternative 3.

Figure E-1-1: Route Alternatives and Local Study Area



For its comparative evaluation procedure, the Class EA process for the proposed Project utilized a weighted multi-criteria decision making analysis to assist in selecting the preferred alternative. Resources were identified, and data obtained from literature reviews, reports and technical memos commissioned by Hydro One, online databases, mapping, consultation and field surveys.

Since late 2019, Hydro One has conducted consultation with municipal, provincial and federal government officials and agencies, Anishnawbek and Haudenosaunee communities, potentially affected and interested persons, and interest groups. This involved project notifications, communications and engagements resulting in issues identification and resolution efforts. The consultation process included the development of a project website, several rounds of Virtual Information Sessions (VIS), in-person meetings with Anishnawbek and Haudenosaunee communities, government officials, potential affected and interested persons, extensive correspondence with Rights-holders and stakeholders, and dedicated Community Relations and Indigenous Relations representatives. Furthermore, a robust Technical Advisory Committee (TAC) was established early in the Project planning process with members representing multiple Indigenous, government, and interest groups to participate in workshops throughout the Class EA process and help inform the project team of important project issues and key decisions.

The Class EA process for the proposed Project included a characterization of the existing environment through literature reviews, reports and technical memos commissioned by Hydro One, online databases, mapping, consultation and field surveys. This research informed an assessment of the Route Alternatives and variations using a weighted multi-criteria decision making analysis to evaluate the alternatives and select the preferred Route Alternative 2A. Evaluation criteria were identified and relative weightings were assigned using input obtained through the consultation process for the Project, including the formation of a Technical Advisory Committee.

Overall, Route Alternative 2A is preferred because it minimizes the overall impact to the natural and socio-economic environments compared to the other Route Alternatives and minimizes impacts to agricultural lands by utilizing an existing idle transmission corridor for nearly 1/3 its length. From an Anishnawbek and Haudenosaunee Culture, Values and Land Use perspective, Route Alternative 2A minimizes impacts to the natural environment while balancing opportunities to co-locate with existing infrastructure and proximity from identified areas of historical significance to Anishnawbek communities.

Potential environmental effects resulting from the proposed Project have been identified and avoidance and/or mitigation measures have been proposed accordingly. Based on information collected to date, no significant net adverse environmental effects were identified.

A project level Cumulative Effects Assessment (CEA) was completed for the Project in accordance with the requirements of the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016). The CEA determined that there are no areas of environmental concern that will result in a significant cumulative effect. It was determined that the mitigation measures outlined for the Project provide adequate project specific mitigation that remain effective after considering cumulative effects from the other projects.

The draft ESR was made available for a 60-day review period, from June 11, 2021, to August 10, 2021. Additionally, in response to requests received from some Indigenous communities, Hydro One extended the draft ESR review period by an additional 30 days (90 days total, through September 10, 2021) for Indigenous communities. Written comments or questions regarding the draft ESR were submitted to:

Paul Dalmazzi, Environmental Planner, Hydro One Networks Inc.
483 Bay Street, North Tower, 12th Floor, Toronto, ON, M5G 2P5
Phone: 1-877-345-6799 (community relations hotline)
Email: CommunityRelations@HydroOne.com

Due to the ongoing public health developments related to COVID-19, the draft ESR was available electronically on [Hydro One's website under the Chatham to Lakeshore Line section](#). Electronic copies of the draft ESR were also available on USB drives for sign out and/or curbside pickup at the following locations:

Chatham-Kent Public Library 120 Queen Street Chatham, ON N7M 2G6 519-654-2940	Chatham-Kent Public Library 2 Queen Street Tilbury, ON N0P 2L0 519-682-0100	Chatham-Kent Civic Centre 315 King Street Chatham, ON N7M 5K8 519-360-1998	Atlas Tube Centre Essex County Library Toldo Branch 447 Renaud Line Lakeshore, ON N0R 1K0 519-727-0470
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To help aid those without access to a computer, limited e-readers were available at the above locations for sign out. In the event that public health restrictions ceased during

the review period, hard copies of the draft ESR were also placed on-site for review at the above locations.

On June 11, 2021, the Notice of Completion of draft ESR was distributed to all interested parties including the Anishnawbek and Haudenosaunee communities, municipal, provincial and federal government officials and agencies, potentially affected and interested persons, and interest groups presented in **Section 3** (see contact list in **Appendix B-1**). The Notice was published in the Leamington/Wheatley/Kingsville Southpoint Sun, Windsor Star, Chatham-Kent This Week and Chatham Daily Press local community papers between June 8 and June 10, 2021, in addition to being posted on the [Project website under the Chatham to Lakeshore Line section](#) (see **Appendix B-2** for notification letter and newspaper ad).

Comments received have been addressed and documented in the final ESR as required by the Class EA process. Hydro One has made best efforts to respond to, and resolve issues raised by concerned parties during the public review period. The ESR has been finalized for the proposed Project in accordance with the Class EA, and has been filed with the Ministry of the Environment, Conservation and Parks (MECP). The Project is considered approved and may proceed as outlined in the ESR.

The *EA Act* has provisions that allowed interested parties to request MECP to make an order for a higher level of study (i.e., requiring comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g. require further studies). This process is referred to as a Section 16 Order request. Such requests could only be made on the grounds that the order may prevent, mitigate or remedy adverse effects on constitutionally protected Aboriginal and treaty rights. Section 16 Order requests were required to be sent in writing or email to:

Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
Email: minister.mecp@ontario.ca

Environmental Assessment Branch
Ministry of Environment, Conservation
and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
Email: EABDirector@ontario.ca

Requests were also copied to Hydro One per the contact information provided above. Following the review period, Section 16 Order requests were submitted by Chippewas of Kettle and Stony Point First Nation, Caldwell First Nation, and Chippewas of the Thames First Nation (see **Appendix B-8**). Following consultation with each of the Section 16 Order requesting communities and subsequent commitments and revisions to the

ESR, all three Section 16 Order requests were subsequently withdrawn (see **Appendix B-8**). The MECP formally acknowledged the withdrawal of all three Section 16 Order Requests on October 14, 2022, thereby allowing for the final ESR to be filed, marking the completion of the Class EA process (see **Appendix B-8**).

The proposed Project will be implemented in full compliance with the requirements of the Class EA process as outlined in the final ESR, incorporating input obtained throughout the planning process including the consultation process. Hydro One will obtain the necessary environmental approvals and permits required for the proposed Project.

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Notice of Commencement - newspaper advertisement

Notice of Community Information Centre (CIC) #1 - notice/invitation

Notice of Community Information Centre (CIC) #1 - newspaper advertisement

Community Update - Community Information Centre (CIC) #1

Postponement Notice

Notice of Virtual Information Sessions (VIS) #1 - notice/invitation

Notice of Virtual Information Sessions (VIS) #1 - newspaper advertisement

Virtual Information Session (VIS) #1 Presentation Slides

Notice of Virtual Open House and Live Discussion (VIS #2) - notice/invitation

Notice of Virtual Open House and Live Discussion (VIS #2) - newspaper advertisement

Virtual Open House and Live Discussion (VIS #2) Presentation Slides

Notice of Virtual Open House and Live Discussion (VIS #3) - notice/invitation

Notice of Virtual Open House and Live Discussion (VIS #3) - newspaper advertisement

Virtual Open House and Live Discussion (VIS #3) Presentation Slides

Notice of Draft Environmental Study Report (ESR) - newspapers advertisement

Appendix B3 Anishnawbek and Haudenosaunee Consultation Materials

Hydro One Duty to Consult Determination and Delegation for the Chatham to Lakeshore Transmission Line letter to the Ministry of Energy, Northern Development and Mines (ENDM)

Ministry of Energy, Northern Development and Mines (ENDM) Response letter for Duty to Consult Determination and Delegation

Sample Interim Update Letter to Anishnawbek and Haudenosaunee Communities

Sample Notice of Commencement Letter to Anishnawbek and
Haudenosaunee Communities

Notice of Virtual Information Sessions (VIS) #1 - Haudenosaunee
Communities

Notice of Virtual Information Sessions (VIS) #1 - Anishnawbek Communities

Virtual Information Sessions (VIS) #1 Presentation Slides

Notice of Virtual Open House and Live Discussion (VIS #2) - Anishnawbek
Communities

Notice of Virtual Open House and Live Discussion (VIS #2) -
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Ministry of Transportation (MTO)

Lower Thames Valley Conservation Authority (LTVCA)

Municipality of Lakeshore

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Chippewas of Kettle and Stoney Point First Nation

Caldwell First Nation

Chippewas of the Thames First Nation

Ministry of the Environment, Conservation and Parks

Appendix C Environmental Inventory

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Appendix D Health Canada Electric and Magnetic Fields (EMF) Fact Sheet

List of Acronyms & Abbreviations

AFN	Aamjiwnaang First Nation
ANSI	Area of Natural and Scientific Interest
AQHI	Air Quality Health Index
BHA	Butternut Health Assessments
CEA	Cumulative Effects Assessment
CEC	Community Engagement Coordinator
CFA	Capacity Funding Agreement
CFFO	Christian Farmers Federation of Ontario
CFN	Caldwell First Nation
CHEC	Cultural Heritage Existing Conditions
CHVI	Cultural Heritage Value or Interest
CIC	Community Information Centre
CKSPFN	Chippewas of Kettle and Stony Point First Nation
CLI	Canada Land Inventory
CNR	Canadian National Railway
CO	Carbon monoxide
COTTFN	Chippewas of the Thames First Nation
CP Rail	Canadian Pacific Railway
CRS	Culture and Rights Study
CWS	Canadian Wildlife Services
CWAT	County Wide Active Transportation
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EA Act	Environmental Assessment Act
EAB	Environmental Assessment Branch
EASR	Environmental Activity and Sector Registry
EBA	Event Based Areas
ECA	Environmental Compliance Approval
ECCC	Environment and Climate Change Canada
ECI	Early Contractor Involvement

eDNA	Environmental Deoxyribonucleic Acid
EMF	Electro-magnetic Fields
ENDM	Ministry of Energy, Northern Development and Mines
EPC	Engineering, Procurement and Construction
ERCA	Essex Region Conservation Authority
ESA	Endangered Species Act
ESR	Environmental Study Report
HCCC	Haudenosaunee Confederacy Chiefs Council
HDI	Haudenosaunee Development Institute
HIA	Heritage Impact Assessments
ICNIRP	International Commission on Non-Ionizing Radiation Protection
IBA	Important Bird Area
IEEE	Institute of Electrical and Electronics Engineers
IESO	Independent Electricity System Operator
IO	Infrastructure Ontario
IPZ	Intake Protection Zone
km	Kilometres
kV	Kilovolt
LACP	Land Acquisition Compensation Principles
LIO	Land Information Ontario
LSA	Local Study Area
LTVCA	Lower Thames Valley Conservation Authority
masl	Metres above sea level
MCDA	Multi-Criteria Decision Making Analysis
MECP	Ministry of the Environment, Conservation and Parks
mG	Milligauss
MGSC	Ministry of Government and Consumer Services
MHSTCI	Ministry of Heritage, Sport, Tourism and Culture Industries
MIA	Ministry of Indigenous Affairs
MMAH	Ministry of Municipal Affairs and Housing
MNRF	Ministry of Natural Resources and Forestry
MPP	Member of Provincial Parliament

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MTO	Ministry of Transportation
MW	Megawatts
NHIC	Natural Heritage Information Centre
NHRM	Natural Heritage Reference Manual
NHSC	National Historic Site of Canada
NO ₂	Nitrogen dioxide
NRCan	Natural Resources Canada
O. Reg.	Ontario Regulation
O ₃	Ozone
OCWA	Ontario Clean Water Agency
OEB	Ontario Energy Board
OFA	Ontario Federation of Agriculture
OMAFRA	Ministry of Agriculture, Food and Rural Affairs
Oneida	Oneida Nation of the Thames
OPP	Ontario Provincial Police
OWES	Ontario Wetland Evaluation System
PM	Particulate Matter
PSA	Project Study Area
PSW	Provincially Significant Wetlands
PTTW	Permit to Take Water
PWQMN	Provincial Water Quality Monitoring Network
qPCR	Quantitative Polymerase Chain Reaction
ROW	Right-of-way
SAR	Species at Risk
SARA	Species at Risk Act
SCC	Species of Conservation Concern
SCGT	Simple Cycle Gas Turbine
Six Nations	Six Nations of the Grand River Elected Council
SO ₂	Sulphur dioxide
SPA	Source Protection Area
SS	Switching Station
SWH	Significant Wildlife Habitat

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SWHTG	Significant Wildlife Habitat Technical Guide
TAC	Technical Advisory Committee
TC	Transport Canada
TEK	Traditional Ecological Knowledge
TMHC	Timmins Martelle Heritage Consultants Inc.
TS	Transformer Station
VC	Valued Components
VIS	Virtual Information Session
WHO	World Health Organization
WIFN	Walpole Island First Nation
WPCP	Water Pollution Control Plant

1 Introduction

Hydro One Networks Inc. (Hydro One) is proposing to construct a new, double-circuit, 230 kilovolt (kV) transmission line (the Project) in southwestern Ontario. The Project will be approximately 49 kilometres (km) in length and will connect the Chatham Switching Station (SS) in the Municipality of Chatham-Kent to the Lakeshore Transformer Station (Lakeshore TS) in the Municipality of Lakeshore (**Figure 1-1**). As the preferred Route Alternative will repurpose approximately 16 km of an existing idle 115 kV transmission corridor between Tilbury and Chatham, the Project will involve dismantling and removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the idle transmission line. The Project will also involve an expansion of the Chatham SS to facilitate the connection of the new transmission lines. The purpose of the Project is to reliably supply the forecast load growth in the Windsor-Essex region. This will allow the resources and bulk facilities in this region to operate efficiently for local and system needs, and maintain existing interchange capability on the Ontario-Michigan interconnection.

The proposed Project is subject to the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016), an approved planning process under the *Environmental Assessment Act* (EA Act) designed for proponents to characterize the existing environment, assess potential environmental effects and mitigation, identify and evaluate alternatives, conduct consultation and document study findings. This final Environmental Study Report (ESR) has been prepared in accordance with the requirements of the EA Act and describes the Class Environmental Assessment (EA) process undertaken for the proposed Project.

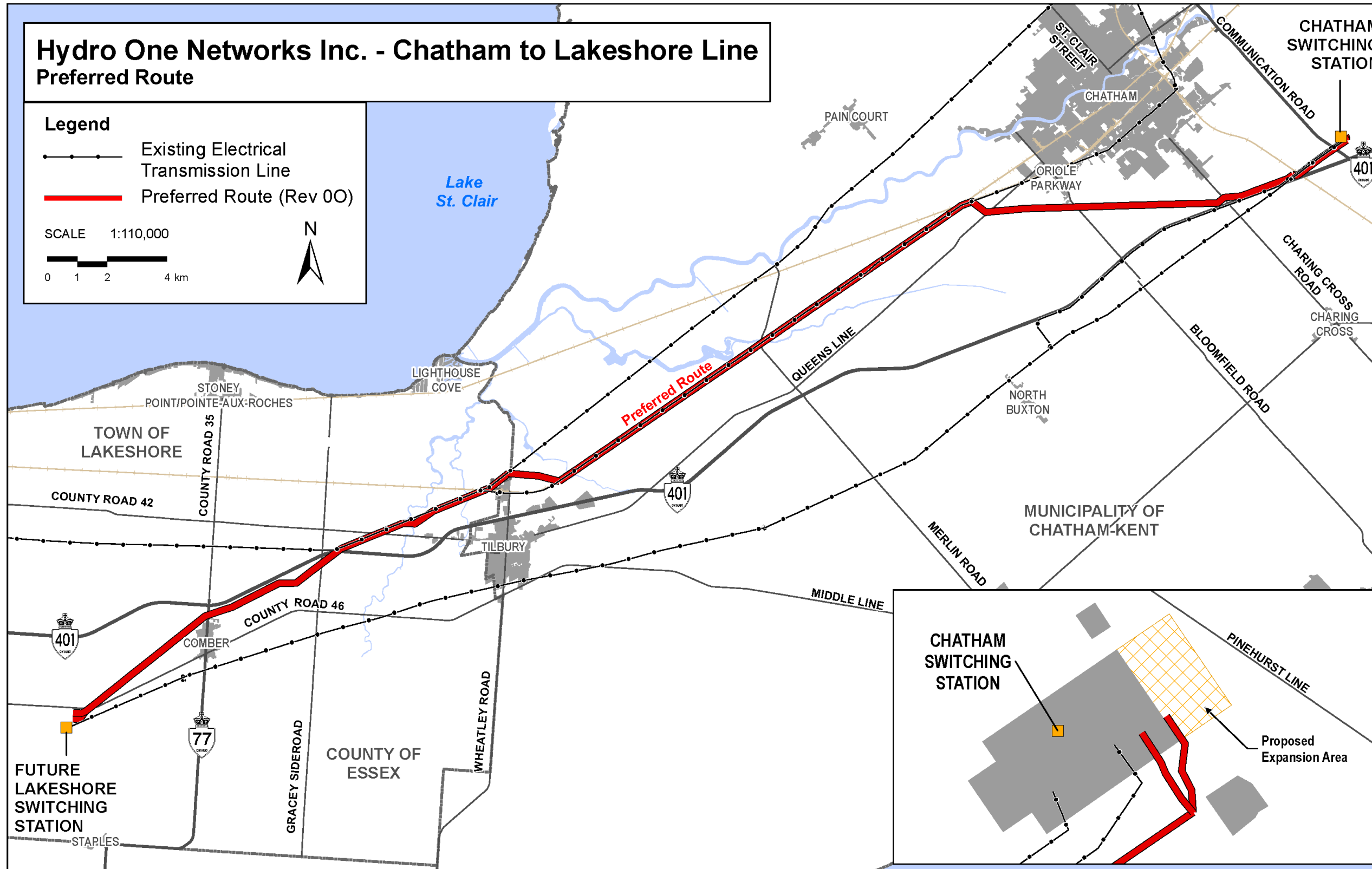
The Class EA was developed as a streamlined planning process to ensure that applicable projects are planned and carried out in a manner that is efficient and environmentally acceptable.

This final Environmental Study Report (ESR) describes the Class EA process that was undertaken for the proposed Project. The final ESR:

- Summarizes existing conditions in the Local Study Area (LSA) (500 m) and Project Study Area (PSA) (120 m).
- Documents the notification to, and consultation undertaken with; Anishnawbek and Haudenosaunee communities, government agencies, municipal staff and elected officials, interest groups and members of the public about the Project.

- Documents the route identification and evaluation process conducted to select the Preferred Route Alternative.
- Identifies potential environmental effects associated with the Project.
- Identifies potential avoidance, mitigation and restoration measures to address these potential environmental effects.

Figure 1-1: Project Location



1.1 Need for the Undertaking

In June 2019, the Independent Electricity System Operator (IESO) – the agency responsible for monitoring electricity demand and forecasting future needs in the province – requested Hydro One to initiate work on development activities, including seeking relevant regulatory approvals and to construct a new double-circuit 230 kV transmission line between the Chatham SS in the Municipality of Chatham-Kent, to the future Lakeshore TS in the Municipality of Lakeshore (**Appendix A**).

The purpose of the new double-circuit 230 kV transmission line is to:

- Increase the overall transfer capability of the bulk transmission system west of Chatham to reliably supply the forecast load growth in the Kingsville-Leamington area and the broader Windsor-Essex Region in the near- to mid-term due to a strong growth in the agricultural sector.
- Permit the resources and bulk facilities in this region to operate efficiently for local and system needs.
- Maintain existing interchange capability on the Ontario-Michigan interconnection between Windsor and Detroit.

The required in-service date for the Project is prior to the winter of 2025/2026 to address the specified bulk system electricity needs. To meet the energy needs of the region as quickly as possible, Hydro One is seeking opportunities to advance the in-service date.

1.2 Description of the Undertaking

The proposed Project will involve the installation of a new double-circuit 230 kilovolt kV transmission line, including associated infrastructure (e.g., towers, access roads), along the preferred Route. As the preferred Route Alternative will repurpose approximately 16 km of an existing idle 115 kV transmission corridor between Tilbury and Chatham, the Project will involve dismantling and removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the idle transmission line. The Project will also involve an expansion of the Chatham SS to facilitate the connection of the new transmission lines.

Upon the successful completion of the Class EA process and receipt of subsequent required approvals, construction could begin as early as 2023.

1.3 Alternatives to the Undertaking

The Class EA process requires identification and evaluation of alternatives to the undertaking. "Alternatives to" the undertaking are functionally different approaches to addressing the need for the undertaking. These alternatives must be reasonable from a technical, economic and environmental perspective.

Alternatives to the undertaking must be reasonable from a technical, economic and environmental perspective and must fall within the mandate of the proponent. It is understood that companies whose operating licences (i.e., as granted by the Ontario Energy Board) are limited to assessment of transmission alternatives cannot, for example, assess generation as an alternative to transmission facilities.

This Project resulted from a recommendation of the IESO, as documented in the report "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region" (June 13, 2019) and the letter sent to Hydro One by the IESO in June 2019 requesting Hydro One to initiate work on development activities, including seeking relevant regulatory approvals and to construct a new double-circuit 230 kV transmission line between the Chatham SS in the Municipality of Chatham-Kent, to the future Lakeshore TS in the Municipality of Lakeshore.

In such cases, the transmitter will accept the recommendations of an independent agency as a starting point for the Class EA Process and will not revisit alternatives considered and rejected by the planning process (e.g., generation alternatives and other transmission alternatives). The following summarizes the conclusions of the IESO report regarding the alternatives to the undertaking that were considered to address the identified need:

- Alternative 1: Do nothing
- Alternative 2: Additional Generation
- Alternative 3: New Transmission Infrastructure

Alternative 1: Do Nothing

The "Do Nothing Alternative" is an alternative to the undertaking that must be considered.

Due to the significant increase in the demand forecast for electricity in the Essex area, the Do Nothing Alternative would result in the inability to reliably supply the forecasted load growth. This load growth is anticipated for the Kingsville-Leamington area and the broader Windsor-Essex Region in the near- and mid-term. Furthermore, the Do Nothing Alternative would limit resources and bulk facilities in the region from operating

efficiently for local and system needs. Therefore, the Do Nothing Alternative is not considered to be a feasible option.

Alternative 2: Additional Generation

The IESO, in their June 13, 2019 report titled "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region (IESO, 2019)", documents the results of a planning study undertaken by IESO. This study assessed the adequacy of the bulk transmission system in the Windsor-Essex Region and recommended preferred near- and mid-term solutions to address identified needs.

After an assessment by the IESO of the capabilities and cost of potential resources, a new natural gas-fired simple cycle gas turbine (SCGT), located west of the future Lakeshore TS was identified as the lowest cost resource alternative capable of supplying the magnitude of energy and capacity required. Other generation types were also considered (e.g., wind, solar, storage, combined cycle gas turbine); however, the profile of energy required to meet the regional needs made these options less cost-effective compared to a SCGT. Additionally, a proponent's choice of location for a new generation facility may require new or reinforced transmission infrastructure to ensure that the installed generator is able to meet the identified need. Therefore, the Additional Generation Alternative is not considered to be a feasible option.

Alternative 3: Transmission Alternatives

The IESO report concludes that for the current planning assumptions and the evaluated load growth scenarios, new transmission was found to be the most cost effective and technically feasible option to meet identified system needs in a timely manner. For the needs considered, the transmission option has a net present value approximately \$500M lower than the least cost resource alternative for the most likely scenario. Based on the results of the two studies, the IESO recommends a new 230 kV double circuit transmission line from the existing Chatham SS to the Lakeshore.

1.4 Approval Process and Regulatory Requirements

This section outlines the approval process required under the Class EA process as well as other regulatory requirements.

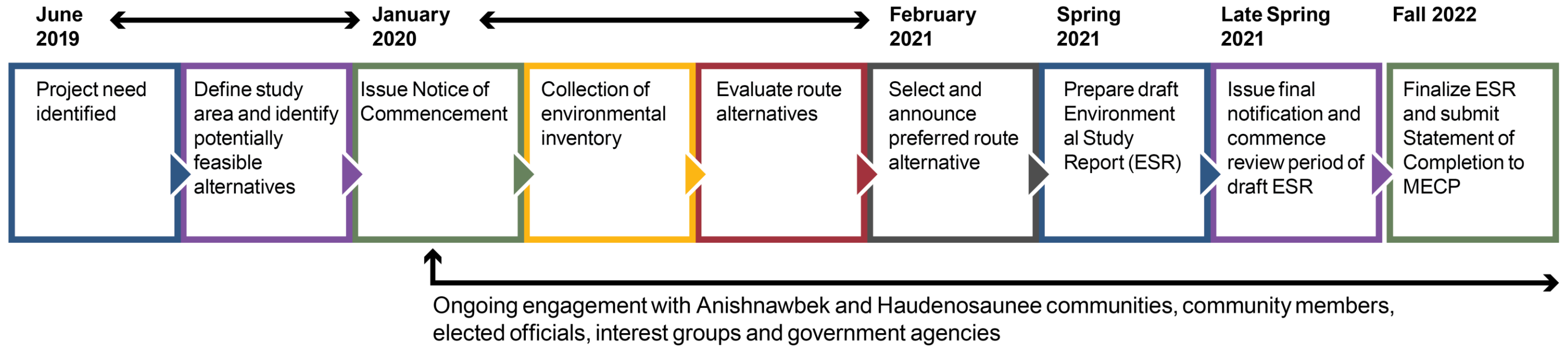
1.4.1 Class Environmental Assessment Process

This final ESR has been prepared in accordance with the Class EA for Minor Transmission Facilities (Hydro One, 2016), an approved planning process under the EA Act. Components of the process include:

- Establish need (**Section 1.1**).
- Identify and evaluate “alternatives to” the undertaking (**Section 1.3**).
- Define study area (**Section 2**).
- Issue initial notification (**Section 3.1**).
- Conduct an environmental inventory (**Section 4**).
- Identify and evaluate “Route Alternatives” (**Section 5**).
- Select preferred Route Alternative (**Section 5.6.5**) and prepare draft ESR.
- Issue final notification and the draft ESR for public review and comment (**Section 3.14**).
- File final ESR and Class EA Statement of Completion with the MECP and proceed with the undertaking (**Section 3.14**).
- Conduct consultation throughout the process (**Section 3**).

The Class EA process is illustrated in **Figure 1-1-2**.

Figure 1-1-2: Class Environmental Assessment Process



The Class EA for Minor Transmission Facilities applies to Category B transmission projects that are not associated with Category B generation projects, as per the Guide to EA Requirements for Electricity Projects associated with Ontario Regulation (O. Reg) 116 (MECP, 2011).

The criteria that triggered the Class EA for this Project is from Section 1.1 Class Definition subsection a, which states:

“The projects that are subject to this Class EA Document are defined as follows:

- a. The planning, design and construction of minor transmission lines and/or transformer stations (including telecommunication stations), and the subsequent operation, maintenance and retirement of these facilities.

Minor transmission lines include all transmission line projects involving greater than 2 km of line, which:

- i. Are capable of operating at a nominal voltage equal to 115 kV.
- ii. Are capable of operating at a nominal voltage level higher than 115 kV and less than 500 kV, and which involve less than 50 km of line.”

With the completion of the draft ESR, Hydro One issued a final notification to municipal, provincial and federal government officials and agencies, Anishnawbek and Haudenosaunee communities, potentially affected and interested persons, and interest groups. The draft ESR was available for public review and comment for a period of 60 calendar days, from June 11, 2021, until August 10, 2021. Additionally, in response to requests received from some communities, Hydro One extended the draft ESR review period by an additional 30 days (90 days total, through September 10, 2021) for Indigenous communities. Hydro One has made best efforts to respond to, and resolve issues raised by concerned parties during the draft ESR review period. Any issues and their respective resolutions have been documented and summarized in the final ESR.

As outlined by recent Provincial government amendments, a request may be made to the Ministry of the Environment, Conservation and Parks (MECP) for an order requiring a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed). A request may also be submitted that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. The MECP will not consider requests on other grounds.

Section 16 Order requests were submitted by Chippewas of Kettle and Stony Point First Nation, Caldwell First Nation, and Chippewas of the Thames First Nation (see **Appendix B-8**). Following consultation with each of the Section 16 Order requesting communities, and subsequent commitments and revisions to the ESR, all three Section 16 Order requests were subsequently withdrawn (see **Appendix B-8**). The MECP formally acknowledged the withdrawal of all three Section 16 Order Requests on October 14, 2022, and confirmed that with no outstanding Section 16 order requests before the Minister, Hydro One can proceed with the Project, subject to any additional permits or approvals that may be required (see **Appendix B-8**).

A copy of the final ESR has been placed on the Hydro One Project website, as well as provided to the Environmental Assessment Branch (EAB) and the appropriate Regional EA Coordinator at MECP for filing. The final ESR and the Class EA Statement of Completion have been filed with MECP, and the proposed Project is considered acceptable and may proceed as outlined in the final ESR.

1.4.2 Other Permits, Licenses and Approvals

In addition to meeting *EA Act* requirements, there are several permits, licenses and approvals that may be required under municipal, federal and provincial legislation and regulations. These are described in **Table 1-1**. Hydro One or its contractors will contact the appropriate regulatory agencies to ensure that the proposed Project will meet all regulatory requirements prior to construction. The proposed Project does not trigger a federal EA under the *Impact Assessment Act, 2019*.

As stated in Section 62(1) of the *Planning Act (R.S.O. 1990, c. P.13)*, “An undertaking of Hydro One Inc. that has been approved under the *EA Act* is not subject to this Act.” While the proposed Project is not subject to the *Planning Act* after completion of the Class EA, Hydro One has been working with the County of Essex and the Municipalities of Chatham-Kent and Lakeshore during the Class EA process and will continue to consult with these municipalities regarding design, and the potential effects of the construction on local traffic and nearby communities, as needed.

Table 1-1: Potentially Required Permits, Licenses and Approvals

Permit, License, or Approval	Primary Agency	Description
Section 92 Leave to Construct	Ontario Energy Board (OEB)	Required for the construction of the new transmission line.
Transport Canada Aeronautical Assessment	Transport Canada	Required for the construction of the new transmission structures within 6 km of an aerodrome.
Nav Canada Land Use Assessment	Nav Canada	Required for the construction of the new transmission structures within 6 km of an aerodrome.
Environmental Activity and Sector Registry (EASR)/Permit to Take Water (PTW)	MECP	May be required for construction dewatering.
Air and Noise Environmental Activity and Sector Registry (EASR)	MECP	May be required for noise-emitting equipment as part of the expansion of the Chatham SS for this project.
Industrial Sewage Works Environmental Compliance Approval (ECA) for station drainage	MECP	May be required for changes to the station drainage system as part of the expansion of the Chatham SS for this project.
Approvals and/or Permits under the Endangered Species Act, 2007	MECP	May be required for planned works that might affect species at risk and/or their habitat which are protected under the Endangered Species Act, 2007.
Archaeological Acceptance Letters	Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)	Acceptance is required prior to undertaking new ground disturbance in areas with archeological potential.
Encroachment Permit	Ministry of Transportation (MTO)	Required for works within the Highway 401 corridor.
Land Use Permit	MTO	Required for project assets to be located within 400 m of a 400-series highway.

Permit, License, or Approval	Primary Agency	Description
Noise By-law Exemption	Municipalities of Lakeshore and Chatham-Kent	An exemption may be required if the operation of construction equipment occurs outside of the Noise By-law curfew.
Use, Storage, Transportation of Explosives	Natural Resources Canada (NRCan)	Required for magazines, vehicles used for transportation of explosives, and activities related to storage of explosives in support of splicing.
Road Entrance Permits	Municipalities of Lakeshore and Chatham-Kent	Required to construct potential new entrances for access to a construction site from existing municipal roads.
Building Permit	Municipality of Chatham-Kent	Required for new relay building being constructed as part of the expansion of the Chatham SS.
Demolition Permit	Municipalities of Lakeshore and Chatham-Kent	Required for the demolition and removal of structures.
Section 28 Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Permit	Essex Region Conservation Authority (ERCA) and Lower Thames Valley Conservation Authority (LTVCA)	Required for construction works within ERCA and LTVCA regulated areas.
Fisheries Act Authorization	Fisheries and Oceans Canada (DFO)	May be required for in-water construction works or works with potential releases that have potential to adversely affect fish or fish habitat.
Crown Land Work Permit	Ministry of Natural Resources and Forestry (MNRF)	May be required for work on Crown lands (e.g., river beds).
Notice of Work	Rail Companies	May be required for crossings of federally regulated rail lines.
Clearance Letter	Utility companies	Required to cross utilities (e.g., natural gas or oil pipelines).

In the event that other permits are identified as required, Hydro One and/or the EPC will work with the regulator to ensure compliance.

2 Study Area

At the outset of the Class EA, two Study Areas (Local Study Area and Project Study Area) were identified to consider potential natural and socio-economic environmental features and potential effects associated with each of the Route Alternatives and their corresponding variations (**Figure 2-2-1**).

As further described in **Section 5.2**, at the beginning of the Class EA process, the Hydro One project team completed a preliminary assessment to identify the technical specifications, constraints and system requirements for the proposed double-circuit 230 kV transmission line. This preliminary assessment mapped viable Route Alternatives, including variations, for the proposed transmission line. This included mapping known environmental and technical feature constraints, identifying opportunities to parallel existing linear infrastructure, as well as utilization of existing easements and/or ROW, where possible.

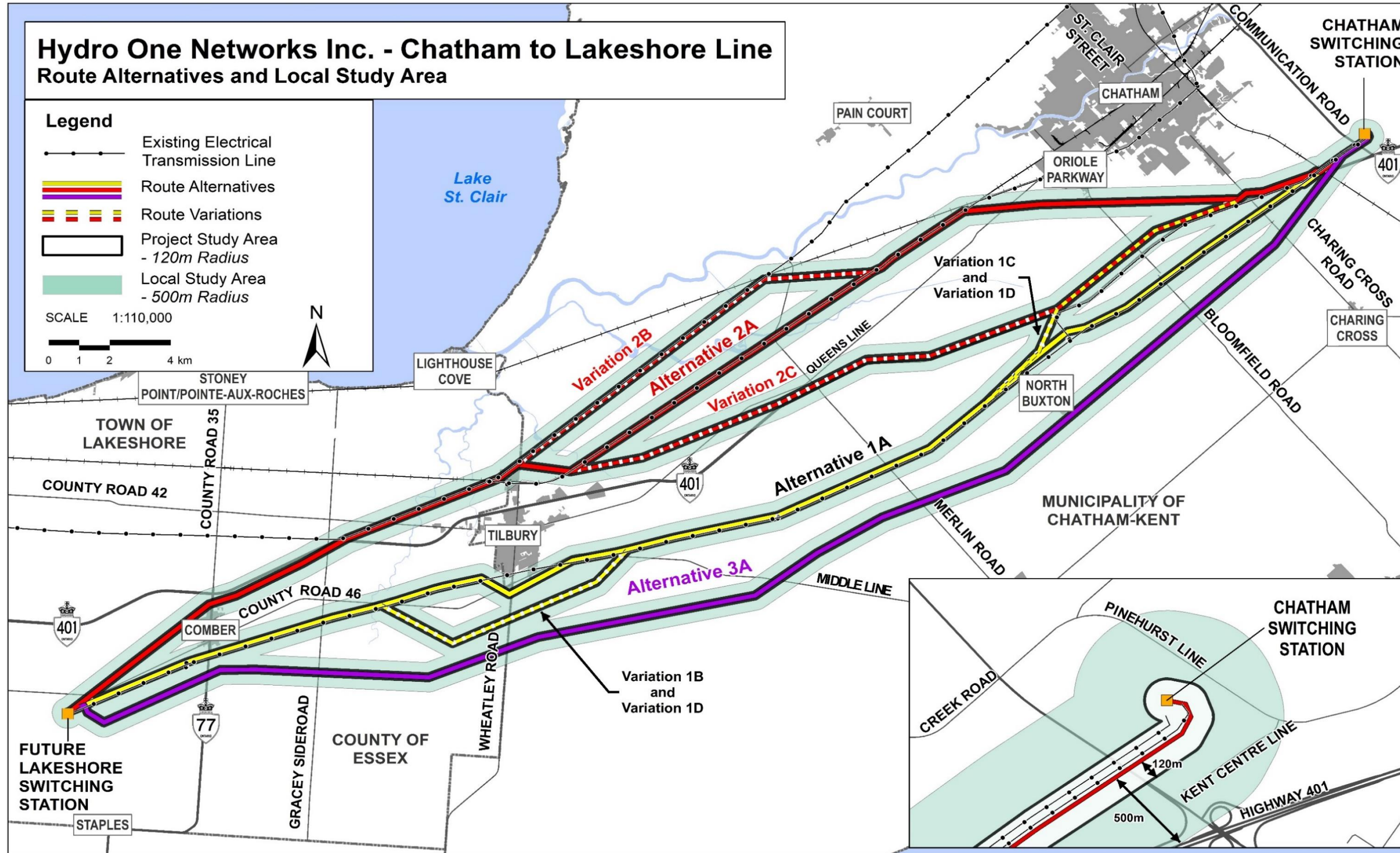
2.1 Project Study Area

A Project Study Area (PSA) was delineated to include lands within 120 m of each of the Route Alternative centre lines, including their respective variations. The PSA encompasses the proposed length of the transmission line from the Chatham SS to the Lakeshore TS. The purpose of the PSA was to determine an area that would encompass the future asset location, associated ROW and adjacent lands such that technical studies and field investigations for the purposes of documenting baseline existing conditions could be appropriately scoped and planned.

2.2 Local Study Area

The Local Study Area (LSA) was delineated to include lands within 500 m of each of the Route Alternative centre lines, including their respective variations. The LSA encompasses the proposed length of the transmission line Route Alternatives from the Chatham SS to the future Lakeshore TS in the Municipality of Lakeshore. The purpose of the LSA was to expand upon the PSA to include an area of potential project effects on the natural and socio-economic environments associated with each of the Route Alternatives, including their corresponding variations.

Figure 2-2-1: Study Areas



3 Consultation

Consultation is an important component of the Class EA process. It provides those potentially affected by, or interested in, the proposed Project with opportunities to provide input and participate in the planning process. It also allows the proponent to gain information and knowledge related to social, cultural, economic and natural environment concerns and considerations of direct relevance to the proposed Project. The key principles that have guided Hydro One's approach to communication and consultation include:

- Early, ongoing and timely communication and engagement.
- An open, transparent, and flexible engagement process.
- Clear project information and respectful dialogue with Anishnawbek and Haudenosaunee communities, community officials, and project Rights holders and stakeholders.
- Ongoing opportunities for interested parties to learn about and provide meaningful input on the proposed Project.
- Full and fair considerations and documentation by the proponent of all input received during the consultation process and incorporation of such input, where feasible and reasonable, into project decision-making.

The consultation process for this Project incorporated methods to encourage two-way communication involving: Anishnawbek and Haudenosaunee communities (identified by the Crown); local elected officials; federal, provincial and municipal government agencies; local residents, farmers and property owners; potentially affected and interested persons and businesses; and interest groups. The Project contact list is provided in **Appendix B-1**.

To facilitate comprehensive, transparent and adequate consultation and engagement, an integrated multi-channel communication program was implemented, consisting of:

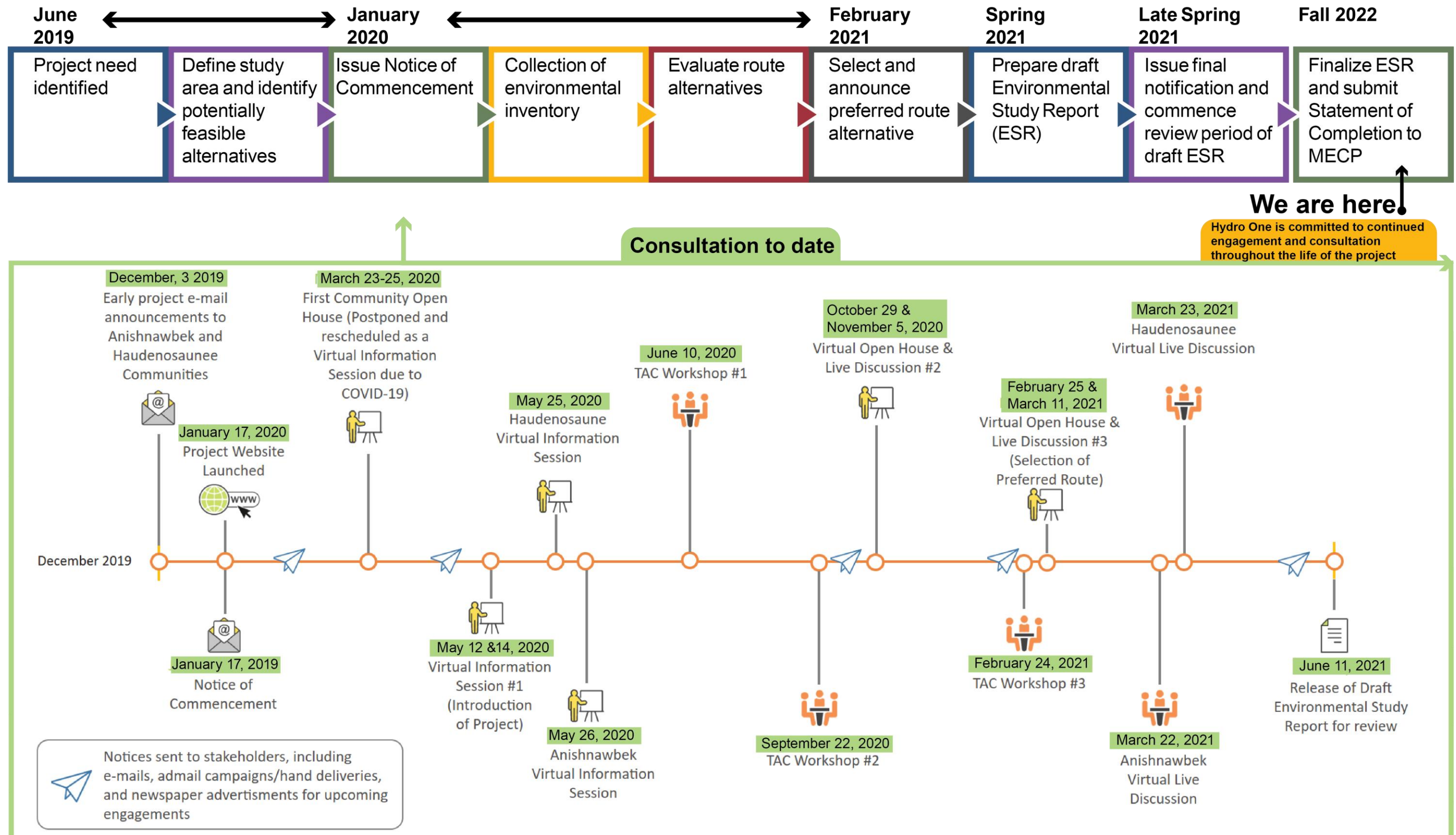
- Notification letters, flyers and newspaper advertisements to announce and provide updates on the Project. Notices were sent via Canada Post admail campaigns to target all available postal routes within the LSA.
- Social media advertisements, radio advertisements and phone call reminders of upcoming public consultation events.
- Virtual Information Sessions (VIS), which consisted of online open houses, live discussions, and workshops.
- Meetings and discussions with municipal and provincial elected officials.

- Meetings, video conference calls and correspondence with Rights-holders and stakeholders who expressed specific interests or concerns.
- Establishment of a project contact list, through which interested parties received project updates via email.
- Dedicated Community Relations representatives and email address.
- Establishment and maintenance of a project website with an interactive online project mapping tool at [Hydro One's Chatham-to-Lakeshore Webpage](#) which allowed for the sharing of project information and updates.

The results of the consultation program are summarized in the sections below. Input was considered by the project team and incorporated into the Project planning, where considered feasible and reasonable. Copies of consultation materials such as notices, notification letters, VIS display panels, presentation slides and correspondence are included in **Appendix B-2**, **Appendix B-3**, **Appendix B-4** and **Appendix B-5**, respectively. A copy of the Project correspondence log is provided in **Appendix B-6**.

A high-level overview of the consultation timeline is outlined in **Figure 3-3-1** and further explained in the subsequent sections below.

Figure 3-3-1: Consultation Timeline



3.1 Notice of Commencement

The Notice of Commencement, introducing the Project, providing details on the need, description, study areas, Route Alternatives and associated regulatory processes, was published in the Windsor Star, Chatham-Kent This Week, Chatham Daily Press, Belle River Lakeshore News and Leamington/Wheatley/Kingsville Southpoint Sun local community papers between January 18, 2020, and January 24, 2020. The Notice of Commencement referred to the Project website and solicited questions and comments to be provided to Hydro One. Copies of the Notice of Commencement were distributed as follows:

- Hydro One sent a project initiation letter by email and registered mail to Anishnawbek and Haudenosaunee communities on December 3, 2019.
- Hydro One issued the Notice of Commencement to Anishnawbek and Haudenosaunee communities by email and by registered mail on January 7, 2020 and January 8, 2020, respectively.
- Beginning January 16, 2020, the Notice of Commencement was sent via email to elected officials, government agencies and officials, interest groups, businesses, utilities, community associations and school boards
- The Notice of Commencement was issued to homes and businesses within the LSA as admail by Canada Post during the week of January 13, 2020.
- A hand delivery of the Notice of Commencement was completed on January 16, 2020, for properties near Communication Road and Highway 401 that were not part of the larger admail route coverage.

Refer to **Appendix B-2** for the Notice of Commencement materials.

3.2 Community Information Centre #1

The first set of Community Information Centres were scheduled (same content) to be held on March 23, 2020, March 24, 2020, and March 25, 2020, to provide flexibility in schedule. The Notice inviting Rights-holders and stakeholders to attend one of these events was distributed as follows:

- Hydro One issued the Notice to Anishnawbek and Haudenosaunee communities beginning March 5, 2020, by email.
- The Notice was sent via email beginning March 3, 2020, to elected officials, government agencies and officials, interest groups, businesses, utilities, community associations and school boards.
- The Notice was issued to homes and businesses within the LSA as admail by Canada Post beginning the week of March 9, 2020.

- A hand delivery of the Notice was completed on March 4, 2020, for properties near Communication Road and Highway 401 that were not part of the larger admail route coverage.
- The Notice was published in the Belle River Lakeshore News, Tilbury Times, Leamington/Wheatley/Kingsville Southpoint Sun, Windsor Star, Chatham-Kent This Week and Chatham Daily Press local community papers between March 10, 2020, and March 14, 2020.
- Radio ads were also played on local stations, including:
 - CIMX-FM Radio (Windsor – New Rock)
 - CIDR-FM Radio (Windsor – Adult Alternative)
 - CKLW-AM Radio (Windsor – News).

Prior to the CICs being held, the public health emergency related to the COVID-19 pandemic was announced restricting in-person gatherings. As a result, CIC #1 needed to be postponed, and Rights-holders and stakeholders were informed of the postponement beginning March 16, 2020, through radio ads, social media, the Project website and the Project email mailing list. Anishnawbek and Haudenosaunee leadership were informed through email that the CICs were to be rescheduled as virtual events. The project team remained available to answer questions via email and phone.

In lieu of CIC #1, Virtual Information Sessions (VIS) were held on May 12, 2020, and May 14, 2020 (see **Section 3.3** below).

Refer to **Appendix B-2** for the Notice of CIC #1 materials.

3.3 Virtual Information Session (VIS #1)

Hydro One issued a Notice for the VIS inviting stakeholders to attend VIS#1 (same content on two separate days) in May 2020. Copies of the Notice were distributed as follows:

- The Notice was sent by email to Anishnawbek and Haudenosaunee communities, elected officials, government agencies and officials, interest groups, businesses, utilities, community associations and school boards beginning in late-April 2020.
- The Notice was published in the Belle River Lakeshore News, Tilbury Times, Leamington/Wheatley/Kingsville Southpoint Sun, Windsor Star, Chatham-Kent This Week and Chatham Daily Press local community papers between April 30, 2020, and May 6, 2020.
- Radio ads were played on local stations and an automated call reminding stakeholders of the upcoming session was circulated.

- The Notice was issued to homes and businesses within the LSA as admail by Canada Post beginning the week of April 20, 2020.
- A hand delivery of the Notice was completed on May 4, 2020, for properties near Communication Road and Highway 401 that were not part of the larger admail route coverage.

Anishnawbek and Haudenosaunee communities were invited to attend the public VIS. Separate Notices for the Anishnawbek and Haudenosaunee VIS were sent to communities. Refer to **Section 3.6** for Anishnawbek and Haudenosaunee community engagement.

Refer to **Appendix B-2** for the VIS #1 materials.

3.3.1 Overview of VIS #1

To provide flexibility in schedule, VIS #1 was held over two days (same content) on May 12, 2020, and May 14, 2020 (**Table 3-1**). The two sessions were scheduled to provide stakeholders with an opportunity to learn more about the Project need, the Class EA process, the proposed Route Alternatives, the route selection process, key milestones, and next steps.

Table 3-1: May 2020 VIS Overview

Date and Time	Platform	Number of Attendees
May 12, 2020 7:00 p.m. to 8:00 p.m. E.T.	Online Presentation and Live Discussion	2,630
May 14, 2020 7:00 p.m. to 8:00 p.m. E.T.	Online Presentation and Live Discussion	1,616

The sessions were presented through a virtual forum and participants could register and call into the event to listen to the presentation and/or view the live stream of materials online. Participants were able to submit their questions in advance or dial in to join a queue for live questions. The virtual sessions included a panel of Hydro One representatives and a moderator. The presentation covered the following topics:

- Project overview
- Class EA process
- Proposed Route Alternatives and Route selection process
- Key milestones and next steps
- Live Q&A session

During the session, Hydro One responded to pre-submitted questions and live questions. Hydro One asked three survey polling questions during each of the sessions and

participants were invited to phone in their response. If participants were unable to ask their question live, participants were invited to contact Hydro One's Community Relations team at 1-877-345-6799 or Community.Relations@HydroOne.com with their question. Hydro One uploaded the video presentation, audio recordings from the Q&A and Notice materials to the [Chatham to Lakeshore Project Webpage](#).

Overall, VIS #1 was well attended with a combined total of over 4,000 participants signing on over the two days. A combined total of 22 questions were answered during the sessions and the majority of questions focused on the following themes:

- Existing and new infrastructure
- Property requirements for the new transmission line
- Route direction, location and design
- Electricity rates
- Power supply/reliability
- Effects to residential/agricultural land

Pre-submitted email questions were responded to by Hydro One Community Relations after the sessions.

A summary of key questions and responses throughout the Class EA are provided in **Section 3.12**.

3.3.2 Live Discussion – May 12, 2020

In total, 2,630 participants joined the May 12 VIS and the Hydro One panel responded to 11 live questions and three pre-submitted questions. The results of the three survey polling questions asked during the event are summarized in **Table 3-2**.

Table 3-2: May 12 VIS Survey Polling Question Summary

Survey Question	Options	Response
Question 1: What do you hope to learn more about after tonight's session?	1) Project Need	1) 23
	2) Route Selection Process	2) 117
	3) How to participate	3) 6
	4) Project Timelines	4) 16
	5) Another Topic	5) 20
Question 2: In your view, which criteria is most important to take into consideration as part of this project?	1) Vegetation, Wildlife and/or Water Bodies	1) 41
	2) Residential Properties	2) 74
	3) Commercial Operations	3) 7
	4) Agricultural Lands and Operations	4) 81
	5) Another Criteria	5) 13

Survey Question	Options	Response
Question 3: What is your preferred method to receive project updates or information?	1) Newsletters or Emails	1) 96
	2) Virtual Information Sessions	2) 28
	3) In-person Sessions or Meetings	3) 36
	4) A Different Method Not Mentioned	4) 9
Question 1	Total Responses	182
Question 2	Total Responses	216
Question 3	Total Responses	169

As shown in **Table 3-2**, the majority of participants wanted to learn more about the route selection process, and considered residential property and agricultural lands and operations to be the most important criteria to take into consideration in the evaluation of Route Alternatives. In addition, the majority of participants preferred newsletters or emails for project updates and information. This feedback informed ongoing engagement and evaluation for the Project.

3.3.3 Live Discussion – May 14, 2020

In total, 1,616 participants joined the May 14 VIS. The Hydro One panel responded to six live questions and two pre-submitted questions.

Results of the three survey polling questions are summarized in **Table 3-3**.

Table 3-3: May 14 VIS Survey Polling Question Summary

Survey Question	Options	Response
Question 1: What do you hope to learn more about after tonight's session?	1) Project Need 2) Route Selection Process 3) How to participate 4) Project Timelines 5) Another Topic	1) 13 2) 108 3) 4 4) 12 5) 11
Question 2: In your view, which criteria is most important to take into consideration as part of this project?	1) Vegetation, Wildlife and/or Water Bodies 2) Residential Properties 3) Commercial Operations 4) Agricultural Lands and Operations 5) Another Criteria	1) 21 2) 31 3) 0 4) 47 5) 3
Question 3: What is your preferred method to receive project updates or information?	1) Newsletters or Emails 2) Virtual Information Sessions 3) In-person Sessions or Meetings 4) A Different Method Not Mentioned	1) 40 2) 17 3) 29 4) 1
Question 1	Total Responses	148
Question 2	Total Responses	102
Question 3	Total Responses	87

As shown in **Table 3-3**, the results reflected the same priorities expressed in the first VIS #1 session. The majority of participants wanted to learn more about the route selection process, and considered residential property and agricultural lands and operations to be the most important criteria to take into consideration in the evaluation of Route Alternatives. In addition, the majority of participants indicated they prefer receiving newsletters or emails for project updates and information. This feedback informed ongoing engagement and evaluation for the Project.

3.4 Virtual Information Session (VIS #2)

Hydro One hosted two engagement events to provide stakeholders with an opportunity to learn more about the Project need and updates, recent Route Alternative refinements, key milestones and next steps. Due to public health restrictions around in-person gatherings related to the COVID-19 pandemic, a virtual Open House was available to view online beginning October 29, 2020, and a Live Discussion was held over the phone on November 5, 2020.

Copies of the Notice were distributed as follows:

- The Notice was sent by email to Anishnawbek and Haudenosaunee communities, elected officials, government agencies and officials, interest groups, businesses, utilities, community associations and school boards beginning the week of October 12, 2020.
- The Notice was published in the Leamington/Wheatley/Kingsville Southpoint Sun, Windsor Star on October 28, 2020, and the Chatham-Kent This Week and Chatham Daily Press local community papers on October 29, 2020. An automated call reminding stakeholders of the upcoming session was circulated.
- Social media ads were posted on Facebook between October 30, 2020, and November 12, 2020.
- Radio ads were also played on local stations from October 29, 2020, to November 5, 2020, and included the following stations:
 - CIMX-FM Radio (Windsor – New Rock)
 - CIDR-FM Radio (Windsor – Adult Alternative)
 - CKLW-AM Radio (Windsor – News).
- The Notice was sent via email to property owners/members of the public on October 26, 2020.
- The Notice was sent to homes and businesses within the LSA as admail by Canada Post and by mail to absentee landowners during the week of October 26, 2020.
- A hand delivery of the notice was completed on October 20, 2020, for properties near Communication Road and Highway 401 that were not part of the larger admail route coverage.

Anishnawbek and Haudenosaunee communities were invited to attend the public VIS. Separate notices for the Anishnawbek and Haudenosaunee VIS were sent to communities. Refer to **Section 3.5** for Anishnawbek and Haudenosaunee community engagement.

Refer to **Appendix B-2** for the Virtual Open House and Live Discussion (VIS #2) materials.

3.4.1 Virtual Open House (VIS #2)

The Open House, hosted online at www.chatham-to-lakeshore-openhouse.com, consisted of a virtual interactive room, which allowed stakeholders to view information boards on their own schedule and provide feedback either through a comment form or by contacting Hydro One's Community Relations team. The key information shared included:

- Project overview and benefits
- Class EA process
- Route Alternative refinements and project maps
- Work completed to date
- Evaluation of Route Alternatives
- Ontario Energy Board approval requirements
- Land requirements and detailed design
- Project milestones and next steps
- Registration link to, and subsequent live recording of, the Live Discussion

The Open House room remained live until February 21, 2021.

3.4.2 Live Discussion (VIS #2)

Similar to a tele-Town hall, the virtual Live Discussion session was conducted by phone and had a corresponding presentation that could be viewed online (**Appendix B-2**) by visiting the [Hydro One Meeting Website](#). The event was divided into two parts: a presentation outlining key project details and updates, and a facilitated Q&A session with project team members.

To join the event, participants could either register in advance or dial into the session using a toll-free phone number. Hydro One's vendor also dialed out to publicly available phone numbers to encourage listeners to attend the event.

The session was hosted by a panel of Hydro One representatives, and the presentation covered the following:

- Project overview
- Update on Class EA process
- Work completed to date
- Route Alternative refinements
- Key milestones and next steps

During the Q&A session, Hydro One responded to pre-submitted questions, and listeners were asked to join the queue for live questions via phone or through a submission box

located online. If listeners were unable to ask their live question, Hydro One encouraged participants to contact Community Relations at 1-877-345-6799 or email Community.Relations@HydroOne.com. Following the event, Hydro One uploaded the presentation, audio recording from the Live Discussion and notice materials to the [Chatham to Lakeshore Project webpage](#).

In total, 1,590 listeners joined the virtual Live Discussion and the Hydro One panel responded to 15 questions. During the Q&A session, Hydro One addressed three frequently received questions from stakeholders over the last few months, as well as live and pre-submitted questions. A total of 34 live questions were submitted.

The majority of questions focused on the following themes:

- Existing and new infrastructure
- Property (including property rights and property acquisition)
- Route selection, location and design
- Setbacks from existing dwellings and livestock buildings
- Residential electricity rates and costs
- Health and safety
- Effects to residential/agricultural land
- Community Involvement

The remaining pre-submitted email questions were responded to by the Hydro One Community Relations teams after the sessions.

A summary of key questions and responses throughout the Class EA are provided in **Section 3.13**.

3.5 Virtual Information Session (VIS #3)

Hydro One hosted two engagement events to provide stakeholders with an opportunity to learn more about the preferred Route Alternative, the Class EA evaluation process and next steps. Due to public health restrictions around in-person gatherings related to the COVID-19 pandemic, a virtual Open House was available for stakeholders to view online beginning February 25, 2021, and a Live Discussion was held over the phone on March 11, 2021.

Copies of the Notice were distributed as follows:

- The Notice was sent by email to Anishnawbek and Haudenosaunee communities, elected officials, government agencies and officials, interest groups, businesses, utilities, community associations and school boards beginning February 22, 2021.
- The Notice was published in the Leamington/Wheatley/Kingsville Southpoint Sun, Windsor Star, Chatham-Kent This Week, and Chatham Daily Press local community papers on March 3, 2021 and February 25, 2021, respectively. Radio ads were played on local stations.
- The Notice was issued to homes and businesses within the LSA as admail by Canada Post and to absentee landowners by mail during the week of February 22, 2021.
- The hand delivery routes identified during previous notice distributions were mailed the Notice on February 22, 2021. This included properties within the LSA that were not part of the larger admail route coverage.

Anishnawbek and Haudenosaunee communities were directly invited to attend the public VIS. Separate notices for the Anishnawbek and Haudenosaunee VIS were sent to communities. Refer to **Section 3.6** for Anishnawbek and Haudenosaunee engagement).

Refer to **Appendix B-2** for the Virtual Open House & Live Discussion (VIS #3) materials.

3.5.1 Virtual Open House (VIS #3)

The Open House, hosted online at www.chatham-to-lakeshore-openhouse.com, consisted of a virtual interactive room, which allowed stakeholders to view information boards on their own schedule and provide feedback either through a comment form or by contacting Hydro One's Community Relations team. The key information shared included:

- Project overview
- Class EA process
- Route Alternatives assessed
- Evaluation of Route Alternatives
- Preferred Route Alternative
- Engagement and technical work to date
- Ontario Energy Board approval requirements
- Key milestones and next steps
- Registration link to, and subsequent live recording of, the Live Discussion

3.5.2 Live Discussion (VIS #3)

Similar to a tele-Town hall, the virtual Live Discussion session was conducted by phone and had a corresponding presentation that could be viewed online (**Appendix B-2**) by visiting the [Hydro One Meeting Website](#). The event was divided into two parts: a presentation outlining key project details and updates, and a facilitated Q&A session with project team members. To join the event, participants could either register in advance or dial into the session using a toll-free phone number. Hydro One's vendor also dialed out to publicly available phone numbers to encourage listeners to attend the event. The presentation covered the following:

- Project update.
- Update on Class EA process.
- Route evaluation process and selection of the Preferred Route Alternative.
- Ongoing engagement.
- Key milestones and next steps.

During the Q&A session, Hydro One responded to pre-submitted questions, and listeners were asked to join the queue for live questions via phone or through a submission box located online. If listeners were unable to ask their live question, Hydro One encouraged participants to contact Community Relations at 1-877-345-6799 or email Community.Relations@HydroOne.com.

Following the event, Hydro One uploaded the presentation, audio recording from the Live Discussion and notice materials to the [Chatham to Lakeshore Project Webpage](#).

In total, 1,211 listeners joined the virtual Live Discussion and the Hydro One panel responded to 15 questions. A total of 54 questions were submitted.

The majority of questions focused on the following themes:

- Preferred Route Alternative
- Costs
- Design & Infrastructure
- Impacts to Lands/Properties & Agreements/Compensation
- Consultation
- Evaluation Process
- Construction
- Interference with electronic/GPS equipment

The remaining pre-submitted email questions were responded to by the Hydro One Community Relations teams after the sessions.

A summary of key questions and responses throughout the Class EA are provided in **Section 3.13**.

3.6 Indigenous Communities

Consultation with Indigenous communities is an important part of the engagement requirements of the Class EA process. In addition, there exists the Crown's Duty to Consult requirements per Section 35 of the Constitution Act (1982), which, while separate; may be discharged (partially or fully) concurrent with the Class EA process. With respect to the latter, Hydro One contacted the Ministry of Energy, Northern Development and Mines (ENDM) on July 5, 2019, to understand if the Crown's Duty to Consult was triggered by the Project, and if so; which Indigenous communities need to be consulted and if they would be delegating procedural aspects of the consultation to Hydro One. In the correspondence Hydro One provided a description of the characteristics, general location and scope of the proposed Project.

On November 29, 2019, the ENDM confirmed the Duty to Consult. The letter provided specific delegation of procedural aspects of the Crown's Duty to Consult to Hydro One, and advised that the following communities were to be included in the consultation process (see **Appendix B-3** for the Hydro One inquiry letter to the Crown and the Crown Duty to Consult delegation letter):

- Aamjiwnaang First Nation.
- Bkejwanong (Walpole Island) First Nation.
- Caldwell First Nation.
- Chippewas of Kettle and Stony Point First Nation.
- Chippewas of the Thames First Nation.
- Oneida Nation of the Thames.
- Six Nations of the Grand River Elected Council.
- Haudenosaunee Confederacy Chiefs Council/Haudenosaunee Development Institute.

The communities listed above were notified of the proposed Project through a pre-Notice of Commencement email sent on December 3, 2019, notifying the communities that the IESO had contacted Hydro One identifying the need to build a 230 kV transmission line from Chatham SS to the future Lakeshore TS. A formal Notice of Commencement was sent to all Anishnawbek and Haudenosaunee communities on January 7, 2020, notifying that Hydro One was initiating a Class EA for the Project. The letters outlined that the procedural aspects of the duty to consult had been delegated to Hydro One, and provided Crown contacts for questions or comments regarding this delegation.

The Anishnawbek and Haudenosaunee community consultation and engagement process was implemented to promote a comprehensive, transparent and meaningful consultation approach. The process included:

- Direct mailings of notifications and provision of information to provide updates on the Project throughout the Class EA process.
- Ongoing reminders of upcoming public and Anishnawbek and Haudenosaunee specific community information virtual events.
- Direct resident phone call reminders with prior authorization from Anishnawbek and Haudenosaunee leadership to community members were also placed.
- VIS events, which consisted of virtual open houses and live discussions for Anishnawbek and Haudenosaunee communities in addition to invitation to public events.
- Offers by the Hydro One project team to meet with the community to present the proposed Project and to address their issues or concerns.
- Frequent meetings and discussions with Anishnawbek and Haudenosaunee Chiefs/leadership.
- Meetings, conference calls and correspondence with Anishnawbek and Haudenosaunee nation representatives.
- Dedicated Indigenous Relations representatives and email inbox.
- A series of Route Evaluation documents were created and shared with the Anishnawbek and Haudenosaunee communities to assist in gathering input on the Route Evaluation process. These documents included a workbook and one-page overview to encourage review and feedback from communities
- Establishment and maintenance of a project website and interactive project map ([Chatham to Lakeshore Project Webpage](#)), allowing for the sharing of project information and updates.
- Community Engagement Coordinators.
- Capacity Funding.

Hydro One acknowledges the challenges that communities have faced in recent years due to COVID-19, and that these challenges impact communities' ability to address and respond to requests for engagement by proponents such as Hydro One. To address these new challenges, Hydro One has attempted to facilitate engagement safely, using virtual tools and platforms to a greater extent. Ongoing correspondence and records of engagement activities with Anishnawbek and Haudenosaunee communities is included in the Record of Consultation (**Appendix B-6**).

3.6.1 Capacity Funding Agreements

The eight Anishnawbek and Haudenosaunee communities identified by the Crown to be consulted by Hydro One (via delegation) are key participants in the Project. At the outset of the Class EA process, Hydro One offered financial assistance through Capacity Funding Agreements (CFA). The CFAs are meant to address the following aspects with communities:

- Outline an agreed-upon method of consultation and engagement, taking into account community protocols and practices.
- Outline a jointly agreed-upon work plan and budget for each community to be meaningfully consulted on the Project, including adequate capacity and resourcing to participate.
- Identify a Community Engagement Coordinator or similar position.

Outline a process for the sharing of information regarding the Project and associated studies and regulatory processes.

Hydro One recognizes that each community may wish to amend aspects of the agreement to reflect community consultation protocols that may already be established. Anishnawbek and Haudenosaunee communities were requested to review the agreements and share revisions with Hydro One.

Funding was also provided to communities seeking to undertake or enhance Traditional Ecological Knowledge/Traditional Resource and Land Use studies (collectively referred to as Indigenous Knowledge). Both Caldwell First Nation and Chippewas of the Thames First Nation undertook studies and provided input to Hydro One during the draft ESR review period. Where appropriate, the findings from these studies have been incorporated throughout the final ESR.

Following the release of the draft ESR in June 2021, Hydro One has engaged Indigenous communities to offer additional capacity funding through multi-year regional CFA. These regional CFA are meant to fund additional capacity for Indigenous communities to engage Hydro One in the planning of a suite of projects occurring in southwestern Ontario over the coming years, including the Chatham to Lakeshore project.

3.6.2 Community Engagement Coordinators

As part of its initiatives to support and build capacity for the Haudenosaunee and Anishnawbek communities that are participating in the Project, Hydro One offered each participating community the financial resources necessary to hire a Community Engagement Coordinator (CEC). The role of the CECs has been to provide support to,

and facilitate, their community's participation on the Project and to liaise with Hydro One Project team members in obtaining/sharing input and information. CECs are employed directly by their community. The specific role of the CECs has included:

1. Coordinating the community's engagement related to the advancement of the Project Class Environmental Assessment.
2. Being responsible for the dissemination of Project-related information to community members and leadership.
3. Collecting, documenting, and sharing community comments, issues, and concerns about the Project with Hydro One.
4. Collecting, documenting, and sharing Project information to support the community's participation in the Class EA process.
5. Liaising as necessary with Hydro One team members, Hydro One's project consultants, and other participating communities related to community engagement, employment, training, business, economic development opportunities, and capacity building related to the Project.
6. Liaising, collecting, documenting, and sharing Project information with the community and Hydro One.

CECs will continue to be retained through to the commencement of construction. Not all communities chose to retain a CEC.

The following paragraphs provide a description of engagement and consultation activities per community.

3.6.3 Aamjiwnaang First Nation (AFN)

3.6.3.1 Class EA

In addition to the consultation process outlined above, AFN received an advanced project initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 7, 2020. Hydro One spoke with AFN on February 3, 2020, and informed the community that they will hold community events in March and April 2020. Hydro One met with AFN, Environment Committee for a pre-engagement meeting on February 4, 2020. The Notice for the CIC was sent to the community on March 5, 2020, and Hydro One invited the community to participate in field studies commencing in early April, 2020. Prior to COVID-19 public health restrictions, Hydro One attended the community's St. Clair Day in person on March 7, 2020, and provided project information, including maps of the alternative routes to community members. Discussions included topics such as migratory birds, bald eagles and the health and safety of electromagnetic fields.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the in-person CIC due to public health developments related to COVID-19. Hydro One shared the proposed CFA with the community on April 20, 2020, and requested an opportunity to speak with Chief Plain. Correspondence regarding the CFA occurred from April 2020 to when the CFA was signed by Chief Plain on August 28, 2020. Correspondence regarding setting up the invoicing process and Purchase Order to access the capacity funding followed. A Project update email was sent to the community by email on May 1, 2020, detailing the status of ongoing environmental studies and both public and Anishnawbek VIS. Hydro One followed up with the community throughout May 2020, and continued to provide updates on the VIS, field studies and the Technical Advisory Committee (TAC). A reminder email was sent to the community for the VIS on May 23, 2020, and a copy of the presentation slides was shared. The VIS for the Anishnawbek communities was held on May 26, 2020, during which Hydro One provided a presentation on the Project and responded to questions from community members. Throughout June 2020, Hydro One shared the invitation to join the TAC and provided materials, including the initial evaluation criteria and informational video.

Hydro One followed up with the community by email on August 17, 2020, and provided an update on the CFA, technical corridor workshop, participation in field surveys, engagement and economic benefits. An email was sent on September 9, 2020, inviting the community to the second TAC workshop. Hydro One reached out to the community throughout September 2020 and in January 2021 regarding economic participation and invited the community to discuss opportunities. Hydro One offered to hold a virtual route Selection Workshop with the community by email on September 28, 2020, and provided materials including the presentation and dialogue workbook. Hydro One mailed hard copy material for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020, and encouraged Aamjiwnaang's feedback into the reports. On January 11, 2021, Hydro One provided virtual training on the online invoicing platform and process in relation to the CFA Purchase Order.

Prior to announcing the selection of the preferred Route, Hydro One invited the community to attend sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. An early briefing meeting was held on March 8, 2021, during which Hydro One provided an overview of the Project to date and insight into the selection of the preferred Route, including the participation from the Anishnawbek communities. Discussions also included economic

participation opportunities. At this time, it was requested that Hydro One work with the Economic Development staff on economic opportunities.

On February 25, 2021, the community was emailed to inform them of the upcoming Public VIC on March 8, 2021, and the Anishnawbek VIS on March 22, 2021.

Hydro One emailed the community with updates on the Project on March 5, 2021, April 1, 2021, and April 9, 2021, regarding Early Contractor Involvement (ECI), the Anishnawbek VIS, and an opportunity to discuss the assessment of environmental effects and potential mitigation measures.

Hydro One emailed AFN on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

AFN was contacted via email on July 6, 2021, and July 19, 2021, regarding upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project. AFN was invited to attend both surveys. A follow up email was sent on August 4, 2021, where a representative from AFN was invited to participate in Stage 2 Archaeological Assessment work and to inquire whether AFN had any comments or questions regarding the draft ESR.

AFN emailed Hydro One on August 12, 2021, indicating AFN would be unable to provide comments on the draft ESR by September 10, 2021 and hoped Hydro One would consider a request for extension of the review period. Hydro One emailed AFN on August 12, 2021, indicating that an additional 30 days had been provided for the draft ESR review period.

On September 16, 2021, AFN submitted comments on the draft ESR to Hydro One via email. Hydro One responded thanking AFN for their comments. Hydro One emailed AFN on February 18, 2022, to advise that Voltage Power has been selected to execute their plan to design, procure and construct the Project. Hydro One provided responses to AFN's comments on the draft ESR on April 25, 2022 via email. AFN's comments on the draft ESR and Hydro One's corresponding responses are provided in **Section 3.14.1**.

3.6.3.2 Economic Opportunities – Jobs, Training and Procurement

Hydro One sent an email on April 9, 2021, to explain the ECI process, introduce the two Engineering, Procurement and Construction (EPC) contractors and offer an introductory meeting. Following the community's request to discuss economic equity participation

at the March 8, 2021, meeting, a meeting with Economic Development staff was held on April 20, 2021, to provide an introduction of these opportunities.

Throughout 2021 and 2022, the Hydro One team continued to provide opportunities to meet with AFN regarding the ECI and EPC processes for the project. AFN responses to several requests for meetings and EPC engagement has continued with AFN.

3.6.4 Bkejwanong (Walpole Island) First Nation (WIFN)

3.6.4.1 Class EA

In addition to the consultation process outlined above, WIFN received an advanced project initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 7, 2020. Hydro One emailed WIFN on February 7, 2020, to inform them of the upcoming CICs and provided the invitation on March 5, 2020. Hydro One requested an opportunity for a meeting prior to the CIC and invited the community to participate in field studies commencing in April 2020. A meeting was held with WIFN on March 20, 2020.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the CIC due to public health developments related to COVID-19. An update was provided by email on May 14, 2020, regarding upcoming Anishnawkeb VIS, field studies, the TAC and the CFA. The invitation was shared on May 14, 2020, and May 21, 2020. Correspondence regarding the CFA occurred from May 2020 to July 2020. The CFA was signed on May 20, 2020, and correspondences in relation to the invoicing process to access the funding followed.

Hydro One shared the invitation to join the TAC and provided materials, including the initial evaluation criteria and informational video in early June 2020. Throughout June 2020, Hydro One corresponded with WIFN regarding their concerns and questions related to the Project and other transmission stations projects.

On June 12, 2020, Hydro One emailed WIFN with updates on upcoming field surveys and included the TAC survey. A summary of the remaining field surveys was shared with WIFN on June 19, 2020, and Hydro One invited the community to participate. WIFN representatives participated in baseline natural environment field surveys for the Project in 2020. More information on field surveys was provided to WIFN as requested. Following a concern from WIFN regarding the TAC Workshop #1 survey, Hydro One offered to hold a virtual corridor workshop with WIFN.

A letter dated July 7, 2020, was sent by WIFN regarding their concerns with the Project, including Hydro One's relationship with WIFN. A meeting was requested with Hydro One.

Hydro One emailed WIFN on August 17, 2020, to follow up and reiterate opportunities for the community to participate in the Project. An additional follow up was sent on September 10, 2020, relating to the completion of the field surveys, next steps, and the second TAC workshop. The materials from the first TAC workshop were shared with WIFN. Hydro One scheduled a meeting with WIFN on September 18, 2020; however, due to the pending election within the community the meeting was cancelled within ten minutes of attending the meeting.

An email was sent to WIFN on October 2, 2020, sharing previous emails and a letter with updated information regarding the Project. Hydro One inquired whether WIFN would be interested to discuss potential economic participation opportunities for the Project, and Hydro One shared an outline of opportunities via email on October 6, 2020. Correspondence took place with WIFN throughout November 2020 related to the timeline and completion of the Class EA and route selection process. Hydro One shared hard copy material for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020, and encouraged WIFN's feedback into the reports.

WIFN attended a technical route selection workshop on November 27, 2020, during which the Route Alternative were presented. WIFN provided feedback during the meeting on potential route evaluation criteria of interest. A meeting was held on January 4, 2021, to discuss the points raised during the previous meeting regarding projects and facilities which generate revenue for the community, an identified butternut grove and archaeological review. Following this meeting, WIFN provided maps highlighting areas of historic significance to assist in the evaluation of Route Alternatives and corresponded with Hydro One with background information related to the maps. Hydro One corresponded with WIFN regarding fish species of significance or interest to WIFN and provided information regarding the butternut trees observed during field surveys attended by a representative from WIFN.

Prior to announcing the selection of the preferred Route Alternative, Hydro One invited the community to attend sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. Hydro One provided an update via email on February 12, 2021, regarding upcoming VIS. The invitation to the community VIS was emailed on February 25, 2021.

A letter dated February 25, 2021, was sent by the Council of Three Fires stating their concern regarding the November 2019 delegation letter from the Crown to Hydro One. On March 18, 2021, WIFN stated at that time they were not in support for the advancement of this Project and is currently on 'hold', Hydro One responded back thanking them for letting them know. On April 1, 2021, Hydro One acknowledged the email from WIFN and in effort to maintain transparency and accountability regarding the EA process, Hydro One continued to share information and opportunities to meet. A meeting was held on May 5, 2021, to discuss WIFN's concerns.

Hydro One emailed the community with an update on the Project on March 5, 2021, April 1, 2021, and April 9, 2021, regarding ECI, the community VIS, and an opportunity to discuss the assessment of environmental effects and potential mitigation measures. WIFN provided Hydro One with historical information to be considered in the evaluation of alternative corridors prior to release of the draft ESR in late spring.

Hydro One emailed WIFN on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

WIFN was contacted via email on July 6, 2021, regarding upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project. WIFN was invited to attend both surveys. A follow up email was sent on August 4, 2021, where a representative from WIFN was invited to participate in Stage 2 Archaeological Assessment work and to inquire whether WIFN had any comments or questions regarding the draft ESR. WIFN responded on August 4, 2021, confirming they would be scheduling Archaeological monitors to participate in Stage 2 Archaeology Assessment in the fall.

On August 11, 2021, WIFN's consultant, Neegan Burnside Ltd, emailed Hydro One requesting a 2-3 week extension to the draft ESR review period for the submission of WIFN's comments. Hydro One responded to WIFN via email on the same day, advising them that an additional 30 days would be provided for comments on the draft ESR.

On September 10, 2021, WIFN submitted comments on the draft ESR to Hydro One. Hydro One emailed WIFN on February 18, 2022, to advise that Voltage Power has been selected to execute their plan to design, procure and construct the Project. Hydro One provided responses to WIFN's comments on the draft ESR on March 25, 2022. WIFN's comments on the draft ESR and Hydro One's corresponding responses are provided in **Section 3.14.1**.

3.6.4.2 Economic Opportunities – Jobs, Training and Procurement

Hydro One sent an email on April 9, 2021, to explain the ECI process, the announcement of the two EPC contractors and offer an introductory meeting.

Following the meeting held with WIFN on May 5, 2021, the Hydro One team provided dates to WIFN in order to continue the conversation and ensure that the community has the opportunity to engage in the EPC process.

3.6.5 Caldwell First Nation (CFN)

3.6.5.1 Class EA

In addition to the consultation process outlined above, CFN received an advanced project initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 7, 2020. Hydro One followed up with CFN in early February 2020, regarding the Notice of Commencement, to discuss the Project and to provide early notice of the upcoming CICs. The invitation to the CIC was sent on March 5, 2020, and Hydro One also invited the community to participate in the upcoming field surveys in April 2020.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the CIC due to public health developments related to COVID-19. Hydro One informed CFN of both the public and Anishnawbek VIS in May 2020 and requested input on the process via email on April 17, 2020. Correspondence regarding the CFA occurred from April 2020 to July 2020. A meeting was held on April 20, 2020, and discussions included the communities identified in the Crown delegation letter, archaeology and Anishnawbek VIS. Following the meeting, Hydro One shared several consultation materials, including the cancellation notice for the CICs, the notice for the VIS, presentation slides and previously sent emails.

An update email was sent to CFN on May 14, 2020, regarding the Anishnawbek VIS, upcoming field surveys, the TAC and the CFA. The invitation to the VIS was shared on May 14, 2020, and May 22, 2020. Hydro One invited CFN to participate in the TAC and offered a virtual community TAC as an alternative by email on May 27, 2020. An additional update email was sent on August 17, 2020, and Hydro One reiterated participation opportunities on the Project, including the CFA, TAC workshop, field surveys, Indigenous Engagement Consultant and economic benefits. CFN signed a CFA on July 23, 2020, and correspondences in relation to invoicing for capacity funding has been ongoing since. A Community Engagement Coordinator was hired by the First Nation utilizing the CFA funds. The coordinator manages the flow of information and

coordinates capacity and resources for CFN to assess the Project information. Hydro One shared the TAC workshop invitation and emailed CFN to follow up on September 15, 2020, with information. CFN participated in the September 22, 2020, and February 24, 2021, TAC workshops.

Hydro One also held a virtual route selection/TAC workshop with CFN on October 27, 2020, during which the Route Alternatives, route selection criteria and weighting, including Anishnawbek and Haudenosaunee participation, and Class EA process were presented and discussed. A meeting was held on November 24, 2020, to discuss economic participation opportunities for the Project. Hydro One shared hard copy materials for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020.

CFN shared a route evaluation memo with the project team on December 15, 2020, and a subsequent WebEx meeting was held on December 18, 2020, to discuss the memo, and for the project team to answer questions and provide additional context on the Project, the evaluation of the Route Alternatives and the natural environment field surveys conducted to support the Class EA.

In early January 2021, Hydro One corresponded with CFN regarding the importance of potential fishing grounds and fish-bearing creeks to CFN. Prior to announcing the selection of the preferred Route Alternative, Hydro One invited the community to attend sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. An early briefing was held on February 19, 2021, to present the progress and rationale on the preferred Route Alternative, including the input gathered from CFN.

CFN emailed Hydro One on February 17, 2021, and reiterated the community's strong interest in ecological protection and the opportunity to exercise their rights, and reiterating the community's preference for Route Alternative 1A. A subsequent virtual meeting was held on February 19, 2021, where Hydro One staff provided an early briefing on the selection of preferred Route Alternative 2A, including the rationale for why it had been selected and how input provided by CFN had been incorporated into the evaluation process. Subsequent to the meeting, a formal response to the February 17, 2021, email from CFN was sent on March 22, 2021, which reiterated many of the items discussed at the February 19, 2021, meeting.

Hydro One emailed CFN on February 25, 2021, and shared the invitation and information for the public and upcoming Anishnawbek VIS. An update email was sent in early March 2021 regarding the Project, ECI and the upcoming VIS.

Hydro One emailed the community with an update on the Project on April 1, 2021, April 9, 2021, and April 23, 2021, regarding ECI, the announcement of the two EPC contractors, the community VIS, and an opportunity to discuss the assessment of environmental effects and potential mitigation measures.

Hydro One emailed CFN on April 23, 2021, welcoming CFN to undertake a Traditional Ecological Study and providing examples on how the results of the study will be incorporated into aspects of the Project moving forward, and applied to future projects.

Hydro One emailed CFN on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

CFN was contacted via email in July 2021, regarding upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project. CFN was invited to attend both surveys. CFN responded on July 27, 2021, confirming their attendance at the aquatic survey being held on July 28, 2021. On July 28, CFN staff joined Hydro One and Dillon consulting staff, as well as representatives of CKSPFN, to observe the eDNA sampling and aquatic habitat assessments conducted on that date.

Hydro One emailed CFN on August 4, 2021, to inquire whether CFN had any comments or questions regarding the draft ESR. On August 9, 2021, CFN sent Hydro One a letter (via email) requesting an extension of an additional 60 days for the draft ESR review period. On August 12, 2021, Hydro One emailed CFN advising them that an additional 30 days would be provided for comments on the draft ESR. On September 1, 2021, Hydro One met with CFN to discuss CFN's upcoming Traditional Ecological Knowledge (TEK) and the timeline for submission of comments on the draft ESR. CFN emailed Hydro One to provide their initial comments on the draft ESR to Hydro One via email on September 7, 2021, and provided their TEK study conducted for the Chatham to Lakeshore Project via email on September 8, 2021. Hydro One met with CFN on September 8, 2021 to discuss the draft ESR and CFN's initial comments. On September 10, 2021, CFN emailed MECP, copying Hydro One, to submit a Section 16 Order Request and providing a list of comments on the draft ESR in support of their request.

On October 4, 2021, Hydro One emailed CFN to provide responses to CFN's comments on the draft ESR and to reiterate Hydro One's commitment to ongoing consultation and dialogue regarding the responses provided. CFN's Section 16 Order Request and associated comments, and Hydro One's responses, are summarized in **Section 3.15.2**.

Hydro One emailed CFN on February 3, 2022, in an effort to seek meaningful engagement with CFN for the Project and resolve concerns related to the Section 16 Order being reviewed by MECP.

Hydro One emailed CFN on February 18, 2022, to advise that Voltage Power has been selected to execute their plan to design, procure and construct the Project.

From February to September 2022, CFN and Hydro One communicated on several occasions to discuss Stage 2 Archaeological Assessment survey work and monitoring opportunities, capacity funding agreements and invoices, and opportunities to incorporate findings from CFNs TEK study in the ESR. On July 5, 2022, Hydro One provided draft documents demonstrating how Hydro One planned to incorporate CFNs TEK Study into the final ESR. The documents included a new environmental effects and mitigation table for the incorporation of Valued Components (VCs) that were directly addressable through management of the Project and a separate acknowledgment and response to broader issue VCs which are beyond the scope, mandate or ability of Hydro One to manage through the Project, but which are recognized as important concerns to CFN and its members. On July 7, 2022, Hydro One provided a copy of the Project level Cumulative Effects Assessment completed for the Project for CFN review. The Cumulative Effects Assessment included an analysis table and supporting maps.

On September 12, 2022, after a meeting in Leamington, ON to resolve some outstanding issues, CFN emailed Hydro One providing a letter of withdrawal of their Section 16 Request. CFN emailed MECP on September 28, 2022 providing their official withdrawal of the Section 16 Order Request for the project, dated September 12, 2022. On October 14, 2022, the MECP sent a letter to CFN leadership (copied to Hydro One) acknowledging CFN's withdrawal of their Section 16 Order Request.

3.6.5.2 Economic Opportunities – Jobs, Training and Procurement

Hydro One sent an email on April 9, 2021, to explain the ECI process, introduce the contractors and offer an introductory meeting.

CFN emailed on May 7, 2021, requesting a meeting to discuss equity participation and employment and training opportunities on the Project. The Hydro One is currently working with CFN to arrange a meeting to continue the conversation and ensure that the community has the opportunity to engage in the EPC process.

3.6.5.3 Traditional Ecological Knowledge Study

CFN completed a preliminary TEK study for the Chatham to Lakeshore Project and the final report was provided to Hydro One via email on September 8, 2021. Based on the data collected in the study, including from interviews and mapping exercises with several CFN members, it was identified that the Project area is of great importance to CFN members. The study identified key issues and project interactions with four primary CFN VCs, including the following:

- Water and Fishing
- Hunting and Trapping
- Plants and Medicines
- Cultural Continuity and Sense of Place

As described above, these VCs and other information presented in the TEK study have been incorporated into the ESR, including additional environmental effects and mitigation tables specific to the TEK study for those VCs and aspects of the study which are directly addressable through the management of the Project (as presented in **Section 7.8**).

In addition to the supplemental environmental effects and mitigation table described above, Hydro One provided the following acknowledgement of the broader issues and VCs that are beyond Hydro One's scope, mandate or control, but which Hydro One recognizes as important issues for CFN, as sent to CFN on July 5, 2022:

Hydro One acknowledges that the VCs described by CFN in the Caldwell First Nation Traditional Ecological Knowledge Preliminary Study for Hydro One's Chatham-Kent To Lakeshore Project ("TEK study") dated August 10, 2021, are of significant importance to the CFN community. We also note that many of these VCs relate to broader historical, local and regional issues faced by Indigenous communities in southwestern Ontario. This includes VCs such as Land clearing for and other effects of farming, greenhouses and industrial development, Increased competition from other hunters, Increased land privatization, concerns about cultural continuity and feeling a sense of connection to the territory, and loss of community connection through traditional foods and food sharing.

Hydro One recognizes that these are important issues to CFN. However, these are not issues that are within the direct control of Hydro One, either within the context of a single undertaking (such as the Chatham to Lakeshore project), nor on a regional level that includes multiple projects.

Management of these issues, including control and/or mitigation of effects is well beyond the mandate of Hydro One.

That said, while Hydro One is not able to directly control or mitigate all the effects to these VCs, we would be pleased to consider potential opportunities to address concerns that are within our control and to help address these issues in other ways. For example, Hydro One will be conducting a Biodiversity Initiative for the Project which will include opportunities to create or enhance habitat; this will include opportunities to incorporate TEK and medicinal or other plant species of interest, as well as potential opportunities for community-led education and sharing of traditional knowledge through the design and implementation of the habitat work. Hydro One is committed to and looks forward to working alongside the team at CFN to be involved in the Chatham to Lakeshore Biodiversity Initiative and would welcome the opportunity to meet to discuss in the near future.

The issue raised regarding the cumulative effects of development, and of infrastructure projects (such as the Chatham to Lakeshore project) enabling future growth and "induced" development, is also a broad issue that is outside the control of Hydro One. Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on CFN's current and future use of lands and resources, and the exercise of their Aboriginal and Treaty Rights and Interests. However, Hydro One's role is to provide the necessary electricity infrastructure based on planning conducted by, and direction received from the IESO. The Chatham to Lakeshore project, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future.

Hydro One intends to further assess the cumulative effects of the Project per the requirements of the Class Environmental Assessment for Minor Transmission Facilities (MTF) (i.e., "within the immediate project area").

We acknowledge the portions of CFN's TEK study which speak to Hydro One-specific consultation, and the importance of not just traditional knowledge, but also considering Indigenous land and resource stewardship values in the planning of new projects. We acknowledge the

challenges that communities have faced in recent years due to COVID-19, and that these challenges impact communities' ability to address and respond to requests for engagement by proponents such as Hydro One.

To this end, we are committed to continuing to find innovative ways to address these issues on the Chatham to Lakeshore Project and future projects and we value our relationship with CFN. We know we have more work to do, but we are committed to continually learning and improving along the way. We appreciate and respect the information shared by CFN and thank you for your continued engagement and interest and look forward to a meeting in the very near future to continue our work together.

3.6.6 Chippewas of Kettle and Stony Point First Nation (CKSPFN)

3.6.6.1 Class EA

In addition to the consultation process outlined above, CKSPFN received an advanced project initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 7, 2020.

Hydro One followed up with the community in early February 2020 regarding the Notice of Commencement, to discuss the Project and to provide early notice of the upcoming CICs. The invitation to the CICs were sent by email on March 5, 2020, and Hydro One also invited the community to participate in the upcoming field surveys in April 2020.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the CIC due to public health developments related to COVID-19. Correspondence regarding the CFA occurred from April 2020 and is still ongoing. A meeting was held on May 4, 2020, during which Hydro One provided an introduction to the Project, the Class EA process, the CFA and potential employment and training opportunities. Hydro One followed up by email on May 14, 2020, to provide an update on Anishnawbek VIS, field surveys, the TAC and the CFA.

In late-September 2020, Hydro One provided updates regarding the Route Selection Virtual Workshop and offered to host one with the community. The route selection presentation and workbook were provided. Hydro One reached out to the community on October 6, 2020, to inquire whether they would be interested to discuss the potential economic participation opportunities for the Project. Hydro One shared hard copy material for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020.

Hydro One followed up with the community on December 4, 2020, to provide a project update and to inquire whether the community would be interested in providing input into the route evaluation selection process, or identification of sensitive features. Hydro One had a phone call with the community later that day to discuss the Project.

Hydro One invited the community to attend sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. Hydro One also provided an update on availability for an upcoming economic participation meeting and the upcoming VIS in early February 2021. The invitation to the community VIS was emailed on February 25, 2021.

Hydro One emailed the community with updates on the Project on March 8, 2021, April 1, 2021, and April 9, 2021, regarding ECI, the announcement of the two EPC contractors, the community VIS, and an opportunity to discuss the assessment of environmental effects and potential mitigation measures. Hydro One reached out on April 26, 2021, to share previous correspondence on the Project and requesting input for how to proceed.

Hydro One emailed the community on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

CKSPFN were contacted via email in July 2021, regarding upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project. On July 28, CKSPFN staff joined Hydro One and Dillon consulting staff, as well as a representative from CFN to observe the eDNA sampling and aquatic habitat assessments conducted on that date.

The community emailed Hydro One on August 10, 2021, and shared their comments on the Draft ESR and formal submission of their Section 16 Order Request to MECP. Hydro One provided a response to the comments raised by email on September 17, 2021. The community emailed Hydro One on October 1, 2021, to respond to Hydro One's September 17, 2021 comments. Further discussions and a meeting occurred in September and October 2021 regarding the Draft ESR. Hydro One provided a response to the community's comments by email on November 23, 2021. CKSPFN's Section 16 Order Request and associated comments, and Hydro One's responses, are summarized in **Section 3.15.1**.

Hydro One emailed the community on February 18, 2022, to advise that Voltage Power has been selected to execute their plan to design, procure and construct the Project.

From February to September 2022, the community and Hydro One engaged on several occasions to discuss concerns related to the Section 16 Order Request. On July 5, 2022, Hydro One provided a copy of the Project level Cumulative Effects Assessment completed for the project. The Cumulative Effects Assessment included an analysis table and supporting maps.

On September 12, 2022, the community emailed MECP and Hydro One providing a letter of withdrawal of their Section 16 Order Request. On October 14, 2022, the MECP sent a letter to CKSPFN leadership (copied to Hydro One) acknowledging CKSPFN's withdrawal of their Section 16 Order Request.

3.6.6.2 Economic Opportunities – Jobs, Training and Procurement

Hydro One sent an email on April 9, 2021, to explain the ECI process, introduce both EPC contractors and offer an introductory meeting.

The Hydro One team is currently working to engage with the community in order to have a dialogue and to ensure that the community has the opportunity to engage in the EPC process and other potential economic benefits.

3.6.7 Chippewas of the Thames First Nation (COTTFN)

3.6.7.1 Class EA

In addition to the consultation process outlined above, COTTFN received an advanced initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 7, 2020. Hydro One followed up with the community in early February 2020 regarding the Notice of Commencement, to discuss the Project and to provide early notice of the upcoming CICs. The invitation to the CICs was sent by email on March 5, 2020, and Hydro One also invited the community to participate in the upcoming field surveys in April 2020.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the CIC due to public health developments related to COVID-19. Hydro One corresponded with COTTFN regarding the CFA from April 2020 to December 2020. Hydro One also informed COTTFN of the upcoming VIS for both the public and communities, and requested input on the process.

A teleconference was held on April 27, 2020, and discussions included COTTFN consultation protocol, upcoming environmental studies and opportunities to participate. Hydro One followed up by email on May 14, 2020, to provide an update on the public and Anishnawbek VIS, field surveys, the TAC and the CFA. In follow up to a

discussion with COTTFN, Hydro One provided the VIS invitation, presentation and overview of the Project and CFA by email on May 25, 2020. Representatives were also invited to attend the TAC workshop.

In late-September 2020, Hydro One offered to host a Route Selection Virtual Workshop with the community. Hydro One shared hard copy material for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020, and encouraged feedback on the reports.

COTTFN signed a CFA on December 14, 2020, and correspondence followed to set up the invoicing process. On January 15, 2020, Hydro One provided virtual training on the online invoicing platform to help with accessing the capacity funding.

Hydro One invited the community to attend sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. Hydro One followed up with an email providing an overview of the upcoming public and Anishnawbek VIS and provided the invitation via email on February 25, 2021.

Hydro One emailed the community with updates on the Project on March 8, 2021, and April 9, 2021, regarding ECI, announcing the two EPC contractors, the community VIS, and Indigenous participation. Hydro One is expecting COTTFN to submit a first draft of a Traditional Ecological Study by spring 2021.

Hydro One emailed COTTFN on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

COTTFN was contacted via email in July 2021, with an invitation to attend upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project.

Hydro One emailed COTTFN on August 4, 2021, to inquire whether COTTFN had any comments or questions regarding the draft ESR. COTTFN emailed their comments on the draft ESR to Hydro One, and also formally submitted a Section 16 Order Request to the MECP (copied to Hydro One) on August 10, 2021.

Hydro One provided a draft response to COTTFN's Section 16 Order Request and draft ESR comments by email on August 30, 2021, noting that more fulsome responses would follow. A meeting was held between COTTFN and Hydro One on August 31, 2021 to discuss the comments provided on the draft ESR and the Section 16 Order Request. Hydro One provided the final responses to COTTFN's Section 16 Order Request and draft

ESR comments via email on September 20, 2021, and subsequently met with COTTFN on September 21, 2021 to discuss the key responses to COTTFN's draft ESR/Section 16 Order Request comments. COTTFN's Section 16 Order Request and associated comments, and Hydro One's responses, are summarized in **Section 3.15.3**.

Hydro One and COTTFN continued to correspond and meet regularly through the fall of 2021 regarding the Project, with discussions including COTTFN's Culture and Rights Study (CRS), COTTFN's transition to utilizing the NationsConnect consultation software platform, and the biodiversity initiative planned for the project.

Hydro One emailed COTTFN on February 18, 2022, to advise that Voltage Power has been selected to execute their plan to design, procure and construct the Project.

From February to September 2022, COTTFN and Hydro One engaged on several occasions (including regularly scheduled monthly meetings) to discuss opportunities to incorporate findings from COTTFN's CRS into the final ESR and discussions regarding a Project level Cumulative Effects Assessment. On February 18, 2022, Hydro One provided a draft environmental effects and mitigation table for the incorporation of VCs described in the CRS that were directly addressable through management of the Project. On March 23, 2022, Hydro One provided a separate acknowledgment and response to broader issue VCs which are beyond the scope, mandate or ability of Hydro One to manage through the Project, but which are recognized as important concerns to COTTFN and its members. COTTFN provided a response to the broad issues acknowledgement on April 22, 2022, noting COTTFN's appreciation for the work done to date by Hydro One to incorporate the CRS into the final ESR, but expressing disagreement with some aspects of Hydro One's acknowledgement of the broader issues and cumulative effects, requesting Hydro One more fully consider and acknowledge its role (alongside that of other proponents, the IESO and the Crown) in cumulative effects to the region. On July 7, 2022, Hydro One provided a copy of the Project level Cumulative Effects Assessment completed for the Project for COTTFN review. The Cumulative Effects Assessment included an analysis table and supporting maps.

Throughout the summer of 2022, Hydro One continued to correspond with COTTFN on topics such as regional capacity funding, participation in Stage 2 Archaeological Assessment work, and plans for a Hydro One community open house at COTTFN. The community open house was held at COTTFN on September 15, 2022, and presented information on Hydro One ongoing and upcoming projects in southwestern Ontario including the Chatham to Lakeshore project.

On September 20, 2022, COTTFN emailed Hydro One and MECP providing a letter of withdrawal of their Section 16 Order Request. On October 14, 2022, the MECP sent a letter to COTTFN leadership (copied to Hydro One) acknowledging COTTFN's withdrawal of their Section 16 Order Request.

3.6.7.2 Economic Opportunities – Jobs, Training and Procurement

COTTFN informed Hydro One via letter on January 19, 2021, that they would like to discuss economic participation opportunities. A meeting was held on February 18, 2021, to discuss economic participation and equity partnerships. Another meeting was held on March 15, 2021, regarding their interest and concerns on economic participation.

Hydro One sent an email on April 9, 2021, to explain the ECI process, introduce the EPC contractors and offer an introductory meeting.

The Hydro One team is currently working to provide dates to COTTFN in order to continue the conversation and ensure that the community has the opportunity to engage in the EPC process.

3.6.7.3 Culture and Rights Study

COTTFN completed a Culture and Rights Study (CRS) and associated implications letter, which were provided to Hydro One via email on December 15, 2021. The CRS contained a description of the methodologies undertaken, including interviews with COTTFN members, and the limitations of the study. Based on the data collected in the study, it was identified that the Project area is of great importance to COTTFN members. The study identified key issues and project interactions with COTTFN VCs, which were presented and grouped into the following three categories of VCs:

1. Harvesting and Traditional Use
2. Governance and Stewardship
3. Cultural Continuity

For each of the three high-level VCs, specific subjects of interest were described (e.g., Plants and Medicines, Fishing and use of waterways etc.), including a description of the historical and ongoing changes from baseline conditions and COTTFN members' perspectives on the effects of the Chatham to Lakeshore project, as well as general continued development and growth in COTTFN's traditional territory.

In the implications letter accompanying the CRS, COTTFN reiterated several deficiencies with the draft ESR as outlined in their comments accompanying the Section 16 Order Request. These included:

1. Inadequate consultation and recognition of COTTFN's governance and stewardship rights,
2. Lack of recognition of historical context and ongoing pressures on COTTFN lands and resources,
3. Lack of integration of COTTFN knowledge in the assessment process,
4. Inadequate understanding of project impacts and impact pathways that may adversely impact COTTFN's constitutionally protected rights and interests (e.g., hunting, fishing, harvesting, tangible and intangible cultural resources) within our traditional territory; and,
5. Inadequate mitigations for offsetting impacts from the proposed project.

The implications letter further described the methods and limitations of the CRS, summarized the key findings related to the VCs presented in the CRS, and listed 9 requirements from COTTFN (some of which were reiterations of requirements from COTTFN's Section 16 Order Request submission):

1. Hydro One must work with COTTFN to incorporate the results of the COTTFN Study into the final ESR, future decision-making, and Project planning including in the development and implementation of mitigation measures and monitoring plans.
2. COTTFN requires the Proponent to work with COTTFN to incorporate COTTFN's land use and restoration initiatives in future project planning including rehabilitation and restoration planning.
3. COTTFN requires that Hydro One consults with COTTFN regarding key culturally important species of concern in relation to the Project, wildlife habitat, and natural areas including woodlands.
4. COTTFN requires Hydro One develop meaningful mitigations that will effectively mitigate Project impacts on wildlife, vegetation, aquatic species, COTTFN cultural heritage, and COTTFN Aboriginal and Treaty Rights.
5. COTTFN requires long-term funding to support COTTFN Treaty, Lands and Environment (TLE) Department staff engagement in the project.
6. COTTFN requires that Hydro One provide funding to complete a COTTFN-led study on cumulative effects to understand the total impacts from all projects (including past, present, and planned future Hydro One transmission lines) and changes in COTTFN values over time. This assessment can and should be used to

determine final project plans and ongoing work of Hydro One in COTTFN traditional territory. The nature and scope of this study will be determined in an agreement with Hydro One.

7. COTTFN requests further ongoing consultation on the Project with Hydro One. This should include ongoing discussions and collaboration between Hydro One and COTTFN. Discussions should cover the conditions listed above as well as all requirements listed in this letter, including but not limited to:
 - An agreement on how COTTFN Knowledge and findings from the Study will be considered in decision-making and further project planning including mitigation measures;
 - The co-development of mitigation plans and efforts that COTTFN determines to be necessary for the protection of our rights and interests;
 - The involvement of COTTFN in future environmental monitoring, including the hiring of COTTFN environmental monitors; Support for training COTTFN on cultural and environmental monitors;
 - Support for COTTFN land use planning initiatives, including but not limited to COTTFN's current traditional plant rehabilitation efforts, offsetting habitat impacts, developing inventories of key species of animals, plants, and medicines in the Project area so COTTFN can practice stewardship; and
 - Employment and contracting opportunities for COTTFN.
8. COTTFN appreciates that Hydro One has agreed in principle to support COTTFN's current initiatives on burial site exploration at the Mt. Elgin residential school, given the recent increased recognition and emphasis on the harms created by colonization, residential schools, and Canadian policies. COTTFN looks forward to discussing the specifics of this commitment with Hydro One through further consultation and engagement.
9. COTTFN requires that Hydro One support cultural heritage monitoring and mitigation efforts, including:
 - Reviewing COTTFN's archaeology protocol (currently in development) when complete, and in close collaboration with COTTFN, determining how to appropriately apply it to the Project (if timing allows) and all future Hydro One projects;

- Financially supporting training of COTTFN archaeology field liaisons (AFLs);
- Continued involvement of COTTFN in cultural heritage work, including presence of AFLs during archaeological assessments; and
- Supporting cultural revitalization activities, as identified by COTTFN.

As described above, these VCs and other information presented in the CRS have been incorporated into the ESR, including additional environmental effects and mitigation tables specific to the CRS for those VCs and aspects of the study which are directly addressable through the management of the Project.

The draft CRS effects and mitigation table was sent to COTTFN on February 18, 2022. In addition to the additional environmental effects and mitigation table described above, Hydro One provided the following acknowledgement of the broader issues and VCs that beyond Hydro One's scope, mandate or control, but which Hydro One recognizes as important issues for COTTFN, as sent to COTTFN on March 23, 2022:

Hydro One acknowledges that all of the Valued Components (VCs) described by COTTFN in the Culture and Rights Study (CRS) are of significant importance to the COTTFN community. We also note that many of these VCs relate to broader historical, local and regional issues faced by Indigenous communities in southwestern Ontario. This includes VCs such as:

- Access restrictions to areas of historical and potential future traditional uses;
- Inadequate land base for the community and food sovereignty/security;
- Lack of adequate housing;
- Effects of additional future development; and,
- Concerns about knowledge transfer and loss of language.

Hydro One recognizes that these are very real issues facing COTTFN and other Indigenous communities in southwestern Ontario and across the country every day. However, these are not issues that are within the direct control of Hydro One, either within the context of a single undertaking (such as the Chatham to Lakeshore project), nor on a regional level that includes multiple projects. Management of these issues, including control and/or mitigation of effects is well beyond the corporate mandate of Hydro One.

However, while Hydro One is not able to directly control or mitigate the effects to these Valued Components, we would be pleased to consider potential opportunities to help address these issues in other ways. For example, Hydro One will be conducting a Biodiversity Initiative for the Project which will include opportunities to create or enhance habitat; this will include opportunities to incorporate TEK and medicinal or other plant species of interest, as well as potential opportunities for community-led education and sharing of traditional knowledge through the design and implementation of the habitat work. As previously committed, Hydro One is committed to providing opportunities for COTTFN to be involved in the Chatham to Lakeshore Biodiversity Initiative. Hydro One is also aware that there are many community driven initiatives and projects to address these concerns and will consider how we can appropriately support such initiatives.

The issue raised regarding the cumulative effects of development, and of infrastructure projects (such as the Chatham to Lakeshore project) enabling future growth and development, is also a broad issue that is outside the control of Hydro One. Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on COTTFNs current and future use of lands and resources. However, Hydro One's role is to provide the necessary electrical infrastructure based on planning conducted by, and direction received from the Independent Electricity System Operator (IESO). In the case of the Chatham to Lakeshore Project and other Hydro One projects in southwestern Ontario, the need for this new infrastructure has been identified by the IESO in their regional planning framework and demand forecasts, with a formal direction provided to Hydro One to undertake planning and eventually construction and operation of the transmission assets. Additionally, the Ontario Energy Board (OEB) was issued an Order in Council to amend Hydro One's transmission license to include the development and construction of the Chatham to Lakeshore project. As such, Hydro One is acting on the direction provided by the IESO, as well as direction provided by the Crown via the OEB, to design and build the Chatham to Lakeshore transmission line.

As stated in Hydro One's initial response to COTTFN's comments (sent September 20, 2021), Hydro One intends to further assess the cumulative

effects of the Project per the requirements of the Class Environmental Assessment for Minor Transmission Facilities (MTF) (i.e., "within the immediate project area"). To extend beyond this, is outside the scope of the Class EA for MTF and Hydro One's mandate and control. The Chatham to Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future.

Hydro One acknowledges the portions of the CRS which speak to Hydro-One specific consultation, and the importance of not just traditional knowledge, but also considering Indigenous land and resource stewardship values in the planning of new projects. We acknowledge the challenges that communities have faced in recent years due to COVID-19, and that these challenges impact communities' ability to address and respond to requests for engagement by proponents such as Hydro One. In projects such as Chatham to Lakeshore, Hydro One seeks to balance incorporation of Indigenous knowledge and respect for traditional community decision-making practices, while considering other natural, socio-economic and technical factors, when planning new infrastructure on a timeline that meets the needs of the province.

To this end, we are committed to continuing to find innovative ways to address these issues on the Chatham to Lakeshore Project and future projects. We are committed to continually learning and improving along the way. We appreciate and respect the information shared by COTTFN and thank you for your continued engagement and interest.

COTTFN sent a letter to Hydro One dated April 22, 2022, following up on Hydro One's response to COTTFN's CRS for the Project, which had included a project effects and mitigation table relating to VCs raised in the CRS that were addressable within the context of the Chatham to Lakeshore Project and Class EA as well as a description of Hydro One's position on the VCs that revolved around broader historical, local and regional issues, both of which were to be included in the final ESR. COTTFN expressed disagreement with some of the assertions mentioned by Hydro One regarding broader historical and regional VCs, noting that while Hydro One's response acknowledged several of the key themes expressed by COTTFN citizens in the CRS, it denies the role of Hydro One's contributions to cumulative effects within the Nation's Traditional and Treaty Territory. The community stated that the tone of the message seems to conflict

with Hydro One's commitment to reconciliation that had previously been expressed to the community.

COTTFN acknowledged the roles of the IESO, the OEB, and the Ministry of Energy (MOE) in the planning and approval of new transmission lines in the region, but noted that the functions of those entities do not negate Hydro One's role in the design, construction and operation of the transmission infrastructure. COTTFN stated that Hydro One has some responsibility for cumulative effects within the territory and measures need to be taken to address those effects throughout the Project planning process. COTTFN also expressed that the existing and legacy Hydro One infrastructure also contributes to the effects on the livelihoods and rights of their community.

COTTFN did not accept the viewpoint of cumulative effects detailed in Hydro One's response, stating that cumulative effects cannot be thoroughly addressed within the context of a single project. The community mentioned Hydro One's plans for future projects in the region, identifying that each project will have its own effects both individual and cumulative. COTTFN proposed a plan to develop a proposal to assess cumulative effects as part of the regional capacity funding agreement that has been introduced between Hydro One and COTTFN for the ongoing and future Hydro One projects in the region.

COTTFN expressed an interest in participating in the planned Biodiversity Initiative discussed in the mitigation table and viewed these commitments as a positive step forward, noting that the adequacy of the offset measures will depend on the implementation of the Biodiversity Initiative. The community discussed plans to engage closely with Hydro One over the upcoming years regarding the planned transmission projects in the region, noting the importance of acknowledging the effects these projects will have and ensuring alignment with Indigenous rights. COTTFN requested that Hydro One more fully considers and acknowledges its role in cumulative effects within the ESR, and at minimum, note and describes COTTFN's response.

3.6.8 Oneida Nation of the Thames (Oneida)

3.6.8.1 Class EA

In addition to the consultation process outlined above, Hydro One received a letter from Oneida regarding the Notice of Commencement and acknowledged it will be released in January 2020. Oneida received an advanced project initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 8, 2020. A meeting was held on January 16, 2020, regarding the Project. The invitation to the CICs

was sent by email on March 5, 2020, and Hydro One also invited the community to participate in the upcoming field surveys in April 2020.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the CIC due to public health developments related to COVID-19. Correspondence regarding the CFA occurred from April 2020 to April 2021. Hydro One also informed Oneida of the upcoming VIS for both the public and the Haudenosaunee session, and requested input on the process in April 2020. Hydro One followed up by email on May 14, 2020, to provide an update on the Haudenosaunee VIS, field surveys, the TAC and the CFA. Hydro One also invited Oneida to participate in the TAC.

Hydro One offered to host a Route Selection Virtual Workshop with Oneida via email on September 23, 2020. In October 2020, Hydro One corresponded with Oneida regarding potential economic participation opportunities and updates on the Project, including the route selection process, VIS #2 and the CFA. The invitation to the VIS was shared with the community via email on October 23, 2020. Hydro One shared hard copy material for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020. Hydro One followed up with the community on December 4, 2020, to provide a project update and to inquire whether the community would be interested in providing input into the route evaluation, selection process, or identification of sensitive features.

Hydro One invited the community to attend sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. Hydro One followed up with an email providing an overview of the upcoming VIS and provided the invitation via email on February 25, 2021. A meeting was held on February 28, 2021, and Hydro One provided an overview of the selection of the preferred Route Alternative, the rationale for its selection and how input received helped to inform the evaluation. The invitation to the upcoming community VIS was shared via email on February 25, 2021.

Hydro One emailed the community with updates on the Project on March 8, 2021, and April 1, 2021, regarding ECI, announcing the two EPC contractors, the community VIS, assessment of environmental effects and potential mitigation measures and Indigenous participation. Hydro One reached out to Oneida in late-March 2021 and shared information for the community VIS and economic opportunities for the Project. Hydro One also provided the list of communities included in the Crown's delegation letter.

A meeting was held on April 1, 2021, regarding the Project and to discuss Oneida's inquiries related to Stage 2 Archaeological Assessment participation and Class EA review.

Hydro One emailed Oneida on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

Oneida was contacted via email on July 19, 2021, regarding upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project. Oneida was invited to attend both surveys. A follow up email was sent on August 4, 2021, where a representative from Oneida was invited to participate in Stage 2 Archaeological Assessment work and to inquire whether Oneida had any comments or questions regarding the draft ESR.

An email was sent to the community on August 12, 2021, indicating that an additional 30 days had been provided for the draft ESR review period for Indigenous communities.

Throughout October and November 2021, Oneida was provided with notice and details regarding fieldwork for Stage 2 Archaeological Assessment work.

On November 4, 2021, Oneida emailed Hydro One and requested an update presentation to the Oneida Environment Committee. A meeting was held on November 10, 2021, during which Hydro One provided an update on the Project and discussions included the ECI process, and equity participation. Hydro One followed up with Oneida via email on November 19, 2021, regarding the community's concerns related to the former rail corridor. Hydro One indicated they were interested in learning more about the testing that was completed in the corridor as mentioned during the November 10th meeting, and inquired if further information could be provided. Hydro One followed up by email on January 19, 2022, and noted they are willing and available to further discuss the outstanding items identified in the meeting held on November 10, 2021. A summary of the meeting was provided.

Hydro One emailed Oneida on August 11, 2022, and shared the completed draft of the Stage 2 Archaeological Assessment report for the Project corridor. Hydro One sent a follow up email on October 3, 2022, providing an update on the report, and the inclusion of additional areas that were surveyed. Conversations between Hydro One, Timmins-Martelle Heritage Consultants and Oneida continued through the summer and fall of 2022 regarding participation in ongoing stage 2 Archaeological Assessment fieldwork.

3.6.8.2 Economic Opportunities – Jobs, Training and Procurement

Hydro One sent an email on April 9, 2021, to explain the ECI process, introduce the contractors and offer an introductory meeting.

On April 13, 2021, Hydro One met with representatives of the Oneida Nation of the Thames to introduce the ECI process. The EPC contractors were introduced and participants were provided the opportunity to ask questions and have dialogue regarding next steps.

The Hydro One team is working with the EPC to continue the dialogue and ensure the First Nation has the opportunity to engage in the EPC process.

3.6.9 Six Nations of the Grand River Elected Council (Six Nations)

3.6.9.1 Class EA

In addition to the consultation process outlined above, Six Nations received an advanced project initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 8, 2020. Hydro One followed up with the community in early February 2020 regarding the Notice of Commencement and to provide early notice of the upcoming CICs. Hydro One and Six Nations also corresponded regarding a meeting to discuss the Project. The invitation to the CICs was sent by email on March 5, 2020, and Hydro One also invited the community to participate in the upcoming field surveys in April 2020.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the CIC due to public health developments related to COVID-19. Correspondence regarding the CFA began in April 2020 and is ongoing. In April 2020, Hydro One informed Six Nations of both the public and the Haudenosaunee VIS in May and requested input for the process. Hydro One followed up by email on May 14, 2020, to provide an update on VIS, natural environment field surveys, the TAC and the CFA. Six Nations and Hydro One discussed the VIS and Six Nations requested materials in advance. Hydro One also invited Six Nations to participate in the TAC.

Hydro One shared hard copy material for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020. Hydro One followed up with the community on December 4, 2020, to provide a project update and to inquire whether the community would be interested in providing input into the route evaluation, selection process, or identification of sensitive features.

Hydro One invited the community to attend meetings and workshop sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. Hydro One followed up with an email providing an overview of the upcoming VIS and provided the invitation via email on February 25, 2021.

Hydro One emailed the community with updates on the Project on March 8, 2021, April 1, 2021, and April 9, 2021, regarding ECI, announcing the two EPC contractors, the public and Haudenosaunee VIS, assessment of environmental effects and potential mitigation measures and Indigenous Participation.

Hydro One emailed Six Nations on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

Six Nations was contacted via email on July 6, 2021, and July 19, 2021, regarding upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project. Six Nations was invited to attend both surveys. A follow up email was sent on August 4, 2021, where a representative from Six Nations was invited to participate in Stage 2 Archaeological Assessment work and to inquire whether Six Nations had any comments or questions regarding the draft ESR.

An email was sent to the community on August 12, 2021, indicating that an additional 30 days had been provided for the draft ESR review period.

Hydro One emailed Six Nations on August 12, 2021, and provided an overview of the upcoming Stage 2 Archaeological Assessment work and how to arrange for attending representatives from Six Nations. On September 13, 2021, Six Nations emailed Hydro One and indicated they are unable to attend the upcoming surveys and requested to remain informed on updates related to the Project. Hydro One responded to Six Nations and indicated they will provide updates on progress and provide the draft Stage 2 Archaeological Assessment report for review when available.

Throughout Fall 2021 and Spring/Summer 2022, Six Nations was provided with notice and details regarding fieldwork for Stage 2 Archaeological Assessment work.

On March 14, 2022, Hydro One met with Six Nations staff to provide updates on a number of projects, including the Chatham to Lakeshore project. Hydro One emailed Six Nations on May 19, 2022, and provided documents and information related to an upcoming Open House for the planned major projects for Southwestern Ontario and

eDNA Field Surveys as part of Hydro One's continued consultation and engagement on major project planning activities in Southwestern Ontario.

Hydro One emailed Six Nations on August 11, 2022, and shared the completed draft of the Stage 2 Archaeological Assessment report for the Project corridor. Hydro One sent a follow up email on October 3, 2022, providing an update on the report, and the inclusion of additional areas that were surveyed.

3.6.9.2 Economic Opportunities – Jobs, Training and Procurement

Hydro One sent an email on April 9, 2021, to explain the ECI process, introduce the contractors and offer an introductory meeting.

On May 11, 2021, Hydro One met with representatives of Six Nations to introduce the ECI process. Both EPC contractors were introduced and participants were provided the opportunity to ask questions and have dialogue regarding next steps.

Following the introductory meeting, the EPC contractors are currently engaging with Six Nations to continue the discussion on employment, training and procurement opportunities. The Hydro One team is working with the EPC contractors to continue the dialogue and ensure the First Nation has the opportunity to engage in the EPC process.

3.6.10 Haudenosaunee Confederacy Chiefs Council/Haudenosaunee Development Institute (HCCC/HDI)

3.6.10.1 Class EA

In addition to the consultation process outlined above, HCCC/HDI received an advanced initiation letter dated December 3, 2019. The Notice of Commencement was sent on January 8, 2020. The community notified Hydro One via letter on January 27, 2020, of their concerns related to the Project and delegation. ENDM responded to HCCC/HDI on March 27, 2020, and provided the delegation letter. Hydro One followed up with the community in early February 2020 to organize a meeting to discuss the Project and to provide early notice of the upcoming CICs.

Hydro One emailed the community on March 20, 2020, informing them of the cancellation of the CIC due to public health developments related to COVID-19. Correspondence regarding the CFA occurred from April 2020 to May 2021. In April 2020, Hydro One informed HCCC/HDI of both the public and Haudenosaunee VIS in May and requested input on the process and invited the community to participate in environmental studies. Correspondence from May 2020 to July 2020 included coordinating the community's participation in environmental surveys. An update email

was sent on May 1, 2020, for environmental studies, and the public and Haudenosaunee VIS. Hydro One followed up by email on May 14, 2020, to provide an update on community VIS, field surveys, the TAC and the CFA.

Hydro One also invited HCCC/HDI to participate in the TAC and shared the initial route evaluation criteria on June 25, 2020. In late-September 2020, Hydro One offered to host a Route Selection Virtual Workshop with the community. Hydro One followed up in October 2020 to offer a discussion regarding potential economic participation opportunities for the Project. Hydro One shared hard copy material for the draft Stage 1 Archaeology Report, Cultural Heritage Existing Conditions Report and workbook with the community on November 30, 2020.

In-early January 2021, Hydro One informed the community of potential participation and responded to previously submitted questions related to consultation, consent, project initiation and delegation.

Hydro One invited the community to attend sessions related to the Project, including an early briefing, the third TAC workshop and information sessions by email on February 2, 2021. Hydro One followed up with an email providing an overview of the upcoming VIS and provided the invitation via email on February 25, 2021.

On February 26, 2021, Cavalluzzo LLP sent a letter on behalf of the HCCC/HDI to the ENDM, and cc'd Hydro One, to communicate concerns regarding the Project and the failure of the Crown to engage on the selection of Hydro One to construct the Project. The letter called on the Crown to engage and accommodate on any infringement of rights.

Hydro One emailed the community with updates on the Project on March 8, 2021, April 1, 2021, and April 9, 2021, regarding ECI, the community VIS, assessment of environmental effects and potential mitigation measures and Indigenous participation. Hydro One also provided an overview of the EPC contractors and invited the community to arrange an introductory meeting with Hydro One and the EPC contractors.

On May 4, 2021, Cavalluzzo LLP sent an email to Hydro One expressing concerns of Hydro One's proposed edits to the CFA in seeking to prescribe the limit and parameters of capacity funding being offered. In addition, HCCC/HDI maintains concerns of Hydro One not recognizing Haudenosaunee rights in relation to the Project. On May 5, 2021, Hydro One's legal counsel responded to the email providing points of clarification in respect to the CFA and invited HCCC/HDI to share a workplan to help inform the ongoing discussions regarding the CFA.

Hydro One emailed HCCC/HDI on June 10, 2021, and shared the Notice of draft ESR, noting that the draft ESR was available for an extended 60-day review and comment period beginning June 11, 2021.

On June 15, 2021, the legal counsel for the community emailed a letter presenting their concerns with the Project and included ENDM and MECP staff on the correspondence.

HCCC/HDI was contacted via email on July 6, 2021, regarding upcoming aquatic surveys and Stage 2 Archaeological Assessment work for the Project. HCCC/HDI was invited to attend both surveys. A follow up email was sent on August 4, 2021, where a representative from HCCC/HDI was invited to participate in Stage 2 Archaeological Assessment work and to inquire whether HCCC/HDI had any comments or questions regarding the draft ESR.

HDI participated in eDNA sampling and aquatic habitat assessments with project team staff on July 27, 2021.

An email was sent to the community on August 12, 2021, indicating that an additional 30 days had been provided for the draft ESR review period.

Hydro One emailed HDI on August 12, 2021, and provided an overview of the upcoming Stage 2 Archaeological Assessment work and how to arrange for attending representatives from HDI.

Throughout Fall 2021 and Spring/Summer 2022, HDI was provided with notice and details regarding fieldwork for Stage 2 Archaeological Assessment work.

Hydro One emailed HDI on August 11, 2022, and shared the completed draft of the Stage 2 Archaeological Assessment report for the Project corridor. Hydro One sent a follow up email on October 3, 2022, providing an update on the report, and the inclusion of additional areas that were surveyed and would be included in the first Stage 2 report.

Legal counsel for HDI sent a letter to legal counsel for Hydro One dated September 28, 2022, regarding supplemental responses that Hydro One had provided in support of the OEB Section 92 Leave-to-Construct application. The letter from HDI requested clarification on the initiators, grounds, status and oversight of the Section 16 Order Requests. In response to HDI's letter, Hydro One submitted additional information through the OEB S. 92 process relating to HDI's questions, including an update that all three Section 16 Order requests had since been withdrawn by the communities that had submitted them.

3.6.10.2 Economic Opportunities – Jobs, Training and Procurement

Hydro One sent an email on April 9, 2021, to explain the ECI process, introduce the contractors and offer an introductory meeting.

The Hydro One team is currently working to provide dates to the First Nation in order to continue the conversation and ensure that the community has the opportunity to engage in the EPC process.

3.6.11 Project Updates & Key Communications

In addition to correspondence with each community and invitations to VIS, Anishnawbek and Haudenosaunee communities were sent project updates throughout the Class EA process. The following updates were sent to Anishnawbek and Haudenosaunee Communities:

- May 27, 2020: Communities were invited to participate in the TAC and Hydro One also offered to hold a virtual Anishnawbek and Haudenosaunee route evaluation workshops.
- October 23, 2020: Communities were emailed an update on the route selection and were offered an opportunity to meet to discuss. They were invited to the virtual open house happening November 5, 2020. They were also provided an opportunity to meet to discuss economic participation and capacity funding.
- November 30, 2020: A cover letter, hard copy package and USB were sent to Anishnawbek and Haudenosaunee communities and included the GIS dataset and survey results/species list, Draft Stage 1 Archaeology Report, CHEC Report and workbook.
- February 2, 2021: Invitation to Anishnawbek and Haudenosaunee communities to attend sessions related to an early briefing of the Preferred Route, upcoming TAC Workshop and VIS.
- February 16, 2021: Invitation to Anishnawbek and Haudenosaunee communities to attend sessions related to an early briefing on the Preferred Route and Save the Date for the upcoming community VIS.
- February 25, 2021: Invitation to Anishnawbek and Haudenosaunee communities to attend VIS on March 22, 2021, and March 23, 2021.
- March 8, 2021: Anishnawbek and Haudenosaunee communities were sent an email providing an update on the Project and to outline the upcoming consultation.
- June 10, 2021: Anishnawbek and Haudenosaunee communities were sent the final notification and information regarding the release of the draft ESR for an extended 60-day review period.

- August 12, 2021: Anishnawbek and Haudenosaunee communities were sent an email indicating that an additional 30-day extension of the draft ESR review period was being provided for Indigenous communities.

3.6.12 Anishnawbek and Haudenosaunee Virtual Information Sessions (VIS – May 2020)

Two VIS were held on May 25, 2020, and May 26, 2020 (**Table 3-4**). Originally, CICs with Anishnawbek and Haudenosaunee communities were to be held in-person; however, due to public health developments related to COVID-19, the in-person CICs were postponed and provided virtually as two separate VIS. The first round of VIS were scheduled to provide the Anishnawbek and Haudenosaunee communities an opportunity to learn more about the Project need, the Class EA process, the proposed Route Alternatives, the route selection process, key milestones, and next steps.

The VIS also provided Hydro One an opportunity to gather important information about community interests and values. Participants were informed that their feedback will contribute to the decision-making process and ultimately influence Hydro One’s preferred route selection.

Anishnawbek and Haudenosaunee communities were notified of the virtual sessions by email on May 14, 2020, and provided with a notice detailing the VIS (**Appendix B-3**). Some communities provided consent to send automated calls to community members as a reminder of the upcoming information session.

Table 3-4: May 2020 Anishnawbek and Haudenosaunee VIS Overview

Communities	Date and Time	Virtual Forum	Number of Attendees
Haudenosaunee Communities	May 25, 2020 7:00 p.m. to 8:00 p.m. E.T.	Online Presentation and Live Discussion	213
Anishnawbek Communities	May 26, 2020 7:00 p.m. to 8:00 p.m. E.T.	Online Presentation and Live Discussion	56

The VIS were hosted using a virtual platform and participants could register and view the live stream of materials (**Appendix B-3**), and/or call in to listen to the presentation. Participants were able to submit their questions in advance or phone in to ask live questions. The VIS included a panel of Hydro One representatives and a moderator. The presentation covered the following topics:



- Project overview
- Class EA process
- First Nations Consultation
- Proposed Route Alternatives and route selection process
- Key milestones and next steps
- Live Question and Answer (Q&A) session

Hydro One responded to pre-submitted questions and participants were asked to join the queue for live questions. Hydro One asked two survey polling questions during each of the sessions and participants dialled in their response. If participants were unable to ask their live question, Hydro One encouraged questions to be emailed to Indigenous.Relations@HydroOne.com. Hydro One uploaded the video presentation, audio recordings from the Q&A and Notice materials to the [Chatham to Lakeshore Project Webpage](#).

Overall, 269 participants engaged in both VIS'. In total, 25 questions were asked during the sessions. The majority of questions focused on the following themes:

- Route selection
- Indigenous training/employment and business opportunities
- Use of Indigenous Traditional Knowledge
- Indigenous Community Engagement and Consultation

Haudenosaunee VIS – May 25, 2020

In total, 213 participants joined the Haudenosaunee VIS and the Hydro One panel responded to one live question and ten pre-submitted questions. The results of the two survey polling questions are summarized in **Table 3-5**.

Table 3-5: Haudenosaunee May 25 VIS Survey Polling Question Summary

Survey Question	Options	Response
Question 1: In your view, which criteria is most important to take into consideration as part of this project?	1) Vegetation, Wildlife and/or Water Bodies 2) Archeological Assessments 3) Protection of Indigenous Values and Traditional Land Use 4) Class Environmental Assessment Process	1) 7 2) 0 3) 9 4) 1

Survey Question	Options	Response
Question 2: What project information would you like to learn more about in future engagement sessions with the community?	1) Project Need 2) Technical Route Selection Process 3) Indigenous Business Opportunities 4) Employment and Training Opportunities	1) 0 2) 1 3) 1 4) 2
Question 1	Total Responses	17
Question 2	Total Responses	4

As shown in **Table 3-5**, the majority of Haudenosaunee participants thought the protection of Indigenous Values and traditional land use was the most important criteria to take into consideration. Half of the participants also wanted to learn more about employment and training opportunities.

A total of 11 questions were asked during the VIS; one live question and ten pre-submitted questions. Refer to **Section 3.6.14** for a summary of key comments and responses.

Anishnawbek VIS – May 26, 2020

In total, 56 participants joined the virtual session and the Hydro One panel responded to four live questions and ten pre-submitted questions.

The results of the two survey polling questions are summarized in **Table 3-6**.

Table 3-6: Anishnawbek May 26 VIS Survey Polling Question Summary

Survey Question	Options	Response
Question 1: In your view, which criteria is most important to take into consideration as part of this project?	1) Vegetation, Wildlife and/or Water Bodies 2) Archeological Assessments 3) Protection of Indigenous Values and Traditional Land Use 4) Class Environmental Assessment Process	1) 5 2) 0 3) 1 4) 0
Question 2: What project information would you like to learn more about in future engagement sessions with the community?	1) Project Need 2) Technical Route Selection Process 3) Indigenous Business Opportunities 4) Employment and Training Opportunities	1) 1 2) 0 3) 2 4) 1

Survey Question	Options	Response
Question 2	Total Responses	6
Question 2	Total Responses	4

As shown in **Table 3-6** the majority of the Anishnawbek participants agreed that the protection of the natural environment was the most important criteria to take into consideration. Half of the respondents wanted to learn more about Indigenous business opportunities.

A total of 14 questions were asked during the virtual session; four live questions and ten pre-submitted questions. Refer to **Section 3.6.14** for a summary of key comments and responses.

3.6.13 Anishnawbek and Haudenosaunee Virtual Information Sessions (VIS - March 2021)

Due to the ongoing COVID-19 pandemic public health restrictions applying to in-person gatherings, the Open House and Live Discussions were held virtually. The virtual Open House was available for communities to view online beginning February 25, 2021, and the Live Discussions were held on March 22, 2021, and March 23, 2021 (**Table 3-7**). The virtual sessions were scheduled to provide the Anishnawbek and Haudenosaunee communities with information regarding the preferred Route Alternative, including an in-depth update to the feedback and participation received from the Anishnawbek and Haudenosaunee communities into the route evaluation process. The virtual sessions also provided an overview of the Class EA process and employment and training opportunities along with next steps.

The Anishnawbek and Haudenosaunee communities were notified of the virtual sessions by e-mails detailing the virtual session information (**Appendix B-3**) beginning the week of February 22, 2021. The notice included a social media package with details of the virtual session encouraging the communities to post on their social media platforms inviting members to attend the scheduled event. In addition, the vendor provided a call to community members to inform them about the upcoming virtual session the day of the event with permission from representatives of the communities.

Table 3-7: March 2021 Anishnawbek and Haudenosaunee VIS Overview

Communities	Date and Time	Virtual Forum	Number of Attendees
Anishnawbek Communities	March 22, 2021 7:00 p.m. to 8:00 p.m. E.T.	Online Presentation and Live Discussion	27
Haudenosaunee Communities	March 23, 2021 7:00 p.m. to 8:00 p.m. E.T.	Online Presentation and Live Discussion	72

The Open House was available online (www.chatham-to-lakeshore-openhouse.com) prior to the Live Discussions. The Open House displayed information covering the following:

- Project overview
- Class EA process
- Interactive Project Map
- Route Alternatives assessed
- Route Evaluation Criteria
- Evaluation of Route Alternatives
- Preferred Route Alternative
- Engagement and technical work to date
- Next steps
- Comment Form

Community members could register online to participate in the live discussion sessions. The virtual Live Discussion sessions were presented live by phone by a panel of Hydro One representatives and a moderator, and included an online presentation that was uploaded to the [Chatham to Lakeshore Project Webpage \(Appendix B-3\)](#). Community Members were invited to view the presentation materials online during the presentation. Community members were also invited to submit questions in advance to IndigenousRelations@HydroOne.com, or by dialing in to submit live question and through a question submission box. The presentation covered the following:

- Project update
- Update on Class EA process
- Route evaluation process and selection of the Preferred Route Alternative
- Ongoing engagement including employment, training and Indigenous procurement opportunities.
- Next steps
- Live Q&A session

Community Members who preferred not to ask their question live, were provided an email address to submit their question electronically - IndigenousRelations@HydroOne.com.

In total, the panelists answered 18 questions during the sessions. The majority of questions focused on the following themes:

- Environmental Assessment Process
- Traditional Ecological Knowledge
- Indigenous-owned businesses and Employment Opportunities
- Indigenous Consultation and Participation
- Evaluation of Route Alternatives

Anishnawbek VIS – March 22, 2021

In total, 27 attendees joined the Anishnawbek Virtual Live Discussion. The Hydro One panel provided responses to two recurring questions and seven pre-submitted questions. Refer to **Section 3.6.14** for a summary of key comments and responses.

Haudenosaunee VIS – March 23, 2021

In total, 72 attendees joined the Haudenosaunee Virtual Live Discussion. The Hydro One panel provided responses to two recurring questions, one live question and ten pre-submitted questions. Refer to **Section 3.6.14** for a summary of key comments and responses.

3.6.14 Summary of Key Anishnawbek and Haudenosaunee Comments and Concerns

Table 3-8 provides a consolidated summary of the comments and concerns raised from Anishnawbek and Haudenosaunee communities throughout the Class EA consultation process, through the release of the draft ESR. Specific comments received from Anishnawbek and Haudenosaunee communities on the draft ESR during the review period, or accompanying Section 16 Order Requests, and Hydro One's responses, are provided in **Sections 3.14 and 3.15**, respectively.

Table 3-8: Summary of Key Comments and Concerns from Anishnawbek and Haudenosaunee Communities

Number	Theme	Question/Concern	Response
1.	Project Need/Information: Project Information	What is the location of the new transmission line?	The Project website contains more detailed ortho-photo tile maps of the preferred Route Alternative, as well as an interactive online mapping tool that allows users to view the preferred Route Alternative in detail in specific areas.
2.	Project Need/Information: Project Need	What is the need for the new line?	In Ontario, the IESO oversees electricity planning. They conduct routine planning to identify where electricity growth or demand is in the province and they work in conjunction with transmitters, generators and utilities like Hydro One to confirm how to best address these needs. In 2019, the IESO requested that Hydro One build a new transmission line that connects from our Chatham SS to our future Lakeshore TS to meet the significant amount of electricity growth in Essex County and the surrounding region over the next several years. Currently, there is only a limited amount of electric power, which can be transmitted by the existing transmission lines from our Chatham SS into Windsor-Essex Region.
3.	Project Need/Information: Electricity Rates	What impact will this project have on my electricity rate?	An application will be made for this project to obtain a Leave to Construct from the OEB. Through this regulatory process, the OEB will make a ruling on the viability of proceeding with this Project at the presented costs. Every few years, Hydro One provides details on our plans for the transmission system via a rate application to the OEB. Through the rigorous regulatory process, the OEB will then make a decision on our rate application, ensuring that customers are protected from any undue costs.
4.	Project Need/Information: Cost	What is the cost of the Project?	The preliminary cost of the Project, as indicated in a letter dated June 2019 from the IESO letter, is estimated between \$115 - 150 million. A detailed estimate will be provided before Hydro One seeks approval from OEB in late 2021.
5.	Class Environmental Assessment & Consultation: Class EA process	What is the Class EA process that is supporting the Project?	The Class EA for Minor Transmission Facilities (Hydro One, 2016) in accordance with the Ontario <i>EA Act</i> , sets out a planning and decision-making process that ensures transmission projects that have a predictable range of effects are planned and carried out in an environmentally acceptable manner. This process includes: <ul style="list-style-type: none"> • Consultation with government officials; government agencies; Indigenous communities; potentially affected and interested persons, affected businesses and interest groups. • Collection of environmental data and a description of existing conditions. • Identification and evaluation of alternative methods of undertaking the Project. • Identification of potential environmental effects of the Project and mitigation measures. • Selection of preferred Route Alternative. • As part of the Class EA process, a draft ESR is made available for public review and comment period.
6.	Class Environmental Assessment & Consultation: Class EA process	Will Hydro One Incorporate Indigenous Knowledge into the environmental studies?	Hydro One will incorporate feedback regarding Indigenous Knowledge into the Class EA including, where provided, the route evaluation and selection process and the effects assessment of the preferred Route Alternative. Representatives from Anishnawbek and Haudenosaunee communities have attended field surveys. As the Project progresses towards design and construction, Hydro One will work with communities to identify additional opportunities to incorporate this knowledge into the planning and execution of the Project, including the Biodiversity Initiative. Since the release of the draft ESR, Hydro One has received Indigenous knowledge studies from two communities and has incorporated these into the final ESR. This information is summarized in Sections 3.6.5, 3.6.7, and 7.8, and Table 7-2 and Table 7-3.
7.	Class Environmental Assessment & Consultation: Class EA process	Are there still opportunities for the Anishnawbek and Haudenosaunee communities to continue to participate in environmental studies?	Hydro One appreciates and encourages the continued participation of Anishnawbek and Haudenosaunee community representatives. Hydro One looks forward to continuing discussions for the remainder of the Class EA, subsequent studies and other project activities as the Project proceeds. Hydro One will provide field liaison monitoring opportunities for Stage 2 Archaeological Assessment and natural environment assessments for the preferred Route Alternative. As the Project progresses towards design and construction, Hydro One will work with communities to identify additional opportunities for participation, including the Biodiversity initiative for the Project.

Number	Theme	Question/Concern	Response
8.	Class Environmental Assessment & Consultation: Class EA process	What is the timeline for the EA process?	Hydro One is planning to release the draft ESR in June, for review and comment over the summer of 2021.
9.	Class Environmental Assessment & Consultation: Consultation	Which Indigenous communities has Hydro One consulted with on this project?	<p>Consultation with Indigenous communities is a top priority for Hydro One. We have received delegation of the procedural aspects of consultation from the Crown (Ministry of Energy, Northern Development and Mines). The Crown provided Hydro One with a list of Anishnawbek and Haudenosaunee communities with whom Hydro One is required to consult with on this project. Throughout the development activities, Hydro One has consulted and will continue to work closely with the communities identified, which include:</p> <ul style="list-style-type: none"> • Aamjiwnaang First Nation • Bkejwanong (Walpole Island) First Nation • Caldwell First Nation • Chippewas of Kettle and Stony Point First Nation • Chippewas of the Thames First Nation • Oneida Nation of the Thames • Six Nations of the Grand River Elected Council • Haudenosaunee Confederacy Chiefs Council/Haudenosaunee Development Institute
10.	Class Environmental Assessment & Consultation: Consultation	How can I provide feedback on this project?	<p>Hydro One will offer several opportunities to engage with interested individuals through direct contact with their Indigenous Relations Department and through community sessions. Several areas where individual feedback may aid in the Project include:</p> <ul style="list-style-type: none"> • Helping to understand local and existing environment. • The development of evaluation criteria – in an Indigenous context. • Informing the project team on how to help avoid or mitigate environmental effects and learning about the net effects (including positive). This will be documented in the ESR.
11.	Class Environmental Assessment & Consultation: Consultation	WIFN/3 Fires Council concerns with Haudenosaunee involvement / recognition from the Crown?	Hydro One acknowledges and respects that Anishnawbek and Haudenosaunee communities may have recognized or asserted Aboriginal or treaty rights and overall interests within the Project area. Hydro One also acknowledged that these interests might be overlapping and varying. As a privately owned company, we have been directed by the Crown to undertake the procedural aspects of the Crown's duty to consult on the Project. Hydro One is committed to robust and respectful engagement with all communities with an interest in the Project. A list of communities that Hydro One has been asked to engage and consult with has been provided by the Crown based on <i>their</i> assessment of the communities' rights and potential project impacts. Hydro One continues to consult with all communities listed by the Crown in the duty to consult delegation letter provided to Hydro One to address any Project related interests or concerns.
12.	Class Environmental Assessment & Consultation: Consultation	Concerns raised by HCCC/HDI.	HCCC/HDI expressed concerns regarding assertion of rights and economic participation in relation to the Project. Hydro One met with HCCC/HDI to work towards addressing their concerns and has committed to working together to move the Project forward. Hydro One is presently corresponding with HDI representatives on the conclusion of a CFA to assist HCCC/HDI with capacity funding to participate in the engagement process.

Number	Theme	Question/Concern	Response
13.	Archaeological Resources: Archaeological Resources	How will assessment of potential Archaeological resources be conducted for this project?	<p>Stage 1 Archaeological Assessment was conducted for each of the Route Alternatives to confirm known archaeological sites and identify features and areas of archeological potential. This contributed to refinements in the some of the Route Alternatives to locate them away from known sites with Archaeological resources still anticipated to remain in the ground, as well as the consideration of archaeological features of potential in the evaluation of Route Alternatives.</p> <p>Now that a preferred Route Alternative has been selected, a Stage 2 Archaeological Assessment will be conducted for the areas identified along the preferred Route Alternative with the potential for archaeological resources. If any areas are identified during the Stage 2 Archaeological Assessment as requiring further assessment, Stage 3 and/or 4 Archaeological Assessments will be conducted for those areas as required.</p> <p>Should archaeological artifacts be encountered during construction, work in the vicinity will cease and a licensed archaeologist will be engaged immediately to ensure compliance with the provincial <i>Heritage Act</i>. Likewise, should any human remains be encountered during construction, work in the vicinity will cease and the police and coroner will be notified immediately, as well as the Registrar of Cemeteries to ensure compliance with the <i>Funeral, Burial and Cremation Services Act</i>.</p>
14.	Archaeological Resources: Archaeological Resources	Will there be opportunities for Anishnawbek and Haudenosaunee communities to participate in upcoming Archaeological Assessments?	Yes, Hydro One will provide field liaison monitoring opportunities for the upcoming Stage 2 Archaeological Assessment for the preferred Route Alternative. Field surveys for the Stage 2 Archaeological Assessment are anticipated to commence in late-summer 2021.
15.	Health and Safety: Electric and Magnetic Fields (EMFs)	Concerns about EMFs	<p>Health and safety is our top priority at Hydro One, and we design and operate our equipment across the province in accordance with all regulatory requirements including the Canadian Electric Code and CSA Standards, which account for public safety.</p> <p>EMF levels are invisible sources found everywhere electricity is used including home appliances, computers, offices and electrical stations. They are strongest when close to their source, and as you move away from the source, the strength of the fields fades rapidly.</p> <p>Hydro One seeks guidance from health experts such as Health Canada and the World Health Organization for health related concerns. We understand, Health Canada does not consider that any precautionary measures are needed regarding exposure to power frequency or fields produced by power transmissions.</p> <p>Generally, by the edge of our ROW, EMF fields in the home are higher from everyday household items, such as appliances and general use of electricity than from transmission lines at a distance.</p> <p>We are committed to understanding, addressing and communicating information regarding health concerns individuals may have. Hydro One has further information on our website, as well as a designated EMF information telephone line for any specific questions. Information can be found on the Hydro One Electric and Magnetic Field webpage, and our toll free EMF hotline is 1-800-728-9533.</p>
16.	Health and Safety: Herbicide Use	Will herbicide be used at any time in the Project?	<p>The construction contractor will implement a weed control plan for their work within agricultural areas.</p> <p>During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line. Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices.</p>

Number	Theme	Question/Concern	Response
17.	Route Alternatives and Evaluation: Route Alternatives	How did you identify the Route Alternatives?	Prior to the start of the Class EA, our team conducted preliminary work to identify Route Alternatives to build the new line from the Chatham SS to our future Lakeshore TS. We considered known technical and environmental features and constraints such as large waterbodies, dense residential areas, environmentally significant areas, and looked for opportunities to parallel linear infrastructure and utilize existing transmission corridors. Based on that information, we developed three viable Route Alternatives and associated variations which were evaluated throughout the Class EA.
18.	Route Alternatives and Evaluation: Route Evaluation and Selection	Why are Natural Environment criteria being weighted differently? All aspects of the natural environment should be considered equally.	Incorporating a weighted criteria analysis in the evaluation of Route Alternatives was done to provide an additional avenue for Anishnawbek and Haudenosaunee communities, and project stakeholders such as agencies, municipalities, interest groups and members of the public to provide input into the route evaluation framework (e.g., beyond just the identification of criteria). Hydro One has considered this feedback during the weighting of criteria for the Project, and will consider it for other projects in the future going forward.
19.	Route Alternatives and Evaluation: Route Evaluation and Selection	How was the preferred Route Alternative selected?	Over the past year Hydro One has conducted a process to study, learn more and collect feedback on the three Route Alternatives and associated variations that were identified at the start of the Project. Using feedback received from stakeholders, in addition to information from technical and environmental studies, we weighed the advantages and disadvantages of each Route Alternative in a fair and holistic manner across the four different categories. Through this analysis, Route Alternative 2A was selected as the preferred, based on its collective advantages.
20.	Route Alternatives and Evaluation: Route Evaluation and Selection	How is cost being considered in the evaluation of the Route Alternatives?	The Technical and Cost category represents a number of criteria relating to the design and construction aspects of each Route Alternative, many of which will ultimately impact the final cost of each Route Alternative.
21.	Project Design: Lines	What are the design criteria for the new transmission line?	The new transmission line must meet several technical criteria, which includes the following: <ul style="list-style-type: none"> • The transmission line must operate at 230 kV and transfer 400 megawatts (MW) of power. • The line itself could be a lattice tower design or monopole steel tower design. Once further defined, Hydro One will be able to decide on the correct structure and width of the ROW. • The transmission line right of way can be expected to be approximately 150 feet in width.
22.	Project Design: Lines	Will the lines be buried?	When burying high voltage transmission lines in either a tunnel or within a duct bank, there are many factors that need to be taken into consideration. This includes technical feasibility, disruption to the surface environment (e.g. open trench excavations) and cost. When considering those factors, it was determined that for this Project, an overhead line was the only viable means of meeting the need for the Project.
23.	Project Design: Lines	Will the line go above watercourses?	The Project will involve an overhead transmission line; this means that the conductors (wires carrying the electricity), supported by steel structures will exist several metres above the ground surface at a safe height. As a result, any watercourses that needs to be crossed by the transmission line can be spanned overhead.
24.	Project Design: Right-of-Way	How wide is the ROW for the transmission corridor?	The typical ROW for a 230 kV transmission corridor is 150 feet. However, the exact corridor width will be determined as Hydro One conducts design planning. Further details are expected to be shared this summer.
25.	Existing Infrastructure: Use of Existing Infrastructure	Was upgrading the existing lines considered?	In Ontario, the IESO evaluates the future electricity needs. They conduct routine planning to identify where electricity growth or demand is in the province is and how to best address these needs. As a part of their recent planning cycle, they assessed a variety of options to ensure that the region's electricity needs are met reliably and at the lowest cost, and found the new 230 kV transmission line between the Chatham SS and the future Lakeshore TS to be most preferable option to meet near- to mid-term electricity needs in the area west of Chatham.

Number	Theme	Question/Concern	Response
26.	Existing Infrastructure: Use of Existing Infrastructure	As part of the work to identify the route have you considered the old rail corridor or a portion of the 401?	<p>Hydro One has thoroughly investigated the viable Route Alternatives to connect the Chatham SS to the future Lakeshore TS, and has identified and assessed a diverse set of Route Alternatives that will meet the need for the Project.</p> <p>As part of the preliminary work to identify potential Route Alternatives, the Hydro One team looked at a number of considerations, including known technical and environmental constraints such as waterbodies, dense residential areas and environmentally significant areas. Hydro one also considered opportunities to parallel linear infrastructure – such as existing transmission corridors, Highway 401 and railroads. More specifically, Hydro One looked at paralleling the old railroad which runs through North Buxton, Fletcher, Tilbury, Comber and onwards. This railroad, however, was deemed unfeasible due to several technical constraints, including its narrow width, bisection of established residential areas, and the availability of the railway corridor as sections are utilized by other industries, and encroachment upon existing wind turbines.</p> <p>Additionally, Route Alternative 2C parallels the Highway 401 corridor to the extent determined viable by Hydro One. Through the Class EA, Hydro One evaluated and compared each of these Route Alternatives, including Route Alternative 2C, to select the preferred Route Alternative for the Project. Route Alternative 2A was ultimately selected as the preferred Route Alternative.</p>
27.	Existing Infrastructure: Use of Existing Infrastructure	Was paralleling existing infrastructure considered?	<p>When planning a new transmission lines, paralleling existing linear infrastructure is typically considered as an alternative where viable due to efficiencies that can be realized in the required ROW width, as well as the reduction in the number of corridors located across the landscape/region, which is in line with the Provincial Policy Statement. That said, while paralleling the existing 230 kV corridor was a starting point in identifying Route Alternatives for this Project, we did not limit ourselves to this option and that is why we evaluated a wide variety of diverse routes, each with their own benefits. This includes utilizing an existing idle transmission line corridor, paralleling the Highway 401 corridor, and building an entirely new greenfield corridor.</p>
28.	Existing Infrastructure: Community Partnerships and Revenue-Generating Projects	Potential effects to projects and facilities involving equity partnerships with communities should be considered. Effects to these facilities, such as extended outages, could affect important revenue streams for partner communities.	<p>Where identified by communities, Hydro One has assessed such facilities to determine whether any of the Route Alternatives may cause an effect such as outages. While some of these identified facilities did overlap with the LSA for the Project, or were connected to transmission circuits in the area, Hydro One did not identify any potential for significant adverse effects to these facilities related to any of the Route Alternatives.</p> <p>The Lakeshore TS, currently under construction, will help to mitigate any risk of extended transmission outages to the circuits that these facilities are connected to, by providing additional switching capabilities to the 230 kV transmission network in the region.</p>
29.	Natural Environment: Impacts to animals and their habitats	Concerned about the impact the line will have on animals and their habitat.	<p>Within the Class EA, effects to natural environment and wildlife habitats, are considered in the evaluation of the Route Alternatives, and the identification of environmental effects and potential mitigation measures (Section 7.7.8.5), before an infrastructure project advances to detailed design and construction. Hydro One will continue to provide opportunities for Anishnawbek and Haudenosaunee communities to participate in discussions regarding effects, mitigation and restoration to wildlife and their habitats on the Project moving forward.</p>
30.	Natural Environment: Impacts to aquatic habitats	Concerned about the impact the line will have to aquatic habitats.	<p>Within the Class EA, effects to natural environment and aquatic habitats are considered in the evaluation of the Route Alternatives, and the identification of environmental effects and potential mitigation measures (Section 7.7.8.2), before an infrastructure project advances to detailed design and construction. The Project will involve an overhead transmission line; this means that the conductors (wires carrying the electricity), supported by steel structures will exist several metres above the ground surface at a safe height. As a result, any watercourses crossed by the transmission line can be spanned overhead. While temporary watercourse crossings may need to be installed, mitigation measures will be employed as mentioned above. Hydro One will continue to provide opportunities for Anishnawbek and Haudenosaunee communities to participate in discussions regarding effects, mitigation and restoration to aquatic habitats on the Project moving forward.</p>

Number	Theme	Question/Concern	Response
31.	Natural Environment: Species at Risk (SAR)	Concerned about the impact that the Project could have to a Butternut grove identified along Route 1 during field surveys.	As described in Section 4.6.7 , during the natural environment field surveys conducted in the 2020 field season, Hydro One's consulting biologists and attending community representatives identified a grove of endangered Butternut (<i>Juglans cinerea</i>) adjacent to the existing 230 kV transmission lines. Butternut were also identified along an adjacent hedgerow which would have been traversed by some variations associated with Route Alternative 1, necessitating removal of some Butternut as they are an incompatible species with overhead transmission lines. During the route evaluation, potential and known SAR habitats, including the observed Butternut and their habitat, were considered in the Natural Environment and Anishnawbek and Haudenosaunee categories. As Route Alternative 2A was ultimately selected as the preferred Route Alternative, and no Butternut were identified along Route Alternative 2A, Hydro One does not currently anticipate any effects to Butternut as a result of the Project. In the event Butternut is identified along Route Alternative 2A going forward, Hydro One will follow the appropriate provincial regulations regarding assessment and removal of Butternut.
32.	Natural Environment: Species at Risk (SAR)	Concerned about the impact that the Project could have to aquatic SAR.	As described in Section 4.6.7 , potential aquatic SAR habitat was identified for Lake Chubsucker (<i>Erimyzon sucetta</i>) and Lilliput (<i>Tozolasma parvum</i>) in association with Route Alternative 2. Lake Chubsucker is listed as endangered federally and threatened provincially, while Lilliput is provincially listed as threatened. Similarly, although background mapping identified habitat for Round Pigtoe (<i>Pleurobema sintaxia</i>), listed as endangered federally and provincially, in association with all Route Alternatives, the PSA is beyond the current Canadian range of the species (DFO, 2019). The same mitigation measures outlined above for aquatic habitat would be employed with respect to potential impacts to aquatic SAR. In the event the construction of watercourse crossings has the potential to impact habitat of Lake Chubsucker and Lilliput, necessary permits and approvals from MECP and DFO would be obtained before the commencement of work.
33.	Natural Environment: Traditional Ecological Knowledge	Will Hydro One use Indigenous people to identify medicinal plants?	Hydro One has sought input from community members and participants on the location, type and importance of medicinal plants during the Route Alternative evaluation process and during the effects assessment of the preferred Route Alternative. Additionally, representatives from Anishnawbek and Haudenosaunee communities have attended field surveys. As the Project progresses towards design and construction, Hydro One will work with communities to identify additional opportunities to incorporate this knowledge into the planning and execution of the Project.
34.	Natural Environment: Biodiversity Initiative	Are there opportunities for communities to participate in biodiversity initiatives?	Hydro One values input from community members on biodiversity initiatives, whether it be Traditional Knowledge or any information that the community may want to put forward. Hydro One would like to work with communities to identify locations for the initiative, to identify Anishnawbek and Haudenosaunee-specific ideas, how they benefit the communities and the surrounding region, and understand Indigenous values. Hydro One plans to advance the Biodiversity Initiative following completion of the Class EA and OEB Section 92 processes.
35.	Property Acquisition: Property Acquisition	Once the route has been selected will Hydro One be purchasing the land it needs or pursuing easement rights?	Hydro One's real estate team will work closely with directly impacted property owners who have the preferred ROW on their property. In order to construct the line, Hydro One will require new land rights. Hydro One's goal is to secure voluntary property settlements, using project specific land acquisition compensation principles, which would grant Hydro One the ability to construct, operate and maintain the transmission line. These principles will provide property owners the choice of Hydro One either acquiring an easement or ownership of the lands required for the Project.
36.	Property Acquisition: Pinery Provincial Park	Will this project go through Pinery Provincial Park? "This is considered unceded territory and will present issues."	Pinery Provincial Park will not be affected or traversed by the new transmission line, as it is approximately 100 km north of the Study Area.
37.	Economic and Skills Development Opportunities: Employment, Training and Business Opportunities	Was there any participation of Anishnawbek and Haudenosaunee communities in the hiring process?	Hydro One is currently in the early definition and delivery stage; however, Hydro One believes that in order to be a good partner with the communities, opportunities for training and skill development are to be offered.

Number	Theme	Question/Concern	Response
38.	Economic and Skills Development Opportunities: Employment, Training and Business Opportunities	Will there be potential business opportunities for Indigenous businesses?	Yes, there will be opportunities for Indigenous-owned businesses within the region. Discussions will occur between the EPC Contractors, the community businesses, and Hydro One to try and ensure that the participation of Indigenous owned businesses is maximized during the construction on this Project.
39.	Economic and Skills Development Opportunities: Employment, Training and Business Opportunities	Will there be potential Anishnawbek and Haudenosaunee employment and procurement opportunities through this Project?	Hydro One recognizes the importance of engagement with Anishnawbek and Haudenosaunee communities in connection with the Project. Hydro One will explore and discuss various benefits, including, but not limited to, capacity funding to participate in the engagement process, procurement, contracting and employment opportunities. Indigenous Peoples are an important part of Hydro One's workforce. Hydro One is committed to increasing the representation of qualified Indigenous employees as part of the Project and for all levels in their workforce. Hydro One is committed to developing and maintaining business relationships with Indigenous businesses and communities for opportunities. Hydro One supports procurement opportunities for qualified Indigenous-owned businesses and the development and capacity of Indigenous suppliers who can provide goods and services for the Project.
40.	Economic and Skills Development Opportunities: Employment, Training and Business Opportunities	Following Hydro One's announcement of the ECI this month, can you please share whether there will be further engagements from both the EPC contractors and the Anishnawbek and Haudenosaunee participation?	Hydro One has chosen an ECI model for the Project. Under this model, two EPC contractors have been pre-qualified and will work with Hydro One to develop the design and construction solution to be utilized on this Project. Indigenous participation and inclusion in the delivery of the Project is of greatest importance to Hydro One. As the Project progresses, Hydro One will be holding engagements with the EPC contractors and your community to discuss the Project. Information such as job types and numbers, procurement and sub-contracting that need to be utilized in the delivery of the works will be discussed. This will assist Hydro One in understanding the capacity that exists within the communities. Hydro One is committed to meaningful Indigenous participation on the Project and will have discussions about capacity building through forms such as training and skills development, as well as opportunities for business enhancement to ensure participation from the community is maximized.
41.	Economic and Skills Development Opportunities: Employment, Training and Business Opportunities	Will there be training and job opportunities for Anishnawbek and Haudenosaunee communities through this project?	The EPC Contractors and Hydro One will be meeting with representatives from Anishnawbek and Haudenosaunee communities. Part of the meetings will be to discuss the opportunities for employment on the Project. The workforce that will be delivering the construction phase of the Project will be one of our EPC contractors; however, they will draw upon as many members from the communities as possible to carry out aspects of the construction of the Project. To ensure that community members are able to meaningfully participate in construction, there will be training and jobs that will be offered through the EPC contractors.
42.	Economic and Skills Development Opportunities: Partnership Opportunities	Will there be partnership opportunities on this project?	Hydro One recognizes the importance of engagement with Anishnawbek and Haudenosaunee communities in connection with the Project. Hydro One has engaged with the communities regarding potential opportunities for economic participation in the Project and will continue to work to advance meaningful opportunities for economic benefits throughout the process.

3.7 Federal Government and Agencies

As part of the consultation program for the Project, the following federal government representatives and agencies were contacted during the Class EA Process:

- Agriculture and Agri-Food Canada
- Canadian National Railway (CNR)
- Canadian Pacific Railway (CP Rail)
- Canadian Wildlife Services (CWS)
- Environment and Climate Change Canada (ECCC)
- Fisheries and Oceans Canada (DFO)
- Transport Canada (TC)
- VIA Rail

No concerns were raised by the federal agencies. Correspondence with Federal Government and Agencies is included in the Record of Consultation (**Appendix B-6**).

3.7.1 Agriculture and Agri-Food Canada

Hydro One emailed the notices for the above mentioned engagement opportunities to Agriculture and Agri-Food Canada. No comments or concerns were raised by Agriculture and Agri-Food Canada.

3.7.2 Canadian National Railway (CN Rail)

Hydro One emailed the notices for the above mentioned engagement opportunities to CN Rail. Hydro One called CN Rail on November 6, 2020, to follow up on the notices and provided a brief overview of the Project and referred to a crossing with CN Rail. In the call, CN Rail indicated that if the line is an overhead crossing then there would be minimal concerns as long as standards were met and there would be no interference with train electronics. No other comments or concerns were raised by CN Rail.

3.7.3 Canadian Pacific Railway (CP Rail)

Hydro One emailed the notices for the above mentioned engagement opportunities to CP Rail. Hydro One called CP Rail in September 2020 to follow up on the notices. CP Rail returned the call on September 21, 2020, and Hydro One provided a brief overview of the Project and referred to the Route Alternatives which may impact CP Rail track. In the call, Hydro One confirmed the expansion would not be in the direction of the CP Rail ROW and CP Rail staff indicated that as long as the new line would remain outside of the CP Rail ROW, they do not foresee any immediate conflicts. CP Rail indicated more details may be required depending on the work adjacent to the railway. Hydro One followed up by email on September 22, 2020, and provided maps and more

information on the Route Alternatives that may cross CP Railway track and outlined anticipated next steps for the Project. The following day, CP Rail emailed to indicate they do not foresee any issues and Hydro One agreed to notify CP Rail if the preferred Route Alternative crosses or parallels CP Rail track. No other comments or concerns were raised by CP Rail. CP Rail was included on the update regarding the selection of the preferred Route Alternative on February 25, 2021, and a subsequent follow-up email reiterating the selection of the preferred Route Alternative and section parallel to the CP track was also sent on March 2, 2021.

No comments were submitted by CP Rail during the draft ESR review period.

3.7.4 Canadian Wildlife Services (CWS)

Hydro One emailed the notices for the above mentioned engagement opportunities to CWS. No comments or concerns were raised by CWS.

3.7.5 Environment and Climate Change Canada (ECCC)

Hydro One emailed the notices for the above mentioned engagement opportunities to ECCC. ECCC emailed Hydro One and inquired whether the Route Alternatives crossed federal lands. Hydro One provided confirmation in a follow up email on June 12, 2020, that the Route Alternatives do not cross federal lands. No other comments or concerns were raised by ECCC.

3.7.6 Fisheries and Oceans Canada (DFO)

Hydro One emailed the notices for the above mentioned engagement opportunities to DFO. Hydro One received a confirmation of receipt for the Notice of Commencement from DFO on January 28, 2020, by email. No other comments or concerns were raised by DFO.

3.7.7 Transport Canada (TC)

Hydro One emailed the notices for the above mentioned engagement opportunities to TC. Hydro One followed up by email on December 3, 2020, regarding previous correspondence and inquired whether TC had any comments related to the route evaluation. TC emailed Hydro One on December 9, 2020, and indicated they do not typically provide input regarding Route Alternatives and encouraged Hydro One to contact the Navigation Protection program team. The Navigation Protection program team responded to Hydro One's email regarding the Project and provided Hydro One with resources. No other comments or concerns were raised by TC.

In July and September 2021, Voltage Power (the EPC contractor for the Chatham to Lakeshore project) made submissions to TC regarding aeronautic assessment of the new transmission structures, and potential navigable waters crossing review, respectively. TC emailed Hydro One on September 27, 2022, responding to the navigable waters review submission, noting that the Chatham to Lakeshore Project may not require an application to the Minister as it appears to fall under the Minor Works Order, and provided some additional information and tools to assist Hydro One and Voltage Power in confirming that the Project meets the criteria of the Minor Works Order.

3.7.8 VIA Rail

Hydro One emailed the notices for the above mentioned engagement opportunities to VIA Rail. Hydro One followed up by email in August 2020, regarding previous correspondence and inquired whether VIA Rail had any comments related to the Project. VIA Rail emailed Hydro One on August 21, 2020, and indicated they do not have any objection with the Project. Hydro One indicated that if the Route Alternative near the VIA Rail line is selected, they would be in touch to discuss further. No other comments or concerns were raised by VIA Rail.

3.7.9 NAV CANADA

In July 2022, Voltage Power (the EPC contractor for the Chatham to Lakeshore project) made a submission to Nav Canada regarding a Land Use Assessment for the new transmission structures. On July 22, 2022, NAV CANADA emailed Hydro One and shared a letter and requested that Hydro One provide notification at least 10 business days prior to the start of construction.

3.8 Provincial Government & Agencies

As part of the consultation program for the Project, the following provincial government representatives and agencies were contacted during the Class EA Process:

- Ministry of Agriculture, Food and Rural Affairs (OMAFRA)
- Ministry of Energy, Northern Development and Mines (ENDM)
- Ministry of the Environment, Conservation and Parks (MECP)
- Ministry of Government and Consumer Services (MGSC)
- Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)
- Ministry of Indigenous Affairs (MIA)
- Ministry of Natural Resources and Forestry (MNRF)
- Ministry of Municipal Affairs and Housing (MMAH)
- Ministry of Transportation (MTO)

- Essex Region Conservation Authority (ERCA)
- Infrastructure Ontario (IO)
- Lower Thames Valley Conservation Authority (LTVCA)
- Ontario Clean Water Agency (OCWA)
- Ontario Provincial Police (OPP)

Correspondence with Provincial Government and Agencies is included in the Record of Consultation (**Appendix B-6**).

3.8.1 Rick Nicholls, MPP for Chatham-Kent-Leamington

Hydro One had regular touchpoints with MPP Nicholls by way of email and meetings to share updates on the Class EA process and notices regarding the above-mentioned engagement opportunities. On January 16, 2020, Hydro One and MPP Nicholls' staff had a teleconference to introduce the Project, share further information and expected next steps. In July 2020, Hydro One shared a written update on the Project and consultation to date. In October 2020 and during the Live Discussion, MPP Nicholls shared questions related to health and safety and electro-magnetic fields (EMF). A subsequent meeting was held on November 13, 2020, to follow up with MPP Nicholls to discuss these items further.

In February 2021, Hydro One held a briefing with MPP Nicholls on the selection of the preferred Route Alternative and next steps. MPP Nicholls shared feedback and concerns related to route considerations, impacts to drainage tiles, property values and impacts to agricultural operations. A subsequent meeting was held on March 13, 2021 to discuss additional comments and concerns from the community, including the proximity of the line to homes, the impact the line will have on farmers' contracts with distributors, the impact of the line to future growth, interference to farming equipment communication systems and tower design. Route Alternatives previously studied and suggested diversions along the preferred Route Alternative were also discussed.

On April 16, 2021, Hydro One held meetings with MPP Nicholls, his staff and residents in both Chatham and Comber to discuss their concerns related to the Project. The topic of discussion focused on health concerns, property values and impacts, visual impacts, development in Comber and suggested diversions along the preferred Route Alternative.

Hydro One emailed MPP Nicholls on September 3, 2021, and shared a notice prepared for distribution to residents along the route. The notice provided an update on the Project, including a review of recent activities and next steps. Hydro One provided an update on engagement with property owners and next steps in the Class EA process.

On September 30, 2021, Hydro One met with the MPP to review the status of the Project, our progress on responding to property owner concerns, and design details.

In the June 2022 provincial elections, MPP Nicholls was not re-elected. Hydro One will continue engagements with the new incumbent MPP Trevor Jones.

3.8.2 Taras Natyshak, MPP for Essex

Hydro One shared notices and updates by way of email throughout the Class EA process, and also shared notices regarding the above-mentioned engagement opportunities, with MPP Natyshak's office. On January 29, 2020, Hydro One had a meeting with MPP Natyshak's staff to introduce the Project, share further information and expected next steps. In July 2020, Hydro One shared a written update on the Project and consultation to date. In February 2021, Hydro One shared information on the preferred Route Alternative and next steps, and offered an opportunity for further discussion.

Hydro One emailed MPP Natyshak on September 9, 2021, and shared a notice that prepared for distribution to residents along the route. The notice provided an update on the project, including a review of recent activities and next steps. Hydro One provided an update on engagement with property owners and next steps in the Class EA process, and requested the MPP's availability for a meeting.

In the June 2022 provincial elections, MPP Natyshak did not run for re-election. Hydro One will continue engagements with the new incumbent MPP Anthony Leard.

3.8.3 Ministry of Agriculture, Food and Rural Affairs (OMAFRA)

Hydro One shared notices via email for the above mentioned engagement opportunities to OMAFRA. On September 29, 2020, OMAFRA emailed Hydro One and confirmed the feedback received from the agricultural sector regarding the placement of lines and Hydro One responded with more information as requested. On October 16, 2020, OMAFRA emailed Hydro One and inquired about comments received regarding mid-field towers. Hydro One provided clarification on the comments received in an email on October 30, 2020.

On July 29, 2021, OMAFRA emailed Hydro One and provided initial comments on the draft ESR. During a phone discussion held on July 30, 2021, OMAFRA staff followed up on their emailed comments on the draft ESR and inquired about the primary agricultural stakeholders consulted and interference to GPS equipment. OMAFRA emailed Hydro One on August 10, 2021, and shared their comments on the draft ESR. Hydro One

emailed OMAFRA on September 30, 2022, to provide a formal response to OMAFRA's comments on the draft ESR.

No other comments or concerns were raised by OMAFRA.

3.8.4 Ministry of Energy, Northern Development and Mines (ENDM)¹

As discussed in **Section 3.6**, on November 29, 2019, ENDM confirmed the list of Indigenous communities to be included in the consultation process for the proposed Project (**Appendix B-3**) and formally delegated the procedural aspects of consultation to Hydro One, with respect to any regulated requirements for the Project. ENDM directed Hydro One to notify these communities, provide project information and opportunities for input, and maintain a record of interactions with the communities. Additionally, ENDM requested that they be kept up to date on the consultations. ENDM emailed Hydro One on November 25, 2020, to provide an updated list of staff to include on upcoming updates. No other comments or concerns were raised by ENDM. As requested, ENDM staff identified in the delegation letter of November 29, 2019, were circulated on the Notices of Commencement and other key project updates provided to Indigenous communities.

On June 15, 2021, ENDM was copied on an email from HCCC/HDI's legal counsel, which included a letter presenting HCCC/HDI's concerns with the Project. ENDM emailed WIFN (copying Hydro One on the correspondence) on June 17, 2021 to provide a response WIFN's February 2021 letter to the Crown regarding overlapping treaty rights in relation to the Project.

Hydro One met with staff from MECP, ENDM and the Ministry of Economic Development, Job Creation and Trade on September 22, 2022, to discuss cumulative effects assessments, including the assessment that had been completed for the Chatham to Lakeshore project, and to relay some of the requests and concerns regarding cumulative effects that Hydro One had received from Indigenous communities.

3.8.5 Ministry of the Environment, Conservation and Parks (MECP)

Hydro One shared notices via email for the above-mentioned engagement opportunities to MECP. On June 23, 2020, MECP shared comments from their Air Quality

¹ Note: Following the release of the Draft ESR, the Ministry of Energy, Northern Development and Mines's name and structure changed. The responsibilities of ENDM now falls under several organizations.

Analyst and Hydro One confirmed that temporary effects such as air quality and dust will be considered as part of the ESR but may not be considered as a criterion for the selection of the preferred Route Alternative, as these effects are generally limited to the construction phase of the Project and therefore would be generally equivalent for all of the Route Alternatives. MECP forwarded an email from their Species at Risk Branch on July 29, 2020, containing the Proponent's Guide: Preliminary Screening for Hydro One's reference for Species at Risk. Hydro One informed MECP on August 5, 2020, that the resources provided by MECP will inform part of the baseline environment description in the ESR.

As requested by ENDM, MECP staff identified in the delegation letter of November 29, 2019, were circulated on the Notices of Commencement and other key project updates provided to FN&H communities.

Baseline natural environment field surveys were completed between April 20, 2020, and July 13, 2020. The baseline field surveys were conducted in accordance with the Natural Environment Field Program Terms of Reference (TOR) (Dillon, 2020). The Natural Environment Field Program TOR was submitted to the MECP throughout February and March 2020 for review and comment in advance of the 2020 field program. MECP responded on March 18, 2020, acknowledging that the Natural Environment Field Program TOR had been provided to a Management Biologist for review, and that they would follow up directly with Hydro One following their review with any comments. No comments were received and the natural environment field program was conducted as described in the Natural Environment Field Program TOR.

MECP's Species at Risk Branch emailed their comments on the draft ESR to Hydro One on June 28, 2021. Hydro One provided their response via email on July 16, 2021.

On August 10, 2021, the MECP emailed Hydro One providing a letter containing the MECP's formal comments on the draft ESR for the Chatham to Lakeshore project. The MECP's commented on the topics of land use planning, air quality, surface water, groundwater, source water protection, Indigenous consultation, cumulative effects, and also reiterated the comments on Species at Risk as previously provided by the MECP Species at Risk Branch staff. Hydro One emailed MECP a formal response to their comments on the draft ESR on April 21, 2022.

As Section 16 Order Requests were submitted, Hydro One continued to engage with MECP, including holding a meeting with MECP staff on August 17, 2021, to discuss next steps in the process and provide updates on engagement with the Section 16 Order requesters and responses. On October 4, 2021, Hydro One emailed the MECP to

provide the completed Tables A and B, outlining the issues and concerns raised with the Section 16 Order Requests and providing Hydro One's formal responses to each (see **Appendix B-8**). Hydro One and MECP staff met again on November 16, 2021 to review the responses provided by Hydro One to date and discuss some questions that the MECP staff had identified in their review to date; Hydro One followed up via email on December 16, 2021 to provide written responses to the MECP's questions. Hydro One continued to provide regular updates to the MECP through summer 2022 on engagement and progress made with the Section 16 Order Requesting communities, including a meeting with MECP staff on June 6, 2022 and providing regular email updates on progress made in addressing commitments to incorporate the CRS and TEK studies into the final ESR and completion of a project-level cumulative effects assessment. MECP staff also provided updates to Hydro One on the MECP's outreach to the Section 16 Order Requesting communities to discuss their concerns.

Hydro One met with staff from MECP, ENDM and the Ministry of Economic Development, Job Creation and Trade on September 22, 2022, to discuss cumulative effects assessments, including the assessment that had been completed for the Chatham to Lakeshore project, and to relay some of the requests and concerns regarding cumulative effects that Hydro One had received from Indigenous communities.

In September 2022, all three Section 16 Order Requests submitted on the Chatham to Lakeshore Class EA were formally withdrawn, and on October 14, 2022 the MECP provided via email a letter formally acknowledging the withdrawal of the Section 16 Order Requests and stating that Hydro One can proceed with the project, subject to any additional permits or approvals that may be required. The MECP acknowledgement letters are provided in **Appendix B-8**.

3.8.6 Ministry of Government and Consumer Services (MGCS)

Hydro One shared notices via email for the above mentioned engagement opportunities to MGCS. No comments or concerns were raised by MGCS.

3.8.7 Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI)²

Hydro One shared notices via email for the above mentioned engagement opportunities to MHSTCI. In response to the Notice of Commencement, MHSTCI

² Note: Following the release of the Draft ESR, the Ministry of Heritage, Sport, Tourism and Culture Industries' name and structure changed to the Ministry of Tourism, Culture and Sport.

provided their formal comments and recommendations for the Project by email on February 18, 2020 (**Appendix B-4**). Hydro One responded and confirmed the Project will proceed with initial baseline studies for all potential Route Alternatives to inform the selection of the preferred Route Alternative. On June 25, 2020, MHSTCI emailed Hydro One and re-shared the February 18, 2020, letter providing an outline of their expectations for the study with regards to cultural heritage. No other comments or concerns were raised by MHSTCI.

3.8.8 Ministry of Indigenous Affairs (MIA)

Hydro One shared notices via email for the above mentioned engagement opportunities to MIA. No other comments or concerns were raised by MIA.

3.8.9 Ministry of Municipal Affairs and Housing (MMAH)

Hydro One shared notices via email for the above mentioned engagement opportunities to MMAH. Upon receiving the invitation to participate in the TAC, MMAH stated that they do not need to be involved in the TAC but would be available as a technical resource if specific land use planning matters arose. Hydro One emailed MMAH in May 2021, to inform them of the concerns raised by the Municipality of Lakeshore regarding the preferred Route Alternative and the designated Employment Lands in the community of Comber that are traversed by the preferred Route Alternative. Hydro One staff noted that the Lakeshore Official Plan designations had been considered in the evaluation of the Route Alternatives and that it is very common for new commercial/industrial developments to occur directly adjacent to, and occasionally find compatible uses within, overhead transmission corridors. MMAH staff thanked Hydro One for the update, and agreed with Hydro One's planned approach to continue to work with the Municipality to address their concerns. No other comments or concerns were raised by MMAH.

3.8.10 Ministry of Natural Resources and Forestry (MNRF)

Hydro One shared notices, via email, for the above mentioned engagement opportunities to MNRF. On February 13, 2020, MNRF notified Hydro One that a screening of natural heritage or other resources has not been completed. Hydro One informed MNRF that the background research had begun. In March 2020, Hydro One left a voicemail for the MNRF Petroleum Operations Section to seek further information about petroleum operations for the Project and received information by email. Hydro One emailed MNRF on June 25, 2020, and requested data. MNRF provided a guide to assist Hydro One with accessing natural heritage information. No other comments or concerns were raised by MNRF.

3.8.11 Ministry of Transportation (MTO)

Hydro One shared notices via email for the above mentioned engagement opportunities to MTO. Hydro One informed MTO of the overlapping study areas and requested that the project teams coordinate. MTO emailed Hydro One on July 2, 2020, and shared a document containing their comments and requirements for the Project (**Appendix B-4**). A video-conference was held on July 8, 2020, with MTO and Hydro One staff to discuss the projects in the area, including scope and anticipated timelines. MTO provided Hydro One with their minimum vertical clearances and requirements and requested they be incorporated in the drawings. A meeting was held on August 13, 2020, regarding MTO's setback requirements related to Highway 401, restrictions and requirements for future maintenance and work, and potential conflicts at crossings and interchanges. A subsequent meeting was held on September 4, 2020, during which MTO provided an overview of their project plans and how they relate to Hydro One's project and nearby lines. MTO emailed Hydro One on September 15, 2020, sharing a letter stating their concerns with the proposed Route Alternatives, specifically with Route Alternatives 2C, 1C and 1D, particularly as they relate to potential conflicts at Charing Cross Road and at the Bloomfield Road interchange (**Appendix B-4**).

Hydro One emailed MTO in response to their letter on September 28, 2020, and indicated that they have been investigating minor refinements to the Route Alternatives and requested clarification for some of the items in their letter. Hydro One presented the route refinements to MTO on October 14, 2020, and discussed any potential conflicts or concerns with MTO. Hydro One had a phone call with MTO on November 17, 2020, regarding Hydro One's inquiry about updates with MTO's Regional Director and the agreement. Hydro One followed up by phone on December 4, 2020, to inquire whether MTO had any further comments, specifically from MTO regional management. Hydro One confirmed with MTO by email on December 7, 2020, that they would review the additional comments received. A meeting was held on February 2, 2021, to provide MTO with an early briefing on the preferred Route Alternative as requested. MTO did not raise any immediate concerns about the preferred Route Alternative. A meeting was held on April 19, 2021, with MTO, Hydro One and representatives from the Owner's Engineer and ECI firms to discuss next steps on the Project, and to further discuss MTO considerations for the preferred Route Alternative design and permitting.

Hydro One emailed MTO on July 20, 2021, and August 26, 2021, to follow up on items requiring MTO's confirmation. MTO emailed Hydro One on September 7, 2021, and September 8, 2021, and provided responses to the requested items, including confirmation of upcoming plans for an MTO project, MTO policy and planned work on Highway 77 for consideration during the design phase.

No other comments or concerns were raised by MTO.

3.8.12 Essex Region Conservation Authority (ERCA)

Hydro One shared notices via email for the above mentioned engagement opportunities to ERCA. Hydro One provided shapefiles of the Route Alternatives to ERCA on February 7, 2020, as requested. Hydro One spoke with ERCA on June 5, 2020, regarding the Biodiversity Initiative that Hydro One is planning to implement for the Project to compensate for net effects to natural features as a result of the Project. ERCA also stated a request for Hydro One to share natural heritage information obtained through the Class EA so that the information could contribute to the provincial knowledge base, and Hydro One staff confirmed that they would be willing to share this information with organizations such as ERCA. ERCA shared environmental data sets requested by the Hydro One project team by email on August 5, 2020.

ERCA emailed Hydro One on July 20, 2021, and provided comments regarding permitting requirements. Hydro One provided a response via email on August 10, 2021. ERCA emailed Hydro One on August 10, 2021, and provided the contact information of their Regulations Coordinator.

No other comments or concerns were raised by ERCA.

3.8.13 Infrastructure Ontario (IO)

Hydro One shared notices via email for the above mentioned engagement opportunities to IO. On January 31, 2020, IO emailed Hydro One and identified potential government properties within or adjacent to the study area. Hydro One emailed IO on May 28, 2020, and confirmed the lands and easements within the existing transmission corridors. Hydro One emailed IO on March 26, 2021, and confirmed the government properties directly affected by the Project based on the recent selection of the preferred Route Alternative, and noted that other than some MTO property parcels associated with highways, these government properties generally consisted of lands used for existing transmission lines and facilities. No other comments or concerns were raised by IO.

3.8.14 Lower Thames Valley Conservation Authority (LTVCA)

Hydro One shared notices via email for the above mentioned engagement opportunities to LTVCA. Hydro One emailed LTVCA on June 23, 2020, and requested datasets to support the Project. LTVCA provided comments on the proposed Route Alternatives on November 4, 2020 (**Appendix B-4**). Hydro One emailed LTVCA on November 5, 2020, and requested data for the areas mentioned in LTVCA's comments,

as well as any additional information. Hydro One emailed LTVCA on April 6, 2021, and requested that LTVCA identify regulated areas adjacent to the Chatham SS in support of detailed design and construction planning for the planned expansion of the station. LTVCA confirmed that the Chatham SS expansion area is outside of the LTVCA regulations limits and noted they will look over the preferred Route Alternative to confirm LTVCA regulatory requirements.

LTVCA emailed Hydro One on June 10, 2021, and noted that a pair of Osprey have been trying to build a nest on one of the older towers south of 3rd Line and inquired about installing a nesting tower in that area. Hydro One reached out to LTVCA by email on June 22, 2021, and indicated they will work to find a solution. Hydro One requested more information on the location of the nest/tower in question. Hydro One also inquired about the possibility of erecting a nest pole off of the transmission ROW (but in close proximity if possible) in a follow up email sent on July 19, 2021. LTVCA responded via email on July 28, 2021, and noted that the Osprey nest appeared to have been knocked over by the wind. LTVCA commented on the possible location and whether to inquire with the Municipality of Chatham-Kent.

No other comments or concerns were raised by LTVCA.

3.8.15 Ontario Clean Water Agency (OCWA)

Hydro One shared notices via email for the above mentioned engagement opportunities to OCWA. No comments or concerns were raised by OCWA.

3.8.16 Ontario Provincial Police (OPP)

Hydro One shared notices via email for the above mentioned engagement opportunities to OPP. No comments or concerns were raised by OPP.

3.9 Municipal Governments and Agencies

As part of the consultation program for the proposed Project, the following Municipal Governments and agencies were contacted:

- County of Essex
- Municipality of Chatham-Kent
- Chatham-Kent Fire and Emergency Services
- Municipality of Lakeshore
- Municipality of Lakeshore Fire Services
- Essex-Windsor Emergency Medical Services
- Chatham-Kent Small Business Centre

For each of the aforementioned, the Mayor, Deputy Mayor, Ward Councillors, Chief Administrative Officer (CAO), Clerk, and key department staff (e.g., Engineering, Public Works, Planning) were contacted, where appropriate.

Correspondence with Municipal Government and Agencies is included in the Record of Consultation (**Appendix B-6**).

3.9.1 County of Essex – Municipal Staff

Hydro One emailed the notices for the above mentioned engagement opportunities to the County of Essex. Staff from the County of Essex participated in the TAC for the Class EA. More detail on the TAC is provided in **Section 3.12**. County staff emailed Hydro One on June 25, 2020, and shared their concerns regarding the Project, including effects to County Roads, construction timing, effects to County projects and property effects. Hydro One emailed the County staff on July 3, 2020, and August 11, 2020, and provided responses to their questions related to traffic management and the future Lakeshore TS, and that the concerns raised regarding County roads would be addressed in the draft ESR for the Project (see **Section 7.5.3**). County staff replied on August 11, 2020, and stated that they would review and provide comments on the draft ESR.

County staff provided comments on the draft ESR by email on August 11, 2021. Hydro One provided responses to the County's comments on June 24, 2022.

3.9.2 County of Essex – Elected Officials

Hydro One had regular touchpoints by way of email and meetings with Warden McNamara and CAO Maisonville to provide regular updates on the Class EA process and to share notices regarding the above mentioned engagement opportunities. On January 13, 2020, Hydro One had a meeting with Warden McNamara and CAO Maisonville to introduce the Project, share further information and expected next steps.

In June 2020, a touchpoint meeting was held with the Warden and CAO during which Hydro One shared information on the current status of the Project and feedback received from the community. The County noted that through the TAC they would provide comments and feedback on access and protecting local roads during construction. Hydro One presented to County of Essex Council on November 11, 2020, to provide an update on the Project, and shared what Hydro One had been hearing to date and next steps. Warden McNamara emphasized the importance of electricity infrastructure for the expected growth in the region.

Prior to announcing the selection of the preferred Route Alternative, Hydro One met with Warden McNamara and CAO Galloway on February 17, 2021, to provide a briefing

on the preferred Route Alternative and next steps in the process. The discussion included items related to the design of the line, including how it would cross county roads.

Hydro One met with Warden McNamara and CAO Galloway on August 5, and September 15, 2021, to discuss design details for the Project and next steps in working with community partners. On May 11, 2022, Hydro One emailed Warden McNamara and CAO Galloway providing an update on the Project.

As Hydro One continues work on the Project and working with landowners, they will continue to engage with Warden McNamara and CAO Galloway, and respond to items raised.

3.9.3 Municipality of Chatham-Kent – Municipal Staff

Hydro One shared notices, via email, for the above mentioned engagement opportunities to the Municipality of Chatham-Kent. Staff from the Municipality of Chatham-Kent participated in the TAC for the Class EA. More detail on the TAC is provided in **Section 3.12**.

Subsequent to comments received at the first TAC workshop, Hydro One reached out to the Municipality regarding future growth plans on July 31, 2020, and received the requested information on growth in the community in August 2020. Hydro One and the Municipality discussed the Municipality's concerns related to sections of Route Alternatives 2A and 2B in relation to current and forecasted growth in discussions beginning September 2020. Additional mapping, datasets, and other information related to the Municipality's future land use plans were requested and provided in October 2020 for consideration in the evaluation. Hydro One also informed the Municipality in October 2020 that criterion for both existing and future (planned) land uses will be included in the evaluation. Hydro One informed the Municipality on October 15, 2020 that four route refinements have been identified based on the technical studies and stakeholder feedback.

Hydro One held a briefing with the Municipality on February 17, 2021, to present the selected preferred route and next steps for the Project. Meetings were held on March 4, 2021, and March 10, 2021, during which the Municipality staff stated that they fundamentally understood the rationale for the selection of the preferred route but raised concerns for specific areas around Chatham from a future growth and development perspective, and asked about the potential of minor adjustments to the route. Hydro One stated that they would consider the requests, but noted that they could likely not make any significant changes to the route, which would introduce new

directly-impacted properties or environmental effects. Hydro One staff confirmed that the information previously provided by Municipality staff had been taken into consideration during the evaluation of the Route Alternatives, but also reiterated that overhead transmission lines were not necessarily a barrier to new development and growth and in several locations throughout the province, growth and new development were actively occurring around transmission corridors. Hydro One staff also stated that there were compatible uses with overhead transmission corridors themselves, such as green spaces or trails, which could potentially accompany new development. The Municipality shared information related to upcoming growth studies with Hydro One in April 2021. The Municipality drainage staff contacted Hydro One and requested to be kept informed of design progress and tower location selection with regards to Municipal drains, and provided information on Municipal drains in the area to be considered during design. Hydro One indicated this information will be shared with the engineering firms involved in the design work, and that the Municipal drainage staff would be kept apprised of progress on the Project design.

Following the draft ESR comment period, the Municipality highlighted and shared information on areas with drainage issues within the Project extent and informed Hydro One of drainage issues experienced by a landowner. Hydro One continued to meet and corresponded with Municipal staff regarding the Project in 2022, to provide Project updates. On February 3rd, Hydro One had a call with the Municipality to learn more about any additional feedback or concerns that may have been raised. In early March, Hydro One shared that we had selected an EPC contractor and that meeting would be set up to introduce them to the Municipality. Hydro One and Voltage Power met with staff for the Municipality on March 17, 2022, to discuss the Municipality's future development plans and design standards and how this information could be incorporated into planning for the Chatham to Lakeshore project. Hydro One and Voltage Power met again with Municipality staff on August 24, 2022, to discuss upcoming planning for construction work on the Project. Hydro One and municipal staff also met numerous times between May and October 2022 with respect to establishing a Community Support Agreement between Hydro One and the Municipality.

3.9.4 Municipality of Chatham-Kent – Elected Officials

Hydro One had regular touchpoints with Mayor Canniff, Ward 1, 2 and 6 Councillors and CAO Shropshire by way of email and meetings to provide regular updates throughout the Class EA, and share notices regarding the above mentioned engagement opportunities. On January 14, 2020, Hydro One met with Mayor Canniff, Councillor's from Ward 2 and CAO Shropshire to introduce the Project, share further information and expected next steps. During the meeting, specific items were discussed

regarding identified areas of potential SAR, project timelines, the land acquisition process and community growth and energy needs.

As requested by Mayor Canniff and CAO Shropshire, monthly meetings were organized beginning in June 2020. These discussions included updates on the work completed to date, as well as upcoming engagement sessions and feedback heard from the community. Feedback was shared and questions were discussed on topics including potential effects to agricultural operations and land, route considerations, compensation, and health and safety.

Ward Councillors also shared concerns, comments and feedback from their constituents throughout the Class EA, and participated in regular phone calls and meetings with the Project team. Councillors also informed Hydro One of constituents wishing to speak with the team regarding their concerns.

During the spring and summer of 2020, Mayor Canniff and members of Council requested Hydro One reconsider the use of the former railway corridor as a Route Alternative for the Project based on requests from community members.

On September 14, 2020, Hydro One presented to Chatham-Kent Council on the status and next steps of the Project. A deputation letter was read from residents regarding route considerations for the Project, and comments and questions were provided by Council on utilizing the railway corridor and benefits for the Chatham-Kent community. Following this presentation, as described in **Section 3.11.2**, Hydro One shared findings of the reconsideration of the use of the former rail corridor, concluding that the use of the railway provided minimal benefit compared to existing Route Alternatives as far as reducing impact to agricultural properties or environmental features, as well as achieving recognizable cost savings.

Prior to announcing the selection of the preferred Route Alternative, Hydro One held briefings with Mayor Canniff and CAO Shropshire, as well as a Ward 2 Councillor on February 17, 2021, and February 22, 2021, respectively, to discuss the selection of the preferred Route Alternative and next steps.

In a call held on March 9, 2021, Hydro One followed up with Mayor Canniff and CAO Shropshire on concerns shared by the Municipality regarding the potential impact of the line to future growth plans and shared how Hydro One will work with the Municipality when designing the line to incorporate these plans. Route refinements suggested by residents were also discussed. Following the announcement of the preferred Route Alternative, Hydro One, Mayor Canniff, Ward Councillors and CAO Shropshire have continued to have frequent touchpoints through monthly calls,

additional meetings and correspondence to discuss land acquisition compensation principles, tower design options, route refinements and meetings with residents.

Hydro One met with Mayor Canniff and CAO Shropshire on July 13 to share an update on the Project. August 10, 2021, Mayor Canniff shared a letter by email on regarding the Project in response to the draft ESR and informing Hydro One of the crucial role of electrical expansion in Chatham-Kent. Hydro One provided a response by email on October 6, 2021.

Hydro One emailed Mayor Canniff and Councillors in September 2021 to share a notice that was prepared for distribution to residents along the route. The notice provided an update on the project, including a review of recent activities and next steps. Hydro One provided an update on engagement with property owners and next steps in the Class EA process. Following this notice, Hydro One met with the Mayor and CAO on September 29 and October 20, 2021, to provide updates on the Project, share design information and introduce new Hydro One staff working on the project.

In 2022, Hydro One continued to have additional meetings and touchpoints with elected officials. In January, Hydro One met with the CAO and Mayor and shared a status update on the Project and where we are to date with our Class EA. In March, Hydro One emailed the Mayor and municipal staff to let them know we had selected an EPC contractor. Later that month, Hydro One met with the Mayor to discuss establishing a Community Support Agreement.

On May 11, 2022, Hydro One emailed Mayor Canniff and interim CAO Tony Haddad providing an update on the project. During the Association of Municipalities conference in August 2022, Hydro One met with the Mayor with respect to investments in the region and to touch upon the status of the Community Support Agreement. On September 26, 2022, Municipal Council passed a motion to execute a signed Community Support Agreement. This agreement provides the Municipality with direct community support as part of Hydro One's transmission infrastructure expansion in the region, which includes the Chatham to Lakeshore Project.

As Hydro One continues work on the Project and working with landowners, they will continue to engage with Elected Officials and respond to items raised.

3.9.5 Municipality of Lakeshore – Municipal Staff

Hydro One shared notices, via email, for the above mentioned engagement opportunities to the Municipality of Lakeshore. Staff from the Municipality of Lakeshore participated in the TAC for the Class EA. More detail on the TAC is provided in **Section**

3.12. Hydro One emailed Lakeshore staff twice in October 2020 and requested any information or plans related to future land uses to assist in the evaluation of the Route Alternatives. Hydro One informed the Municipality on October 15, 2020 that four route refinements have been identified based on stakeholder feedback.

Following the announcement of the selection of the preferred Route Alternative and the third TAC workshop, the Municipality expressed concerns regarding the preferred Route Alternative traversing the Employment Lands designated in the north portion of Comber. A virtual meeting was held on March 1, 2021, to discuss the Municipality's concerns. At the meeting, Lakeshore staff raised concerns regarding the route traversing current commercial/industrial land uses as well as future/potential future development expansion in north Comber. Lakeshore staff asked questions regarding the identification and selection of the preferred route, design options, and upcoming Real Estate processes. Lakeshore stated that they did not currently support the selection of Route Alternative 2A for the effects to existing and future/potential future land uses, and Hydro One staff responded that land uses had been taken into consideration during the route evaluation and noted that overhead transmission corridors are not a barrier to future development in practice and there are many examples of both commercial/industrial and residential development occurring around such corridors. Hydro One staff stated that they would continue to work closely with Lakeshore staff to discuss and address their concerns going forward. Municipality staff emailed Hydro One on March 3rd, and thanked Hydro One for the opportunity to meet and discuss the Project but reiterated that they remain opposed to the location of the preferred Route Alternative through Comber and suggested that the route be moved to the North, diverting around Comber. Hydro One followed up with the Municipality by email on March 8, 2021, and provided more insight on the preferred Route Alternative relative to Comber. Hydro One also noted that diversions of the route north of Comber would introduce new directly-impacted properties, transmission line crossings, and would have greater overall effects to agricultural fields and operations. A follow up meeting with Lakeshore staff was held on March 31, 2021, during which route diversions, real estate rights, proximity to Comber, potential future uses, and the need for OEB approvals for the Project were discussed. At the meeting, Hydro One staff reiterated that large diversions of the preferred route could not be considered for the reasons previously provided, and that new development around and adjacent to overhead transmission corridors, as well as compatible secondary uses (including compatible commercial facilities or uses) within transmission corridors, was fairly common. Lakeshore staff stated that while they understood and supported the need for the Project, they could not support the preferred route traversing the Employment lands in Comber. Both groups agreed that subsequent discussion would be required as the Project progressed.

The Municipality sent a letter on April 16, 2021, reiterating the Municipality's concerns and request for the route to be diverted to the north. Hydro One shared their response via email on May 6, 2021, which reiterated the process conducted to select the preferred Route Alternative and the rationale for the selection of Route Alternative 2A. The response to Lakeshore staff provided several examples of other areas in southern Ontario where residential, commercial and industrial developments had successfully occurred adjacent to overhead transmission lines, as well as examples of compatible uses developed within the ROWs, and also reiterated Hydro One's desire to work with the Municipality to address their concerns and to work with them as development plans for these areas unfold.

In May 2021, Hydro One contacted the Municipality of Lakeshore Drainage staff and requested further information on municipal drains traversed by the preferred route, so that this information could be considered during design and construction planning. Municipality staff subsequently provided a number of drain reports. Hydro One followed up with Municipal staff on June 9, 2021, to inquire about Municipal drains on the online mapping tools.

A letter providing comments on the draft ESR was sent to Hydro One by email on August 10, 2021. Hydro One provided a response by email on October 6, 2021.

On December 6, 2021, Hydro One and Municipality staff met to discuss Hydro One's proposal to create a Memorandum of Understanding that would seek to identify and formalize commitments between Hydro One and the Municipality.

In 2022, between February to September, Hydro One has had meetings with the Municipality to introduce a proposal for a Community Support Agreement/Road User Agreement. On August 24, 2022, Hydro One and Voltage Power also met with staff from the Municipality of Lakeshore to discuss planning and coordination of upcoming construction work on the Project.

3.9.6 Municipality of Lakeshore – Elected Officials

Hydro One had regular touchpoints by way of emails and meetings to provide updates on the Class EA and share notices regarding the above mentioned engagement opportunities to Mayor Bain, Deputy Mayor Bailey, Wards 4, 5 and 6 Councillors and CAO McBride. On January 13, 2020, Hydro One met with Mayor Bain and Nelson Cavacas, Director of Infrastructure, to introduce the Project, share further information and expected next steps. During the meeting, items relating to protecting local roads during construction, communication methods and locations for community information centres were discussed.

In July 2020, a touchpoint meeting was held with Mayor Bain and Nelson Cavacas during which Hydro One shared information on the current status of the Project. Discussion items included providing an update on the future Lakeshore TS, reviewing consultation and feedback with residents to date and discussing energy needs in the area. A subsequent letter was shared to Mayor Bain, Nelson Cavacas and CAO McBride from Hydro One's Vice President of Stakeholder Relations thanking Mayor Bain for meeting and acknowledging Hydro One's commitment to working with the Municipality. On November 10, 2020, Hydro One presented to the Municipality of Lakeshore's Council to provide an update on investments Hydro One is making in the Lakeshore community, including the Project, and what feedback has been received to date. Questions from Council ranged from power surges and reliability concerns to load growth and maintenance.

Prior to announcing the selection of the preferred Route Alternative, Hydro One held a briefing with Mayor Bain and CAO McBride on February 19, 2021. The discussion included items related to the proximity of the route to the Comber community in relation to a previous development proposed in the area, community engagement, the line's crossing of County roads and the location of a national historic site that was identified as part of Hydro One's route evaluation.

On March 9, 2021, Hydro One had a follow-up call with Mayor Bain to discuss concerns regarding interference to satellite and TV from the line, as well as concerns shared by the Municipality regarding the potential impact of the line traversing Comber's designated Employment lands. Hydro One noted they can look at opportunities to work with the Municipality to mitigate effects with the placement and spacing of the towers, as it relates to planned developments. Hydro One had an additional meeting with Mayor Bain, Councillor McKinlay, Councillor Walstedt and CAO McBride on March 12, 2021, to review the preferred Route Alternative selected, provide an overview of the route selection and next steps. Representatives shared concerns about the location of the route in Comber regarding impacts to future development and agricultural lands. Questions around whether modifications to the route could be made were discussed and Hydro One indicated that they would work with landowners on a property-by-property basis to discuss opportunities to best mitigate effects, where practical and feasible.

The Municipality shared a formal response stating their position to the preferred Route Alternative on April 16, 2021, and requested Hydro One present before Council to discuss the route selection. As described in (**Section 3.9.5**), Hydro One reviewed the Municipality's route diversion request and determined that the diversions introduced greater adverse net effects in comparison to preferred Route Alternative 2A. During the

week of May 16, 2021, Hydro One met with Mayor Bain, Deputy Mayor Bailey, Councillor McKinlay, Councillor Walstedt and CAO McBride on different occasions to share these findings. On May 25, 2021, Hydro One presented before Council to discuss concerns raised by the Municipality and to reiterate Hydro One's commitment to working with them as future development plans in the Comber area unfold.

Hydro One emailed Councillors on September 14, 2021, and shared a notice prepared for distribution to residents along the route. The notice provided an update on the Project, including a review of recent activities and next steps. Hydro One provided an update on engagement with property owners and next steps in the Class EA process. Hydro One staff met to discuss the Project and Hydro One's overall role in the region with Councillors Janisse and Santarossa from the Municipality of Lakeshore in the fall of 2021.

On May 11, 2022, Hydro One emailed Mayor Bain and CAO McBride providing an update on the project. During the Association of Municipalities conference in August 2022, Hydro One met with the Mayor with respect to investments in the region and sharing the benefits of this growth with the community.

On September 8, 2022, Hydro One emailed Councillor McKinlay and provided a letter speaking to the Councillor's comments on the Project that had been shared by Deputy Mayor Bailey to Hydro One.

As Hydro One continues work on the Project and working with landowners, they will continue to engage with Elected Officials and respond to items raised.

3.10 Potentially Affected and Interested Groups, Businesses, School Boards and Utilities

Consultation opportunities were provided to potentially affected and interested groups, businesses, school boards and utilities throughout the Class EA process.

As part of the consultation program, approximately 50 potentially affected interest groups, businesses, school boards and utilities were contacted during the Class EA process. A complete list of the interest groups is provided in **Appendix B-1**.

Correspondence with potentially affected and interested groups, businesses, school boards and Utilities is included in the Record of Consultation.

3.10.1 Christian Farmers Federation of Ontario (CFFO)

Hydro One emailed the notices for the above mentioned engagement opportunities to CFFO. CFFO was invited to participate in the TAC in May 2020, and the CFFO confirmed their representative through email. CFFO informed Hydro One in August 2020 that through discussions with farmers, they have received comments and concerns regarding the Project. CFFO noted that the placement of towers is important for their members and that the line installation should be completed using a collaborative approach. In February 2021, CFFO and Hydro One corresponded regarding the preferred Route Alternative, including its planned direction, easement, impact to farms and the idle line. CFFO inquired why the idle 115 kV line cannot be used. A conference call was held on March 1, 2021 during which CFFO's concerns were discussed with the project team.

Hydro One continued to further engage with the CFFO and responded to items raised through the remainder of 2021. This included meetings held in November and December 2021 to discuss the route alignment for the Project.

No other comments or concerns were raised by CFFO.

3.10.2 Ontario Federation of Agriculture (OFA)

Hydro One had several touchpoints by way of email and meetings with the OFA to provide regular updates on the Class EA process, and to share notices regarding the above mentioned engagement opportunities. Following the Notice of Commencement, the OFA stated their support for bringing more capacity to southwestern Ontario for agricultural business. In May 2020, representatives were invited to participate as a member of the TAC, as well as for all subsequent committee meetings held.

In mid- to late-2020, Hydro One spoke and met with representatives from the OFA to provide project updates and discuss comments and recommendations received from their membership. On August 19, 2020, a meeting was held with representatives to share a project status update and discuss feedback received. During the meeting, items related to engagement activities, impacts to agricultural operations, tower types, maintenance of infrastructure assets, and route considerations were discussed. A meeting was held on October 28, 2020, to share further information on Hydro One's route refinements, Hydro One's findings of railway corridor analysis, and next steps.

Following the announcement of the preferred Route Alternative, OFA shared feedback from their membership pertaining to tower design and location, interference to

agricultural communication equipment, farming operations, and route diversions. On March 18, 2021, a meeting was held with representatives to review the preferred Route Alternative, provide an overview of the route selection process and discuss next steps.

During April 2021 and May 2021, Hydro One continued to have frequent touchpoints with the OFA who shared ongoing feedback from their members pertaining to the transmission line and tower design, property rights and compensation, future community development, archaeological surveys and impacts to farm equipment operation.

In July of 2021, Hydro One met with the OFA to discuss broadband capability as a part of this Project and confirmed that we will be installing fibre optic telecommunication cables on the new transmission towers for the new line. This fibre optic cable can be an enabler for improving broadband capacity in the area by providing the backbone for future broadband infrastructure, which will allow last mile internet service providers to connect. OFA emailed Hydro One on August 10, 2021, and shared a letter containing the OFA's comments on the draft ESR. Hydro One provided a response letter by email on October 6, 2021.

In September of 2021, Hydro One emailed the OFA and shared a notice prepared for distribution to residents along the route. The notice provided an update on the Project, including a review of recent activities and next steps. Later that month, they had a meeting to share details on the design on the new line and provided an update on engagement with property owners and next steps in the Class EA process.

In October of 2021, Hydro One had a meeting with the OFA regarding creating supporting materials to communicate Hydro One's land rights processes and acquisition principles.

In 2022, Hydro One continued to engage and meet with OFA. January 24, 2022, Hydro One had a touchpoint meeting to discuss the supporting materials on land rights. Additionally, a meeting was held on January 28 to review the electricity outlook for Southwest Ontario and Project updates, including our work with landowners and upcoming milestones.

In April 2022, Hydro One received inquiries regarding landowner specific property questions and questions on Project details, which Hydro One responded to that same month. Hydro One also had a touchpoint meeting on April 28 to review the status of projects taking place in the region.

On May 11, 2022, Hydro One emailed the OFA providing an update on the project. Additionally, from May to September, 2022, Hydro One has responded to additional questions related to the land acquisition process, land rights, tower locations and designs, and compensation. During that time, another touchpoint meeting took place on August 9 where an update on the status of the Class EA and upcoming milestones was provided. On September 30, 2022 supporting materials on land rights were also shared.

As Hydro One continues work on the Project, they will further engage with the OFA and respond to items raised.

3.10.3 Enbridge Gas Inc./Union Gas

Hydro One emailed the notices for the above mentioned engagement opportunities to Enbridge. Enbridge was invited to participate in the TAC in May 2020. Enbridge followed up with Hydro One on July 9, 2020, and noted their appreciation for the outreach from Hydro One and that they will provide their comments and information on assets shortly. Correspondence between Hydro One and Enbridge included discussions related to project coordination in the area and identifying any potential conflicts with their assets. A conference call was held on September 1, 2020, to discuss the Project. Shapefiles of the Route Alternatives were shared with Enbridge to confirm any potential conflicts. Follow up emails were sent to Enbridge throughout November 2020 seeking information on assets and any potential concerns.

An early briefing was held on January 28, 2021, to discuss the preliminary preferred Route Alternative and potential implications to Enbridge assets or projects. Enbridge staff emailed Hydro One on February 17, 2021, identifying areas requiring further study to ensure no existing Enbridge facilities will be negatively impacted.

Hydro One had a virtual meeting with Enbridge staff on February 25, 2021, to discuss their concerns regarding the preferred Route Alternative. Information was shared with Hydro One following the meeting with specifications for setback requirements. Hydro One had a meeting with Enbridge staff on April 6, 2021, to discuss next steps in order to coordinate between the two teams. No other concerns were raised.

Hydro One continued to further engage with the Enbridge to discuss technical studies and other requirements to be addressed during the design phase of the Project.

3.11 Property Owners/Residents/General Members of the Public

As outlined in **Section 3**, property owners, residents and general members of the public within the LSA were provided project notifications by means of email, Canada Post

admail, hand delivered notices near Communication Road and Highway 401, advertisements in local newspapers, radio, social media and the Project website. Five admail campaigns with over 16,000 recipients in each campaign were delivered throughout the Class EA process. Hydro One also received feedback and comments by phone and email to their Community Relations team.

Throughout the Class EA process, Hydro One had over 600 interactions with property owners, residents and general members of the public via phone, email and virtual/in-person meetings.

Table 3-13 in **Section 3.13** summarizes the frequent comments received and the responses provided by Hydro One through the Class EA process.

During the draft ESR review period, Hydro One received comments from several members of the public. A list of these comments received, and Hydro One's corresponding responses, is provided in **Section 3.14**.

In 2022, Hydro One staff have continued to engage with interested and potentially affected members of the public as questions or concerns are raised, as well as with directly affected landowners by way of dedicated Real Estate representatives. Hydro One staff will remain available to discuss the Project throughout the design and construction and operational phases of the Project.

3.11.1 Meetings with Property Owners and Potentially Affected Members of the Public

In addition to the public VIS' and direct correspondence with individual property owners and interested or potentially affected members of the public, Hydro One arranged for meetings with groups of landowners and interested stakeholders upon request. This included the following:

- A virtual update Meeting was held on July 22, 2020, with landowners regarding the Route Alternatives and compensation.
- A socially distanced outdoor site meeting was held on October 16, 2020, with landowners.
- A teleconference was held on November 3, 2020, with a landowner on route refinements and effects to agricultural operations.
- A teleconference was held on November 5, 2020, with landowners regarding route refinements, selection and effects to agricultural operations.
- A virtual meeting was held on April 7, 2021, with landowners and stakeholders on the selection of the preferred Route Alternative.

- A virtual meeting was held on April 8, 2021, with landowners and stakeholders on the selection of the preferred Route Alternative.
- Four virtual meetings with landowners and MPP Rick Nicholls and some of his constituents were held on April 16, 2021, regarding the selection of the preferred Route Alternative.
- A meeting was held on August 11, 2022, with a group of directly impacted landowners, to answer questions about the class EA process, upcoming surveys and landowner compensation.

3.11.2 Former CASO Rail Corridor Review Requests

During spring and summer of 2020, reconsidering the use of the former rail corridor (current Entegrus distribution line right-of-way) as an alternative for the Project was repeatedly requested. These requests were initially made by members of the public and were also conveyed by elected officials from the Municipality of Chatham-Kent. Initially, the Hydro One project team reiterated that the former rail corridor was initially considered during the identification of viable Route Alternatives for the Project, as well as the technical rationale for why this corridor was rejected as a potential Route Alternative. The rationale included its narrow width, bisection of established residential areas, the limited availability of the former rail corridor (as sections are utilized by other utilities), and encroachment upon existing wind turbines.

Project stakeholders reiterated their belief that using the former rail corridor (by applying a narrowed infrastructure design if necessary) would avoid the need to traverse numerous agricultural properties, thus avoiding effects to agricultural operations and landowners while presenting potential cost savings to Hydro One. Based on feedback received, the project team agreed to reconsider the viability (feasibility and reasonability) of adding the former rail corridor to the existing Route Alternatives by subjecting it to a more detailed assessment, involving data collection and analysis including site reconnaissance.

The results of this more detailed assessment of the former rail corridor confirmed that none of the former rail corridor options considered proved to be viable when compared to existing Route Alternatives. In fact, all options introduced additional as well as more severe constraints in almost all areas assessed without satisfying the premise of the request; that is, presenting no appreciable reduction of effects to agricultural properties nor recognizable cost savings. Key findings of the assessment included:

- Even with significant design considerations to minimize ROW width, utilizing the former rail corridor would significantly affect built-up and residential areas in

Tilbury and Comber along the rail corridor, including an increase in the total number of properties impacted and a significant increase in the total number of properties requiring buy-outs.

- Hydro One would be required to take ownership of several aging bridges, culverts/box culverts and other constructed watercourse crossings resulting in upward pressure on future sustainment investment that would be borne by customers, which would otherwise not be required for the existing Route Alternatives.
- 1.9 km of the rail corridor being assessed is currently occupied by a transmission line associated with the South Kent Wind Farm, including a tap connection to the South Kent Wind Farm substation.
- Utilizing the former rail corridor would have greater effects to adjacent channelized surface water features compared to existing Route Alternatives.
- Sections of the rail corridor assessed included several conflicts regarding close proximity to wind turbines, much closer than found along any of the existing Route Alternatives, and would likely require deviations off of the former rail corridor in these locations.
- A much greater extent of removal of mature trees and other incompatible vegetation associated with use of the former rail corridor (proportionate to line length).
- Disturbance to a linear, contiguous vegetated area representing potential SAR habitat. Such vegetated corridors are not common in this region. None of the existing Route Alternatives risk disturbance to SAR habitat to this degree.

Following completion of this reassessment, Hydro One communicated the findings to interested stakeholders including elected officials of the Municipality of Chatham-Kent that had requested further investigation into the use of the former rail corridor.

3.11.3 Lakeshore Route Diversion Requests

Following the announcement of the preferred Route Alternative, some members of the public located in the Municipality of Lakeshore requested Hydro One to consider two diversions of the preferred Route Alternative around the community of Comber. The request to consider these diversions was also reiterated by elected officials representing the Municipality of Lakeshore. These requests involved deviating from the preferred Route Alternative at either northwest Tilbury or Gracey Sideroad, and utilizing existing transmission lines westward until the Rochester Townline Road, before turning southward towards the Lakeshore TS.

In responding to both the Lakeshore councillors and members of the public, Hydro One staff clarified that the existing transmission lines identified were not idle in these sections, and were required to remain in operation for the foreseeable future, and also that the road allowance (such as the Rochester Townline road allowance) was not sufficient to house a double-circuit 230 kV transmission line. Therefore, following these existing lines would require additional new transmission line ROW for the new double-circuit 230 kV line. Hydro One staff reiterated the process that had been conducted to select the preferred Route Alternative based on feedback received through the Class EA process, and confirmed that these diversions were not considered to be viable as they were significantly longer and more complex than the preferred Route Alternative. The requested diversions introduced additional challenges and effects including:

- Several kilometres of additional transmission line resulting in greater effects to agricultural operations (several more transmission line structures and several hectares of additional transmission line ROW within prime agricultural lands) compared to the preferred Route Alternative.
- Require an increase in the total number of properties impacted and a significant increase in the total number of properties requiring buy-outs, including dozens of properties that had not previously been considered or notified of such a potential transmission line route through the Class EA process. Additional technical and cost challenges such as additional line angles and two additional crossings of existing operational 115 kV transmission line, which introduces additional risk to the reliability of the overall bulk transmission system.
- Additional effects to other environmental features that were assessed through the route evaluation process, such as fish and aquatic habitat, source water protection areas, Conservation Authority regulated areas and floodplains, and potential SAR habitats.

Hydro One staff will be sending a delegation to a Lakeshore Council meeting on May 25, 2021, as well as issuing responses directly to residents who had initially requested the consideration of these diversions. The responses will present the above rationale as to why the requested diversions are not considered viable options for the new transmission line, and will reiterate Hydro One's commitment to working with the Municipality to address their concerns and to work with them going forward as future development plans in the Comber area unfold.

3.12 Technical Advisory Committee (TAC)

Three TAC workshops were held throughout the Class EA process. The purpose of the TAC was to provide a platform for Hydro One to present information, hold discussions

and draw upon the experience and knowledge of representatives from Anishnawbek and Haudenosaunee communities, government agencies, Municipalities and interest groups. This knowledge-sharing forum helped to inform the planning and Class EA process for the Project. Specifically, Hydro One drew upon the technical knowledge represented by TAC organizations to help inform the comparative evaluation used to select the preferred Route Alternative for the new Chatham to Lakeshore double-circuit 230 kV transmission line.

Due to the ongoing public health developments related to COVID-19, the TAC workshops were held virtually. A summary of each workshop is outlined below.

3.12.1 TAC Workshop #1

Originally, the first TAC Workshop was intended to be an in-person event; however, due to public health developments related to COVID-19, a three part virtual workshop format was developed. The workshop consisted of:

1. A video presentation.
2. Moderated conference call discussion.
3. A digital survey to collect feedback on the evaluation criteria.

The purpose of the first TAC Workshop was to introduce the Project, provide an update on the status of the Class EA, and begin the conversation to identify the criteria and methods for measuring criteria in support of the route evaluation.

On May 26, 2020, Hydro One sent email invitations to Anishnawbek and Haudenosaunee communities, government agencies, Municipalities and interest groups explaining the purpose of the TAC and inviting them to attend the first workshop. TAC members attending the workshop consisted of representatives from AFN, WIFN, federal and provincial agencies, municipalities and interest groups. Remaining Anishnawbek and Haudenosaunee representatives from other Indigenous Communities were also invited to participate in the workshop. As part of the invitations, TAC members were requested to confirm their participation prior to the first component of the workshop.

Video Presentation

On June 3, 2020, Hydro One sent TAC members a short video presentation and preliminary criteria list (**Appendix B-5**). The video presentation covered the following topic areas:

- Project Overview.
- Status of Class EA.

- Explanation of the weighted Multi-criteria Decision-Making Analysis framework being used to evaluate the Route Alternatives.
- Initial Evaluation Criteria.
- Next Steps.

The intent of the video presentation was to provide an overview of the Project, the process and objectives of the TAC. TAC members were asked to view the video and review the initial criteria list prior to the second component of the workshop: the moderated conference call.

Moderated Conference Call Discussion

Following the video presentation, TAC members were asked to participate in a moderated conference call. To keep conversations focused on key topic areas, the moderated conference call discussion was split into two sessions: one focused on the Socio-Economic Environment and the other focused on the Natural Environment (**Table 3-9**). The intent of the moderated conference calls was to receive input and feedback from TAC members and have a general group discussion regarding the Project evaluation criteria and measures.

Table 3-9: Summary of TAC Workshop #1 Moderated Conference Calls

Criteria	Date and Time	Virtual Forum	Number of Attendees
Socio-Economic Environment Criteria	June 10, 2020, 10:00 a.m. - 11:30 a.m. E.T.	Online Presentation and Discussion	20
Natural Environment Criteria	June 10, 2020, 2:00 p.m. - 3:30 p.m. E.T.	Online Presentation and Discussion	16

Moderated conference calls were held using a virtual platform and participants could join via video or phone. Hydro One provided an overview of the Project and the status of the Class EA prior to the moderated discussions. A general summary of comments and topics discussed on both calls is outlined below:

Socio-Economic Environment Moderated Conference Call

TAC members raised the following topics for discussion during the call:

- Importance of paralleling existing infrastructure (including crossing and paralleling infrastructure to Highway 401).
- Proximity to existing infrastructure.

- Agricultural operations (equipment clearance, alignment of poles along property lines and drainage effects).
- Need for Stage 1 and 2 Archaeological Assessments.
- Existing and future land uses.
- Tower placement and spacing in relation to roads.

Natural Environment Moderated Conference Call

TAC members raised the following topics for discussion during the call:

- Importance of capturing hedgerows/wind breaks and tree lines in the criteria.
- Importance of including floodplains as a criterion.
- The construction methods to install the transmission line and construction timing need to be considered.
- Natural heritage system protection (consider in a focused manner).
- Prioritizing the avoidance of environmentally significant areas.
- Prioritizing avoidance of the Important Bird Area.
- Whether the biodiversity initiative can be integrated in the criteria.

Digital Survey

Following completion of the moderated conference calls, Hydro One invited TAC members to complete a digital survey. The survey was available until 5:00 p.m. on June 26, 2020, and had a total of 21 questions and was comprised of five sections:

- Natural Environment Factor
- Socio-Economic Environment Factor
- Technical/Cost Factor
- Factor Weighting
- Workshop Feedback

The intent of the survey was to formally document comments on the initial evaluation criteria and measures for the Project.

Summary of Digital Survey Results

In total, 11 survey responses were received. Generally, respondents only filled out sections they felt compelled to complete based on the nature of their comments.

TAC members recommended the addition of five criteria for the Natural Environment factor area, 15 criteria for the Socio-Economic Environment factor area, and four criteria for the Technical and Cost factor area. Four of the recommended criteria under Socio-Economic and one recommended criterion under Technical and Cost were

recommended revisions to the preliminary list of criteria. The recommended criteria additions and criteria revisions are summarized in **Table 3-10**.

Table 3-10: TAC Proposed Criteria and Measures

Factor Area	Proposed Criteria to be Added	Proposed Measure to be Added
Socio-Economic Environment	Placement of towers on farm land (on property lines)	Look at county maps to see where existing property lines are currently and try to place towers as close to them as possible.
Socio-Economic Environment	Agri-Food Network	Infrastructure such as transportation, drainage/irrigation, natural gas and electrical agri-food assets. Services such as food and beverage processors, grain elevators, refrigerated warehousing, abattoirs, agricultural research facilities, fresh produce terminals, food hubs. Municipalities may have some of this data. It would likely take the form of a map of the facilities and the interconnectivity between them.
Socio-Economic Environment	Construction Methods	Routes where the design options are limited should be rated less preferred.
Socio-Economic Environment	Service Corridor Alignment	The number of easements or restrictions already in place on a given property. The average of these values should be minimized.
Socio-Economic Environment	Underwire Clearance Restrictions	Area of restricted farm use (support structure design can mitigate).
Socio-Economic Environment	"Existing and Future Land Use Designations" should also include "Potential Future Settlement Area Expansions"	Further consultation with the Municipality.
Socio-Economic Environment	Aggregate Resources	Further consultation with the Municipality.

Factor Area	Proposed Criteria to be Added	Proposed Measure to be Added
Socio-Economic Environment	Include primary and secondary settlement boundaries as part of the future land use designations discussion	If the land use designation is agricultural, the potential effects should be weighed against that type of land use. If the land use is for future development and potential commercial, residential, manufacturing, etc. this would require a separate level of consideration to account for the potential risks and mitigation required.
Socio-Economic Environment	Impact to future active transportation facilities	Comparing the route options with the County Wide Active Transportation System Master Plan proposed facilities maps.
Socio-Economic Environment	Future development potential along Highway 401	Transportation, logistics, warehousing sectors.
Socio-Economic Environment	In addition to growth of greenhouse industry, consider potential industrial growth (advanced manufacturing)	Measure not included.
Socio-Economic Environment	Potential growth in the Comber Area	Measure not included.
Socio-Economic Environment	Placement of electrical towers in relation to wind turbines	Measure not included.
Socio-Economic Environment	Consider the potential growth in rural communities post-COVID-19 in "Effects to residential buildings, properties or site plans" criteria	Measure not included.
Socio-Economic Environment	Include Site Plans and identified areas of potential residential and business development	Measure not included.

Factor Area	Proposed Criteria to be Added	Proposed Measure to be Added
Natural Environment	Support structure placement	The level of restrictions within a route such as other structures/right of ways/established uses; where these restrictions will limit support structure placement.
Natural Environment	Effects to established tree lines or wind breaks	Number of tree lines/wind breaks crossed by the line.
Natural Environment	Line maintenance activities (pesticide use)	Land elevation or grade can be a useful indicator where water tables are higher than others (low grade or elevation can be more susceptible to a high water table; natural springs; subsurface water courses).
Natural Environment	Potential impact to restoration areas and linkages as identified in Official Plans or other studies/strategies (potential for enhancement)	Measurements and assessments of the potential area of habitat that could be restored and linked based on different routes. Potential for ranking to include the availability of external agencies or non- government organizations to initiate stewardship and securement discussions with private landowners on those areas. Data could come from existing prioritization maps from County of Essex Official Plan land use planning schedules. The metric could also include a qualitative ranking of the relative quality or benefit of a particular linkage. The TAC could identify a smaller subset of individuals to complete this.
Natural Environment	Add Existing and Future Land Use Designations to Natural Environment (remove from Socio-Economic)	Measure not included.
Technical and Cost	Line Angles	Measure not included.
Technical and Cost	Crossings	Measure not included.
Technical and Cost	Structure Life Expectancy	Support structure design for each route. Maintenance plan for the design.

Factor Area	Proposed Criteria to be Added	Proposed Measure to be Added
Technical and Cost	Include linear infrastructure related to wind turbines (i.e., associated TLs/DLs and substations) to "Proximity to Wind Turbines"	Measure not included.

TAC members did not recommend the removal of any of the existing criteria; however, it was noted that Source Water Protection may not be applicable depending on the policies within relevant Source Water Protection Plans.

TAC members were also requested to provide their input on whether any of the factor areas (Natural Environment, Socio-economic Environment, Technical and Cost, and First Nations Interests/Traditional Land Use) should be weighed more heavily than other factors. Generally, TAC members were divided between weighing the Natural Environment and Socio-Economic Environment more heavily in the evaluation. A select few respondents indicated that the First Nations Interests/Traditional Land Use factor area should be weighed more heavily. A further select few respondents indicated that all of the factors should be in alignment with each other and weighted equally.

In addition, TAC members were requested to provide any additional or alternate methods of assessing or scoring any of the initial Socio-Economic Environment and Natural Environment criteria. The recommended additional or alternate methods of assessing criteria are summarized below in **Table 3-11**.

Table 3-11: TAC Recommended Additional/Alternative Assessment Methods

Factor	Criteria	Measure	TAC Recommended Method of Assessment
Natural Environment	Effects to Fish and Aquatic Habitat	Effects to aquatic habitat including total number of watercourse crossings, effects to bank riparian vegetation, potential effects to surface flows (info source: NHIC/DFO historical data, field investigations)	A complete review of the available data from the NHIC and potentially searches of data from older Renewable Energy Approvals for wind turbines may also yield additional data and studies to help to inform steps. The Carolinian Canada Coalition may have a local Conservation Action Plan that is located within or immediately adjacent to this area. If so, this could provide another additional source of information to inform the consideration of metrics.
Natural Environment	Effects to Vegetation	Effects to vegetation including footprint effects, potential effects to incompatible vegetation communities (info source: ELC mapping, field investigations)	No Recommendations.

Factor	Criteria	Measure	TAC Recommended Method of Assessment
Natural Environment	Terrestrial and Wildlife Habitat	Effects to terrestrial wildlife and habitat including footprint effects, potential removal, disturbance and/or destruction of habitat, potential disturbance to wildlife movement/habitat fragmentation (info source: ELC mapping, field investigations)	Look at either existing research, or conduct research on how many bird strikes are in the existing transmission line ROW that will possibly be doubled. Research in zones where birds fly between feeding areas (fields) and wetlands. Lake St. Clair, and the Eastern Lake St. Clair IBA (Important Bird Area), is recognized as being one of the most significant staging areas for waterfowl in southern Ontario. Also, marshes in the area support significant populations of breeding birds including a few at risk species (Least Bittern and King Rail). Recommend a heavier ranking to routes that avoid wetlands and woodlots. Especially in Essex and Chatham Kent counties. They have already been developed so heavily – more than 95% of original wetlands and forests are gone, so this should be ranked more heavily than in other regions. The remaining habitat in the counties is vital to wildlife.
Natural Environment	Species at Risk & Species of Conservation Concern	Effects to Species at Risk and their habitat (info source: NHIC historical data, MECP, ELC mapping, field investigations)	No Recommendations.

Factor	Criteria	Measure	TAC Recommended Method of Assessment
Natural Environment	Natural Hazards, Wetlands and Floodplain Areas	Distance of the route that occurs within/in close proximity to floodplain areas, wetlands, areas of erosion concern (info source: CA mapping and regulated areas, ELC mapping, field investigations)	No Recommendations.
Socio-Economic Environment	Existing and future land use designations	Alignment with existing and future land use designations as defined by the Provincial Policy Statement and local Municipal Official Plans (info source: OP land use designations, zoning, and mapping)	Comparison of Official Plans from all adjoining Counties and Municipal government tiers.
Socio-Economic Environment	Agricultural Operations	Effects to agricultural operations including farming of land, movement of farm machinery and access to processing facilities (info source: feedback from stakeholders, socio-economic baseline assessment)	Soil compaction if construction is on agricultural land; effects during construction and after completion should be separated out.
Socio-Economic Environment	Petroleum Operations	Effects to petroleum operations including access to petroleum wells or resources and distribution networks/ pipelines (info source: feedback from stakeholder, socio-economic baseline assessment)	No Recommendations.

Factor	Criteria	Measure	TAC Recommended Method of Assessment
Socio-Economic Environment	Effects to residential buildings, properties or site plans	Effects to existing residential properties including proximity to existing homes, site plan alteration or building effects (info source: feedback from stakeholder, socio-economic baseline assessment)	No Recommendations.
Socio-Economic Environment	Effects to commercial/ industrial buildings, properties, site plans or business operations/ supply chains	Effects to existing commercial or industrial properties including proximity to commercial/industrial operations, building effects or supply chain effects (info source: feedback from stakeholder, socio-economic baseline assessment)	No Recommendations.
Socio-Economic Environment	Source water Protection	Effects to source water resources including policy areas and drinking water sources for private landowners (info source: source water protection mapping)	No Recommendations.
Socio-Economic Environment	Cultural Resources	Effects to properties or landscapes with cultural heritage resource potential (info source: MHSTCI background information, heritage inventories, etc.)	No Recommendations.

Factor	Criteria	Measure	TAC Recommended Method of Assessment
Socio-Economic Environment	Archaeological Resources	Effects to lands with archaeological potential, proximity to known archaeological sites (info source: Consultation with First Nations, MHSTCI background information, Stage 1 archaeological assessment, etc.)	No Recommendations.

3.12.2 TAC Workshop #2

The purpose of the second TAC Workshop was to gather information on the relative importance of evaluation criteria from TAC members. TAC Workshop #2 also provided an opportunity to update TAC members on the status of the Class EA and summarize how their feedback from TAC Workshop #1 was incorporated into the study process.

On September 8, 2020, Hydro One sent email invitations to TAC members. TAC members in attendance of the workshop consisted of representatives from CFN, Oneida Nation of the Thames, COTTFN, federal and provincial agencies, municipalities and interest groups. Remaining Anishnawbek and Haudenosaunee representatives from other Indigenous Communities were also invited to participate in the workshop. Included in the invitation were two memos; one summarizing the first TAC Workshop and a second outlining how survey responses from the first TAC Workshop were analysed and used to determine the Project criteria list. TAC members were asked to review the memos prior to the second workshop.

Workshop Sessions

The second TAC Workshop was held on September 22, 2020. To keep conversations focused on key topic areas, the workshop was split into two sessions: one focused on Socio-Economic Environment interests and the other focused on Natural Environment interests (**Table 3-12**).

The sessions were held virtually using an online presentation and participants could join via video or phone.

Table 3-12: Summary of TAC Workshop #2 Moderated Conference Call

Interest	Date and Time	Virtual Forum	Number of Attendees
Socio-Economic Environment Interests	September 22, 2020, 10:30 a.m. - 12:00 p.m. E.T.	Online Presentation and Discussion	17
Natural Environment Interests	September 22, 2020, 1:30 p.m. - 3:00 p.m. E.T.	Online Presentation and Discussion	17

Each workshop included an overview presentation (**Appendix B-5**) which included the following topics:

- Project Overview
- Status of the Class EA
- Re-cap of the Route Evaluation Framework
- TAC Workshop #1 Results
- Final Criteria List and Weighting Exercise
- Next Steps

A general summary of comments and topics discussed during both sessions is outlined below.

Socio-Economic Environment Workshop Session

TAC members raised the following questions and/or comments for discussion during the Socio-Economic Environment focused session:

- A TAC member inquired about data sources for measuring criteria and how those would be identified and found.
- The project team indicated that they are collecting available information through the field program, as well as published plans, policies, secondary sources and spatial data sources (i.e., mapping of vegetation, water). These data sources would be collected and used wherever possible, in addition to local area knowledge provided through TAC and public comments.
- Commentary regarding non-renewable resources (e.g., wetlands) and how they would be addressed in the comparative evaluation. Specifically, if non-renewable resources are encountered from a policy perspective in land use plans they would require mitigation measures as part of the impact assessment for the preferred route. Non-renewable resources are encountered from a policy perspective in land use plans they would require mitigation measures as part of the impact assessment for the preferred route.

- The project team noted that it is important to consider and the application of specific mitigation measures will occur later in the process following the selection of the preferred route.
- It was noted that archaeological and cultural resources are non-renewable resources; once removed they are gone forever. Additionally, knowledge of these resources and sites are reliant on studies completed to date and knowledge of existing resources and sites. A question was posed about the studies/sources for archaeology and cultural resources being completed as part of the Project.
- The project team noted that a Stage 1 Archaeological Assessment and Cultural Heritage Existing Conditions Report are a component of the Project and will be used to inform the route evaluation.
- Comments were noted with respect to the placement of the transmission line relative to farmland parcel boundaries and parcel layouts. It was also noted that tower placement will depend on landowners/farm use, but is subject to engineering/design requirements first and foremost.

Natural Environment Workshop Session

TAC members raised the following questions and/or comments for discussion during the Natural Environment focused session:

- A TAC member noted that criteria for Traditional/Indigenous Ecological Knowledge (e.g., medicinal plants) is important to Anishnawbek and Haudenosaunee communities in the area and there is a need to ensure that this is included. The project team noted this is being pursued in the Anishnawbek and Haudenosaunee Culture, Values and Land Use factor and will depend heavily on input from communities.
- A TAC member cautioned that a flaw may exist in the weighting and evaluation process. Specifically, a concern was noted that Indigenous perspectives utilize a holistic approach to considering effects on the environment. It is difficult to identify one criterion as more valuable than another. It was suggested this be considered in future weighting exercises.

Weighting Exercise

As part of the presentation, the final criteria list (**Appendix B-5**) was presented to TAC members. Input sought in TAC Workshop #2 focused on weighting the relative importance of each criteria through a weighting exercise. Using a live survey tool, participants were asked to weight each of the criterion within the criteria list using the following weighting scale:

- Most Important
- Important
- Neutral
- Less Important
- Least Important

TAC members who attended both sessions were asked to complete the live survey only once.

Summary of Weighting Exercise

The results of the weighting exercise are summarized below in **Figure 3-3-2** and **Figure 3-3-3**.

Figure 3-3-2: Socio-Economic Environment Criteria Weighting Survey Results

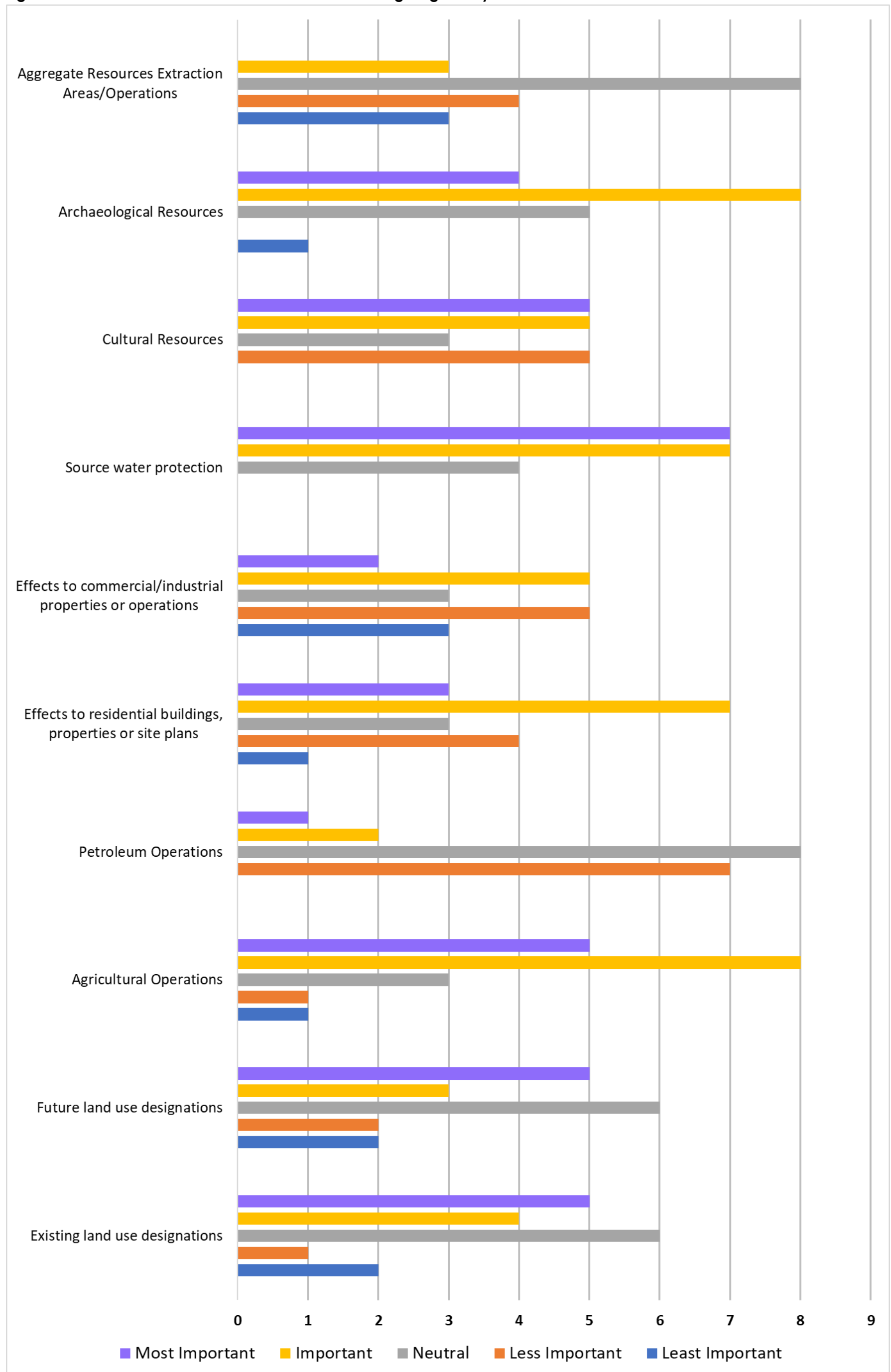
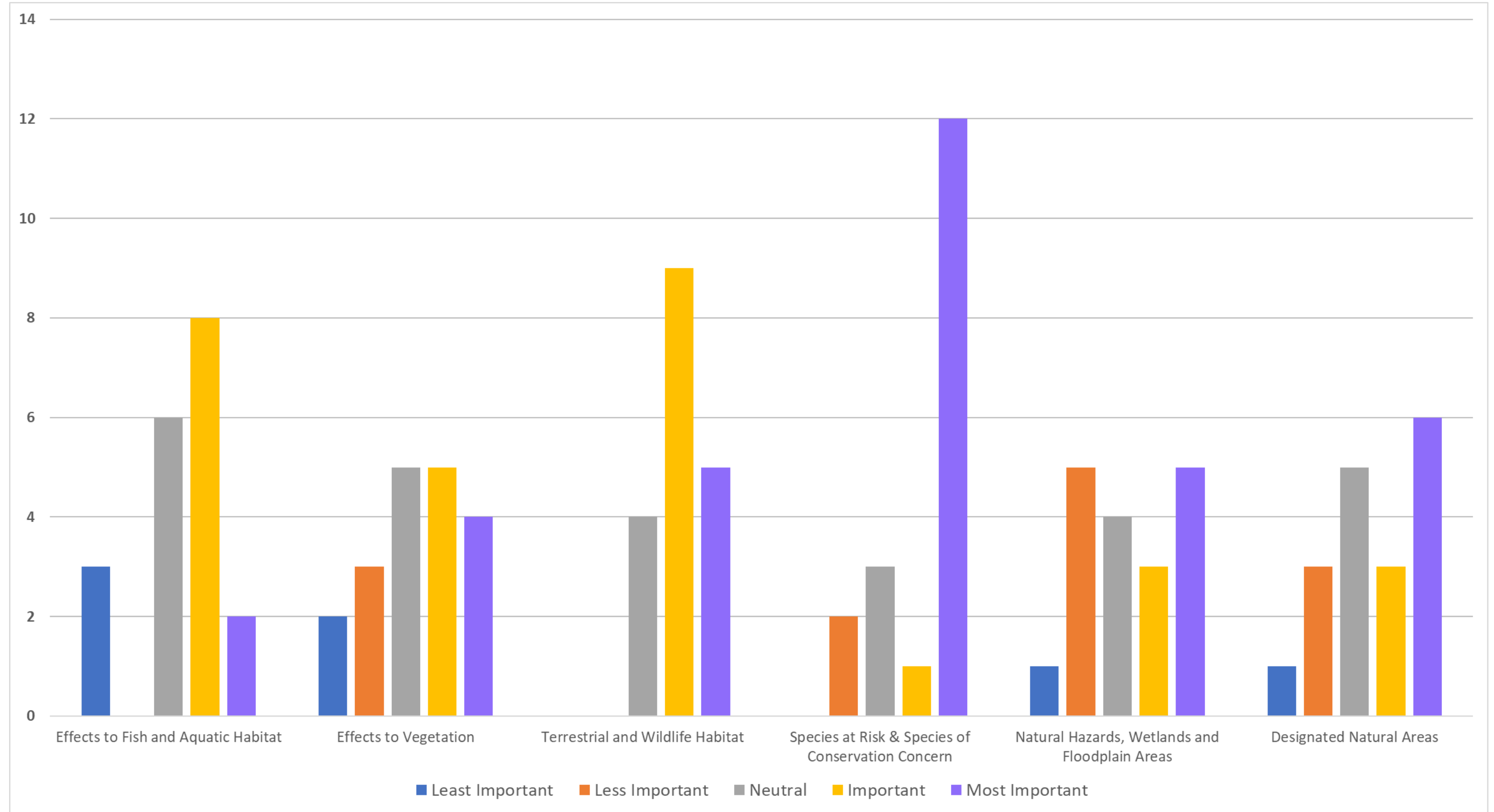


Figure 3-3-3: Natural Environment Criteria Weighting Survey Results



3.12.3 TAC Workshop #3

The purpose of the third TAC Workshop was to present the results of the comparative evaluation completed in support of the preferred Route Alternative for the Project. TAC Workshop #3 also provided an opportunity to update TAC members on the status of the Class EA and summarize how their feedback from TAC Workshop #2 was incorporated into the evaluation that led to the selection of the preferred Route Alternative.

On February 8, 2021, Hydro One sent email invitations to TAC members. TAC members in attendance consisted of representatives from CFN, federal and provincial agencies, municipalities and interest groups. Remaining Anishnawbek and Haudenosaunee representatives from other Indigenous communities were also invited to participate in the workshop. Included in the invitation were two memos; one summarizing TAC Workshop #2 and a second outlining how criteria weighting feedback from TAC Workshop #2 were analysed and used in the selection of the preferred Route Alternative.

Workshop Session

The third TAC Workshop was held virtually on February 24, 2021, using a virtual platform and participants could join via video or phone. The workshop was held from 10:00 a.m. to 11:30 a.m. ET with 22 individuals in attendance.

The workshop included a presentation (**Appendix B-5**) which included the following topics:

- Project Overview
- Status of the Class EA
- Re-cap of the Route Evaluation Framework
- Selection of the Preferred Route Alternative (Route 2A)
- Review of TAC Workshop #2 Weighting Exercise Results
- Next Steps

A general summary of comments received and topics discussed during the Workshop is outlined below.

Summary of TAC #3 Workshop Discussion

TAC members raised the following questions for discussion during the third TAC Workshop session:

- A municipal representative inquired whether the existing transmission line that appears to be within the “idle line corridor” remains idle or is currently active through the Municipality of Lakeshore.
- The project team indicated that the idle line being reused for Preferred Route Alternative 2A will involve full replacement of the existing idle towers east of Tilbury. The project team indicated they will confirm if the line remains inactive within the Municipality of Lakeshore and get back to the commenter.
- Post-meeting Note: The portion of the existing transmission line through Tilbury and to the west through the Municipality of Lakeshore is currently being utilized and is not fully idle.
- An agricultural representative noted their appreciation for the use of the existing idle line along Route Alternative 2A. They commented that Route Alternative 2A goes through prime agricultural land and inquired why the route does not follow the idle line further to avoid this land.
- The project team indicated that the line could not continue along the idle line further due to increasing technical constraints.
- An agricultural representative inquired whether everyone along the preferred Route Alternative ROW had been notified about the decision.
- The project team indicated the notice announcing the preferred Route Alternative is currently being distributed and notices are anticipated to begin reaching mailboxes this week. Additional outreach initiatives (e.g., radio, website, social media, etc.) were also planned to commence over the next week. It was also noted that there will be a virtual information session to present the preferred Route Alternative starting February 25, 2021, with a live virtual discussion planned for March 11, 2021. The project team explained that the real estate team will work with directly impacted landowners.
- A municipal representative inquired whether there is still an opportunity to provide input on the tower positioning and placement of the mainline.
- The project team indicated there is still an opportunity to provide input as tower placement specific details are not yet confirmed. The TAC member also requested a map of the centreline near Comber and the project team indicated this information is available through the interactive map and confirmed they would provide this map. The project team also confirmed that they would reach out regarding tower positioning.

- An agricultural representative requested a map showing parcel fabric information near the Chatham Substation.
- The project team directed the representative to the Project website, noting this information is available through the interactive map. A link to the website was shared with all attendees on the call: [Chatham to Lakeshore Project Webpage](#).
- A municipal representative indicated they have a minor question and wished to speak to the project team offline following the call.
- The project team confirmed they would follow-up with the attendee to discuss.

3.13 Summary of Stakeholder Comments and Concerns

Table 3-13 provides a consolidated summary of the comments and concerns raised from the interested parties throughout the Class EA consultation process. Since selection of the preferred route, Hydro One's real estate representatives have continued to work with directly affected landowners on matters specific to their property. Concerns raised during the draft ESR review period and provided in the form of comments on the draft ESR, as well as Hydro One's corresponding responses, are presented separately in **Section 3.14**.

Table 3-13: Summary of Stakeholder Comments and Concerns Table 3-1

Theme	Question/Comment	Response
Project Need/Information	Who owns Hydro One?	Hydro One is Ontario's largest electricity transmission and distribution service provider. We distribute electricity across Ontario to nearly 1.4 million predominantly rural customers, or approximately 26% of the total number of customers in Ontario. In November 2015, we became a publicly traded company on the Toronto Stock Exchange (H).
Project Need/Information	Where is the new transmission line located?	The Chatham to Lakeshore Project Webpage contains more detailed ortho-photo tile maps of the preferred Route Alternative, as well as an interactive online mapping tool that allows users to view the preferred route in detail in specific areas.
Project Need/Information	What is the need for the new line?	In Ontario, the IESO oversees electricity planning. They conduct routine planning to identify where electricity growth or demand is in the province and they work in conjunction with transmitters, generators and utilities like Hydro One to confirm how to best address these needs. In 2019, the IESO requested that Hydro One build a new transmission line that connects from our Chatham SS to our future Lakeshore TS to meet the significant amount of electricity growth in Essex County and the surrounding region over the next several years. Currently, there is only a limited amount of electric power, which can be transmitted by the existing transmission lines from our Chatham SS into Windsor-Essex Region.
Project Need/Information	Will the load forecasts justify the need for this expansion and what market segment is this additional capacity supporting?	The IESO is the agency in Ontario that oversees electricity planning. As a part of their most recent electricity planning cycle for the Windsor-Essex region, the IESO's forecasts showed a significant amount of electricity growth in Essex County and the surrounding region for the next several years. You can find further information regarding the need and forecasted growth in the IESO's report entitled "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region/ June 13, 2019, which can be found on their website: www.ieso.ca/en/Get-Involved/Regional-Planning/Southwest-Ontario/Southwest-Ontario-Bulk-Planning-Initiatives . For more information, you may also contact the IESO.
Project Need/Information	Will the new transmission line support greenhouses?	The Independent Electricity System Operator's forecasts show a remarkable amount of electricity growth in Essex County and the surrounding region over the next several years. This growth is expected to meet the evolving needs of residents and emerging industries and businesses including greenhouse operators. The new double-circuit 230 kV transmission line and the Lakeshore TS will: <ul style="list-style-type: none"> • Increase the overall transfer of the bulk transmission system west of Chatham in order to reliably supply the forecast load growth in the Kingsville-Leamington area and the broader Windsor-Essex Region in the near- to mid-term. • Permit the resources and bulk facilities in this region to operate efficiently for local and system needs. • Maintain existing interchange capability on the Ontario-Michigan interconnection between Windsor and Detroit.
Project Need/Information	What is the Local Study Area?	The local study area refers to the area within 500 m on each side of the Route Alternatives, for which available background data was collected and incorporated as input to the Class EA. It also served as the notification area around the alternative routes.
Project Need/Information	What is the cost of the Project?	The preliminary cost of the Project, as indicated in a letter dated June 2019 from the IESO letter, is estimated between \$115 - 150 million. A detailed estimate will be provided before Hydro One seeks approval from the OEB in late 2021.
Project Need/Information	Where can I find a more detailed map?	The Chatham to Lakeshore Project Webpage contains detailed maps of the preferred Route Alternative, as well as an interactive mapping tool to provide more information on the location of the preferred Route Alternative in specific areas. Following the release of the draft ESR, Hydro One and its EPC contractor have continued to refine project estimates. As per the OEB Section 92 application submitted May 2022, the latest project cost estimate is \$267.7MX.

Theme	Question/Comment	Response
Class Environmental Assessment & Consultation	What is the Class EA process that is supporting the Project?	<p>The Class EA for Minor Transmission Facilities (Hydro One, 2016) in accordance with the Ontario Environmental Assessment Act, sets out a planning and decision-making process that ensures transmission projects that have a predictable range of effects are planned and carried out in an environmentally acceptable manner. This process includes:</p> <ul style="list-style-type: none"> • Consultation with government officials; government agencies; Indigenous communities; potentially affected and interested persons, affected businesses and interest groups. • Collection of environmental data and a description of existing conditions. • Identification and evaluation of alternative methods of undertaking the Project. • Identification of potential environmental effects of the Project and mitigation measures. • Selection of preferred Route Alternative. <p>As part of the Class EA process, a draft ESR is made available for public review and comment period.</p>
Class Environmental Assessment & Consultation	Why have I been notified about the project?	<p>As part of our notification of the Project, we contacted Anishnawbek and Haudenosaunee communities, nearby residents and community members, business small and large, associations and all other potentially interested stakeholders to learn more about the Project.</p>
Class Environmental Assessment & Consultation	Who has Hydro One consulted with?	<p>Throughout the Project, Hydro One has been committed to creating opportunities for community members and key stakeholders to provide insights and input into our project planning. We have followed the Class EA process and taken extensive efforts using a variety of tools and methods to obtain feedback on the Project, such as:</p> <ul style="list-style-type: none"> • Hosting multiple virtual information sessions and live discussions. • Launching virtual open houses. • Issuing newspaper and radio ads as well as thousands of admail notices encouraging residents and landowners to provide feedback and comments. • Maintaining a dedicated project website and interactive mapping tool. Establishing a technical advisory committee with our technical stakeholders.
Class Environmental Assessment & Consultation	Has Hydro One consulted with and sought approval from Municipalities?	<p>Since the commencement of the Class EA in January 2020, Hydro One has engaged with staff and elected officials from all three municipal governments by way of email and meetings, including the County of Essex, Municipality of Lakeshore and Municipality of Chatham-Kent, on the planning process being conducted for the new transmission line. This included holding a number of meetings with elected officials, presenting before each respective Municipality's Council in Fall 2020 and hosting Technical Advisory Committee workshops, which included municipal staff.</p> <p>While the approval authority for the Class EA process is the MECP, Hydro One or its contractors may need to obtain additional, more specific permits from Municipal governments, generally relating to specific aspects of the construction work for this project.</p>
Class Environmental Assessment & Consultation	Were landowners consulted on this route?	<p>Since the commencement of the Class EA in January 2020, Hydro One has notified, consulted and engaged with landowners and community members along each of the various Route Alternatives being considered. Notification and outreach methods used included hosting multiple virtual presentation and discussion sessions; launching virtual open houses; issuing newspaper, radio and social media ads; hosting a dedicated project website; and sending multiple notices by mail within 500 m of transmission line Route Alternatives encouraging landowners to provide feedback and comments. During this time, Hydro One corresponded and/or met with over 100 landowners and community members, and with the selection of the preferred Route Alternative selected, Hydro One will continue to directly work with landowners traversed by the route.</p>

Theme	Question/Comment	Response
Class Environmental Assessment & Consultation	Will there be further consultation on the selection of the preferred route?	<p>Since January 2020, as part of the Class Environmental Assessment, we have undertaken an extensive process to study, learn more and collect feedback on three alternative routes and associated variations. This feedback was used to evaluate and compare the advantages and disadvantages of each of the alternatives in a fair and holistic manner.</p> <p>While we have selected the preferred route, Hydro One will continue to have ongoing conversations with landowners and learn more about individual features and uses of properties, which will be considered as we complete our design and construction planning.</p>
Health & Safety	Concerns about stray voltage	<p>Hydro One has been working with the farming community for many years now, to help identify, assess and mitigate stray voltage problems. And in the industry and by our regulator, the OEB, this phenomenon is largely understood to be a concern related to local distribution infrastructure rather than transmission infrastructure, as the problem can extend from the close proximity of a distribution line's neutral conductor to farming equipment. Hydro One has a team that specializes in these requests if property owners or community members have further questions.</p>
Health & Safety	Concerns about Electric and Magnetic Fields (EMFs)	<p>Health and safety is our top priority, and we design and operate our equipment across the province in accordance with all regulatory requirements including the Canadian Electric Code and CSA Standards, which account for public safety.</p> <p>EMF levels are invisible sources found everywhere electricity is used including home appliances, computers, offices and electrical stations. They are strongest when close to their source, and as you move away from the source, the strength of the fields fades rapidly. Hydro One seeks guidance from health experts such as Health Canada and the World Health Organization for health related concerns. We understand Health Canada does not consider that any precautionary measures are needed regarding exposure to power frequency or fields produced by power transmissions. Generally, by the edge of our corridor right-of-way, EMF fields in the home are higher from everyday household items, such as appliances and general use of electricity than from transmission lines at a distance.</p> <p>We are committed to understanding, addressing and communicating information regarding health concerns individuals may have. Hydro One has further information on our website Hydro One Electric and Magnetic Fields Webpage, as well as a designated EMF information telephone line 11-800-728-9533 to help address any specific questions.</p>
Health & Safety	Will the lines hum?	<p>The level of noise emitted by transmission lines is related to a number of different factors, including weather conditions. During regular weather, our lines are typically silent, however during certain weather conditions, such as windy or wet weather, those noise levels may increase, although background noise is also generally elevated during these periods.</p>
Health & Safety	Will the construction affect the water table?	<p>The construction of the new transmission line is not anticipated to cause any adverse effect to groundwater quantity or quality.</p>
Electricity & Power	Will I be able to use my solar panels and tie into the hydro to give any excess power?	<p>Following the Project, we anticipate that there will be an increase in capacity to connect distributed generation. However, the total amount at each of the existing transformer stations is unknown at this time and those calculations are done once infrastructure upgrades are complete.</p>
Electricity & Power	Do the existing wind turbines not provide enough power? Will the wind turbines be fully utilized?	<p>In Ontario, the IESO ensures the reliability of the province's power system. This includes balancing the supply of electricity production from generation sources and the demand for electricity on a minute-by-minute basis. Hydro One does not own any generation facilities, but owns and maintains the equipment that transmits or carries electricity produced by generators to homes and businesses in the province.</p> <p>Currently, there is only a limited amount of electric power which can be transmitted by the existing transmission lines from Chatham Switching Station into Windsor-Essex Region. The new Chatham to Lakeshore Transmission line project is being built to ensure that enough power is being delivered to meet significant anticipated growth and need in the region. For more information, you may visit: The Independent Electricity System Operator Website.</p>

Theme	Question/Comment	Response
Electricity & Power	What impact will this project have on my electricity rate?	An application will be made for this project to obtain a Leave to Construct from the OEB. Through this regulatory process, the OEB will make a ruling on the viability of proceeding with this project at the presented costs. Every few years, Hydro One provides details on our plans for the transmission system via a rate application to the OEB. Through the rigorous regulatory process, the OEB will then make a decision on our rate application, ensuring that customers are protected from any undue costs.
Electricity & Power	Will this project affect who my utility provider is?	As part of this Project, there will be no change in electricity service providers.
Electricity & Power	Would this give me better hydro in Wheatley?	The new line will not only support the forecasted load growth in the Essex region, but will also reinforce the local electricity system. For specific questions related to power interruptions, I would encourage you to contact our Customer Communications team at 1-888-664-9376.
Electricity & Power	Where is the power coming from to feed the Chatham Switching Station?	The transmission system is an interconnected network. Once power is generated, our transmission equipment carries it to where and when it is needed. As a result of this interconnection, this southwestern Ontario area is supplied by electricity generated locally as well as remotely from locations such as the Bruce peninsular and the Niagara peninsular. In Ontario, the IESO, who is the province's system planner and is responsible for ensuring that future energy needs are being met, will continue to assess the needs and requirements of the broader transmission system.
Electricity & Power	Will there be any expected power outages or surges during the construction of the line?	There are no anticipated power surges or outages expected for residential customers as a result of this Project.
Electricity & Power	Will the line impact the TV reception or any other electronics in our homes?	Hydro One has many kilometres of transmission line corridors where residential developments border the corridor throughout the Province. Based on our experience, we do not anticipate there to be any issues with TV reception. There are some particular circumstances during adverse weather conditions where if a satellite dish beam or antenna is pointing directly at high voltage line hardware, such as towers, that there may be experiences with some static noise. However, it is more likely for interference to be experienced from things such as a faulty microwave. Should a customer identify a television or radio interference problem that they believe is caused by hydro equipment, they can call 1-888-664-9376, and request a technician be sent out to investigate.
Route Alternatives & Evaluation	How did you identify the alternative routes?	Prior to the start of the Class EA, our team conducted preliminary work to identify viable Route Alternatives to build the new line from the Chatham SS to our future Lakeshore TS. We considered known technical and environmental features and constraints such as waterbodies, dense residential areas, environmentally significant areas, and looked for opportunities to parallel linear infrastructure and utilize existing transmission corridors. Based on that information, we developed three Route Alternatives and associated variations which were evaluated throughout the Class EA.
Route Alternatives & Evaluation	As part of the route identification process, why was paralleling the existing 230 kilovolt transmission line considered?	When identifying Route Alternatives, paralleling existing transmission lines is typically considered where viable due to efficiencies that can be realized, which is in line with the Provincial Policy Statement. That said, while paralleling the existing 230 kV corridor was a starting point in identifying Route Alternatives for this Project, Hydro One evaluated a wide variety of diverse routes, each with their own benefits. This included utilizing an existing idle transmission line corridor, paralleling the Highway 401 corridor to the extent feasible, and building an entirely new greenfield corridor.

Theme	Question/Comment	Response
Route Alternatives & Evaluation	Why is the old railway corridor not being considered as a route alternative?	<p>While the feasibility of the railway corridor was looked at initially, based on feedback received early on when these routes were introduced, our team completed an additional analysis to understand whether it could represent a viable route alternative. The objective of this analysis was to determine whether this route would reduce the need to cross numerous agricultural properties, while presenting potential costs savings to Hydro One. Our findings confirmed that:</p> <ul style="list-style-type: none"> • The use of the railway provided minimal benefit compared to existing Route Alternatives as far as reducing impact to agricultural properties or environmental features • That each option looked at introduced additional or more severe constraints compared to existing Route Alternatives • That upon looking at the sum of all considerations, only minimal sections of the railway corridor were considered usable, which is not sufficient for the Project (Refer to Section 3.11.2) <p>As such, it was not added as an additional Route Alternative.</p>
Route Alternatives & Evaluation	Was upgrading the existing lines considered?	<p>As a part of the IESO's recent planning cycle, they assessed a variety of options to ensure that the region's electricity needs are met reliably and at the lowest cost, and found the building of a new 230 kV transmission line between Chatham-Kent and the future Lakeshore TS to be most preferable option to meet near- to mid-term electricity needs in the area west of Chatham.</p>
Route Alternatives & Evaluation	How was the preferred route selected?	<p>Over the past year, Hydro One has conducted a process to study and collect feedback on three Route Alternatives and associated variations that were identified at the start of the Project. Using feedback received from stakeholders, in addition to information from technical and environmental studies, we weighed the advantages and disadvantages of each route in a fair and holistic manner across four different categories. Through this analysis, Route Alternative 2A was selected as the preferred Route Alternative, based on its collective advantages.</p>
Route Alternatives & Evaluation	How did the Preferred Route 2A compare to Alternative 3?	<p>Overall, Route Alternative 2A is preferred because it minimizes the overall impact to the natural and socio-economic environments compared to the other Route Alternatives and minimizes impacts to agricultural lands by utilizing an existing idle transmission corridor for nearly 1/3 its length. From a technical perspective, Route Alternative 2A is more complex to construct (soil conditions, line angles, etc.) but crosses the fewest number of property parcels and makes use of the existing idle line corridor. From an Anishnawbek and Haudenosaunee Culture, Values and Land Use perspective, Route Alternative 2A minimizes impacts to the natural environment while balancing opportunities to co-locate with existing infrastructure and proximity from identified areas of historical significance to Anishnawbek communities</p>
Route Alternatives & Evaluation	How did Route 2A score highly within the socio-economic category?	<p>The four categories of the route evaluation (Natural Environment, Socio-Economic Environment, Technical and Cost, and Anishanwbek and Haudenosaunee Culture, Values and Land Use) are each made up of several specific criteria. For example, the Socio-Economic Environment category consists of criteria relating to Existing Land Uses, Future Land Uses, Effects to Agricultural Operations, Archaeological Resources and several others.</p> <p>Each Route Alternative and variation has different advantages and disadvantages which were captured in the various criteria making up these four categories. In some instances, preferred Route Alternative 2A did score lower on certain criteria, including criteria within the Socio-Economic Environment category. However, this was outweighed by advantages in other criteria within the category. For example, in the Socio-Economic category, Route Alternative 2A scored highly on criteria related to Effects to Agricultural Operations, Effects to Archaeological resources, etc., which resulted in Route Alternative 2A receiving the highest overall score for that category and the entire evaluation.</p>
Project Design	When will we be notified of tower locations?	<p>Hydro One is completing the design planning for the new line, where we will confirm details such as the transmission corridor width, as well as tower design and location. Further information on these details will be shared in summer 2021.</p>

Theme	Question/Comment	Response
Project Design	What will the tower design and footprint be?	<p>There are a number of different tower designs that could be used to complete this Project, and the design of the transmission line will take into account a number of considerations. Some of these considerations include, existing structure locations, new structure heights, span between structures, topography and soil conditions, road crossing clearances and environmental constraints.</p> <p>Generally, the typical tower footprint range for a 230 kV line is 26 feet (ft.) by 26 ft. to 46 ft. by 46 ft. As Hydro One completes design planning, the tower design and exact footprint will be confirmed.</p> <p>Since the release of the draft ESR, Hydro One has confirmed that the tower will be a lattice type structure.</p>
Project Design	Will the towers be larger in size than the existing 115 kilovolt towers?	<p>The 230 kV transmission line towers will be larger than the existing towers located within the idle 115 kV transmission corridor. Generally, towers that carry a lower voltage are smaller in scale because less space is required between each conductor on the tower. As Hydro One completes the design planning for the line, the exact height of the towers will be confirmed.</p>
Project Design	What is the span length between the towers?	<p>For this Project, we anticipate that the span length will range between 900 ft. to 1200 ft, with the exact length determined once Hydro One completes design planning. It is anticipated that further information will be shared by summer 2021.</p> <p>Since the release of the draft ESR, Hydro One has confirmed that the average span will be approximately 290 metres.</p>
Project Design	Will the existing idle line and towers along Route 2A be removed and replaced with new ones?	<p>A portion of Route Alternative 2A between approximately Montpetit Road and Dillon Road will repurpose a section of an existing transmission line that is no longer energized or operating. To utilize this section to build the Chatham to Lakeshore Line, Hydro One will remove the existing towers and lines in this area, and install our new infrastructure.</p>
Project Design	Why does Hydro One not plan to continue using the existing old idle transmission line further east from the current point of deviation?	<p>While the existing idle transmission line presents a beneficial opportunity to repurpose an existing transmission corridor to meet the needs of this project, Hydro One determined early on that we would only be able to utilize approximately 16 kilometres of this line due to constraints that exist both east and west of where Route Alternative 2A begins to utilize the idle line. More specifically, continuing to utilize the idle line to the east would require the bisection of woodlots and commercial facilities/structures. Additionally, as the line moves more eastward into Chatham, it is also constrained on both sides by dense development, including a large number of commercial and residential properties that would be directly affected by the widening of the existing transmission line corridor.</p>
Project Design	Will the lines be buried?	<p>When burying high voltage transmission lines in either a tunnel or within a duct bank, there are many factors that need to be taken into consideration. This includes technical feasibility, disruption to the surface environment (e.g. open trench excavations) and cost. When considering those factors, it was determined that for this Project, an overhead line was the most viable means of meeting the need for the Project.</p>
Project Design	Will the line go above water?	<p>As an overhead transmission line, the steel structures supporting the conductors (wires carrying the electricity), will exist several metres above the ground surface at a safe height. While the new line will span across 26 watercourses, these watercourses can be crossed overhead, such that no direct disturbance to a watercourse is required during construction.</p>
Project Design	What land uses are traversed by the transmission line and what removal is required to construct the transmission line?	<p>While the majority of the lands traversed by the preferred Route Alternative are currently being used for agricultural production, there are some areas where the preferred Route Alternative will require the removal of trees and incompatible vegetation, or in some very specific areas, potentially existing buildings and structures. Where structures are determined to require or potentially require removal, Hydro One's Real Estate representatives will work directly with the landowners to discuss options available under Hydro One's project specific Land Acquisition Compensation Principles.</p>

Theme	Question/Comment	Response
Project Design	Will the existing idle line be removed prior to beginning construction?	While the sequencing of construction activities is being confirmed, typically towers would be removed prior to construction start. More information on the sequencing of activities will be available and shared with landowners once the design and construction planning has been finalized.
Project Design	How wide is the ROW for the transmission corridor?	The ROW for the new 230 kV transmission corridor is approximately 150 feet.
Project Design	Why was the existing transmission corridor north of Highway 401 not considered?	Following the announcement of the preferred Route Alternative, Hydro One received requests from property owners and members of Council in the Municipality of Lakeshore to consider two diversions of the preferred Route Alternative around the community of Comber and north of the 401. Based on these requests and feedback received, Hydro One completed an analysis and compared the proposed diversions to prefer Route Alternative 2A, while keeping feedback heard through the planning process – such as feedback received through the Technical Advisory Committee and all project stakeholders – top of mind. Upon completing this analysis, Hydro One confirmed the requested diversions would introduce greater net effects and additional challenges in comparison to the selected Route Alternative. This included increasing the potential environmental effects, impacting more properties and agricultural lands, and introduce additional technical and cost challenges as well as a risk to power reliability (refer to Section 3.9.5). As a result, it was not considered further.
Project Design	There is a small Hydro One station in Merlin, will that be affected in this build?	The Merlin Distribution Station will not be affected by this project.
Project Design	Have the existing wind turbines been taken into consideration for the planning of routes? Also, how can we minimize the impact to the operation of wind turbines during the construction phase?	The proximity to wind turbines was taken into consideration as part of our preliminary assessment to identify routes for the new transmission line. As a part of the construction of this Project, we do not anticipate any impacts to existing wind farms.
Project Design	What is the setback distance from Highway 401?	As part of the Class EA process, Hydro One consulted with a wide variety of technical stakeholders, including the MTO. As a part of those discussions, they indicated that a minimum setback distance of 25-30 metres is required from the edge of our ROW to the Highway 401 corridor. Hydro One recognizes the importance of the 400-series highways and the need to work collaboratively with MTO to coordinate ongoing projects being planned now and into the future by both organizations.
Project Design	Can there be any variations in the route to keep the corridor further away from my property?	When building linear infrastructure that spans such distances, there are technical challenges and considerations that limit the ability to weave and turn around individual property locations. It is important to note that our contractors are currently working on developing a preliminary design - which includes tower placements - that takes into consideration opportunities to minimize the view of the towers amongst other considerations.
Project Design	Will you consider tweaking the proposed route and consider following property lines and/or roadways versus traversing fields and properties on a diagonal?	In the design phase, some flexibility may be considered on a property-by-property basis to best mitigate any effects of the properties traversed by the line, where it is deemed to be practical and feasible.
Project Design	How close to Comber will these towers be?	The preferred route crosses Highway 77 just south of the 401. The Chatham to Lakeshore Project Webpage contains more detailed maps of the preferred route, as well as an interactive online mapping tool that allows users to view the preferred route in detail in specific areas.

Theme	Question/Comment	Response
Route Refinements	What is the rationale for the Highway 401 route refinement?	This route was refined and shifted further north from Highway 401 and away from the interchange ramp at Bloomfield Road and overpass at Charing Cross Road to accommodate certain setback distances from the Highway 401 corridor and interchanges, as provided by the Ministry of Transportation.
Route Refinements	Why was this route re-routed just northeast of North Buxton to run along north of the 401?	Route Refinement 2 changed the way that Route Alternative 1, Variations C/D are angled towards Highway 401, in order to reduce effects to vegetated watercourses, avoid a known archaeological site and increase distance from a wind turbine. It is important to note that this refinement did not re-route any of the Route Alternatives to the north of the 401, as Route Alternative 1, Variations C/D followed the north side of the 401 since we commenced the Class EA for the Project. At the outset of the Project, we did consider opportunities to parallel the existing transmission line, which runs on the south side of the Highway 401; however, this was not taken forward for further consideration due to existing constraints, such as built-up commercial facilities, woodlots, watercourses, and roads, in the area near Bloomfield Road.
Property	Impact to property value; and, Will I be compensated?	Hydro One's real estate representatives will work closely with directly impacted property owners to acquire land rights for transmission ROW that would cross their property. Our goal is to secure voluntary property settlements, utilizing project specific Land Acquisition Compensation Principles. These principles set out the process between Hydro One and property owners to attain voluntary property settlements, and have been tailored to the Project based on local characteristics of the region and feedback we've heard to date. Each impacted property owner will be presented with a formal offer based upon the information contained in a property specific, independent third party appraisal report. If deemed applicable by the independent third-party appraiser, Hydro One's offer will take into consideration Injurious Affection, which is a payment offered when reductions to the market value of the remainder of the property, occur as a result of Hydro One's use and interest in the property. This analysis takes into consideration various attributes – such as the separation distance between the residence and transmission line and/or location of the transmission crossing on the subject property – and whether a loss of value is likely to result from the proposed transmission line. If deemed applicable by the third party appraiser, an injurious affection payment will be made.
Property	If I am not a directly impacted property owner, will I be compensated?	As a part of our practices, Hydro One is offering compensation to landowners who have the new transmission line directly on their property. This compensation is being offered for Hydro One to build and host our new infrastructure on these lands.
Property	What if a farmer doesn't want to sell their land? Do you have any expropriation ability?	Hydro One's goal is to secure voluntary property settlements which would grant Hydro One the ability to construct, operate and maintain the transmission line. The OEB does provide additional provisions to seek land rights, however, we will seek to work closely with landowners in a fair, transparent and consistent manner to provide them with a choice in Hydro One either acquiring an easement or fee simple interest (ownership) of the lands required for the Project corridor. Hydro One has developed project specific Land Acquisition Compensation Principles to incent landowners to reach voluntary agreements.
Property	Will there be agreements for the new line?	In order to construct the line, Hydro One will require new land rights, and our goal is to secure voluntary property settlements using project specific Land Acquisition Compensation Principles, which would grant Hydro One the ability to construct, operate and maintain the transmission line. These principles will provide property owners the choice of Hydro One either acquiring an easement or ownership of the lands required for the Project corridor. Additionally, there will be various agreements required through the pre-construction phase of the Project as well as to facilitate construction of the Project. These agreements come in the form of Access Agreements and Option Agreements. The details of these agreements will be shared with property owners traversed by the line and can be further discussed one-on-one with their dedicated real estate representative.

Theme	Question/Comment	Response
Property	Do we have to pay rent to maintain your land?	Hydro One's Land Acquisition Compensation Principles provide property owners the choice of Hydro One either acquiring an easement or fee simple interest (ownership) of the lands required for the Project corridor. If a property owner chooses to transfer the required transmission right-of-way to Hydro One in fee, the landowner may licence this area for a compatible use (i.e. cropland) from Hydro One.
Property	Is the route confirmed in terms of its location on my property?	<p>A key component of the Class EA process was ensuring that the evaluation of each route was done fairly and through a balanced framework, incorporating feedback received and weighing that feedback over the entire length of the proposed route. That is why we looked at the cumulative advantages and disadvantages of each option. And as a whole, Route Alternative 2A had the least impacts overall to three of the evaluation categories assessed.</p> <p>Following the selection of the preferred Route Alternative, we will continue to work with landowners and discuss on a property-by-property basis opportunities to best mitigate effects where practical and feasible. The feedback shared with our real estate representatives on your property details and use will help our team take these factors into consideration.</p>
Property	What is the setback from residences?	The typical width for a 230 kV transmission line corridor is 150 feet, however, the exact corridor width will be confirmed once we design details. Our real estate team will work closely with directly impacted property owners and will discuss property specific questions related to the line's proximity to structures on a property. While Hydro One does not permit buildings or structures within the ROW, they are generally permitted immediately adjacent to our ROW.
Property	Are residences within the 500 m taken into account?	The local study area of the Project represents a 500 metre radius of each Route Alternative and variation where available background data was collected, and where admail notification campaigns were targeted. For the evaluation of Route Alternatives, effects to residences and residential properties were considered within the Project study area, which is 120m from the Route Alternatives.
Effects to Agricultural Land & Operations	Concerned about impacts to agricultural operations, damages to farms and decrease in value of the farms.	Throughout the Class EA and consultation process, the importance of considering effects to the agricultural community, and agricultural operations, in our planning for this new transmission line was top of mind. We had the opportunity to hear from many local farmers in the Project area, including having the opportunity to see first-hand the size of modern day farming equipment. Based on this feedback, effects to agricultural operations was a key criterion used to evaluate each of the different Route Alternatives. As Hydro One continues environmental and construction planning for this Project, we will look for opportunities to avoid, protect and prevent damage to environmental features, such as soil compaction and tile drainage, to every extent possible and, where necessary, make appropriate repairs. Our real estate representatives will continue to work closely with landowners who have the preferred ROW on their property, and share further details on the design and construction planning this summer. The dedicated Real Estate Representatives will facilitate one-on-one meetings with directly impacted landowners to understand their property and any specifics that may require further discussion with Hydro One.
Effects to Agricultural Land & Operations	Will you restore the land to its original condition? What if we have crops planted in the area you are building on?	Directly impacted landowners will have an opportunity to work with their dedicated real estate representative who will communicate access onto the property. With respect to our crop loss out of production program, landowners are compensated for payment during and post-construction for cropland out of production and any physical damages or crop loss that is unable to be mitigated. Details for that program will be communicated in the one-on-one discussions with the dedicated real estate representatives. Hydro One is committed to ensuring that you can continue your farming operations and all associated physical damages associated with Hydro One activity are compensated.

Theme	Question/Comment	Response
Effects to Agricultural Land & Operations	Can we farm the land around the towers?	Farming is a compatible use within the transmission corridor. Hydro One's focus is to mitigate construction impacts as much as possible and Hydro One will compensate landowners for croplands out of production during and post-construction, with payment recognizing compaction to land, years after construction is completed. This cropland out of production program is specific to this project and is designed to take into account community input. Property specific questions pertaining to this program can be further reviewed and discussed with your dedicated real estate representative.
Effects to Agricultural Land & Operations	Will the voltage interfere with GPS Systems?	Some farmers have raised concerns regarding potential interference from overhead transmission lines to precision agriculture applications, possibly resulting in inaccurate or imprecise position determinations. While obstructions such as buildings or trees are known to block reception of GPS signals, published studies assessing these concerns indicate that overhead power line conductors are too thin to cause appreciable screening. Hydro One acknowledges these localized issues have been raised by farmers working beneath the transmission lines and while we do not anticipate effects to communication systems in farm equipment, Hydro One will work with concerned farmers to collect information on the systems of concern, and contact manufacturers of these systems to gain further insight into potential concerns and possible solutions if applicable.
Effects to Agricultural Land & Operations	Are the damaged tile drains going to be repaired by a licensed drainage contractor or landowner?	As Hydro One continues environmental and construction planning for this project, we will look for opportunities to avoid, protect and prevent damage to environmental features such as tile drainage, to the extent practical. Should repairs be required, Hydro One is committed to fully repairing damage with landowner involvement, and we will use professionally licensed contractors to execute this type of work.
Effects to Agricultural Land & Operations	How will Hydro One access the towers for maintenance following construction? Will they be driving through fields?	When maintenance is required, Hydro One will make every effort to facilitate access by the least intrusive means and methods. Access along the ROW is preferred, however, if there is a less intrusive way to get to the towers, Hydro One will look to coordinate this with the property owner. At the time of any required maintenance, property owners will be notified by Hydro One personnel and advanced coordination would be provided. Hydro One will seek to mitigate any physical property damages during these activities, however, should any damages/crop loss occur by these activities, compensation would be provided.
Effects to Agricultural Land & Operations	How deep will the fields be ploughed in looking for artifacts?	Ploughing required for Pedestrian surveys conducted as part of the Stage 2 Archaeological Assessment for the Project will generally be conducted to the same depth that the field has historically been ploughed to.
Effects to Agricultural Land & Operations	Will we have advanced notice of construction?	Ongoing communication with landowners will continue throughout the Project, including advanced notice of construction activities. Hydro One will host a pre-construction information session to share details on what can be expected throughout construction. This will be followed by subsequent information sharing.
Effects to Agricultural Land & Operations	How long after completion of the Project do landowners have to have any drainage issues repaired?	Hydro One commits to rectifying any drainage issues that may appear due to our presence on the lands. If such instance occurs even years after completion of the Project, Hydro One will look to resolve this issue.
Effects to Natural Environment	Will the line have any impacts to animals and/or their habitat?	Within the Class EA, effects to natural environment and wildlife habitats were considered in the evaluation of the Route Alternatives. This included the identification of environmental effects and potential mitigation measures (refer Section 7) before the Project advances to detailed design and construction.
Effects to Natural Environment	Organizations requested natural heritage information obtained through Class EA to contribute to the provincial knowledge base	Hydro One will share this information with organizations.
Construction	Will the work be done by a local contractor that values safety and properties?	The Project will be completed by an Engineering, Procurement and Construction (EPC) contractor. Safety is our number one priority, and we work closely with our contractors to ensure they provide the same level of safety and care when working on private properties.

Theme	Question/Comment	Response
Construction	Will local contractors have an opportunity to be involved in this project?	We always make it a priority to support the local economy by sourcing materials and hiring from the local area as much as possible. As a part of this project, we are working with a number of EPC partners that will take on the general contractor role associated with the construction phases of this Project, and we are committed to ensuring that the use of local businesses is considered and maximized in their delivery plans.
Construction	How will Hydro One intend on accessing the new transmission corridor?	Hydro One will work with landowners to identify access routes along properties with a preference to remain within the transmission line ROW and use existing access points, where possible.
Construction	What kind of access road will be built to build the towers?	Where practical, temporary access roads and work pads will be built in agricultural fields using mats or geotextile and crushed rock, which can be easily removed when construction is complete to allow for re-cultivation of the area.
Construction	How will Hydro One prevent trespassers from driving down the access roads from our road during the construction period?	In the past, Hydro One has controlled access with the use of gates along access roadways. Hydro One has requested the construction contractor to do the same for this project.
Impacts to Future Development	Resident concerned with the line's impacts to future development in the Comber area.	Hydro One recognizes the importance of the employment lands designated for future development in Comber as well as acknowledges the concerns that have been raised by both the Municipality of Lakeshore and members of the community regarding impacts to future and existing residential, commercial and industrial buildings along the preferred route. With the presence of our assets in almost every community across Ontario, development has and continues to be integrated both within and adjacent to our transmission corridors, with our infrastructure serving as the backbone to supporting growth. As a part of this Project, we remain confident that future development can occur adjacent to the new transmission corridor and that there are compatible uses that can take place within the corridor itself. We have many examples in the southwest region where development has successfully occurred in relation to our infrastructure. In Leamington, for example, we built a new 13-kilometre transmission line in an area poised for future greenhouse development, and since then, have seen this development continue adjacent to our line. Overall, we remain committed to working with developers to mitigate any effects to future development related to the employment lands.

3.14 Final Notification and Draft ESR Review Period

Hydro One provided a 60-day review period, from June 11, 2021, to August 10, 2021, to allow sufficient time for review and comment on the draft ESR. Comments regarding the draft ESR were submitted to:

Paul Dalmazzi, Environmental Planner, Hydro One Networks Inc.
483 Bay Street, North Tower,
12th Floor, Toronto, ON M5G 2P5
Phone: 1-877-345-6799 (community relations hotline)
Email: Community.Relations@HydroOne.com

Due to the ongoing public health developments related to COVID-19, the draft ESR was available electronically on [Hydro One Chatham to Lakeshore Project webpage](#). Electronic copies of the draft ESR were also available on USB drives for sign out and/or curbside pickup at the following locations:

Chatham-Kent Public Library 120 Queen Street Chatham, ON N7M 2G6 519-654-2940	Chatham-Kent Public Library 2 Queen Street Tilbury, ON N0P 2L0 519-682-0100	Chatham-Kent Civic Centre 315 King Street Chatham, ON N7M 5K8 519-360-1998	Atlas Tube Centre Essex County Library-Toldo Branch 447 Renaud Line Lakeshore, ON N0R 1K0 519-727-0470
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To help aid those without access to a computer, limited e-readers were available at the above locations for sign out. In the event that public health restrictions ceased during the review period, hard copies of the draft ESR were also available for on-site review at the above locations.

- On June 9 and 10, 2021, the Notice of Completion of draft ESR was distributed to all interested parties including the Anishnawbek and Haudenosaunee communities, municipal, provincial and federal government officials and agencies, potentially affected and interested persons, and interest groups presented in **Sections 3** (see contact list in **Appendix B-1**). The notification indicated that the draft ESR was complete, and that the public review and comment period would run between June 11, 2021, and August 10, 2021. The Notice was published in the Leamington/Wheatley/Kingsville Southpoint Sun, Windsor Star, Chatham-Kent This Week and Chatham Daily Press local

community papers between June 8 and June 10, 2021, and was posted on the Project website www.HydroOne.com/Chatham-to-Lakeshore (see **Appendix B-2** for the notice and newspaper ad).

Comments and concerns received by Hydro One during the draft ESR review period were recognized, considered, addressed and documented. The ESR has been finalized for the proposed Project in accordance with the Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016). The final ESR has been filed with the MECP, and was made available on the Project website www.HydroOne.com/Chatham-to-Lakeshore. The Project is considered acceptable to proceed as outlined in this ESR.

A request may be made to the MECP for an Order requiring a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed). A request may also be submitted that conditions be imposed (e.g., require further studies), only on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. The MECP will not consider requests on other grounds.

The request were to be sent in writing or email to:

Minister of the Environment,
Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
Email: minister.mecp@ontario.ca

Environmental Assessment Branch
Ministry of Environment, Conservation
and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
Email: EABDirector@ontario.ca

Section 16 Order Request submissions were also requested to be copied to Hydro One per the contact information provided above. **Section 3.15** provides an overview of the Section 16 Order Requests submitted during the draft ESR review period alongside Hydro One's corresponding responses.

3.14.1 Draft ESR Review Period

Comments received from Indigenous Communities, Stakeholders, Interest Groups and members of the public on the draft ESR, and subsequent responses provided by Hydro One are captured below in **Table 3-14** through to **Table 3-19**.

Table 3-14: Aamjiwnaang First Nation Draft ESR Comments & Responses

Comment #	Comment	Recommendation	HONI Response
Consultation and Regulatory Requirements			
<p>Draft ESR, Section 3 Consultation, p. 3-1) and Section 3.6 (Indigenous Communities, pg. 3-14 to 3-48)</p>	<p>Section 4.1.1 of HONI's Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016) identifies that a key outcome of consultation is for a proponent to include a detailed record of all consultation-related activities, including efforts to address concerns or mitigate effects. Section 3 of the Draft ESR identifies that a key principle guiding HONI's approach to communication and consultation includes "full and fair considerations and documentation by the proponent of all input received during the consultation process and incorporation of such input, where feasible and reasonable, into project decision-making" (pg. 3-1).</p> <p>In Section 3.6 of the Draft ESR for the Project, HONI provides a summary of engagement activities with First Nation communities but does not provide a summary of how consultation with Aamjiwnaang First Nation has influenced HONI's decision-making for the proposed Project, and how the input of Aamjiwnaang First Nation has been used to identify options for mitigating, avoiding or accommodating impacts on Aboriginal rights and interests.</p>	<p>HONI should amend the Draft ESR to include documentation of how the involvement of First Nation communities has influenced HONI's decision-making for the proposed Project, including the identification of options for mitigating, avoiding, or accommodating impacts on the Aboriginal rights and interests of the First Nation communities that the Crown has directed HONI to include in the consultation process. Aamjiwnaang First Nation should be allowed the opportunity to confirm that these amendments appropriately reflect the concerns and input shared during consultation and identify any concerns or input raised during the consultation process that have not yet been substantially addressed.</p>	<p>Since January 2020, as summarized in Section 3.6 of the draft ESR and further outlined in the Record of Consultation (Appendix B of the dESR), Hydro One has made efforts to seek input on all aspects of the project, including input into the evaluation of alternatives, identification of environmental effects and potential mitigation measures. Engagements included virtual information sessions, workshops, technical advisory meetings and the provision of input workbooks for communities, to name a few. Recognizing that some communities have capacity challenges, resources were made available, starting in April 2020, through Capacity Funding Agreements, to all participating communities to hire dedicated staff and to obtain assistance from outside professionals if required.</p> <p>Section 3.6 of the draft ESR describes the consultation activities and opportunities provided to Indigenous communities throughout the Class EA. Section 3.6, 3.6.1 and 3.6.2 describe the consultation and outreach activities and opportunities (such as capacity funding agreements) that were offered to all communities, while Section 3.6.3 provides a further summary of the consultation with Aamjiwnaang First Nation specifically. Further detail is provided in the Record of Consultation in Appendix B.</p> <p>Section 5 of the draft ESR, and in particular Section 5.3.4, describe how input received from Indigenous communities was specifically incorporated into the framework to evaluate the route alternatives and ultimately select the preferred route, through the development of evaluation criteria. These Anishnawbek and Haudenosaunee Culture, Values and Land Use criteria formed one quarter of the route evaluation framework, alongside the Natural Environment, Socio-Economic Environment, and Technical and Cost categories of criteria, and were influential in the selection of the preferred route for the Chatham to Lakeshore project.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Appendix B-3 (Anishnawbek and Haudenosaunee Consultation materials), Draft ESR, Section 7 (Potential Environmental Effects and Mitigation Measures), and Draft ESR, Section 3 (Consultation)</p>	<p>In Appendix B-3 of the Draft ESR, HONI includes a letter from the Ministry of Energy, Northern Development and Mines (MENDM) outlining the Crown's assessment of the potential for the Project to adversely impact the Aboriginal and Treaty rights of First Nations and the Crown's delegation of procedural aspects of consultation to HONI. In this letter, MENDM directs that information needs to be gathered about how the Project may adversely impact Aboriginal and Treaty rights and for HONI to bear the reasonable costs associated with the procedural aspects of consultation.</p> <p>The June 2021 Draft ESR does not include any adequate documentation of how the Project may adversely impact the Aboriginal and Treaty rights of Aamjiwnaang First Nation, instead only including general statements that "there are no Anishnawbek or Haudenosaunee Reserve Lands located in the PSA" (p. 7-37) and that all phases of the Project have "potential to affect First Nations and Haudenosaunee interests" (p. 7-60). Therefore, the Crown cannot be satisfied that the substantive and procedural aspects of consultation were completed.</p>	<p>HONI must amend Section 7 of the Draft ESR to provide documentation of the adverse effects of each specific Project phase on the Aboriginal and Treaty rights of each specific First Nation community involved in the consultation process. Additionally, adverse impacts to Aboriginal and Treaty rights associated with net effects to various aspects of the environment need to be characterized. First Nation communities involved in the consultation process must be provided the opportunity to verify this updated assessment of the adverse impacts of the Project on their Aboriginal and Treaty rights. Where insufficient information is available to HONI to complete this assessment, First Nation communities must be afforded the time and funding to complete Traditional Ecological Knowledge (TEK) / Traditional Land and Resource Use (TLRU) studies and integrate their results into the Draft ESR before it is considered complete.</p>	<p>Through the consultation process conducted as part of the Class EA, Hydro One relies on input from Indigenous communities to specifically identify Aboriginal and treaty rights that may be affected by the Project.</p> <p>The draft ESR contains a description of the existing environment (Section 4) and the potential effects of the project and proposed mitigation measures to address these effects (Section 7), including effects to natural environment features and potential cultural heritage resources. If more specific information on Aamjiwnaang First Nation's Aboriginal and treaty rights is provided to Hydro One prior to the submission of the final ESR, Hydro One can review this information and include a summary within the final ESR as appropriate, potentially with reference to existing mitigation measures and commitments (such as those for some natural environment features) which may also serve to mitigate potential adverse effects to Aamjiwnaang First Nation's Aboriginal and treaty rights.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to fund and work with Indigenous communities to receive input and traditional knowledge information throughout the life cycle of the project, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project such as project design, construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, General Comment</p>	<p>Section 6.5 of HONI's Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016) requires that "all proponents will consider cumulative effects when planning projects" (pg. 54) and that this assessment will "include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available" (pg. 54).</p> <p>In the current Draft ESR, HONI has not included any consideration of cumulative environmental effects or specific information on cumulative effects of the Project to the Aboriginal and Treaty rights of Aamjiwnaang First Nation.</p>	<p>HONI must amend the Draft ESR to include a chapter setting out an assessment of the cumulative effects of the Project. This assessment should consider:</p> <p>Appropriate boundaries for cumulative effects assessment informed by consultation with Indigenous groups. Spatial and temporal boundaries for cumulative effects should be considered on a larger scale than boundaries for the effects of the Project alone.</p> <p>The interaction of the effects of the Project with effects of all other past, existing, and future anticipated projects and physical activities, and other potential sources of cumulative effects identified in consultation with Indigenous groups. Note that cumulative effects may be significant even if the Project's net effects are considered minor.</p> <p>Effects on Aboriginal and Treaty rights and the ability of Indigenous Peoples to exercise their rights and effects on the social conditions and culture of Indigenous Peoples.</p> <p>Approaches to managing cumulative effects with First Nations communities involved in the consultation process, including verification that these approaches, have been approved by First Nations communities.</p>	<p>Hydro One intends to further assess the cumulative effects of the project as per the requirements of the Class Environmental Assessment for Minor Transmission Facilities (MTF) (i.e., "within the immediate project area"), and will document this assessment in the final ESR. To extend beyond this, is outside the scope of the Class EA for MTF and Hydro One's mandate and control. The Chatham to Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Section 8 (Effects Monitoring, pg. 8-1)</p>	<p>Section 3.7 of HONI's Class Environmental Assessment for Minor Transmission Facilities (Hydro One, 2016) requires that "potential monitoring requirements should be considered throughout the Class EA process" (pg. 27) and that "the ESR will describe the effects monitoring strategies required for the project" (pg. 27).</p> <p>In Section 8 of the Draft ESR, HONI defers the identification of effects monitoring approaches and strategies until the completion of Class EA process in the development of a future "Environmental Management Plan." This is a major outstanding deficiency of the Draft ESR as it provides no way for Aamjiwnaang First Nation, the Crown, and other parties to verify the adequacy of HONI's approach to effects monitoring corresponding to the effects of the Project on the environment and the Aboriginal and Treaty rights of First Nation communities involved in the consultation process.</p>	<p>HONI must amend Section 8 of the Draft ESR to include a detailed description of HONI's planned approach to effects monitoring programs, including:</p> <p>The environmental or TLRU component being monitored;</p> <p>The monitoring methods being used, and the timing and duration of monitoring at each Project phase;</p> <p>HONI's intervention mechanisms in the event of non-compliance, including descriptions of thresholds that trigger interventions; and</p> <p>The plans, including commitments to provide capacity funding, to involve Indigenous communities in effects monitoring on an on-going basis during the life of the Project.</p> <p>Where the development of effects monitoring plans is deferred until after the completion of the Class EA process, HONI must set out in Section 8 of the Draft ESR a process, collaboratively developed with Indigenous groups, for the involvement of Indigenous groups in the development and finalization of effects monitoring plans and environmental management plans.</p>	<p>As more detailed and specific design and construction plans are developed for the project, the environmental mitigation measures prescribed for certain situations will also become more well-defined. This includes not just the site-specific mitigation measures and work plans for construction, but also more specific monitoring protocols. Monitoring will be regularly conducted by the construction contractor but with ongoing regular review and regular field monitoring checks conducted by Hydro One staff as well.</p> <p>Indigenous community input into the development of these plans, including details of monitoring is an important component of the environmental management process.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties, it has generally not been Hydro One's practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by Aamjiwnaang FN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors. These efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and Aamjiwnaang FN as preparations begin for construction and we are committed to working together on this.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to fund and receive input and traditional knowledge information, and to incorporating that information into subsequent phases of the project such as construction planning, potential monitoring of environmental mitigation measures during construction, post-construction restoration and the Biodiversity Initiative planned for the project.</p>
<p>Aquatic Ecology</p>			

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Section 4.6.3 (pg. 4-17 to 4-20)</p>	<p>In the Draft ESR, HONI describes two types of surface water resource: "Water Crossings" and "Waterbodies." This description can be confusing as in virtually no instance are water crossings considered a surface water resource. Water crossings are the physical, constructed means of crossing surface water features (e.g., low-bed crossing, culverts, bridges, etc.), typically at water courses.</p> <p>Regarding potential impacts to surface waters, actual water crossings can be one of the primary causes of impacts to fish and fish habitat as a result of linear corridor projects. Therefore, the use of this term for both a natural feature and physical structure is confusing and incorrect.</p> <p>Likewise, waterbodies include a wide range of surface water features ranging from ephemeral and intermittent, standing or flowing waters to permanent standing or flowing larger systems but are never just constructed, or natural pools that are landlocked.</p> <p>Adding to the inconsistency, Table 4-3: Watercourse Crossings Surveyed; Column 1, Watercourse/Drain Name lists streams and creeks (incorporated as drains), none of which are standing waters albeit some may be pumped systems. Most of these were natural, flowing streams before incorporation as "drains" under the Provincial Drainage Act.</p> <p>In both cases, it is confusing why these two terms with well-accepted uses are set out in the Draft ESR in these incorrect and confusing ways. Aamjiwnaang First Nation requests that HONI use a standard method for classifying surface water resources, such as the <i>Evaluation, Classification and Management of Headwater Drainage Features Guideline</i> (Toronto and Region Conservation Authority and Credit Valley Conservation, 2014).</p>	<p>Aamjiwnaang First Nation request that HONI clarify or correct the use of the terms "water crossing" and "waterbodies." Aamjiwnaang First Nation requests that HONI use a standard method for classifying surface water resources, such as the <i>Evaluation, Classification and Management of Headwater Drainage Features Guideline</i> (Toronto and Region Conservation Authority and Credit Valley Conservation, 2014).</p>	<p>The reference to water crossings is associated with the physical crossing of watercourses/drains by the alternative routes. Section 4.6.3 provides the definition of water crossings for the purposes of the ESR. Hydro One will clarify the distinction between waterbodies and watercourse crossings in the final ESR.</p>

Comment #	Comment	Recommendation	HONI Response
<p>"Draft ESR, Section 4.6.7 (Natural Heritage Features, pg. 4-31 to 4-32)</p>	<p>HONI described some of the aquatic systems surveyed as: "reported to have good to fair systematic agricultural tile drainage (classifications of C, E and F)." Tile drainage is never classified as C, E, and F, or any of the classes for drains (A, B and D); only open agricultural drains were/are classified as such. Information that goes into the classification of municipal drains is typically good information and goes a long way to describe the "quality" of the drain and potential as habitat. There is virtually no habitat provided in tile drainage apart from being a water contributor only.</p>	<p>Aamjiwnaang First Nation request that HONI correct the use of the Drains Classification System to be used only for open municipal drains throughout the Draft ESR and Appendix (C-1).</p>	<p>It is acknowledged that the Drain Classification System is to be used for open municipal drains. The mention of systematic agricultural tile drainage was from an external reference which described the inputs to drain classes C, E and F ("... reported to have good to fair systematic agricultural tile drainage"). The reference will be updated in the final ESR to reflect that drain classes C, E and F receive "good to fair systematic agricultural tile drainage inputs".</p>
<p>Draft ESR, Section 7.7.8.2 (Fish and Aquatic Habitat, pg. 7-34)</p>	<p>HONI indicates that the Project will cross over several watercourses that have been identified as fish habitat. Minimal information has been provided that would allow Aamjiwnaang First Nation to assess the sensitivity of these watercourses and potential impacts to fish and fish habitat. This information is necessary for Aamjiwnaang First Nation to determine the potential impacts to Aamjiwnaang First Nation's rights and interests.</p>	<p>For each watercourse that requires a crossing, Aamjiwnaang First Nation requires that HONI provide information pertaining to: Crossings Details, including:</p> <ul style="list-style-type: none"> • Crossing type • In-stream footprint • Outlet velocity (for culverts) • If fording is required • Proposed construction timing • Biophysical Habitat Data, including: <ul style="list-style-type: none"> • Bankfull width • Bankfull depth • Wetted width • Wetted depth • Fish Species Present • Fish Habitat Value (e.g., presence of spawning and nursery habitat) • Proposed Restricted Activity Timing Window 	<p>Information on temporary watercourse crossing structures (locations and designs) will be provided as part of the detailed construction plans when they are available. As stated in Section 7 and Table 7-1 of the draft ESR, existing crossings and access routes will be utilized to the extent practical.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Appendix C1 (Aquatics Assessment, pg. 15-16)</p>	<p>In several locations along Route Alternative 2, potential habitat for lake chubsucker and lilliput was identified. HONI has not indicated if they will complete surveys to confirm the presence / absence of lake chubsucker and lilliput at their respective locations. If present, this may require that HONI obtain the necessary permits under the provincial <i>Endangered Species Act</i> and federal <i>Species at Risk Act</i>.</p>	<p>Where potential Species at Risk habitat was identified, Aamjiwnaang First Nation requires that HONI undertake further field studies to confirm the presence / absence of Species at Risk, using accepted standardized protocols such as the <i>Protocol for the detection of fish Species at Risk in Ontario Great Lakes Area</i> (Portt, Coker, Mandrak, & Ming, 2008) and the <i>Protocol for The Detection and Relocation of Freshwater Mussel Species at Risk in Ontario Great Lakes Area</i> (Mackie, Morris, & Ming, 2008).</p>	<p>Section 4.6.7 (Natural Heritage Features) and Appendix C-1 in the dESR provide a summary of the SAR baseline conditions, while Section 7.7.8.4 (Species at Risk) and Table 7-1 provides a summary of the potential direct and indirect effects the project may have on SAR, including their associated project phase (i.e. construction and maintenance) and mitigation measures. As outlined in the dESR, the main mitigation measure is avoidance, where possible.</p> <p>Species at Risk (SAR) habitat was described in the draft ESR by either direct observation during field surveys (e.g., Butternut) or by the identification of potential SAR habitat by way of cross-referencing the results of Ecological Land Classification against the habitat descriptions for SAR with the potential to occur within the project study area. This is a conservative approach which Hydro One believes to be appropriate for Class EA projects.</p> <p>The MECP has recently acknowledged that an authorization under the <i>Endangered Species Act, 2007</i> (ESA) would not be required for SAR bats and/or Eastern Foxsnake so long as the timing windows outlined in the ESR are adhered to.</p> <p>If it is determined that disturbance to some areas of potential SAR habitat cannot be avoided, then additional detailed surveys to confirm presence or absence of SAR habitat may be required and opportunities for participation from interested Indigenous communities will be provided. Some of these additional surveys (eDNA and additional aquatic habitat assessments) were conducted in July 2021 and were attended by interested Indigenous communities, and additional species-specific surveys are being planned by the engineering and construction contractor (Voltage Power) for the 2022 field season, to further inform their detailed environmental management and mitigation plans. Specific multi-season surveys are not currently being planned, however Hydro One is confident that the combination of field data collected during the Class EA and in the following seasons (including forthcoming surveys) is sufficient to provide a confident understanding of the SAR habitat that may occur along the new transmission line corridor.</p> <p>As described in Section 4.6.7 of the ESR, in the event the project has the potential to result in potential impacts to aquatic SAR, both the MECP and DFO will be consulted to confirm whether permitting under the ESA and/or the <i>Fisheries Act</i> may be required.</p> <p>Aamjiwnaang First Nation and other First Nations will be provided opportunities to participate in the development of the environmental management plan and construction plans which will outline details of where and how specific mitigation measures will be applied and how construction effects will be offset. Funding to participate will be provided as necessary.</p>

Comment #	Comment	Recommendation	HONI Response
Terrestrial Ecology			
Draft ESR, Section 4.0 (Environmental Inventory, pg. 4-1)	<p>In Section 4.0, HONI states that “As of the drafting of this ESR, comments from MECP on the Natural Environment Field Program TOR remain outstanding” (pg. 4-1). HONI does not provide copies of the correspondence, nor do they provide details of what the outstanding concerns may be.</p> <p>This is concerning to Aamjiwnaang First Nation as it is unclear whether comments made by the Ministry of Environment, Conservation and Parks (MECP) related to the natural environment remain unresolved. The absence of the correspondence undertaken with MECP and outstanding comments is concerning to Aamjiwnaang First Nation as potential impacts or shortcoming of the Project could adversely impact the natural environment that Aamjiwnaang First Nation community members rely upon to practice their Aboriginal and Treaty rights.</p>	<p>Aamjiwnaang First Nation request that HONI provide a copy of the correspondence with MECP, specifically correspondence on outstanding comments.</p>	<p>Summaries of correspondence between Hydro One and agencies such as the MECP, will be included in the Record of Consultation (RoC) for the final ESR as they have been in the draft ESR. Specifically, correspondence with the MECP is briefly described in Section 3.8.5 of the draft ESR and are documented in further detail in Appendix B6. This record will be updated for the final ESR to include those correspondence that have occurred since the release of the draft ESR.</p> <p>While the MECP Species at Risk Branch (SARB) did not provide specific comment on the Natural Environment Field Program Terms of Reference, MECP staff were engaged throughout the Class EA process including participation in the Technical Advisory Committee. MECP staff (including SARB staff) also reviewed and provided comments on the draft ESR, which will be documented (alongside Hydro One’s responses) in the final ESR.</p>
Draft ESR, Section 4.6.6 (Designated or Special Natural Areas, pg. 4-23)	<p>The existing transmission line south of Comber currently runs “directly adjacent” to Big O Conservation Area in Aamjiwnaang First Nation’s Treaty Territory, which is a well-known local heritage feature and birding site – known as a “birding hot spot.” Aamjiwnaang First Nation is concerned that activities associated with the Project, such as an expansion of the existing Right of Way (ROW) for route 1 (A, B, C, and D) could lead to adverse impacts on the Big O Conservation Area. This area is an important stop-over location for migratory birds. As a natural heritage area and one of a remaining few such areas in this region of Aamjiwnaang First Nation’s Treaty Territory, there is a concern that the new line may impact the Big O Conservation Area and contribute further cumulative impacts to the existing HONI ROW.</p>	<p>HONI must provide details on how the Big O Conservation Area will be avoided. Aamjiwnaang First Nation would not be supportive any encroachment into the Big O Conservation Area, including a buffer region (indirect encroachment from widening of the ROW).</p>	<p>The Big O Conservation Area (CA) will not be affected by the project, as this feature is avoided entirely by the preferred Route 2A, which is located north of the Big O CA.</p> <p>The Big O CA is currently traversed by existing 230 kV transmission lines and would have been affected (by way of the widening of this transmission corridor) by any of the Route 1 alternatives which would have paralleled these existing transmission lines on the north side. The anticipated effects to the Big O CA were considered in the evaluation of route alternatives and was one of the features that lead to Route 1 alternatives scoring lower in some evaluation criteria within the Natural Environment and Anishnawbek and Haudenosaunee Culture, Values and Land Use categories.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Section 4.6.6 (Designated or Special Natural Areas, pg. 4-23 to 4-24)</p>	<p>Within the Draft ESR document, HONI recognizes that the Project Study Area (PSA) does overlap with the Eastern Lake St. Clair Important Bird Area (IBA) but then cites that IBAs are not legally protected in Canada. HONI does not provide any details of the value of IBAs to Aamjiwnaang First Nation's Aboriginal and Treaty rights in this statement.</p> <p>Additionally, and as discussed in comment 14 below, if indeed there are other ecological features such as wetlands (specifically unclassified) or waterbodies, complexing is likely to occur but may have been missed in the single season or point-assessments conducted as part of this Draft ESR. Aamjiwnaang First Nation is concerned about the potential impact of the new transmission line on bird species using the IBA and Project Study Area, which may be underestimated or are not yet assessed.</p>	<p>A. HONI must provide wording within the Draft ESR that notes the importance of IBAs to the Aboriginal and Treaty rights of Indigenous Peoples.</p> <p>B. HONI must re-evaluate the potential impacts of the Project on IBAs via increased assessments that explore potential complexing and cumulative effects. The results of these studies should be provided to Aamjiwnaang First Nation for review before proceeding with Project planning. Aamjiwnaang First Nation should also have the opportunity, with reasonable capacity funding, to participate in these assessments.</p>	<p>As described in Section 7.7.7.1 of the ESR, the majority of the IBA which is traversed by the preferred route 2A consists of an existing 115 kV idle transmission line corridor which will be repurposed to accommodate the proposed Project. Therefore, while the new transmission line will be different in design (e.g., taller structures with greater span distance between them), this represents an incremental change to this area. However, recognizing that the IBA is an important consideration in the planning of the project, this was taken into account both in the evaluation of the route alternatives and the assessment of environmental effects and identification of mitigation measures.</p> <p>Within the IBA, Lake St. Clair provides a critical resting, feeding and staging area for numerous species of waterfowl; earning its reputation as one of the most important resting and feeding sites for waterfowl in Canada south of James Bay. However, these congregations are contained within the lake itself, adjacent wetlands and a broad swath of adjacent farmlands and inland habitats from Wallaceburg to the mouth of the Thames River. The preferred route 2A is outside of the critical waterfowl feeding, staging and stopover areas.</p> <p>Indigenous communities will be provided opportunities for input into development of the environmental management plan and construction plans during the detailed design phase of the project. This will provide important opportunities to participate in the identification of mitigation measures to address potential effects to IBAs.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Section 7.7.7.1 (East Lake St. Clair Important Bird Area, pg. 7-28 to 7-29).</p>	<p>In Section 7.7.7.1, HONI states that "Through review of available data, flight paths for water bird species commonly associated with the IBA do not appear to extend through the eastern extents of the IBA that overlap with the proposed Project" (pg. 7-29). HONI does not provide citations for the data sources they used to come to this conclusion, nor do they provide details of the species that they assessed. Without these key details, it is not possible to verify HONI's conclusion that flight paths of migratory water birds found in the IBA do not overlap with the proposed Project.</p> <p>As well, HONI states that to mitigate impacts to migratory birds associated with the IBA, they will remove vegetation outside the breeding bird season where practical and "In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified terrestrial/avian biologist will be completed" (pg. 7-29). HONI does not provide a timeframe as to when these nest searches will be conducted relative to the start of vegetation removal.</p> <p>These aspects of the proposed Project are concerning to Aamjiwnaang First Nation as potential adverse impacts to waterfowl and other migratory birds within our Treaty Territory could adversely impact the Aboriginal rights and interests of our community members.</p>	<p>A. HONI must provide a list of species for which they assessed flight paths and provide the list of data sources they used in their assessment of the flight paths to Aamjiwnaang First Nation.</p> <p>B. HONI must commit to conducting nest searches 24 hours in advance of vegetation removal during the breeding bird season to minimize any possibility of incidental take of migratory bird species protected under the <i>Migratory Birds Convention Act</i> (Government of Canada, 1994). As well, nest searches are only appropriate in simple habitats such as agricultural fields or hedgerows where nests are likely to be detected and should not be performed in complex habitats such as forests.</p>	<p>As further described in Section 7.7.7.1 of the ESR, a review of available data, flight paths for water bird species commonly associated with the IBA do not appear to extend through the eastern extents of the IBA that overlap with the proposed Project. Species for which specific flight path information was obtained and reviewed include Black-Bellied Plovers and King Rail, for which information in the eastern Lake St. Clair region was available through the MOTUS Wildlife Tracking System, an international collaborative research network that uses coordinated automated radio telemetry to facilitate research and education on ecological and conservation of migratory animals. A reference to these data will be added to the final ESR.</p> <p>While suitable habitat conditions for water birds within the IBA were not identified within the transmission ROW associated with the preferred route, potential suitable habitat does exist adjacent to the transmission ROW. As a result, there is potential for birds to collide with the transmission line during the construction and operational phases associated with the proposed Project. In addition to the above-mentioned repurposing of the existing idle transmission corridor, Hydro One has also committed to implementing additional visual mitigation (e.g., bird diverters or similar technology) along key sections of the transmission line within the IBA to further mitigate the potential for avian collisions. Selection and implementation of this visual mitigation will form part of the detailed design and environmental mitigation planning to be undertaken by the construction contractor for the project; Hydro One will work with its selected contractor to further review potential mitigation solutions with interested Indigenous communities, and to incorporate input from communities into these plans.</p> <p>As committed in Section 7.7.7.1 of the draft ESR, vegetation removal will be completed outside of the migratory bird breeding season (i.e., April 5 to August 31, zone C1 as provided by ECCC 2018), where practical. In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified terrestrial/avian biologist will be completed in advance of these removals.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR Section 7.7.7.2 (Significant Woodlands, pg. 7-29 to 7-30), and Table 7-1 (Summary of Potential Environmental Effects, Mitigation Measures, and Net Effects, pg. 7-55)</p>	<p>In Section 7.7.7.2, HONI states that vegetation clearing will be needed for portions of the significant woodlands to accommodate the new ROW as part of the Project. HONI states that they “will undertake a Biodiversity Initiative to offset habitat loss or transition (e.g., from trees to compatible vegetation communities) that cannot otherwise be avoided or mitigated” (pg. 7-30). HONI does not provide further details of what this Biodiversity Initiative will entail or whether they will consult with Aamjiwnaang First Nation on the actions undertaken as part of the initiative.</p> <p>Within Table 7-1, HONI states that the net effects on woodlands in the Project Area are not considered significant. HONI states that they “will undertake a Biodiversity Initiative to offset habitat loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated” (pg. 7-55).</p> <p>This is concerning to Aamjiwnaang First Nation as without the details of what specific actions will be undertaken as part of the Biodiversity Initiative, it is not possible to determine whether the impacts to woodlands will be significant or whether the actions of the Biodiversity Initiative are adequate.</p> <p>Aamjiwnaang First Nation is very concerned about the potential effects of the Project on forest habitat fragmentation and habitat loss. Cumulative impacts of infrastructure development and other activities have contributed to the loss and fragmentation of forest ecosystems within our Treaty Territory and adversely impacted the wildlife species that depend on them. This means that further impacts on these already strained and important ecosystems hold greater significance as they could adversely impact our rights and interests.</p>	<p>A. ONI must provide specific details of what actions they plan to undertake as part of the Biodiversity Initiative to offset forest/woodland habitat loss and forest/woodland fragmentation associated with this Project.</p> <p>B. As well, HONI must commit to consulting with Aamjiwnaang First Nation on the actions undertaken as part of the Biodiversity Initiative for this Project. Aamjiwnaang First Nation expects that the actions undertaken as part of the Biodiversity Initiative will include:</p> <ul style="list-style-type: none"> • Offsetting the fragmentation and loss of areas of impacted forests/woodlots through creating more forest habitat within the local landscape at a minimum of a 3:1 ratio; • Prioritizing forest habitat offsetting measures to expand existing forests/woodlands and maintain or build habitat connectivity within the landscape; • Prioritize planting native plant species including Carolinian species and consulting with Aamjiwnaang First Nation to ensure that plant species of importance are included in the plantings; • Undertake follow-up monitoring for a minimum of five years and re-plant if necessary to ensure the survival of plantings and successful establishment of the compensation forest habitat; and • Provide opportunities for Aamjiwnaang First Nation community members to be involved in these activities. 	<p>The Biodiversity Initiative (offsetting for residual habitat impacts that cannot otherwise be avoided, mitigated or restored) is an important component of the project. The project team's focus is currently on identifying and planning measures to avoid or mitigate environmental effects (such as effects to natural features and habitats), through such mechanisms as detailed Environmental management Plans for construction. Once complete (and discussed with Indigenous communities, focus will turn to the Biodiversity initiative and the offsetting of habitat impacts. As such, the specific format, framework and scope of project-specific Biodiversity Initiatives are generally built out after completion of the Environmental Assessment, closer to or even during construction.</p> <p>Opportunities will be provided for Aamjiwnaang FN to participate in planning for the Biodiversity Initiative for the project. This more detailed planning of the Biodiversity Initiative could begin in 2022, but until then, Aamjiwnaang FNs' comments regarding the prioritization of Carolinian forest habitats are acknowledged and much appreciated, and is exactly the type of input that is helpful to HONI in shaping the format of the eventual Biodiversity Initiative.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Section 7.7.8.1 (Wetlands, pg. 7-33)</p>	<p>In the Draft ESR, HONI states that three unevaluated wetlands are crossed by the new transmission line for the preferred route and could be impacted by the activities associated with the line. HONI further elaborates that avoidance, where possible, will be the primary mitigation; however, if impacts cannot be avoided, offsetting of losses will follow the guidance in the proposed Biodiversity Initiative.</p> <p>Aamjiwnaang First Nation is concerned that the wetlands are connected to other ecological features present in the local landscape (i.e., through wetland complexing) and that moving and re-creating wetlands at different locations as a common off-set strategy may be unable to adequately re-create the functions/conditions and habitat that was present in the original wetland.</p> <p>Additionally, across Aamjiwnaang First Nation's Treaty Territory, wetlands represent an endangered ecosystem. Further evaluation and protection are required in order to avoid impacts to Aamjiwnaang First Nation Aboriginal and Treaty rights and to avoid worsening cumulative impacts that already exist within their Treaty Territory.</p>	<p>Aamjiwnaang First Nation requests that HONI employ an environmental professional that is certified as wetland evaluator to evaluate the wetlands, in collaboration with Aamjiwnaang First Nation, not only for intrinsic valued ecological components but also for extrinsic valued ecosystem components (VECs) that may include complexing to other ecological features. Aamjiwnaang First Nation expects to be able to participate in these assessments, with reasonable capacity funding provided by HONI.</p> <p>Should avoidance be unable to mitigate impacts to wetlands, HONI should consult with Aamjiwnaang First Nation on their initial proposed offsetting measures.</p>	<p>During the Class EA, field studies were undertaken by qualified biologists and ecologists to characterize natural features in the study area to the extent that property access permission could be obtained; this included Ecological Land Classification and vegetation inventories, breeding bird surveys, amphibian call surveys and aquatic habitat assessments. These studies and their findings are described in Section 4.6 of the draft ESR and presented in Appendix C1.</p> <p>Aamjiwnaang First Nation and other First Nations will be provided opportunities to participate in the development of the environmental management plan and construction plans which will outline details of where and how specific mitigation measures will be applied and how construction effects will be offset. Funding to participate will be provided as necessary.</p> <p>As discussed in the response to Comment #13, opportunities will also be provided for Aamjiwnaang FN to participate in the planned Biodiversity Initiative (habitat offsetting program) for the project, including the provision of input to help shape the initiative, as described above in the response to comment 13. More detailed planning of the Biodiversity Initiative could begin in 2022.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Section 7.7.8.4 (Species at Risk, pg. 7-34 to 7-35)</p>	<p>Within the Draft ESR and appendices, HONI cites various fish and wildlife species listed under either or both the federal <i>Species at Risk Act</i> (SARA) and the provincial <i>Endangered Species Act</i> (ESA).</p> <p>The studies undertaken as part of the Draft ESR are insufficient as the:</p> <ul style="list-style-type: none"> Species at Risk (SAR) assessments were mostly desktop based; and Single-season point assessments that were used in most of the studies are presence-not observed level and insufficient for understanding or describing potential impacts to wildlife and especially for SAR. This is of serious concern to Aamjiwnaang First Nation as adverse impacts to wildlife of importance to our community and SAR would in turn have adverse impacts on our Aboriginal and Treaty rights. 	<p>A. As more detailed plans are developed, HONI must commit to undertaking fulsome, multi-season studies to assess the presence or absence of SAR.</p> <p>B. If SAR are found to be present, HONI must provide a mitigation plan for Aamjiwnaang First Nation's review and comment. Aamjiwnaang First Nation expects that this mitigation plan will include total avoidance as the primary mitigation measure.</p> <p>C. HONI must commit to consulting with Aamjiwnaang First Nation on all permitting / authorizations under the ESA. Aamjiwnaang First Nation expects that this consultation would include review of draft permit / authorization applications, capacity funding, and sharing on-going communications with MECP.</p> <p>D. Aamjiwnaang First Nation expects that HONI provide opportunities for Aamjiwnaang First Nation community members to participate in these assessments, with reasonable capacity funding and any necessary industry standard training.</p>	<p>Species at Risk (SAR) habitat was described in the draft ESR by either direct observation during field surveys (e.g., Butternut) or by the identification of potential SAR habitat by way of cross-referencing the results of Ecological Land Classification against the habitat descriptions for SAR with the potential to occur within the project study area. This is a conservative approach which Hydro One believes to be appropriate for Class EA projects.</p> <p>The MECP has recently acknowledged that an authorization under the <i>Endangered Species Act, 2007</i> (ESA) would not be required for SAR bats and/or Eastern Foxsnake so long as the timing windows outlined in the ESR are adhered to.</p> <p>If it is determined that disturbance to some areas of potential SAR habitat cannot be avoided, then additional detailed surveys to confirm presence or absence of SAR habitat may be required and opportunities for participation from interested Indigenous communities will be provided. Some of these additional surveys (eDNA and additional aquatic habitat assessments) were conducted in July 2021 and were attended by interested Indigenous communities, and additional species-specific surveys are being planned by the engineering and construction contractor (Voltage Power) for the 2022 field season, to further inform their detailed environmental management and mitigation plans. Specific multi-season surveys are not currently being planned, however Hydro One is confident that the combination of field data collected during the Class EA and in the following seasons (including forthcoming surveys) is sufficient to provide a confident understanding of the SAR habitat that may occur along the new transmission line corridor.</p> <p>As described in Section 4.6.7 of the ESR, in the event the project has the potential to result in potential impacts to aquatic SAR, both the MECP and DFO will be consulted to confirm whether permitting under the ESA and/or the <i>Fisheries Act</i> may be required.</p> <p>Aamjiwnaang First Nation and other First Nations will be provided opportunities to participate in the development of the environmental management plan and construction plans which will outline details of where and how specific mitigation measures will be applied and how construction effects will be offset. Funding to participate will be provided as necessary.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Section 7.7.8.6 (Invasive Species, pg. 7-36 to 7-37), and Appendix C, Section 2.2 (Ecological Land Classifications and Botanical Assessments, pg. 5-6)</p>	<p>HONI notes within Appendix C, Section 2.2 that "ELC surveys and botanical assessments for the majority of lands within the Project Study Area were performed as roadside surveys. Where private property access was permitted, assessment of vegetation communities occurred from within property boundaries (i.e., within natural features)" (pg. 5). HONI also noted that only a single-season botanical assessment occurred.</p> <p>The limited scope of the botanical surveys (single-season surveys, and mostly roadside assessments) is concerning to Aamjiwnaang First Nation, as these could have easily overlooked potential pockets of invasive species, and plants species of importance to Aamjiwnaang First Nation.</p> <p>As well, HONI outlines the following mitigation measures in Section 7.7.8.6 of the Draft ESR to reduce the spread of invasive species:</p> <p>"Utilizing native plant species during construction restoration.</p> <p>Taking care to avoid spreading invasive species (especially invasive plant species) that occur in or adjacent to work areas, and educating crews on the importance of preventing the spread of invasive species.</p> <p>Abiding by the Invasive Species Act regulations;</p> <p>Proper handling, containment and disposal of invasive plant material, where required.</p> <p>Inspecting and cleaning equipment and vehicles as necessary to reduce potential for spreading invasive species propagules" (pg. 7-36 and 7-37).</p> <p>HONI's mitigation measures are extremely general and lack specific details that would allow Aamjiwnaang First Nation to verify whether they would be effective to limit the spread of invasive species.</p> <p>This is concerning to Aamjiwnaang First Nation as further spread on invasive species due to this Project would adversely impact the natural environment that Aamjiwnaang First Nation community members rely upon to practice their Aboriginal and Treaty rights.</p>	<p>A. HONI must commit to providing a Project-specific invasive species control plan. Aamjiwnaang First Nation expects that this plan would include, at a minimum:</p> <ul style="list-style-type: none"> • Training materials and objectives for Project staff; • Details of regular monitoring (e.g., methods, frequency, location, scope, personnel, reporting); • Responsibilities of environmental monitors; • Control methods for invasive species should they be present within the Project area (i.e., mechanical methods, herbicide); • Details of proper disposal of invasive species • Communications pathways; and • Adaptive management actions and thresholds for these adaptive management actions. <p>B. HONI should commit to using the <i>Clean Equipment Protocol for Industry</i> (Halloran et al., 2013) to ensure that equipment used in this project does not become a vector for the spread of invasive species.</p> <p>C. Aamjiwnaang First Nation request that HONI commit to undertaking fulsome, multi-season studies to assess plants species present within the Project area. HONI should consult with Aamjiwnaang First Nation to identify potential valued ecosystem components (VECs) and to ensure locations of these VECs identified during surveys are adequately protected.</p> <p>D. Aamjiwnaang First Nation expects HONI to continue to provide opportunities for Aamjiwnaang First Nation community members to participate in this Project as Environmental Monitors. These Environmental Monitors should receive any necessary industry standard training. This will provide Aamjiwnaang First Nation with greater confidence that effective environmental mitigations are in place and VECs are protected.</p>	<p>Hydro One will continue to identify and flag areas with populations of invasive species, including <i>Phragmites australis</i> for consideration during detailed access and construction planning. As described in Section 7.7.8.6 of the ESR, Construction staff will be educated on the identification of invasive species and the importance of avoiding their spread to new areas, and areas with known invasive species populations will be avoided to the extent practical during construction. Additional measures that would be undertaken to reduce the spread of invasive species include utilizing native plant species during construction restoration, care to avoid spreading invasive species (especially invasive plant species) that occur in or adjacent to work areas, and educating crews on the importance of preventing the spread of invasive species, conducting proper handling, containment and disposal of invasive plant material, where required, and inspecting and cleaning equipment and vehicles as necessary to reduce potential for spreading invasive species propagules.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on plant species of harvesting interest or VECs, and incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>Hydro One notes Aamjiwnaang's request for the participation of Environmental Monitors on the project. This is an important consideration for all involved on the project, especially during the construction period. Hydro One's first priority for any construction activity is health and safety. As such, it is important that safety protocols are respected and adhered to at all time. Hydro One is currently exploring options/opportunities with the construction contractor for First Nations to participate in monitoring during construction for adherence to commitments and VECs in conformity with safety protocols. These options will be discussed with all interested First Nations prior to the commencement of construction.</p>

Comment #	Comment	Recommendation	HONI Response
Draft ESR, Table 7-1 (Summary of Potential Environmental Effects, Mitigation Measures, and Net Effects, pg. 7-41 to 7-62)	Aamjiwnaang First Nation acknowledges the extent of the potential effects and mitigation measures outlined within Table 7-1. In this table, HONI provides details of potential impacts that they foresee happening and their plans to mitigate those impacts without final plans in place. This is concerning to Aamjiwnaang First Nation as it is not clear what potential effects and associated mitigation measures will be in place once the plan for this Project is finalized.	<p>A. HONI must commit to consulting and collaborating with Aamjiwnaang First Nation on the mitigation plan once the plans for the Project are finalized. Aamjiwnaang First Nation expects that this consultation and collaboration will include capacity funding to review and comment on the draft mitigation plans to ensure they are fulsome and adequately protect sensitive environmental features and VECs.</p> <p>B. Aamjiwnaang expects HONI to provide capacity funding for Aamjiwnaang First Nation Environmental Monitors to be on site during construction activities.</p>	<p>Involving Aamjiwnaang team members in the development and review of the Environmental Management Plan, including mitigation will be an important component of project mitigation during the detailed design and permitting phase of the project. The manner in which Aamjiwnaang chooses to participate can be discussed further. Hydro One is also aware that additional capacity funding is required to facilitate this engagement/participation as the current Capacity Funding Agreement is intended for Class EA activities only. This will be discussed in detail with Aamjiwnaang in the weeks following finalization of the ESR.</p> <p>Similarly, Hydro One recognizes that additional capacity funding is required for participation of Environmental Monitors and others during construction.</p>
Archaeology			
Appendix C2, Stage 1 Archaeological Assessment, General Comment	According to the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI's) Standards and Guidelines, it is not a requirement to actively engage Indigenous communities at the Stage 1 Archaeological Assessment level. However, given the proximity to numerous pre-contact Indigenous sites, the fact that First Nations Peoples have inhabited the area for thousands of years, as well as the interest of numerous First Nations' communities in the area, Aamjiwnaang First Nation should be provided with the opportunity, and sufficient time, to provide Traditional and Oral Histories of the area, inclusive of capacity funding for these activities. Timmins Martelle Heritage Consultants Inc. (TMHC) did not directly contact any Indigenous communities or provide those communities with the opportunity to provide their knowledge of the proposed Project areas with respect to traditional use and/or sacred sites as part of the Stage 1 Archaeological Assessment.	HONI must provide Aamjiwnaang First Nation with the opportunity, and sufficient time, to provide Traditional and Oral Histories of the area. Aamjiwnaang First Nation must be provided capacity funding to provide these Traditional and Oral Histories of the area.	<p>From the commencement of the Class EA in January 2020, Hydro One has made efforts to directly consult with Indigenous communities on the Project and remains committed to this ongoing consultation/engagement throughout the life cycle of the Project. Where information on areas of significance or interest has been provided, this information has been discussed with Timmins-Martelle Heritage Consultants and referenced in the Stage 1 Archaeological Assessment (AA) Report. Additionally, the draft Stage 1 AA report was provided in both digital and hard copy format to Indigenous communities in November 2020 for their review and comment for a period of approximately 6 months, prior to the finalization of the Stage 1 AA report.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information such as traditional and oral histories, including information on Aboriginal rights and interests, and incorporating that information into subsequent phases of the project, including the involvement of interested Indigenous communities in the upcoming Stage 2 AA field surveys and report review as well as development of the environmental management plan and construction plans, and the eventual Biodiversity Initiative for the project.</p>

Comment #	Comment	Recommendation	HONI Response
Appendix C2, Stage 1 Archaeological Assessment, General Comment	According to the MHSTCI's Standards and Guidelines (Ministry of Tourism & Culture, 2011), it is not a requirement to actively engage Indigenous communities at the Stage 2 Archaeological Assessment level. However, current best practice suggests that First Nation communities, including Aamjiwnaang First Nation should be given the opportunity to participate in the potential discovery of Indigenous artifacts and/or sites.	A. HONI must provide Aamjiwnaang First Nation with the opportunity to participate in the potential discovery of Indigenous artifacts and/or sites. B. Aamjiwnaang First Nation expects HONI to provide capacity funding to have community members participate as monitors during Stage 2 Archaeology Assessment work and provide any necessary industry standard training to these monitors. C. Aamjiwnaang First Nation expects HONI to require their archaeological consultants to undertake community engagement on the Stage 1 and Stage 2 Archaeological Assessments and provide capacity funding for participation in archaeological assessments.	Hydro One has offered interested Indigenous communities the opportunity to attend upcoming Stage 2 AA field surveys and review the findings and draft report. Funding is to be arranged through the consulting archaeologist (Timmins-Martelle Heritage Consultants) and Hydro One understands that this is currently being coordinated. If there are any specific considerations or requirements related to training to support participation in this process Hydro One is open to discussing them with Aamjiwnaang First Nation and working address them potentially through the provision of capacity funding if required. Indigenous communities have also been invited to participate in the Stage 2 Archaeological Assessment field surveys. Approximately 30% of the Stage 2 Archaeological field survey work was completed in Fall 2021 with no artifacts encountered to date. We are aware that Aamjiwnaang FN representatives attended some of these surveys as arranged through TMHC. Stage 2 fieldwork is planned to resume in Spring 2022 as the weather permits. If not already done, TMHC will reach out shortly to coordinate participation in those surveys.
Appendix C2, Stage 1 Archaeological Assessment, General Comment	Since it is not a requirement to actively engage Indigenous communities at the Stage 2 Archaeological Assessment level (Ministry of Tourism & Culture, 2011), the archaeological consulting firm is under no obligation to involve First Nation communities in the cultural recommendations if Indigenous artifacts, features, and/or sites are located. However, best practice would suggest that the First Nation communities, including Aamjiwnaang First Nation, should be consulted on further archaeological assessment as cultural materials could pertain directly to ancestors.	HONI must undertake further consultation with Aamjiwnaang First Nation when determining the cultural heritage value of Indigenous artifacts, features, and/or sites, including to assist in the recommendations for further archaeological assessment. Aamjiwnaang First Nation expects that HONI will provide capacity funding to participate in these activities.	See responses to comments 18 and 19, above.
Appendix C2, Cultural Heritage Existing Conditions (CHEC) Report, General Comment	Golder Associates Ltd. Recommended that HONI conduct a Preliminary Heritage Impact Assessment (HIA) with respect to the preferred alternative transmission line corridor to identify the direct and indirect impacts from the preferred alternative on the known and potential built heritage resources and cultural heritage landscapes identified in the CHEC Report included with the Draft ESR. There is no record of this Preliminary HIA in the Draft ESR.	For the preferred alternative transmission line corridor, HONI should provide a Preliminary HIA to identify the direct and indirect impacts from the preferred alternative on the known and potential built heritage resources, and cultural heritage landscapes identified in the CHEC Report included with the Draft ESR.	As stated in Section 7.4 of the draft ESR, Hydro One has committed that where an identified built heritage resource cannot be feasibly avoided and will be directly impacted through destruction, alteration, or disruption, Hydro One will undertake property specific Cultural Heritage Evaluation Reports (CHERs) and/or Heritage Impact Assessments (HIAs). The additional study will confirm the cultural heritage value or interest and heritage attributes of the impacted built heritage resource and identify all adverse effects. No Cultural Heritage Landscapes have been identified along the preferred route 2A; the Cultural Heritage Landscape referenced in the CHEC report is located south of the Highway 401 along routes 1 and 3 and is therefore avoided by the selection of preferred route 2A.

<p>Appendix C2, Cultural Heritage Existing Conditions (CHEC) Report, and Draft ESR, Section 7.4 (Cultural Heritage Resources, pg. 7-9 to 7-10)</p>	<p>In the Draft ESR, HONI states that no cultural heritage landscapes were identified in the study area associated with the Preferred Route Alternative. The CHEC Report included with the Draft ESR is not inclusive of input from Aamjiwnaang First Nation on potential Indigenous cultural landscapes. The Provincial Policy Statement (Ministry of Municipal Affairs & Housing, 2020) says "Ontario recognizes the unique role Indigenous communities have in land use planning and development, and the contribution of Indigenous communities' perspectives and traditional knowledge to land use planning decisions. The Province recognizes the importance of consulting with Aboriginal communities on planning matters that may affect their section 35 Aboriginal or treaty rights. Planning authorities are encouraged to build constructive, cooperative relationships through meaningful engagement with Indigenous communities to facilitate knowledge-sharing in land use planning processes and inform decision-making." (pg. 5).</p> <p>The Provincial Policy Statement (Ministry of Municipal Affairs & Housing, 2020) defines a Cultural Heritage Landscape as follows: "means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the Ontario Heritage Act; or have been included in on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms" (pg. 42; emphasis ours).</p> <p>Golder Associates Ltd. notes in the CHEC Report that "The Ontario Planning Act (1990) and associated Provincial Policy Statement 2020 (PPS 2020) mandate heritage conservation in land use planning. Under the Planning Act, conservation of "features of significant architectural, cultural, historical, archaeological or scientific interest" are a "matter of provincial interest" and integrates this at the provincial and municipal levels through the PPS 2020. Issued under Section 3 of</p>	<p>Aamjiwnaang First Nation requests that HONI provide an assessment of cultural heritage landscapes that may be impacted by the Project, and avoidance or mitigation measures associated with those impacts. In this assessment, HONI should reference direct input from Aamjiwnaang First Nation on potential Indigenous cultural landscapes inclusive of Traditional and Oral Histories of the area, and reference inputs on any potential avoidance or mitigation measures.</p>	<p>See response to comment 21, above.</p> <p>From the commencement of the Class EA in January 2020, Hydro One has made efforts to consult with Indigenous communities on the Project. To date, no input was received from any Indigenous community on known or potential Indigenous cultural landscapes; had that information been received by Hydro One, it would have been provided to Golder Associates for discussion within the CHEC report. The CHEC report does describe the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Moving forward, Hydro One would be pleased to receive any information from Aamjiwnaang First Nation that would help inform project design, mitigation planning, construction methods and post-construction restoration and the Biodiversity Initiative planned for the project.</p>
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Comment #	Comment	Recommendation	HONI Response
	<p>the Planning Act, PPS 2020 recognizes that cultural heritage and archaeological resources “provide important environmental, economic, and social benefits”, and that “encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes” supports long-term economic prosperity (PPS 2020:6,22)” (pg. 3).</p> <p>Section 2.6.1 of the Provincial Policy Statement (Ministry of Municipal Affairs & Housing, 2020) says: “Significant built heritage resources and significant cultural heritage landscapes shall be conserved.”</p>		
<p>Draft ESR, Section 4.3.1 (Archaeology, pg. 4-4)</p>	<p>Within the Draft ESR, HONI states that the Stage 1 Archaeology Assessment has been accepted into the public register, which means that it cannot be amended.</p> <p>This is concerning to Aamjiwnaang First Nation as it is unclear how our comments on the Stage 1 Archaeological Assessment will be addressed.</p>	<p>A. Aamjiwnaang First Nation requests that HONI commit to engaging First Nation communities in a more effective archaeological review process and commit to addressing our concerns related to the Stage 1 Archaeology Assessment.</p> <p>B. HONI must commit to providing a draft assessment report for future archaeological work to Aamjiwnaang First Nation for review and comment prior to submission to the Ministry.</p>	<p>From the commencement of the Class EA in January 2020, Hydro One has made efforts to directly consult with Indigenous communities on the Project and remains committed to this ongoing consultation/engagement throughout the life cycle of the Project. Where information on areas of significance or interest has been provided, this information has been discussed with Timmins-Martelle Heritage Consultants (TMHC) and referenced in the Stage 1 Archaeological Assessment (AA) Report. Additionally, the draft Stage 1 AA report was provided in both digital and hard copy format to Indigenous communities in November 2020 for their review and comment for a period of approximately 6 months, prior to the finalization of the Stage 1 AA report. Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project.</p> <p>Indigenous communities have also been invited to participate in the Stage 2 Archaeological Assessment field surveys. Approximately 30% of the Stage 2 Archaeological field survey work was completed in Fall 2021 with no artefacts encountered to date, and we are aware that Aamjiwnaang FN representatives (Tri-Tribal Monitoring Services) were able to attend some of these surveys as arranged through TMHC. Stage 2 fieldwork is planned to resume in Spring 2022 as the weather permits and TMHC will shortly reach out to coordinate participation in this upcoming Stage 2 survey work.</p>
<p>Draft ESR, General Comment</p>	<p>Within the Draft ESR, HONI provided an extremely brief and low detail summary account of the archaeological assessment.</p>	<p>Aamjiwnaang First Nation requests that HONI provide more details about the history of Aamjiwnaang First Nation in the summary of the Stage 1 Archaeology Assessment.</p>	<p>As stated in the response to comment No.23, Hydro One remains committed to incorporating information received from Aamjiwnaang, including historical context and/or Indigenous Knowledge, at any stage in the project, including the Stage 2 AA study. Information provided will be incorporated once received.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Draft ESR, Table 3-13 (Summary of Stakeholder Comments and Concerns, pg. 3-96)</p>	<p>Within Table 3-13, HONI refers to "identified areas of historical significance to Anishnawbek communities" (pg. 3-96). HONI does not identify where these areas may be located, nor do they provide a description of these areas in the Stage 1 Archaeology Assessment.</p>	<p>HONI should identify and describe the areas of significance to Anishnawbek communities in the Draft ESR including how these areas were taken into consideration during the decision-making process.</p>	<p>From the commencement of the Class EA in January 2020, Hydro One has made efforts to directly consult with Indigenous communities on the Project and remains committed to this ongoing consultation/engagement throughout the life cycle of the Project. Where information on areas of significance or interest has been provided, this information has been discussed with Timmins-Martelle Heritage Consultants and referenced in the Stage 1 Archaeological Assessment (AA) Report. Additionally, the draft Stage 1 AA report was provided in both digital and hard copy format to Indigenous communities in November 2020 for their review and comment for a period of approximately 6 months, prior to the finalization of the Stage 1 AA report.</p> <p>The specific areas referenced in these sections were generally located in the northern portion of the study area, generally around the Thames river. This resulted in a lower scoring of this criterion (less preferred) for the northern routes, particularly Route 2B which was geographically closest to the areas identified.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project, including the involvement of interested Indigenous communities in the upcoming Stage 2 AA field surveys and report review.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Appendix C2, Stage 1 Archaeology Assessment, General Comment</p>	<p>In the Stage 1 Archaeology Assessment HONI recommends: "Areas of previous disturbance (e.g., building footprints and existing roads or laneways), as well as low-lying and wet areas are considered to have low archaeological potential. As a field inspection was not conducted as part of this study, areas of low archaeological potential within the preferred route alternative will need to be confirmed and photo-documented at the time of Stage 2 survey (MTC 2011:28; Section 2.1.2)" (pg. iii).</p> <p>The reference used by HONI in this section is wrong.</p> <p>As well, HONI did not include a property inspection in the report and Map 34 (Archaeological Potential) depicts areas exempt from Stage 1 surveys.</p>	<p>A. HONI should reference "(MTC 2011:28; Section 2.1 standard 2)" rather than "(MTC 2011:28; Section 2.1.2)."</p> <p>B. Since there was no property inspection in the report, HONI should conduct a Stage 2 Archaeology Assessment for all route alternatives (except those areas that have been previously assessed), beginning with a property inspection (S&G Section 1.4.1 standard 1a). HONI should update Map 34 Archaeological Potential to indicate archaeological potential throughout all alternative routes, except where previous assessments have cleared areas.</p>	<p>From the commencement of the Class EA in January 2020, Hydro One has made efforts to directly consult with Indigenous communities on the Project and remains committed to this ongoing consultation/engagement throughout the life cycle of the Project. Where information on areas of significance or interest has been provided, this information has been discussed with Timmins-Martelle Heritage Consultants and referenced in the Stage 1 Archaeological Assessment (AA) Report. Additionally, the draft Stage 1 AA report was provided in both digital and hard copy format to Indigenous communities in November 2020 for their review and comment for a period of approximately 6 months, prior to the finalization of the Stage 1 AA report.</p> <p>As the preferred route has been selected, Hydro One does not plan to conduct Stage 1 archaeological Assessment on all route alternatives. Generally, the Stage 1 report can be conducted on all alternatives (including identification of features and areas of archaeological potential) to help inform the selection of the preferred route alternative. The Stage 2 assessment is then conducted on the areas of archaeological potential along the preferred route only. This is the process that is being conducted for the Chatham x Lakeshore project.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project, including the involvement of interested Indigenous communities in the upcoming Stage 2 AA field surveys and report review.</p>
<p>2.2.6 Summary of Registered or Known Archaeological Sites Pp 252</p>	<p>HONI plotted archaeological sites on maps in the SD (separately documented) report, which was not provided to Aamjiwnaang First Nation.</p>	<p>Aamjiwnaang First Nation request that HONI provide a copy of the SD (separately documented) report and commit to providing these reports in future archaeology assessments.</p>	<p>The Supplementary Documentation (SD) report referenced in the Stage 1 Archaeological Assessment report for the Chatham x Lakeshore project was provided with the draft Stage 1 Report provided to Aamjiwnaang FN and other Indigenous Communities in November 2020. Hydro One will provide this SD report for Aamjiwnaang FN to review as requested. Hydro One will continue to provide supplementary documentation on future archaeological assessment reports to Indigenous communities.</p>

Comment #	Comment	Recommendation	HONI Response
<p>Appendix C2 Chatham to Lakeshore New Double-Circuit 230 KV Transmission Line Project Cultural Heritage Existing Conditions Report, General Comment</p>	<p>HONI's Cultural Heritage Existing Conditions Report concerns Euro-Canadian buildings and landscapes. HONI does not reference any engagement with Aamjiwnaang First Nation.</p>	<p>HONI must undertake further engagement with Aamjiwnaang First Nation to determine which of the "identified areas of historical significance to Anishnawbek communities" referred to in the Draft ESR meet the definition of cultural landscapes.</p>	<p>From the commencement of the Class EA in January 2020 Hydro One has directly consulted with Indigenous communities on the Project. Hydro One is committed to including input received from Indigenous communities on known or potential Indigenous Cultural Landscapes prior to finalization of the ESR. The CHEC report describes the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Where information on known areas of historical significance was provided by First Nation communities, that information was considered in the evaluation of the route alternatives (see the response to comment 25, as well as Section 5.3.4 of the draft ESR, for more information).</p> <p>If any such information can be provided going forward (i.e., following submission of the final ESR) either resulting from the Indigenous Knowledge studies or otherwise, Hydro One will review and consider this information in the subsequent phases of the Project.</p>

Table 3-15: Walpole Island First Nation Draft ESR Comments & Responses

Comment Number	Walpole Island First Nation Comments	Hydro One Response
1.	<p>It is unclear why weightings were applied to the evaluation criteria. The weighting seems somewhat arbitrary and based on input from a very small number of individuals. It is unclear who were the participants on the Technical Advisory Committee (TAC) who provided input into the criteria and weighting. It appears as though members were primarily agency staff and First Nation representatives, along with members of "interest groups". Who were represented by the interest groups? Were any affected landowners on the TAC and did they provide input on the weighting?</p>	<p>The implementation of weighted criteria was done to provide an additional means for Rights holders and project stakeholders to provide input into the route evaluation process and resulting evaluation framework, or in the case of the Technical/Cost category of criteria, to better capture the relative potential cost impact of the criteria.</p> <p>Section 5.3 of the ESR describes how the respective weightings were assigned to the criteria for the project. Specifically, the weightings were derived from input and comments provided by Anishnawbek and Haudenosaunee communities, members of the public and members of the TAC.</p> <p>Section 3.12.2 of the ESR discusses the second TAC Workshop held on September 22, 2020, and includes details of the transparent weighting exercise completed for the project. Figures 3-2 and 3-3 of the ESR provide the results of the weighting exercise completed during the TAC workshop. The results of the weighting exercise shown in Figures 3-2 and 3-3 correlate to the weightings provided in Table 5-5 of the ESR.</p>
2.	<p>Hydro One has provided strong commitments to work with Indigenous communities to ensure training and jobs are available to community members. It is understood that two EPC contractors have been retained for early works. Both will meet with Indigenous communities and prepare project participation plans which will outline how each will provide training and employment opportunities to Indigenous communities. Hydro One will ultimately select one EPC contractor to complete the design and construction work, with the Indigenous employment plans being one of the deciding factors. Will Indigenous communities be provided with an opportunity to comment on each contractors' plan? Will Hydro One reach out to each Indigenous community to understand how well each community's needs and capacity are addressed? What assurances are there that contractors will follow through with plans?</p>	<p>As stated, Hydro One is committed to ensuring that Indigenous community and business involvement on the Chatham to Lakeshore Transmission Line Project is maximized. To ensure this occurs, Hydro One will be placing a high degree of responsibility onto the shoulders of the successful EPC during the construction stage. Also, as pointed out, the EPCs have been encouraged throughout the (competitive) Early Contractor Involvement (ECI) stage of the Project to engage with the participating Indigenous communities; to develop relationships; determine community capacities related to its Project needs, Indigenous communities needs and interests; discuss how the communities can become involved and to what extent; and make any commitments they choose to make.</p> <p>The Request for Proposals that formed the basis of the bids submitted by EPC contractors required each EPC to prepare an Indigenous Engagement and Inclusion Plan (IEIP). Contractors were asked to address a number of details related to their plans for engaging with Indigenous communities, as well as their plans for training/employment, contracting and subcontracting with Indigenous-owned businesses, and partnering, including targets for Indigenous economic participation during the construction stage of the Project. They have been informed, in clear terms, that the targets they present in their IEIP are commitments, not just to the Indigenous community, but contractually to Hydro One. They have been clearly informed that missing the targets presented in their IEIP will result in economic consequences to the contractor.</p> <p>After a rigorous evaluation, Voltage Power has been selected to execute their plan to design, procure and construct the Project. With this new level of certainty, the expectation from HONI is that Voltage will work very closely with the designated staff from your community to discuss HDI's participation in the procurement, employment and training opportunities associated with construction. Details on this engagement will be provided shortly as internal discussions continue on how to best coordinate these efforts. We also remain committed to ensuring that follow through with mitigation plans are an important part of this continued engagement.</p> <p>Hydro One will continue to develop relationships with the participating Indigenous communities that will extend far beyond the Chatham to Lakeshore project. Similarly, both EPCs are striving to develop and maintain long-term relationships with participating Indigenous communities and Hydro One, that will also extend beyond the current project. It is Hydro One's view that it is in the best short- and long-term interests of all parties to follow through on commitments made, and to do what is necessary to maximize Indigenous community and business involvement in the project.</p> <p>Hydro One staff will work with the EPC contractor throughout detailed design, construction and post-construction restoration, and will be monitoring the EPC's progress to ensure that the EPC contractor fulfills the requirements of the Project, including commitments made during the Class EA and in more detailed environmental mitigation plans to be developed after completion of the Class EA.</p>

Comment Number	Walpole Island First Nation Comments	Hydro One Response
3.	<p>Please confirm if the route shown on figures as the Preferred Route (Alternative 2A) will be constructed exactly as shown. Several statements are made in the mitigation section of the report, including:</p> <ul style="list-style-type: none"> • “Where practical, the location of towers will be placed to minimize impact to maneuverability of agricultural equipment (e.g. along lot lines).” • “Minimize the extent of vegetation clearing for the project.” • “Woodlands will be taken into account during project planning as a mechanism to minimize project impacts.” <p>Could you confirm what exactly is meant by minimizing impacts in these cases? Will any slight adjustments be made to the route to minimize impacts e.g. move the route slightly so the line crosses along the edge of a woodland rather than through the middle?</p>	<p>Since the release of the draft ESR in June 2021, and consistent with the statements made in the draft ESR, Hydro One has continued to investigate minor refinements to the preferred route (e.g., within the existing property fabric traversed by the preferred route) to further reduce the environmental effects of the project where practical. As an example, one such refinement that has been made will reduce the effects of the project (required clearing) to a significant woodlot. The final route, inclusive of these minor refinements, will be presented in the final ESR.</p> <p>Other measures to mitigate effects to vegetation communities are described in the draft ESR and include measures such as the retention of compatible vegetation during construction where practical, post-construction restoration with native species, and implementation of a Biodiversity Initiative for the project to offset adverse effects to natural habitats from the project that cannot be avoided, mitigated or restored. This initiative will be administered by Hydro One but will involve opportunities for Walpole Island First Nation and other Indigenous communities to provide input into the types of projects (habitats etc) that the initiative targets, as well as opportunities to submit habitat creation or enhancement projects for consideration.</p> <p>Hydro One reiterates the commitment made in the draft ESR to continue to work with Indigenous communities to receive input and information and to incorporating that information into subsequent phases of the project, such as detailed design, construction and environmental mitigation plans, post-construction restoration and the Biodiversity Initiative for the project. If this information can be provided prior to the end of the extended draft ESR review period, then Hydro One will incorporate this information into the final ESR. As previously mentioned, Hydro One recognizes that consultation with Indigenous communities on the project will continue beyond the completion of the Class EA and through construction and post-construction restoration.</p>
4.	<p>Please confirm how much of the ROW needs to be cleared of trees and other incompatible vegetation. Will it be the entire ROW width?</p>	<p>Generally, the entire ROW (23 m from centerline; 46 m total width) is maintained to be free of incompatible vegetation, to ensure a safe and reliable supply of electricity. The majority of the proposed ROW (preferred route 2A) consists of agricultural fields, with only few sporadic areas of incompatible vegetation (of which many are agricultural hedgerows). With exception to route 2B, the preferred route 2A results in less overall effects to incompatible vegetation when compared to each of the route alternatives.</p> <p>Hydro One will add to the final ESR an estimate of the amount of incompatible vegetation (taking into account recent route refinements) anticipated to be removed for the Project to the appropriate sections of the ESR, including Table 7-1.</p> <p>Where incompatible vegetation communities (those containing species which, at maturity, reach a height that may pose a risk to the safe and reliable operation of an overhead transmission line, generally 3 m for an overhead 230 kV transmission line) are traversed by transmission lines, these areas can typically be restored following construction into compatible vegetation communities (consisting of species which do not pose such a threat to transmission reliability at maturity, e.g. Shrub Thicket), such that the long-term effect to incompatible vegetation communities is not a loss of habitat value on the landscape, but rather a transition to a different, compatible vegetation community within the extent of the transmission line ROW.</p>

Comment Number	Walpole Island First Nation Comments	Hydro One Response
5.	<p>Some statements related to mitigation are very generic and do not offer any serious commitment to carrying them out e.g. “the limits of wetlands will be demarcated to limit construction activities within wetland communities, where practical” and “Eastern Foxsnake habitat will be demarcated and protected from impacts during construction, where practical.” The qualifiers “where practical” or “to the extent possible” are attached to many mitigation measures. This gives the perception that these measures will not be seriously considered or implemented when the project is actually constructed. We would prefer stronger commitments to locating towers at least 30m from wetlands and 15m from watercourses (with additional setbacks where aquatic SAR are present). We also suggest that MECP should be consulted during this stage of the project planning to confirm how Eastern Foxsnake should be addressed, rather than at a later stage. Then more firm and appropriate commitments related to this species can be provided.</p>	<p>As more detailed and specific design and construction plans are developed for the project, the environmental mitigation measures prescribed for certain situations will also become more well-defined. As the detailed plans required for this level of specificity have not yet been developed, the mitigation measures described in the draft ESR include the suite of potential mitigation measures that could be applied for the project and specifically prescribed during the detailed design and construction planning phase of the project. As not every mitigation measure is feasible or practical in all areas, these qualifying statements are important to note that some measures will be applied to specific areas or circumstances to which they are best suited, as identified in subsequent detailed construction and environmental mitigation plans.</p> <p>Hydro One reiterates the commitment made in the draft ESR to continue to work with Indigenous communities to provide opportunities to review and comment on detailed environmental and construction plans such as Environmental Management Plans, Erosion and Sediment Control Plans, Construction Water management Plans etc. prior to construction. Hydro One and/or the EPC contractor staff will engage with representatives from Walpole Island First Nation and other Indigenous communities when drafts of these plans are available for review.</p> <p>Hydro One has engaged MECP staff, including staff at the MECP Species at Risk Branch (SARB) on the project and SARB staff have provided comments on the draft ESR which will be presented (with Hydro One’s responses) in the final ESR. Regarding Eastern Foxsnake in particular, in their comments SARB staff noted that an authorization under the <i>Endangered Species Act, 2007</i> (ESA) would not be required for SAR bats and/or Eastern Foxsnake so long as the appropriate timing windows are adhered to.</p>
6.	<p>We have no comments associated with noise or vibration.</p>	<p>Hydro One thanks Walpole Island First Nation staff for their review.</p>
7.	<p>With respect to socio-economic effects, we suggest, as noted under comments #3 and #5, that stronger commitments to minimizing agricultural impacts be provided.</p>	<p>See Hydro One’s response to comment #5 above; more specific (and site-specific) construction and environmental mitigation plans will be developed prior to construction.</p> <p>Throughout the Class EA process Hydro One has worked closely with the local agricultural community (including both directly-impacted property owners and groups such as the Ontario Federation of Agriculture) to discuss the project, learn about the concerns and potential effects of the project raised by the agricultural community, and to discuss mitigation measures that could be employed during detailed design and construction. Hydro One continues to work closely with directly impacted landowners and farmers and will continue to do so through design of site-specific construction and mitigation plans as well as through construction and post-construction restoration.</p>
8.	<p>Please include any correspondence with the NDMNRF, MECP, ERCA, or LTVCA regarding species occurrence records or natural heritage reports.</p>	<p>The Record of Consultation contains all correspondence with all stakeholders, including agencies, which have been consulted with up to this point of the project, and can be found in Appendix B of the dESR.</p> <p>Species occurrence records were obtained in accordance with the Natural Heritage Information Request Guide and Department of Fisheries and Oceans (DFO) records, as well as through direct observation during environmental field surveys. Species at Risk (SAR) habitat was described in the draft ESR by either direct observation during field surveys (e.g., Butternut) or by the identification of potential SAR habitat by way of cross-referencing the results of Ecological Land Classification against the habitat descriptions for SAR with the potential to occur within the project study area. This is a conservative approach which Hydro One believes to be appropriate for Class EA projects.</p>

Comment Number	Walpole Island First Nation Comments	Hydro One Response
9.	<p>With regard to the methodology for amphibian call surveys, we note that Natural Environment Survey Methods all Anuran call surveys, not just the last, were carried outside of the timing window recommended by Bird Studies Canada for the southern region (i.e. south of the 43rd parallel) where the study area lies. Typically, studies are to be carried out between 1-15 April, 1-15 May, and 1-15 June. It is unclear, in the case of the third survey which was carried out nearly two weeks after the end of the window, whether this may have impacted the results of the surveys.</p>	<p>The survey dates included in the Marsh Monitoring Protocol (Bird Studies Canada, 1995), are provided as a guideline only (per the Protocol). The most critical factors with respect to amphibian call count surveys is air temperature and lack of wind and noise. Aside from having completed surveys slightly outside of the suggested dates, each of the amphibian surveys were completed in accordance with the Protocol (i.e. 15 days apart, under appropriate air temperature, and with little to no wind/noise). As a result, the 2020 amphibian call count survey dates, including the assessment of amphibian significant wildlife habitat (SWH) (lack thereof), are acceptable as per the Marsh Monitoring Protocol.</p>
10.	<p>Given the presence of suitable wetland habitat (thicket swamps, animal burrows, culverts/crossing structure foundations), why was consideration for the presence of candidate Reptile Hibernacula not provided?</p>	<p>In accordance with the SWH criteria, snake hibernation takes place below the frost line in burrows, rock crevices and other natural or naturalized locations. Burrows were incidentally observed at survey station 1 of route alternative 3 and was identified as having the potential to support hibernacula habitat for Eastern Foxsnake.</p> <p>The existence of features below the frost line (e.g. rock piles or slopes, old stone fences, crumbling foundations, etc.) assist in identifying candidate SWH. In addition, the criterion also identifies that wetlands can also provide important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with spare trees or shrubs with sphagnum moss or sedge hummock ground cover.</p> <p>Although a small section of a thicket swamp adjacent to Highway 401 is associated with preferred route 2A, given its characteristics, its isolation on the landscape, and the lack of snake observations, the feature was not carried forward as candidate SWH. In addition, it is anticipated that impacts to the feature will be avoided through a minor refinement as described in the response to comment #3.</p> <p>With exception of the burrow discussed above, no other features with the potential to extend below the frost line were incidentally observed during field investigations.</p>
11.	<p>It is our understanding that, although not ideal, wheat fields can provide nesting habitat for Bobolink. As several Bobolink were observed and may have been nesting in the study area, consultation with the MECP should be sought.</p>	<p>Hydro One has engaged MECP staff, including staff at the MECP Species at Risk Branch (SARB) on the project and SARB staff have provided comments on the draft ESR which will be presented (with Hydro One's responses) in the final ESR. While bobolink were not specifically mentioned by MECP SARB staff in their comments, the MECP will continue to be consulted throughout each stage of the project as appropriate.</p> <p>With regards to potential effects to agricultural fields where wheat is grown, it should be noted that these crops are compatible with overhead transmission lines and that disturbance will generally be temporary in nature (during construction). Crews will be provided information on Bobolink and if nests are identified during construction, they will be protected and avoided until young have fledged.</p>

Comment Number	Walpole Island First Nation Comments	Hydro One Response
12.	<p>In section 4.8.4, it is stated that “The majority of snag trees were associated with forest and woodland communities; however, the numbers of snags observed did not meet criteria outlined in the 2017 MNRF Guelph District Survey Protocol for Species at Risk Bat with Treed Habitats for high quality SAR bat habitat.” Given that dedicated snag surveys were not carried out during the leaf off period, there is potential to suggest that potential snag trees, particularly those in the earlier stages of decay class, may not have been observed. As such, it should not be stated with certainty that high quality habitat is not present as sufficient investigations have not been carried out. Furthermore, it does not appear as though the potential for habitat for tri-coloured bats (i.e. presence of maple oaks of sufficient DBH) has been considered.</p>	<p>Species specific surveys were not completed as part of the field investigations. As a result, snags were observed incidentally as part of the greater field program. To address WIFN's comment, the language in the ESR will be revised to exclude mention of “high quality habitat is not present”. Rather, a conservative approach was applied when assessing presence of potential SAR bat habitat in support of the route evaluation process (i.e. FOD, SWD and WOD communities). As a result of this conservative approach, the potential habitat of tri-coloured bat was considered.</p>
13.	<p>Please provide a brief summary at the end of the report outlining potential future commitments including considerations for species at risk (i.e. SAR bats, Eastern Foxsnake studies and butternut assessments), significant wildlife habitat (i.e. bat maternity habitat), permitting etc., that may impact the project during the design phase.</p>	<p>Table 7-1 of the draft ESR includes a summary of the potential direct and indirect effects the project may have on SAR, including their associated project phase and associated mitigation measures.</p>
14.	<p>We understand that Hydro One will implement planting and habitat restoration project during their Biodiversity Initiative and that third parties will be approached to carry out such projects. Please engage WIFN with regard to this initiative.</p>	<p>Hydro One commits to engaging WIFN and other interested Indigenous communities with regard to the Biodiversity Initiative. Planning for the Biodiversity Initiative could begin during 2022.</p>

Table 3-16: Provincial Government and Agencies Draft ESR Comments & Responses

Organization	Comment	Response
<p>Essex Region Conservation Authority</p>	<p>The Essex Region Conservation Authority (ERCA) administers a provincial regulation made under Section 28 of the Conservation Authorities Act; the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses (Ontario Regulation 158/06).</p> <p>Please be advised, that you will need permits for works taking place within the ERCA Limit of Regulated Area (i.e. Regulation Line for the ERCA Watershed- ERCA's Area of Jurisdiction).</p> <p>Below is a link to our Interactive Mapping Tool:</p> <p>Interactive Mapping Tool</p>	<p>Thank you for providing comments on the draft ESR for Hydro One's Chatham x Lakeshore project on behalf of ERCA. As you are likely aware, Hydro One and Conservation Ontario have recently agreed to a Memorandum of Understanding (MOU) regarding the protocols surrounding the application of the Conservation Authorities Act and its regulations to Hydro One's work within regulated areas and CA-owned lands. As per this MOU, projects involving the construction of a new transmission line (such as the Chatham x Lakeshore project) would undergo a regular approach to obtaining permission under Section 28 of the Conservation Authorities Act for works within regulated areas. As such, Hydro One acknowledges that ERCA will require permits for works within these areas.</p> <p>Hydro One or its construction contractor will contact ERCA at a later date to discuss the specific works within these regulated areas and to initiate the permitting process.</p>
<p>Ontario Ministry of Agriculture, Food and Rural Affairs</p>	<p>Consultation (3.0)</p> <p>It is clear that the project team undertook a number of extensive consultation events with agricultural stakeholders and interested parties including, but not limited to, Agriculture and Agri-Food Canada, Ontario Federation of Agriculture, Christian Farmers Federation of Ontario, Ontario Greenhouse Alliance, Ontario Greenhouse Vegetable Growers, Essex County Federation of Agriculture, Kent Federation of Agriculture, MPP Taras Natyshak, MPP Rick Nicholls, local (regional and municipal) staff and local agricultural operators (Appendix B-4). It is understood during these consultation events, many concerns were raised regarding the potential impacts that the proposed Project may have on agricultural operations (e.g. soil compaction, loss of agricultural lands and crops, mixing of soils, disturbance to farm operations, vegetation removal, contamination of organic or identity-preserved crops, damage to field tile drainage, livestock stress/loss/injury and potential electric/magnetic interference on automated agricultural equipment). That said, it is understood that the concerns raised during consultation events assisted in guiding Hydro One's decision-making process, as well as the mitigation measures the proposed Project may have on agricultural operations.</p>	<p>Hydro One thanks OMAFRA and acknowledges the comment.</p>
<p>Ontario Ministry of Agriculture, Food and Rural Affairs</p>	<p>Agricultural Resources (4.1)</p> <p>As outlined in Section 4.1, Hydro One completed an agricultural assessment of the Project Study Area and Local Study Area. The project team used the following methodologies and data sources to summarize agricultural conditions:</p> <ul style="list-style-type: none"> • Published documents; • Government agency and resources databases; • Mapping tools; • Municipal websites; • Government planning and guidance documents; • Relevant project documents; and • Reports commissioned by Hydro One (4-1). 	<p>Hydro One thanks OMAFRA and acknowledges the comment.</p>

Organization	Comment	Response
<p>Ontario Ministry of Agriculture, Food and Rural Affairs</p>	<p>Land Use and Communities (4.4) As identified, the Project Study Area is comprised of prime agricultural land, predominantly Class 2 lands, with portions of the Project Study Area rated as CLI Class 1, Class 3 and Class 5 lands. CLI Class 1-3 lands represent prime agricultural lands, as defined by the PPS (2020). PPS Policy 2.3.3.1 states "in <i>prime agricultural areas</i>, permitted uses and activities are: <i>agricultural uses</i>, <i>agriculture-related uses</i> and <i>on-farm diversified uses</i>". Given that the proposed Project is not one of the three uses, permitting such a use would therefore be considered a limited non-agricultural use and would be subject to PPS Policy 2.3.6.1 (b). Policy 2.3.6.1 (b) states: Planning authorities may only permit non-agricultural uses in a <i>prime agricultural area</i> for limited non-residential uses, provided that all of the following are demonstrated:</p> <ol style="list-style-type: none"> 1. The land does not comprise a <i>speciality crop area</i>; 2. The proposed use complies with the minimum distance separation formulae (MDS); 3. There is an identified need within the planning horizon provided for in policy 1.1.2 for additional land to accommodate the proposed use; and 4. Alternative locations have been evaluated, and, <ol style="list-style-type: none"> b. There are no reasonable alternatives which avoid <i>prime agricultural areas</i>; and, c. There are no reasonable alternative locations in <i>prime agricultural areas</i> with lower priority lands. <p>The Draft ESR has demonstrated consistency with Policy 2.3.6.1 (b) in that:</p> <ul style="list-style-type: none"> • The proposed Project does not compromise a <i>speciality crop area</i>; • MDS setbacks are not required for <i>infrastructure</i>; • There is an identified need within the planning horizon and nothing in policy 1.1.2 limits planning for <i>infrastructure</i> ... beyond a 25-year time horizon; and • While alternative locations (routes) have been evaluated, the preferred route (2A) includes lower priority lands (Class 5 lands). <p>PPS Policy 1.6.8.4 states where feasible, the preservation and reuse of abandoned corridors for purposes that maintain the corridor's integrity and continuous linear characteristics should be encouraged. This policy has been satisfied through the preferred route (2A) repurposing approximately 16 kilometers of an existing idle 115 kV transmission corridor between Tilbury and Chatham.</p> <p>Section 4.4.1.1 speaks to PPS Policy 1.6.8.6, which states: "when planning for corridors and rights-of-ways for ... electricity transmission and infrastructure facilities, consideration will be given to the significant resources in Section 2...", inclusive of agriculture (Section 2.3). As illustrated in the Draft ESR, Hydro One has completed substantial consultation events with agricultural stakeholders and interested parties noting potential effects on agricultural operations and effective mitigation measures. Hydro One further notes that effects to significant resources outside of the Project Study Area are not anticipated. That said, OMAFRA is satisfied that the proposed Project is aligned with the PPS (2020).</p> <p>Section 4.4.1.2 through to 4.4.1.4 speaks to three Official Plans which apply to the Project Study Area. This includes the County of Essex, the Municipality of Lakeshore and the Municipality of Chatham-Kent Official Plans. These Official Plans (OP's) describe the majority of the Project Study Area as designated "Agricultural" areas. These OP's generally acknowledge utility corridors must exist and therefore permit utility transmission facilities. The County of Essex OP stipulates that electrical transmission facilities are to be designed in a matter that will minimize potentially negative effects, particularly on agricultural lands, where possible, and that the routes for these corridors should follow existing ROWs, fence lines and property lines. It would appear that the preferred route is aligned with these policies as it follows existing linear infrastructure, such as Highway 401 and other energized transmission lines. Additionally, as indicated in Table 3-13 and Appendix B, there may be opportunity for potentially affected agricultural stakeholders to discuss further mitigation options with Hydro One, where practical and feasible.</p>	<p>Hydro One thanks OMAFRA and acknowledges the comment.</p>

Organization	Comment	Response
Ontario Ministry of Agriculture, Food and Rural Affairs	<p>Potential Environmental Effects and Mitigation Measures to Agricultural Resources (7.1)</p> <p>As previously noted, the preferred route will transverse several agricultural property parcels, of which Hydro One noted may experience temporary and long-term effects. As demonstrated in Table 7-1, the project team has not only identified potential effects on agricultural resources on both the short-term (construction) and long-term (operation/maintenance) activities of the proposed Project but has provided in-depth mitigation measures and solutions, based on extensive consultation with the agricultural community.</p> <p>Recognizing that the socioeconomic environment factor uses agricultural resources as a criterion, it would be beneficial to note the overall impact to the local agricultural and agri-food sector through economic and operational changes (i.e. how loss of agricultural land or uses will impact the sector in the area such as through loss of access to local food, livestock infrastructure and supplies, farm infrastructure, etc.).</p>	<p>We recognize the importance of the Agricultural sector within the environment of southwestern Ontario and since the release of the draft ESR last summer, have (as noted at the end of the second paragraph of page 4 of OMAFRA's comments) continued to engage with landowners, farmers, industry representatives including the OFA and CFFO, Municipalities and other stakeholders to ensure that any input received on potential means of avoiding, mitigation and restoring effects to agricultural lands from the project are considered as we look forward to commencing construction in 2023.</p>
Ministry of the Environment, Conservation and Parks	<p>Land Use Planning</p> <p>1. Further to the consultation undertaken with municipal governments as described in Section 3.9 of the draft ESR, the assessment of existing land use planning frameworks for the Project Study Areas provided in Section 4.4, and the consideration of impacts to existing and future land use designations and development provided in Section 7.5.2, the ministry encourages the proponent to continue to engage with municipalities in order to address concerns related to land use designations, the location of the preferred route, and any other items raised.</p>	<p>Comment acknowledged.</p> <p>Hydro One has continued to engage, and work with, municipalities subsequent to the submission of the draft ESR in an attempt to provide resolution to items raised by municipalities.</p>
	<p>Air Quality</p> <p>2. Further to the consideration of mitigation measures for impacts on air quality presented in Section 7.7.2.2 of the draft ESR, please note that the ministry recommends that non-chloride dust suppressants be applied during construction.</p>	<p>Comment acknowledged.</p> <p>Section 7 (Potential Environmental Effects and Mitigation Measures) of the ESR will be revised to include that non-chloride dust suppressants be applied during construction.</p>
	<p>Source Water</p> <p>3. The draft ESR adequately identifies potential impacts to surface water and its related features and proposed to develop appropriate mitigation measures during the detailed design stage.</p>	<p>Comment acknowledged.</p>
	<p>4. The draft ESR does not mention or describe any significant sensitive water features, including wetlands (e.g. Provincially Significant Wetlands), within the project study area. Please identify these sensitive surface water features, if any, and potential impacts to them during and after the construction and report to the ministry for review. In case of significant potential impacts, a mitigation plan is also recommended.</p>	<p>No mapped Provincially Significant Wetlands (PSWs) are located within the Project Study Area. Section 7.7.8.1 (Wetlands) and Section 7.7.8.2 (Fish and Aquatic Habitat) and Table 7-1 identify potential impacts to sensitive water features, as well as mitigation measures to minimize and/or avoid adverse effects. Mitigation Measures also outlined in Sections 7.7.2 (Atmospheric Environment), 7.7.4 (Surface Water Resources) and 7.7.7 (Designated or Special Natural Areas) also serve to mitigate and/or avoid adverse impacts to sensitive water features.</p>
	<p>5. Installation of sediment and erosion control measures during the construction is critical both in terms of protecting the water quality and reducing the impacts to local aquatic community. As proposed in the draft ESR, an appropriate sediment and erosion control plan is to be designed during the detailed design stage. Please submit this plan to the ministry for review once finalized.</p>	<p>As committed in the draft ESR, an Erosion and Sediment Control Plan will be prepared during detail design. This plan will be submitted to the ministry for review once finalized.</p>

Organization	Comment	Response
	<p>6. It is recommended that a surface water quantity/quality monitoring program is conducted before the construction to establish baseline conditions as well as to track the changes in environmental conditions during and after construction. Available recent data for existing Provincial Water Quality Monitoring Network stations can also be incorporated in the monitoring assessment. The ministry would like to review this monitoring program once it is developed.</p>	<p>Potential effects to surface water quality from the Project have been minimized and mitigated by design and planned construction practices:</p> <ul style="list-style-type: none"> • Tower locations have been optimized to maintain ≥ 30 m setbacks from watercourses where practical (i.e., in consideration of other design constraints, landowner input, engineering requirements, etc.); • Access on the project will utilize existing roads where possible. Where temporary access needs to be constructed it will be imported gravel underlain by geotextile cloth, and/or wood matting, both of which will limit soil disturbance and not require soil stripping. • Helical piles will be used for tower foundations. This foundation type minimizes surface disturbance and does not require soil excavation or soil stripping of the foundation site. Refer to Responses #9 and 10 for more information—no pumping or discharge of water is expected for foundations. This is supported by the geotechnical data that has been collected following the Class EA draft ESR submission. • Equipment refueling will be completed in designated areas away from watercourses or with additional containment or spill prevention measures in place. • Proactive erosion and sediment control (ESC) measures will be installed around work areas where proximity to sensitive features and erosion have been identified as a concern. • Environmental monitoring will be completed throughout the Project footprint during construction. This includes monitoring and maintenance of existing ESC measures, installation of additional ESC measures where warranted, and completing field-based surface water quality monitoring (e.g., turbidity, pH) upstream and downstream of receiving sites as applicable and supported by a Qualified Professional. These and other commitments regarding mitigation of effects to surface water resources are documented in Sections 7.7.1.2, 7.7.4 and 7.7.5, as well as Table 7-1, of the draft ESR. <p>These mitigations by design and planned construction practices will limit both the amount and proximity of disturbance near sensitive features. If installations on agricultural fields results in damage to a localized field tile drain during a period when it is conveying water, it will be locally controlled and allowed to naturally re-infiltrate to the surrounding field and tile drain network. Commitments have been made to manage and mitigate effects to agricultural tile drainage as described in Section 7.1.7 and Table 7-1 of the draft ESR, and any water managed in this manner during construction will be returned to the same area/drain network that it originated from. Therefore, Hydro One and its construction contractor do not believe that pre-construction surface water quantity monitoring is necessary, although any water volumes that are required to be actively managed during construction will be recorded and documented.</p>

Organization	Comment	Response
	<p>7. The proposed work likely requires Environmental Activity & Sector Registry (EASR) registration or a Permit to Take Water (PTTW) for dewatering activities during the site preparation and construction of transmission line. A separate ministry approval process is required to ensure the quality and quantity of surrounding surface water is not adversely affected during the dewatering activities.</p>	<p>Given our current understanding of site conditions, and the helical pile design and installation methodology being proposed for this project and the findings of the geotechnical study (refer to Responses #9 and 10 for more information), it is not currently anticipated that an EASR or PTTW will be required during construction as any construction-related water taking or discharge is expected to be negligible. As such, major sources of water taking/construction de-watering are not anticipated on the Project.</p> <p>If, during detailed design and/or construction, it is identified that dewatering activities over 50,000 L/day are required, Hydro One commits to preparing and submitting to the Ministry a PTTW application or EASR registration.</p>
	<p>8. The ESR should identify major sources and/or discharges of water as well as significant water taking activities within the project study area. This will be helpful in identifying any other potential impacts due to changes in water quality and quantity to existing/downstream water users.</p>	<p>Given our current understanding of site conditions, and the helical pile design and installation methodology being proposed for this project and the findings of the geotechnical study (refer to Responses #9 and 10 for more information), it is not currently anticipated that an EASR or PTTW will be required during construction as any construction-related water taking or discharge is expected to be negligible. As such, major sources of water taking/construction de-watering are not anticipated on the Project.</p> <p>If, during detailed design and/or construction, it is identified that dewatering activities over 50,000 L/day may be required, Hydro One commits to proactively preparing and submitting to the Ministry a PTTW application or EASR registration.</p> <p>The most likely source for a potential need to manage water during construction involves potential damage or disruption to agricultural field tile drains during periods when they are conveying water; these features are generally ubiquitous in agricultural fields across the project area, and commitments made to manage and mitigate effects to agricultural file drainage are currently described in Section 7.1.7 and Table 7-1 of the draft ESR, and any water managed in this manner during construction will be returned to the same area/drain network that it originated from.</p>

Organization	Comment	Response
	<p>Groundwater</p> <p>9. The construction of the proposed transmission line may have an adverse effect on the local groundwater resource depending on the construction method used for the tower foundations. Section 6.1.1 Overhead Transmission Lines of the Hydro One Class Environmental Assessment for Minor Transmission Facilities document states the following on Page 43, "Tower Foundations: The type of foundation installed at any given site is dependent on both the type of soil and the type of tower to be built. Soil tests are carried out to determine soil strength for foundation designs. The majority of foundations in earth will be augered reinforced concrete. In weak soils, pad and pier, spread or piles may be required. Those in rock will have steel rods drilled and grouted into the rock and a small pad of concrete placed on top. Foundations for towers which will be used at angle or terminating positions are larger than those required for suspension towers."</p> <p>The ministry notes that following site-specific geotechnical investigations it may be determined that steel pile type foundations will be required for certain or all transmission tower locations within the project study area. Given this possibility, the ESR should be revised to address the effects of pile driving into the subsurface, specifically to the bedrock surface at depth, and to propose appropriate avoidance and/or mitigation measures.</p>	<p>Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. This commitment will be made in the final ESR. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations. Additionally, based on the current geotechnical data and the preliminary helical pile designs, pile embedment depths are anticipated to be relatively shallow (9-12 m below ground surface) vs other foundation types (e.g., driven pile), and are not anticipated to be installed to bedrock depths.</p> <p>Driven pile foundations are not being proposed for use on the Chatham to Lakeshore project, and as such the ESR does not need further revision to address the potential effects of driven pile foundations. It is not anticipated that installation of helical pile foundations to a relatively shallow depth (9-12 m below ground surface) poses any risk of adverse effects to water well resources. No groundwater dewatering is expected to occur on this project.</p>
	<p>10. Should steel pile type foundations be the preferred construction method for the tower foundations based on the geotechnical investigation findings in the future, the ministry will require a detailed account of the installation procedures and protocols for steel piles on the tower foundations, including size, type, length and manner of installation prior to any construction commencing.</p>	<p>Based on geotechnical data that has been collected following the Class EA draft ESR submission, helical piles will be used for all transmission tower foundations on the Project. This commitment will be made in the final ESR. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations. Additionally, based on the current geotechnical data and the preliminary helical pile designs, pile embedment depths are anticipated to be relatively shallow (9-12 m below ground surface) vs other foundation types (e.g., driven pile), and are not anticipated to be installed to bedrock depths.</p> <p>It is not anticipated that installation of helical pile foundations to a relatively shallow depth (9-12 m below ground surface) poses any risk of adverse effects to water well resources. The preliminary design basis for helical pile type foundations has been attached for the Ministry's information, and more detailed installation procedures and protocols for helical piles can be provided following detailed design finalization and prior to commencement of construction. No groundwater dewatering is expected to occur on this project.</p>
	<p>11. Our ministry is aware that the driving of steel piles into the subsurface clays in this region has in the past resulted in negative feedback from the general public due to water well impact concerns. In this regard, the ministry reserves the right to request additional information once the final construction technique has been decided upon, up to and potentially including a groundwater monitoring program of domestic water wells.</p>	<p>Refer to response #10. Driven pile foundations are not being proposed for use on the Chatham to Lakeshore project.</p>

Organization	Comment	Response
	<p>Source Water Protection</p> <p>12. The ministry notes that the draft ESR properly identifies the source protection areas that intersect with the project study area and includes a discussion of source protection considerations in Section 4.6.5. However, the ministry would like to clarify that lands within the project study area are not "designated as EBAs due to potential contamination from existing land uses (i.e. road ways and active agriculture)" as indicated in this Section; instead, they are delineated as Events-Based Areas (EBAs) based on modeled scenarios that show that certain types of fuel spills may reach a surface water intake under certain weather conditions. We recommend that the proponent revise the document to address this clarification.</p>	<p>The final ESR will be updated to reflect the difference between delineated EBAs and EBAs based on modelled scenarios.</p>
	<p>13. Specifically, electrical transmission lines projects may include activities during the construction or maintenance phases that, if located in a vulnerable area, may pose a risk to sources of drinking water (i.e. have the potential to adversely affect the quality or quantity of drinking water sources) and could be subject to policies in a source protection plan. Where an activity poses a risk to drinking water, policies in the local source protection plan may impact how or where that activity is undertaken. For example, construction and maintenance phase activities that may pose a risk to sources of drinking water may include the storage of fuel, stormwater management facilities, and the relocation of sanitary sewage pipes. Policies may prohibit certain activities, or they may require risk management measures for these activities. Where an activity related to the construction or maintenance phase of the electrical transmission line poses a risk (significant, moderate, or low) to drinking water, the proponent should document and discuss in the ESR how the project addresses applicable policies in the local source protection plan. This section should then be used to inform, and be reflected in, other sections of the ESR, such as the identification of net positive/negative effects of alternatives, mitigation measures, evaluation of alternatives, etc. The ministry acknowledges that the draft ESR identifies spill prevention and contingency plans and other mitigation measures that protect sources of drinking water.</p>	<p>Section 4.6.5 (Source Water Protection) of the draft ESR notes that the Project Study Area falls within EBA and IPZ-3 policy areas of the corresponding Source Protection Plans and that permitting related to the handling and storage of fuels are required under ERCA and LTVCA Source Protection Plans. Section 7.7.5 (Land Use and Communities), and Table 7-1 of the ESR, acknowledges the potential for contamination of surface water during construction and maintenance activities of the transmission line (including mitigation and/or avoidance measures) and specifically notes the risk of contamination from a spill or leak.</p> <p>Hydro One commits to referencing specific policies within the corresponding Source Protection Plans in the final ESR.</p>
	<p>14. The ESR should also identify how sensitive hydrologic features, including current or future sources of drinking water not explicitly addressed in source protection plans, will be protected during the construction and maintenance of the project. This may include private systems (individual or clusters) and designated facilities within the meaning of Ontario Regulation 170/03 under the Safe Drinking Water Act (i.e. camps, schools, health care facilities, seasonal users, etc.). The ministry appreciates that the draft ESR has addressed these types of systems and included them in the evaluation of impacts and potential mitigation measures.</p>	<p>Section 7.7.5 (Land Use and Communities) of draft ESR outlines potential impacts to surface water, designated surface water Intake and Wellhead Protection Areas and Significant Groundwater Recharge areas, as well as mitigation and/or avoidance measures.</p>
	<p>15. For further information about the source protection plan and assistance in identifying all applicable policies and their requirements, proponents should contact source protection program manager for the applicable source protection region (resources available online: on Conservation Ontario, Water Protection webpage)</p>	<p>Comment acknowledged.</p>
	<p>Species at Risk</p> <p>16. Section 4.6.7 of the draft ESR states on page 4-36, "If effects to aquatic habitat capable of supporting Lake Chubsucker and Lilliput are anticipated, consultation with DFO will occur during detailed design to confirm next steps." Please note that if impacts to Lake Chubsucker and/or Lilliput and/or their habitat are anticipated then consultation with the ministry's Species at Risk (SAR) Branch is required, as these species and/or their habitat are protected under the provincial Endangered Species Act (ESA). This sentence should be revised to reflect this.</p>	<p>The MECP SARB will be consulted if it is determined that impact to Lake Chubsucker or Lilliput habitat is anticipated as part of the project. More clarity on the potential impacts to these species or their habitats will be realized as the engineering design, construction plans and additional natural heritage investigations are further developed and completed during the detailed design phase of the project.</p> <p>The final ESR will be revised to include consultation with the ministry's SAR Branch in the event impacts to Lake Chubsucker and/or Lilliput are anticipated.</p>

Organization	Comment	Response
	<p>17. Regarding Section 7.7.8.4, page 7-34 & 7-35 of the ESR, please note that timing windows for SAR bats and Eastern Foxsnake are mitigation measures that allow contravention of the ESA. If these cannot be adhered to then please contact the ministry's SAR Branch at SARontario@ontario.ca, as an authorization may be required.</p>	<p>Hydro One thanks the MECP SARB for this clarification, and will add mention of this to Section 7.7.8.4 and Table 7-1 of the ESR.</p>
	<p>18. Section 7.12 of the draft ESR states in Table 7-1 on page 7-59, "SAR observed during construction activities will be reported to the MECP." Additionally, SAR observations should be submitted directly to the Natural Heritage Information Centre. Detailed information can be found online at: https://www.ontario.ca/page/report-rare-species-animals-and-plants. In order to submit observations:</p> <ul style="list-style-type: none"> • use iNaturalist - join the (NHIC) Rare species of Ontario project • use eBird, or download their mobile apps • use the Ontario Butterfly Atlas or eButterfly • email the Natural Heritage Information Centre • write: Natural Heritage Information Centre Ontario Ministry of Natural Resources and Forestry 300 Water St., 2nd Floor North Tower Peterborough, ON K9J 3C7 	<p>SAR observations during construction will be reported to the NHIC. Hydro One thanks the MECP SARB for providing a list of tools through which this can be accomplished.</p>
	<p>Indigenous Consultation</p> <p>19. The proponent has consulted with an appropriate list of communities for this Class EA process and has provided sufficient opportunities for communities to be engaged throughout the EA process, including capacity funding agreements, community coordinators, participation in the technical advisory committee, virtual information sessions, and meetings. The proponent has clearly demonstrated how input received from communities was incorporated into the evaluation criteria for the selection of the preferred route.</p>	<p>Comment acknowledged.</p>
	<p>20. It is the ministry's understanding that the proponent is sharing the draft ESR with Indigenous communities for their review and comment. It is important for the proponent to record these comments in an updated record of consultation and to make sure that they are addressed in the final ESR.</p>	<p>Comment acknowledged.</p> <p>Hydro One extended the minimum 30 day review period to 60 days in recognition of the challenges associated with COVID-19. In addition, as a result of requests from Indigenous communities to extend the review period, Hydro One provided an additional 30 day extension for Indigenous communities to review and comment on the draft ESR.</p> <p>Hydro One commits to documenting Indigenous community comments on the draft ESR, as well as updating the record of consultation and ESR, where applicable.</p>

Organization	Comment	Response
	<p>21. It is not clear how the proponent will incorporate any further Traditional Ecological Knowledge (TEK) provided, such as that of the Caldwell and Chippewas of the Thames who have indicated they may share TEK in spring 2021, and it is recommended that the proponent clarify its commitment to this. It is important for the proponent to document and follow through on any commitments they have made to communities, including incorporation of further TEK and participation in the biodiversity initiative.</p>	<p>The ESR includes a commitment to continuing to work with Indigenous communities to receive input and traditional knowledge information, and to incorporate that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>Caldwell First Nation provided their TEK report on September 8, 2021 and Chippewas of the Thames First Nations provided their Culture and Rights Study on December 15, 2021. Hydro One is committed to updating the effects and mitigation section in the final ESR to include the Valued Components included in the aforementioned TEK and Cultural Rights Study which can be addressed through management of the project (e.g., avoidance, mitigation or restoration measures). As mentioned above, these studies will also be used to help inform subsequent phases of the project and opportunities will also be provided to interested Indigenous communities to review and provide input on these detailed plans.</p>
	<p>Cumulative Effects</p> <p>22. Section 6.5 Consideration of Cumulative Effects of the Hydro One Class Environmental Assessment for Minor Transmission Facilities document states on Page 54, "All proponents will consider cumulative effects when planning projects. The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments)."</p> <p>In order to meet these requirements of the Class EA, the ESR should clearly document how anticipated cumulative effects, including but not limited to residual environmental effects, have been assessed through the planning process and how cumulative impacts will be addressed. The ministry recommends that the proponent revise the ESR to include, at a minimum, a separate section that discusses the cumulative effects of the project in the context of the near- to mid-term forecasted load growth and mid- to long-term needs in the Windsor-Essex region. The ministry would be pleased to discuss this comment further with the proponent as required.</p>	<p>Hydro One intends to assess the cumulative effects of the project in compliance with the requirement of Section 6.5 of the Class EA for Minor Transmission Facilities; to the extent beyond this (such as other cumulative effects beyond the immediate project area), is outside the scope of the Class EA for Minor Transmission Facilities and often Hydro One's mandate, awareness or control.</p>

Table 3-17: Municipal Governments and Agencies Draft ESR Comments & Responses

Organization	Comment	Response
<p>Municipality of Chatham-Kent/Mayor Darrin Canniff</p>	<p>Electrical expansion is crucial in the rural areas of Chatham-Kent as the current infrastructure is limiting economic development in both the industrial and agricultural sectors thereby limiting job growth.</p> <p>Having limited access to electricity puts Chatham-Kent at a distinct competitive disadvantage as it is difficult to attract new businesses to the community where basic energy expenses will be double, simply because the infrastructure is either undersized or is completely lacking.</p> <p>Chatham-Kent has identified opportunities to grow the greenhouse and food processing sectors given our strategic location to global markets and farm gate. Costs involved to extend proper size electrical infrastructure areas that are conducive to hosting these types of employment generators, often make the development financially impossible.</p> <p>In the past 24 months, Chatham-Kent has had to turn away millions of dollars in proposed greenhouse construction investment due to the costs to extend utility infrastructure to the preferred sites being prohibitive. Using the multiplier of four jobs created for every acre of greenhouse developed means 1,200 jobs were not created and much needed municipal tax dollars will not be realized.</p> <p>The Chatham-Kent/Lakeshore Southwestern Ontario Transmission Project will provide a 230-kilovolt transmission line to accommodate future electricity growth, which in turn will service new and existing business customers, the ever expanding and future residential market and improve reliability for in these rural, underserved locations.</p>	<p>As builders of equipment that keep the lights on in homes and businesses across Ontario, we recognize the need to ensure our plans for new infrastructure are made using knowledge and feedback from local voices, agencies and the communities we're building in. As you know, the Chatham to Lakeshore Line project was directly informed by feedback received from hundreds of stakeholders, and we appreciate the Municipality's support in sharing and providing important advice, which has been invaluable to shaping the process to date.</p>
<p>Municipality of Chatham-Kent/Mayor Darrin Canniff</p>	<p>In 2020, Municipal Council adopted the Chatham-Kent Growth Strategy intended to increase population, jobs and tax assessment. Investment in rural infrastructure is essential in achieving long-term sustainability as a community. I am grateful for the investment Hydro One is making in Chatham-Kent.</p>	<p>We're pleased to play a critical role in Southwestern Ontario's ability to attract new businesses, create jobs and help communities grow by making investments in our power system. And as we continue our planning for this project and additional investments in the region, we look forward to continuing our dialogue together.</p>

Organization	Comment	Response
<p>Municipality of Lakeshore</p>	<p>The Municipality submitted numerous comments to Hydro One setting out its concerns with the impacts of the preferred Route Alternative due to its adverse impacts on local farmers and future development of commercial land, loss of employment lands among other impacts.</p> <p>The Municipality during the public consultation process advised Hydro One of its “significant” concerns with the preferred Route Alternative bisecting the Community of Comber. The Municipality has previously identified the significant impacts on the residential, commercial and industrial buildings and lands located in the Community of Comber (“Comber”) and requested that Hydro One reconfigure the proposed hydro line in this area to mitigate the negative impacts on Comber.</p> <p>The Draft ESR acknowledges in its evaluation of the alternative routes that Alternative 2 crosses “through a built-up area/Urban Area designation at the northern area of Comber which is not preferred by the Municipality.” However, it does not appear that any mitigation measures such as the relocation of the proposed route in the Comber area were considered by Hydro One.</p> <p>It appears that route Alternative 3 avoids built-up areas and Urban Fringe Areas as identified in Lakeshore’s Official Plan. Also, route Alternative 1 aligns with the official plan policies and was designed in a manner to deviate south around the Tilbury community. The Municipality is seeking the same consideration in the preferred Route Alternative as given to the Tilbury community and seeks to have the proposed route deviate around Comber to mitigate impacts on the community and loss of Employment lands.</p>	<p>Since commencing the Class Environmental Assessment (“Class EA”) for the project in January 2020, Hydro One has completed a thorough process to study, collect feedback on, and evaluate the route alternatives identified resulting in the selection of Route 2A as the preferred alternative for the new transmission line between our Chatham Switching Station and the future Lakeshore Switching Station. This new line will play a critical role in bringing power to the Windsor-Essex region to accommodate future electricity growth, improve reliability for homes and businesses in communities across the region, including Lakeshore, and support local new and emerging industries.</p> <p>At the outset of the project, three Route Alternatives and associated variations were identified by assessing and mapping known technical and environmental constraints such as built-up areas and large waterbodies, as well as identifying opportunities to parallel or reuse existing linear infrastructure corridors where feasible and reasonable, in line with guidance provided in the Provincial Policy Statement (PPS, 2020). Environmental and technical constraints were applied equally across the project area and between municipalities. Areas containing significant concentrations of structures or uses deemed incompatible with overhead transmission corridors, such as dense residential pockets and commercial structures, were avoided. Land use zoning or existing land uses deemed compatible with our infrastructure, such as parking lots or agricultural fields, were not considered constraints but were considered during the evaluation of the route alternatives.</p>

Organization	Comment	Response
<p>Municipality of Lakeshore</p>	<p>The preferred Route Alternative chosen is identified as traversing 14.65 ha (36.19 acres) of the lands identified as future development potential by Lakeshore. This alternative has the highest impact on future development lands from any of the alternatives presented and traverses a portion of the Employment area located in Comber. It is important to note that Comber is one of the oldest communities situated in Lakeshore.</p> <p>The Provincial Policy Statement, 2020 (the "PPS 2020") requires Lakeshore to protect employment uses and requires that the long-term viability of these areas be maintained.</p> <p>Employment lands form a vital component of the Municipality's land-use structure and represent an integral part of the local economic development potential in the surrounding area. The development generally accommodated on employment lands typically result in a series of economic multipliers (i.e. spin-off effects) that benefit the Municipality directly and indirectly. Employment lands generally provide for high-quality employment opportunities that improve local socio-economic conditions (for example live/work opportunities). Also, providing for non-residential growth adds to the Municipality's assessment base which acts to support competitive property taxes and allows for strong municipal service levels. The loss of the Employment lands in the Comber area has significant negative impacts on the Municipality.</p> <p>The Planning Objectives & Strategies set out in the Municipality of Lakeshore Official Plan (the "Official Plan") identifies Comber as one of its settlement and employment areas (see Table 3.2 – Settlement Areas). Comber is also identified as one of the Municipalities Urban Areas.</p> <p>The goal identified by Lakeshore for the Comber Employment Area is to promote a diverse economic base by maintaining a range and choice of suitable employment sites that support a range of employment and ancillary uses. The intent of the Employment Lands is to accommodate and promote concentrations of industry-related and employment growth and development in the Municipality. The loss of these lands detrimentally impacts the Comber community and Municipality as a whole.</p> <p>The Draft ESR states in section 5.6.2 that the preferred Route Alternative conforms well to the recommendations of the PPS 2020 "although it traverses a portion of Employment lands in Comber." Hydro One acknowledges the determinantal impacts of the preferred Route Alternative but fails to consider any amendments to the configuration of the preferred Route Alternative in this area to mitigate the identified impacts.</p> <p>The loss of Comber's Employment Lands has considerable short and long term impacts on the Municipality. The Municipality reiterates its request that Hydro One consider amending the route in the area of Comber to avoid impacts on the Comber Employment Area.</p>	<p>We recognize the importance that the lands designated for employment in Comber have for the Municipality. With the presence of our assets in almost every community across Ontario, we believe Hydro One plays a critical role in advancing economic development and growth by making investments in our power system. We believe the investments planned in the region, including the Chatham to Lakeshore line, align with the future development needs of the area, as this infrastructure will form the backbone to prepare for and accommodate future industry-related and employment growth.</p> <p>Traversal of the employment lands in Comber was considered as part of the route evaluation, along with other aspects of the Provincial Policy Statement, within the criterion which assessed existing land uses under the socio-economic environment category. While the new transmission line Right-of-Way ("ROW") may restrict some developments deemed incompatible, Hydro One remains confident that future development can occur adjacent to the new transmission ROW and that there are compatible uses that can occur within the ROW itself. Hydro One has previously shared examples of other locations in Southern Ontario where residential and commercial development has successfully occurred adjacent to, and around, existing transmission ROWs, and where approved compatible uses have also been permitted within the ROWs themselves.</p> <p>While Hydro One has previously demonstrated that the full avoidance of the Comber employment lands presents additional negative environmental effects, including additional effects to prime agricultural lands, we remain committed, as outlined in the draft ESR, to working with the Municipality to mitigate the effects to any future development plans for the Employment lands. In Section 7.5.2 and Table 7-1 of the draft ESR, Hydro One has committed that where and when future development projects or initiatives are proposed to occur along or within the ROW for the new Chatham to Lakeshore transmission line. Hydro One would be pleased to review and look for opportunities to facilitate these future developments, including consideration of potential compatible uses within the transmission line ROW. In addition, Hydro One would be pleased to work with Lakeshore to consider potential means of accommodating potential future development during design of the transmission line (e.g., placement of structures), within the property fabric traversed by the transmission line ROW.</p> <p>To understand how Hydro One can best support the Municipality in ensuring the long-term development plans for these lands, we have proposed a workshop with representatives from the Municipality of Lakeshore. It is our intent that by working with both the Municipality and local economic agencies, we can better understand the Municipality's respective plans for the area and discuss how Hydro One can help be a catalyst in planning for growth.</p>

Organization	Comment	Response
<p>Municipality of Lakeshore</p>	<p>The impacts to the agricultural lands in the Municipality raises numerous safety challenges for farmers utilizing machinery around the towers in addition to removing valuable agricultural land out of production.</p> <p>The preferred Route Alternative also cuts through 165.74 ha (409.38 acres) of prime agricultural land resulting in significant impacts on the prime agricultural lands in the area. the PPS 2020 defines prime agricultural areas as: ... areas where prime agricultural lands predominate. This includes areas of prime agricultural lands and associated Canada Land Inventory Class 4 through 7 lands, and additional areas where there is a local concentration of farms which exhibit characteristics of ongoing agriculture. Prime agricultural areas may be identified by the Ontario Ministry of Agriculture and Food using guidelines developed by the Province as amended from time to time. A prime agricultural area may also be identified through an alternative agricultural land evaluation system approved by the Province. Prime agricultural lands are defined in the PPS 2020 as:</p> <p>Prime agricultural land: means specialty crop areas and/or Canada Land Inventory Class 1, 2, and 3 lands, as amended from time to time, in this order of priority for protection</p> <p>The PPS 2020 provides direction on matters of Provincial interest and seeks to protect prime agricultural areas for long-term agricultural uses. In prime agricultural areas, the Municipality promotes and protects all types, sizes and intensities of agricultural uses and normal farm practices.</p> <p>Lakeshore has consistently expressed its concern with the impacts associated with the preferred Route Alternative on the existing agricultural lands in the area. To avoid impacts on agricultural lands the Municipality reiterates its request that the route for the Proposed Project be altered to travel north of Highway 401 and parallel to the alignment of the existing transmission line.</p>	<p>Throughout the Class EA and consultation process, the importance of considering effects to the agricultural community, agricultural lands and agricultural operations in our planning for this new transmission line was top of mind. We had the opportunity to hear from industry leaders, including the Ontario Federation of Agriculture and many local farmers in the project area, including having the opportunity to discuss these concerns on-site with farmers who operate on fields traversed by the route alternatives. Based on this feedback, effects to agricultural operations was a key criterion used to evaluate each of the different route alternatives.</p> <p>Given the location of the two stations required to connect the line, we were aware that regardless of the route selected, each would traverse through prime agricultural lands, as the majority of the region is classified within the 1 to 3 soil class range, as described in section 4.1 of the Draft ESR. While Route Alternative 2A does include areas where paralleling existing linear infrastructure does not occur, the route does achieve this in part and, most notably, allowing for approximately 16 km of an idle transmission line to be repurposed. This provided an opportunity to traverse fewer net new agricultural lands, and in effect reducing our footprint and the number of new towers on these lands. In consideration of agricultural operations on lands that will be traversed by the new transmission line, Hydro One has committed to a number of measures that will be utilized to mitigate or restore agricultural lands, as documented in Section 7.1 and Table 7-1 of the draft ESR. We have also taken this into consideration when planning the design of the line.</p> <p>We recognize that effects to agricultural lands continue to be a concern, and we continue to keep this top of mind as we complete preliminary engineering and confirm tower placement and line design. We will continue to work with property owners to discuss additional mitigation opportunities.</p> <p>Upon the selection of 2A as the preferred route, Hydro One did receive comments from the Municipality of Lakeshore requesting the exploration of two diversions north of Comber and the 401. Hydro One did explore both of these options presented. Upon the completion of our analysis, we confirmed the requested diversions would introduce greater net effects and additional challenges in comparison to the selected route, including greater overall effects to prime agricultural lands and operations. As a result, our team did not pursue these route diversions further.</p>
<p>Municipality of Lakeshore</p>	<p>We also note that First Nations Major Projects Coalition (the "FNMPC") has commenced work in support of the Chippewas of the Thames First Nation concerning the impacts of the Proposed Hydro One Project on their territory along with other First Nations in the region.</p> <p>We ask that you advise as to whether the FNMPC has submitted a request to the Ministry of Environment, Conservation and Parks for a comprehensive EA approval, or the imposition of the conditions on the Proposed Hydro One Project.</p>	<p>Hydro One does not wish to speak on behalf of COTTFN and their advisors and will continue to engage and consult with them to discuss issues and concerns throughout the life of the project.</p>

Organization	Comment	Response
<p>Municipality of Lakeshore</p>	<p>The Municipality is submitting these comments to express its concern that Hydro One has failed to consider all alternatives including the reconfiguration of the preferred Route Alternative to travel north of Highway 401 avoiding the impacts on Comber's employment area and agricultural properties. The Municipality would like to continue to work collaboratively with Hydro One in determining a preferred Route Alternative that meets the needs of Hydro One while avoiding any detrimental impacts on Comber one of the oldest communities in Lakeshore.</p>	<p>We remain confident in the work completed to select the preferred route for the new transmission line. Hydro One and the project team understand that planning, designing and building new infrastructure can be difficult, and we know we cannot have outcomes that please all parties. However, what we can promise is that rights-holder and stakeholder input is carefully reviewed and considered.</p> <p>As stated in the draft ESR and reiterated above, Hydro One will be pleased to continue to work with the Municipality of Lakeshore to consider potential means of accommodating potential future development during design of the transmission line (e.g., placement of structures), within the property fabric traversed by the transmission line ROW, but is not willing to entertain large deviations of the route which introduce new properties or significant environmental effects.</p> <p>Thank you again for sharing the Municipality of Lakeshore's comments. We look forward to continuing to work collaboratively with the Municipality to further understand their priorities for this area.</p>
<p>County of Essex</p>	<p>Permitting & Road Closures</p> <p>1. With the construction of the proposed substation there will be a line going south into Leamington which will impact County Rd 8 and is anticipated to require a road closure in November / December for 2 weeks. Any/All proposed plans that affect County roads will have to be reviewed by the Infrastructure Services Department prior to obtaining approvals. Note: The County's winter operations season is from November 15th to April 30th and this will need to be considered with the proposed road closures. Based on the information provided, as per the preferred alternative, the County has identified the following roads that will be impacted: CR 1, 8, 37, 42 and 46.</p> <p>CWATS & CASO Trail</p> <p>2. 4.7 Recreational Resources: There should be mention of the CWATS network, namely that County Road 37 and portions of South Middle Road are signed CWATS corridors. The 2012 CWATS Master Plan and the #CycleON Province-Wide Cycling Network have identified the former CASO rail trail as a featured active transportation connection. The local conservation authority (ERCA) is coordinating efforts to acquire and develop these lands for the purpose of creating a multi-purpose trail facility and specific details and information should be sought from their Staff before selecting of a preferred alternative.</p>	<p>Comment acknowledged. It should be noted that the works mentioned in this comment (new substation and associated Distribution line work on County roads) appear to be related to a separate project, distinct from the Chatham x Lakeshore project and Class EA.</p> <p>Section 4.7 (Recreational Resources) of the ESR documents elements of the CWATS MP including the CASO Trail and Trans Canada Trail that fall within the Study Area as depicted by the CWATS Interactive Mapping tool. In addition, Section 7.9 (Recreational Resources), and Table 7-1, of the ESR identifies the potential for some temporary impacts to the enjoyment of recreational resources adjacent to the proposed Project, including measures to mitigate these short-term impacts. It should be noted that Hydro One is only aware of a single intersection point between the new transmission corridor and the CASO trail. Subject to internal review by Hydro One, recreational trails are generally considered to be a compatible secondary land use within overhead transmission line corridors.</p> <p>Hydro One will add some additional description to Section 4.7 of the ESR to more specifically describe the CWATS network and 2012 Master Plan.</p> <p>Section 3.8.11 (Essex Regional Conservation Authority) of the ESR documents consultation activities with ERCA during the project. No comments or concerns regarding recreational resources have been noted by ERCA to date on the project.</p> <p>Hydro One has selected the preferred alternative (Route 2A) and will continue to work with stakeholders on how to best mitigate effects where practical and feasible.</p>

Organization	Comment	Response
	<p>3. Hydro One's study maps are difficult to translate with respect to the location of the CASO corridor and more detailed information is required before final comments can be completed. In the meantime, at minimum, there should be a mention of the CWATS MP considerations as it related to road crossings and the CASO corridor.</p>	<p>We appreciate the challenges associated with the print versions of the project maps. To assist reviewers the project team developed an interactive project map which can be manually controlled to access terrain and topographic features including the CASO corridor as shown on the aerial imagery. Details about this map are included in Section 3 of the ESR, in addition to the Chatham to Lakeshore Project webpage.</p> <p>Section 4.7 (Recreational Resources) of the ESR discusses recreational resources including the CASO trail and Trans Canada Trail which are the two trails that fall within the project Study Area as shown in the CWATS MP. In addition, Section 7.9 (Recreational Resources), and Table 7-1, of the ESR identifies the potential for some temporary impacts to the enjoyment of recreational resources adjacent to the proposed Project, including measures to mitigate these short-term impacts.</p>
	<p>4. 7.9 Recreational Resources: If there are impacts to the road right of way (ROW) during construction, the County requests signage and other mitigation solutions guiding cyclists on an alternate route. In the event of damage to the road as a result of this project's construction, coordination of reparation with the municipality of Lakeshore and County of Essex is requested.</p>	<p>Section 7.5.3 (Effects to Local Roads and Traffic), and Table 7-1 of the ESR summarizes the potential effects on local roads and traffic, including measures to mitigate temporary impacts from construction activities.</p> <p>In addition, Section 7.9 (Recreational Resources), and Table 7-1, of the ESR identifies the potential for some temporary impacts to the enjoyment of recreational resources adjacent to the proposed Project, including measures to mitigate these short-term impacts. It should be noted that, subject to internal review by Hydro One, recreational trails are generally considered to be a compatible secondary land use within overhead transmission line corridors.</p> <p>Hydro One has selected Voltage Power as the successful construction contractor for this project, and Voltage Power staff are currently completing detailed designs and developing construction plans for the project. The Project team (including Voltage Power staff) would be happy to coordinate a meeting with County staff to discuss the Chatham x Lakeshore project in more detail.</p>
	<p>5. We request a meeting with the Project Team to better understand the project and to have further discussions as it relates to County infrastructure prior to finalizing the preferred alternative.</p>	<p>Hydro One has selected the preferred alternative (Route 2A) and will continue to work with stakeholders on how to best mitigate effects where practical and feasible.</p> <p>Hydro One has also selected Voltage Power as the successful construction contractor for this project, and Voltage Power staff are currently completing detailed designs and developing construction plans for the project. The Project team (including Voltage Power staff) would be happy to coordinate a meeting with County staff to discuss the Chatham x Lakeshore project in more detail.</p>

Table 3-18: Potentially Affected and Interested Groups, Businesses, School Boards and Utilities Draft ESR Comments & Responses

Organization	Comment	Response
Invest Windsor-Essex	<p>As the leading economic development agency in Windsor and Essex County responsible for advancing economic development in the region, we recognize that an important part of this practice is ensuring that key infrastructure enhancements are in place.</p> <p>The expansion of this new electricity infrastructure is essential to supporting economic growth in Windsor-Essex. This infrastructure will ensure that we meet the needs of our growing key sector industries and their emergence into new and innovative economies with a reliable and sustainable electricity supply. Economic growth is also a vital component to the health and well-being of a community that must support all residents of Windsor-Essex with a quality of life they can rely on for their homes and businesses, well into the future.</p> <p>Our agency joined the Technical Advisory Committee (TAC) and participated in a series of workshops which provided a detailed introduction of the project to a robust cross-section of representative stakeholders. This allowed for open dialogue, discussion, and feedback on, but not limited to, the environmental and technical process, criteria, socio-economic environmental considerations, and digital surveys, to assist with moving towards a consensus building solution.</p>	<p>As builders of equipment that keep the lights on in homes and businesses across Ontario, we recognize the need to ensure our plans for new infrastructure are made using the knowledge and feedback from local voices, agencies and the communities we're building in. As you know, the Chatham to Lakeshore Line Class Environmental Assessment was directly informed by feedback received from hundreds of stakeholders, and we appreciate your organization's support in sharing and providing important input, which has been invaluable to shaping the process to date.</p>
Invest Windsor-Essex	<p>We certainly recognize the overall benefits that this critical infrastructure will provide to our region as we continue to work towards developing a solid base for local and global investment. At Invest Windsor Essex we want to attract and retain the best businesses and talent from across the continent and globe. That is one of the reasons why we recently changed our name, because our goal is to ensure our region remains competitive for both local and foreign investment.</p> <p>On behalf of Invest Windsor Essex, I encourage Hydro One to continue their informed planning, analysis and engagement with all stakeholders and residents as we all work to move this initiative forward.</p>	<p>As your organization is the leading economic development agency in Winsor and Essex County whose mission is to advance economic development, Hydro One is pleased to play a critical role in Southwestern Ontario's ability to attract new businesses, create jobs and help communities grow by making investments in our power system. And as we continue our planning for this project and additional investments in the region, we look forward to continuing our dialogue together.</p>
Ontario Federation of Agriculture	<p>OFA expects and supports efforts of the Ontario Ministry of Energy, the IESO, utilities and the Ontario Energy Board, to adopt a fulsome planning and implementation process. This ensures energy capacity needs are brought online in a timely way. There is significant energy demand from greenhouse and covered agriculture in Southwest Ontario. OFA supports a transparent process to help impacted and nearby landowners, farmers and residents, with fair and balanced land acquisition negotiations.</p>	<p>As builders of equipment that keep the lights on in homes and businesses across Ontario, we recognize the need to ensure our plans for new infrastructure are made using knowledge and feedback from local voices, agencies and the communities we're building in. As you know, the Chatham to Lakeshore Line project was directly informed by feedback received from hundreds of stakeholders, and we appreciate your organization's support in sharing and providing important advice, which has been invaluable to shaping the process to date.</p>
Ontario Federation of Agriculture	<p>We appreciate Hydro One making the Draft ESR available to impacted stakeholders and the public. Considering the extensive engagement and consultations taken to date, as detailed in the Draft ESR appendices, OFA supports HONI efforts to continue public engagement, and to work with landowners through this planning process stage, the design and construction planning stage, proposed construction during 2022-23, and operation start-up in 2024-25.</p>	<p>We're especially grateful for the ongoing correspondence we've continued to have with the OFA's representatives for Essex Kent. The advice they've shared on behalf of your membership has directly influenced Hydro One's considerations when it comes to designing infrastructure on agricultural lands and input on cropland out of production compensation.</p>
Ontario Federation of Agriculture	<p>Balancing the needs of the Southwestern Ontario region, including significant agricultural activities, with the needs and concerns of farm operations along the proposed route is a difficult undertaking. We look forward to continuing to work with Hydro One to ensure all stakeholders receive their due consideration.</p>	<p>As we continue our planning for this project and additional investments in the region, we look forward to continuing our dialogue together.</p>

Table 3-19: Property Owners, Residents, General Members of the Public Draft ESR Comments & Responses

Comment	Response
<p>Concerns raised regarding effects to agricultural operations, including:</p> <ul style="list-style-type: none"> • Route 2A traversing farmland at an angle reducing available farmable acreage • A reduction of farmable land due to tower location • Ground compaction during and after project installation • Towers placed mid-field instead of along fencerows • Restrictions for farming equipment to access an area already restricted to a drainage creek 	<p>Throughout the Class EA and consultation process, the importance of considering effects to agricultural operations was top of mind. We had the opportunity to hear from many local farmers in the project area, including a visit to a local farm to review first-hand the size of modern-day farming equipment. Based on this feedback, effects to agricultural operations was a key criterion used to evaluate each of the different route alternatives.</p> <p>As part of our assessment, we had to evaluate the different route options fairly and holistically by considering how effects would apply to the entire length of each of the routes. Overall, Route 2A was the option with the overall lowest effects to agricultural operations, when compared to the other route alternatives across their entire length.</p> <p>Currently, Hydro One is completing the design for the new line, including tower locations. In the next few weeks, you can expect your real estate representative, Murray Clark to review how the new line will cross your individual property and to identify the location and placement of tower structures.</p> <p>Section 7.1 and Table 7-1 of the draft ESR provide further information on Hydro One's commitments to address and mitigate these effects, as well as other identified effects to agricultural operations and the mitigation measures proposed to address them. This includes measures such as minimizing the length and width of construction access required within agricultural fields, identifying tile drain locations to avoid and protect them during construction to the extent practical, development of a project Weed Control Plan for implementation during construction, and post-construction restoration of agricultural fields, among others.</p>
<p>Concern regarding effects to a section of a long standing tree line which was planted to reduce wind erosion on the sand hills</p>	<p>While effects to incompatible vegetation are not completely avoidable, the preferred Route 2A traverses a low amount of incompatible vegetation relative to other route alternatives.</p> <p>Sections 7.1.5, 7.7 and Table 7-1 of the draft ESR address the effects to incompatible vegetation and the mitigation measures identified to address them, such as the retention of compatible vegetation and post-construction restoration with compatible vegetation species.</p>
<p>Concern regarding water table issues due to deep footings required and potential effects to shallow wells.</p>	<p>Effects to groundwater from the construction of transmission line structures are generally very localized to the tower footings and temporary in nature.</p> <p>Section 7.7.6 and Table 7-1 of the draft ESR provide more information on potential effects to groundwater resources and the mitigation measures identified to address them.</p>
<p>Comment that there needs to be an engineered approach to a "Main Electrical Distribution Corridor," which includes a plan for a main distribution line that follows the 401 corridor or another main east to west Route.</p>	<p>In Ontario, broader regional planning is conducted by the Independent Electricity System Operator (IESO). Each project identified by the IESO's regional planning work must then be assessed and planned by the local transmitter through its own planning process.</p> <p>It is important to note that when planning for the transmission infrastructure routes takes into consideration a number of different factors. Prior to the start of the Class EA, our team conducted preliminary work to identify viable Route Alternatives to build the new line from the Chatham Switching Station to our future Lakeshore Switching Station. We considered known technical and environmental features and constraints such as waterbodies, dense residential areas, environmentally significant areas, and looked for opportunities to parallel linear infrastructure, such as follow Highway 401, and utilize existing transmission corridors. Based on that information, we developed three route alternatives and associated variations which were evaluated under the Class EA process identified above.</p>
<p>Concern raised regarding the comments and feedback received by elected Municipal representatives and Municipal staff.</p>	<p>Throughout the Class EA, we have had the opportunity to meet with and share further information with elected officials and staff. During these conversations, we had heard concerns regarding effects to agricultural properties as well as potential future development.</p> <p>Section 7.5.2 and Table 7-1 of the draft ESR address the effects to existing and future land uses, and Hydro One's commitment to continuing to work collaboratively with each of the municipalities as we progress further into detailed design and construction planning for the project.</p>
<p>Request for additional information on the location of the new transmission line.</p>	<p>The Chatham to Lakeshore Project webpage contains project maps as well as an interactive mapping tool, showing the location of the proposed transmission line. The draft ESR document is also available for review at locations within Belle River, Tilbury and Chatham, and also contains maps showing the location of the Project.</p>

Comment	Response
<p>Raised concerns over the possibility of bad tv antenna reception.</p>	<p>It is important to note that across the province, we operate many kilometers of transmission lines adjacent to homes and businesses. Based on this experience, we do not anticipate there to be any issues with your TV reception, particularly since you are located further from the corridor right-of-way.</p> <p>Hydro One does, however, have a process in place when a customer calls to identify a television or radio interference problem that they believe may be caused by our hydro equipment. By calling 1-888-664 9376, a request can be made to have a technician sent out to investigate.</p>
<p>Comment that Hydro One is reusing an existing corridor to reduce costs.</p>	<p>Regarding the reuse of an existing corridor, while route 2A presents an ability to utilize approximately 16 km of an existing idle transmission line, our project team considered this route alternative alongside other identified alternatives and evaluated each on the basis of four categories. These included Natural Environment, Socio-Economic Environment, Technical/Cost and Anishnawbek and Haudenosaunee Culture, Values and Land Use criteria.</p> <p>While route alternative 2A did score well in the technical/cost category, it was not the most preferred in this category. However, when compared to the other route alternatives across each of the four categories mentioned above it was identified as the preferred route overall.</p> <p>For further detail on the evaluation of route alternatives and how they compared to one another, you can refer to Section 5 of the ESR.</p>
<p>Concerns raised regarding EMF</p>	<p>Health and safety is our top priority, and we design and operate our equipment in accordance with all regulatory requirements including the Canadian Electric Code and CSA Standards, which account for public safety. As the builders and operators of electrical equipment, we take our responsibility seriously to understand, address and communicate information on this topic and seek guidance from health experts such as Health Canada and the World Health Organization (WHO).</p> <p>EMF levels are found everywhere electricity is used including home appliances, computers, offices and electrical stations. They are strongest when close to their source, and as you move away from the source, the strength of the fields fades rapidly. Health Canada regularly monitors the science on electromagnetic fields, conducts research on potential health effects from EMF, and contributes to the WHO's International EMF Project. We understand Health Canada also does not consider that any precautionary measures are needed regarding exposure to power frequency or fields produced by power transmissions.</p> <p>Generally, by the edge of our corridor right-of-way, EMF fields in the home are higher from everyday household items, such as appliances and general use of electricity than from transmission lines at a distance.</p> <p>More information is available on Health Canada's Radiation webpage.</p> <p>We would also be happy to connect you with one of our health and safety managers, specializing in EMF if you have additional questions.</p>
<p>Question regarding whether there has been any assessment on quality and productivity of soils in the area</p>	<p>If you refer to Section 4.1 in the ESR, a description of the Agricultural resources within the Project Study Area is provided, including a review of the CLI classifications for agricultural land capability, which are further illustrated in Figure 4-1. As assessed as part of the Class EA, the Project Study Area is dominated by Prime (Class 1-3) agricultural lands and that each route alternative was required to cross these lands in connecting to the two stations.</p> <p>Effects to agricultural operations, including traversal of agricultural land, was also the highest-weighted criterion within the Socio-Economic environment category of the route evaluation framework.</p>

Comment	Response
<p>Question about why the government would allow something to be built on productive land and close to the city limits in Chatham</p>	<p>Building and locating new linear infrastructure is not an easy decision, nor one we take lightly. We know this route will be a change for some property owners, however, when selecting the route, our goal was to ensure that everyone had an opportunity to weigh-in on the different route alternatives and that this feedback was listened to and considered.</p> <p>The Class Environmental Assessment - established under the <i>Environmental Assessment Act</i> and legislated by the Ministry of the Environment, Conservation and Parks - lays out the planning process to ensure that both natural and socio-economic environmental effects to communities where a project is built are considered in the evaluation of the different route alternatives, and identification of mitigation measures before an infrastructure project advances to detailed design and construction.</p> <p>Based on the need for the project, as identified by the Independent Electric System Operator, to construct a new line between terminal stations in Chatham and Lakeshore, it would not be possible to completely avoid traversing agricultural land or lands near southwest Chatham.</p> <p>Electrical transmission infrastructure must often traverse a variety of land uses, some of which, including most agricultural operations, are compatible with overhead transmission lines. Throughout the province, we have overhead transmission lines which cross agricultural lands, and well as directly adjacent to or even within urban centres.</p>
<p>Question regarding whether the Municipality of Chatham-Kent has shown the boundaries set aside for future development of the Municipality</p>	<p>Throughout the Class EA process, Hydro One has consulted with both elected officials and staff from the Municipality of Chatham-Kent. Representatives from the municipality provided information on areas of growth and development potential in and around the Project Study Area and this information was considered in the evaluation of route alternatives through a criterion for Future Land Use, within the Socio-Economic Environment category.</p> <p>Throughout the province, development including residential and commercial/industrial, occurs around and adjacent to existing transmission line corridors and stations. There are also many uses deemed to be compatible within transmission line corridors. And Hydro One is and will continue to work with municipalities along the route to understand and review future developments or initiatives within and along the route.</p>
<p>Question regarding whether indigenous artifacts may be discovered on and/or removed from properties. And if so, whether the project will continue?</p>	<p>As described in Section 4.3.1 of the ESR, a Stage 1 Archaeological Assessment for the project was conducted to identify known archaeological sites as well as features and areas of archaeological potential along each of the route alternatives.</p> <p>A Stage 2 Archaeological Assessment is required along the selected route for all lands exhibiting archaeological potential that have not been previously assessed. Prior to construction, a Stage 2 Archaeological Assessment will be completed within the identified areas of archaeological potential along the new transmission line corridor in accordance with MHSTCI requirements. If the Stage 2 Archaeological Assessment identifies the need for further assessment, a Stage 3/4 Archaeological Assessment will occur as required and as outlined in the "Standards and Guidelines for Consultant Archaeologists", Ministry of Tourism, Culture and Sport (2011)."</p>
<p>Question regarding whether Hydro One will have to get permits from the Conservation Authorities for work in their regulated areas</p>	<p>For new transmission line construction projects such as the Chatham to Lakeshore Line, Conservation Authority permits or approvals for certain activities within regulated areas are generally required, as per Section 28 of the Conservation Authorities Act. For the Chatham to Lakeshore Line project, it is anticipated that Section 28 permits or approvals will be required from the Essex Region Conservation Authority and the Lower Thames Valley Conservation Authority.</p>
<p>Questions regarding why certain property owners whose properties are not directly traversed by the transmission line, but have residences near the new line, are not being offered compensation</p>	<p>As a part of our practices, we are only offering compensation to those landowners who have the new transmission line Right-of-Way (RoW) directly on their property. This compensation is being offered for Hydro One to build and host our new infrastructure on these lands. Direct outreach from our Real Estate representatives is targeted to only those landowners for whom we will be requiring property rights for the new transmission line RoW.</p>
<p>Concerns regarding visual change resulting from the project</p>	<p>While engineering design work (including preliminary tower placement) was currently still underway, that proximity from transmission towers to adjacent homes was one aspect that was being taken into consideration.</p>
<p>Question regarding the typical span length and tower heights</p>	<p>While these aspects of the new line are still being designed and confirmed, in general, 230 kV transmission towers typically have approximately 300 m span distance between them. Hydro One also noted that some example 230 kV transmission tower designs were included in the draft ESR, and that the heights of these were approximately 150 feet.</p>

3.15 Section 16 Order Requests

As per Section 16 of the Ontario *Environmental Assessment Act*, a request can be made to the MECP for an Order to elevate a Class EA project to a higher level of study (i.e., requiring an individual/comprehensive EA approval before being able to proceed), or to request that conditions be imposed (e.g., require further studies). These requests could only be made on the grounds that the order may prevent, mitigate or remedy adverse effects on constitutionally protected Aboriginal and treaty rights. On the Chatham to Lakeshore project, Section 16 Order Requests were submitted by the Chippewas of Kettle and Stony Point First Nation, Caldwell First Nation, and Chippewas of the Thames First Nation. Following the receipt of the Section 16 Order Requests, responses to issues raised in each of the Section 16 Order Requests were provided to each requesting community and tables summarizing the issues/concerns raised in the requests and Hydro One's responses were developed and submitted to MECP for each of the three requests. Copies of the Section 16 Order Requests issues tables and Hydro One responses are included in the subsections below. Following consultation with each of the Section 16 Order Requesters and approved revisions to the ESR, all three Section 16 Order requests were subsequently withdrawn. The MECP provided formal acknowledgement of the withdrawal of all three Section 16 Order Requests on October 14, 2022, and noted that with no outstanding Section 16 Order Requests before the Minister, Hydro one can proceed with the Chatham to Lakeshore Project, subject to any additional permits or approvals that may be required (see **Appendix B-8**).

3.15.1 Chippewas of Kettle and Stony Point First Nation (CKSPFN)

On August 10, 2021, CKSPFN provided Hydro One and MECP with their comments on the draft ESR and formally submitted a Section 16 Order Request to the MECP. MECP emailed CKSPFN on September 22, 2021, and provided a letter indicating they will review and consider the issues and concerns cited in the August 10 letter as to why an Individual EA should be prepared.

Hydro One met with CKSPFN on September 9, 2021, to discuss the Project, including the comments and issues raised within the Section 16 Order Request.

Hydro One emailed CKSPFN on September 17, 2021, to provide Hydro One's responses to the issues raised in CKSPFN's Section 16 Order Request. CKSPFN followed up on this response by email on October 1, 2021, and shared their responses to Hydro One's responses of September 17. Hydro One provided further responses to CKSPFN via email on November 10, 2021.

One of the key commitments in Hydro One's responses to the issues raised by CKSPFN was that Hydro One would complete a project-level Cumulative Effects Assessment in line with the requirements of the Class EA for Minor Transmission Facilities. Hydro One emailed CKSPFN on July 5, 2022, and provided the Cumulative Effects Assessment and draft Analysis Table for their review.

MECP staff emailed CKSPFN (copying Hydro One staff) on July 5, 2022, offering to discuss the Project and Section 16 Order Request with CKSPFN directly, and asking for any additional information that CKSPFN may wish to provide be sent to the MECP by September 2, 2022.

Three Fires Group emailed Hydro One on behalf of CKSPFN on September 12, 2022, to provide a copy of their Section 16 Order Request withdrawal. MECP emailed CKSPFN (copying Hydro One staff) on October 14, 2022, to provide a formal acknowledgement of CKSPFN's Section 16 Order withdrawal.

The issues identified in the Section 16 Order Request from CKSPFN as well as Hydro One's responses are included in **Table 3-20**.

Table 3-20: Chippewas of Kettle and Stoney Point First Nation Section 16 Order Request – Proponent Responses

Issues and Concerns	Proponent Responses	Status
<p>1.1.1 Appendix B – Class EA Consultation - Consultation Record:</p> <p>HONI does not provide a summary of effective and meaningful consultation with CKSPFN, or other Indigenous groups, with respect to how comments from CKSPFN, or other Indigenous groups, have influenced HONI's decision-making for the proposed project, and how comments have been used to identify options for mitigating, avoiding or accommodating impacts on Aboriginal rights and interests.</p> <p>Recommendation: HONI should be required to provide a summary of consultation with CKSPFN documenting how CKSPFN inputs have influenced HONI's decision-making for the proposed project, including for identifying options for mitigating, avoiding or accommodating impacts on CKSPFN's Aboriginal rights and interests, and HONI should be required to provide similar documentation for other Indigenous groups identified in the consultation record for the proposed project.</p>	<p>Section 3.6 of the draft ESR describes the consultation activities and opportunities provided to Indigenous communities throughout the Class EA. Section 3.6, 3.6.1 and 3.6.2 describe the consultation and outreach activities and opportunities (such as capacity funding agreements) that were offered to all communities, while Section 3.6.6 provides a further summary of the consultation with the Chippewas of Kettle and Stony Point First Nation (CKSPFN) specifically. Further detail is provided in the Record of Consultation in Appendix B.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities throughout the life cycle of the Project and sees the consultation process as ongoing, not static or tied to any one step in the process. The final ESR will include information related to Aboriginal and Treaty Rights based on information provided by communities. Hydro One remains open to receiving any additional input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests from CKSPFN, and incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>1.1.2 Appendix B – Class EA Consultation – Consultation Record / Draft ESR Section 3 – Consultation:</p> <p>HONI does not provide a description of the existing Aboriginal and treaty rights of CKSPFN as recognized and affirmed in section 35 of the Constitution Act, 1982. As such, the ESR is not able to provide information on how HONI plans to <i>prevent, mitigate or remedy adverse impacts</i> on CKSPFN's Aboriginal and treaty rights. Information Request: HONI should be required to provide a description of the existing Aboriginal and treaty rights of CKSPFN as recognized and affirmed in section 35 of the Constitution Act, 1982.</p> <p>Recommendation: HONI should be required to provide a summary of HONI's plans to prevent, mitigate or remedy adverse impacts on CKSPFN's Aboriginal and treaty rights. The attached map of CKSPFN Treaty Territory should be referenced in the ESR.</p>	<p>Through the consultation process conducted as part of the Class EA, Hydro One relies on input from Indigenous communities to specifically identify Aboriginal and treaty rights that may be affected by the Project.</p> <p>The draft ESR contains a description of the existing environment (Section 4) and the potential effects of the project and proposed mitigation measures to address these effects (Section 7), including effects to natural environment features and potential cultural heritage resources. If more specific information on CKSPFN's Aboriginal and treaty rights is provided to Hydro One prior to the submission of the final ESR, Hydro One can review this information and include a summary within the final ESR as appropriate, potentially with reference to existing mitigation measures and commitments (such as those for some natural environment features) which may also serve to mitigate potential adverse effects to CKSPFN Aboriginal and treaty rights.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information throughout the life cycle of the project, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project such as project design, construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>1.1.3 Appendix B – Class EA Consultation - Consultation Record:</p> <p>While it is acknowledged that HONI did receive the list of Indigenous communities to engage with from the Ministry of Energy and Northern Development; and it is understood that consultation is with the Community, it is not understood why political entities and tribal organizations that other Indigenous communities are affiliated with were engaged (as per Consultation Log) while those that the CKSPFN (or other Chippewas Nations) are affiliated with were not.</p> <p>HONI does not provide evidence that it directly contacted to provide notification to the Southern First Nation Secretariat, London District Chiefs Council, Chiefs of Ontario or the Union of Ontario Indians.</p> <p>Recommendation: HONI should engage with the Southern First Nation Secretariat, London District Chiefs Council, Chiefs of Ontario and the Union of Ontario Indians.</p>	<p>As noted in the comment, Hydro One received the list of communities to be consulted on the Chatham x Lakeshore project from the Ministry of Energy, Northern Development and Mines (ENDM) in November 2019. This formed the basis for the communities that were engaged through the Class EA.</p> <p>Hydro One does not typically engage with Tribal Councils, Provincial Treaty Organizations (PTOs), or other agencies that do not directly represent the rights and interests of First Nations communities, such as the Southern First Nation Secretariat, London District Chiefs Council, Chiefs of Ontario and the Union of Ontario Indians, unless directed to do so by the Crown. However, Hydro One would be pleased to provide an update on the Project to these agencies, if requested.</p>	<p>Addressed.</p>

Issues and Concerns	Proponent Responses	Status
<p>1.1.4 Draft ESR – 3.6.1 – Capacity Funding Agreements:</p> <p>HONI has not finalized a Capacity Funding Agreement with CKSPFN. CKSPFN's participation in the review of the Draft ESR is currently funded entirely by CKSPFN. Section 35 of the <i>Constitution Act, 1982</i> recognizes and affirms the existing Aboriginal and treaty rights of Aboriginal peoples. The Crown's duty to consult and accommodate arises when the Crown contemplates an action or makes a decision that may have an adverse effect on potential or proven Aboriginal or treaty rights.</p> <p>For Class EAs such as new transmission facilities or expanded rights of way (RoWs), the Hydro One Class Environmental Assessment for Minor Transmission Facilities (2016) process notes that "when the duty to consult arises, the proponent will carry out interest-based public consultation with First Nations... In addition, the Crown may use this Class EA as a vehicle to fulfill the duty to consult and accommodate potentially affected communities... Where a duty to consult obligation is identified, the proponent shall fulfill the responsibilities delegated to it by the Crown to the satisfaction of the Crown prior to concluding the Class EA Process."</p> <p>In its concurrent filing to the OEB that includes this project in an application to establish a regulatory account for affiliate transmission projects – EB-2021-0169 – HONI notes that "transmission projects that are subject to a Ministerial direction or an IESO letter can be large transmission projects that have higher levels of risk and uncertainty due to their size, impact on landowners, environmental impacts and lengthy timelines in both the development and construction phase". HONI also notes that it expects to have one or more Indigenous partners in respect of the ownership and operation of the line assets, and at "the commencement of the development phase there are key unknowns, such as project route, preliminary engineering information, land acquisition requirements, etc., that are required to produce a project cost estimate. Furthermore, the need giving rise to the direction can change and may impact the continuation of development activities and the direction itself."</p> <p>Clearly, HONI understands that this project on CKSPFN's Aboriginal and treaty rights will be significant, that CKSPFN is likely to entertain an option to have an ownership and operation position with the Project, and should therefore require interest-based consultation, including approaches to determining appropriate accommodations for expected impacts on CKSPFN's Aboriginal and treaty rights.</p> <p>Recommendation: HONI should immediately finalize negotiation of the Capacity Funding Agreement submitted by CKSPFN to HONI on July 21, 2021 so that CKSPFN can meaningfully participate in interest-based consultation, including approaches to determining appropriate accommodations for expected impacts on CKSPFN's Aboriginal and treaty rights.</p>	<p>Hydro One is very much interested in an interest-based approach to ongoing consultation/engagement throughout the life cycle of the project. Additional input from CKSPFN on their interests and rights in the project area will help Hydro One and CKSPFN identify further potential project impacts, measures to mitigate potential impacts, and any necessary accommodation. As previously committed, Hydro One will welcome this input at any point in the project and will work to address potential concerns that may be raised by CKSPFN.</p> <p>Capacity Funding Agreements were offered early in the Class EA process to all participating Indigenous communities, beginning in April 2020. Since that time, Hydro One staff have frequently followed up with all Indigenous communities, including CKSPFN, to pursue execution of the CFAs to support communities' participation in the Project.</p> <p>In an effort to ensure CKSPFN had resources required to support ongoing consultations / engagements, on August 16, 2021, Hydro One offered an interim CFA to CKSPFN, to facilitate further participation on the Project, prior to the finalization of a more comprehensive CFA but have not yet received a response. Hydro One remains committed to finalizing these agreements to ensure these activities and associated costs are covered by the Project.</p>	<p>Addressed.</p>

Issues and Concerns	Proponent Responses	Status
<p>1.2.1 Appendix C2 - TMHC Inc., Stage 1 Archaeological Assessment</p> <p>According to the MHSTCI's Standards and Guidelines, it is not a requirement to actively engage Indigenous communities at the Stage 1 level. However, given the proximity to numerous pre-contact Indigenous sites, the fact that First Nations peoples have inhabited the area for thousands of years, as well as the interest of numerous First Nations' communities in the area, First Nation communities, including CKSPFN should be provided the opportunity, and sufficient time, to provide traditional and oral histories of the area, inclusive of capacity funding for these activities. It does not appear that Timmins Martelle Heritage Consultants Inc. (TMHC) directly contacted any Indigenous communities or provided those communities with the opportunity to provide their knowledge of the proposed areas with respect to traditional use and/or sacred sites as part of the Stage 1 Archaeological Assessment.</p> <p>Recommendation: Given the proximity to numerous pre-contact Indigenous sites, the fact that First Nations peoples have inhabited the area for thousands of years, as well as the interest of numerous First Nations' communities in the area, First Nation communities, including CKSPFN should be provided the opportunity, and sufficient time, to provide traditional and oral histories of the area, inclusive of capacity funding for these activities.</p>	<p>From the commencement of the Class EA in January 2020, Hydro One has made efforts to directly consult with Indigenous communities on the Project and remains committed to this ongoing consultation/engagement throughout the life cycle of the Project. Where information on areas of significance or interest has been provided, this information has been discussed with Timmins-Martelle Heritage Consultants and referenced in the Stage 1 Archaeological Assessment (AA) Report. Additionally, the draft Stage 1 AA report was provided in both digital and hard copy format to Indigenous communities in November 2020 for their review and comment for a period of approximately 6 months, prior to the finalization of the Stage 1 AA report.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project, including the involvement of interested Indigenous communities in the upcoming Stage 2 AA field surveys and report review.</p>	<p>Addressed.</p>
<p>1.2.2 Appendix C2 - TMHC Inc., Stage 1 Archaeological Assessment</p> <p>According to the MHSTCI's (2011) Standards and Guidelines, it is not a requirement to actively engage Indigenous communities at the Stage 2 level. However, current best practice suggests that First Nation communities, including CKSPFN should be given the opportunity to participate in the potential discovery of Indigenous artifacts and/or sites. If the consulting First Nation communities do not have trained field liaisons/monitors, it is further recommended that training be provided inclusive of capacity funding.</p> <p>Recommendation: First Nation communities, including CKSPFN, should be provided the opportunity to participate in the potential discovery of Indigenous artifacts and/or sites. If the consulting First Nation communities do not have trained field liaisons/monitors, it is further recommended that training be provided inclusive of capacity funding. Training is important to not only recognizing and distinguishing between cultural/non-cultural artifacts/features; but, it is also integral to ensuring proper field health and safety protocols are followed.</p>	<p>Hydro One has offered interested Indigenous communities the opportunity to attend upcoming Stage 2 AA field surveys and review the findings and draft report. Funding is to be arranged through the consulting archaeologist (Timmins-Martelle Heritage Consultants) and Hydro One understands that this is currently being coordinated. If there are any specific considerations or requirements related to training to support participation in this process Hydro One is open to discussing them with CKSPFN and working address them potentially through the provision of capacity funding if required.</p>	<p>Addressed.</p>

Issues and Concerns	Proponent Responses	Status
<p>1.2.3 Appendix C2 - TMHC Inc., Stage 1 Archaeological Assessment</p> <p>Since it is not a requirement to actively engage Indigenous communities at the Stage 2 level (MHSTCI 2011), the archaeological consulting firm is under no obligation to involve First Nation communities in the cultural recommendations, if Indigenous artifacts, features, and/or sites are located. However, best practice would suggest that given that material cultural could pertain directly to their ancestors, for Stage 2 level or further archaeological assessment, the First Nation communities, including CKSPFN, should be consulted and provided reasonable capacity funding, and appropriate training, when determining the cultural heritage value of Indigenous artifacts, features, and/or sites, and assist in the recommendations for further archaeological assessment.</p> <p>Recommendation: Given that material cultural could pertain directly to their ancestors, for Stage 2 level or further archaeological assessment, the First Nation communities, including CKSPFN, should be consulted and provided reasonable capacity funding when determining the cultural heritage value of Indigenous artifacts, features, and/or sites, and assist in the recommendations for further archaeological assessment.</p>	<p>Hydro One has offered interested Indigenous communities the opportunity to attend upcoming Stage 2 AA field surveys and review the findings and draft report. Funding is to be arranged through the consulting archaeologist (Timmins-Martelle Heritage Consultants) and Hydro One understands that this is currently being coordinated.</p>	<p>Addressed.</p>
<p>1.3.1 Appendix C2 - Golder Associates Ltd., Cultural Heritage Existing Conditions (CHEC) Report</p> <p>Golder Associates Ltd. recommends HONI conduct a Preliminary Heritage Impact Assessment (HIA) with respect to the preferred alternative transmission line corridor to identify the direct and indirect impacts from the preferred alternative on the known and potential built heritage resources and cultural heritage landscapes.</p> <p>identified in the CHEC included with the draft ESR. There is no record of this Preliminary HIA in the draft ESR.</p> <p>Recommendation: With respect to the preferred alternative transmission line corridor, HONI should be required to provide a Preliminary HIA to identify the direct and indirect impacts from the preferred alternative on the known and potential built heritage resources, and cultural heritage landscapes identified in the CHEC included with the draft ESR.</p>	<p>As stated in Section 7.4 of the draft ESR, Hydro One has committed that where an identified built heritage resource cannot be feasibly avoided and will be directly impacted through destruction, alteration, or disruption, Hydro One will undertake property specific Cultural Heritage Evaluation Reports (CHERs) and/or Heritage Impact Assessments (HIAs). The additional study will confirm the cultural heritage value or interest and heritage attributes of the impacted built heritage resource and identify all adverse effects.</p> <p>No Cultural Heritage Landscapes have been identified along the preferred route 2A; the Cultural Heritage Landscape referenced in the CHEC report is located south of the Highway 401 along routes 1 and 3 and is therefore avoided by the selection of preferred route 2A.</p>	<p>Addressed through the commitment in the draft ESR to undertake further heritage assessments as necessary.</p>

Issues and Concerns	Proponent Responses	Status
<p>1.3.2 Appendix C2 - Golder Associates Ltd., Cultural Heritage Existing Conditions (CHEC) Report; Draft ESR Section 7.4</p> <p>The Draft ESR states that no cultural heritage landscapes were identified in the study area associated with the Preferred Route Alternative. The CHEC included with the draft ESR is not inclusive of input from First Nations on potential Indigenous cultural landscapes. The Provincial Policy Statement (2020) says “Ontario recognizes the unique role Indigenous communities have in land use planning and development, and the contribution of Indigenous communities’ perspectives and traditional knowledge to land use planning decisions. The Province recognizes the importance of consulting with Aboriginal communities on planning matters that may affect their section 35 Aboriginal or treaty rights. Planning authorities are encouraged to build constructive, cooperative relationships through meaningful engagement with Indigenous communities to facilitate knowledge-sharing in land use planning processes and inform decision-making.”</p> <p>The Provincial Policy Statement (2020) defines a Cultural Heritage Landscape as follows: “means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, <i>including an Indigenous community</i>. The area may include features such as buildings, structures, spaces, views, archaeological sites or natural elements that are valued together for their interrelationship, meaning or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the Ontario Heritage Act; or have been included in on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms” (emphasis ours).</p> <p>Golder Associates Ltd. notes in the CHEC: “The Ontario Planning Act (1990) and associated Provincial Policy Statement 2020 (PPS 2020) mandate heritage conservation in land use planning. Under the Planning Act, conservation of “features of significant architectural, cultural, historical, archaeological or scientific interest” are a “matter of provincial interest” and integrates this at the provincial and municipal levels through the PPS 2020. Issued under Section 3 of the Planning Act, PPS 2020 recognizes that cultural heritage and archaeological resources “provide important environmental, economic, and social benefits”, and that “encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including built heritage resources and cultural heritage landscapes” supports long-term economic prosperity (PPS 2020:6,22).” Section 2.6.1 of the Provincial Policy Statement (2020) says: “Significant built heritage resources and significant cultural heritage landscapes shall be conserved.”</p> <p>Recommendation: HONI should be required to provide an assessment of cultural heritage landscapes that may be impacted by the project, and avoidance or mitigation measures associated with those impacts, and reference direct input from First Nations on potential Indigenous cultural landscapes inclusive of traditional and oral histories of the area, and reference First Nation inputs on any potential avoidance or mitigation measures.</p>	<p>From the commencement of the Class EA in January 2020, Hydro One has made efforts to consult with Indigenous communities on the Project. To date, no input was received from any Indigenous community on known or potential Indigenous cultural landscapes; had that information been received by Hydro One, it would have been provided to Golder Associates for discussion within the CHEC report. The CHEC report does describe the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Moving forward, Hydro One would be pleased to receive any information from CKSPFN that would help inform project design, construction methods and/or rehabilitation planning.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>1.4.1 ESR – Surface Water Resources s.4.6.3</p> <p>The ESR describes two types of surface water resource: 'Water Crossings' and 'Waterbodies'. This description can be confusing as in virtually no instance are water crossings ever considered a surface water resource. Water crossings are the physical, constructed means of crossing surface water features (e.g. low-bed crossing, culverts, bridges, etc.).</p> <p>Relative to potential impacts to surface water, actual water crossings can be one of the largest affecters for impacts on fish and fish habitat. Therefore, the use of this term for both a natural feature AND physical structure is confusing and incorrect.</p> <p>Likewise, waterbodies include a wide range of surface water features ranging from ephemeral and intermittent, standing or flowing waters to permanent standing or flowing larger systems but are never <i>just</i> constructed, or natural pools that are landlocked.</p> <p>Adding to the inconsistency, Table 4-3: Watercourse Crossings Surveyed; Column 1, Watercourse/Drain Name lists streams and creeks (incorporated as drains), none of which are standing waters albeit, some may be pumped systems. Most of these were natural, flowing streams before incorporation as 'drains' under the Provincial Drainage Act.</p> <p>In both cases, it is confusing why these two terms with well accepted uses are set out in the ESR in these incorrect and confusing ways. Could not better, accepted terms such as lotic and lentic, or similar terms be used?</p> <p>Recommendation: HONI should clarify or correct the use of the terms "water crossing" and "waterbodies".</p>	<p>The reference to water crossings is associated with the physical crossing of watercourses/drains by the alternative routes. Section 4.6.3 provides the definition of water crossings for the purposes of the ESR. Hydro One will clarify the distinction between waterbodies and watercourse crossings in the final ESR.</p>	<p>To be addressed in the final ESR.</p>
<p>1.4.2 ESR - Natural Heritage Features s.4.6.7 – Fish and Fish Habitat</p> <p>Some of the aquatic systems surveyed were described as: "...reported to have good to fair systematic agricultural tile drainage (classifications of C, E and F)."</p> <p>Tile drainage is never classified as C, E, and F, or any of the classes for drains (A, B and D); only open agricultural drains were/are classified as such. Information that goes into the classification of municipal drains is typically good information and goes a long way to describe the 'quality' of the drain and potential as habitat. There is virtually no habitat provided in tile drainage apart from being a water contributor only.</p> <p>Recommendation: HONI should correct the use of the Drains Classification System to be used only for open municipal drains throughout the ESR and Appendix (C-1).</p>	<p>It is acknowledged that the Drain Classification System is to be used for open municipal drains. The mention of systematic agricultural tile drainage was from an external reference which described the inputs to drain classes C, E and F ("... reported to have good to fair systematic agricultural tile drainage"). The reference will be updated in the final ESR to reflect that drain classes C, E and F receive "good to fair systematic agricultural tile drainage inputs".</p>	<p>To be addressed in the final ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>1.4.3 ESR – Wetlands s.7.7.8.1</p> <p>The ESR describes that the new transmission line crosses 3 unevaluated wetlands being directly impacted from the activities associated with the line. It is described that avoidance, where possible, will be the primary mitigation, however if impacts cannot be avoided, offsetting of losses will follow the guidance in the proposed Biodiversity Initiative.</p> <p>There is a concern that wetlands may complex (be connected) to other features, and moving and recreating wetlands at different locations as a common off-set strategy may not reflect the complex that other, original features may have. Additionally, across CKSPFN Treaty Territory, wetlands of any sort that are persistent are in effect, an endangered ecosystem and need more evaluation and protection to avoid impacts on CKSPFN's Aboriginal and treaty rights, and to avoid additional cumulative impacts on the Treaty Territory.</p> <p>Recommendation: As more final plans are developed with regard to towers construction in-or-around these or other wetlands, HONI should re-evaluate the wetlands, in collaboration with CKSPFN, not only for intrinsic valued ecological components but also for extrinsic valued ecosystem components (VECs) that may include complexing to other ecological features. CKSPFN must be able to participate in these assessments, with reasonable capacity funding.</p>	<p>Section 7.7.8.1 of the draft ESR states: "The new transmission line crosses three unevaluated wetland communities; shallow Marsh (MAS), White Elm Mineral Deciduous Swamp (SWDM4-2) and Thicket Swamp (SWT), respectively. Of the aforementioned wetlands, direct impacts are limited to the SWDM4-2 community given the community's association with incompatible vegetation."</p> <p>It is important to note that where incompatible vegetation communities (such as SWDM4-2) are traversed by transmission lines, these areas can typically be restored following construction into compatible vegetation communities (e.g., Thicket Swamp), such that the long-term effect to incompatible vegetation communities is not a loss of all habitat value or function, but a transition to a different vegetation community within the extent of the transmission line ROW. Overhead transmission lines generally have little to no long-term effects to the underlying hydrology of the areas that they traverse, as these facilities do not require additional drainage works or large-scale excavation or grading.</p> <p>Hydro One will add a description of potential wetland complexing to Section 7.7.8.1 of the ESR; Hydro One believes that this can be accomplished using the information previously collected during the natural environment field program conducted for the project to date. If it is determined that further assessments are required, Hydro One will inform CKSPFN and provide an opportunity for their participation.</p> <p>As committed to in the ESR, Hydro One will continue to seek opportunities to avoid, mitigate and restore any adverse effects to wetlands and other natural features and habitats throughout the detailed design and planning of the project, including input into environmental mitigation and post-construction restoration plans. Hydro One has committed to undertake a Biodiversity initiative for the Chatham x Lakeshore project to offset any adverse effects to habitats that cannot otherwise be avoided, mitigated or restored. While past Biodiversity Initiatives have focused largely on the creation of new habitats or enhancement of existing habitats, these offsets are not always conducted on a like-for-like basis and largely depend on opportunities identified and proposed by external parties such as Conservation Authorities, First Nation communities, and Municipalities. Hydro One welcomes the involvement from interested Indigenous communities to discuss the scope and format of the Chatham x Lakeshore Biodiversity Initiative as the project progresses and approval to proceed with the undertaking has been obtained.</p> <p>As earlier committed, Hydro One remains open to the provision of capacity funding to support the ongoing consultation/engagement on the Project.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>1.5.1 ESR and Appendix C-1 – Designated or Special Natural Areas s. 4.6.6 – Big O Conservation Area</p> <p>During the CKSPFN site visits with HONI and representative on July 28, 2021, HONI representatives stated that the new line would effectively be constructed "...within 78 feet and south of..." (23.8m) the existing line. This widening will likewise increase the HONI Right of Way beyond the current Right of Way. In this, the existing line currently runs 'directly adjacent' to Big O Conservation Area in CKSPFN Treaty Territory, which is a well known, local heritage feature and birding site – known as a "birding hot spot". In early May, many species of migratory birds arrive at this area after crossing Lake Erie. As a natural heritage area and one of a remaining few such areas in this region of CKSPFN Treaty Territory, there is concern the new line may impact this resource, and contribute further cumulative impacts to the existing HONI Right of Way.</p> <p>Recommendations: HONI must provide details on how the Big O site will be avoided. It is unlikely any encroachment into the Big O Conservation Area, including a buffer region (indirect encroachment from widening of the Right of Way) would be supported.</p>	<p>The Big O Conservation Area (CA) will not be affected by the project, as this feature is avoided entirely by the preferred Route 2A, which is located north of the Big O CA.</p> <p>The Big O CA is currently traversed by existing 230 kV transmission lines and would have been affected (by way of the widening of this transmission corridor) by any of the Route 1 alternatives which would have paralleled these existing transmission lines on the north side. The anticipated effects to the Big O CA were considered in the evaluation of route alternatives and was one of the features that lead to Route 1 alternatives scoring lower in some evaluation criteria within the Natural Environment and Anishnawbek and Haudenosaunee Culture, Values and Land Use categories.</p> <p>The discussion regarding Big O CA that occurred during the aquatic surveys on July 28, 2021 was not meant to imply that Big O CA would be affected by the preferred route 2A, but was in the context of describing how route 1 variations (paralleling the existing 230 kV corridor) would still result in effects to features directly adjacent by way of widening the ROW.</p>	<p>Addressed.</p>

Issues and Concerns	Proponent Responses	Status
<p>1.5.2 ESR and Appendix C-1 – Designated or Special Natural Areas s. 4.6.6 – Important Bird Areas</p> <p>The ESR documents recognize that the Project Study Area (PSA) does overlap with the Eastern Lake St. Clair Important Bird Area (IBA) but then cites that IBAs are not legally protected in Canada. This comment does add to concerns as the value of IBAs to CKSPFN's Aboriginal and treaty rights is minimized in that statement.</p> <p>Additionally, and as discussed in 2.4.3 above, if indeed there are other ecological features such as wetlands (specifically unclassified) or waterbodies, complexing is likely to occur but may be missed in the single season and/or point-assessments being conducted leading to the drafting of this ESR. With the comment about the legal protection and nature of the assessments in this ESR, there are concerns the potential impact of the new transmission line may be underestimated, or at best, not yet assessed relative to impact on bird species using the IBA and beyond.</p> <p>Recommendations: HONI must re-evaluate the potential impacts of the line on IBAs via increased assessments that explore potential complexing. The results of these studies should be provided to CKSPFN for review before proceeding with planning. CKSPFN should also have the opportunity, with reasonable capacity funding, to participate in these assessments.</p>	<p>As described in Section 7.7.7.1 of the ESR, the majority of the IBA which is traversed by the preferred route 2A consists of an existing 115 kV idle transmission line corridor which will be repurposed to accommodate the proposed Project. Therefore, while the new transmission line will be different in design (e.g., taller structures with greater span distance between them), this represents an incremental change to this area. However, recognizing that the IBA is an important consideration in the planning of the project, this was taken into account both in the evaluation of the route alternatives and the assessment of environmental effects and identification of mitigation measures.</p> <p>Within the IBA, Lake St. Clair provides a critical resting, feeding and staging area for numerous species of waterfowl; earning its reputation as one of the most important resting and feeding sites for waterfowl in Canada south of James Bay. However, these congregations are contained within the lake itself, adjacent wetlands and a broad swath of adjacent farmlands and inland habitats from Wallaceburg to the mouth of the Thames River. The preferred route 2A is outside of the critical waterfowl feeding, staging and stopover areas.</p> <p>As further described in Section 7.7.7.1 of the ESR, a review of available data, flight paths for water bird species commonly associated with the IBA do not appear to extend through the eastern extents of the IBA that overlap with the proposed Project. While suitable habitat conditions for water birds within the IBA were not identified within the transmission ROW associated with the preferred route, potential suitable habitat does exist adjacent to the transmission ROW. As a result, there is potential for birds to collide with the transmission line during the construction and operational phases associated with the proposed Project. In addition to the above-mentioned repurposing of the existing idle transmission corridor, Hydro One has also committed to implementing additional visual mitigation (e.g., bird diverters or similar technology) along key sections of the transmission line within the IBA to further mitigate the potential for avian collisions. Selection and implementation of this visual mitigation will form part of the detailed design and environmental mitigation planning to be undertaken by the construction contractor for the project; Hydro One will work with its selected contractor to further review potential mitigation solutions with interested Indigenous communities, and to incorporate input from communities into these plans.</p>	<p>Per proponents response, addressed in the draft ESR, as well as though through the commitment in the ESR to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>1.6.1 Draft ESR – Section 7 Cumulative Impacts - The Hydro One Class Environmental Assessment for Minor Transmission Facilities (2016) process requires all proponents to consider cumulative effects when planning projects, including the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available.</p> <p>HONI has not provided information on cumulative impacts, or specific information on cumulative impacts to CKSPFN Aboriginal and treaty Rights. However, the draft ESR notes “more than 95% of original wetlands and forests are gone... remaining habitat in the counties [sic] is vital to wildlife” (Table 3-10). Of course, “the counties” represent CKSPFN treaty lands and waters.</p> <p>Recommendation: HONI should be required to provide a chapter in the ESR on Cumulative Impacts. This chapter should be:</p> <ul style="list-style-type: none"> • inclusive of information from the IESO and regional Local Distribution Companies (LDCs) including the IESO Annual Acquisition Report (July, 2021) and the forthcoming IESO West of London Bulk Report planned for release later this summer; • inclusive of Information from regional Local Distribution Companies (LDCs) regarding their expectations for system expansion and refurbishment given the IESO's expected quadrupling of electricity demand in the region between now and 2035; and • reflect the outcomes of court cases including <i>Yahey v British Columbia, 2021 BCSC 1287 (Blueberry River)</i>, <i>Mikisew Cree First Nation v. Canada (Mikisew)</i>, <i>Southwind v. Canada (Southwind)</i> with respect to identifying and managing cumulative impacts across treaty lands and waters. In <i>Blueberry River</i>, B.C. Supreme Court justice Emily Burke agreed with the Blueberry River First Nation that the constant approval of new energy projects in the region had infringed on treaty rights meant to protect the Nation's way of life. She characterized it as "death by a thousand cuts. <p>This chapter on Cumulative Impacts should also reference approaches to managing cumulative impacts with Indigenous treaty rights-holders including:</p> <ul style="list-style-type: none"> • structuring collaboration with CKSPFN in the context of regional cumulative effects management and the IESO's information regarding the quadrupling of energy infrastructure across CKSPFN treaty territory • co-governance structures for managing cumulative impacts with CKSPFN given the IESO's predicted growth in energy infrastructure • managing cumulative impacts with CKSPFN in light of the fact that across its treaty territory, “more than 95% of original wetlands and forests are gone... remaining habitat in the counties is vital to wildlife” (HONI Draft ESR Table 3-10) 	<p>The need for the project is described in Section 1.1 of the draft ESR and the alternatives to the undertaking were considered in Section 1.3. In these Sections, Hydro One as the transmitter accepts the recommendations of the independent agency (IESO) as a starting point for the EA and technically viable alternative routes were developed for evaluation through the Class EA process.</p> <p>Hydro One will include in the final ESR a subsection describing the consideration of cumulative effects, as per the requirements of the Class EA for Minor Transmission Facilities. The project team will identify and describe the cumulative effects of the preferred alternative in relation to any identified proposed undertakings in the immediate project area where documentation is available. This will include information from the IESO regarding other projects planned within the study area. Inclusion of Local Distribution Companies plans for expansion given the expected electricity demand is outside of the purview of this study unless those plans are known and available to Hydro One. Broad, regional cumulative effects or cumulative effects related to the increased energy demand in southwestern Ontario is also outside of the purview of this study. Hydro One accepts the recommendation of the IESO to construct a new double-circuit 230 kV transmission line between the Chatham SS in the Municipality of Chatham-Kent, to the future Lakeshore TS in the Municipality of Lakeshore.</p>	<p>To be addressed in the final ESR though the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>1.6.1 ESR and Appendix C-1 – Species at Risk s.7.7.8.4</p> <p>The ESR and appendices cite various fish and wildlife species listed under either or both the federal Species at Risk Act (SARA) or the provincial Endangered Species Act (ESA). As discussed in several of the preceding sections, there is an inherent shortcoming in the various studies resulting from two main issues: 1) the detailed route is not yet known therefore SAR assessments were more of a desk-top analysis and, 2) single season-point assessments are at the low scale of required assessment for statistical analysis of species. Single season-point assessments are presence-not observed level and likely not sufficient for understanding or describing the potential impact to virtually any species let alone SAR species.</p> <p>Recommendations: As more detailed plans are developed, HONI should commit to undertaking fulsome, 3-season studies to clearly define the reasonableness that SAR species are or are not present, and if present, include planning that has total avoidance as the primary mitigation. The CKSPFN would also appreciate the potential to participate in these assessments, with reasonable capacity funding.</p>	<p>Species at Risk (SAR) habitat was described in the draft ESR by either direct observation during field surveys (e.g., Butternut) or by the identification of potential SAR habitat by way of cross-referencing the results of Ecological Land Classification against the habitat descriptions for SAR with the potential to occur within the project study area. This is a conservative approach which Hydro One believes to be appropriate for Class EA projects. The MECP has recently acknowledged that an authorization under the <i>Endangered Species Act, 2007</i> (ESA) would not be required for SAR bats and/or Eastern Foxsnake so long as the timing windows outlined in the ESR are adhered to.</p> <p>Now that the preferred route has been selected, Hydro One continues to further investigate potential methods of avoiding or mitigating adverse effects to potential SAR habitats and would welcome input from CKSPFN in this process; this may include avoiding disturbance to some areas by minor realignments (e.g., within the existing property fabric) of the preferred route, or by avoiding disturbance to known or potential SAR habitat during sensitive seasons.</p> <p>If it is determined that disturbance to some areas of potential SAR habitat cannot be avoided, then additional detailed surveys to confirm presence or absence of SAR habitat may be required and opportunities for participation from interested Indigenous communities will be provided. Some of these additional surveys (eDNA and additional aquatic habitat assessments) were conducted in July 2021 and were attended by interested Indigenous communities.</p> <p>As described in Section 4.6.7 of the ESR, in the event the project has the potential to result in potential impacts to aquatic SAR, both the MECP and DFO will be consulted to confirm whether permitting under the ESA and/or the <i>Fisheries Act</i> may be required.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>1.6.2 ESR and Appendix C-1 – Non-native and Invasive Species s.4.6.7 - Invasive Species s.7.7.8.6</p> <p>It is acknowledged, the effort that HONI and their consultants have made in identifying Invasive species and describing ways to mitigate propagation. It is also acknowledged that some species (i.e. fragmites), once established, are virtually impossible to remove. That said, again, due the level of assessment completed, there is concern that invasive species may have been missed in the original studies, so consideration in mitigation plans may be missed.</p> <p>Additionally, in this region of CKSPFN Treaty Territory, fragmites has become the dominant species lining virtually any waterbody, road or pathway. With regard to certain plant species of harvest (i.e. bull rush and yellow flag), fragmites growth has invariably taken over those areas and where harvesting opportunities for these species may still exist, there would be extra concern to minimize the potential for spread of any invasive into these areas.</p> <p>Recommendation: As HONI develops final plans and completes additional environmental studies, HONI should be both watchful of invasive species, as well as identifying valued plant species and locations. This identification and listing should be provided to CKSPFN and other Indigenous communities in the area to confirm and add CKSPFN valued ecosystem components (VECs). Additionally, final mitigation plans directed at the prevention of the spread of invasive species relative to specific sites should be provided to CKSPFN for review prior to initiating work.</p>	<p>Hydro One will continue to identify and flag areas with populations of invasive species, including <i>Phragmites australis</i> for consideration during detailed access and construction planning. As described in Section 7.7.8.6 of the ESR, Construction staff will be educated on the identification of invasive species and the importance of avoiding their spread to new areas, and areas with known invasive species populations will be avoided to the extent practical during construction. Additional measures that would be undertaken to reduce the spread of invasive species include utilizing native plant species during construction restoration, care to avoid spreading invasive species (especially invasive plant species) that occur in or adjacent to work areas, and educating crews on the importance of preventing the spread of invasive species, conducting proper handling, containment and disposal of invasive plant material, where required, and inspecting and cleaning equipment and vehicles as necessary to reduce potential for spreading invasive species propagules.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on plant species of harvesting interest or VECs, and incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project. Hydro One is also open to discussing ways in which representatives from CKSPFN could be involved in safely participating in this field work during the construction and restoration phases of the Project.</p>	<p>Addressed in the draft ESR through proposed mitigation and the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>1.6.3 ESR - Summary of Potential Environmental Effects, Mitigation Measures, and Net Effects s.7.12</p> <p>The effort in the development of this section including the summary table 7-1 is acknowledged. This section attempts to envision each potential impact and mitigate it without final plans in place. As it is now, this section is a compendium of virtually every mitigation that could' be applied.</p> <p>Recommendation: As final plans are developed for all aspects of the project relative to each environmental feature and impact specific to the project, HONI will share that mitigation plan with CKSPFN for review, collaborate with CKSPFN in finalizing mitigation plans, and provide capacity funding for involvement in the review process, and provide capacity funding for CKSPFN environmental monitors to be on site during construction activities.</p>	<p>As detailed construction plans, including detailed environmental mitigation plans are developed, Hydro One and its construction contractor will provide opportunities for review and discussion with CKSPFN and other interested Indigenous communities, and will seek to incorporate their input into the final detailed plans.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognizance of the interest expressed by CKSPFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and CKSPFN as preparations begin for construction and we are committed to working together on this.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

3.15.2 Caldwell First Nation (CFN)

On September 10, 2021, CFN emailed Hydro One and submitted their comments on the draft ESR and noted that they recommend the Project be elevated to a more comprehensive Individual EA. CFN emailed MECP on the same day and formally submitted their Section 16 Order Request.

Hydro One emailed CFN on October 4, 2021, and provided responses to the draft ESR comments. Hydro One confirmed they are committed to ongoing dialogue and would value the opportunity to review and discuss the comments and Hydro One's responses. CFN sent a letter via email to Hydro One on January 17, 2022, regarding their concerns with the consultation during the Project. CFN emailed MECP on January 17, 2022, requesting a response to their Section 16 Order Request. Hydro One emailed CFN on February 3, 2022, to share their correspondence letter in an effort to seek meaningful engagement with CFN for the Project.

On March 22, 2022, MECP emailed CFN (copying Hydro One staff) to provide an update on the Ministry's progress in reviewing the Section 16 Order Request and Hydro One's responses. MECP emailed CFN (copying Hydro One staff) on July 4, 2022, offering to discuss the Project and Section 16 Order Request with CFN directly, and asking for any additional information that CFN may wish to provide be sent to the MECP by September 2, 2022.

Two key commitments made in Hydro One's responses to CFN's Section 16 Order request were that Hydro One would incorporate CFN's TEK study (when received) into the final ESR, and that Hydro One would complete a project-level Cumulative Effects Assessment in line with the requirements of the Class EA for Minor Transmission Facilities. CFN provided their TEK study to Hydro One on September 8, 2021, and on July 5, 2022, Hydro One provided CFN with an additional effects and mitigation table which would form the basis for incorporation of the TEK study into the final ESR. The TEK study effects and mitigation table, provided as **Table 7-2**, is based upon the VCs presented in the TEK study which are addressable through the management of the Chatham to Lakeshore Project (e.g., through environmental mitigation measures during construction). Hydro One also provided text acknowledging the broader issues and VCs raised by CFN in the TEK study which are beyond Hydro One's scope or ability to control through the Chatham to Lakeshore project, noting that this acknowledgement would also be included in the final ESR (see **Sections 3.6.5 and 7.8**). Hydro One emailed CFN on July 7, 2022, and provided for CFN review, the Cumulative Effects Assessment, Analysis Table and supporting maps that had been drafted for the Project for inclusion in the Final ESR.

Chatham to Lakeshore 230 kV Transmission Line Class Environmental Assessment
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Consultation

Hydro One met with CFN on September 12, 2022 to discuss the Project and resolve outstanding concerns.

The issues identified in the Section 16 Order Request from CFN as well as Hydro One's responses are included in **Table 3-21**.

Table 3-21: Caldwell First Nation Section 16 Order Request – Proponent Responses

Issues and Concerns	Proponent Responses	Status
<p>More context is required to understand the overall ecological and cultural values that the remaining woodlands, wetlands, and creeks/waterways represent within the region and Caldwell First Nation's (Caldwell) territory, so that the severity of Projects to these natural heritage areas can be properly characterized</p> <p>Potential project-related impacts must be understood in the broader picture for where the project occurs and must recognize the baseline conditions for the native habitats and environments that it may impact. This includes having an appropriate characterization of legacy effects and current cumulative stresses that natural environments and native habitat have already been subjected to (e.g., a substantially or even significantly damaged baseline status) within the region.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> • Given the heavily impacted current condition of the proposed route, please describe how HONI will adhere to the Ontario Provincial Policy Statement 2020 (PPS) to avoid significant effects on wetlands, woodlands, and wildlife habitat, including those potentially significant woodlands and wetlands identified during the field investigations for the dESR. • Please provide a supplemental submission that includes a description of the relative importance of the significant woodlands and waterways identified in the dESR. The submission should address: <ul style="list-style-type: none"> ◦ What portion of the natural habitat for woodlands, wetlands, and creeks/waterways within the region are considered undisturbed relative to the native habitat of the region? For example, the dESR estimates that 95% of original wetlands and forests are gone in Essex and Chatham Kent counties (3- 78). ◦ How much of the remaining landscape is represented by natural habitat, and what portion of those areas might be affected by the Project? Please use as a reference the delineations used by Caldwell in its Traditional Ecological Knowledge preliminary report (TEK report): local study area of 5km radius around the Project, and a regional study area of 25km radius around the Project. 	<p>01 a. The PPS, issued under the <i>Planning Act</i>, provides direction and guidance on land use planning issues which are subsequently implemented through municipal official plans. In accordance with Section 62 of the <i>Planning Act</i>, Hydro One undertakings approved under the <i>Environmental Assessment Act</i>, are not subject to the <i>Planning Act</i>. Nonetheless, Section 1.6.8.6 of the PPS (Section 4.4.1.1 in the ESR) states that planning for corridors and RoWs for significant electricity transmission and infrastructure facilities 'consider' the significant resources protected by Section 2 (Wise Use and Management of Resources) of the PPS. Hydro One is committed to complying with the intent of the PPS and has provided mitigation in the ESR as a mechanism to avoid adverse impacts to natural features and/or their functions (e.g. transitioning incompatible vegetation to compatible vegetation, Biodiversity Initiative).</p> <p>01 b. The draft ESR includes an assessment of effects to all vegetation (i.e., not limited to only significant woodlots), both in the evaluation of route alternatives and in the description of environmental effects and proposed mitigation measures. Similarly, Hydro One would like to reiterate the commitment made in the dESR that TEK studies or other information or input provided by Indigenous communities, including Caldwell First Nation, will be considered and incorporated into the project to the extent feasible, and that this commitment does extend to aspects of the project such as post-construction restoration and the Biodiversity Initiative that Hydro One has committed to undertake for the Chatham x Lakeshore project.</p> <p>01 c. The Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria applied in the evaluation of route alternatives were intended to address potential impacts to natural heritage areas and included the criterion: "Effects to rare/undisturbed native habitats/ ecosystems". Factors that were measured to understand these potential impacts included, "Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. and measured the level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism".</p> <p>01 d. Since the release of the ESR, Hydro One has continued to assess opportunities to avoid and/or mitigate effects to natural features. Recent refinements to the preferred route alternative made within property fabrics will minimize the number of wetland communities previously impacted, the amount of significant woodland previously impacted, as well as the amount of incompatible vegetation impacts. As per the commitment made in the draft ESR, input received from Caldwell First Nation will continue to be reviewed and incorporated into the project to further identify specific mitigation measures, as these plans are more specifically developed during the detailed design and construction planning phase of the project following completion of the Class EA process.</p>	<p>Addressed in the proponent's response and in the draft ESR, including through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

<p>Selection of the preferred alternative route has not addressed Caldwell concerns: In the fall of 2020, Caldwell was consulted on its route alternative preference. After carefully considering the potential effects of each route option, Caldwell identified alternative route option 1A based on its values and priorities. Namely, that the new transmission line should result in as little new undisturbed habitat as possible and avoid areas that are ecologically and culturally important to Caldwell.</p> <p>Caldwell's least preferred option was alternative route 2A. Other Indigenous groups and municipalities have also rejected Route Alternative 2A.</p> <p>The dESR has not demonstrated that route 2A would be less ecologically or culturally impactful than route 1A, in particular in respect to potential adverse effects to fish habitat and bird habitat.</p> <p>The alternatives assessment (weighting criteria) has not taken into account:</p> <ul style="list-style-type: none"> the relative quality of fish habitat that would be impacted by routes 2A and 1A when making its assessment in respect to potential effects on waterways. In effect, the weighting criteria has treated an irrigation ditch as equivalent to a stream tributary, and ignored the overall value of waterways in terms of their effective ecological function. the cumulative impacts to bird habitat posed by route 2A, which crosses within the Eastern Lake St. Clair Important Bird Area, when considered in combination with existing transmission lines, transportation corridors and wind turbines located in the same vicinity. <p>These important factors were raised by Caldwell in discussions with HONI last fall but have not been included in the route selection criteria.</p> <p>Information Request(s): Please provide a supplementary memo that describes how Caldwell's input during route option consultations in the fall of 2020 was taken into consideration by HONI in making its preferred route selection. This memo should provide a rationale for where HONI has disagreed with Caldwell's views, including Caldwell's concerns related to bird habitat, fish habitat and preferred route recommendation.</p>	<p>02 a. As outlined in Section 5.3.4 of the dESR, Caldwell First Nation provided a technical memo to Hydro One on December 15, 2020 summarizing the findings of their study of the route alternatives and identification of route evaluation criteria. It is acknowledged that Caldwell First Nation stated an overall preference for Route Alternative 1A for the reason that it had the greatest overall distance parallel to existing transmission lines. The memo also outlined key considerations and criteria that Caldwell First Nation had identified as priorities in the evaluation of the route alternative, of which ecological protection and restoration were identified as a primary criterion. Following Hydro One's receipt of Caldwell First Nation's memo, Hydro One held a virtual meeting with Caldwell on December 18, 2020 to collectively review Caldwell First Nation's memo, as well as provide additional context on the route alternatives, including information on the research and environmental studies completed during the 2020 field season.</p> <p>Both Caldwell's preference for Route Alternative 1A and the importance of ecological protection and restoration were reiterated in a February 17, 2021 email to Hydro One. On February 19, 2021 Hydro One held a virtual meeting with Caldwell First Nation to provide an early briefing on the selection of the preferred route alternative, as well as an explanation on how Hydro One focused on the key criteria and considerations that Caldwell First Nation provided in their December 15, 2020 technical memo, and utilized those along with similar input from other communities to develop the criteria under the Anishawbek and Haudenosaunee Culture, Values and Land Use category.</p> <p>Hydro One advised Caldwell First Nation that their stated preference for Route Alternative 1A was captured in a new duplicate criterion relating to overall distance parallel to existing infrastructure, but that other criteria, particularly those relating to natural environment (i.e. Species at Risk, fish and aquatic habitats, areas of potential hunting and harvesting uses, etc.) actually ended up favouring Route Alternative 2A and 2B as these routes had less overall potential effects on these habitat features when compared to other route alternatives. Similarly, while favoured by Caldwell First Nation for its larger overall distance parallel to existing infrastructure, Route Alternative 1A ended up scoring relatively poorly in several of the natural environment criteria (i.e. effects to Big O Conservation Area, greater extent of fish and aquatic habitat traversed, effects to SAR). Table 5-6 of the dESR highlights why route alternative 2A is preferred, overall.</p> <p>As such, it is important to note that input from Rights holders and stakeholders did directly inform the route evaluation framework for the project (as communicated), which resulted in the selection of the preferred route 2A. In the evaluation of route alternatives, Route 1A actually conflicted with criteria of importance raised by both Caldwell First Nation and other Rights holders, such as affecting an overall greater area that support hunting, trapping and harvesting grounds, potential Species at Risk habitat, aquatic habitat and riparian areas, and rare/undisturbed native habitats. Caldwell First Nation's stated preference for Route 1A was specifically captured through the addition of a duplicate criterion assessing overall distance parallel to existing infrastructure, but this was ultimately outweighed in the evaluation by the other relative advantages of Route 2A that were identified such as those listed above, and in other aspects of the evaluation (e.g., Socio-Economic criteria) such as potential effects to archaeological resources and effects to agricultural operations. When all of the weighted criteria were considered together, Route 2A is the overall preferred alternative.</p> <p>With regards to criteria used to assess potential effects to aquatic and fish habitat, all areas of</p>	<p>Addressed in the draft ESR.</p>
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	<p>known or potential fish habitat (as informed by desktop research as well as aquatic habitat assessment field surveys in 2020) were considered, and consideration was given to both the number of watercourse crossings and total area of aquatic habitat and riparian areas traversed by each route.</p> <p>Ultimately, input from Caldwell First Nation directly influenced the route evaluation framework through the addition of a duplicate criterion to capture distance parallel to existing transmission lines, and was considered alongside input from other communities in the creation of criteria such as effects to areas supporting hunting, trapping and harvesting grounds, effects to areas supporting fish-bearing waters, rare/sensitive species regeneration potential, and effects to rare/undisturbed native habitats and ecosystems. Caldwell First Nation's input into criteria weighting for the Natural Environment and Socio-Economic Environment factor criteria provided through the TAC was also considered and reflected in the final criteria weights for those factors.</p> <p>While Caldwell First Nation provided input through their participation in the Technical Advisory Committee (TAC), production of their December 15, 2020 technical memo and participation in the Caldwell First Nation virtual route evaluation workshop was extremely valuable to the outcome of the comparative evaluation. Input from other Anishnawbek and Haudenosaunee communities and stakeholders were also factored into the comparative evaluation, as well as results of technical studies. In aggregate, these inputs contributed to the identification of the preferred alternative 2A.</p> <p>02 b. Consistent with the draft ESR, if it is determined that disturbance to some natural areas cannot be avoided, then additional detailed surveys may be required and opportunities for participation from interested Indigenous communities will be provided.</p> <p>Additional surveys (eDNA and additional aquatic habitat assessments) were conducted in July 2021 in direct response to a request made by Caldwell First Nation and were attended by interested Indigenous communities, including representative from Caldwell First Nation. Hydro One is committed to sharing the results of the eDNA analysis with Caldwell First Nation once the data is available, in addition to incorporating the results in the final ESR to supplement the baseline conditions and effects assessment.</p> <p>It is important to note that while watercourses, fish and fish habitat, and overall aquatic health remain important considerations, the type of infrastructure (overhead transmission lines) and work planned, will almost completely avoid any direct interaction with watercourse channels and banks. Section 7.7.4 and Table 7-1 of the draft ESR describe mitigation measures that will be used to avoid or mitigate effects to watercourses and fish habitat, such as utilizing existing crossings where practical, minimizing vegetation removals and retaining compatible vegetation in riparian areas, and implementation of an Erosion and Sediment control (ESC) plan during construction, among other measures. As per the commitment made in the draft ESR, input received from Caldwell First Nation will continue to be reviewed and incorporated into the project to further identify specific mitigation measures, as these plans are more specifically developed during the detailed design and construction planning phase of the project following completion of the Class EA process.</p> <p>It was important to incorporate Caldwell First Nation's input to help inform the evaluation criteria and demonstrate how they were developed and applied. However, from the outset of the Class EA process Hydro One has repeatedly communicated that the evaluation of the route</p>	
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Issues and Concerns	Proponent Responses	Status
	<p>alternatives would be conducted through a fair and transparent criteria-based framework, and as such directly stated preferences for a route were not sought but rather the important factors and criteria leading to the preference would be considered. In this way, Hydro One has incorporated the input received from Caldwell First Nation in a manner consistent with input received from other Rights Holders and stakeholders in developing the comparative evaluation framework.</p>	
<p>Weighting of criteria Caldwell was not adequately consulted on the weighting of criteria in the multiple accounts assessment that has resulted in the selection of Route 2, and does not agree with the criteria weighting presented in Table 5-5.</p> <p>Caldwell has expressed its concern with Route Alternative 2A. Specifically, it was identified as Caldwell's least preferred option. Other Indigenous groups and municipalities have also expressed their dislike of Route Alternative 2A.</p> <p>Caldwell notes that the weightings support some values more than others with no apparent reason, relying almost exclusively on subjective assessment.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Provide a justification for why indicators were given the weighting scores in Table 5-5. Describe the methodology that produced these weightings. <p>Please provide a supplementary submission that includes a rationale for the selection of Route Alternative 2A, explaining how the methodology and weighting criteria used in the alternatives assessment resulted in a conclusion that is so different, and even opposite to, preferences of Indigenous Rights holders who will be most affected by the Project.</p>	<p>03 a. The implementation of weighted criteria was done to provide an additional means for Rights holders and project stakeholders to provide input into the route evaluation process and resulting evaluation framework, or in the case of the Technical/Cost category of criteria, to better capture the relative potential cost impact of the criteria.</p> <p>Section 5.3 of the ESR describes how the respective weightings were assigned to the criteria for the project. Specifically, the weightings were derived from input and comments provided by Anishnawbek and Haudenosaunee communities, members of the public and members of the TAC.</p> <p>Section 3.12.2 of the ESR discusses the second TAC Workshop held on September 22, 2020, and includes details of the transparent weighting exercise completed for the project. Figures 3-2 and 3-3 of the ESR provide the results of the weighting exercise completed during the TAC workshop, which Caldwell First Nation participated in. The results of the weighting exercise shown in Figures 3-2 and 3-3 correlate to the weightings provided in Table 5-5 of the ESR.</p> <p>Please refer to 02 a response above for information related to how Caldwell First Nation's technical memorandum and other input provided was incorporated to inform the evaluation.</p>	<p>Addressed in proponent's response as well as the draft ESR.</p>
<p>Weighting of paralleling of transmission line Caldwell was disappointed to discover in Table 5-5, for example, that paralleling the transmission line to existing infrastructure to avoid new disturbances was given a weighting of 5/100. By contrast, the length of the transmission line is weighted at 20/100. Caldwell was clear in its comments and own route selection that paralleling was of utmost priority to Caldwell in order to minimize habitat disturbances in this area that is already so heavily disturbed.</p> <p>Caldwell notes that the PPS 2020, Section 1.6.8.4 and Section 1.6.8.5 also clearly indicate that new infrastructure components should be built along existing linear corridors and reuse abandoned corridors "wherever feasible". It is apparent that Caldwell's concerns in this respect, communicated to HONI in December 2020, had no discernable influence on the preferred route selection.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Please describe how the technical weighting ascribed to paralleling of the transmission line is appropriate relative to Section 1.6.8.5 of the PPS 2020 (i.e., "The co-location of linear infrastructure should be promoted, where appropriate."). <p>Please provide a rationale for why paralleling received relatively low weighting in the evaluation of routes, in comparison to other criteria.</p>	<p>04 a. Caldwell First Nation's comments and input regarding their preference for Route alternative 1A on the basis of larger distance parallel to existing transmission lines was captured specifically in a duplicate criterion in the Anishnawbek and Haudenosaunee Culture, Values and Land Use factor area. This duplicate criterion, with a weight of 14.3%, represents a direct capture of Caldwell First Nation's comments on parallel distance and their preference for route alternative 1A within the route evaluation framework.</p> <p>Distance parallel to existing linear infrastructure was also an important consideration, particularly with respect to the PPS, in the Land Use criterion within the Socio-Economic factor area. Hydro One also notes that the preference stated within the PPS for the re-use of abandoned corridors is in fact reflected in the Land Use criterion and contributed to the selection of Route alternative 2A, which maximizes the re-use of an existing idle transmission line corridor.</p> <p>As it applies to the weightings ascribed to criteria specifically within the Technical and Cost evaluation category, these were largely driven by their overall potential impact to overall cost of the project and this factor area was assessed through that lens.</p>	<p>Addressed in proponents response as well as the draft ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Scoring of indicators The methodology used for the scoring of indicators lacks transparency. The scoring is conducted on a 1-5 scale for each indicator. But there is no reference point for what constitutes a 1 vs a 2, or a 3 vs a 5. With regards to Indigenous values and land use, this information should be scored by affected Indigenous groups or, at the least, subject to Indigenous verification.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Provide the methodology of how the scores were derived for indicators, as presented in Table 5-6. Please include response to the following: <ul style="list-style-type: none"> what factors contribute to a score of 1 for an effect on aquatic habitat? What about a 2, 3, 4, 5? Why, under the Indigenous values factor indicator of paralleling, did a difference in length lines of 14km drop the score from a 5 to a 4, but a subsequent drop in line length of only 2km was sufficient to lower the score to a 3? How reliant was each indicator on GIS data? Was the selection of an indicator constrained by its need to be GIS-compatible? Were established terms defined for each scale and indicator that can be replicated? Or was scoring based on "professional judgement"? Who did the scoring – was it a subject matter expert, or a HONI project manager? <p>How were criteria related to Indigenous values and land use assessed and/or verified?</p>	<p>05 a. The application of scoring was completed on a scale of 1 to 5, where 1 represents having the most effect and 5 represents having the least effect. A score of 3 was determined to be neutral with scores of 2 and 4 falling along the proportionate scale of most-to-least effect, respectively.</p> <p>Scores were assigned using a quantitative method establishing a high and low threshold for each individual criterion. Results of this assessment can be demonstrated and replicated using the below examples.</p> <p>EXAMPLE 1 - Paralleling existing infrastructure criterion: Alternative 1A parallels the most existing infrastructure (41.67 km) while Alternative 3 parallels the least (1.5 km). 41.67 km represents the least adverse effect, or low threshold relative to this specific criterion, while 1.5 km represents the most adverse effect, or high threshold. The difference between the high and low thresholds is 40.17 km. To assign scores on a scale of 1-5, the 40.17 km distance (difference) was divided by 5 (for a proportionate scoring scale of 1-5). This gave us a scoring distance interval of 8.03 km. This means that for every 8.03 km increase of parallel infrastructure there is a one point change on our 1-5 score scale (starting at 1.5 km receiving a score of 1).</p> <p>EXAMPLE 2 - Effects to Vegetation Communities criterion: Alternative 2B affects 2.88 ha of incompatible vegetation while Alternative 1B affects 4.20 ha of incompatible vegetation (incompatible vegetation being the effect being assessed). 2.88 represents the least adverse effect (low threshold) while 4.20 represents the most adverse effect (high threshold). The difference between the high and low thresholds is 1.33 ha. To assign scores on a scale of 1-5, the 1.33 ha difference was divided by 5 (for a proportionate scoring scale of 1-5). This gave us a scoring area interval of 0.27 ha. This means that for every decrease of 0.27 ha (starting at a 4.20ha score of 1) of adverse effect there is a one point score change (increase in this example) on our 1-5 scoring scale.</p> <p>This quantitative method which applies a high and low threshold for each criterion was applied throughout the evaluation matrix where numerical quantitative assessments could be applied.</p> <p>While many criteria are spatial in nature (as is logical for a comparative evaluation of route alternatives across a broad study area), the selection of evaluation criteria were not limited by a requirement to be GIS-compatible. Assessments and scoring were conducted by subject matter experts – examples include the scoring for Archaeological and Cultural Heritage criteria conducted and provided by the consulting subject matter experts that completed the Stage 1 Archaeological Assessment and Cultural Heritage Existing Conditions Report, respectively.</p>	<p>Addressed in proponent's response</p>
<p>Caldwell TEK Report Section 4.1 has not incorporated input from Caldwell's TEK report.</p> <p>Information Request(s): Please provide a supplementary report that includes consideration of the findings from Caldwell's TEK Report in relation to the Project's baseline assessments and effects assessment of Valued Components (VCs) in Subsections 4.6 and 7.7 of the dESR, especially for VCs that are directly related to supporting the means for the exercise of Caldwell rights (i.e., fish and fish habitat, wildlife, vegetation (significant woodlands, wetlands, etc.). Caldwell is particularly concerned about interactions and residual effects to Caldwell's identified VCs in section 4.1 of the TEK Report.</p>	<p>06 a. Hydro One thanks Caldwell First Nation for providing their TEK report. HONI is committed to working with Caldwell First Nation on incorporating the findings of the TEK study into the final ESR when describing the existing natural environment (including historical context), VCs and effects assessment where information generally overlaps with the project and local study areas.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and Indigenous Knowledge information, including Valued Components, and to incorporating that information into subsequent phases of the project such as construction planning, environmental management planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p>	<p>To be addressed in the final ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Gaps in historical baseline and cumulative effects precludes reliable assessment of environmental effects and impacts to Caldwell rights</p> <p>In section 7, the assessment of effects on “natural heritage” has omitted consideration of legacy and cumulative effects, in spite of the dESR concluding residual adverse effects after mitigation measures, for the following VCs:</p> <ul style="list-style-type: none"> • Significant Woodlands • Vegetation, including wetlands (White Elm Mineral Deciduous Swamp) • Wildlife Habitat • Migratory birds • Fish and Fish Habitat (in-water construction works) <p>Standard EA practice is to undertake a cumulative effects assessment (CEA) if and when project-specific residual effects are predicted for a VC after mitigation. As part of the CEA, project-specific residual effects on these VCs should be considered in combination with the continuing effects of past (legacy) and present projects and activities (e.g., agriculture, transportation and energy linear projects). The CEA should also provide a characterization of trajectories of changes from the historical baseline.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> • Please provide a supplementary submission that includes a characterization of the historical baseline, as well as trajectories of change over time, of the following VCs in relation to the local and regional studies areas: <ul style="list-style-type: none"> ○ fish and fish habitat; ○ waterfowl and migratory birds; ○ wildlife and wildlife habitat; ○ vegetation of cultural concern (i.e., medicinal plants, forest cover, significant woodlands); and ○ cultural landscape. • Please provide a supplementary submission that includes a characterization of the “historical context” within which new project-specific impacts are expected to occur. <p>This should be based on a back-casting exercise to estimate a historical baseline, as well as trajectories of change over time, related to Caldwell’s ability to exercise its treaty and Aboriginal rights within its territory.</p>	<p>07 a. Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to limit Caldwell First Nation’s current and future use of lands and resources.</p> <p>Hydro One is committed to incorporating the findings of Caldwell First Nation’s TEK study into the final ESR when describing the existing natural environment (including historical context), VCs and effects assessment.</p> <p>Planning for this project is subject to the Class EA for Minor Transmission Facilities (MTF), 2016 (Class EA for MTF), which is the proponent’s legal compliance mechanism under the Environment Assessment Act.</p> <p>Section 6.5 of the Class EA for MTF states: <i>Consideration of Cumulative Effects: All proponents will consider cumulative effects when planning projects. The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments).</i></p> <p>Hydro One intends to assess the cumulative effects of the project in compliance with this requirement, however; to extend beyond this (such as the area of “induced development”, or other cumulative effects beyond the immediate project area in order to assess trajectories of change over time), is outside the scope of the Class EA for MTF and Hydro One’s mandate, and control. The Chatham x Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future. Further, Hydro One’s ability to determine what future developments or potential “induced developments” may occur in the region are limited to what the IESO provides in its broader regional planning, which focuses primarily on large-scale regional trends. Future development will be managed by municipalities and the Province within other applicable planning processes.</p> <p>Hydro One will include in the final ESR a subsection describing cumulative effects, within the parameters of the requirements of the Class EA for MTF. The assessment will identify and describe the cumulative effects of the preferred alternative in relation to any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments). Hydro One accepts the recommendation of the IESO to construct a new double-circuit 230 kV transmission line between the Chatham SS in the Municipality of Chatham-Kent, to the future Lakeshore TS in the Municipality of Lakeshore.</p>	<p>To be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Cumulative effects Caldwell notes that the significance determination of VCs are incomplete and likely under-estimated as the determination fails to consider the direct and indirect long-term operational effects of the project, the intended development it will induce (i.e., expansion of industrial-scale greenhouse operations), and relevant cumulative effects on affected valued components.</p> <p>Information Request(s): Please provide a supplementary submission that includes a re-evaluation of the significance determination of project-specific effects, together with cumulative effects, on valued ecological and cultural components of water, fish, wildlife (including birds), plants, and Indigenous culture, taking into consideration the additive and synergistic effects of inter-related projects (See IR "Caldwell-10" below) and induced development. Future project and activities should include, but not be limited to, the potential impact effects of interconnected electrical facilities and the planned induced industrial development (e.g., significant growth in indoor greenhouses and cannabis production), and the existing and anticipated cumulative effects affecting the valued components. The significance determination should be made relative to the historical baseline identified in IR "Caldwell-07", above.</p>	<p>08 a. Please refer to 07 a response above. Effects of the project from the operation phase are described in Section 7 of the draft ESR.</p>	<p>To be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Concerns over rapid increase in indoor agriculture and cannabis growing. Caldwell has seen the majority of its traditional lands taken over by agriculture. Caldwell members have witnessed firsthand the changes to the landscape, the reduced quality of water, and the decreased abundance of traditional foods. Members have seen habitat degradation of waterways as agricultural runoff and sedimentation clouds the waters and changes the riparian habitat and fish species. Caldwell members have seen chemical pollution from agricultural production enter waterways, making the water and fish unfit for human consumption.</p> <p>Caldwell has also had access to their traditional lands restricted by private property rights and reduced physical access to important areas, or the loss of important areas in full.</p> <p>These cases are documented in Caldwell's TEK Report. The culmination of these changes has resulted in a significantly degraded ecological and cultural environment. Accessing and using Caldwell traditional lands regularly and meaningfully has become a serious challenge for many members.</p> <p>Caldwell members are very concerned about the growth in the indoor agricultural sector that this Project will enable. The cumulative impacts of a growing agricultural sector will add to the existing stressors and pressures facing Caldwell. Caldwell cannot consider an effects assessment complete if it does not assess the potential of the Project to add to the existing stressors that are facing our important cultural and ecological valued components. This includes long-term effects of the Project as well as likely cumulative effects associated with the agricultural growth scenarios identified in the dESR.</p> <p>Information Request(s): Please provide a supplementary submission that includes an impact assessment on the long-term impacts of the Project and likely cumulative effects associated with the agricultural growth scenarios in the dESR on the valued components identified in section 4.1 of Caldwell's TEK Report.</p>	<p>09 a. 09 Please refer to 07 a response above.</p>	<p>To be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Interconnected or linked projects within the same region being developed in sequence for the purpose of providing new electrical supply to cannabis greenhouse production</p> <p>The Project under review is one component of a series of interconnected transmission upgrading projects that includes multiple new stations and transmission line segments, including the newly approved (and unbuilt) Lakeshore Transmission Station¹ project and the additionally planned 230 kV transmission line that would run between Chatham and Lambton². Caldwell notes that the original handoff letter to HONI from the IESO considers the new switching station at the Leamington Junction and the 230kv transmission line between Chatham SS and Lakeshore TS as part of the same "Integrated Transmission Solution" project (Appendix A:6).</p> <p>Caldwell is concerned that the separation of these projects into smaller sub-projects prevents a full assessment of the potential adverse effects of Hydro One's infrastructural expansion, within the Windsor-Essex and Chatham areas, on Caldwell rights and traditional territory. Furthermore, were these projects considered together they would have likely triggered an Individual Environmental Assessment and a more comprehensive impact assessment. Caldwell disagrees that a Class EA is an appropriate or responsible way of assessing the additive and potential synergistic effects of all three projects.</p> <p>Information Request(s):</p> <p>Please provide a supplementary plan for the avoidance of all known and identified- likely significant natural heritage features or areas, and adjacent lands, including those identified by Caldwell's TEK Report as important ecological and/or cultural areas.</p>	<p>10 a. Please refer to 07 a response above.</p> <p>Hydro One is currently working on a map that would provide this information while ensuring that sensitive information (that is protected by regulation) is not issued for public review; this is required to protect system integrity.</p>	<p>To be addressed in the final ESR, where practical.</p>

Issues and Concerns	Proponent Responses	Status
<p>Significant Woodlands: Protection of Significant Natural Heritage Areas and Features is a basic requirement for Caldwell.</p> <p>The selected route for the transmission line travels through six areas that are designated as "significant woodlands."</p> <p>In accordance with subsection 2.1.5 of the Province of Ontario's Provincial Policy Statement (2020) in respect to land use planning, combined with municipal land use plans, these areas are deemed significant due to their representing rare places of native, undisturbed habitat in a region that has seen substantial industrial and agricultural development. These areas are important for preserving and maintaining ecological function, which in turn, is essential for supporting fish, wildlife and vegetation relied upon by Caldwell members for the exercise of harvesting rights.</p> <p>The Project has identified numerous occurrences where it intends to encroach upon and disturb these significant woodlands, despite their protected designation under criteria set out under the Lakeshore and Chatham-Kent Official Plan. The dESR notes that, "Construction associated with the Project may induce both temporary and permanent disturbance to natural heritage features", including removal of "incompatible vegetation and associated wildlife habitat".</p> <p>The PPS prohibits disturbances to significant woodlands, "unless it has been demonstrated that there will be no negative impacts on the natural features or their ecological functions.". The dESR does not have a sufficient effects assessment to make this claim. It also plans to encroach the adjacent lands and the significant areas themselves.</p> <p>Information Request(s): Please provide a supplementary plan for the avoidance of all known and identified- likely significant natural heritage features or areas, and adjacent lands, including those identified by Caldwell's TEK Report as important ecological and/or cultural areas.</p>	<p>11 a. Complete avoidance of significant woodlands is generally not possible, particularly as some features are linear in nature and perpendicular to the direction of the new transmission line (e.g, woodlands lining watercourses that run North-South, perpendicular to the general direction of the route alternatives).</p> <p>Environmental features and significant natural areas were considered from the outset of the planning process, including during the initial identification of viable route alternatives, in the evaluation of route alternatives as well as the selection of the preferred route, and will be important considerations going forward into detailed design and construction planning.</p> <p>See response 01 d above for a description of how Hydro One has continued to identify opportunities to avoid or mitigate effects to natural features since the release of the draft ESR.</p> <p>Please see response 01 a above regarding the PPS. Alignment with the PPS was considered in the route evaluation criteria and scores.</p>	<p>Addressed in the proponent's response and in the draft ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Insufficient details for mitigation The Significant Natural Heritage Areas and Features are critically important to the existing and future ability of Caldwell members to harvest and have meaningful experiences on their traditional lands. Caldwell does not accept that the potential loss of any of these habitats is not significant, nor that their loss can be mitigated by unspecified compensation or conservation plans. Caldwell is of the opinion that any adverse and/or permanent disturbance to these special areas represents a significant impact to the values and integrity of those areas. Such an impact will also significantly and adversely impact Caldwell's rights.</p> <p>The anticipated project effects do not consider the baseline status of the existing systems, the pressures that they are facing now and in the future. The effects assessment does not even provide a clear picture of anticipated impacts during the operational period of the Project. These are basic elements of a significant determination that have not been done to an acceptable EA standard. These significant areas warrant at least that consideration.</p> <p>The Project has also identified residual effects during the construction phase of the Project on these areas. However, proposed mitigation and/or offsetting remains vague and undefined.</p> <p>HONI's proposed method of mitigation is to provide compensation and develop a Biodiversity Initiative, neither of which are defined. The proposed environmental management measures initiative does not include sufficient detail or supporting evidence to support the claim that the Project can be "carried out in an environmentally acceptable manner".</p> <p>Information Request(s): Please provide a supplementary submission that includes specific details for how the proposed Biodiversity Initiative will address specific project-related impacts, to specific VCs, and advance reconciliation with Caldwell through the restoration of impacted ecological systems within the territory that are required for Caldwell to exercise its harvesting rights.</p>	<p>12 a. A summary of direct and indirect effects on natural heritage features, including the relevant project phase (i.e., construction, maintenance and operation) and mitigation measures identified to address those effects are provided in Sections 7.7.7.2 and 7.7.8, as well as Table 7-1 of the ESR. As outlined in the dESR, the primary objective is avoidance. In some instances, where avoidance of a feature is not feasible or practical, timing windows were identified to mitigate potential impacts during critical periods to avoid species impacts. Additional mitigation commitments in the dESR include demarcating the limits of vegetation/wetlands/SAR habitat to limit construction activities within these features (where practical), as well the development of detailed construction and environmental mitigation plans in consultation with Indigenous communities, regulatory agencies, the Municipality of Lakeshore and Chatham-Kent, and County of Essex.</p> <p>See response 01 d above for a description of how Hydro One has continued to identify opportunities to avoid or mitigate effects to natural features since the release of the draft ESR.</p> <p>12 b. As outlined in Section 7.7.8.6 of the dESR, Hydro One has committed to undertaking a Biodiversity Initiative specific to the project to offset any habitat loss or transition (long-term change) that may occur as a result of the project.</p> <p>As part of the Biodiversity Initiative, once detailed design is complete and final project effects are known, Hydro One is committed to working with Caldwell First Nation to develop the scope of the Biodiversity Initiative as a mechanism to enhance Indigenous VCs by:</p> <ul style="list-style-type: none"> • Improving water quality by reinforcing watercourse/drain banks. • Creating as well as enhancing habitat which will support a larger population of crop-pollinating insects, native flora and fauna in support of potential future harvesting. • Transitioning incompatible vegetation removal areas to compatible vegetation to maintain the level of existing vegetation coverage on the landscape throughout the project. <p>Hydro One is pleased to discuss the Biodiversity Initiative and obtain any early feedback or suggestions from Caldwell FN and other Rights holders, however the Biodiversity Initiative will only be implemented following completion of the Class EA and Ontario Energy Board Leave-to-Construct processes.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Project Study Area too small to consider important environmental interactions and regional effects on valued components.</p> <p>Caldwell is concerned about the geographic size of the study area and its ability to capture the interactions between valued environmental components. The narrow range is further compounded by the lack of a cumulative effects assessment, which means that affected areas or creatures are being considered in a very isolated manner, and only relative to project-construction activities.</p> <p>The lack of a regional study area adds to the underestimation of potential cumulative effects on Caldwell rights. Caldwell has already identified the following omissions from the effects assessment:</p> <ul style="list-style-type: none"> • lack of consideration of operational and long-term project-related effects, lack of a cumulative effects assessment, • lack of consideration of the damaged baseline of many valued components, and • lack of consideration of the critical state of habitat in Caldwell traditional territory. <p>By contrast, the Caldwell TEK Study was conducted using a local study area of 5km radius around the Project, and a regional study area of 25km radius around the Project. Important findings from this report have influenced Caldwell's perspective and comments regarding potential project-related effects and HONI's mitigation measures.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> • Please consider the findings from Caldwell's TEK report in an appropriate geographical scope and cultural context when considering the overlap of effects and impacts on the project study area and local study area. • Please provide a supplementary cumulative effects assessment for all Valued Components, using a 25km radius RSA. <p>Please provide a supplementary submission that considers the sufficiency of resources for Caldwell members to meaningfully exercise their Aboriginal rights within the 25km-wide project RSA.</p>	<p>13 a. Section 2 (Study Area) of the ESR provides the Project Study Area and Local Study Area definitions. As outlined in Section 4 (Environmental Inventory) of the ESR, desktop information for the natural and socio-economic environment was generally collected within the Local Study Area to support the feasibility of the route alternatives, while the natural environment field surveys were limited to the Project Study Area. Section 4 of the ESR provides additional information beyond the Project Study Area for some environment features (e.g., socio-economic environment and cultural heritage), where additional context is appropriate.</p> <p>The 120 m Project Study Area was selected as a mechanism to understand potential site-specific impacts so support the Class EA. Section 7 of the ESR outlines various mitigation measures as a mechanism to avoid and/or mitigate potential impacts, including those on natural environment features.</p> <p>Hydro One is committed to incorporating the findings of Caldwell First Nation's TEK in the final ESR when describing the existing natural environment and effects assessment where information generally overlaps with the project and local study areas used for the Class EA. Hydro One is not in a position to assess cumulative effects within a broader regional study area, for the reasons listed in the response 07 a.</p> <p>Hydro One and its contractor welcomes further collaboration and input from Caldwell First Nation during the detailed design stage of the project where site specific mitigation and avoidance measures are utilized to minimize impacts.</p>	<p>Addressed in the proponent's reponse.</p> <p>To be addressed in the final ESR, where new information has recently been provided (i.e., Caldwell FN TEK).</p>

Issues and Concerns	Proponent Responses	Status
<p>Sufficiency of resources to maintain rights must be considered. Caldwell has identified the damaged baseline that many of its valued components currently exhibit. Caldwell has also identified in its TEK Report the impact that habitat loss has had on its culture and ability to undertake traditional activities, including subsistence activities. These cumulative concerns are at the heart of Caldwell's concerns regarding further industrial development on its lands. In the absence of a cumulative effects assessment and a fulsome impacts assessment, this concern is not captured in the dESR.</p> <p>The "sufficiency of resources" available to Caldwell within its territory to exercise its rights in a meaningful manner must be considered when assessing the project's effects on rights.</p> <p>The current draft of the ESR omits any reference to this concept.</p> <p>Information Request(s): Please provide a supplementary submission that assesses, in collaboration with Caldwell, how much of Caldwell's traditional lands and resources remain available for meaningful use, and will assess project interactions with those lands and resources. Particular attention should be paid to any disturbances to rights-based resources as a result of direct, indirect, or induced project related effects.</p>	<p>14 a. Hydro One is committed to incorporating the findings of Caldwell First Nation's TEK study into the final ESR when describing the existing natural environment (e.g. resources which remain available for meaningful use by Caldwell First Nation) and effects assessment where information generally overlaps with the project and local study areas.</p> <p>Please refer to 07 a response above regarding assessment of cumulative effects.</p>	<p>To be addressed in the final ESR, where practical and in accordance with the Class EA for MTF (2016).</p>
<p>Responsiveness of HONI (on behalf of the Crown) during consultation on route selection Of concern to Caldwell in this consultation process is the timing associated with comments received by Caldwell and the selection of the preferred Route Alternative 2A. The dESR outlines consultation processes that it has made throughout the Class EA process, including consultations with affected Indigenous groups on the Route Alternatives that occurred in November and December 2020.</p> <p>Despite the issues and concerns raised by Caldwell at the time, Caldwell has not seen any substantive change in the design or selection of preferred Route Alternative 2A. From the perspective of Caldwell, it seems that HONI has dismissed Caldwell's concerns.</p> <p>Information Request(s): Please describe any changes made to the Route Alternative options, and specifically to the design and route of the preferred Route Alternative 2A, following the commencement of Indigenous consultation efforts in November 2020 regarding the selection and identification of the preferred route alternative.</p>	<p>Please refer to 02 a response above for information related to how Caldwell First Nation's technical memorandum and other input provided was incorporated to inform the evaluation.</p> <p>15 a. Regarding the comment made by Caldwell FN "...following the commencement of Indigenous consultation efforts in November 2020 regarding the selection and identification of the preferred route alternative.", Hydro One would like to clarify that the Class EA commenced in January 2020, and that consultation (including on the route alternatives and the evaluation/selection framework) was conducted from the outset of the Class EA process. Examples of this include the Notice of Commencement and other early project materials (such as the online interactive mapping tool made available on the project website) including information on the route alternatives and evaluation process being conducted, as well as specific presentation and discussion of the route alternatives and evaluation framework at event such as Virtual Information Sessions (VIS) held in May 2020 (including a VIS held specifically for Anishnawbek communities on May 26, 2020), Technical Advisory Committee (TAC) workshops held in June and September 2020 to specifically discuss the route evaluation framework, and information and offers to meet to discuss the route evaluation provided by Hydro One throughout calendar 2020.</p> <p>See response 01 d above for a description of how Hydro One has continued to identify opportunities to avoid or mitigate effects to natural features since the release of the draft ESR.</p>	<p>Addressed in the proponent's response and in the draft ESR.</p>
<p>Inaccurate representation of consultation history with Caldwell This section contains a number of inaccuracies in the chronology and description of the consultation between HONI and Caldwell to date in relation to the project.</p> <p>Information Request(s): Working with Caldwell's consultation coordinator, please provide a revised consultation record in respect to the project.</p>	<p>16 a. Hydro One has made efforts to ensure the accuracy of the description of the consultation events documented in the draft ESR, Hydro One would welcome the opportunity to discuss the chronology and description of consultation between HONI and Caldwell FN, and the perceived inaccuracies noted by Caldwell FN so they can be updated.</p>	<p>To be addressed in the final ESR as required.</p>

Issues and Concerns	Proponent Responses	Status
<p>Uncertainty around the extent to which HONI considered concerns raised during consultation.</p> <p>Caldwell's route evaluation memo, submitted to HONI December 15, 2020, which raised serious concerns of Caldwell's members regarding the route options, is cited on page 3-24.</p> <p>However, this section does not address how Caldwell's input was considered in HONI's final routing decision; or alternatively, why Caldwell's input in respect to our routing preference was not adopted as part of HONI's decision.</p> <p>In addition, this section does not acknowledge Caldwell's expectation that HONI would incorporate the findings of Caldwell's TEK study (that HONI agreed to fund in 2020) into the draft ESR.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Please provide a supplementary submission that describes how Caldwell's route evaluation memo was considered in HONI's final routing decision; or alternatively, why Caldwell's input and recommendation was not adopted as part of HONI's final decision. <p>Please describe if and how Caldwell's route evaluation memo resulted in any modifications to the selection criteria or weighting of indicators used in the evaluation process.</p>	<p>17 a. Please refer to 02 a response above for information related to how Caldwell First Nation's technical memorandum and other input provided was incorporated to inform the evaluation.</p>	<p>Addressed in the draft ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Caldwell does not agree that proposed improvements to the process should only apply to future projects.</p> <p>The section, on page 3-24, states that HONI emailed Caldwell “on April 23, 2021 welcoming Caldwell to undertake a Traditional Ecological Study and provided examples on how the result of the study will be incorporated into aspects of the Project moving forward, and applied to future projects.” Caldwell does not agree with this characterization.</p> <p>Caldwell has communicated to HONI the importance of Caldwell conducting its own TEK Study since the beginning of the Class EA process in 2020. Caldwell has always maintained that the TEK Study should be considered as critically important input into the Draft ESR. The TEK Study was always intended to focus on the selected final route, and therefore could not be initiated until HONI had announced its route selection in February 2021. Due to COVID-19 health concerns and restrictions at this time, which continued through April 2021, Caldwell was not able to initiate its TEK Study until May 2021. Upon being notified in April 2021 that HONI had made April 30, 2021, the cut-off for input into the dESR, Caldwell requested that HONI consider and incorporate findings of the final TEK report when it is provided.</p> <p>Caldwell's concerns about the route selection, and our criteria for minimizing the extent of new ROW clearing, as well as the importance of locating the project away from the Important Bird Area and further upstream from Lake St. Claire, are even more relevant with the confirmation and identification of numerous important areas and traditional activities in the Project study area that are documented in the Caldwell TEK report.</p> <p>Information Request(s): Please provide a supplementary submission that incorporates relevant sections of Caldwell's TEK Report into the baseline characterizations and effects assessments of related VCs considered in the dESR, i.e., in sections 7.3, 7.4 and 7.7. This submission should identify where Caldwell knowledge has been incorporated into the updated assessment.</p>	<p>18 a. Throughout the Class EA process to date, Hydro One has reiterated that any information or input from Indigenous communities, including TK/TEK, would be incorporated into the project and Class EA when it was provided. This includes the aforementioned email from Hydro One on April 23, 2021, where Hydro One staff reiterated the commitment to include TEK into the Chatham x Lakeshore project if it could be provided.</p> <p>Hydro One has communicated that should TK/TEK be provided prior to the submission of the final ESR, that that information would be included in the document, but has also reiterated that the submission of the final ESR is not the 'deadline' to receive any such information and that if any point this information is provided to Hydro One, that it would be considered in the subsequent planning phases of the Chatham x Lakeshore project, such as in the detailed construction and environmental mitigation planning, post-construction restoration planning, or the Biodiversity Initiative. This was the primary message of the email from Hydro One dated April 23, 2021.</p> <p>As Hydro One has received Caldwell FN's TEK report on September 8, 2021, Hydro One is able to review the information provided and to incorporate the findings of the report into the final ESR, as well as consideration in detailed design, environmental mitigation and construction plans, as well as the Biodiversity Initiative for the Chatham x lakeshore project going forward.</p> <p>Further to the Chatham x Lakeshore project, Hydro One also identified opportunities for the work and resources put into such TK/TEK studies to have value to future projects and initiatives.</p>	<p>Addressed in the proponent' response and in the draft ESR, including through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p> <p>To be addressed in the final ESR, where new information has recently been provided (i.e., Caldwell FN TEK).</p>

<p>Herbicide use</p> <p>HONI mentions a weed control plan for works in agricultural areas. Use of herbicides are also described as a common tool used to manage unwanted vegetation during the operational phase of the Project. There are no details on the frequency of these herbicide applications, nor on their potential effect to threatened or endangered species in the Project Study Area.</p> <p>Caldwell has serious concerns about the use and application of herbicides along the final Right of Way. Caldwell members' experiences with chemical pollutants is described in the Caldwell TEK report. Overuse and mismanagement of these pollutants has had a negative environmental effect that has also affected the perception of fish and other resources as tainted. Any activity that reduces confidence in the health of the land and the safety of its resources for Caldwell members constitutes an adverse impact to rights.</p> <p>Perception of risks associated with consumption of contaminated country foods have made some Caldwell members apprehensive about eating fish. Avoidance of use due to perceived risk has the potential to reduce the number of Caldwell members being able to pursue traditional activities, which in turn poses harm to Caldwell's traditional and cultural well-being.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Please provide a supplementary submission on the proposed use of herbicides for the Project, including the type of herbicide most likely to be used, the frequency of its use during operations, its propensity for bioaccumulation, and the setback that will be implemented to avoid possible contamination around sensitive bioreceptors and valued components. <p>Please describe any long-term impacts associated with the application of herbicides along the Right of Way over the lifetime of the Project.</p>	<p>19 a. Hydro One follows strict regulations governing the application of herbicides. Hydro One only applies Health Canada approved herbicides, and our certified applicators adhere to the regulations set by the Ministry of Environment, Conservation and Parks. The type of herbicide chosen for application will depend on the specific environmental constraints of the area, the specific vegetation being targeted and will be selected to minimize impact to the environment.</p> <p>Our Forestry Technicians are required to identify all vegetation that could grow or fall into the power lines or towers. Depending on species type, density of vegetation and corridor characteristics (such as line sag, tower height, elevation etc.), our Forestry Technicians will determine which trees and other vegetation will pose a risk, and the best methods to address the vegetation. Hydro One's approach aims to find a balance between ensuring that taller-growing and invasive tree species are deterred from re-establishing, and also encouraging the growth of low-growing plant communities to promote biodiversity.</p> <p>The application of herbicides to select vegetation plays a critical role in Hydro One's integrated approach to maintaining vegetation on hydro corridors. Mowing and trimming are important parts of any right of way maintenance program, but mechanical means alone do not provide a long-term sustainable solution for managing vegetation along right of ways. Mechanical control can reduce pollinator habitat, distribute weed seeds and cause some plant species (including some invasive plant species) to re-sprout rapidly resulting in increased density of the stand. Mechanical control also needs to be repeated frequently in order to maintain the right of way. Selective application of herbicides allows desirable species to flourish which increases biodiversity. It is less disruptive to the landscape and controls the entire plant so the intensity of required future maintenance is lower. Integrated vegetation management programs use both mechanical and herbicide control strategies and are proven to be the safest, most cost effective long-term vegetation management strategy.</p> <p>Typically, vegetation maintenance on transmission lines is completed on a six year cycle. In instances where herbicides are used to prevent the re-growth of certain fast growing species, the intensity of the required future maintenance is lower, for example, less herbicide required, less cutting, less mowing. In some cases where herbicide is employed, no brush maintenance is required during the next maintenance cycle as low growing vegetation flourishes and impedes the regrowth of trees and brush.</p> <p>As part of our work planning process, Hydro One staff complete a species at risk assessment for each maintenance project in addition to identification of any Water Source Protected areas or any known archeological areas of concern. They follow product label directions when determining buffers to potable water wells, Municipal well head or water intake, and/or surface water features and wetlands. In most cases Hydro One utilizes more conservative setbacks than what product labels indicate. Additionally, Hydro One staff follow all provincial and federal legislation (including, but not limited to Canada's Migratory Bird Convention Act, Ontario's Endangered Species Act, Ontario's Fish and Wildlife Conservation Act, Ontario's Invasive Species Act), and make all reasonable efforts to comply with the legislation in extreme circumstances if vegetation compromises the integrity of the system.</p> <p>Hydro One's approach to the use of herbicide differs from the use of agricultural pesticide used for crop protection on private land. In general, Hydro One's approach involves:</p> <ul style="list-style-type: none"> notifying the community that a Forestry Technician will be in the community conducting an assessment 	<p>Addressed in the proponent's response. Additional information and description in the response to be added to the final ESR.</p>
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Issues and Concerns	Proponent Responses	Status
	<ul style="list-style-type: none"> determining which specific vegetation would require herbicide application to prevent re-growth assessing proximity of open water courses to determine if herbicide application is permissible seeking consent from each property owner posting notification in local newspapers or posting warning signs in the application area advising of herbicide application Selective/targeted application of herbicides to target species/incompatible vegetation <p>Hydro One does not take the application of herbicides lightly, application is kept to a minimum and spraying is localized to each specific stem and not widespread.</p>	
<p>Impact of tower choice on Project design</p> <p>HONI has not yet selected the towers that it will use for the Project. They may be lattice towers or monopoles and could range in height and width from 26x26 metres to 46x46 metres. These are taller than the existing 115kV transmission lines. There is no impact prediction comparing the sizes of the towers and how they may affect valued components, such as the amount of woodland or wetland disturbed, disturbances to residential areas, aesthetic disturbances, or how the designs may affect bird and bat populations.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Please update the effects assessment with design considerations based on the smaller and larger lattice tower or monopole. Please describe how the impact predictions vary according to the design choice. <p>Please describe under what conditions one design is preferred over another.</p>	<p>20 a. Steel lattice structures will be utilized for the project, similar to the examples presented in Figures 6-1 and 6-2. Monopole structures are not currently being considered for the Chatham x lakeshore project and are therefore not specifically described in the draft ESR, although most environmental effects of construction and operation/ maintenance of an overhead transmission ROW would be very similar or the same, regardless of the transmission structure type. It should be noted that monopole structures typically require short span distances and therefore generally result in a greater number of towers required overall, vs a standard steel lattice transmission line of the same voltage and distance.</p> <p>Table 3-13 (page 3-97) in the ESR describes tower footprints and tower span lengths in feet. The measurement units included in the schematic drawings (Figures 6-1 and 6-2; pages 6-2 and 6-3) are the correct references.</p> <p>Assessment of environmental effects and mitigation measures is based on an assumed 46 m (150 ft) wide ROW and tower designs similar to those presented in Figures 6-1 and 6-2.</p>	<p>Addressed in proponent's response and the draft ESR.</p>
<p>Elaboration of design considerations for buried pipelines</p> <p>The Project traverses the Eastern Lake St. Clair Important Bird Area. The large towers in this important bird area and migratory corridor present a collision risk to migratory birds. Despite this risk HONI states that overhead transmission lines are the only viable means of meeting the need of the Project.</p> <p>Information Request(s):</p> <p>Please elaborate on why buried pipelines are not a viable solution to reduce or avoid impacts to migratory birds in important bird habitat areas like the IBA and the Big O Conservation Corridor?</p>	<p>21 a. When burying high voltage transmission lines in either a tunnel or within a duct bank, there are many factors that need to be taken into consideration. This includes technical feasibility, disruption to the surface environment (e.g. open trench excavations) and cost. When considering those factors, it was determined that for this Project, an overhead line was the only viable means of meeting the need for the Project.</p> <p>21 b. The Big O Conservation Area (CA) will not be affected by the project, as this feature is avoided entirely by the preferred Route 2A, which is located north of the Big O CA.</p> <p>The Big O CA is currently traversed by existing 230 kV transmission lines and would have been affected (by way of the widening of this transmission corridor) by any of the Route 1 alternatives which would have paralleled these existing transmission lines on the north side.</p>	<p>Addressed in proponent's response and the draft ESR.</p>
<p>Tower height dimensions unclear</p> <p>The dESR uses two different units to describe tower heights. On page 3-97 towers are described in feet. On page 6-2, towers are described in metres. Caldwell is using the schematic drawing as the correct option (page 6-2).</p> <p>Information Request(s):</p> <p>Please describe the proper dimensions for the towers.</p>	<p>22 a. See response 20 a above.</p>	<p>Addressed in proponent's response and the draft ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of transparency in Technical Advisory Committee (TAC) decision-making process for the preferred route selection</p> <p>Caldwell is happy to see the description and role of the TAC in the development of Plans and the design of the ESR, including discussions about appropriate cultural values that should be assessed and the relative weighting of the comparative evaluation indicators. It is not clear to Caldwell from the dESR how representative the final indicators and weighting were of the respective Indigenous groups or of the TAC. The TAC participated in the selection of important indicators for the evaluation of preferred routes. Of the recommendations put forward by the TAC, the dESR says that 4 of 15 criteria for socio- economics were adopted (27%), 0 of 5 criteria for natural environment were adopted (0%), and 1 of 4 criteria for technical and cost was adopted (25%). It is not clear why the remaining recommendations were not adopted.</p> <p>It is also not clear how the weighting of finalized indicators was selected. For example, paralleling the transmission line with existing disturbances was considered a top priority for Caldwell, as was avoiding disturbances to remaining undisturbed/natural habitat. Yet paralleling received a weighting within the technical and cost parameters of only 5 out of 100.'</p> <p>TAC members also had specific recommendations on how indicators ought to be evaluated which were not adopted. A TAC member suggested, for example, that the route selection should consider the potential for increased bird strikes on the transmission line, especially in and around the Eastern Lake St. Clair Important Bird Area, and a weighted ranking to routes that avoid wetlands and woodlots. This does not appear to have occurred in a clear and repeatable manner in the methodology or evaluation. In the comparative evaluation results (Table 5-6), it is unclear how these considerations affected the scores in a significant way.</p> <p>Information Request(s): Please describe what contributed to the acceptance of some TAC-identified parameters for consideration in the comparative evaluation and why others were discarded.</p>	<p>23 a. Section 3.12 of the ESR discusses the TACs involvement in the identification of criteria, measurements and weightings for the comparative evaluation. Specifically, Table 3-10 of the ESR summarizes the criteria TAC members wanted included in the evaluation and the method of measurement TAC members proposed using for the suggested criteria. Where a statement of "Measure Not Included" is indicated, this means members of the TAC did not provide a method to measure the criteria they wanted included.</p> <p>Table 3-11 summarizes how the criteria additions and changes to the measures resulted in changes to the criteria list to be used for the comparative evaluation. Specifically, Table 3-11 under the Criteria for Designated Natural Areas, as well as for Terrestrial and Wildlife Habitat, reflect traversal of the Lake St. Clair and Eastern Lake St. Clair IBA, being an important staging area for waterfowl in Southern Ontario. The recommendation and request from Caldwell First Nation to have a heavier ranking for routes that avoid wetland and woodlands is also specifically noted. When Table 3-11 recommendations to the final comparative evaluation in Table 5-6, there are two important conclusions:</p> <ul style="list-style-type: none"> • The recommendations provided by TAC have been incorporated into the final comparative evaluation criteria list and measures, expressing the transparency of this process and involvement of TAC member input in the comparative evaluation, and • The Terrestrial and Wildlife Habitat criteria in Table 5-6 received one of the highest weightings in the Natural Environment factor area partially as a result of feedback provided by Caldwell First Nation. <p>Please refer to responses 03 a, 04 a, and 05 a above regarding criteria weighting and scoring.</p>	<p>Addressed in the proponent's response and in the draft ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Relatively low weighting of significant natural areas in the route selection process.</p> <p>A TAC member recommended a heavier ranking to "routes that avoid wetlands and woodlots. Especially in Essex and Chatham Kent counties. They have already been developed so heavily – more than 95% of original wetlands and forests are gone, so this should be ranked more heavily than in other regions. The remaining habitat in the counties is vital to wildlife." (3-79).</p> <p>Caldwell agrees with this comment and the vital importance of these remaining pockets of natural habitat. Caldwell also relies on these areas for traditional activities, impacts to these areas have a disproportionate impact on the remaining integrity and resilience of the natural ecosystem and of Caldwell traditional and cultural well-being.</p> <p>The dESR identifies on 4-2 that agricultural lands comprise between 92-96% of all route alternative options. This highlights how rare natural habitat is in the Project Study Area. Caldwell is therefore disappointed to see these areas considered as a medium and low constraint in the identification of alternatives, as described in section 5.2.</p> <p>Information Request(s):</p> <p>Please provide a supplementary submission that considers what route option would be select if significant natural areas were weighted in the alternatives assessment criteria such that they were deemed a high constraint that the Project must be designed from the outset to avoid.</p>	<p>24 a. The creation of a distinct criterion for Designated Natural Areas was a direct result of input received from the TAC; originally, Hydro One had proposed including designated natural areas as considerations within the existing Land Use criterion, however due to input received at the first TAC workshop it was decided that designated natural areas be separated into their own criterion within the Natural Environment factor.</p> <p>Section 5.3 of the dESR identifies how the respective weightings were assigned to the criteria for the project. Specifically, the weightings were derived from input and comments provided by Anishnawbek and Haudenosaunee communities, members of the public and members of the TAC.</p> <p>Table 3-3 of the dESR summarizes input received from TAC members on the weighting of the Natural Environment Criteria. As shown, Designated Natural Areas was shown as an important criteria, similar to all criteria within this category. The two criteria that stood out within the category as being important to TAC members were Species at Risk and Terrestrial and Wildlife Habitat. For this reason, as a result of the collective input from all TAC members, comments from members of the public and input from a variety of stakeholders, effects to SAR and Terrestrial and Wildlife Habitat were weighted slightly higher in the comparative evaluation. Effects to Designated Natural Areas was weighted equally to all remaining criteria within this category.</p> <p>Additionally, while Designated Natural Areas was a single criterion in the Natural Environment Factor, many of the other values associated with significant natural features (such as significant woodlots, wetlands and other vegetation communities) were also captured in several other criteria within the Natural Environment factor, such as effects to vegetation, effects to wildlife habitat, and effects to potential SAR habitat, as well as criteria in the Anishnawbek and Haudenosaunee Culture, Values and Land Use factor such as effects to rare/undisturbed native habitats, rare/sensitive species regeneration potential, and area that support hunting/trapping/harvesting grounds.</p>	<p>Addressed in the draft ESR.</p>
<p>Operational impacts and agricultural operations need to be considered.</p> <p>The assessment of project-related effects needs to consider related impacts that occur throughout the life of the Project. This includes not just the effects of soil compaction after completion of construction, as per the comment on 3-80, but also the induced agricultural development that the Project will enable.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> • Please state the intended operational lifetime of the transmission line. • Please provide a supplementary submission that describes the direct, indirect, and induced project-related impacts that may occur during the operational phase of the Project. <p>Please describe the activities associated with the closure and reclamation of the transmission line following the transmission-line's end of life. Please describe the related direct, indirect and induced impacts of those activities.</p>	<p>25 a. A transmission line is not built for a definitive operational lifetime. The transmission line will be subject to maintenance, and in the longer term to refurbishment, as required to keep it operational, until such time as it is deemed to be no longer needed and can be decommissioned.</p> <p>Section 7.1 of the dESR identifies the various direct and indirect effects (both temporary and long-term) the project is expected to have on agricultural resources. A summary of the direct and indirect effects on agricultural resources, including their associated project phase (i.e. construction, maintenance and operation) and mitigation measures, are provided in Sections 7.1.1 through 7.1.9 and Table 7-1 of the dESR.</p> <p>With respect to activities associated with the closure and reclamation of the transmission line following the transmission line's end of life, several of direct and indirect effects outlined in Sections 7.1.1 through 7.1.9 and Table 7-1 are anticipated. Should the transmission line become obsolete or unserviceable, the line infrastructure will be retired from service and 'may' be removed. In the event that the transmission line is decommissioned and removed, Hydro One is committed to consulting with local Indigenous communities in advance as a mechanism to provide input on reclamation activities and potential mitigation measures.</p> <p>Please refer to response 07 a above regarding cumulative effects and induced development.</p>	<p>To be addressed in the final ESR as part of the Effects Assessment and through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Caldwell disagrees with HONIs determination on project-related impacts on significant resources.</p> <p>The dESR states that “Effects to significant resources, as identified by Section 2 of the PPS, outside of the PSA, are not anticipated.” The Class EA has not effectively considered any project-related effects outside of the PSA.</p> <p>As stated previously in these comments, Caldwell’s traditional and cultural well-being are tied with the remaining natural habitat areas that preserve ecological function for birds, fish, natural vegetation and wildlife in the region.</p> <p>Any disturbance to these critical habitat represents a potential impact on Caldwell’s ability to continue using its lands for traditional purposes. Furthermore, considering how rare natural habitat is in the broader landscape, Caldwell considers any disturbances to them as having the potential to cause severe adverse effects to Caldwell’s harvesting and cultural rights.</p> <p>Information Request(s): Please update the planning and effects assessment to include potential direct, indirect, and induced project-related effects to significant resources protected by Section 2 of the PPS within the PSA. Assessed resources should include those additional resources identified by HONI staff and its consultants during their field work, which were identified as likely to meet the criteria as significant resources, and culturally valued components identified in Caldwell’s TEK Report.</p>	<p>26 a. Please refer to response 01 a above regarding consideration of the Provincial Policy Statement</p> <p>Section 4 (Environmental Inventory) of the ESR provides a summary of the environmental baseline conditions within the Project Study Area and Local Study Area (with later limited to socio-economic environment and cultural heritage) which include the resources identified under Section 2 of the PPS. Similarly, Section 7 (Potential Environmental Effects and Mitigation Measures) and Table 7-1 (Summary of Potential Effects, Mitigation Measures and Net Effects) of the ESR provides a summary of the direct and indirect effects on the resources identified in Section 2 of the PPS, including their associated project phase (i.e. construction, maintenance and operation) and mitigation measures.</p> <p>As previously indicated Hydro One is committed to incorporating the findings of Caldwell First Nation’s TEK study in the final ESR when describing the existing environment and effects assessment where information generally overlaps with the project and local study areas.</p> <p>Please refer to 07 a response above regarding cumulative effects and induced development.</p>	<p>To be addressed in the final ESR, where practical.</p>
<p>Impacts to surface waters</p> <p>The dESR identifies surface water quality for the sub-watershed in the general vicinity of the PSA as poor. The conditions associated with this poor water quality are attributed to past and current agricultural and residential land uses.</p> <p>The Caldwell TEK Report also identifies a damaged baseline for water in the study area and attributes some of the disturbances to agricultural practices, including loss of habitat and water contamination via the use of agricultural chemicals.</p> <p>The intent of the Project is to supply the region with sufficient energy resources that it can substantially grow the agricultural sector. The dESR does not discuss the potential impacts of this induced development. This absence represents an important knowledge gap for Caldwell as agriculture is associated with the majority of habitat destruction and fragmentation in the region, and has been attributed to adverse impacts to water quality.</p> <p>Information Request(s): Please complete an effects assessment of how the induced growth in the agricultural sector will affect project impact predictions in the dESR. In particular, the assessment should consider impacts of indoor agriculture on valued environmental components including surface water, insects, bats, and birds.</p>	<p>27 a. Please refer to 07 a response above regarding cumulative effects and induced development.</p>	<p>To be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Impacts to water crossings are rights-based issues.</p> <p>Caldwell notes that only 42 of the 182 water crossings potentially affected by the Project were assessed in the field. Caldwell notes that in the design methodology for aquatic field surveys, the field study was "scoped down". Aquatic surveys "were conducted within a subset of aquatic features with the potential to provide fish habitat, as well as potential habitat for aquatic SAR" (Appendix C:15). 17 crossings were surveyed along Route Alternative 2, and fish and fish habitat were identified at numerous crossings, including potential habitat Lilliput, who are listed as endangered under federal species at risk designation. HONI should consider all streams and water crossings encountered by the Project to be potentially fish bearing until it can confirm otherwise through proper field study.</p> <p>Water is of critical importance to Caldwell members. In Caldwell's TEK Report, water is described as having the utmost importance to Caldwell. Caldwell particularly values the importance of water quality, and wetlands and streams close to the shores of Lake St. Clair and Lake Erie. Important waterways in the study area include Jeannette's Creek and Baptiste Creek. These flow into the Thames River, which then flows into Lake St. Clair. "These locations are important as they are home to environmental features such as spawning locations for species like pickerel and are important fishing locations for Caldwell participants."</p> <p>Caldwell notes that both of the creeks identified in its TEK Report are crossed by HONI's preferred Route Alternative 2A. The ecological and cultural values associated with these waters are considered by Caldwell to have a damaged baseline. This means that their values have already been affected by a range of impacts. Some of these impacts are described on page 14 of the report. Concerns include habitat degradation and contamination from chemicals and herbicides.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Due to the reduced scope in field study and the findings of important fish and fish habitat at some water crossings, please consider all water crossings as potentially fish bearing until a field study by a trained aquatic monitor can establish otherwise. <p>Please provide a supplementary submission that includes a complete effects assessment for the creek crossings at Jennette's Creek and Baptiste Creek, which considers the existing damaged baseline of the creek and the indirect, direct, and induced project-related impacts throughout the anticipated lifetime of the Project. This effects assessment will include associated habitat destruction in and around the creek, and the risk pathway and associated risks of herbicide use in routine maintenance activities. Caldwell seeks to be consulted on the significance determination of the cultural impacts once the ecological impacts have been assessed. As the cultural knowledge holders and users of these creeks, Caldwell knowledge holders are best equipped to make the significance determination.</p>	<p>28 a. As previously mentioned, Hydro One is committed to incorporating the findings of Caldwell First Nations TEK in the final ESR when describing the existing natural environment and effects assessment where information generally overlaps with the project and local study areas.</p> <p>As outlined in Section 4.6.7 (Natural Heritage Features) and Appendix C-1 (Natural Environment Existing Conditions Technical Report) of the dESR, each of the watercourses surveyed were assessed as having the potential to support fish habitat (direct or seasonal), with exception to an Unnamed Feature (Alt2_S9) and the 6-7 Sideroad Drain (Alt2-S21).</p> <p>Please refer to 02 a response above for information related to how Caldwell First Nation's technical memorandum and other input provided was incorporated to inform the evaluation.</p> <p>28 b. Based on the results of the 2020 aquatic habitat assessments, and consistent with Caldwell First Nation's comment, all watercourses were in fact considered as having the potential to support fish and fish habitat. As part of the route evaluation (Table 5-6 in the ESR), the Natural Environment factor area included Effects to Fish and Aquatic Habitat. The distance an alternative traverses watercourses combined with the total number of watercourse crossings represents the potential impact to fish and fish habitat. As an example, alternative 3 traversed 2.59 km of watercourse and crosses 46 watercourses with the potential to affect fish and fish habitat and scored 1 (the lowest). Conversely, the preferred alternative 2A traverses 1.57 km of watercourse and crosses 26 watercourses with the potential to affect fish and fish habitat and scored 5 (the highest). The aforementioned approach was also applied to the Areas that Support Fish Bearing Waters with Identified or Inferred Habitat of Game Fish criteria under the Anishnawbek and Haudenosaunee Culture, Values and Land Use factor area.</p> <p>Please see response 19 a above regarding the use of herbicides on overhead transmission corridors.</p>	<p>Addressed in the draft ESR.</p> <p>Some aspects (incorporation of Caldwell FN's recently provided TEK report) to be addressed in the final ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Impacts to wetlands Five unevaluated wetland communities were identified in the PSA, including four along Route Alternative 2, totaling 4.56 ha in size. These wetlands are identified to “have the potential to meet criteria for significance as they provide potential biological, hydrological, and special feature components (i.e., wetland type, biodiversity) and special feature components (i.e. SAR Habitat and SWH)” according to the Natural Heritage Reference Manual 2010 (NHRM) and Ontario Wetland Evaluation System (Appendix C:45).</p> <p>In Caldwell’s TEK Report, water is described as having the utmost importance to Caldwell. Caldwell particularly values the importance of water quality, and wetlands and streams close to the shores of Lake St. Clair and Lake Erie. “Wetlands are also very important to Caldwell members, as they are home to important plant and animal species. Wetlands in the Study Area include Hillman Marsh and the shoreline near Shrewsbury and Rondeau Bay.” Caldwell notes that the waters identified in its TEK Report are crossed by HONI’s preferred Route Alternative 2A. The ecological and cultural values associated with these waters are considered by Caldwell to have a damaged baseline. This means that their values have already been affected by a range of impacts. Some of these impacts are described on page 14 of the TEK report. Concerns include habitat degradation and contamination from chemicals and herbicides.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> • Please complete an evaluation of the unevaluated wetlands as well as Hillman Marsh and the shoreline near Shrewsbury and Rondeau Bay to assess their significance according to established evaluation system of the Natural Heritage Reference Manual 2010 and Ontario Wetland Evaluation System. The assessment must establish the biological, hydrological, and special feature components associated with each wetland and mitigation measures must be specific to safeguard the specific components that may be affected. • Please provide a supplementary submission that includes a complete effects assessment for the significant wetlands that may be affected by the Project, which considers the existing damaged baseline of the wetlands and the indirect, direct, and induced project-related impacts throughout the anticipated lifetime of the Project. This effects assessment should include associated habitat destruction in and around the creek, the risk pathway and associated risks of herbicide use in routine maintenance activities, and additional cumulative effects associated with the induced development of a substantially increased agricultural sector, including any additional risks of contamination. <p>Should a wetland be assessed as significant, please consult with provincial authorities and First Nations on determining appropriate mitigation and monitoring methods to ensure the wetlands are not adversely impacted by project activities.</p>	<p>See response 01 d above for a description of how Hydro One has continued to identify opportunities to avoid or mitigate effects to natural features since the release of the draft ESR.</p> <p>29 a. Section 7 (Potential Environmental Effects and Mitigation Measures) as well as Table 7-1 (Summary of Potential Effects, Mitigation Measures and Net Effects) of the dESR provides a summary of the direct and indirect effects on wetlands, including their associated project phases (i.e. construction and maintenance) and mitigation measures. As previously indicated, Hydro One is committed to incorporating the findings of Caldwell First Nation’s TEK study in the final ESR when describing the existing environment and effects assessment where information generally overlaps with the project and local study areas.</p> <p>Please refer to response 07 a above regarding assessment of cumulative effects.</p> <p>If it is determined that disturbance to some natural areas cannot be avoided, then additional detailed surveys may be required and opportunities for participation from interested Indigenous communities will be provided. Some of these additional surveys (eDNA and additional aquatic habitat assessments) were conducted in July 2021 and were attended by interested Indigenous communities including representatives of Caldwell First Nation.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and Indigenous Knowledge information, including Valued Components, and to incorporating that information into subsequent phases of the project such as construction planning, environmental management planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p>	<p>To be addressed in the final ESR, where practical.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Impacts to Big O Conservation Area The dESR describes the Big O Conservation area as a well-known birding habitat in the community of Comber. The dESR describes other habitat disturbances affecting the conservation area, including the presence of an existing and adjacent 230kV transmission line. However, the dESR does not present a meaningful baseline or assessment of the project-specific and cumulative effects of the proposed preferred route on waterfowl and migratory birds in this area.</p> <p>Migratory birds and their well-being are identified as very important in Caldwell's TEK Report.</p> <p>Information Request(s): Please provide a supplementary submission that includes a complete effects assessment, including a cumulative effects assessment of project-related effects over the lifetime of the Project that considers past, present, and future planned impacts and developments (e.g., induced developments) on the health and well-being of the Big O Conservation area to continue operating as an important bird habitat over the lifetime of the Project.</p>	<p>30 a. Please refer to response 21 a above regarding the Big O Conservation Area.</p> <p>Please refer to response 07 a above regarding assessment of cumulative effects.</p>	<p>Addressed in proponent's response and the draft ESR.</p> <p>To be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Impacts to Eastern Lake St. Clair Important Bird Area are rights-based issues</p> <p>The dESR describes the Eastern Lake St. Clair Important Bird Area (IBA) as a critical feeding, resting and staging area for numerous species. This includes two SAR species for which good habitat and habitat use have been identified by HONI staff and/or their consultants in the 2020 field studies. This habitat is adjacent to the PSA in association with Route Alternative 2A. However, the dESR does not present a meaningful baseline or assessment of the project-specific and cumulative effects of the proposed preferred route on waterfowl and migratory birds within this area.</p> <p>Migratory birds and their well-being are identified as very important in Caldwell's TEK Report.</p> <p>Information Request(s):</p> <p>Please provide a supplementary submission that includes a complete effects assessment, including a cumulative effects assessment of project-related effects over the lifetime of the Project that considers past, present, and future planned impacts and developments (e.g., induced developments) on the health and well-being of the IBA and areas identified in the dESR as having potential suitable habitat and habitat use for SAR species.</p>	<p>31 a. Section 4.6.6 (Designated or Special Natural Areas) provides a summary of IBA and its significance on the landscape. Section 7.7.7.1 (Eastern Lake St. Clair Important Bird Area) and Table 7-1 of the ESR provides a summary of the potential effects (i.e. bird collisions within the IBA), including their associated project phase (i.e. construction and operation) and mitigation measures. As previously indicated, Hydro One is committed to incorporating the findings of Caldwell First Nations TEK study in the dESR when describing the existing environment and effects assessment where information generally overlaps with the project and local study areas.</p> <p>With respect to the IBA itself, the main concentration of waterfowl (i.e. critical resting, feeding and staging areas) are contained within the lake itself, adjacent wetlands and a broad swath of adjacent farmlands and inland habitats from Wallaceburg to the mouth of the Thames River; the preferred route 2A is south of the Thames River. Given that the preferred route 2A is outside of the critical waterfowl feeding, staging and stopover areas, it is not unrealistic to assume that the level of concern with respect to waterfowl (i.e. potential bird collisions) is low.</p> <p>The east shoreline is known to support large numbers of shorebirds (main species include black-bellied plovers and American golden plovers). Based on scientific studies which track migration routes (Motus Wildlife Tracking System; currently tracks black-bellied plovers), black-bellied plover spring and fall migration routes do not intersect with preferred route 2A. As a result, preferred route 2A, though partially located within the IBA, is located outside of the areas of high waterfowl or shorebird concentrations.</p> <p>Two SAR (King Rail and Least Bittern) are known to occur within the IBA. Based on the MOTUS Wildlife Tracking system, two King Rail are tracked, of which none of their migration routes intersect with preferred route 2A. Similarly, the majority of eBird reported sightings are tied to the Lake St. Clair shoreline. Although King Rail observation locations are not publicly available on eBird, given the similarities in habitat requirements, it is not unrealistic to assume that King Rail observations are also tied to the Lake St. Clair shoreline. Similarly, both species are considered relatively low flying species. Of the portion of preferred alternative 2A located within the IBA, approximately 12.5 km involves the repurposing of an existing 115 kV idle transmission line corridor. Given that 230 kV transmission line will result in fewer towers than the existing 115 kV idle transmission line, coupled with the fact that the new towers and lines will be taller than 115 kV towers/lines, when compared to the existing 115 kV idle transmission line, it is not unrealistic to assume that the new 230 kV transmission line may have a reduced impact on low-flying birds (e.g. King Rail, Least Bittern), particularly once the mitigation measures outlined in Section 7 and Table 7-1 in the dESR are incorporated as part of detailed design. The fESR will be updated to include the aforementioned as part of the effects assessment.</p> <p>Please refer to response 07 a above regarding assessment of cumulative effects and induced development.</p>	<p>To be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Gaps in aquatic and fish habitat baseline assessments</p> <p>The Caldwell TEK Report has traditional knowledge that can help confirm the presence of fish in many of the streams and creeks in the region. Jeannette's Creek and Baptiste Creek are specifically mentioned, while traditional knowledge refers to lost fish habitat in many areas. Fish have been, and continue to be, a vital food source for Caldwell members.</p> <p>Information Request(s): Please provide a supplementary submission on baseline conditions for all potentially fish-bearing stream and creeks traversed by the preferred route, that considers information provided by Caldwell knowledge-holders. As the cultural knowledge holders and users of these creeks, Caldwell knowledge holders are best equipped to provide information.</p>	<p>32 a. Consistent with the ESR and the specific request made by Caldwell FN in the event that one of routes 2A or 2B were selected as the preferred, Hydro One invited Indigenous communities to participate in supplemental aquatic surveys (eDNA and habitat assessments) in July 2021 to further characterize the aquatic habitat along the preferred route alternative. A member of Caldwell First Nation participated in the surveys. Hydro One is committed to sharing the results of the eDNA analysis with Caldwell First Nation once the data is available, in addition to incorporating the results in the final ESR to supplement the baseline conditions and effects assessment.</p> <p>Hydro One is committed to incorporating the findings of Caldwell First Nations TEK into the final ESR when describing the existing natural environment and effects assessment where information generally overlaps with the project and local study areas.</p> <p>Refer to response 02 b above for additional information related to consideration of aquatic and fish habitat.</p>	<p>To be addressed in the final ESR, where practical.</p>
<p>Impacts to "significant woodlands"</p> <p>The NHRM 2010 characterizes the southwestern Ontario region as Ecoregion 7E and characterizes it by small woodlots in an agricultural landscape (NHRM 2010:87). The MNR describes this ecoregion as "the most imperiled in Canada because of the amount of natural habitat that has been drained, cut, and converted into agricultural and suburban land uses" (MNR 2015:52). Significant woodlots are designated in this ecoregion based on scientific and expert knowledge based, in part, on how rare they are in the ecoregion, and their importance to biodiversity and maintaining ecological function."</p> <p>The dESR identifies 14 significant woodlands in the PSA. This includes 4 designated woodlands in Route 2 and 3 additional woodlands that might meet that criterion. These woodland features are isolated in the landscape and have limited connectivity to other natural heritage features. This makes these specific woodlands as pockets of biodiversity and refuge to the flora and fauna that live there. The dESR seems to dismiss these values, and the designation of significant itself, in its statement "Each of the significant woodland communities are considered common or secure in Ontario" (4-32).</p> <p>As with the waters and wetlands in the PSA, these significant woodlands are directly tied to the resilience of Caldwell cultural practices and well-being.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> Please provide a supplementary memo that provides that extent of significant woodlands that will be impacted (i.e., replaced with "compatible vegetation" by the project, and outlines a program for construction and operations monitoring of the areas to ensure that the ecological functions they represent are maintained throughout the lifetime of the Project. 	<p>See response 01 d above for a description of how Hydro One has continued to identify opportunities to avoid or mitigate effects to natural features since the release of the draft ESR, and response 11 a for more information on significant woodlands.</p> <p>33 a. Effects to significant woodlands are currently described in Section 7.7.7.2 of the draft ESR and Hydro One will provide additional detail and description, of the anticipated effects to significant woodlands in the final ESR. This will include a description of the refinements made since the release of the draft ESR, as well as updating mapping showing the extents of significant woodlands associated with incompatible vegetation removals.</p>	<p>Addressed in the draft ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>Impacts to Species at Risk (SAR) The dESR has identified various SAR species within the PSA and along Route Alternative 2A, including Butternut, Barn Swallows, and Bobolink. Additional suitable habitat was identified for Lake Chubsucker, Lilliput, SAR bats, and Eastern Fox Snake. Additional significant habitat was identified for bat maternity colonies and turtle wintering areas, eastern Wood-pewee, Climbing Prairie Rose, and Honey Locust. The dESR has not provided a detailed baseline assessment and effects assessment for these species.</p> <p>Caldwell considers these species important to biodiversity and important contributors to a healthy ecosystem. Both of these factors make them impactful on Caldwell cultural interests.</p> <p>Information Request(s): Please provide a supplementary submission that includes a complete effects assessment for the potential SAR species that may be affected by the Project, which considers the existing damaged baseline of these creatures that makes them species at risk and the indirect, direct, and induced project-related impacts throughout the anticipated lifetime of the Project. This effects assessment should include associated habitat destruction in and on adjacent lands, and additional cumulative effects associated with the induced development of a substantially increased agricultural sector.</p> <p>Please consult Caldwell on the significance determination of the cultural impacts once the ecological impacts have been assessed. As the cultural knowledge holders and users of these creeks, Caldwell knowledge holders are best equipped to make the significance determination.</p>	<p>34 a. Section 4.6.7 (Natural Heritage Features) and Appendix C-1 in the dESR provide a summary of the SAR baseline conditions, while Section 7.7.8.4 (Species at Risk) and Table 7-1 provides a summary of the potential direct and indirect effects the project may have on SAR, including their associated project phase (i.e. construction and maintenance) and mitigation measures. As outlined in the dESR, the main mitigation measure is avoidance, where possible. Hydro One welcomes ongoing consultations with Caldwell First Nation.</p> <p>Consistent with the dESR, now that the preferred route has been selected, Hydro One continues to further investigate potential methods of avoiding or mitigating adverse effects to potential SAR habitats and would welcome input from Caldwell First Nation in this process; this may include avoiding disturbance to some areas by minor realignments (e.g., within the existing property fabric) of the preferred route, or by avoiding disturbance to known or potential SAR habitat during sensitive seasons.</p> <p>See response 01 d above for a description of how Hydro One has continued to identify opportunities to avoid or mitigate effects to natural features, including known or potential SAR habitat, since the release of the draft ESR.</p> <p>34 b. The MECP has recently acknowledged that an authorization under the Endangered Species Act, 2007 (ESA) would not be required for SAR bats and/or Eastern Foxsnake so long as the timing windows outlined in the ESR are adhered to.</p> <p>If it is determined that disturbance to some areas of potential SAR habitat cannot be avoided, then additional detailed surveys to confirm presence or absence of SAR habitat may be required and opportunities for participation from interested Indigenous communities will be provided. Some of these additional surveys (eDNA) were conducted in July 2021 and were attended by interested Indigenous communities.</p> <p>Please refer to response 07 a above regarding assessment of cumulative effects and induced development.</p>	<p>Anticipated project effects on SAR are addressed in the draft ESR.</p> <p>Cumulative Effects will be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

Issues and Concerns	Proponent Responses	Status
<p>Construction activities are described in Section 6.2 along environmental management actions that will be overseen by an onsite environmental specialist. The specialist is intended to ensure that construction activities are carried out in accordance with “environmental specifications”. There is no indication of what these environmental specifications are, nor how they will be derived. There is also no indication of the level of power that the environmental specialist will have in enforcing compliance with the specifications.</p> <p>Information Request(s): Please make the Environmental Specifications Plan public and available for comment and improvement by participants of the Class EA process, including Caldwell. The plan should have clear description of monitoring and management goals and detail the responsibilities and powers of the environmental monitors onsite. These powers should include the power to stop-work if significant values are at risk from construction activities.</p>	<p>35 a. The Environmental Specifications referenced in Section 6.2 of the draft ESR refers to the Environmental Management Plan (EMP) and associated construction-related plans (e.g., water management plan, erosion and sediment control plans, etc.) that will be developed by the EPC contractor prior to the start of construction, and which will dictate the management of those activities during construction. As Hydro One has committed in the draft ESR, these detailed environmental mitigation and construction plans will be shared with interested First Nation communities for their review and any input received will be considered for incorporation into the plans as appropriate. The EMP will include a description of the roles and responsibilities of the Environmental specialist.</p> <p>35 b. As described in section 7.7.8.4 of the draft ESR, should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat.</p> <p>35 c. Similarly, as described in Section 7.3 of the draft ESR, in the event that archaeological material is encountered during construction, all activities with the potential to affect these materials will cease immediately and a licensed archaeologist will be engaged. Notification of such findings will be communicated to MHSTCI. In the event that human remains are encountered, Hydro One will immediately stop work in the area and notify local police, the coroner’s office, MHSTCI and the Registrar of Cemeteries. In addition, all Anishnawbek and Haudenosaunee communities that have an interest in the Project and/or location will also be immediately contacted so that, in the event such resources or remains are Anishnawbek and Haudenosaunee in origin, protocols for handling such resources can be established immediately prior to the disturbance or removal of such from the property.</p> <p>35 d. Should other deficiencies be noticed by work crews or environmental monitors during construction (e.g., erosion and sediment controls requiring repair), this work will be prioritized.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Assessment of maintenance activities Maintenance activities are described on page 7-23 in terms of surface water quality. Of interest to Caldwell is the description that maintenance activities will be short-term in duration, will occur periodically over the life of the proposed Project, and may have associated environmental impacts. The effect of maintenance activities in this case is described as not likely to have long-term effect on surface water quality. However, the frequency of effects and the description of how they will add to existing effects is not discussed.</p> <p>This is a concern in terms of the ability of the Class EA to address project effects on Caldwell rights, as maintenance and operational impacts of the Project are not meaningfully assessed in the dESR.</p> <p>Information Request(s): Please provide a supplementary submission that described anticipated maintenance activities associated with the Project. What are the potential impacts of these activities? How will they affect the long-term well-being of the valued components assessed in the dESR?</p>	<p>36 a. The assessment of the effects of the project as presented in the draft ESR includes descriptions of effects associated with maintenance activities. References to maintenance activities are found throughout Section 7 and Table 7-1 in the draft ESR. The frequency of maintenance activities may be variable, and effects are generally anticipated to be contained within the transmission line ROW.</p> <p>Please refer to response 19 a above for additional information regarding vegetation management along overhead transmission line corridors.</p>	<p>Addressed in the draft ESR and in the proponent’s response. Additional information and description in the response to be added to the final ESR.</p>

<p>Biodiversity Initiative is vague and ill-defined for purposes of mitigation and offsetting</p> <p>HONI discusses the intent of developing a Biodiversity Initiative throughout Section 7 as a means of offsetting residual impacts associated with the Project. In Section 7.7.8.7 it states "HONI has committed to undertaking a biodiversity initiative specific to this project to offset any habitat loss or transition (long-term change) that may occur as a result of the Project." For reasons already described, Caldwell interprets the need for such a compensation and the identification of likely long-term adverse environmental effects as an admission that the Project is likely to have significant adverse effects on the environment that cannot be readily mitigated. This calls into question the suitability of the Class EA process and is one reason why Caldwell is recommending the Project be elevated to an Individual EA.</p> <p>Notwithstanding, Caldwell has concerns over the lack of detail surrounding the Biodiversity Initiative. HONI does not discuss mitigation hierarchies or state a purpose for the compensation. Standard practice in Canada is for compensation to occur as a last resort and, where appropriate, for it to focus on replacing the same values, ecological function, and biodiversity as is being lost, and to occur in as close to the affected area as possible. This is not very possible in the area, where over 90% of the landscape is described as being repurposed to agriculture and development. Ecogregion 7E, as a reminder, is identified by the MNR as "the most imperiled in Canada because of the amount of natural habitat that has been drained, cut, and converted into agricultural and suburban land uses" (MNR 2015:52). Finding a suitable replacement for critical ecological function in an area already critically damaged is a very challenging task.</p> <p>The dESR describes the Biodiversity Initiative in terms of something that will be developed in consultation with affected stakeholders. Caldwell does not believe that individual discussions and independent Biodiversity Initiatives will result in an adequate compensation to offset values lost by the Project. With no clear details on what this initiative will look like or aim to accomplish, Caldwell has a low level of confidence that it is likely to succeed in avoiding a loss of biodiversity or ecological function for affected areas.</p> <p>Caldwell believes that a comprehensive biodiversity offset plan is required for each of the significant areas disturbed by the Project. The practice of biodiversity offsets is well established and many excellent resources exist that HONI can use to design appropriate offsets.</p> <p>Information Request(s):</p> <ul style="list-style-type: none"> • Please describe examples from completed/ongoing Biodiversity Initiatives that have been successful in replacing lost biodiversity and ecological function from significant environmental features within Ecogregion 7E. • Please describe other compensation that HONI considers appropriate in compensating for lost ecological integrity and traditional land use. Are these in-kind initiatives (replacing like-for-like) or completely unrelated (e.g. displacing wetland and planting trees in lieu); are they geographically 	<p>37 a. The purpose of the Biodiversity Initiative for the project is to offset any effects of the project to natural habitats that cannot otherwise be avoided, mitigated or restored (as per the "mitigation hierarchy" mentioned by Caldwell FN). As the Chatham x Lakeshore project is still in the early phases of planning, Hydro One's current priority remains on advancing detailed design and construction planning, and on potential measures to avoid, mitigate and plan to restore these effects before the focus shifts to offsetting via the Biodiversity Initiative. These offsets generally take the form of creation of habitat on previously disturbed areas, or the enhancement of existing habitat. Examples of habitat creation and enhancement projects funded through past Hydro One Biodiversity Initiatives include pollinator meadow habitat establishment, reforestation projects, invasive species inventory and control work within existing habitats, aquatic and wetland habitat creation/enhancement projects, and pollinator garden plots on First Nation Reserve lands. In addition to creating or enhancing habitat, many of these projects have also provided educational opportunities and other community benefits.</p> <p>Hydro One's previous experience has found that Biodiversity Initiatives are most successful when heavily informed by input from project Rights holders and stakeholders. This includes both the identification and submission of habitat creation or enhancement opportunities, as well as helping to inform the parameters of the selection of these opportunities (such as prioritization of like-for-like replacements, versus focusing on local or regional conservation priorities).</p> <p>Offsets are ideally located in relatively close proximity to the areas affected by a project; Hydro One's past initiatives have typically targeted opportunities within the same watershed as the areas affected by the project, although as Hydro One looks to external parties to identify habitat creation or enhancement opportunities, and the fact that Hydro One generally does not entertain opportunities located on Private lands, availability of such opportunities may be limited and require consideration of a broader area. Exceptions have also previously been made to include opportunities within or near Indigenous communities, where the community itself is not in close proximity to the project. For the Chatham x Lakeshore project, Hydro One does not intend to consider offset opportunities located outside of southwestern Ontario.</p> <p>In past Biodiversity Initiatives on large projects, Hydro One has incorporated input from subject matter experts in two ways: as previously mentioned, Hydro One looks to these experts (e.g., Indigenous communities, Conservation Authorities, Municipalities, etc.) to identify potential opportunities to be funded through the Biodiversity Initiative, and, if an excess of opportunities are identified, Hydro One may look to these experts to help inform a framework to prioritize the selection of opportunities. In such a framework, such as whether to prioritize opportunities closer to the areas affected by the project, certain habitat types, opportunities which contribute to species or uses of cultural importance etc.</p> <p>Input from Rights holders and stakeholders will be important in determining the approaches used in the Biodiversity Initiative for the Chatham x lakeshore project, and Hydro One invites Caldwell First Nation and other Indigenous communities to provide input to help shape this initiative. Hydro One plans to hold a workshop to discuss the Biodiversity Initiative, following the completion of project approvals such as the Class EA and very much looks forward to working with and collaborating with Caldwell First Nation on this item.</p>	<p>Addressed in the draft ESR through the commitment to engage with interested parties to discuss the implementation of the biodiversity initiative for the project.</p>
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Issues and Concerns	Proponent Responses	Status
<p>proximal to one another, or distant (e.g. on adjacent lands, or in northern Ontario)?</p> <p>Please provide a supplementary memo that outlines how HONI intends to implement Biodiversity Initiatives, i.e., biodiversity offsets, in terms of species composition, habitat structure, ecosystem function and people's use and cultural values associated with all significant environmental areas or features disturbed by the Project. Discuss how biodiversity offsets would be planned with the input of subject matter experts including Indigenous knowledge holders.</p>		
<p>Lack of engagement with Caldwell First Nation with respect to Indigenous archaeological values.</p> <p>Caldwell was not engaged in the Stage 1 archaeological assessment (Appendix C1) commissioned by the Proponent, and this assessment makes only minor reference to Caldwell. This is a major gap in view that the Project area occurs within Caldwell's traditional territory.</p> <p>The Stage 1 assessment calls for a Stage 2 assessment as it concludes that there is significant potential for additional archaeological values within each Project route.</p> <p>Caldwell expects that the lack of engagement will be rectified in a Stage 2 assessment.</p> <p>Information Request(s):</p> <p>Prior to finalizing the draft ESR, please provide a supplementary submission that provides the results of the Stage 2 assessment for the Project. Hydro One must involve Caldwell in the assessment, as Caldwell is best positioned to determine potential areas with archaeological significance based on our oral record and traditional knowledge of past use and occupancy of the Project area.</p>	<p>38 a. From the commencement of the Class EA in January 2020, Hydro One has directly consulted with Indigenous communities on the Project. Where information on areas of significance or interest has been provided, this information has been discussed with Timmins-Martelle Heritage Consultants and referenced in the Stage 1 Archaeological Assessment (AA) Report. Additionally, the draft Stage 1 AA report was provided in both digital and hard copy format to Indigenous communities in November 2020 for their review and comment for a period of approximately 6 months, prior to the finalization of the Stage 1 AA report.</p> <p>38 b. Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project, including the involvement of interested Indigenous communities in the upcoming Stage 2 AA field surveys and report review.</p> <p>38 c. Stage 2 Archaeological Assessment (AA) field surveys began in Fall 2021 on properties where landowner permission to conduct the surveys has been provided, and Hydro One understands that Caldwell First Nation sent a representative to observe the survey work conducted to date and this opportunity will be provided on forthcoming Stage 2 AA survey work as well. Hydro One will be sharing draft copies of the Stage 2 reports with Caldwell First Nation for review and comment as well as copied of the final reports.</p>	<p>Addressed in the proponent's response and commitment to continue to engage interested First Nations communities in the ongoing stage 2 Archaeological Assessment</p>
<p>Stage 1 Assessment is not focused on the preferred route option.</p> <p>The Stage 1 Assessment is based on the region within which all the proposed route options have been proposed, and has not undertaken a detailed archaeological assessment along the main project route.</p> <p>A stage 2 assessment of the selected route option is required in order for this section to be completed. At this stage of the assessment, there is insufficient information to conclude on the potential effects of the project on potential effects of the project on Caldwell's cultural heritage.</p> <p>Information Request(s):</p> <p>Caldwell First Nation requests that Hydro One add text to this section of the assessment to provide appropriate context that explains information gaps with respect to Indigenous engagement and cultural heritage information.</p>	<p>39 a. Archaeological Assessments (AA) are conducted in a sequential process, beginning with Stage 1 AA which consists of a desktop review of known sites and features of archaeological potential to determine the areas of archaeological potential within a study area. Stage 2 (and subsequent AA, if required) involve field investigations. As such, it is common practice for Stage 1 AA to be conducted across a broader study area (i.e., multiple alternatives) during the Class EA process, to inform aspects of the Class EA such as the evaluation of alternatives, as was done on the Chatham x Lakeshore project.</p> <p>Stage 2 AA are typically conducted on only the preferred alternative, due to the intrusive field survey work required. Stage 2 and later AA are typically done after the completion of the Class EA.</p> <p>As per Section 7.3 and Table 7-1 of the draft ESR, Hydro One has committed to undertaking a Stage 2 AA on the areas of archaeological potential (as identified in the Stage 1 AA) associated with the preferred route 2A.</p> <p>See response 38 c above for the status of Stage 2 AA work and the opportunities provided to date and going forward for participation in the Stage 2 AA.</p>	<p>Addressed in the proponent's response and commitment to continue to engage interested First Nations communities in the ongoing stage 2 Archaeological Assessment</p>

Issues and Concerns	Proponent Responses	Status
<p>The Cultural Heritage Existing Conditions Report omits characterizing Caldwell's cultural heritage within the project area.</p> <p>The following statement appearing in Section 7.4, without context related to baseline information gaps, is misleading:</p> <p>No cultural heritage landscapes were identified in the study area associated with the preferred Route Alternative. (p.7-9)</p> <p>The consultant report (Appendix C2 – Cultural Heritage Existing Conditions Report) supporting the Proponent's assessment did not investigate information sources related to Indigenous history or cultural heritage, or consult Caldwell or other Indigenous groups. The above statement, absent this context, leaves the impression that no Indigenous cultural landscapes were identified, and therefore none exist. However, it appears that the potential for Indigenous cultural heritage values and landscapes was not explored, nor were Indigenous nations and groups engaged in the baseline data collection underpinning this statement.</p> <p>Information Request(s):</p> <p>Caldwell First Nation requests that Hydro One add text to this section of the assessment to provide appropriate context that explains information gaps with respect to Indigenous engagement and cultural heritage information.</p>	<p>40 a. Regarding the Caldwell First Nation Cultural heritage information, from the commencement of the Class EA in January 2020 Hydro One has directly consulted with Indigenous communities on the Project. Hydro One is committed to including input received from Caldwell First Nation on known or potential Indigenous Cultural Landscapes prior to finalization of the ESR. The Cultural Heritage Existing Conditions (CHEC) report describes the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Where information on known areas of historical significance was provided by First Nation communities, that information was considered in the evaluation of the route alternatives.</p> <p>If any such information can be provided going forward (i.e., following submission of the final ESR) either resulting from the TEK or otherwise, Hydro One will review and consider this information in the subsequent planning phases of the Project.</p>	<p>Addressed in the proponent's response and in the draft ESR, including through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p> <p>To be addressed in the final ESR, where new information has recently been provided (i.e., Caldwell FN TEK).</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of consideration of Caldwell's cultural heritage within the Project area Baseline data collection for the cultural heritage assessment (as described by Golder on p.9 of the consultant report) has focused primarily on settler cultural heritage resources and landscapes, especially "built heritage resources" (e.g., houses, farms, settlements).</p> <p>Caldwell and other Indigenous groups' histories and cultural heritage are not reflected at all in Section 7.4 of the dESR or the Cultural Heritage Existing Conditions Report.</p> <p>The Project area occurs on Indigenous lands and within the traditional territory of Caldwell, yet Caldwell was not engaged by the Proponent with respect to baseline data collection and the identification of important cultural heritage places and landscapes. This is substantial information gap.</p> <p>Section 7.4, nor the supporting consultant report, acknowledge that the Project area and the identified settler cultural heritage values were all built on Indigenous lands. Nor do they mention that Caldwell is associated with the Project area and broader area, including Pelee Point National Park. The proponent's assessment and the consultant report make no clear effort to demonstrate Indigenous cultural heritage.</p> <p>Information Request(s): In order to address the baseline information gap regarding Caldwell's cultural heritage resources and landscapes, please provide a supplementary submission that includes information on Caldwell cultural heritage, both tangible and intangible aspects, within the project area. All phases of this submission (i.e., design, data collection, reporting) must be done in collaboration with Caldwell.</p>	<p>See response 40 a above</p>	<p>Addressed in the proponent's response and in the draft ESR, including through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p> <p>To be addressed in the final ESR, where new information has recently been provided (i.e., Caldwell FN TEK).</p>
<p>Inadequacy of spatial boundary to address project-specific and cumulative cultural heritage impacts related to visual quality and cultural landscape.</p> <p>The project will have a high likelihood of having substantial cumulative effects on the cultural landscape, i.e., in combination with existing structures (wind turbines and electrical transmission lines). The current 500m buffer area is inadequate to assess cumulative effects on the cultural landscape.</p> <p>Relative to existing conditions, route 2A will result in larger towers and a new transmission line, which are additional adverse impacts to the visual landscape, and therefore should be adequately assessed. The potential for route 2A to "re-purpose 16km of an existing idle 115kV transmission corridor" does not reduce the cumulative impacts of the new transmission line route over other routes, as the Hydro One could decommission the idle 115kV transmission corridor as part of other route options.</p> <p>Information Request(s): Please provide a supplementary submission, working with Caldwell, and using a 10km-wide regional study area (5km on either side of the preferred route option), assess the potential cumulative effects of the project on Caldwell cultural landscape and associated cultural sense of place.</p>	<p>Please refer to 07 a response above regarding assessment of cumulative effects.</p>	<p>To be addressed in the final ESR through the addition of a Cumulative Effects section in accordance with the Class EA for MTF (2016).</p>

3.15.3 Chippewas of the Thames First Nation (COTTFN)

On August 10, 2021, COTTFN emailed MECP and provide their submission for a Section 16 Order Request. COTTFN emailed Hydro One on August 10, 2021, and shared their technical review and commentary on the draft ESR, noting that a letter was submitted to MECP requesting further conditions be imposed before the Project can proceed.

Hydro One emailed COTTFN on August 30, 2021, and shared the draft response to COTTFN's comments on the draft ESR. Hydro One met with COTTFN on August 31, 2021, to discuss the comments provided by COTTFN on the draft ESR and the Section 16 Order Request. COTTFN emailed Hydro One on September 9, 2021, and informed Hydro One they met internally to discuss next steps, including the Culture and Rights Study. Hydro One responded via email on the same day and noted they were generally supportive of the proposal and look forward to working with COTTFN on it.

Hydro One emailed COTTFN on September 20, 2021, and provided Hydro One's final responses to COTTFN's comments on the draft ESR. A meeting was held on September 21, 2021, to discuss the scope and path forward for the COTTFN Culture and Rights Study, responses to the comments associated with COTTFN's Section 16 Order Request and the Stage 2 Archaeological Assessment work.

MECP emailed COTTFN on September 22, 2021, and shared their response to COTTFN's Section 16 Order Request.

Hydro One met with COTTFN on September 28, 2021, and reviewed the draft ESR comments and to establish a path forward with a shared focus on finding agreeable wording and phrasing for certain sections of the ESR. Other items discussed included the Culture and Rights Study and the Biodiversity Initiative.

Hydro One met with COTTFN and Firelight staff on November 23, 2021, to discuss the COTTFN Culture and Rights Study progress and next steps on the Project. COTTFN emailed Hydro One on December 15, 2021, and shared the Culture and Rights Study and associated Implications Letter.

From February to September 2022, COTTFN and Hydro One engaged on several occasions (including regularly scheduled monthly meetings) to discuss opportunities to incorporate findings from COTTFN's CRS into the final ESR and discussions regarding a project level cumulative effects assessment. On February 18, 2022, Hydro One provided a draft environmental effects and mitigation table for the incorporation of Valued Components (VCs) described in the CRS that were directly addressable through management of the Project. On March 23, 2022, Hydro One provided a separate

acknowledgment and response to broader issue VCs which are beyond the scope, mandate or ability of Hydro One to manage through the Project, but which are recognized as important concerns to COTTFN and its members. COTTFN provided a response to the broad issues acknowledgement on April 22, 2022, noting COTTFN's appreciation for the work done to date by Hydro One to incorporate the CRS into the final ESR, but expressing disagreement with some aspects of Hydro One's acknowledgement of the broader issues and cumulative effects, requesting Hydro One more fully consider and acknowledge its role (alongside that of other proponents, the IESO and the Crown) in cumulative effects to the region. On July 7, 2022, Hydro One provided a copy of the Project level Cumulative Effects Assessment completed for the Project for COTTFN review. The Cumulative Effects Assessment included an analysis table and supporting maps.

MECP emailed COTTFN on July 5, 2022, and provided a letter regarding the ongoing review of the Section 16 Order Request.

COTTFN emailed MECP on September 20, 2022, and shared a letter regarding the Section 16 Order Request and noting that given Hydro One's actions and commitments, COTTFN would like to withdraw their Section 16 Order Request. MECP emailed COTTFN on October 14, 2022, to provide a formal acknowledgement of the withdrawal of COTTFN's Section 16 Order request withdrawal.

The issues identified in the Section 16 Order Request from COTTFN as well as Hydro One's responses are included in **Table 3-22**.

Table 3-22: Chippewas of the Thames First Nation Section 16 Order Request – Proponent Responses

Issues and Concerns	Proponent Responses	Status
<p>We have a deep and longstanding connection to, and stake in, the Project area. Our past, present, and future connection to our lands must be honoured through deep consultation on any activity that may impact our traditional territory.</p> <p>It is imperative for Hydro One to understand that, regardless of how the government classifies land ownership today, the Project falls in the traditional territory of COTTFN. It is our responsibility to care for these lands and resources now and in the future. As such, COTTFN must be included in all decisions that impact these lands, waters, and resources.</p> <p>COTTFN therefore expects the government and project proponents, including Hydro One: to work with us in utmost good faith; cultivate trust-like relationships; incorporate COTTFN perspectives in decision-making procedures and outcomes; approach dispute resolution with an eye of reconciliation; understand and practice COTTFN cultural norms; interpret historic events from a COTTFN perspective; not infringe on Aboriginal and Treaty Rights; engage in effective and meaningful consultation with COTTFN; reasonably balance COTTFN interests in making calculations of the public good; and provide compensation where COTTFN economic interests are diminished (COTTFN 2021).</p>	<p>Hydro One’s goal is to be a trusted partner to Chippewas of the Thames First Nation (COTTFN) and we value deeply our relationship.</p> <p>Hydro One acknowledges and respects COTTFN’s “deep and longstanding connection to, and stake in, the Project area”, and recognizes that the Project falls within their traditional territory.</p> <p>Cultivating a “trust-like relationship”, engaging in “effective and meaningful consultation”, and involving COTTFN in all project decisions that affect COTTFN’s traditional territory, are key objectives of the Chatham to Lakeshore transmission project engagement process and we are committed to this important work.</p> <p>In addition, it is Hydro One’s objective to minimize infringements to COTTFN’s Aboriginal and/or treaty rights (economic or otherwise). Where COTTFN considers their rights and/or interests to be potentially impacted, Hydro One intends to work with COTTFN to identify measures to mitigate and/or accommodate/compensate for those impacts in order to minimize residual effects throughout the life cycle of the Project.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>COTTFN will be requesting in a separate letter to the Minister of Environment, Conservation and Parks (MECP) that the Minister impose the following conditions on Hydro One pursuant to s. 16(3) of the Environmental Assessment Act:</p> <ol style="list-style-type: none"> 1. Hydro One must work with COTTFN to complete the TKUS and integrate the content of the TKUS into the Final ESR; 2. Hydro One must work with COTTFN to ensure that the TKUS informs a proper assessment of the Project's adverse (and cumulative) impacts to COTTFN's Indigenous and Treaty Rights, and that it revises the applicable sections of the Final ESR accordingly; 3. Hydro One must work with COTTFN to co-develop measures to address and mitigate any Project impacts on COTTFN's Indigenous and Treaty Rights that are identified in the TKUS and subsequent revisions to the Draft ESR; 4. Hydro One must include all mitigation measures co-developed with COTTFN in the Final ESR, and must carry out such mitigation measures; 5. Hydro One must co-draft a report with COTTFN to the Minister confirming that the above- noted 4 conditions have been satisfied; and the Minister must confirm in writing to Hydro One and COTTFN that the 5 above-noted conditions have been satisfied before Hydro One proceeds with the Project. 	<p>Hydro One offers the following perspective on COTTFN's requested conditions:</p> <ol style="list-style-type: none"> 1. Hydro One looks forward to receiving TKUS information from COTTFN. As COTTFN is aware, Hydro One has agreed to extend the 60-day public review period for the draft ESR by an additional 30 days for Indigenous communities, through September 10, 2021. It is considered in the public interest to meet the targeted schedule in order to keep the project on track to be operational in 2025/2026, but we recognize there must be a balance and are committed to receiving and incorporating TKUS at any time during the life cycle of the Project. As such, if any TKUS information is received prior to the submission of the final ESR, Hydro One can review this information and include a summary within the final ESR as appropriate, potentially with reference to existing mitigation measures and commitments (such as those for some natural environment features) which may also serve to mitigate potential adverse effects to COTTFN Aboriginal and treaty rights. TKUS information received after the submission of the final ESR will be incorporated into project design, further development of project avoidance, mitigation, restoration and accommodation, determination of construction methods, construction rehabilitation and operations/maintenance. Hydro One also understands that the TKUS will form part of COTTFN's community knowledge base, and could also potentially be applied to future Hydro One projects and operations in the area. 2. Noted and acknowledged. As stated in Answer No.1, any TKUS information received prior to the submission of the final ESR will be reviewed and incorporated into the final ESR to the extent that is feasible, but there is also the ability to further incorporate TKUS into the project design, further development of project avoidance, mitigation, restoration and accommodation, determination of construction methods, construction rehabilitation and operations/maintenance. 3. Hydro One would be pleased to work with COTTFN to develop measures that address and mitigate project impacts on COTTFN's Indigenous and treaty rights, to the extent feasible within the ESR and through the development of project design, the development of construction methods, and through post-construction restoration. 4. To the extent that is feasible, Hydro One will include identified mitigation measures in the final ESR, and will ensure that measures identified through project design are also included in the register of commitments for execution during construction and operations. 5. Hydro One would be pleased to co-develop a report to the Minister outlining how TKUS and mitigation will be incorporated into the project, including the final ESR. 	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR.</p>

<p>1. Inadequate consultation and recognition of COTTFN's governance and stewardship rights</p> <p>Consultation has been inadequate thus far. Proper consultation involves a two-way exchange of information, concerns, ideas, and future plans based on a meaningful and balanced relationship between the Proponent and the Nation. Instead, this consultation process has been top-down and one-sided, with Hydro One treating COTTFN as a “check mark” in the assessment process, rather than a self-governing Nation with rights and interests in the Project area. Overall, COTTFN knowledge and input was not included in project scoping, the identification of impacts, the alternatives assessment, nor in the development of mitigations.</p> <p>In general, most references to consultation regarding the identification of impacts and the alternatives assessment are vague and tied to all the potentially impacted with “Anishnawbek and Haudenosaunee communities”. Throughout the dESR, Hydro One refers to consultation with “Anishnawbek and Haudenosaunee” communities as though we are one entity and that engaging with members from one community is the same as engaging with all communities. It is important to note that not all “Anishnawbek and Haudenosaunee Communities” are the same; each are self-governing entities. Each Nation has its own government, laws, norms, history, and culture. Hydro One's consultation with certain Nations does not mean that they have consulted with all Nations with traditional territory in the Project area.</p> <p>Limited evidence of direct engagement with COTTFN is provided in dESR and its appendices. COTTFN does not equate sending emails with engaging on impacts to rights and title. While we appreciate that Hydro One may have made efforts to reach out, the efforts made do not equal consultation.</p> <p>Therefore, COTTFN input and knowledge has not been incorporated into the dESR and the way impacts specific to COTTFN have been identified and assessed for this Project has not been described within the dESR. The result has been a lack of integration of COTTFN Knowledge and input (Section 3 of this letter goes further into issues regarding lack of COTTFN knowledge in the dESR).</p> <p>COTTFN remain committed to working with Hydro One and want to ensure our concerns, knowledge and future plans for our territory are factored into the decision-making processes and further project planning. As such, COTTFN requires the following:</p> <p>Requirement 1. COTTFN requests further, more extensive, consultation on the Project. This should include ongoing discussions and collaboration between Hydro One and COTTFN. Discussions should cover the conditions listed above as well as all requirements listed in this letter, including but not limited to:</p> <ul style="list-style-type: none"> • An agreement on how COTTFN Knowledge and findings from the forthcoming TKUS will be considered in decision-making and further project planning including mitigation measures; • The co-development of mitigation plans and efforts that COTTFN determines to be necessary for the protection of our rights and interests; 	<p>Hydro One respects appreciates and acknowledges that COTTFN is a self-governing Nation with unique rights and interests in the Project area. Repeated reference to Anishnawbek and Haudenosaunee communities was used to make a clear distinction between the individual communities that make-up these broader communities. At no time during the process was input received from participants, including COTTFN, considered or intended to be a “check mark”, as it was always Hydro One's intention for input from Indigenous communities to meaningfully inform the planning of the project.</p> <p>As earlier stated, Hydro One's goal is to be a trusted partner to COTTFN and we recognize consultations and engagement is ongoing and there is more work to do together through collaboration.</p> <p>Since January 2020, as summarized in Section 3.6 of the draft ESR and further outlined in the Record of Consultation (Appendix B of the dESR), Hydro One has made efforts to seek input on all aspects of the project, including input into the evaluation of alternatives, identification of environmental effects and potential mitigation measures. Engagements included virtual information sessions, workshops, technical advisory meetings and the provision of input workbooks for communities, to name a few. Recognizing that some communities have capacity challenges, resources were made available, starting in April 2020, through Capacity Funding Agreements, to all participating communities to hire dedicated staff and to obtain assistance from outside professionals if required.</p> <p>In considering the balance of input received (community involvement) and the public interest, the dESR was finalized and released for public review in early June 2021, approximately 17 months after the Notice of Commencement.</p> <p>Given consultation and engagement is an ongoing process, it is important to note that input received after finalization of the ESR will still be extremely important in developing/refining project design, defining appropriate construction methods and identifying appropriate post-construction rehabilitation, all with the objective of identifying and minimizing impacts through a more detailed assessment of mitigation and accommodation measures than is typical of a Class EA Environmental Study Report.</p> <p>Requirement 1: Hydro One has committed to receiving and considering TKUS from Indigenous communities at any point throughout the Project. Further, Hydro One would be pleased to discuss how the forthcoming TKUS will be considered in decision-making and further project planning including mitigation measures with COTTFN;</p> <ul style="list-style-type: none"> • Hydro One would be pleased to work with COTTFN to further develop mitigation plans to minimize potential impacts to COTTFN's rights and interests and welcomes the forthcoming TKUS; • Hydro One is committed to providing COTTFN the opportunity to participate in the monitoring of Archaeological Assessment field surveys and look forward to receiving the names of monitors to arrange logistics; • Hydro One provided opportunity for COTTFN to participate in recent aquatic habitat field surveys and would be pleased to discuss any further opportunities for environmental monitoring as the project proceeds; • Any training required for environmental monitors to participate safely and in a meaningful way, will be provided; 	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
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<ul style="list-style-type: none"> • The involvement of COTTFN in future archaeology work and assessment, including the hiring of COTTFN Aboriginal Field Liaisons; • The involvement of COTTFN in future environmental monitoring, including the hiring of COTTFN environmental monitors; • Support for training COTTFN on cultural and environmental monitors; • Support for COTTFN land use planning initiatives, including but not limited to COTTFN's current traditional plant rehabilitation efforts; and • Employment and contracting opportunities for COTTFN. <p>Requirement 2. COTTFN requires that the Proponent adapt its impacts assessment to identify impacts to each Nation separately, rather than all "Anishnawbek and Haudenosaunee" collectively. Please include in the ESR a summary table of issues, concerns, and recommendations raised by each affected group, including COTTFN, as well as Hydro One's responses to these items. COTTFN wishes to address the gap specific to our rights and interests through ongoing or future Project-specific studies.</p> <p>Requirement 3. COTTFN requires flexibility in the Community Engagement Coordinator (CEC) funding into the post-construction monitoring phase. While COTTFN appreciates that Hydro One made CEC funding available, COTTFN was not able to find a CEC in time for this program and thus hired outside of the program and without these funds. COTTFN would like to be actively involved in all stages of the proposed Project and in all decision-making that has the potential to impact on COTTFN rights. COTTFN requests that the CEC funding and program be adapted to COTTFN's circumstances by supporting the salary of our designated staff for the proposed Project - the Environment Technician in the Treaty, Lands, and Environment Department. We request that these funds be extended to support ongoing engagement beyond the construction phase into post-construction monitoring. This would benefit Project communication and the relationship between Hydro One and the COTTFN community during key phases of the proposed Project.</p> <p>Requirement 4. COTTFN requires the Proponent to work with COTTFN to incorporate COTTFN's land use and restoration initiatives in future project planning including rehabilitation and restoration planning. The dESR makes no efforts to consider how the proposed Project may impact our future use of the area and land use planning initiatives. While non-Indigenous land use policies and priorities are considered in the dESR, COTTFN's land use priorities and objectives are not factored into project planning. The dESR states that "Hydro One will ... finalize restoration plans in consultation with appropriate stakeholders and the local communities, as necessary." COTTFN would like to work with Hydro One to align our restoration activities with the plans of Hydro One to ensure that restoration objectives are appropriately informed by COTTFN's Indigenous Knowledge and supportive of COTTFN's future use of the area. This is discussed further in Section 4 of this letter.</p> <p>Requirement 5: In order to ensure the adequacy of the alternatives assessment, Hydro One must integrate criteria and weighting agreed to by all the potentially</p>	<ul style="list-style-type: none"> • Hydro One would be pleased to support COTTFN land use planning initiatives, including traditional plant rehabilitation efforts; • Hydro One is committed to maximizing economic participation of Indigenous communities in the Project and welcomes this shared goal by COTTFN. Employment and contracting efforts during construction will be made available through the EPC contractor that is selected through the Early Contractor Involvement process; COTTFN is encouraged to facilitate meetings directly with the ECI EPCs. <p>Requirement 2: In order to address impacts specific to COTTFN, it is necessary to receive information, such as TKUS that provides the information necessary to conduct this assessment. As discussed above, if COTTFN's TKUS, or even some initial conclusions or partial findings, is provided prior to submission of the final ESR then this information can be incorporated into the document. As per the commitments made in the draft ESR, any information received after that time will be used to develop/refine project design, develop construction methods and develop plans for post-construction rehabilitation, including the identification of specific mitigation measures.</p> <p>Requirement 3: Hydro One would be pleased to discuss how best to provide resources to support the continued involvement of a COTTFN representative through environmental monitoring following construction.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by COTTFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and COTTFN as preparations begin for construction and we are committed to working together on this.</p> <p>Requirement 4: As per commitments made in the ESR, Hydro One would be pleased to work with COTTFN to incorporate COTTFN's land use and restoration initiatives in future project planning including post-construction restoration planning as well as the Biodiversity Initiative that Hydro One plans to undertake for the Chatham x Lakeshore project.</p> <p>Requirement 5: Given the robust evaluation of the route alternatives undertaken leading to the selection of the preferred route, including the numerous opportunities provided to incorporate input into the evaluation throughout 2020, Hydro One does not intend to revisit the evaluation of the route alternatives and selection of the preferred route. Hydro One is however committed to engaging with COTTFN to deliver on the commitments outlined in this document and throughout our discussions to reduce and mitigate against potential impacts and to meaningfully incorporating inputs provided.</p> <p>Requirement 6: Hydro One would welcome the opportunity to discuss opportunities to support COTTFN's current initiatives on burial site exploration at the Mt. Elgin residential school.</p>	
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Issues and Concerns	Proponent Responses	Status
<p>impacted Indigenous Nations; undergo a multi-party re-evaluation process including Nation- selected representation from each Nation; and work with COTTFN to integrate the results of the COTTFN's TKUS prior to this re-evaluation process.</p> <p>Requirement 6: Given the recent increased recognition and emphasis on the harms created by colonization, residential schools, and Canadian policies, COTTFN requests that Hydro One act in good faith and support COTTFN's current initiatives on burial site exploration at the Mt. Elgin residential school. The extent of this support and can be discussed through further consultation and engagement.</p>		

Issues and Concerns	Proponent Responses	Status
<p>2. Lack of recognition of historical context and ongoing pressures on COTTFN lands and resources</p> <p>The dESR does not consider or address cumulative effects or historical context. Good practice demands the assessment of the existing cumulative effects context, as it may be important even if the proposed Project's effects are considered minor by the Proponent. The legacies of settlement and development, and associated land conversion within the Project area have had a substantial impact on COTTFN members' abilities to access and use lands and resources within COTTFN traditional territory. These ongoing and cumulative effects should not be taken as a reason to further develop on our traditional territory and instead should be understood as added pressure on COTTFN lands and resources and must be properly considered in mitigation efforts.</p> <p>This lack of consideration of the existing cumulative effects context is another consequence of inadequate consultation with COTTFN. Similarly, the assessment does not robustly address the proposed Project's effects on COTTFN's current use of lands and resources, nor does it take into account our desired future use of our lands by COTTFN members for traditional purposes. As a result, the baseline data and subsequent assessment provide insufficient information to understand the nature and magnitude of potential Project effects on COTTFN.</p> <p>Requirement 6: COTTFN requires that the Proponent work with COTTFN to include revisions to the dESR that include an assessment of impacts to COTTFN Aboriginal and Treaty Rights and interests, as well as impacts from past, present, and reasonably foreseeable project activities in the area. The spatial and temporal scopes of these supplemental assessments must be defined in collaboration with COTTFN.</p> <p>Requirement 7: COTTFN requests that the Proponent provide more information on discharge water, including anticipated volumes, and an adequate characterization of impacts and impact pathways, magnitude, extent, likelihood of effects.</p>	<p>Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on COTTFNs current and future use of lands and resources.</p> <p>The need for the project is described in Section 1.1 of the draft ESR and the alternatives to the undertaking were considered in Section 1.3. In these Sections, Hydro One as the transmitter accepts the recommendations of the Independent Electricity System Operator (IESO) as a starting point for the EA and only the technically viable alternative routes were developed and evaluated through the Class EA process.</p> <p>Planning for this project is subject to the Class EA for Minor Transmission Facilities, 2016 (Class EA for MTF), which is the proponent's legal compliance mechanism under the Environment Assessment Act. Section 6.5 of the Class EA for MTF states: Consideration of Cumulative Effects: All proponents will consider cumulative effects when planning projects. The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments).</p> <p>Hydro One intends to assess the cumulative effects of the project in compliance with this requirement, however; to extend beyond this (such as other cumulative effects beyond the immediate project area), is outside the scope of the Class EA for MTF and often Hydro One's mandate, awareness or control. The Chatham x Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future. Further, Hydro One's ability to determine what future developments or potential "induced developments" may result in the region are limited to what the IESO provides in its broader regional planning, which focuses primarily on large-scale regional trends. Subsequent projects also require their own planning processes, which often makes knowledge of siting or locations of assets (tied to potential effects) impossible to predict before that planning is undertaken.</p> <p>That said, Hydro One would be pleased to discuss further how the Chatham to Lakeshore transmission project could affect COTTFN's current use of lands and resources, as well as plans for future use of same, and examine opportunities to mitigate potential effects. If information necessary to assess/discuss these issues is provided prior to submission of the final ESR, Hydro One will examine how best to incorporate the information into finalization of the ESR. If information is received after submission of the final ESR, it will be included in the subsequent phases of the project such as development of detailed construction and environmental mitigation plans and post-construction rehabilitation plans.</p> <p>Requirement 6: (this is the second requirement 6): See response to No.2, immediately above.</p> <p>Requirement 7: Hydro One would be pleased to provide more information on discharge water, including anticipated volumes and to discuss impacts, impact pathways, magnitude, extent and likelihood of impacts, with COTTFN. As this information will require consideration of both detailed design and construction methodology (e.g., tower footing specifications) as well as further site-specific information (e.g., geotechnical information) not yet available, Hydro One expects this information to be made available later in the detailed design and construction planning process, closer to the commencement of construction.</p>	<p>To be addressed in the final ESR through the addition of a new section describing cumulative effects, in line with the requirements of the Class EA for MTF.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>3. Lack of integration of COTTFN knowledge in assessment process</p> <p>The dESR includes no COTTFN-specific knowledge in any aspect of the assessment and project planning, including identification of impacts, the alternatives assessment, and mitigation planning. We appreciate that Hydro One intends to include the findings from COTTFN's ongoing Traditional Knowledge and Use Study (TKUS) into the next stages of Project Planning; however, our knowledge should have also been considered in the identification of impacts, mitigations, and the development of the project plan <u>before</u> a preferred alternative was identified. Indigenous Knowledge (IK) should inform all aspects of the project design and assessment since the project is being proposed in COTTFN's traditional territory and there is a body of knowledge that should have been used to better understand the past and future ecological and cultural uses of the area.</p> <p>In general, the Proponent's conclusions that there will be no measurable adverse impacts on COTTFN's CULRTP demonstrates how its technical findings diverge from Indigenous understandings and perspectives and highlights the need for proper, Indigenous-led integration of COTTFN Indigenous Knowledge.</p> <p>COTTFN finds it especially troubling that the dESR does not consider COTTFN's cultural heritage within the Project area. COTTFN cultural heritage information was not sought or included in dESR. Therefore, the assessment did not benefit from COTTFN's Indigenous Knowledge related to key places and areas of historic and ancestral use and occupancy.</p> <p>Requirement 8: Hydro One must work with COTTFN to incorporate the results of the COTTFN TKUS into the final ESR, future decision-making, and Project planning including in the development and implementation mitigation measures and monitoring plans. This will require a modification and revisions to the ESR based on guidance from COTTFN. Hydro One was unwilling to wait for COTTFN's TKUS as a part of our comments package for the dESR, and as such the level of detail provided in this submission is limited by COTTFN's inability to consult with knowledge holders. While COTTFN appreciates that Hydro One has its timeline, it is more important that irrevocable actions are not taken until COTTFN can add its knowledge into the assessment of acceptable and preferred alternative routing for the proposed Project. It is imperative that COTTFN knowledge is a part of this assessment and project planning.</p>	<p>See Response to G3, NO.1, above.</p> <p>Regarding the COTTFN Cultural heritage information, from the commencement of the Class EA in January 2020 Hydro One has directly consulted with Indigenous communities on the Project. Hydro One is committed to including input received from COTTFN on known or potential Indigenous Cultural Landscapes prior to finalization of the ESR. The CHEC report describes the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Where information on known areas of historical significance was provided by First Nation communities, that information was considered in the evaluation of the route alternatives.</p> <p>If any such information can be provided going forward (i.e., following submission of the final ESR) either resulting from the TKUS or otherwise, Hydro One will review and consider this information in the subsequent planning phases of the Project.</p> <p>Requirement 8: Hydro One will examine how best to incorporate COTTFN TKUS information when received and discussed with COTTFN. At a minimum, this information will be included in the development/refinement of project design, development of construction methodologies and development of post-construction rehabilitation plans. Either way, Hydro One considers it very important to work with COTTFN to identify mitigation/accommodation measures that will minimize impacts to COTTFN's rights and interests.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

<p>4. Inadequate understanding of Project impacts and impact pathways that may adversely affect COTTFN's constitutionally protected rights and interests within our traditional territory</p> <p>The dESR was prepared in the absence of relevant information about COTTFN's knowledge and use of the Project area and fails to identify impact pathways related to COTTFN's Aboriginal and Treaty rights and interests. In a survey conducted by COTTFN, all respondents identified the ongoing and future importance of the area for our rights and interests (COTTFN Survey, August 5-6, 2021). The survey respondents noted that the area is used for fishing, hunting, and harvesting. The respondents likewise noted that the Project falls within or near important wildlife habitats, fish habitats, and traditional plant zones (areas where traditional plants grow and are harvested). The latter is particularly important because it is difficult to find areas where traditional plants still grow, so the loss of any traditional plant zones can have profound impacts on our rights and interests.</p> <p>In short, our technical review and preliminary discussion with members have identified several potential impacts to our rights and interest including: a) impacts to hunting rights via impacts to wildlife and wildlife habitat (particularly migratory birds and waterfowl); b) impacts to fishing rights via impacts to water and aquatic species; c) impacts to harvesting rights via impacts to ability to pick traditional plants, impacts to vegetation and traditional plants and medicine; and d) impacts to tangible and intangible cultural heritage resources.</p> <p>The assessment of project effects on COTTFN must recognize that COTTFN's ability to practice our Aboriginal and Treaty Rights has been severely limited in the project area due to land alienation, agricultural development, urbanization, transportation infrastructure and utilities. The dESR fails to recognize this historical, cumulative context and the consequent vulnerability of COTTFN to additional incremental impacts.</p> <p>The dESR fails to consider potential impacts on COTTFN's ability to harvest culturally important vegetation, including medicinal plants, due to project-related clearing and the application of herbicides. Given the historical cumulative alienation of COTTFN's lands and resources, all potential vegetation harvesting sites are of high value to COTTFN. The dESR also fails to identify a role for COTTFN in identifying reclamation objectives, which not only misses the opportunity to incorporate COTTFN Indigenous Knowledge, but also fails to respect COTTFN's stewardship rights and responsibilities.</p> <p>The dESR's assessment of wildlife impacts fails to take into account culturally important species for COTTFN, instead focussing primarily on rare and at-risk species. While rare and at-risk species are important, the dESR needs to consider species that are essential to the practice of COTTFN's Aboriginal and Treaty rights. This includes not only the species, but also their habitat. For example, waterfowl are highly significant to COTTFN, yet the dESR's assessment of potential wetland impacts is perfunctory and not carried through to an assessment of wildlife impacts. Similarly, the dESR only considers impacts to "significant woodlands," but</p>	<p>Hydro One looks forward to receiving COTTFN's TKUS information, as well as other information received from survey respondents and other community members in regards to the identification of potential impacts and impact pathways related to COTTFN's Aboriginal and Treaty rights and interests.</p> <p>Not having received this information from COTTFN prior to the selection of the preferred route alternative, the Hydro One team developed criteria for the comparison of route alternatives and the assessment of potential project impacts using factors that may address many of the potential impacts identified by COTTFN community members, including:</p> <p>a) Impacts to hunting rights via impacts to wildlife and wildlife habitat (particularly migratory birds and waterfowl);</p> <p>The Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria applied in the evaluation of route alternatives intended to address these potential impacts with a criterion, "Areas that support hunting/trapping/harvesting grounds". As per similar comments received for other communities prior to the selection of the preferred route, this criterion was not limited to specifically identified areas of current use but rather was applied to capture effects to all potential habitats which may provide or support these uses, applying information collected from the natural environment field program for the Class EA such as Ecological Land Classification (ELC) and aquatic habitat assessments.</p> <p>b) Impacts to fishing rights via impacts to water and aquatic species;</p> <p>The Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria applied in the evaluation of the route alternatives intended to address these potential impacts with a criterion, "Areas that support fish bearing waters with identified or inferred habitat of game fish". Similar to the criterion mentioned above, this criterion captured effects to all areas supporting fish and aquatic habitats and species and therefore supported both current and potential fishing uses throughout the region.</p> <p>c) Impacts to harvesting rights via impacts to ability to pick traditional plants, impacts to vegetation and traditional plants and medicine</p> <p>The Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria applied in the evaluation of route alternatives intended to address these potential impacts with criteria described above, plus the criterion, "Effects to rare/undisturbed native habitats/ ecosystems". Factors that were measured to understand these potential impacts included, "Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism". Based on input received from participating Indigenous communities, many of these habitat types are considered traditional habitats used for medicine gathering and other important cultural uses of the land.</p> <p>d) Impacts to tangible and intangible cultural heritage resources.</p> <p>From the commencement of the Class EA in January 2020 Hydro One has directly consulted with Indigenous communities on the Project. Hydro One is committed to including input received from COTTFN on known or potential Indigenous Cultural Landscapes prior to finalization of the ESR. The CHEC report describes the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of</p>	<p>Several aspects of this comment have been addressed in the draft ESR.</p> <p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
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<p>does not consider potential impacts to woodlands not considered to be significant which may nonetheless provide important habitat to COTTFN's valued species. In areas subject to a high degree of deforestation, all remaining treed areas take on a higher importance. Additionally, the Project is located in the Eastern Lake St. Claire Important Bird Area but the dESR does not consider potential cumulative effects of the project on migratory birds in combination with existing transmission lines and wind turbines.</p> <p>The dESR fails to consider the potential impacts of the project on COTTFN's fishing rights. Instead, the dESR states that the Project would obtain the necessary permits and approvals from MECP, Conservation Authorities and Department of Fisheries and Oceans would be obtained before the commencement of work that has the potential to adversely affect fish and fish habitat. Obtaining such permits may not be protective of COTTFN's rights, which must be adequately assessed and vigorously protected.</p> <p>The Project has the potential to interact with tangible and intangible elements of COTTFN's cultural heritage. COTTFN cultural heritage includes both tangible and intangible values including culturally important sites and places (such as spiritual sites, historical areas, burial grounds and ceremonial sites), connection to place, knowledge transmission, and cultural continuity. Each of these components should have been considered in the Proponent's assessment of cultural heritage resources in the Project area; however, the dESR failed to do so. The dESR concludes that the Project does not interact with any cultural landscapes, but does so in the absence of appropriate consultation with COTTFN. Survey respondents noted that they are concerned that the proposed Project would impact members' ability to practice culture thereby impacting knowledge transmission and the ability for COTTFN to care for their lands and water into the future.</p> <p>Requirement 9: COTTFN requires that Hydro One incorporate the results of COTTFN's forthcoming TKUS into its ESR to evaluate Project impacts to, and infringements on, COTTFN Aboriginal Treaty Rights and interests.</p> <p>Requirement 10: Hydro One must conduct further archaeology and heritage assessments with COTTFN, as well as other impacted Indigenous Nations in order to address gaps in archaeology assessment with respect to Indigenous use and values.</p> <p>Requirement 11: COTTFN requires that Hydro One consults with COTTFN regarding key culturally important species of concern in relation to the Project, wildlife habitat, and natural areas including woodlands. These discussions should include a consideration for whether additional studies (e.g., regarding fish spawning locations, culturally important wildlife and ecosystems, and natural areas) utilizing COTTFN Indigenous Knowledge (IK) are required. The results should be reported in revisions to the ESR.</p>	<p>Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Where information on known areas of historical significance was provided by First Nation communities, that information was considered in the evaluation of the route alternatives.</p> <p>Hydro One would like to clarify that the draft ESR does include assessment of effects to all vegetation (i.e., not limited to only significant woodlots), both in the evaluation of route alternatives and in the description of environmental effects and proposed mitigation measures. Similarly, Hydro One would like to reiterate the commitment made in the draft ESR that TKUS or other information or input provided by Indigenous communities, including COTTFN, will be considered and incorporated into the project to the extent feasible, and that this commitment does extend to aspects of the project such as post-construction restoration and the Biodiversity Initiative that Hydro One has committed to undertake for the Chatham x Lakeshore project.</p> <p>Concerns that the proposed Project could impact COTTFN community members' ability to practice culture thereby impacting knowledge transmission, are important to Hydro One. As Hydro One and COTTFN continue to identify potential impacts and measures to mitigate potential impacts, these concerns will be addressed.</p> <p>Requirement 9: See response to Requirement 8.</p> <p>Requirement 10: As described in the draft ESR, Hydro One has committed to conducting additional archaeological and heritage assessments and has offered to include COTTFN representatives in the upcoming archaeological assessment field surveys and providing opportunities for COTTFN to review reports. Hydro One looks forward to working with COTTFN to discuss any further information that COTTFN is able to provide.</p> <p>Requirement 11: Hydro One looks forward to working with COTTFN to identify key culturally important species of concern in relation to the Project, including wildlife habitat, and natural areas including woodlots. As Hydro One and COTTFN continue to identify potential impacts and measures to mitigate potential impacts, input received from COTTFN, including information provided by the TKUS, will be reviewed and discussed and used to further identify specific mitigation measures.</p> <p>If the COTTFN TKUS information is provided prior to submission of the final ESR, Hydro One will examine how best to incorporate the information into finalization of the ESR. If information is received after the submission of the final ESR, it will be considered in the development/refinement of project design, development of construction methodologies and development of post-construction rehabilitation plans. Either way, Hydro One considers it very important to work with COTTFN to identify mitigation/accommodation measures that will minimize impacts to COTTFN's rights and interests.</p>	

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<p>5. Inadequate mitigations for offsetting impacts from the proposed Project</p> <p>The dESR does not identify an appropriate role for COTTFN in the development and implementation of environmental mitigation and monitoring plans, restoration plans and ongoing project monitoring. This violates COTTFN's governance and stewardship rights and obligations. This is particularly concerning given inadequacy of Hydro One's weakly worded mitigation measures. Many mitigation measures presented in the dESR use qualifying language such as "where practical" and "where feasible." Such language renders the measures practically unenforceable. COTTFN therefore finds the mitigation measures to be incomplete.</p> <p>Requirement 13: COTTFN requires Hydro One develop more meaningful mitigations that will actually and effectively mitigate Project impacts on wildlife, vegetation, aquatic species, COTTFN cultural heritage, and COTTFN Aboriginal and Treaty Rights. Hydro One must involve COTTFN in mitigation development, refinement, and implementation to ensure that final routing, management plans and monitoring incorporate COTTFN's knowledge and minimize impacts on COTTFN's Aboriginal and Treaty Rights. This may include, but is not limited to:</p> <ul style="list-style-type: none"> Plant monitoring and mitigations efforts including support for COTTFN's ongoing traditional plant rehabilitation efforts, the relocation of traditional plants from the Project area to COTTFN's protected areas, and the development of a vegetation plan in collaboration with COTTFN; Water monitoring and mitigation efforts; Other ecological mitigations and monitoring activities including hiring and supporting training a COTTFN environmental monitors, consultation regarding tree removal plans and revegetation, and support for COTTFN in the Proponent's Biodiversity Initiative; and Cultural heritage monitoring and mitigation efforts, including hiring and supporting training COTTFN aboriginal field liaisons, the development of an archaeology protocol in collaboration with COTTFN, and involvement of COTTFN in the Stage 2 assessment for the Project. 	<p>Hydro One wishes to support COTTFN's governance and stewardship rights and obligations. We would be pleased work collaboratively to discuss an appropriate role for COTTFN in the development and implementation of environmental mitigation and monitoring plans, post-construction restoration plans and ongoing project monitoring.</p> <p>As more detailed and specific design and construction plans are developed for the project, the environmental mitigation measures prescribed for certain situations will also become more well-defined. As the detailed plans required for this level of specificity have not yet been developed, the mitigation measures described in the draft ESR include the suite of potential mitigation measures that could be applied for the project and specifically prescribed during the detailed design and construction planning phase of the project. As not every mitigation measure is feasible or practical in all areas, these qualifying statements are important to note that some measures will be applied to specific areas or circumstances to which they are best suited, as identified in subsequent detailed construction and environmental mitigation plans.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, and to incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>Requirement 13: (note there is no Requirement): See response to G7 – No. 5, above.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by COTTFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and COTTFN as preparations begin for construction and we are committed to working together on this.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Hydro One should fund these initiatives and ensure such funding is available throughout the life of the Project (depending on the type of program).</p>	<p>Hydro One has and will continue to work with COTTFN to provide capacity funding to support the ongoing consultation / engagement on the Project. We remain open to continuing this discussion and if there are specific requirements, we remain open to discussing as the Project advances.</p>	<p>Addressed.</p>

Issues and Concerns	Proponent Responses	Status
<p>Depth and approach to consultation and engagement. Hydro One has not yet adequately consulted with Chippewas of the Thames First Nation (COTTFN) on the Project. In general, the consultation process has been top-down and one-sided. Proper consultation involves a two-way exchange of information based on a Nation-to-Nation relationship between the Proponent and the Nation / Indigenous government. For example, Hydro One did not include COTTFN in project scoping or identification of impacts, Hydro One did not fully consult COTTFN on project routing in the alternatives assessment, nor did Hydro One include COTTFN in the development of mitigations. The result has been a lack of integration of COTTFN Knowledge and input.</p> <p>Request: COTTFN requests further formalization of the relationship between COTTFN and Hydro One. This should include the further consultation meetings promote the exchange of information where COTTFN can share their knowledge and inform the project.</p> <p>COTTFN also asks that Hydro One not file its final Environmental Study Report (ESR) until the results of the COTTFN Traditional Knowledge and Use Study (TKUS) are available and work with COTTFN to ensure the findings from the study are incorporated into the ESR.</p> <p>COTTFN recommends the adaption and extension of Community Engagement Coordinator (CEC) funding into post-construction monitoring phase. The draft Environmental Study Report (dESR) states: "As part of its initiatives to support and build capacity for the Haudenosaunee and Anishnawbek communities that are participating in the Project, Hydro One offered each participating community the financial resources necessary to hire a Community Engagement Coordinator (CEC)." While COTTFN appreciates that Hydro One made CEC funding available, COTTFN was not able to find a CEC in time for this program and thus hired outside of the program and without these funds. The dESR goes on to explain that "CECs will continue to be retained through to the commencement of construction." COTTFN wants to be actively involved in all stages of the Project and in decision-making related to impacts to COTTFN rights. COTTFN requests that the CEC funding and program be adapted to COTTFN's circumstances by supporting the salary of our designated staff for this project, the Environment Technician in the Treaty, Lands, and Environment Department. We request that these funds are extended to support ongoing engagement beyond the construction phase into post-construction monitoring. This would benefit Project communication and the relationship between Hydro One and the COTTFN community during key phases of the Project</p>	<p>Hydro One recognizes that consultation / engagement is an ongoing process that continues throughout the life cycle of the Project. We are committed to continuing to work together and improving our relationship with COTTFN.</p> <p>Section 3.6 of the draft ESR describes the consultation activities and opportunities provided to Indigenous communities throughout the Class EA. Section 3.6, 3.6.1 and 3.6.2 describe the consultation and outreach activities and opportunities (such as capacity funding agreements) that were offered to all communities, while Section 3.6.7 provides a further summary of the consultation with the Chippewas of the Thames First Nation specifically. Further detail is provided in the Record of Consultation in Appendix B.</p> <p>Throughout the Class EA process, Hydro One provided numerous opportunities for COTTFN and other Indigenous communities to provide input into the project including o the evaluation of route alternatives, assessment of environmental effects and identification of mitigation measures for the project and we are committed to continuing this work throughout the life cycle of the Project.</p> <p>If COTTFN is able to provide the TKUS, or any similar information, to Hydro One prior to submission of the final ESR, Hydro One will work to incorporate that information into the final ESR.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>Hydro One is open to discussions with COTTFN on how to best utilize the capacity funding provided and would welcome additional dialogue on this request as the Project advances.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of consideration of COTTFN's cultural heritage within the Project area. The assessment only includes consideration of "built" heritage resources. COTTFN cultural heritage information was not sought or included in Section 4.3 of the dESR. Therefore, the assessment did not benefit from COTTFN's Indigenous Knowledge related to key places and areas of historic and ancestral use and occupancy. COTTFN cultural heritage includes both tangible and intangible values including culturally important sites and places (such as spiritual sites, historical areas, burial grounds, and ceremonial sites), connection to place, knowledge transmission, and cultural continuity. Each of these components should have been considered in the Proponent's assessment of cultural heritage resources in the Project area.</p> <p>Request: Work with COTTFN to integrate into the final ESR information on COTTFN cultural heritage, including spiritual sites, historical areas, and ceremonial sites. This update should be prepared in collaboration with COTTFN.</p>	<p>From the commencement of the Class EA in January 2020 Hydro One has directly consulted with Indigenous communities on the Project. Hydro One is committed to including input received from COTTFN on known or potential Indigenous Cultural Landscapes prior to finalization of the ESR. The CHEC report describes the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Where information on known areas of historical significance was provided by First Nation communities, that information was considered in the evaluation of the route alternatives.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, including information on COTTFN cultural heritage, and incorporating that information into subsequent phases of the project.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR. Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Lack of consideration of COTTFN's land use planning and objectives. While settler communities' and governments' land use policies and priorities are considered in the Proponent's assessment, COTTFN's land use priorities and objectives need to be factored as well into design/ siting of the transmission line.</p> <p>Request: COTTFN requests that the Proponent address this assessment gap by seeking information from COTTFN regarding land use planning priorities and objectives, and potential conflicts arising from the proposed Project.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, including information on COTTFN land use planning priorities and objectives, and incorporating that information into subsequent phases of the project.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Cultural and ecological importance of riparian areas overlooked. Section 4.6 does not specifically identify or describe riparian areas even though the Project will cross and interact with numerous watercourses (as shown in Table 4-3). COTTFN understands that healthy riparian areas are important for water quantity and quality and also for plant and animal movement and habitat. Particularly within a landscape where native ecosystems have been largely converted for agricultural and other uses, riparian areas are typically biodiversity hotspots, and critical remaining habitat for culturally important species. The lack of specific consideration of riparian areas undermines baseline data collection and subsequent identification of Project interactions with COTTFN rights and supporting values.</p> <p>Request: Please include a comprehensive description of riparian areas in the Study Area in revisions to the ESR, including an inventory of culturally important species potentially vulnerable to water crossing development developed in collaboration with COTTFN.</p> <p>In collaboration with COTTFN, identify and include mitigations specific to Project impacts in riparian areas.</p>	<p>Due to their association with watercourses and waterbodies, effects to riparian vegetation communities (and proposed mitigation measures) are described in Section 7.7.4.1 of the draft ESR, as well as in Table 7-1 under the "Surface water resources" heading.</p> <p>It's acknowledged that existing farming practices have limited the amount of riparian habitat (watercourse buffers) across the landscape. Riparian areas throughout the study area will be further described in Section 4 of the ESR with specific reference to their potential to provide SAR and aquatic habitat.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, including information on species of cultural importance identified by COTTFN, and incorporating that information into subsequent phases of the project.</p>	<p>Addressed in the draft ESR but further description will be provided in the final ESR.</p> <p>Addressed in the final ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Inadequacy of spatial boundary to address Project-specific impacts arising from water crossings. The Proponent's characterization of water crossings and associated effects assessment is limited to the Project Study Area (PSA - 120 m surrounding the Project route). This may be inadequate for fully identifying and addressing Project impacts, which may not be localized, on COTTFN values. For example, contamination arising from Right of Way (RoW) construction and maintenance may interact with surface and ground water and disperse to other areas downstream.</p> <p>Request: Include consideration of potential Project effects on COTTFN values within the Local Study Area (LSA) that could result from water crossing construction (e.g., water quality impacts, habitat impacts affecting key wildlife species) along the Project route.</p>	<p>The 120 m Project Study Area was selected as a mechanism to understand potential site-specific impacts so support the Class EA. Section 7 of the ESR outlines various mitigation measures (e.g. for spills, source water protection, surface water resources, etc.) as a mechanism to avoid and/or mitigation potential impacts, including the preparation of a Spill Response Plan – to be developed by the EPC contractor. Hydro One and its contractor welcomes collaboration and input from COTT FN on these detailed plans as they are developed.</p>	<p>Addressed in the draft ESR through the description of environmental effects and mitigation measure provided in Section 7, and in the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Lack of consideration of special areas of importance to Indigenous groups. Consideration of special areas is limited to non-Indigenous values. Places of specific importance to Indigenous nations, including COTTFN who exercise rights in the Project area, were not identified.</p> <p>Request: COTTFN requests that the Proponent engage them in discussion regarding identification of areas of importance to COTTFN members, which they may wish to conserve. Results from COTTFN's ongoing Project-specific TKUS should inform these discussions. COTTFN requests that Hydro One work with COTTFN to ensure the study findings are properly integrated into the ESR and considered in decision-making and mitigation planning / monitoring.</p>	<p>Throughout the Class EA process, Hydro One provided numerous opportunities for COTTFN and other Indigenous communities to provide input, including the identification of areas of special importance, into the project including to the evaluation of route alternatives, assessment of environmental effects and identification of mitigation measures for the project.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, including information on areas of special importance to COTTFN, and to incorporating that information into subsequent phases of the project.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of consideration of culturally important species to COTTFN. While rare and at-risk species are important, the assessment is heavily focused on listed species and many wildlife species of particular importance to COTTFN are not captured.</p> <p>Request: Please provide a commitment to consult with COTTFN regarding key culturally important species of concern in relation to the Project, include these species in the assessment. These discussions should include a consideration for whether additional studies (e.g., regarding fish spawning locations, culturally important wildlife and ecosystems) utilizing COTTFN Indigenous Knowledge (IK) are required.</p> <p>Report the results in revisions to the ESR.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, including information on species of cultural importance identified by COTTFN, and incorporating that information into subsequent phases of the project.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Overall, COTTFN consultation and engagement surrounding the alternatives assessment process has been inadequate. Hydro One has not meaningfully involved COTTFN in the process. Hydro One's Consultation Records (Appendix B6) state that COTTFN representation was present at a Technical Advisory Committee (TAC) meeting. COTTFN Treaty, Lands, and Environment Department and Consultation Department are the representing body for COTTFN in project EAs and consultation; however, these departments have no record of involvement in this meeting. Additionally, attendance at on TAC meeting would not constitute COTTFN involvement in the Alternatives Assessment. As such, COTTFN input has not be adequately incorporated in the alternative assessment so far.</p> <p>Request: Please commit to work meaningfully with COTTFN to identify ways to ensure COTTFN provides input on site- specific routing options if the selected route is found to intersect with sensitive lands and resources as per the finding from COTTFN's forthcoming TKUS.</p> <p>Please also verify who from COTTFN attended the TAC and under what representative mandate. If COTTFN determines that the representation was not adequate, COTTFN reserves the right to seek additional opportunities to weigh in on the alternatives assessment.</p>	<p>Throughout the Class EA process, Hydro One provided numerous opportunities for COTTFN and other Indigenous communities to provide input into the project including to the evaluation of route alternatives, assessment of environmental effects and identification of mitigation measures for the project. Section 3.6 of the draft ESR describes the consultation activities and opportunities provided to Indigenous communities throughout the Class EA. Section 3.6, 3.6.1 and 3.6.2 describe the consultation and outreach activities and opportunities (such as capacity funding agreements) that were offered to all communities, while Section 3.6.7 provides a further summary of the consultation with the Chippewas of the Thames First Nation specifically. Section 5.3.4 of the draft ESR further summarizes efforts made by Hydro One to involve Indigenous communities in the route evaluation and selection process, and development of the evaluation framework. Additional detail is provided in the Record of Consultation in Appendix B.</p> <p>Given the evaluation of the route alternatives undertaken leading to the selection of the preferred route, including the numerous opportunities provided to incorporate input into the evaluation throughout 2020, Hydro One does not intend to revisit the evaluation of the route alternatives and selection of the preferred route. As referenced above and in the draft ESR, Hydro One made extensive attempts to provide opportunities for discussion and input from Indigenous communities, and from the commencement of the Class EA was very clear on the timelines for key milestones including the selection of the preferred route.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, and to incorporating that information into subsequent phases of the project.</p> <p>Greg Graham of the COTTFN attended both the Natural Environment and Socio-Economic Environment sessions for the TAC workshop #2 held on September 22, 2020. Additionally, we can confirm that Barry Vickers and Mark Podlasly of the First Nation Major Projects Coalition (FNMPC) both attended the Socio-Economic Environment session for the TAC Workshop #2. It is our understanding, as per email discussions earlier in September 2020 that the FNMPC had been asked by COTTFN to support them on the Chatham x Lakeshore project and had asked to attend the second TAC workshop in this capacity.</p> <p>We recognize we have more work to do and welcome the ongoing collaboration and input of COTTFN.</p>	<p>Addressed in the proponent's response, and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

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<p>In Section 5, Hydro one describes the alternative means assessment process. One of the initial steps of the process is to identify alternatives. Principles and values are a foundational step to identify alternatives. According to the Proponent, principles guiding the selection alternatives include "...engineering principles (best practices and industry drivers ...)" (including design principles), and non- engineering principles (e.g., avoiding large waterbodies, dense residential areas, wind farms, and by limiting impact on wetlands and Environmentally Sensitive Areas (ESA) (p. 5-2). However, in addition to Proponent-defined principles (which reflect underlying values), it is essential to incorporate the principles and values of those most affected by and/or sensitive to the project into the project design and route siting. These additional principles and values may lead to additional location and/or design criteria e.g., aerial vs buried. Therefore, it is critical that COTTFN principles and values are reflected in the assessment of alternatives, otherwise the selection alternative may be biased by the Proponent's preferences (e.g., easiest and most affordable option option).</p> <p>Request: Please collaborate directly with COTTFN to identify principles and values relevant to the Nation, and establish criteria that are verified to have meaning to COTTFN in the conduct of a meaningful alternatives assessment.</p>	<p>Throughout the Class EA process, Hydro One provided numerous opportunities for COTTFN and other Indigenous communities to provide input into the project including to the evaluation of route alternatives, assessment of environmental effects and identification of mitigation measures for the project. Section 3.6 of the draft ESR describes the consultation activities and opportunities provided to Indigenous communities throughout the Class EA. Section 3.6, 3.6.1 and 3.6.2 describe the consultation and outreach activities and opportunities (such as capacity funding agreements) that were offered to all communities, while Section 3.6.7 provides a further summary of the consultation with the Chippewas of the Thames First Nation specifically. Section 5.3.4 of the draft ESR further summarizes efforts made by Hydro One to involve Indigenous communities in the route evaluation and selection process, and development of the evaluation framework. Additional detail is provided in the Record of Consultation in Appendix B.</p> <p>Given the evaluation of the route alternatives undertaken leading to the selection of the preferred route, including the numerous opportunities provided to incorporate input into the evaluation throughout 2020, Hydro One does not intend to revisit the evaluation of the route alternatives and selection of the preferred route. As referenced above and in the draft ESR, Hydro One made extensive attempts to provide opportunities for discussion and input from Indigenous communities, and from the commencement of the Class EA was very clear on the timelines for key milestones including the selection of the preferred route.</p> <p>The Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria applied in the evaluation of route alternatives intended to address potential impacts to features of importance to Indigenous communities, through criteria such as "Areas that support hunting/trapping/harvesting grounds", and "Areas that support fish bearing waters with identified or inferred habitat of game fish". As per comments received prior to the selection of the preferred route, these criteria were not limited to specifically identified areas of current use but rather was applied to capture effects to all potential habitats which may provide or support these uses, applying information collected from the natural environment field program for the Class EA such as Ecological Land Classification (ELC) and aquatic habitat assessments.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, and to incorporating that information into subsequent phases of the project.</p>	<p>Addressed in the proponent's response, and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Hydro One presents the suite of evaluation categories and criteria under each of those categories that will be used to contrast and compare the alternatives. These categories and criteria do not consider COTTfN rights and values. COTTfN-defined categories and criteria to be used for alternative means assessment would at minimum include:</p> <ol style="list-style-type: none"> Constructability and Complexity Economic feasibility Integrity and reliability Physical dimensions (new clearing, waterbody footprint and # of crossings, etc.) Temporal dimensions (lifespan, duration of specific activities, e.g., in-water works, progressive and end-of-life reclamation, etc.) Ecological Social Health Aboriginal and Treaty Rights Reconciliation Sustainability and climate change Hazards and Risks Confidence (in engineering, constructability, and environmental performance) Cumulative Effects <p>Criteria under each of those factors, and any additional factors used, should be developed with affected Indigenous Nations. Some criteria to especially consider, under the appropriate factor, include:</p> <ul style="list-style-type: none"> land use and alienation Indigenous food security mental health risks from fear/stigma association with land, water, food, medicine access to land for harvesting and cultural activities. <p>Request: Please collaborate with COTTfN to identify if and how COTTfN-defined categories and criteria are captured within the current suite of categories and criteria found in Section 5-3. Then, the alternative means – location – assessment should be redone should any categories or criteria be missing from the current assessment. This may include the need to gather additional baseline data to adequately evaluate differences between the alternatives.</p>	<p>Throughout the Class EA process, Hydro One provided numerous opportunities for COTTfN and other Indigenous communities to provide input into the project including o the evaluation of route alternatives, assessment of environmental effects and identification of mitigation measures for the project. Section 3.6 of the draft ESR describes the consultation activities and opportunities provided to Indigenous communities throughout the Class EA. Section 3.6, 3.6.1 and 3.6.2 describe the consultation and outreach activities and opportunities (such as capacity funding agreements) that were offered to all communities, while Section 3.6.7 provides a further summary of the consultation with the Chippewas of the Thames First Nation specifically. Section 5.3.4 of the draft ESR further summarizes efforts made by Hydro One to involve Indigenous communities in the route evaluation and selection process, and development of the evaluation framework. Additional detail is provided in the Record of Consultation in Appendix B.</p> <p>In particular, the primary purpose of the first TAC workshop held in June 2020 was to confirm the list of criteria to be considered in the evaluation of route alternatives, including the identification of potential additional criteria. Further, Hydro One provided opportunities for Indigenous communities to provide input on the route evaluation process through to the selection of the preferred route in early 2021.</p> <p>Given the evaluation of the route alternatives undertaken leading to the selection of the preferred route, including the numerous opportunities provided to incorporate input into the evaluation throughout 2020, Hydro One does not intend to revisit the evaluation of the route alternatives and selection of the preferred route. As referenced above and in the draft ESR, Hydro One made extensive attempts to provide opportunities for discussion and input from Indigenous communities, and from the commencement of the Class EA was very clear on the timelines for key milestones including the selection of the preferred route.</p> <p>Many of the criteria listed by COTTfN were in fact incorporated into the planning process, including the identification and evaluation of the route alternatives. Hydro One is not able to consider route alternatives that are not economically feasible, or that do not meet the “integrity and reliability” requirements or need of the project. Constructability and complexity are captured by a number of Technical and Cost criteria, and other criteria listed by COTTfN are likewise captured in various criteria within the Natural Environment, Socio-Economic Environment and Anishnawbek and Haudenosaunee Culture, values and Land Use categories.</p> <p>Hydro One thanks the COTTfN for this additional information and will consider these comments and suggestions for evaluation criteria on subsequent projects.</p>	<p>Addressed in the proponent's response.</p>

Issues and Concerns	Proponent Responses	Status
<p>Hydro One presents the weighting for the criteria underlying each of evaluation categories. They also state that Hydro One's project team determined that no weighting should be applied to the evaluation categories, rather it should only be applied to the underlying criteria. COTTFN's opinion is that evaluation categories should be weighted amongst themselves. Further, COTTFN's position is that technical and cost evaluation categories should either not be included in the weighting at all or should account for no more than 15% of the weighting given to the evaluation categories.</p> <p>Request: Please collaborate with COTTFN to develop a weighting scheme for the categories and criteria. Then, the alternative means – location – assessment scoring should be redone with the new weighting scheme to confirm the preferred alternative. A Hydro One-defined and a COTTFN-defined scoring should each be developed in the event a mutually satisfactory weighting scheme can't be developed, and the preferred alternative chosen using these two weighting schemes should be compared.</p>	<p>Throughout the Class EA process, Hydro One provided numerous opportunities for COTTFN and other Indigenous communities to provide input into the project including o the evaluation of route alternatives, assessment of environmental effects and identification of mitigation measures for the project. Section 3.6 of the draft ESR describes the consultation activities and opportunities provided to Indigenous communities throughout the Class EA. Section 3.6, 3.6.1 and 3.6.2 describe the consultation and outreach activities and opportunities (such as capacity funding agreements) that were offered to all communities, while Section 3.6.7 provides a further summary of the consultation with the Chippewas of the Thames First Nation specifically. Section 5.3.4 of the draft ESR further summarizes efforts made by Hydro One to involve Indigenous communities in the route evaluation and selection process, and development of the evaluation framework. Additional detail is provided in the Record of Consultation in Appendix B.</p> <p>Given the evaluation of the route alternatives undertaken leading to the selection of the preferred route, including the numerous opportunities provided to incorporate input into the evaluation throughout 2020, Hydro One does not intend to revisit the evaluation of the route alternatives and selection of the preferred route. As referenced above and in the draft ESR, Hydro One made extensive attempts to provide opportunities for discussion and input from Indigenous communities, and from the commencement of the Class EA was very clear on the timelines for key milestones including the selection of the preferred route.</p>	<p>Addressed in the proponent's response.</p>
<p>In the dESR, Hydro One provides a scoring scale column with values of 1, 3, and 5 and assigns scores across each of the alternative route options for the criteria. Three problems arise:</p> <ol style="list-style-type: none"> 1. It is difficult to discern between alternatives using such a coarse scoring system. 2. There are instances where a criterion received a score other than 1, 3, or 5. It is unclear how these scores were determined. <p>It can be assumed that scores are developed for each criterion by comparing each of the alternatives to one another; i.e., subjective scoring. COTTFN's opinion is that scores should be developed independently, i.e., objective scoring, for example by establishing a scoring scheme that is based on an objective threshold tied to the criteria in a logical fashion.</p> <p>Request: Please clarify how scores are determined, including confirming whether they are subjective or objective within the criteria.</p> <p>Also, please include descriptive text for the scoring scheme in the ESR and provide at least one example of how a score is determined.</p> <p>Please collaborate with COTTFN to develop a scoring scheme that provides finer scoring, e.g., by using a number range 1-10, and is objective. The scoring of alternatives should then be redone to confirm the preferred alternative.</p>	<p>The application of scoring was completed on a scale of 1 to 5. A score of one has the most effect (or least benefit) while a score of five has the least effect (or most benefit). A score of three was determined to be neutral with scores of 2 and 4 falling along the scale of most effect to least effect, respectively.</p> <p>As your comment suggests, the scores were assigned using an objective method tied to a high and low threshold for each individual criterion. They were not subjective and can be repeated using the below example as a base case. Looking at the Effects to Vegetation Communities criterion we see that Alternative 2B effects 2.88 ha of incompatible vegetation while Alternative 1B effects 4.20 ha of Incompatible vegetation (incompatible vegetation being the effect being assessed). 2.88 ha represents the least effect (low threshold) while 4.20 ha represents the most effect (high threshold). The difference between the two is 1.33 ha. This means that 1.33 ha is the difference between the high and low thresholds for this individual criterion. To assign scores on a scale of 1-5 we took the 1.33 ha difference and divided it by 5 (for a scoring scale of 1-5). This gave us a quotient of 0.27 ha (representing the area assignable to each scoring unit). This means that for every increase of 0.27 ha (starting at 2.88 ha) of effect, there is a one point score change on our 1-5 scoring scale.</p> <p>This objective method tied to a high and low threshold for each criterion and was applied throughout the evaluation matrix where numerical quantitative assessments could be applied.</p>	<p>Addressed in the proponent's response.</p>

Issues and Concerns	Proponent Responses	Status
<p>The dESR does not adequately explain the impact any of the alternative routes will have on fish bearing streams. The dESR likewise does not explain how Indigenous Knowledge (IK) has been incorporated to identify or infer game species presence, or to limit these criteria to just be geared towards game species. Further, there is no baseline data presented that gives an understanding of Indigenous and non-Indigenous fishing practices and patterns.</p> <p>Request: In the ESR, please</p> <ul style="list-style-type: none"> Describe whether, how and which IK has been incorporated into the understanding of species presence in waters crossed by the alternative route options describe the IK that has been incorporated to justify limiting the consideration to game species describe the impacts this proposed project will have on fish bearing waters, and fishing describe how this evaluation criteria is distinct from the fish and aquatic habitat evaluation criteria and address whether these two evaluation criteria may lead to 'double-counting' <p>redo the scoring if adjustment must be made to this and/or the fish and aquatic habitat criteria</p>	<p>The Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria applied in the evaluation of the route alternatives intended to address these potential impacts with a criterion," Areas that support fish bearing waters with identified or inferred habitat of game fish". This criterion captured effects to all areas supporting fish and aquatic habitats and species as identified from desktop reviews and aquatic habitat assessments conducted in 2020, and therefore supported both current and potential fishing uses throughout the region. Following discussions with Indigenous communities regarding the importance of fish and fish habitat, additional review of provincial game fish stocking programs in the region was undertaken, although no fish stocking programs were identified within watercourses directly traversed by the route alternatives.</p> <p>Anticipated effects to surface water resources fish and aquatic habitats, as well as associated mitigation measures proposed, are described in Sections 7.7.4 and 7.7.8.2 of the draft ESR, respectively, as well as in Table 7-1.</p>	<p>Addressed in the proponent's response.</p>

Issues and Concerns	Proponent Responses	Status
<p>No baseline data is presented to understand the hunting, trapping, and harvesting activities occurring within the study area. Instead, Hydro One has identified lands that 'have potential' to support those activities. It is unclear whether this evaluation criterion has any real substance to adequately evaluate the impact of the various alternative route options on COTTFN Culture, Values and Land Use.</p> <p>Additionally, it is unclear how this evaluation criteria differs from the Effects to Vegetation criteria and what IK has been incorporated to determine its score.</p> <p>Request: In the ESR, please:</p> <ul style="list-style-type: none"> Describe whether, how and which IK has been incorporated into the understanding of hunting, trapping, and harvesting within the alternative route options study area determine with the COTTFN on the need to include 'gathering' in this evaluation criteria. This may also include the need to gather additional baseline data to understand gathering within the study area describe the impacts this specific project will have on hunting, trapping, and harvesting (and gathering if deemed appropriate) describe how this evaluation criteria is distinct from the effects to vegetation evaluation criteria and address whether these two evaluation criteria may lead to 'double-counting' describe the IK that has been incorporated to determining the scores of the alternative route options <p>redo the scoring if adjustment must be made to this and/or the effects to vegetation criteria</p>	<p>The Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria applied in the evaluation of route alternatives intended to address these potential impacts with a criterion, "Areas that support hunting/trapping/ harvesting grounds". As per comments received from other communities prior to the selection of the preferred route, this criterion was not limited to specifically identified areas of current use but rather was applied to capture effects to all potential habitats which may provide or support these uses, applying information collected from the natural environment field program for the Class EA such as Ecological Land Classification (ELC) and botanical assessments.</p> <p>Similarly, the criterion, "Effects to rare/undisturbed native habitats/ ecosystems" was developed to address comments received from Indigenous communities on the importance of preserving remnant native habitats and species. Factors that were measured to understand these potential impacts included, "Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism".</p> <p>Anticipated effects to natural terrestrial habitats and vegetation communities, as well as associated mitigation measures proposed, are described in Section 7.7.8 of the draft ESR, as well as in Table 7-1.</p>	<p>Addressed in the proponent's response.</p>
<p>The dESR states that access roads will be constructed within the station fence of the Chatham SS, but that no new permanent access road or entrance outside of the station fence will be required for the expanded station. Section 6 does not provide information about temporary access roads. This information is required to assess potential effects on water, vegetation, wildlife and COTTFN's rights and interests.</p>	<p>Information on temporary access road locations must be informed by detailed design, and this information will be provided as part of the detailed construction plans when it is available, including for the work required to expand the Chatham SS.</p>	<p>Addressed in the proponent's response, and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>The dESR states that "Hydro One will ... finalize restoration plans in consultation with appropriate stakeholders and the local communities, as necessary." COTTfN requires the proponent to prepare restoration plans in collaboration with COTTfN. This is necessary to ensure that restoration objectives are appropriately informed by COTTfN's IK and supportive of COTTfN's Aboriginal and Treaty Rights and interests.</p> <p>Request:</p> <p>Please provide a commitment to meaningfully work with COTTfN to develop and implement the project's restoration plans, which should include how traditional plants will be protected.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, and to incorporating that information into subsequent phases of the project, including post-construction restoration plans.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>The dESR states that "a project-specific Environmental Specifications will be prepared, outlining specific requirements to be followed for the proposed Project" and that "an Environmental Specialist will be available to address unforeseen environmental effects and mitigation requirements." The dESR does not identify if or how COTTfN will be involved in the development or implementation of project-specific mitigation and monitoring plans. COTTfN requires involvement in such plans to ensure that COTTfN's IK is incorporated and that COTTfN's Aboriginal and Treaty Rights and interests are protected.</p> <p>Request:</p> <p>Please provide a commitment detailing how Hydro One will meaningfully work with COTTfN to develop and implement the project's environmental mitigation and monitoring plans.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, and to incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by COTTfN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and COTTfN as preparations begin for construction and we are committed to working together on this.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>The dESR identifies that the construction of the transmission line and expansion of the Chatham SS will involve clearing. The dESR does not identify the full extent of clearing, which is required to understand potential impacts on vegetation, wildlife habitat and COTTfN's Aboriginal and Treaty Rights and interests.</p> <p>Request:</p> <p>Please identify the total area (in hectares) that will be cleared to accommodate the transmission line (including associated temporary access roads and temporary facilities) and Chatham SS.</p>	<p>Hydro One will add an estimate of the amount of incompatible vegetation anticipated to be removed for the Project to the appropriate sections of the ESR, including Table 7-1.</p> <p>Where incompatible vegetation communities (those containing species which, at maturity, reach a height that may pose a risk to the safe and reliable operation of an overhead transmission line) are traversed by transmission lines, these areas can typically be restored following construction into compatible vegetation communities (consisting of species which do not pose such a threat to reliability at mature height, e.g. Shrub Thicket), such that the long-term effect to incompatible vegetation communities is not a loss of all habitat value but rather a transition to a different, compatible vegetation community within the extent of the transmission line ROW.</p>	<p>Addressed in the proponent's response.</p>

Issues and Concerns	Proponent Responses	Status
<p>The dESR states that “the location of the temporary facilities will be determined by the project team and their contractor(s) during detail design/construction planning.” It is unclear whether any temporary facilities will be located outside of the Project Study Area. This information is required to understand the full extent of potential impacts on vegetation, wildlife, water, fish and COTTEN's Aboriginal and Treaty Rights and interests.</p> <p>Request: Please clarify whether any temporary facilities will be located outside of the Project Study Area.</p>	<p>Information on temporary access road locations must be informed by detailed design, and this information will be provided as part of the detailed construction plans when it is available.</p> <p>While the majority of construction access is anticipated to occur within the new transmission line ROW and Project study area (PSA), there may be a need for some temporary access roads outside of the PSA. As stated in Section 7 and Table 7-1 of the draft ESR, Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment, and existing access routes will be utilized to the extent practical. Off-corridor access will avoid natural features and sensitive areas.</p>	<p>Addressed in the proponent's response.</p>
<p>The dESR does not identify temporary crossing structures that will be installed for construction access at watercourses and other low-lying areas.</p> <p>Request: Please identify the locations of, and design of, temporary crossing structures that will be installed for construction access at watercourses and other low-lying areas.</p>	<p>Information on temporary watercourse crossing structures (locations and designs) will be provided as part of the detailed construction plans when it is available.</p> <p>As stated in Section 7 and Table 7-1 of the draft ESR, existing crossings and access routes will be utilized to the extent practical.</p>	<p>Addressed in the proponent's response and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of consideration of Project effects on Current Use of Lands and Resources for Traditional Purposes (CULRTP). The assessment does not explicitly or robustly assess Project impacts on COTTFN's CULRTP. In general, the Proponent's conclusions that there will be no measurable adverse impacts on COTTFN's CULRTP demonstrates how its technical findings diverge from Indigenous understandings and perspectives and highlights the need for proper, Indigenous-led integration of COTTFN Indigenous Knowledge.</p> <p>Request: COTTFN requests that the Proponent work with COTTFN to incorporate COTTFN knowledge and input into the assessment, which characterize current use of lands and resources by COTTFN and other affected Indigenous nations and assess Project effects on these values directly. Include consideration of cumulative effects (addressed in comment below). Development of this section, including identification of relevant Valued Components (VCs), impact pathways, and mitigations, must be done in consultation with COTTFN and must incorporate findings from COTTFN's TKUS.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including on Valued Components, and to incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>If this information can be provided prior to the submission of the final ESR, then Hydro One will work to incorporate this information into the final ESR. If this information is provided after submission of the final ESR, Hydro One will work with the construction contractor and COTTFN to include such assessments (and resulting avoidance, mitigation or restoration measures) as part of the detailed construction planning and environmental mitigation plans.</p> <p>The need for the project is described in Section 1.1 of the draft ESR and the alternatives to the undertaking were considered in Section 1.3. In these Sections, Hydro One as the transmitter accepts the recommendations of the independent agency (IESO) as a starting point for the EA and technically viable alternative routes were developed and evaluated through the Class EA process.</p> <p>Planning for this project is subject to the Class EA for Minor Transmission Facilities, 2016 (Class EA for MTF), which is the proponent's legal compliance mechanism under the Environment Assessment Act.</p> <p>Section 6.5 of the Class EA for MTF states: Consideration of Cumulative Effects: All proponents will consider cumulative effects when planning projects. The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments).</p> <p>Hydro One intends to assess the cumulative effects of the project in compliance with this requirement, however; to extend beyond this (such as other cumulative effects beyond the immediate project area), is outside the scope of the Class EA for MTF and often Hydro One's mandate, awareness or control. The Chatham x Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future. Further, Hydro One's ability to determine what future developments or potential "induced developments" may result in the region are limited to what the IESO provides in its broader regional planning, which focuses primarily on large-scale regional trends. Subsequent projects also require their own planning processes, which often makes knowledge of siting or locations of assets (tied to potential effects) impossible to predict before that planning is undertaken.</p>	<p>To be addressed in the final ESR where information on CULRTP is provided prior to the submission of the final ESR, and through the addition of a new section describing cumulative effects, in line with the requirements of the Class EA for MTF.</p>

Issues and Concerns	Proponent Responses	Status
<p>Impacts are described simplistically within the assessment, which fails to characterize key impact attributes such as magnitude, direction, extent, frequency, and likelihood of impacts identified. Impact pathways are also not clearly described or captured.</p> <p>Request: The Proponent must include in the requested section on current use of lands and resources by COTT FN a more robust effects characterization and impact pathways discussion that addresses the aforementioned gaps. This should be developed in collaboration with COTT FN.</p>	<p>The assessment of effects and mitigation to Source Water Protection areas (Section 7.7.5) includes a number of mitigation measures to avoid and/or mitigate the potential risk of impact pathways. Detailed construction plans will include specific measures to avoid or mitigate the risks of spills, and a Spill Response Plan will be developed to outline how spills, should they occur, will be managed, with the primary premise being to minimize the magnitude of a spill, the extent of a spill, and potential downstream impacts of a spill. Hydro One welcomes input from COTT FN on these and other detailed construction plans, as they are developed prior to construction.</p> <p>Where possible, the potential magnitude of impacts was captured as part of the evaluation of alternatives. Examples include effects to vegetation based on magnitude of impacts to incompatible vegetation types, as well as magnitude and likelihood of impacts on agricultural lands (magnitude of agricultural lands taken out of production and likelihood of machinery being able to navigate agricultural lands based on tower placement). Similarly, the magnitude and extent of environmental effects were important considerations in the development of the effects and mitigation assessment documented in Section 7 and Table 7-1 of the draft ESR.</p>	<p>Addressed in the proponent's response.</p>
<p>Lack of consideration of cumulative effects. The assessment does not consider or address cumulative effects. Settlement and development, and associated land conversion within the Project area have had a substantial impact on COTT FN members' abilities to access and use lands and resources within COTT FN traditional territory. The ongoing and cumulative effects should not be taken as a reason to further develop on their traditional territory and instead should be understood as added pressure on COTT FN lands and resources.</p> <p>Request: COTT FN requests that the Proponent include in the ESR an assessment of impacts to COTT FN current use of lands and resources, and COTT FN rights, from past, present and reasonably foreseeable project activities in the area, defining the spatial and temporal scopes in consultation with COTT FN.</p>	<p>The need for the project is described in Section 1.1 of the draft ESR and the alternatives to the undertaking were considered in Section 1.3. In these Sections, Hydro One as the transmitter accepts the recommendations of the independent agency (IESO) as a starting point for the EA and technically viable alternative routes were developed and evaluated through the Class EA process.</p> <p>Planning for this project is subject to the Class EA for Minor Transmission Facilities, 2016 (Class EA for MTF), which is the proponent's legal compliance mechanism under the Environment Assessment Act.</p> <p>Section 6.5 of the Class EA for MTF states: Consideration of Cumulative Effects: All proponents will consider cumulative effects when planning projects. The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments).</p> <p>Hydro One intends to assess the cumulative effects of the project in compliance with this requirement, however; to extend beyond this (such as other cumulative effects beyond the immediate project area), is outside the scope of the Class EA for MTF and often Hydro One's mandate, awareness or control. The Chatham x Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future. Further, Hydro One's ability to determine what future developments or potential "induced developments" may result in the region are limited to what the IESO provides in its broader regional planning, which focuses primarily on large-scale regional trends. Subsequent projects also require their own planning processes, which often makes knowledge of siting or locations of assets (tied to potential effects) impossible to predict before that planning is undertaken.</p>	<p>To be addressed in the final ESR through the addition of a new section describing cumulative effects, in line with the requirements of the Class EA for MTF.</p>

Issues and Concerns	Proponent Responses	Status
<p>Inadequate mitigation measures. The dESR identifies guiding principles for the selection of mitigation measures. Several of these principles – and many mitigation measures identified through section 7 – include qualifying language such as “where practical” and “where feasible.” While such language is designed to provide the Proponent with flexibility, it results in vague and unenforceable mitigation because implementation of such measures would be conditional on unspecified circumstances. Moreover, the Proponent cannot rely on highly qualified mitigation measures to derive conclusions regarding net effects, as such measures may not in fact be implemented. The final ESR needs to include clear, specific mitigation measures that can be monitored for effectiveness and enforced.</p> <p>Request: Please remove qualifying language (such as “where practical” and “where feasible”) from all proposed mitigation measures in Section 7 or provide the conditions and criteria that would be used to determine whether implementation is practical/feasible/etc. and how effects will be mitigated if implementation of the proposed measures is not practical/feasible.</p>	<p>As more detailed and specific design and construction plans are developed for the project, the environmental mitigation measures prescribed for certain situations will also become more well-defined. As the detailed plans required for this level of specificity have not yet been developed, the mitigation measures described in the draft ESR include the suite of potential mitigation measures that could be applied for the project and specifically prescribed during the detailed design and construction planning phase of the project. As not every mitigation measure is feasible or practical in all areas, these qualifying statements are important to note that some measures will be applied to specific areas or circumstances to which they are best suited, as identified in subsequent detailed construction and environmental mitigation plans.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, and to incorporating that information into subsequent phases of the project including construction planning, and the development of detailed and site-specific environmental mitigation measures and post-construction restoration plans.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>No identification of how Hydro One will incorporate IK to identify appropriate timing of construction activities. The dESR identifies the following principle to guide the selection of mitigation measures: “appropriate timing of construction activities, where feasible, to avoid sensitive time periods, such as fish spawning and egg incubation periods, or migratory bird nesting periods.”</p> <p>Request: Please indicate how COTTEN's IK will be incorporated to identify appropriate timing of construction activities.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input, including IK, and to incorporating that information and knowledge into subsequent phases of the project such as construction planning. This may include influencing the timing of work in certain sensitive areas.</p> <p>Hydro One would need to review the information provided by COTTEN, including any information or IK that may have implications for the timing of certain construction activities in certain areas, in order to determine how that input could be incorporated into construction plans.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>The dESR identifies the following principle to guide the selection of mitigation measures: "Implementation of conventional, proven mitigation measures during construction consistent with the criteria set out in Appendix E of the Class EA" (Hydro One, 2016). One such criteria set out in Appendix E of the Class EA is "First Nations and Métis are invited to participate in various stages of the project such as archaeology, project planning, construction, etc." However, Hydro One has not adequately supported COTTFN participation in various stages of the project, including alternative selection, identification of appropriate timing for construction, identification of appropriate mitigation measures, inclusion in project monitoring, identification of reclamation and revegetation objectives.</p> <p>Request: Please provide a commitment to meaningfully include COTTFN in the development and implementation of mitigation and management plans and project monitoring.</p>	<p>Since January 2020, as summarized in Section 3.6 of the draft ESR and further outlined in the Record of Consultation (Appendix B of the dESR), Hydro One has made efforts to seek input on all aspects of the project, including input into the evaluation of alternatives, identification of environmental effects and potential mitigation measures. Engagements included virtual information sessions, workshops, technical advisory meetings and the provision of input workbooks for communities, to name a few. Recognizing that some communities have capacity challenges, resources were made available, starting in April 2020, through Capacity Funding Agreements, to all participating communities to hire dedicated staff and to obtain assistance from outside professionals if required.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, and to incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by COTTFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and COTTFN as preparations begin for construction and we are committed to working together on this.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Inadequate description of permanently removed vegetation and habitats. COTTFN requires a more detailed inventory of species and vegetation communities within the RoW footprint that will be removed during construction, should the Project proceed, in order to determine potential effects on culturally important, rare, or hard-to-find species.</p> <p>Request: Should the Project proceed, upon identification of vegetation proposed for removal, Hydro One must involve COTTFN in decision-making regarding clearance of the ROW, including alternative routes and mitigations. Should the Project proceed, discuss with COTTFN an opportunity for COTTFN members to visit the Project footprint in advance of clearing to collect whole plants for transplanting, or to harvest valued plant resources.</p> <p>Discuss as a potential Project mitigation with COTTFN, Hydro One financial support for cultural programs and initiatives aimed at preserving and transmitting COTTFN plant knowledge to younger generations, including but not limited to, medicinal plant habitat mapping. This is a priority for COTTFN elders and community.</p>	<p>Where incompatible vegetation communities (those containing species which, at maturity, reach a height that may pose a risk to the safe and reliable operation of an overhead transmission line) are traversed by transmission lines, these areas can typically be restored following construction into compatible vegetation communities (consisting of species which do not pose such a threat to reliability at mature height, e.g. Shrub Thicket), such that the long-term effect to incompatible vegetation communities is not a loss of all habitat value but rather a transition to a different, compatible vegetation community within the extent of the transmission line ROW.</p> <p>Hydro One will add an estimate of the amount of incompatible vegetation anticipated to be removed for the Project to the appropriate sections of the ESR, including Table 7-1, including a breakdown by ELC community.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to discuss subsequent phases of the project such as detailed construction planning.</p> <p>Hydro One is amenable to facilitating the advance harvesting of plant species of interest, for transplant or community use, but notes that coordination may be required with other Indigenous communities and private landowners.</p>	<p>To be addressed via additional information and description in the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Use of chemical herbicides. The dESR states "construction and maintenance activities may require [...] application of herbicides to control noxious weeds." The dESR notes that "a project-specific Weed Control Plan will be developed for implementation during construction and will incorporate feedback from landowners to the extent practical." The application of herbicides has the potential to interact with COTTFN's potential plant harvesting activities in the project area. The dESR does not identify a commitment to work with COTTFN to develop the project-specific weed control plan. COTTFN members are concerned the Proponent proposes to use chemical herbicides along the RoW. Use of these substances exposes plants, insects, and animals to contamination, and can disperse into groundwater and adjacent watercourses via runoff and infiltration.</p> <p>Request: Please provide a commitment to work with COTTFN to develop the project-specific weed control plan, should the Project proceed.</p> <p>Please provide a commitment not to use herbicides in the project-specific weed control plan.</p>	<p>The Project-specific Weed Control Plan that will be implemented during construction will focus on the control of weeds in agricultural fields which are traversed by construction access and work areas. The weed control plan is not intended to be applied to natural or naturalized areas or vegetation communities, and any application of herbicides will be performed in accordance with all applicable regulations.</p> <p>During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line. Selective use of herbicides often reduces or eliminates the need for more intrusive mechanical clearing, and can reduce the frequency and costs of vegetation management required (e.g., prevention of suckering). Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Assessment should also consider similar effects on wildlife. The assessment of impacts of construction and maintenance activities (noise & proximity) to livestock should extend to wildlife, including any culturally important species to COTTFN including birds.</p> <p>Request: Consult with COTTFN on wildlife, including culturally important species that could be impacted by noise, proximity, and other sources of disturbance.</p> <p>Collaboratively develop appropriate mitigation measures.</p>	<p>Hydro One will add a description of potential indirect and temporary noise effects to nearby wildlife, incorporating input as can be provided by COTTFN. This description will primarily be related to temporary construction noise, as noise from transmission lines during the operational phase primarily occurs when background noise levels are also elevated (e.g., during inclement weather).</p>	<p>To be addressed via additional information and description in the final ESR.</p>
<p>The dESR states "First Nations and Métis are invited to participated in various stages of the project such as archaeology, project planning, construction, etc." Protocols for handling archaeological resources should be developed with COTTFN prior to project construction.</p> <p>Request: Please provide a commitment to work with COTTFN to develop a protocol for handling archaeological resources prior to construction.</p> <p>Please provide a commitment to involve COTTFN in the Stage 2 assessment for the Project. COTTFN is best positioned to determine potential areas with archaeological significance based on our oral record and IK of past use and occupancy in the Project area.</p>	<p>Hydro One and its consultants will adhere to provincial regulations and established protocols for handling archaeological resources, including those described in the Standards & Guidelines for Consulting Archaeologists.</p> <p>Hydro One has offered interested Indigenous Communities the opportunity to attend Stage 2 Archaeological Assessment surveys and understands that COTTFN is currently working with Timmins-Martelle Heritage Consultants, whom Hydro One has retained to conduct the Stage 2 survey, on logistics.</p>	<p>Addressed.</p>

Issues and Concerns	Proponent Responses	Status
<p>Consideration of Project effects on Indigenous cultural heritage is missing from assessment. As previously noted, this assessment has not clearly considered sites and landscapes that are culturally important to COTTFN, but rather focuses exclusively on built heritage resources (e.g., houses, farms, settlements). Indigenous cultural heritage is absent from the dESR.</p> <p>Request: As requested in Comment #2, revisions to the ESR are required to address gaps related to assessment of Project effects on Indigenous cultural heritage needs to be done in consultation with COTTFN. These revisions must include identification of key values, impact pathways, anticipated effects, and mitigations.</p>	<p>Regarding the COTT FN Cultural heritage information, From the commencement of the Class EA in January 2020 Hydro One has directly consulted with Indigenous communities on the Project. Hydro One is committed to including input received from COTTFN on known or potential Indigenous Cultural Landscapes prior to finalization of the ESR. The CHEC report describes the known Cultural Heritage Landscapes within the project study area, which are currently limited to the Buxton National Historic Site of Canada (NHSC), which in turn was considered in the evaluation of the route alternatives and is not traversed or affected by the preferred route 2A.</p> <p>Where information on known areas of historical significance was provided by First Nation communities, that information was considered in the evaluation of the route alternatives.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to collect information, including information on Indigenous Cultural heritage resources, and to incorporate this information into subsequent aspects of the project such as detailed construction planning and identification of mitigation measures.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR. Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Lack of consideration of COTTFN sensitive receptors in effects assessment. Noise and vibration receptor points have not been sufficiently captured. Sensitive receptors have not considered COTTFN values and land uses in the Project area.</p> <p>Request: In consultation with COTTFN, identify noise and vibration receptor points related to cultural/ spiritual/ ceremonial sites, important wildlife habitat, or other key COTTFN values, which could be impacted by the Project. Provide information and assess Project effects inclusive of these receptors.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to collect information, including information on sensitive receptors identified by COTTFN, and to incorporate this information into subsequent aspects of the project such as detailed construction planning and identification of mitigation measures.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR. Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>The dESR states "In an effort to offset net effects, Hydro One is committed to working with municipalities in the area to identify opportunities that could enhance and contribute to the broader landscape, recognizing that community benefits can be varied and diverse in nature. Hydro One will continue to engage and work with project stakeholders to identify and implement such opportunities." The dESR does not identify a commitment to work with COTTFN to identify and implement community benefits.</p> <p>Request: Please provide a commitment to work meaningfully with COTTFN to identify and implement community benefits from the project.</p>	<p>Hydro One is committed to providing participating Indigenous communities with a variety of benefits that could include training/employment, contracting/procurement of goods and services provided by local Indigenous-owned businesses, partnering and direct benefits to communities through sponsorships and other financial support for community-based activities. In addition, Hydro One intends to work closely with communities to facilitate development of a biodiversity program. Hydro One has been discussing these types of benefits with all participating communities to identify community needs and priorities. The discussion of training/employment and contracting/procurement will be led by the EPC contractor with Hydro One support.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Inadequate information provided from which to understand risks and adequacy of mitigations for potential spills. Impacts from spills are not fully addressed in the assessment. The adequacy of mitigation measures cannot be determined from the information provided.</p> <p>Request: Please clearly outline potential impacts and impact pathways, magnitude, extent, and likelihood of occurrence, of Spills.</p>	<p>Hydro One believes that the risks associated with spills, and the associated protection, mitigation and response measures, are adequately described in Section 7.7.1.2 and Table 7-1 of the draft ESR.</p> <p>Risks associated with spills on this project are limited in magnitude/extent to those associated with construction vehicles/equipment and in some cases temporary fuel storage. The likelihood of occurrence of spills is not possible to accurately predict, but is minimized by the use of dedicated refueling areas and/or additional containment as required.</p>	<p>Addressed in the draft ESR and in the proponent's response</p>
<p>Inadequate information provided from which to understand risks and adequacy of mitigations for waste generation. As with the previous section (Spills), impacts arising from contamination from hazardous waste have not been fully addressed in the assessment.</p> <p>Request: Please clearly outline potential impacts and impact pathways, magnitude, extent, and likelihood of occurrence, of Waste Generation.</p>	<p>Hydro One believes that the risks associated with waste generation, and the description of measures that will be used to manage waste during construction, are adequately described in Section 7.7.1.3 and Table 7-1 of the draft ESR.</p> <p>Waste materials will be generated during construction, but with proper management, handling and disposal procedures as described in the ESR, risks of any residual effects to the environment from the generation and handling of wastes during construction are minimal.</p>	<p>Addressed in the draft ESR and in the proponent's response</p>

Issues and Concerns	Proponent Responses	Status
<p>Inadequate assessment of all potential impact pathways and effects. Insufficient information provided on potential Project effects, including proposed vegetation removal, potential for erosion and sedimentation, and associated impacts on surface water quantity.</p> <p>Request: Please provide additional information regarding potential effects of riparian clearing on surface water quantity, including from vegetation removal, construction of access roads and other site preparation activities. Provide information on impact magnitude, extent, and likelihood of occurrence.</p> <p>Discuss alternatives with COTTFN and adequate mitigation if removal vegetation is unavoidable. For example, the dESR states that: "Where erosion is of a concern, exposed soils in previously vegetated areas will be revegetated as practical or have other erosion or sedimentation measures applied as necessary."</p> <p>Describe specific erosion & sedimentation measures proposed. COTTFN would like to ascertain adequacy of measures to prevent erosion and consequent landscape changes that could impact rights related to surface water bodies and other values such as plant harvesting and sense of place.</p> <p>Develop a Water Management Plan (applicable to all phases of the Project, including construction and maintenance) for COTTFN review, which outlines water withdrawal limits proposed, and how compatibility of source and receiving environments would be determined.</p> <p>Engage COTTFN in the development of plans and provide opportunity for COTTFN IK to be incorporated into Erosion & Sediment Control (ESC) Plan and Water Management Plan.</p>	<p>Where possible, the potential magnitude of impacts was captured as part of the evaluation of alternatives. Similarly, the magnitude and extent of environmental effects were important considerations in the development of the effects and mitigation assessment documented in Section 7 and Table 7-1 of the draft ESR</p> <p>Hydro One can provide some additional examples of ESC measures in the final ESR. These may include tools such as erosion blankets/coir mats or silt socks.</p> <p>Hydro One's construction contractor will be preparing detailed construction and environmental mitigation plans ahead of construction, based on the mitigation measures described in the ESR. This will include specific erosion and sediment control (ESC) plans, and a water management plan that will include specific details on the anticipated volumes, handling and discharge of construction water.</p> <p>In addition to the ESC plan, with respect to riparian areas the direct impacts will be limited (compatible riparian vegetation will be retained and disturbance to riparian areas will be avoided to the extent practical). Incompatible vegetation associated with riparian areas will be cut at the base and/or topped as a mechanism to retain the existing soil stabilization features associated with incompatible vegetation.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to engage Indigenous communities and incorporate input provided into subsequent aspects of the project such as detailed construction and mitigation planning, such as the ESC plans and Water Management Plan.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Inadequate assessment of all potential impact pathways and effects. Insufficient information provided on potential Project effects, including proposed vegetation removal, potential for erosion and sedimentation, and associated impacts on surface water quality.</p> <p>Request: COTTFN requests to review and comment on ESC Plan. The Proponent must provide opportunity for COTTFN IK to be incorporated into the plan.</p>	<p>Where possible, the potential magnitude of impacts was captured as part of the evaluation of alternatives. Examples include effects to vegetation based on magnitude of impacts to incompatible vegetation types, as well as magnitude and likelihood of impacts on agricultural lands (magnitude of agricultural lands taken out of production and likelihood of machinery being able to navigate agricultural lands based on tower placement). Similarly, the magnitude and extent of environmental effects were important considerations in the development of the effects and mitigation assessment documented in Section 7 and Table 7-1 of the draft ESR</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to collect information, including information on sensitive receptors identified by COTTFN, and to incorporate this information into subsequent aspects of the project such as detailed construction planning and identification of mitigation measures.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

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<p>Additional information required for mitigation of effects on source water.</p> <p>Request: Please identify Surface Water Intake Protection Zones and Significant Groundwater Recharge Areas that might be impacted and include in Water Management Plan.</p>	<p>Hydro One and its construction contractor will identify Surface Water Intake Protection Zones and Significant Groundwater Recharge Areas as part of the Water Management Plan to be produced as part of the detailed construction and environmental plans for the project. The Water Management Plan will include instructions on specific mitigation or management measures (e.g., construction water discharge) required for these areas.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Unclear rationale for conclusions given information provided. For example, the dESR states that: "No adverse effects have been identified for changes in groundwater quality due to the construction of the proposed Project." This assertion appears to contradict the Proponent's statement in Section 7.7.6: "During construction, the potential effects of the proposed Project on groundwater include changes in water quality due to disturbance of pre-existing soil contamination which may exist, changes to existing groundwater quality or quantity due to excavation and construction dewatering... These are contradictory statements. The dESR also states: "...it is anticipated that groundwater quality would return to baseline conditions following the implementation of mitigation measures previously outlined above, such as containment and removal of contaminated soils." It is unclear what mitigation measures are being referred to.</p> <p>Request: Provide clarification. It is unclear what mitigation measures are being referred to. Indicate the document section(s) and how they address potential impacts to groundwater quality.</p> <p>COTTFN also requires details of potential water quality impact pathways, magnitude of impacts, extent and likelihood of occurrence. This information should also be included and addressed in the Water Management Plan.</p>	<p>Effects (general) are potential impacts as a result of an outcome, and are generally dealt with through standard mitigation and best management practices. Adverse effects are not the same as general effects. Adverse effects implies a harm to human health or the environment.</p> <p>With respect to groundwater, the potential effects are anticipated to be minor/negligible changes in groundwater quality (temporary in nature) or small and temporary changes in groundwater levels in the immediate vicinity of tower footings or other temporary excavations during construction.</p> <p>Regarding the mitigation measures associated with potential effects on groundwater quality, mitigation outlined under section 7.4 and 7.5 are applicable (e.g. Emergency Response Plan, containment measures, discharge of construction water, construction water management plan, maximize retention times, etc.).</p> <p>Hydro One's construction contractor will be preparing detailed construction and environmental mitigation plans ahead of construction, based on the mitigation measures described in the ESR. This will include a water management plan that will include specific details on the anticipated volumes, handling and discharge of construction water.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Rationale for conclusions unclear given information provided. Section 7.7.6.2 of the dESR states: "The effects on groundwater quantity associated with construction of transmission towers are anticipated to be local to the hole or excavation." COTTFN understands groundwater as fluid and mobile. It is unclear how the Proponent came to this conclusion, especially as it appears to be contradicted by a statement in Section 7.7.6, which states: "Changes in groundwater due to project activities during construction could also affect the amount of groundwater discharged to nearby watercourses and natural environmental features (e.g., vegetation, fish habitat, wetlands, etc.)." This is important as impacts on groundwater, and impacts on other environmental values (e.g., aquatic habitats and species, terrestrial plants) via groundwater, can in turn impact COTTFN rights (e.g., fishing, culture).</p> <p>Request: COTTFN requests that the Proponent conduct further hydrogeological assessment to study groundwater systems (e.g., movement) and the effects of the proposed temporary withdrawals on these systems. Provide this information to COTTFN.</p> <p>Use this information to more fully address potential impacts through a Water Management Plan.</p>	<p>Temporary effects to groundwater quantity may occur from construction dewatering activities, which could result in minor, often negligible, effects to groundwater discharges to nearby watercourses. This is typically from site specific, localized, dewatering activities in excavations for towers. The associated cone of depression, if immediately adjacent to groundwater influenced streams, may temporarily reduce groundwater input to streams. This is temporary effect is localized to the foundation being construction while also having a potential effect on nearby watercourses. In these cases, groundwater would return to normal conditions following completion of dewatering activities. These changes in groundwater contribution may also be mitigated through the appropriate discharge of construction waters in such a manner that the water is returned to the environment in the vicinity of the works that required its removal, in accordance with appropriate mitigation measures to reduce potential sedimentation etc.</p> <p>Effects on groundwater quantity associated with construction of transmission towers are anticipated to be local to the hole or excavation due to the brief duration of any open excavation (e.g., augured holes for tower footings) before these excavations are poured with concrete. There is no long-term conduit by which groundwater quantity is adversely affected in the long-term.</p> <p>Seasonal or weather-induced fluctuations in the water table (e.g., higher water table during spring freshet, or temporarily after heavy rain events) may affect the amount of construction water requiring management and discharge during construction.</p> <p>Hydro One's construction contractor will be preparing detailed construction and environmental mitigation plans ahead of construction, based on the mitigation measures described in the ESR. This will include a Water Management Plan will include specific details on the anticipated volumes, handling and discharge of construction water, and will be informed by information collected during geotechnical investigations.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Insufficient information to understand nature and magnitude of potential effects. Hydro One states that they intend to discharge water from construction to surrounding agricultural land and that discharged water will lead to runoff and infiltration. COTTFN is concerned about additional eutrophication risks (agricultural runoff is already an issue) arising from the leaching and transport of nutrients and organic matter into surrounding watercourses.</p> <p>Request: Provide more information on discharge water, including anticipated volumes, and an adequate characterization of impacts and impact pathways, magnitude, extent, likelihood of effects.</p>	<p>Hydro One's construction contractor will be preparing detailed construction and environmental mitigation plans ahead of construction, based on the mitigation measures described in the ESR. This will include specific ESC plans, and a Water Management Plan will include specific details on the anticipated volumes, handling and discharge of construction water. Information on anticipated discharge volumes will be provided in the Water Management Plan, and must be informed by detailed design and additional information such as the results of geotechnical studies. Anticipated construction water volumes will also be highly dependent on weather conditions and events during the time of construction.</p> <p>Given that the majority of agricultural fields in the area contain tile drainage, and the use of mitigation measures to control discharge of construction waters, the temporary and intermittent discharge of construction water will likely not result in significant additional downstream effects beyond typical rain events on these farm fields.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to engage Indigenous communities and incorporate input provided into subsequent aspects of the project such as detailed construction and mitigation planning, such as Water Management Plan.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Additional information required. With respect to potential excavation effects on municipal and local wells, the dESR states: "The zone of influence of such dewatering activities is very localized, and the majority of water wells exploit aquifer(s) that are at a much greater depth than the proposed excavations..."</p> <p>Request: Please include depths of proposed excavation in the Water Management Plan.</p>	<p>Effects on groundwater quantity associated with construction of transmission towers are anticipated to be local to the hole or excavation due to the brief duration of any open excavation (e.g., augured holes for tower footings) before these excavations are poured with concrete. There is no long-term conduit by which groundwater quantity is adversely affected in the long-term.</p> <p>Depths of excavation for tower footings will be determined as geotechnical studies are conducted and detailed design and engineering progresses, after completion of the Class EA and prior to the start of construction. Hydro One will provide this information when it is available.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of consideration of COTTfN valued woodland spaces in determination of Special Natural Areas and Significant Woodlands.</p> <p>The dESR states “the proposed Project’s transmission line ROW crosses three significant woodlands; one of which is associated with the existing 115KV idle transmission line corridor. Woodlands will be taken into account during project planning as a mechanism to minimize project impacts. Section 7.7.7 describes project impacts on woodlands and associated mitigation measures that would be employed with respect to woodlands during construction.” Section 7.7.7 identifies “significant woodlands.” The dESR does not identify whether or not the project will interact with woodlands not considered to be significant.</p> <p>Request: Consult COTTfN regarding woodlands and other natural areas of importance to COTTfN members’ rights-based practices. Include the results of this consultation in the final ESR, along with a comprehensive characterization effects.</p> <p>The Proponent must consult COTTfN regarding tree removal and possible alternatives (e.g., routing), adequacy of revegetation (including ratios), and on the Proponent’s Biodiversity Initiative to offset habitat loss. Any resulting offsetting projects should consider cultural values and culturally effective preservation or restoration practices.</p> <p>Please identify whether or not the project is anticipated to interact with woodlands not considered to be significant.</p> <p>If the project is anticipated to interact with woodlands not considered to be significant, please identify the locations of each impacted woodland and describe the full extent of woodland clearing required, taking into account both woodlands considered to be significant and those not considered to be significant.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and information, including information on natural areas of importance to COTTfN, and to incorporating that information into subsequent phases of the project, such as detailed construction and environmental mitigation plans, post-construction restoration and the Biodiversity Initiative for the project. If this information can be provided prior to the end of the extended draft ESR review period, then Hydro One will incorporate this information into the final ESR.</p> <p>Hydro One will add an estimate of the total amount of incompatible vegetation anticipated to be removed for the Project to the appropriate sections of the ESR, including Table 7-1.</p> <p>Where incompatible vegetation communities (those containing species which, at maturity, reach a height that may pose a risk to the safe and reliable operation of an overhead transmission line) are traversed by transmission lines, these areas can typically be restored following construction into compatible vegetation communities (consisting of species which do not pose such a threat to reliability at mature height, e.g. Shrub Thicket), such that the long-term effect to incompatible vegetation communities is not a loss of all habitat value but rather a transition to a different, compatible vegetation community within the extent of the transmission line ROW.</p> <p>Woodlands and incompatible vegetation anticipated to interact with the project that are not considered to be significant are generally limited to hedgerows and some small patches of vegetation. Maps of these areas are provided in the Natural Environment Existing Conditions Report appended to the ESR.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR. Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of consideration of COTTFN Natural Heritage Values. Natural heritage values of importance to Indigenous nations, including COTTFN are not reflected in the information sources reviewed by the Proponent for the dESR. This is especially problematic as the Proponent anticipates permanent habitat removal. The dESR states “permanent adverse effects may include the potential removal of incompatible vegetation and associated wildlife habitat to accommodate the proposed double circuit 230 kV transmission line.” The dESR does not quantify the extent of vegetation removal required for the project. This information is required to understand effects of the project on harvestable plants and wildlife habitat.</p> <p>Request: Please engage COTTFN to determine natural heritage features of importance to COTTFN and include these in the assessment.</p> <p>Provide a quantified estimate (in hectares) of the amount of vegetation that will be cleared for the project.</p> <p>Provide a commitment to work meaningfully with COTTFN to identify areas of potentially harvestable vegetation and measures to retain or offset the loss of this vegetation.</p>	<p>Hydro One will add an estimate of the total amount of incompatible vegetation anticipated to be removed for the Project to the appropriate sections of the ESR, including Table 7-1. This estimate will include some recent refinements to the route made since the release of the draft ESR, to avoid and minimize effects to woodlands and natural heritage features.</p> <p>Where incompatible vegetation communities (those containing species which, at maturity, reach a height that may pose a risk to the safe and reliable operation of an overhead transmission line) are traversed by transmission lines, these areas can typically be restored following construction into compatible vegetation communities (consisting of species which do not pose such a threat to reliability at mature height, e.g. Shrub Thicket), such that the long-term effect to incompatible vegetation communities is not a loss of all habitat value but rather a transition to a different, compatible vegetation community within the extent of the transmission line ROW.</p> <p>Hydro One is amenable to facilitating the advance harvesting of plant species of interest, for transplant or community use, but notes that coordination may be required with other Indigenous communities and private landowners.</p>	<p>To be addressed in the final ESR via additional description and information, and where information is provided by COTTFN on features of importance to the community prior to the submission of the final ESR. Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>The dESR states “No effects on natural heritage features are anticipated during the maintenance and operation phase.” This statement does not consider potential impacts of the project on birds, as identified in section 7.7.7.1 of the dESR.</p> <p>Request: Please revise the statement “No effects on natural heritage features are anticipated during the maintenance and operation phase” to identify potential impacts on birds from collision with the transmission line or provide a rationale as to why the project will not impact birds during the maintenance and operation phase.</p>	<p>Hydro One will amend the statement in the ESR to ensure consistency, and acknowledge the potential effects to birds during the operation of the transmission line.</p>	<p>To be addressed in the final ESR.</p>

Issues and Concerns	Proponent Responses	Status
<p>The dESR states “For the most part, sensitive resident animals can relocate temporarily to avoid noise and disturbance associated with construction activities and return after construction completion.” This statement does not take into account the highly impacted and fragmented nature of wildlife habitat in the study areas. The dESR does not identify where wildlife can relocate to, and what risks to their health and other values this may entail.</p> <p>Request: Please identify the locations and quantity of accessible and suitable wildlife habitat that wildlife can relocate to in order to avoid project-related disturbance, or revise the statement “for the most part, sensitive resident animals can relocate temporarily to avoid noise and disturbance associated with construction activities and return after construction completion.”</p>	<p>The final ESR will identify and describe opportunities for resident species to seek shelter during construction through the use of nearby habitat features.</p>	<p>To be addressed via additional information and description in the final ESR.</p>
<p>Insufficient information on interactions with wetlands. Very little information on wetlands, and Project interactions with wetlands is provided. It is therefore not possible to understand Project risks for wetlands. Wetlands are biodiversity hotspots and rich in culturally important plant and animal species for COTTFN members. For example, the dESR states “Tower locations and access roads will be located such that they will avoid wetlands; therefore, impacts to MAS and SWT communities are not anticipated.</p> <p>The limits of wetlands will be demarcated to limit construction activities within wetland communities, where practical.” The dESR does not identify whether or not temporary access roads or temporary watercourse crossing structures will be located in wetlands.</p> <p>Request: Please provide a more fulsome description of impacts to wetlands, including all possible impact pathways, characterization of effects, and how Hydro One will involve COTTFN in designing mitigation and the Biodiversity Initiative to ensure COTTFN rights and interests are represented in these decisions.</p> <p>Please identify whether or not temporary access roads or temporary watercourse crossing structures will be located in any wetland communities.</p> <p>If any temporary access roads or temporary watercourse crossing structures will be located in any wetland communities, please identify measures to mitigate impacts to the wetland communities and describe net effects to wetlands and wetland-dependent species.</p>	<p>Hydro One will further expand on the anticipated effects to wetland communities in Sections 7.7.8.1 and Table 7-1 of the ESR.</p> <p>Information on temporary access road locations must be informed by detailed design, and this information will be provided as part of the detailed construction plans when it is available, including for the work required to expand the Chatham SS. Wetland communities will be avoided to the extent practical, however if any temporary access roads are deemed to be required to be located within wetlands, specific environmental mitigation and post-construction restoration measures will be identified.</p>	<p>To be addressed via additional information and description in the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Insufficient information regarding Project effects and lack of confidence in suggested mitigations. The Proponent provides sparse description of Project effects on fish and aquatic habitat effects. The information provided does not allow COTTfN to fully understand Project implications for this crucial resource and habitat. Project effects in fish and aquatic habitats would impact COTTfN fishing rights as well as other key values (e.g., plants and medicines, wildlife). Furthermore, COTTfN expects that mitigations such as “retaining stream bank vegetation” are fully applied, not only where practical as determined by the Proponent.</p> <p>Request: Provide further information and a more robust characterization of anticipated Project effects.</p> <p>Provide a commitment to develop a joint process for COTTfN, Hydro One, and the Ministry of the Environment, Conservation and Parks to determine appropriate mitigations. Mitigations must include adequate riparian buffers and vegetation retention.</p>	<p>The final ESR will include additional information on potential effects to fish/aquatic habitats, including riparian areas. Removal of riparian vegetation will be limited to vegetation that is incompatible with overhead transmission lines (i.e., height at maturity has potential to interfere with safe and reliable operation of the line).</p> <p>Hydro One reiterates the commitment made in the ESR to continue to engage Indigenous communities and incorporate input provided into subsequent aspects of the project such as detailed construction and mitigation planning, and will be happy to work with COTTfN to develop a framework for the sharing and discussion of these initial plans as they are developed.</p>	<p>To be addressed via additional information and description in the final ESR.</p> <p>Addressed in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>The dESR states that “Hydro One has committed to undertaking a biodiversity initiative specific to this project to offset any habitat loss or transition (long- term change) that may occur as a result of the Project.” The project is located in COTTfN’s traditional territory and will result in incremental impacts on COTTfN’s ability to practice its Aboriginal and Treaty Rights. COTTfN must be involved in any biodiversity initiative to ensure that efforts to offset any habitat loss or transition incorporate COTTfN’s IK and support conditions required for the practice of COTTfN’s Aboriginal and Treaty Rights.</p> <p>Request: Please provide a commitment to work meaningfully with COTTfN to develop and implement the Biodiversity Initiative and to adapt it to the needs and plans of COTTfN.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, and to incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>Hydro One will involve both interested Rights holders and stakeholders to discuss the scope and format of the Chatham x Lakeshore Biodiversity Initiative as the project progresses and approval to proceed with the undertaking has been obtained.</p>	<p>Addressed in the draft ESR through the commitment to involve Indigenous communities in the Biodiversity Initiative for the project.</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of information regarding COTTFN lands, rights, and interests. The dESR states "Hydro One is committed to continue to engage with the Anishnawbek and Haudenosaunee communities to [...] actively identify and avoid geographically defined areas which support current or past traditional use for the harvesting of wildlife or fish, the harvesting of traditional plants, or use as sites of spiritual or cultural significance." The dESR contains no identification of potential project interactions, assessment of effects or proposed mitigation measures with respect to potential project effects on Aboriginal and Treaty Rights and interests. COTTFN therefore considers the dESR to be incomplete.</p> <p>Request: In collaboration with COTTFN, please include in the ESR an assessment of impacts to COTTFN current use of lands and resources for traditional, and COTTFN rights, from past, present and reasonably foreseeable project activities in the area, including integration of materials from the forthcoming TKUS.</p>	<p>Throughout the Class EA process, Hydro One provided numerous opportunities for COTTFN and other Indigenous communities to provide input into the project including o the evaluation of route alternatives, assessment of environmental effects and identification of mitigation measures for the project.</p> <p>If COTTFN is able to provide the TKUS, any information identifying their Aboriginal and treaty rights, COTTFN current use of lands and resources, or any similar information, to Hydro One prior to the submission of the final ESR, Hydro One will work to incorporate that information into the final ESR.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and traditional knowledge information, including information on potential impacts to Aboriginal rights and interests, and incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR. Addressed in the proponent's response, and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Insufficient information pertaining to Project effects on COTTFN rights. The dESR does not contain information specific to impacts on COTTFN, including key values, current condition of key values and resources in Project area, and anticipated Project interactions.</p> <p>Request: Please include in the ESR a summary table of issues, concerns, and recommendations raised by affected groups, including COTTFN, as well as Hydro One's responses to these items. Please note that any IK included in the summary table must be approved by COTTFN.</p> <p>COTTFN wishes to address the gap specific to our rights and interests through ongoing or future Project-specific studies. Provide a commitment to work with COTTFN to ensure the study findings are properly integrated into the ESR and considered in decision-making and mitigation planning/monitoring.</p>	<p>In the draft ESR, Section 3.6.14 contains a summary of the key comments and concerns raised by Indigenous communities throughout the Class EA process, and the respective Hydro One responses to each.</p> <p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and Indigenous Knowledge (IK) information, and to incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognizance of the interest expressed by COTTFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and COTTFN as preparations begin for construction and we are committed to working together on this.</p>	<p>To be addressed in the final ESR where information is provided prior to the submission of the final ESR. Addressed in the proponent's response, and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>
<p>Inadequate information provided on Project mitigations, including effects monitoring.</p> <p>The dESR states that effects monitoring plans would be addressed through an Environmental Management Plan (EMP): "As previously noted in Section 7, a project-specific Environmental Management Plan will be prepared..." However, little information was provided for COTTFN to understand what Environmental Management Plan would entail.</p> <p>Request: Provide funding support for COTTFN to participate in the development of the Environmental Management Plan and to conduct a technical review of the Plan upon preparation. IK must also be incorporated into all management plans, including through inclusion of COTTFN environmental monitors in the monitoring process.</p> <p>Please provide a commitment to extend monitoring beyond the construction phase and into the operations/maintenance phase of the Project.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and Indigenous Knowledge (IK) information, and to incorporating that information into subsequent phases of the project such as construction planning, post-construction restoration and the Biodiversity Initiative planned for the project.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognizance of the interest expressed by COTTFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and COTTFN as preparations begin for construction and we are committed to working together on this.</p>	<p>Addressed in the proponent's response, and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

Issues and Concerns	Proponent Responses	Status
<p>Lack of monitoring related to Indigenous rights. Based on the limited information provided, the EMP appears to focus exclusively on biophysical impacts, leaving a gap in monitoring specific to critical Indigenous rights and supporting values.</p> <p>Request: COTTFN requests Hydro One work with COTTFN to develop a monitoring plan specific to the needs and initiatives of COTTFN to address impacts to COTTFN rights.</p>	<p>Hydro One reiterates the commitment made in the ESR to continue to work with Indigenous communities to receive input and Indigenous Knowledge (IK) information, and to incorporating that information into subsequent phases of the project such as construction planning and environmental mitigation plans.</p> <p>With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it is not Hydro One's current practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by COTTFN in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve First Nation staff/monitors; these efforts may be best focused to specific areas of interest, and times where these visits can be conducted safely but this topic will require further discussions between Hydro One, our contractor and COTTFN as preparations begin for construction and we are committed to working together on this.</p>	<p>Addressed in the proponent's response, and in the draft ESR through the commitment to involve Indigenous communities in later stages of the project (i.e. project design, further development of project avoidance, mitigation measures, or post-construction restoration plans, and the Biodiversity Initiative for the project).</p>

3.15.4 Ministry of the Environment, Conservation and Parks

On August 11, 2021 MECP emailed Hydro One informing them of two Section 16 Orders received for the Project on the basis of Aboriginal and Treaty Rights; one from Chippewa of Kettle and Stony Point First Nation and one from COTTFN. MECP provided copies of the Section 16 Orders. On August 12, 2021, Hydro One requested a meeting with MECP to discuss the Section 16 Orders received. MECP noted that not all First Nations had provided comments and Hydro One offered to extend the 30-day public review period of the draft ESR.

On August 17, 2021, MECP and Hydro One held a conference call to discuss the Project and the Section 16 Orders received and next steps. Following the meeting with MECP on August 17, 2021, Hydro One prepared initial responses to the Section 16 Order requests and provided those responses to COTTFN with a copy to MECP.

On September 14, 2021, MECP officially provided acknowledgement of the Section 16 Orders with instructions on next steps and guidance for completion of proponent issue and response tables. On September 16, 2021, Hydro One emailed copies of responses provided to Chippewa of Kettle and Stony Point First Nation and COTTFN regarding their comments on the Draft ESR. Hydro One also noted that comment responses were being developed for the recently received Section 16 Order from CFN. Hydro One noted that a formal issue/response table was being prepared for submission to MECP.

On October 4, 2021, Hydro One emailed the MECP to provide the completed Tables A and B, outlining the issues and concerns raised with the Section 16 Order Requests and providing Hydro One's formal responses to each. MECP confirmed receipt on October 5, 2021.

On October 5, 2021, Hydro One provided a copy of responses sent to CFN regarding their comments on the draft ESR which were the same as the comments on their Section 16 Order. On October 7, 2021, Hydro One informed MECP of additional comments received from Chippewa of Kettle and Stony Point First Nation regarding the Section 16 Order request.

On November 3, 2021, Hydro One reached out to MECP to ask if they had any questions on the Section 16 Order issue/response tables. Hydro One and MECP staff met again on November 16, 2021 to review the responses provided by Hydro One to date and discuss some questions that the MECP staff had identified in their review to date; Hydro One followed up via email on December 16, 2021 to provide written responses to the MECP's questions.

On January 17, 2022, Hydro One provided copies of recently received letters from CFN. The letters reiterated CFNs position regarding the Section 16 Order. Hydro One kept MECP informed of its progress on a response to this letter. A letter was issued to CFN on February 9, 2022, with a copy provided to MECP.

On May 27, 2022, Hydro One provided MECP an update on progress made with COTTFN regarding the Section 16 Order Request commitments. MECP was happy to hear of the progress and requested to be kept informed of ongoing discussions.

Hydro One continued to provide regular updates to the MECP through summer 2022 on engagement and progress made with the Section 16 Order requesting communities, including a meeting with MECP staff on June 6, 2022 and providing regular email updates on progress made in addressing commitments to incorporate the CRS and TEK studies into the final ESR and completion of a project-level cumulative effects assessment. MECP staff also provided updates to Hydro One on the MECP's outreach to the Section 16 Order Requesting communities to discuss their concerns.

On August 5, 2022, Hydro One provided an update to MECP of ongoing discussions with the three Section 16 Order requestors. Hydro One provided copies of documents shared with Chippewas of Kettle and Stony Point First Nation, COTTFN, and CFN. MECP acknowledged receipt on August 8, 2022.

In September 2022, all three Section 16 Order Requests submitted on the Chatham to Lakeshore Class EA were formally withdrawn, and on October 14, 2022 the MECP provided via email a letter formally acknowledging the withdrawal of the Section 16 Order Requests and stating that Hydro One can proceed with the project, subject to any additional permits or approvals that may be required. The MECP acknowledgement letters are provided in **Appendix B8**.

4 Environmental Inventory

The following sections summarize the environmental baseline conditions in the study area. Information presented below acknowledges the VCs from CFN's TEK study and COTTFN's CRS. It is acknowledged that VCs from CFN and COTTFN relate to several areas of potential impact for the project. Baseline condition information collected was considered for impacts to VCs as identified in **Section 7** below. Information for the environmental inventory was obtained through published documents, government agency and only resources databases and mapping tools, municipal websites, government planning and guidance documents, relevant project documents, reports commissions by Hydro One, and primary data collection through targeted natural heritage field surveys.

In accordance with Section 3.3.4 of the Class EA document (Hydro One, 2016), information for the below factors was collected for the purposes of defining existing conditions:

- Agricultural resources.
- Forestry resources.
- Cultural heritage resources (i.e., built heritage resources, cultural heritage landscapes and archeological resources).
- Land Use and Communities.
- Mineral resources.
- Natural environment resources (e.g., air, land, water, wildlife and wildlife habitat).
- Recreational resources.
- Visual and aesthetic resources.

Natural and socio-economic environment baseline conditions are described in the following sections. Desktop information for the natural and socio-economic environment was generally collected within the LSA, while natural environment field surveys were completed within the PSA (see **Section 2**). Field surveys were undertaken between April and July of 2020 to assess baseline environmental conditions and significant natural values to inform the Class EA. Following the release of the draft ESR, an additional eDNA sampling program was completed in July 2021 to supplement the existing baseline environmental conditions and further inform construction planning, as well as to satisfy a request from CFN that additional aquatic habitat surveys be undertaken should Alternative Route 2A or 2B be selected as the preferred alternative. Additional information beyond the PSA is provided for some environmental features (such as the socio-economic environment and cultural heritage) where additional context is appropriate.

The 2020 natural heritage field surveys were conducted in accordance with the Natural Environment Field Program Terms of Reference (TOR) (Dillon, 2020) which was submitted to the MECP on February 10, 2020 for review and comment in advance of the 2020 field program. As of the drafting of this ESR, comments from MECP on the Natural Environment Field Program TOR remain outstanding.

Environmental staff were regularly accompanied during the 2020 aquatic and terrestrial surveys by Indigenous Environmental Monitors from WIFN and the Haudenosaunee Development Institute (HDI), as well as CFN and CKSPFN in support of the 2021 eDNA sampling program, respectively. Where private property access was granted in advance of the field programs, field studies occurred within or directly adjacent to natural heritage features. Where private property access was not granted and the property was associated with a natural feature(s), field data was collected from the ROW, Hydro One's existing transmission ROW and/or from property limits where access was granted. Field data collected from adjacent lands was supplemented with information collected through aerial imagery interpretation and secondary data sources. Results of the natural heritage field surveys are summarized in the Natural Environment Existing Conditions Technical Report for the Project, as well as the 2021 eDNA Sampling Program Results Memo (**Appendix C-1 and C-1.1**). A summary of the 2020 field survey and 2021 eDNA sampling program results are summarized in **Section 4.6.7**, below.

4.1 Agricultural Resources

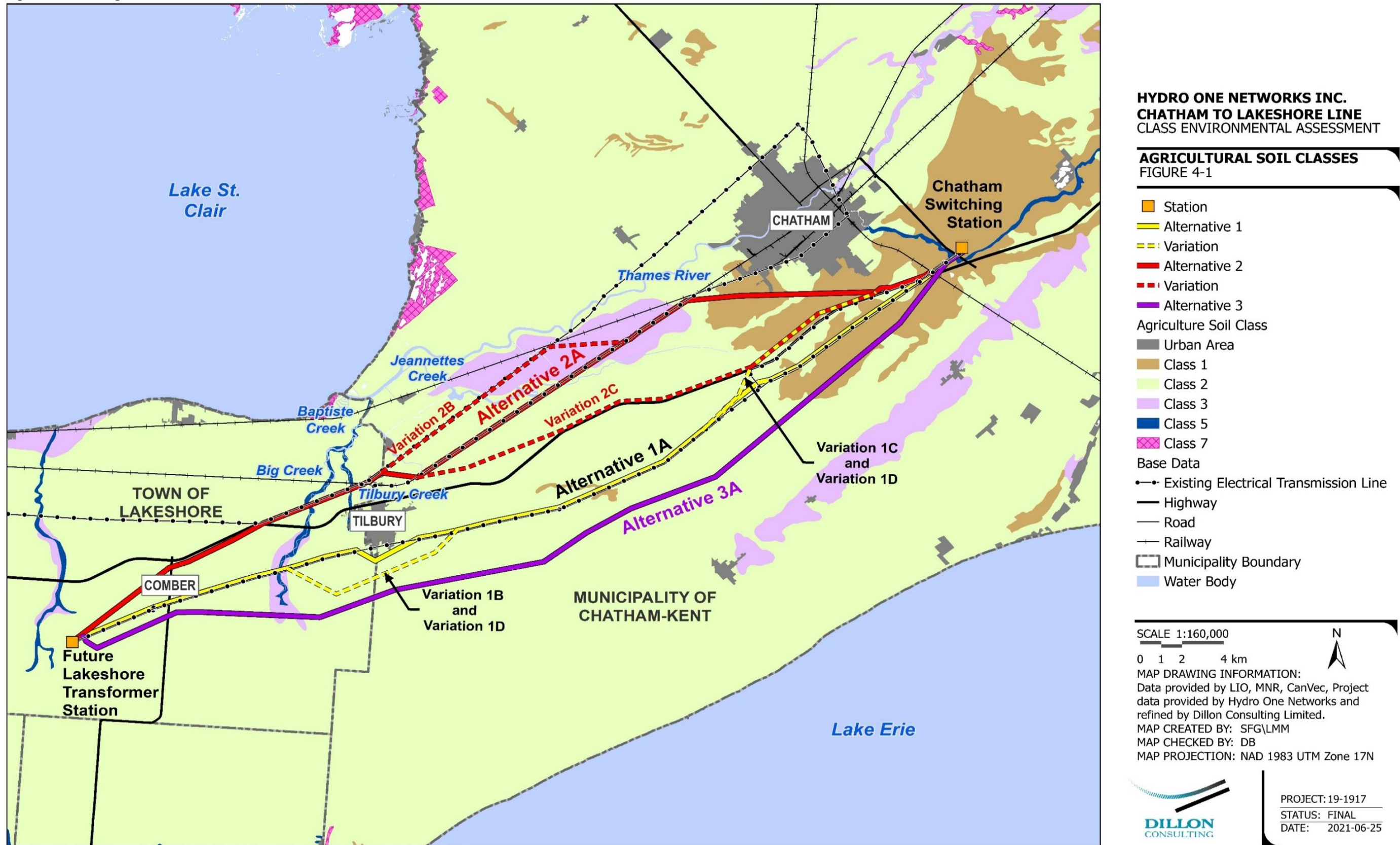
The Canada Land Inventory (CLI) classification system rates agricultural land capability. According to CLI data (1998), the PSA is dominated by Class 2 agricultural lands, which have moderate limitations that restrict the range of crops or require moderate conservation practices (**Figure 4-4-1**). Portions of the PSA near the Municipality of Chatham-Kent are rated as Class 1 and Class 3 lands. Class 1 soils have no significant limitations for crops, whereas Class 3 lands have moderate to severe limitations that restrict the range of crops or require special conservation practises. Lastly, soils associated with riparian habitat of Big Creek have been mapped as Class 5 soils. Class 5 lands have significant limitations to producing perennial forage crops.

Deep soils within Class 2 lands are sub-classified as wet. Excess water may be present as a result of flooding, a high water table, or poor drainage. Wet soils may limit the type of crops planted and restrict the growth of crops (Government of Canada, 2013). It is for this reason that a significant portion of the agricultural lands within the PSA are tile drained (OMAFRA, AgMaps 2020). Similarly, Class 3 soils within the PSA were considered to have low permeability and excessive soil moisture. On the other hand, soils in Class 1

are considered level, deep, well to imperfectly drained and have good nutrient and water holding capacity. If properly managed, soils are considered moderately high to highly productive for common field crops (Government of Canada, 2013).

The majority of agricultural lands within the LSA are used to produce traditional cash crops such as winter wheat, corn (commercial and seed), and soybeans, as well as tomatoes. While crops are rotated annually, the type of crop and soil characteristics in the LSA generally support traditional crop types. Approximately 96% of lands traversed by Route Alternative 1, and its variations, are used for agricultural purposes. Route Alternative 2, and its variations, and Route Alternative 3 are similar with approximately 92% and 96%, respectively, of each route spanning lands used for agricultural production.

Figure 4-4-1: Agricultural Soil Classes



4.2 Forestry Resources

Timber harvesting in Ontario occurs on both Crown and private land. Forest harvesting on Crown land occurs according to the *Crown Forest Sustainability Act*. Private land harvest occurs at the decision of landowners.

While there are several woodlands located within the PSA and adjacent lands, these areas fall outside of Forestry Management Units, Agreement Forest Areas, Forest Cover Units, Forest Resource Inventory Areas, or Wood Use Areas Forest Resources as identified through the MNRF Forest Resource Inventory (MNRF, 2017). As such, there is no potential for the proposed Project to affect the productivity or utilization of the land for timber harvesting.

4.3 Cultural Heritage Resources

Provincial heritage properties include three types of cultural heritage resources: built heritage resources, cultural heritage landscapes and archaeological sites (MHSTCI, 2010).

4.3.1 Archaeology

Timmins Martelle Heritage Consultants Inc. (TMHC) was contracted by Hydro One to conduct a Stage 1 Archaeology Assessment for the Project. The need for archaeological assessment work was determined through Hydro One's internal environmental review of the Project lands, as per the Class EA. All archaeological consulting activities were performed in accordance with MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (2011a) by a licenced archaeologist. The results of the Stage 1 Archaeological Assessment were provided to MHSTCI and entered into the Ontario Public Register of Archaeological Reports. The Stage 1 Archaeological Assessment (TMHC, 2020) determined that the PSA for all Route Alternatives contains lands with archaeological potential, as well as previously recorded archaeological finds and sites. It was recommended that a Stage 2 Archaeological Assessment be completed for the technically preferred Route Alternative, for all lands exhibiting archaeological potential that have not been previously assessed. Hydro One commits to completing the Stage 2 Archaeological Assessment for these identified areas of archaeological potential along the preferred Route Alternative prior to construction. Since the release of the draft ESR, Stage 2 Archaeological Assessment survey work has been initiated with plans for surveys to continue into 2023.

A copy of the Stage 1 Archaeology Assessment report is provided in **Appendix C-2**.

4.3.2 Cultural Heritage

Golder Associated Ltd. (Golder) was retained by Hydro One to provide a Cultural Heritage Existing Conditions (CHEC) report for the Project. The CHEC report was completed following guidance provided by MHSTCI. The CHEC report (Golder, 2020) determined that all Route Alternatives cross properties of known or potential cultural heritage value or interest (CHVI) within the LSA. Similarly, it was determined that Route Alternative 1 is associated with a property listed on the Lakeshore Municipal Heritage Register, while both Route Alternatives 1 and 3 impact the Buxton Settlement National Historic Site of Canada (NHSC). In addition to the CHEC Report, both CFN and COTTFN identified that the PSA includes cultural heritage landscapes which are important to their cultural continuity and sense of place VCs. It was recommended that a Preliminary Heritage Impact Assessment be conducted to identify direct and indirect impacts from the preferred Route Alternative on the known and potential built heritage resources identified in the CHEC.

A copy of the CHEC is provided in **Appendix C-2**.

4.4 Land Use and Communities

The majority of the PSA is designated as agricultural land as identified in the County of Essex (2014), Municipality of Chatham-Kent (2018) and Municipality of Lakeshore (2010) Official Plans. Human settlement areas include those located within the Municipality of Chatham-Kent and the Municipality of Lakeshore.

The Municipality of Lakeshore is comprised of multiple hamlets and urban centres and had a population of 36,611 in 2016 (Municipality of Lakeshore, 2010; Statistics Canada, 2017a). The PSA includes the Urban Area of Comber.

The Municipality of Chatham-Kent is comprised of several hamlets and urban centres and had a population of 101,647 in 2016 (Municipality of Chatham-Kent, 2018; Statistics Canada, 2017b). There are no hamlets or urban centres within the PSA; however, the LSA does include the Primary Urban Centre of Tilbury and the periphery of the Rural Settle Area associated with North Buxton.

There are four district school boards within the LSA; however, there are no schools or private schools located within the PSA.

4.4.1 Land Use Planning

Three Official Plans apply to the PSA, including the County of Essex, the Municipality of Chatham-Kent and the Municipality of Lakeshore Official Plans. Land use planning and development in the PSA is also guided by the Provincial Policy Statement (PPS).

Schedules from the Official Plans are included in **Appendix C-3**.

4.4.1.1 Provincial Policy Statement (2020)

The PPS is issued under Section 3 of the Ontario *Planning Act*, and came into effect on May 1, 2020. Section 3 of the *Planning Act* states that decisions affecting planning matters “shall be consistent with” the PPS. The consistency of the proposed Project (defined as “infrastructure” in the PPS) with the relevant Infrastructure and Public Service Facilities policies included in Section 1.6.8 of the PPS is summarized as follows:

- Planning and protecting corridors and ROWs for infrastructure to meet current and projected needs.
- Preserving and reusing abandoned corridors for purposes that maintain the corridor's integrity and continuous linear characteristics wherever feasible.
- Co-locating linear infrastructure is promoted where appropriate.

Section 1.6.8.6 of the PPS requires that when planning for corridors and ROWs for significant electricity transmission and infrastructure facilities, consider the significant resources protected by Section 2 of the PPS, Wise Use and Management of Resources. Effects to significant resources, as identified by Section 2 of the PPS, outside of the PSA are not anticipated.

4.4.1.2 County of Essex Official Plan (2014)

The County of Essex (County) Official Plan provides guidance and direction for how the land in its local municipalities should be used. The County's Official Plan provides the fundamental policy framework for the land use planning by local municipalities. The local municipalities, including the Municipality of Lakeshore, must implement their own local Official Plan and conform to the County's Official Plan. The Municipality of Chatham-Kent neighbours the County of Essex and is not subject to the County's Official Plan.

Agricultural areas make up the majority of the landscape within the County, with over 80% of the land area used as farm land (County of Essex, 2014). As identified in Schedule A1 of the Official Plan (**Appendix C-3**), the majority of the lands within the PSA

are designated as Agricultural. The PSA also includes Settlement Areas and Natural Environment Areas.

The Official Plan specifies that utility corridors, including transmission facilities, are to be designed in a manner that will minimize potentially negative effects where possible. The Official Plan acknowledges that utility corridors must exist and it is preferred that the routes for these corridors follow existing ROWs, fence lines and property lines, and if unable to accommodate existing ROWs, to avoid built-up and heavily populated areas. Preferred routes for utility corridors, as indicated in the Official Plan, should not infringe on environmentally significant areas. The Official Plan also identifies that minimizing impacts on agricultural lands and natural heritage systems is a high priority.

4.4.1.3 Municipality of Lakeshore Official Plan (2010)

As noted in Section 3.4.1.2, the Municipality of Lakeshore must implement their own local Official Plan and it must conform to the County of Essex's Official Plan.

Agricultural Areas make up the majority of the landscape within the Municipality of Lakeshore, and are generally outside of Urban Areas, Urban Fringe Areas, Hamlet Areas, Employment Areas and Waterfront Areas. The Agricultural Areas consists of prime agricultural land and accommodate agriculturally-related uses. All agricultural uses and secondary agricultural uses as identified in Section 3.3.11 of the Official Plan.

As identified in Schedule C.1 of the Official Plan (**Appendix C-3**), the majority of lands within the PSA are designated as Agricultural. The PSA also includes Comber, which is designated as an Urban Area. Route Alternatives in Comber cross land use designations for Employment, Service Commercial, Environmental Protection and Parks and Open Space (Schedule C.10; Municipality of Lakeshore, 2010).

Under Section 7.5(g) of the Official Plan, utilities are permitted in all land use designations and are to be installed within appropriate easements or public road allowances where possible (Municipality of Lakeshore, 2010).

4.4.1.4 Municipality of Chatham-Kent Official Plan (2018)

The majority of the Municipality of Chatham-Kent's land is designated as Agricultural (Schedule A) and, as identified under Section 3.10 of the Official Plan, over 550,000 acres of land is under cultivation and is considered prime agricultural land (Municipality of Chatham-Kent, 2018). Other land use designations within the Municipality include Residential, Commercial/Industrial and Other (i.e., Open Space/Conservation Lands, Urban Reserve, etc.).

As identified in Schedule A of the Official Plan (**Appendix C-3**), the majority of the lands within the PSA are designated as Agricultural. The LSA includes Tilbury, which is designated as a Primary Urban Centre, and is associated with designated residential land use. The PSA is associated with other land use designations, including industrial rural, Business Park, and suburban residential.

As outlined under Section 2.4.6 of the official plan, utility corridors, communications corridors and transmission facilities are encouraged and are permitted in any land use designation, provided the development satisfies the applicable provincial and/or federal legislation (Municipality of Chatham-Kent, 2018).

4.4.2 Transportation

The PSA comprises multiple road networks in both the Municipality of Lakeshore and the Municipality of Chatham-Kent. The highway network through the PSA is centralized by Highway 401, which passes through both Municipalities from west to east.

Road classifications within the PSA for each Municipality are summarized in **Table 4-1**. Many of the arterial roads in rural areas of the Municipality of Lakeshore are owned and maintained by the County of Essex.

Table 4-1: Road Classifications within PSA

Municipality	Road Classification
Municipality of Lakeshore	<ul style="list-style-type: none"> • Rural Regional Road • Rural Secondary Road • Rural Collector Road • Rural Local Road
Municipality of Chatham-Kent	<ul style="list-style-type: none"> • Local Road • Rural Arterial • Rural Collector

Source(s): Municipality of Lakeshore Official Plan: Schedule D1 (2010); Municipality of Chatham-Kent Official Plan: Schedule B1 (2018).

There are three airports located within the general vicinity of the Project. In the west end in the Town of Lakeshore, Cottam Airport is located approximately 8 km south of the Route Alternative 3, whereas The Stoney Point (Le Cunff) Airport is located approximately 5 km north of Route Alternative 2. Lastly, the Chatham-Kent Municipal Airport is located approximately 6.4 km south of Route Alternative 3.

Railway lines for Canadian National Railway (CNR), Canadian Pacific Railway (CP Rail), BNSF Railway Company and VIA Rail cross the PSA in a west to east direction. The CNR rail system travels west to east through the middle of the PSA. The VIA Rail line travels

west to east towards Windsor through the northern portion of the PSA. CP Rail and BNSF Railway are also located in the northern portion of the PSA. Each of the railway lines cross the U.S. border at Detroit in the west, and continue east to London.

4.4.3 First Nations Lands and Interests

As outlined in **Section 3.6**, several Anishnawbek and Haudenosaunee Communities were consulted as part of the Class EA process; however, there are no First Nation reserve lands situated within the PSA. Of the Anishnawbek and Haudenosaunee Communities identified by the Crown, the closest communities to the PSA include Bkejwanong (WIFN) (No. 06192), and CFN (No.165) (Government of Canada, 2020).

As identified in ENDM's letter confirming Indigenous communities to be consulted on the Project, Anishnawbek and Haudenosaunee communities were consulted on the basis that they have or may have constitutionally protected Aboriginal and/or treaty rights that may be adversely affected by the Project.

Section 3.6 provides additional information regarding consultation with Anishnawbek and Haudenosaunee communities including details on CFN and COTTFN's completion of the TEK study and CRS, respectively, for the Project. VCs described by CFN and COTTFN include in these reports include:

1. Water and Fishing
2. Hunting and Trapping
3. Plants and Medicines
4. Harvesting and Traditional Land Use
5. Governance and Stewardship
6. Cultural Continuity and Sense of Place

Each VC category represents an interest or right of First Nations and contributes to forming a large portion of the basis for First Nation wellness. First Nation wellness is described as physical, spiritual, and mental well-being. It is acknowledged that each VC identified above is interconnected to all of the other VCs identified. For example, Harvesting and Traditional Use rights involve the type of activities that contribute to Cultural Continuity rights. Cultural Continuity is tied to practices of harvesting through hunting, trapping, fishing, etc. which are also identified VCs. The VCs from both CFN and COTTFN have been identified throughout this report to highlight areas of First Nations rights and interests and to acknowledge their consideration. CFN's TEK study also documented specific areas identified by CFN members as currently being used to exercise their Aboriginal and treaty rights, although it was noted that these areas do not fully capture the relationship of the CFN community to their traditional lands or the extent of the practice of Aboriginal and treaty rights.

Although there are no First Nation reserve lands located within the PSA, **Section 7.8** and **Table 7-1** through to **Table 7-3** summarize the potential environmental effects and subsequent mitigation and/or avoidance measures in association with Anishnawbek and Haudenosaunee Lands and Territory, as well as the VCs provided by CFN and COTFN.

4.5 Mineral Resources

Based on a review of the MNRF LIO database, satellite imagery interpretation and observations made during field investigations, there are no active aggregate pits and quarries located within the PSA (**Appendix C-4**).

No active or abandoned mines were identified within the PSA or on adjacent lands (ENDM, 2017a).

While no active oil and gas wells were identified in the PSA, major gas (4") pipelines are present and provide a connection between Lakeshore to Tilbury (**Appendix C-5**). Additional pipelines connect Tilbury to Chatham to the north of the PSA; further major pipelines extend west from Chatham into the PSA.

4.6 Natural Environment Resources

Natural environment features including air, land, water, wildlife and wildlife habitat resources and features were factors considered within the PSA.

This section addresses physical and biological features in the Project Study Area including baseline information for the following:

- Physical environment.
- Atmospheric environment.
- Surface and groundwater resources.
- Designated or special natural areas.
- Natural heritage features.

4.6.1 Physical Environment

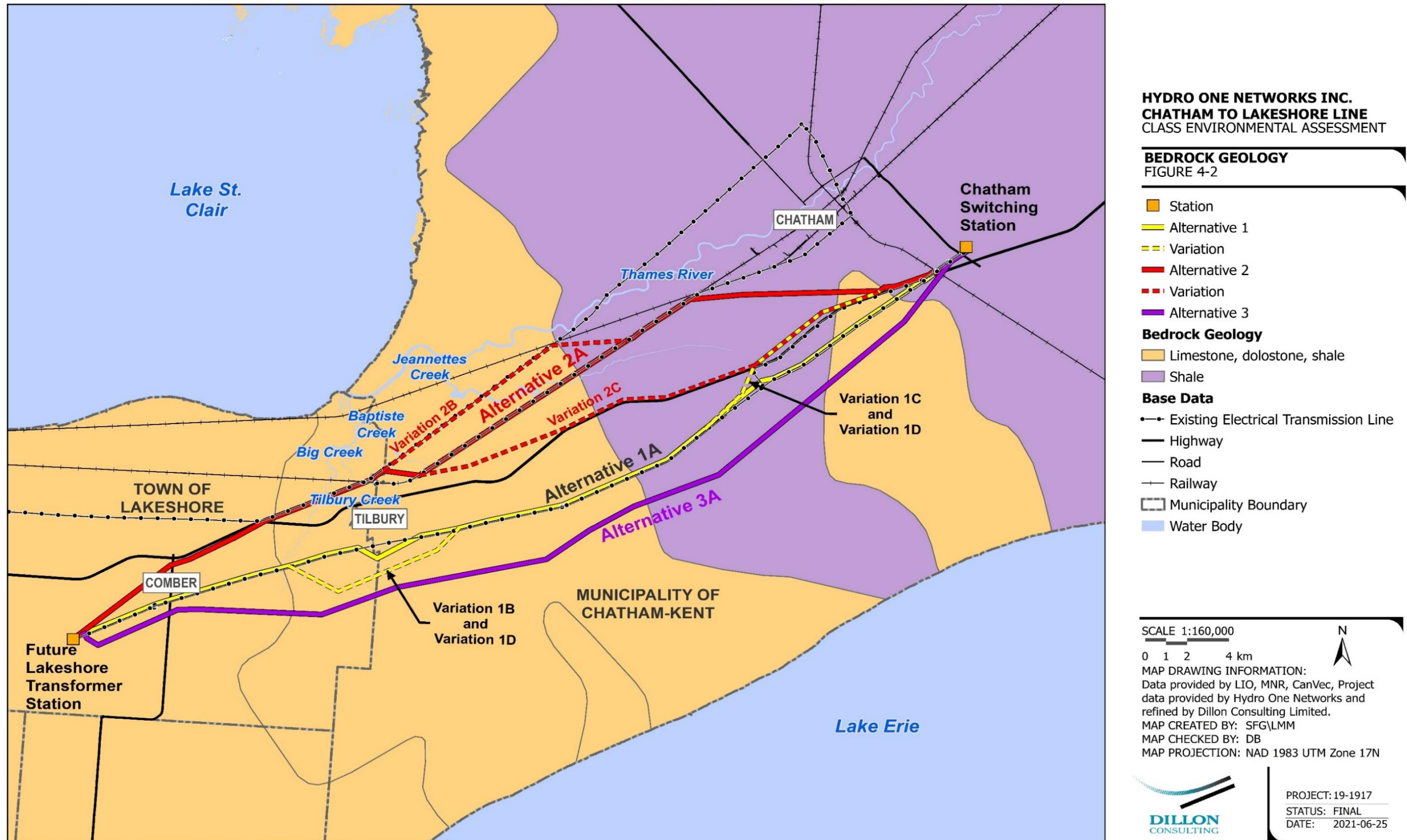
Bedrock Geology of the PSA is illustrated on **Figure 4-4-2** (ENDM, 2010). Bedrock deposits within the majority of the PSA are characterized as limestone, dolostone and shale (ENDM, 1991) of the Dundee Formation and Hamilton Group of the Middle Devonian period (MNDM, 1991). These formations consist of thick layers of Palaeozoic sedimentary rocks of the Michigan Basin sedimentary deposits (ERCA, 2018; MNDM, 1991). Conversely, bedrock geology for the remainder of the PSA in the northeast,

consist of shale. Bedrock geology in this portion of the PSA is associated with the Kettle Point Formation from the Upper Devonian period (MNDM, 2010).

Quaternary geology of the PSA is depicted on **Figure 4-4-3** (MNDM, 2010). The majority of the PSA consists of Tavistock Till. Tavistock Till is described a nearly level to gently sloping glaciolacustrine plain over clayey glaciolacustrine sediments (MNDM, 2010). The glaciolacustrine deposits within this section of the PSA are considered fine textured and consist of silt-clay layers with some gravel and sand; the clay and till described for this area are thick and limit water infiltration. Quaternary geology within the remaining PSA consists of a combination of lacustrine and glaciolacustrine deposits. Generally, the lacustrine deposits are finer in texture, and consist of silt-clay layers with some gravel and sand. Conversely, the glaciolacustrine deposits are considered coarse-textured, and are comprised of mostly sand and gravel with contributions of silt and clay.

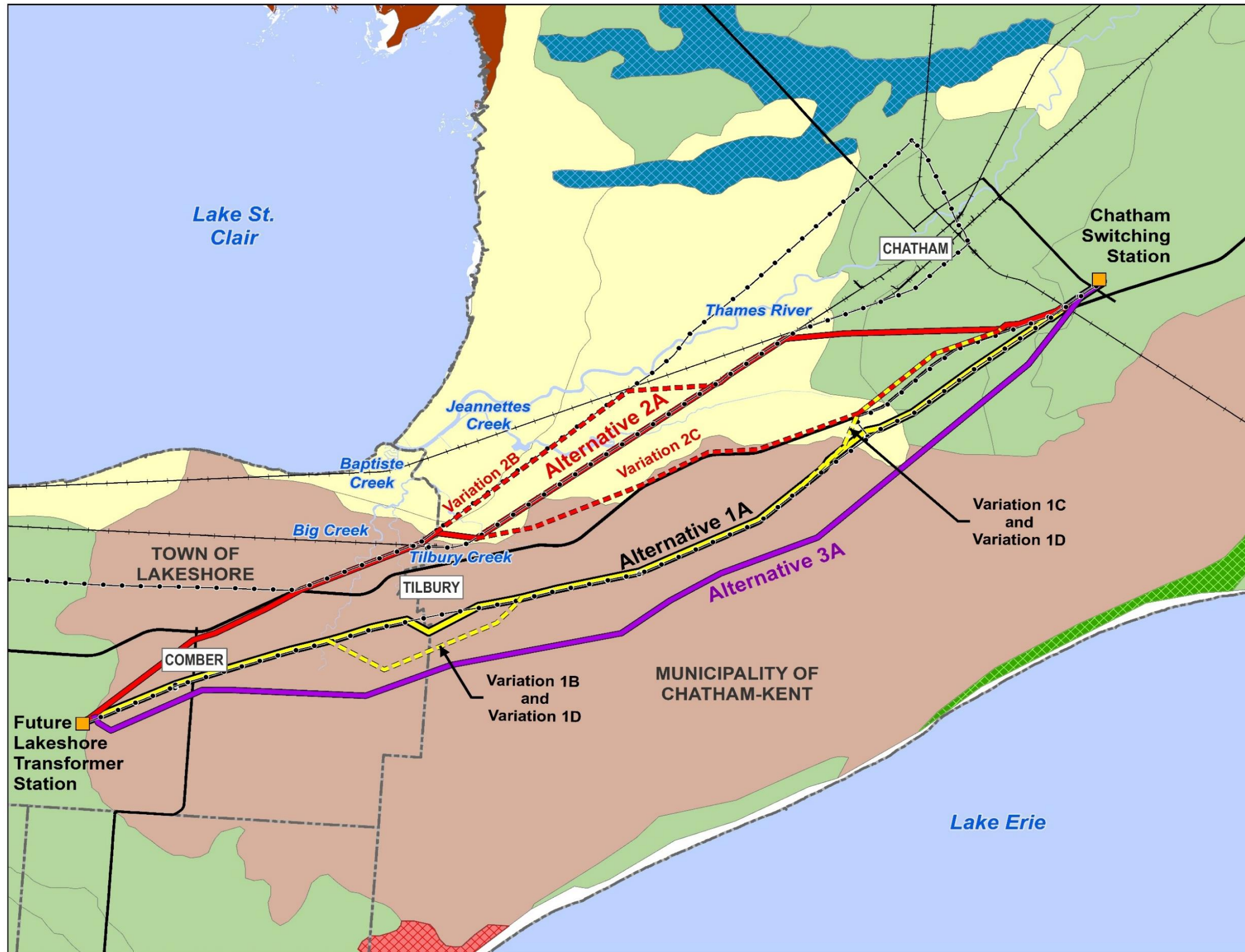
The bedrock and quaternary geology described for the PSA is consistent with the physiographic region described for southwestern Ontario. The PSA extends across the St. Clair Clay Plains and the Bothwell Sand Plains physiographic regions of Ontario as defined by Chapman and Putnam (1984). The St. Clair Clay Plains span across the majority of Essex County, whereas the Bothwell Sand Plains initiate closer to the Municipality of Chatham-Kent and continue north. Topography of the PSA and surrounding region in general are considered as mostly flat (MNRF, 2021).

Figure 4-4-2: Bedrock Geology



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Figure 4-4-3: Quaternary Geology



**HYDRO ONE NETWORKS INC.
CHATHAM TO LAKESHORE LINE
CLASS ENVIRONMENTAL ASSESSMENT**

QUATERNARY GEOLOGY
FIGURE 4-3

- Station
- Alternative 1
- Variation
- Alternative 2
- Variation
- Alternative 3

Quaternary Geology

- Fluvial deposits
- Glaciofluvial ice-contact deposits
- Glaciolacustrine deposits
- Lacustrine deposits
- Organic deposits
- Port Stanley Till
- Tavistock Till

Base Data

- Existing Electrical Transmission Line
- Highway
- Road
- Railway
- Municipality Boundary
- Water Body

SCALE 1:160,000

0 1 2 4 km

MAP DRAWING INFORMATION:
Data provided by LIO, MNR, CanVec, Project data provided by Hydro One Networks and refined by Dillon Consulting Limited.

MAP CREATED BY: SFG\LMM

MAP CHECKED BY: DB

MAP PROJECTION: NAD 1983 UTM Zone 17N



PROJECT: 19-1917
STATUS: FINAL
DATE: 2021-06-25

4.6.2 Atmospheric Environment

Climate

The Municipality of Lakeshore and Municipality of Chatham-Kent are located within the Humid High Moderate Temperate Eco climate Region of southwestern Ontario. Climate in this region is the mildest identified in Canada, with a growing season of approximately 243 days (Crins et al., 2009). Meteorological stations operated by the Government of Canada and the MECP with sufficient long-term data for the general region of the PSA have been identified in Kingsville (Kingsville MECP [formerly MOE], Climate Identifier [ID] 6134190) and in Chatham (Chatham Water Pollution Control Plant, WPCP; Climate Identifier [ID] 6131415) Ontario (Government of Canada, 2019). The meteorological stations are located approximately 18.0 km southwest, and 1.1 km north of the PSA, respectively. Temperature and precipitation data presented in this section are based on annual Climate Normals data available from 1981 and 2010 (**Table 4-2**; Government of Canada, 2019).

Table 4-2: Summary of Published Annual Climate Normals for the 1981 to 2010 Period for the Kingsville MECP and Chatham WPCP Stations

PARAMETER	Kingsville MOE (Station ID: 6134190): 18.0 km southwest of Project Study Area	Chatham WPCP (Station ID: 6131415): 1.1 km north of Project Study Area
Daily average (°C)	9.6	9.8
Daily maximum (°C)	13.5	14.1
Daily minimum (°C)	5.6	5.4
Rainfall (mm)	814.2	803.1
Snowfall (cm)	86.3	79.2
Precipitation (mm)	900.5	882.3
Days with maximum temperature >35°C	0.21	0.55
Days with minimum temperature <-30°C	0.0	0.0
Days with rainfall ≥ 25 mm	5.9	5.6
Days with snowfall ≥ 25 mm	0.12	0.09
Days with precipitation ≥ 25 mm	6.0	5.7

Source: Government of Canada, 2019

Temperature

The climate normal mean annual temperature recorded at the Kingsville MOE and Chatham WPCP meteorological stations are 9.6 and 9.8 degrees Celsius (°C), respectively (Government of Canada, 2019). For these two stations, the climate normal daily average temperature varies between 5.6 -5.4 °C and 13.5 -14.1°C. The climate normal frost-free period is from May 19 to September 30 (133 days) (Government of Canada, 2019).

Precipitation

Precipitation is distributed throughout all four seasons, with snowfall typically limited between November to April, and rainfall occurring throughout the year. Climate normal days with precipitation (equal to or over 0.2 mm) range between 111.1 and 118 days per year for the Kingsville MECP and Chatham WPCP meteorological stations, respectively (Government of Canada, 2019).

Climate normal monthly precipitation varies between 31.6 – 32.9 millimetres (mm) (January) and 87.9- 89.1 mm (September) (Government of Canada, 2019). For the two meteorological stations, the climate normal total annual precipitation is 803.1 mm (Chatham WPCP) and 900.5 mm (Kingsville MECP), where 79.2 mm and 86.3 mm are associated with snowfall and 882.3 mm (Chatham WPCP) and 814.2 mm (Kingsville MECP) occur as rainfall.

Extreme daily rainfall for the Chatham WPCP meteorological station varies from 32.0 mm (November) to 86.1 mm (July) and are considered climate normal. Extreme snow depths for the Chatham WPCP station range from zero to 26.0 centimetres (cm) (January; Government of Canada, 2019). On the other hand, extreme daily rainfall climate normal data for the Kingsville MOE meteorological station varies from 38.0 mm (January) to 106.0 mm (September), while extreme snow depth ranges from zero to 30.0 cm (February; Government of Canada, 2019).

Wind

At the Chatham WPCP meteorological station, winds are primarily blowing from the southwest with an average maximum hourly speed of 60.5 kilometres per hour (km/hr) (Government of Canada, 2019a; Windfinder, 2019). Wind data was not provided in the climate normal data set for the Kingsville MECP meteorological station.

Air Quality

In Ontario, air quality is monitored through a network of air quality monitoring stations operated by the MECP and Environment Canada (MECP, 2019; EC 2019); the MECP monitors air quality throughout the Province as part of the Air Quality Monitoring System (MECP 2018). The nearest stations are located approximately 37 km west (Windsor Downtown) and 3.5 km north (Chatham) of the PSA. Through hourly monitoring, an Air Quality Health Index (AQHI) reading summarizes background air quality levels for ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulphur dioxide (SO₂) and particulate matter (PM_{2.5}). All five parameters are measured at the Windsor Downtown station; however, only ozone, nitrogen dioxide and particulate matter are measured at the Chatham station.

The AQHI creates a score (i.e., 1 - 10+) totalling the overall risk associated with levels recorded for the parameters measured. A score of 1-3 indicates a low risk, a score of 4-6 indicates a moderate risk, while a score of 7+ indicates a high risk to ambient air quality. Air monitoring data summarized to provide AQHI scores from the Windsor Downtown station represents the combined effect of emissions from nearby sources, as well as the effect of emissions transported into the region. AQHI readings are recorded hourly. Based on averaged daily AQHI readings recorded over the 2018, 2019 and 2020 monitoring years, a low score (1-3) and, therefore a low risk to air quality, are indicated for the Windsor Downtown area (MECP, 2018). Similarly, annual average AQHI readings recorded for the parameters measured at the Chatham station indicated an overall low score (1-3) during 2018, 2019 and 2020, respectively (MECP, 2018).

Noise and Vibration

In accordance with the MECP (formerly MOE) publication NPC-300 "Environmental Noise Guideline – Stationary and Transportation Sources – Approval and Planning" noise-sensitive receptors, or points of reception, are defined as sensitive land uses, which include dwellings; institutional use (educational, nursery, hospital, health care facility, community centre, place of worship or detention centre); and commercial use (hotel or motel) (MOECC, 2016b). Based on a desktop review, points of reception were identified within the LSA to represent the noise-sensitive receptors in the vicinity, all being rural residential dwellings and/or commercial operations adjacent to active agricultural lands.

Ambient noise conditions within the LSA were established through a review of publicly available information and the professional opinion of Hydro One based on experience on existing transmission line and station projects. Ambient noise conditions within the LSA are generally expected to be dominated by anthropogenic activities. These

activities include, but are not limited to, transportation (road), agricultural activities, and residential activities. The actual ambient noise levels at a given point of reception depend on a number of factors, including type of noise source, distance to the noise source, and influences from intervening areas (e.g., structures, vegetation, as applicable) that could provide shielding between the noise source and point of reception. Ambient noise levels are expected to vary throughout the various periods of the day (i.e., Daytime [07:00-19:00], Evening [19:00-23:00], and Night-time [23:00-07:00]), days of the week, and seasons of the year. Ambient noise levels are expected to be at their highest during the agricultural planting and harvest seasons.

Ambient noise levels in the LSA are likely influenced by the following noise emissions:

- Local and distant road traffic, particularly along Highway 401.
- Railway activities.
- Agricultural (seasonal) and residential activities.

Vibration can be a by-product of construction activities. Some activities during the construction phase of the proposed Project with the ability to result in vibration include soil compaction, excavation of foundations, and heavy equipment use. The known and/or potential build heritage resources identified in **Section 4.3.2** will be further assessed during the Preliminary Heritage Impact Assessment.

4.6.3 Surface Water Resources

For the purposes of field studies conducted in 2020 in support of the Class EA, surface aquatic features were defined using two categories: 1. watercourses and 2. waterbodies. Watercourses were considered rivers, streams/creeks and constructed drains, whereas waterbodies were considered natural or man-made ponds or pools that are land-locked within the landscape. As summarized in the Natural Environment Existing Conditions Technical Report (**Appendix C-1**), a total of 182 watercourse intersections are associated with the Route Alternatives within the PSA based on background review. Of the 182 identified watercourse intersections, 42 were assessed as part of the 2020 field program. Similarly, 18 waterbodies were identified within the PSA; of which eight were associated with Route Alternatives 1 and 2, respectively, with the remaining two associated with Route Alternative 3.

Physical conditions of watercourses assessed in 2020 were summarized in Section 3.1 of the Natural Environment Existing Conditions Technical Report (**Appendix C-1**). Most of the watercourse features within the PSA flow into Jeannettes Creek, McGregor Creek Drain, Baptiste Creek, Tilbury Creek or Big Creek. Jeannettes Creek, also identified as Duke Drain and Ferguson Drain in the upstream reaches, flows into the Thames River

approximately 3 km east of Lighthouse Cove, and is the most prominent feature throughout the east portion of the PSA.

A list of watercourses surveyed in association with each Route Alternative are provided in **Table 4-3** below.

Table 4-3: Watercourses Surveyed

Watercourse/Drain Name	Route Alternative 1	Route Alternative 2	Route Alternative 3
Locke Drain	Yes	Yes	No
Duke Drain (Jeannettes Creek)	Yes	No	Yes
Waddick Drain	Yes	No	No
O'Rourke Drain	Yes	No	Yes
Government Drain	Yes	No	No
Kersey Drain	Yes	No	Yes
Deary Drain	Yes	No	Yes
Baptiste Creek Drain (Baptiste Creek)	Yes	Yes	Yes
Powell Drain	Yes	No	No
Tremblay Creek Drain (Tilbury Creek)	Yes	Yes	No
Big Creek Drain (Big Creek)	Yes	Yes	No
McGregor Creek Drain (McGregor Creek)	No	Yes	No
Chinnick Drain (Indian Creek)	No	Yes	No
Bullis Creek Drain (Bullis Creek)	No	Yes	No
Ferguson Drain (Jeannettes Creek)	No	Yes	No
Unnamed feature	No	Yes	Yes
Little Creek	No	Yes	No
Malden Road Drain Outlet	No	Yes	No
Doyle Drain	No	Yes	No
Unnamed Drain (tributary to Doyle Drain)	No	Yes	No
Ferguson Drain (Jeannettes Creek)	No	Yes	No
Finn and Cooper Drain	No	Yes	No
6-7 Sideroad Drain	No	Yes	No
Carter Drain	No	No	Yes

Watercourse/Drain Name	Route Alternative 1	Route Alternative 2	Route Alternative 3
Thibert Drain	No	No	Yes
Robb-Dales Drain (Big Creek)	No	No	Yes
East Branch of Big Creek Drain	No	No	Yes
Big Creek Drain – West Branch	No	No	Yes
Toomey Drain	No	No	Yes

While geographically large, the topography across the PSA is relatively flat, with general sloping observed towards watercourse systems and surface drainage features. In general, surface flow from constructed drains and watercourses flow north and northwest within two tertiary watersheds (i.e., the Sydenham River- St. Clair River, the Lower Thames River; MNRF Ontario Flow Assessment Tool, 2019). Surface flow within the PSA is generally directed towards the major watercourses and watercourse systems; within the western most sections of the PSA, surface flows are directed towards the Ruscom River and eventually outlet to Lake St. Clair (MECP, 2019). As mentioned above, surface flows collected by the Baptist Creek, Jeannettes Creek and McGregor Creek systems travel north-northwest to outlet to the Lower Thames River (MNRF, 2019). MNRF secondary watershed mapping for the PSA is provided in **Appendix C-6**.

A total of five active Provincial Water Quality Monitoring Network (PWQMN) stations have been identified within or in the vicinity of the PSA. PWQMN stations for Jeannettes Creek (No. 04001311002) and McGregor Creek (No. 04001308102) are located within the PSA, whereas stations for the Thames River (No. 04001300782), Ruscom River (No. 04001000302) and Big Creek (No. 04001303302) are located approximately 2.0 km north, 3.5 km north, and 2.8 km south, respectively, from the PSA. The five PWQMN stations were mapped in MECP available background source protection data (**Appendix C-7**). The Jeannettes Creek, McGregor Creek, Ruscom River and Big Creek stations were last surveyed in 2019 for Phosphorus, Nitrates, Suspended Solids and Chloride; the Thames River station was last surveyed in 2002 for the same parameters. These parameters were measured in order to document the health of subwatersheds within the regulated areas of ERCA and LTVCA. As identified in the Essex Region Conservation Authority 2015 Watershed Assessment Report, and in the 2018 Lower Thames Valley Watershed Report Card, surface water quality for the subwatersheds identified within, and in the general vicinity of the PSA were considered poor. Furthermore, readings reported by ERCA exceeded the Canadian Environmental Quality Guidelines (ERCA, 2015). According to the ERCA/LTVCA watershed reports, conditions of the subwatershed are likely attributed to past and ongoing agricultural and residential land uses.

4.6.4 Groundwater Resources

Groundwater resources were evaluated within the PSA to effectively capture potential effects on groundwater resources from the proposed Project. Well records mapped for the province of Ontario were reviewed to determine groundwater quality (MECP, 2019d). Background review determined that many water wells are located within the extent of the PSA; mapping identifying the extent of well records for the PSA and general vicinity are illustrated in **Appendix C-8**. As such, select well records were chosen within the PSA in order to identify the approximate ground water and overburden depths for areas associated with the three Route Alternatives. The summary of the water wells chosen for review are listed in **Table 4-4**.

Table 4-4: Water Well Records Selected for Review within the PSA

Well ID	Date Complete	UTM Coordinates (Zone 17 T) Eastings	UTM Coordinates (Zone 17 T) Northings	Depth to Water (m)	Overburden
2103039	05/30/1959	368940	4674500	30.7	clay
2103012	08/13/1962	372100	4672150	34.7	Clay, stoney gravel and sand
2103036	01/27/1961	373600	4676950	30.5	Clay, gravel
2102993	08/12/1951	380000	4673110	43.5	Clay, sand
7232108	10/21/2014	381972	4681519	Not applicable	Sand, silt clay
3305828	07/01/1973	389000	4684114	Not applicable	clay
3304832	04/14/1969	416500	4691990	30.2	Clay, stoney clay, gravel
3302640	03/15/1962	409500	4693000	22	Clay, gravel
3306048	10/12/1974	411626	4690276	28.9	Sand, clay, gravel

Source: MECP, 2019

Well log records are consistent amongst the water wells: groundwater is typically found approximately between 30 - 45 m below ground surface, below a thick layer of clay soil (located approximately between 0 and 34 m below ground surface). The majority of wells observed within and adjacent to the PSA were all used for local water supply (agricultural/livestock and domestic residential). Groundwater observed within boreholes of several of the water wells were described as clear and containing sulphur.

Excerpted summary water well records listed in **Table 4-4** are presented in **Appendix C-8**.

No municipal drinking water supplies were identified within the PSA or within the general vicinity. The aquifers in the PSA and vicinity have been mapped by the MECP as having a high vulnerability index (Vulnerability Score: 6; MECP, 2019), based on the sandy nature of the near-surface soils with underlying clay plain, the land use and population density, and the existence of a protected groundwater supply in the area (ERCA, 2019; ERCA 2015). Highly vulnerable aquifers within the PSA are included in **Appendix C-7**.

Groundwater Hydrology

Groundwater hydrology was assessed in the Essex Region/Chatham-Kent Region Groundwater Study Volume 1: Geologic/Hydrogeologic Evaluation conducted by Dillon Consulting Limited and Golder Associates Limited (Dillon and Golder, 2004). Water table depths and aquifer susceptibility were mapped in Figures 14a, 14b, 15a, 15b, 27a and 27b respectively within the report (Dillon and Golder, 2004; **Appendix C-9**). Results of the study were incorporated into recent Official Plan mapping. As per Schedule C3 of the County of Essex Official Plan, western sections of the PSA associated with municipal drains are designated as zone 3 intake protection zones; however, as per Schedule B1 of the Municipality of Lakeshore Official Plan, the PSA overall is considered within an area of low aquifer intrinsic susceptibility (Figure 27A; Dillon and Golder, 2004). Similarly, the majority of the eastern half of the PSA is identified as a "Low Susceptibility Area" in Schedule D2 (Intrinsic Susceptibility to Ground Water Contamination) of the Municipality of Chatham-Kent Official Plan (2018). Thick layers of clay within the PSA slow the infiltration of groundwater below the water table. Additional "Medium Susceptibility Areas" were noted in Schedule D2 around Tilbury and the limits of Chatham; limited "High Susceptibility Areas" were also noted near Chatham. The mix of High and Medium Susceptibility Areas near Chatham correspond to areas where highly vulnerable aquifers are mapped in **Appendix C-7**.

As described in the report by Dillon and Golder (2004), ground water flow generally follows surface elevation contours towards Lake St. Clair and the Lower Thames River. According to information depicted in Figure 14a and 14 b of the Dillon and Golder report (2004), the ground water elevation within the PSA is between 176-190 metres above sea level (masl). The depth to the water table within the PSA was assessed to be between 2 – 4 m (Figure 15a and 15b, Dillon and Golder, 2004); the water table is described as an unconfined to semi-confined aquifer defined by coarse-grained sand and gravel fill deposits (Dillon and Golder, 2004). A deeper contact aquifer overlies bedrock within the PSA and consists of glacially derived sediments (Dillon and

Golder, 2004). Below this, a bedrock aquifer was identified within fractured portions of the bedrock formations (confined to limestone and dolomite) present within the PSA (Dillon and Golder, 2004).

4.6.5 Source Water Protection

The PSA spans the Essex Source Protection Area (SPA) and Lower Thames Valley SPA (MECP, 2019; **Appendix C-7**). Lands within the two SPAs are categorized as Event-based Areas (EBA). EBAs are considered areas that may pose threats to sources of drinking water (GSCA, 2019), and are determined through analyses to identify the potential risk of spills (GSCA, 2019). As identified in **Appendix C-7**, EBAs are identified in the western sections of the PSA. Lands within the PSA are delineated as EBAs based on modeled scenarios that show that certain types of fuel spills may reach a surface water intake under certain weather conditions. The ERCA and LTVCA SPAs are also designated as category 3 Intake Protection Zones (IPZ-3). IPZs are areas where run-off from streams or drainage systems could carry contaminants into sources of drinking water (ERCA, 2019). Specifically, IPZ-3 indicate areas where contaminant spills may reach IPZ from farther distances during areas of extreme rainfall or storm events (ERCA, 2019).

As a portion of the PSA (including portions of all three Route Alternatives) contain designated EBAs and IPZ-3, permits related to the handling and storage of fuel are required under the Essex Region Source Protection Plan (ERCA, 2015) and Source Protection Plan for the Thames-Sydenham and Region (LTVCA, 2015). The PSA spans the Essex Source Protection Area (SPA) and Lower Thames Valley SPA (MECP, 2019; **Appendix C-7**). A review of the Assessment Reports for each of the SPAs indicated that the PSA extends across the following mapped vulnerable areas:

Essex SPA

- Event Based Areas (EBA), located in the Essex area.

Lower Thames Valley SPA

- Event Based Area (EBA), located in the Tilbury Area.
- Significant Groundwater Recharge Areas (SGRA), located in the Chatham area.
- High Vulnerability Aquifers (HVA), located in the Chatham Area.

EBAs are areas that may contribute runoff to surface water intakes during storm events. SGRAs are locations where groundwater recharge of the source water aquifers is locally significant. HVAs are those aquifers that are susceptible to contamination from land use activities.

Source Protection Plans (SPPs) developed by each of the SPAs identify policies that are to be implemented for the protection of source water. In particular, the identified policies focus on specific land use activities that are identified in the *Clean Water Act* as Prescribed Drinking Water Threats (PDWTs) that may pose a low, moderate or significant threat to the source water. Under the *Clean Water Act*, there are 22 PDWTs identified. The PDWTs that were identified for the PSA are related to construction and maintenance activities that are performed within designated vulnerable areas, and include:

- Application of Pesticides (PDWT #10), as part of the anticipated regular maintenance activities along the transmission corridor.
- Storage and Handling of Fuel (PDWT #15), related to refuelling activities for construction equipment.

A review of the SPPs for the Essex SPA and Lower Thames Valley SPA identified the following policies associated with these PDWTs where the proponent is responsible for action. Policies are only identified for those related to the Storage and Handling of Fuel, as the anticipated Application of Pesticides activity is not identified as posing a significant threat based on the most recent Technical Rules.

Essex SPA

Policy 31 (Ref #SLWA123), Handling and Storage of Fuel. This policy is associated with the handling and storage of fuel in EBAs, where the activities can potentially be a significant threat. In particular, this relates to the above grade handling and storage of liquid fuels (containing benzene) in quantities above 15,000 litres. It is noted that recent changes to the *Clean Water Act* Technical Rules, may reduce the quantity of fuels (i.e., below 15,000 litres) that are being handled or stored at the property that would result in a significant threat designation.

Policy 32 (Ref #All 123), Handling and Storage of Fuel. This policy is associated with the handling and storage of fuel, in areas where the land has been identified within the Official Plan and/or Zoning By-law as being commercial, agricultural or Industrial, and the activity has been identified as a Restricted Land Use. A written notice from the Risk Management Official is required prior to approval of any Building Permit or Planning Act application.

Lower Thames Valley SPA

Policy 1.08 (Ref #2614), Restricted Land Uses for Event-based Modelled Threats. As it pertains to the applicable PDWT (handling and storage of fuels), this policy applies

where the land has been identified within the Official Plan and/or Zoning By-law as being commercial, agricultural or Industrial, and the activity has been identified as a significant threat. For handling and storage of fuels, the determination of the degree of threat is based on the handling and storage quantities involved. A written notice from the Risk Management Official is required prior to approval of any Building Permit or Planning Act application.

Both SPAs identify the requirement for development of a Risk Management Plan if significant threats to SWP are identified based on project activities. The development of the Risk Management Plan is completed in consultation with each SPAs Risk Management Office.

4.6.6 Designated or Special Natural Areas

Designated or special natural areas are identified by federal or provincial agencies and municipalities through legislation, policies, or approved management plans. These areas typically have special or unique values that result in conservation land initiatives. Such areas may have a variety of ecological, recreational, and aesthetic features and functions that are highly valued. Significant woodlands are discussed below in **Section 4.6.7.**

Big O Conservation Area

Located within the PSA and administered by the Lower Thames Valley Conservation Authority (LTVCA), the Big O Conservation Area is approximately 4.5 hectares in size and is located off Main Street in the community of Comber. The Conservation Area was donated to the LTVCA in 1992 by the Big O Drain Tile Company, is known to be frequented by birdwatchers during the spring and fall migrations, and contains a number of natural trails for public enjoyment. The Conservation Area is open for day use from 8:00 AM to 10:30 PM year round and free of charge. The existing 230 kV transmission line runs directly adjacent to the Big O Conservation Area.

C.M. Wilson Conservation Area

Located within the PSA approximately 9 kilometres south of Chatham, the 30 hectare C.M. Wilson Conservation Area was acquired by the LTVCA in 1967. The Conservation Area includes 100 camp sites with a mix of hydro, hydro and water, or unserviced sites, including season-long camping sites for trailers. The Conservation Area includes fully serviced washroom facilities, pavilions, a playground, a man-made lake and several natural trails for public enjoyment. The Conservation Area is also home to the McKinlay Woodlands Memorial Forest where hundreds of trees are planted annually in memory of

friends and family through the McKinlay Funeral Homes Ltd. The Conservation Area is open year-round from 8:00 AM to sunset daily.

Important Bird Areas

The PSA overlaps with the Eastern Lake St. Clair Important Bird Area (IBA; Figure set 2 of **Appendix C-1**). IBAs are considered a relatively new concept in Canada and are not legally protected in their own right. In Canada, IBAs complement (and often overlap partially or entirely with) other national, provincial, and local conservation designations such as National and Provincial Parks, Migratory Bird Sanctuaries, National Wildlife Areas, Crown Reserve lands, and Ecological Reserves.

The IBA noted in the vicinity of the Project was identified to promote conservation and stewardship of migratory stopover and staging habitat for waterfowl along the eastern shoreline of Lake St. Clair. Staging and stopover habitat consists of agricultural fields subject to sheet flooding and standing water during the spring and fall migratory seasons. Historically and to the present day, Lake St. Clair and the general vicinity of the IBA have been used as seasonal recreational hunting grounds. Further to this, the Eastern Lake St. Clair Lake IBA is associated with staging habitat provided mainly by the St. Clair National Wildlife Centre and Bradley Farm Recreational Hunting Area (located approximately 5.3 km northeast and 3.8 km east of the Project, respectively). While habitat along the lake shoreline is the primary focus of the IBA, the extent of the IBA continues southeast over active agricultural lands as a buffer to these important shorelines areas. Specifically, within the PSA, the furthest extents of the IBA overlap with Route Alternative 2 and Route Alternative 1 (Figure set 2 of **Appendix C-1**).

Lake St. Clair is included in two major migration flyways (the Atlantic and Mississippi) and is identified as a critical feeding, resting and staging area for numerous species, such as: Canvasbacks (*Aythya valisineria*), Redheads (*Aythya americana*), Black-bellied Plovers (*Pluvialis squatarola*) and American Golden Plovers (*Pluvialis dominica*). The identification of the IBA was intended to promote conservation stewardship and to ensure recreational practises and hunting traditions were maintained. While the IBA was identified as a mid-point between two migration flyways; it is noted that migration routes differ among species. Telemetry data collected in support of scientific studies track the trajectory of individual birds in Ontario during spring and fall migration. Through reviewing available data, flight paths for the species listed above do not appear to extend through the eastern extents of the IBA which overlap with the PSA.

In addition, wetland habitat within the IBA may provide suitable habitat for two SAR under the provincial Endangered Species Act (2007) and the federal Species at Risk Act

(2002): King Rail (*Rallus elegans*; Endangered) and Least Bittern (*Lxobrychus exilis*; Threatened). Both species prefer large undisturbed marsh habitat (MNR, 2017). Suitable habitat conditions for these species within the IBA were not identified within the PSA as a result of the background review and/or field investigations; however, potential suitable habitat does exist adjacent to the PSA in association with Route Alternative 2A and 2B.

Recommended mitigation measures and/or best practices to mitigate potential impacts to birds is discussed further in **Section 7.7.7** and **7.7.8**.

4.6.7 Natural Heritage Features

As defined in the PPS (2020), natural heritage features and areas include "significant wetlands, significant coastal wetlands, fish habitat, significant woodlands, significant habitat of endangered species and threatened species, significant wildlife habitat, and significant areas of natural and scientific interest", which are important for their environmental and social values as a legacy of the natural landscapes of an area.

The key natural heritage features that are defined in the PPS are considered below. Information on natural heritage features was collected from the following sources:

- Species at Risk Ontario (SARO) (O. Reg. 230/08)
- Species at Risk Act (SARA) database
- Natural Heritage Information Centre (NHIC) database (NHIC, 2018)
- Atlas of Breeding Birds of Ontario (Cadman et al., 2007)
- Atlas of the Mammals of Ontario (Dobbyn, 1994)
- Bat Conservation International range maps (Bat Conservation International, 2016)
- Ontario's Reptile and Amphibian Atlas (Ontario Nature, 2016)
- Fisheries Habitat Management Plan for the Essex Region (Hayman et al., 2005)
- County of Essex Official Plan (2014)
- Township of Lakeshore Official Plan (2010)
- Municipality of Chatham-Kent Official Plan (2018)
- ERCA
- LTVCA
- Aerial imagery
- Ontario Base Map

In addition to the background information review, Hydro One's environmental consultant, conducted natural heritage field surveys within the PSA. As discussed previously in **Section 4**, surveys were completed within PSA lands where access was granted, and/or from existing ROW and property boundaries. Field surveys were carried

out between April through July of 2020. A summary of the field survey results is provided below. Refer to Figures set 3 in **Appendix C-1** for survey locations.

Ecological Land Classification & Botanical Assessment

Ecological communities were classified in accordance with ELC for southern Ontario, second approximation (Lee et al., 1998; Lee, 2008). ELC communities were mapped based on aerial imagery and subsequently verified in the field (**Appendix C-1**). The PSA is dominated by agricultural lands, residential houses and municipal roads. Natural areas documented within the PSA were identified as isolated features in the landscape.

Vegetation communities identified within the PSA are illustrated in Figure set 4 in **Appendix C-1**. The composition of natural vegetation communities identified within the PSA per Route Alternative are listed below in **Table 4-5**.

Table 4-5: Vegetation Communities Identified within the PSA

ELC Community	Dominant Plant Species/Description	Route Alternative 1	Route Alternative 2	Route Alternative 3
SWT Thicket Swamp	American Elm (<i>Ulmus americana</i>), Eastern Red Cedar (<i>Juniperus virginiana</i>), Green Ash (<i>Fraxinus pennsylvanica</i>), Gray Dogwood (<i>Cornus racemosa</i>), and Common Evening Primrose (<i>Oenothera biennis</i>).	No	Yes	No
SWDO2-1 Red-Maple Organic Deciduous Swamp	Red Maple (<i>Acer rubrum</i>), Eastern Cottonwood (<i>Populus deltoides ssp. deltoides</i>), Freeman's Maple (<i>Acer x freemanii</i>), Sugar Maple (<i>Acer saccharum</i>), Gray Dogwood, Sensitive Fern (<i>Onoclea sensibilis</i>), Riverbank Grape (<i>Vitis riparia</i>), Virginia Creeper (<i>Parthenocissus quinquefolia</i>), and Climbing Poison Ivy (<i>Toxicodendron radicans</i>).	Yes	No	No

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ELC Community	Dominant Plant Species/Description	Route Alternative 1	Route Alternative 2	Route Alternative 3
SWD02 Maple Organic Deciduous Swamp	Red Maple, Eastern Cottonwood, Sugar Maple, Gray Dogwood, Poplar Species (<i>Populus sp.</i>), Black Walnut (<i>Juglans nigra</i>), Silver Maple (<i>Acer saccharinum</i>), European Wood-sorrel (<i>Oxalis stricta</i>), English Plantain (<i>Plantago lanceolata</i>), and American Water-horehound (<i>Lycopus americanus</i>)	No	Yes	No
SWDM4-2 White Elm Mineral Deciduous Swamp	American Elm, Green Ash, Gray Dogwood, and Eastern Cottonwood.	No	Yes	No
FOD Deciduous Forest	Sugar Maple, Black Walnut, Black Locust (<i>Robinia pseudoacacia</i>), Northern Red Oak (<i>Quercus rubra</i>), American Elm, Poplar Species, White Aven (<i>Geum canadense</i>), and Northern Prickly Ash (<i>Zanthoxylum americanum</i>).	Yes	Yes	Yes
FODM9-4 Fresh-Moist Shagbark Hickory Deciduous Forest	Shagbark Hickory (<i>Carya ovata</i>), Northern Prickly Ash, American Elm, and Bur Oak (<i>Quercus macrocarpa</i>).	No	Yes	Yes
FODM6-4 Fresh-Moist Sugar Maple- White Elm Deciduous Forest	Green Ash, Sugar Maple, Freeman's Maple, American Basswood (<i>Tilia Americana</i>), American Elm, Northern Red Oak, Eastern Cottonwood, and Yellow Birch (<i>Betula alleghaniensis</i>)	No	No	Yes

ELC Community	Dominant Plant Species/Description	Route Alternative 1	Route Alternative 2	Route Alternative 3
FODM5-7 Dry-Fresh Sugar Maple – Black Cherry Deciduous Forest	Sugar Maple, Wild Black Cherry (<i>Prunus serotina</i>), Yellow Birch, American Elm, Northern Prickly Ash, American Beech (<i>Fagus grandifolia</i>), Spicebush (<i>Lindera benzoin</i>), Jack-in-the-Pulpit (<i>Arisaema triphyllum</i>), Broad-leaved Enchanter's Nightshade (<i>Circaea canadensis</i>), and May Apple (<i>Podophyllum peltatum</i>).	Yes	No	No
WOD Deciduous Woodland	Black Walnut, Russian Olive (<i>Elaeagnus angustifolia</i>), Curly Dock (<i>Rumex crispus</i>), Black-eyed Susan (<i>Rudbeckia hirta</i> var. <i>hirta</i>), and Common Milkweed (<i>Asclepias syriaca</i>).	Yes	Yes	Yes
THD Thicket	Manitoba Maple (<i>Acer negundo</i>), Staghorn Sumac (<i>Rhus hirta</i>), and Black Locust.	Yes	Yes	No
THM Mixed Thicket	Eastern Red Cedar, and Northern Prickly Ash.	No	Yes	No
MAS Shallow Marsh	Field Penny-cress (<i>Thlaspi arvense</i>), Dame's Rocket (<i>Hesperis matronalis</i>), European Common Reed (<i>Phragmites australis</i> ssp. <i>australis</i>), Common Blackberry (<i>Rubus allegheniensis</i>), and Virginia Creeper.	No	Yes	No
OA or OAO Open Aquatic	European Common Reed.	Yes	Yes	No
SA Shallow Aquatic	European Common Reed and Broad-leaved Cattail (<i>Typha latifolia</i>).	Yes	Yes	Yes
MEF Forb Meadow	Broadleaf species.	Yes	Yes	No

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ELC Community	Dominant Plant Species/Description	Route Alternative 1	Route Alternative 2	Route Alternative 3
MEM Mixed Meadow	Curly Dock, Fuller's Teasel (<i>Dipsacus fullonum</i>), Orange Daylily (<i>Hemerocallis fulva</i>), Red Clover (<i>Trifolium pratense</i>), and Yellow Parsnip (<i>Pastinaca sativa</i>), etc.	Yes	Yes	Yes
MEMM3 Dry-Fresh Mixed Meadow	Curly Dock, Fuller's Teasel (<i>Dipsacus fullonum</i>), Orange Daylily (<i>Hemerocallis fulva</i>), Red Clover (<i>Trifolium pratense</i>), and Yellow Parsnip (<i>Pastinaca sativa</i>), etc.	Yes	Yes	Yes
FODM12 Naturalized Deciduous Plantation	Vegetation appeared to consist of trees planted in maintained rows within private properties.	No	No	Yes
TAGM3 Deciduous Plantation	Vegetation appeared to consist of trees planted in maintained rows within private properties.	No	Yes	No
TAGM5 Hedgerow	Black Locust, Manitoba Maple, Eastern White Cedar (<i>Thuja occidentalis</i>), Colts-foot (<i>Tussilago farfara</i>), Norway Spruce (<i>Picea abies</i>), Common Mullein (<i>Verbascum thapsus</i>), Common Burdock (<i>Arctium minus</i>), and Hemp Dogbane (<i>Apocynum cannabinum</i>)	Yes	Yes	Yes
SAG Shrub Agriculture	Active agricultural fields.	Yes	No	No
OAGM1 Annual Row Crop	Active agricultural fields, planted with corn, wheat or bean crops.	Yes	Yes	Yes
CVR Residential	Residential properties. Contains mowed lawns and landscaping trees.	Yes	Yes	Yes

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CVR_3 Single Family Residential	Residential properties. Contains mowed lawns and landscaping trees.	Yes	Yes	Yes
CVR_4 Rural Property	Residential properties. Contains mowed lawns and landscaping trees.	Yes	Yes	Yes
IAG Agricultural Infrastructure	Rural farm properties containing agricultural infrastructure (i.e. barns, silos, etc.).	Yes	Yes	Yes
IAGM1 Agricultural Buildings	Rural farm properties containing agricultural infrastructure (i.e. barns, silos, etc.).	Yes	Yes	No
CVC Commercial and Industrial	Land associated with commercial businesses or light industrial work. May contain equipment, paved parking lots, and areas of maintained lawn and landscaping trees.	Yes	Yes	No
CVC_1 Light Industrial	Land associated with commercial businesses or light industrial work. May contain equipment, paved parking lots, and areas of maintained lawn and landscaping trees.	Yes	No	No
CGL Parkland (mowed grass)	Great Ragweed (<i>Ambrosia trifida</i>), Common Yarrow (<i>Achillea millefolium</i>), Broad-leaved Enchanter's Nightshade, Field Sow-thistle (<i>Sonchus arvensis</i> ssp. <i>arvensis</i>), White Sweet-clover (<i>Melilotus albus</i>), and Canada Thistle (<i>Cirsium arvense</i>).	Yes	Yes	Yes
CGL_4 Recreational	Mowed grass areas.	Yes	Yes	Yes

ELC Community	Dominant Plant Species/Description	Route Alternative 1	Route Alternative 2	Route Alternative 3
CVI_1 Transportation	Municipal Roads, Highways, and railways observed within Project Study Area.	Yes	Yes	Yes
CVI_4 Power Generation	Hydro One Infrastructure.	Yes	Yes	Yes

Wetlands

Wetland vegetation communities observed within the PSA consisted of deciduous swamp, thicket swamp, and marsh. In total, five wetland vegetation communities, were identified within the PSA (**Table 4-5**). Four unevaluated wetlands (Shallow Marsh, Thicket Swamp, White Elm Mineral Deciduous Swamp) were identified in association with Route Alternative 2, while a single swamp community (Red-Maple Organic Deciduous Swamp) was identified in association with Route Alternative 1. No wetland communities were identified in association with Route Alternative 3.

While no Provincially Significant Wetlands (PSW) were identified within the PSA in current land use planning documents and LIO data, the five wetland units observed during ELC investigations may meet criteria for significance under the Natural Heritage Reference Manual (NHRM; 2010) and Ontario Wetland Evaluation system (OWES; MNRF, 2002) based on their potential to support SAR habitat (e.g., SAR bats, Eastern Foxsnake) and/or their potential to be complexed in with other wetland units located outside of the PSA (e.g., the Tilbury North PSW Complex).

As described in Section 6.3.1 of the NHRM (2010) and under Section 6.3.3 of the OWES (MNRF, 2002), the wetland units have the potential to meet criteria for significance as they have the potential to provide biological, hydrological, and special feature components.

Aquatic and Fish Habitat

The most common substrate observed in association with surface aquatic features across all three Route Alternatives consisted of clay with gravel and detritus; minor sand, boulder and cobble substrate were also observed. The dominant instream habitat consisted of emergent aquatic vegetation with woody and organic debris.

While many of the drains associated with the PSA were not rated (classification of NR), the majority of those assessed by DFO (ERCA, 2019; Kavanagh and Hoggarth, 2017;

MECP, 2019) were reported to have good to fair systematic agricultural tile drainage inputs (classifications of C, E and F). Mapping acquired from the MECP illustrating the drain classifications provided by DFO are included in **Appendix C-10**. Drainage classifications provided by DFO were confirmed in the field during aquatic assessments; results of these assessments were summarised in Appendix D of the Natural Environment Existing Conditions Technical Report (**Appendix C-1**).

The majority of watercourses within the PSA are characterized as a combination of open natural watercourses, roadside and agricultural drains with permanent flow regimes, and provide direct fish habitat. Conversely, seasonal fish habitat was identified within surveyed sections of the Tremblay Creek Drain (Tilbury Creek) of Route Alternative 1, the O'Rourke Drain of Route Alternative 2, and an Unnamed Drain, Thibert Drain, Robb-Dales Drain (Big Creek), and Toomey Drain of Route Alternative 3.

Existing farming practices throughout the PSA have limited the amount of available riparian habitat. In the absence of treed riparian areas, and where watercourses bisect active agricultural lands, riparian areas are limited and generally degraded as agricultural fields were observed to be actively farmed as close to watercourses as possible (i.e., little buffer exists between active farm lands and watercourses). Riparian areas play an important role for fish and wildlife habitat, including SAR. In terms of aquatic and fish habitat, riparian areas have the ability to filter and absorb nutrients, sediment and other agricultural contaminants from entering the systems; they provide shade and impact water temperatures; they provide cover and support the aquatic food cycle. Riparian areas also have the potential to function as wildlife corridors, cover and a source of food for a number of wildlife and SAR (e.g., Eastern Foxsnake). It is also acknowledged that riparian areas support a variety of traditional plant species used for harvesting and medicinal purposes while also contributing to cultural continuity of Indigenous communities per CFN and COTTFN identified VCs.

Through background review and field investigations conducted along Route Alternative 1, the Locke Drain, Waddick Drain, Kersey Drain and Deary Drain crossings were confirmed as providing direct fish habitat, including a top predator (Northern Pike or Longnose Gar) observed in Locke Drain. The remaining watercourse crossings assessed (Duke Drain (Jeannettes Creek), O'Rourke Drain, Government Drain, Baptiste Creek Drain, Powell Drain, Tremblay Creek Drain and Big Creek Drain) are anticipated to provide direct fish habitat based on site specific conditions and/or the DFO drain classifications (classifications C and E; Permanent flow regimes with or without sensitive fish species present, respectively); though fish were not observed during the field investigations. The Tremblay Creek Drain (Tilbury Creek) crossing of Route Alternative 1 is anticipated to provide seasonal fish habitat based on the DFO drainage classification

and conditions observed (classification F; Intermittent flow regime with no data on fish community).

With respect to Route Alternative 2, the Locke Drain and Ferguson Drain (Jeannettes Creek) crossings were confirmed as providing direct fish habitat based on desktop and field investigation results. Although fish were not observed due to unsafe wading conditions and/or turbid water conditions, the McGregor Creek Drain, Chinnick Drain (Indian Creek), Bullis Creek Drain (Bullis Creek), Doyle Drain, Ferguson Drain (Jeanettes Creek), Baptiste Creek Drain (Baptiste Creek), Tremblay Creek Drain (Tilbury Creek), Big Creek Drain (Big Creek), Little Creek, Malden Road Drain Outlet and Finn & Cooper Drain are anticipated to provide direct fish habitat based on site specific conditions and/or the DFO drain classifications (classifications C and E; Permanent flow regimes with or without sensitive fish species present, respectively). The unnamed tributary to Doyle Drain was dry at the time of field investigations and is anticipated to provide seasonal fish habitat at best. Based on field observations, the 6-7 Sideroad Drain is assumed to be piped.

Along Route Alternative 3, the Duke Drain (Jeannettes Creek) and Carter Drain crossings were confirmed as providing direct fish habitat based on desktop and field investigation results. Although fish were not observed due to unsafe wading conditions and/or turbid water conditions, the Kersey Drain, Deary Drain, East Branch of Big Creek Drain and Big Creek Drain – West Branch are anticipated to provide direct fish habitat based on site specific conditions and/or the DFO drain classifications (classifications C and E; Permanent flow regimes with or without sensitive fish species present, respectively). O'Rourke Drain, an unnamed drain, Thibert Drain, Robb-Dales Drain (Big Creek) and Toomey Drain are anticipated to provide seasonal fish habitat based on site specific conditions and/or the DFO drain classifications (classification F; Intermittent flow regime with no data on fish community).

eDNA Sampling Program

Concurrent with the draft ESR review period, an eDNA (environmental DNA) aquatic sampling program was completed on July 27 and 28, 2021 along eight watercourses which intersect Route Alternative 2A as a mechanism to supplement the 2020 aquatic survey data and to fulfill the request from CFN that additional aquatic surveys be conducted should Alternative Route 2A or 2B be selected as the preferred.

Watercourses assessed as part of the eDNA sample program included the following:

- McGregor Creek
- Chinnick Drain
- Bullis Drain
- Jeanettes Creek
- Baptiste Creek
- Tilbury Creek
- Locke Drain
- Big Creek

With exception to Big Creek, two eDNA water samples were collected from each watercourse (e.g., upstream and downstream samples). For each watercourse, an attempt was made to collect one of the samples at the Route Alternative 2A crossing location, where possible. For health and safety reasons, only one sample was collected along Big Creek; for a total of 15 eDNA samples. Refer to Attachment A of the 2021 eDNA Sampling Program Results Memo (**Appendix C-1.1**) for an illustration of eDNA survey locations.

Sample analysis was completed by Precision Biomonitoring Inc. through the applicable of dual locus metabarcoding for fishes (12S rRNA and COI; markers). Each sample was also analyzed using qPCR (quantitative polymerase chain reaction) for detection/non-detection of Lake Chubsucker (*Erimyzon sucetta*); a species listed federally as Endangered under SARA and provincially as Threatened under the ESA. Of the aquatic SAR with the potential to occur along Route Alternative 2A, qPCR analysis was only available for Lake Chubsucker.

When combining both markers (12S rRNA and COI) 34 unique taxa were identified to species level when aggregately combined across all samples, representing nine unique family of fishes:

- Cyprinidae, n=11 species
- Centrarchidae, n= 7 species
- Ictaluridae, n= 5 species
- Percidae, n= 3 species
- Catostomidae, n= 3 species
- Esocidae, n= 2 species
- Amiidae, n= 1 species
- Clupeidae, n= 1 species
- Centrarchidea, n= 1 species

Refer to Appendix B of the 2021 eDNA Sampling Program Results Memo (**Appendix C-1.1**). None of the species detected are listed as Endangered or Threatened under the federal SARA or the provincial ESA.

Although no SAR were identified, several fish species identified by CFN as culturally important were detected; they include:

- Black Crappie
- Bluegill
- Channel Catfish
- Common Carp
- Green Sunfish
- Largemouth Bass
- Northern Pike
- Rock Bass
- Yellow Perch

The markers used for metabarcoding (12S rRNA and COI) also included some non-fish species. Raccoon was detected through metabarcoding and was identified by CFN as culturally important species for hunting and trapping.

Targeted qPCR analysis for each sample did not yield detection of Lake Chubsucker.

Woodlands

Under the PPS, significant woodlands are protected in Ecoregions 7E. As discussed in Section 4.2 of the Natural Environment Existing Conditions Technical Report (**Appendix C-1**), sixty-nine woodlands were identified within the PSA based on desktop review; this count included features considered linear treed fencerows. Of the 69 woodlands, 14 were identified as significant to the Municipality of Lakeshore ($n=9$ woodlands; 2020) and Municipality of Chatham-Kent five; ($n=5$ woodlands; 2014) Official Plans, respectively. No woodlands within the PSA were identified as significant by the County of Essex (Schedule B1; 2014). Of the aforementioned 14 woodlands, six are associated with Route Alternative 1, while four are associated with each Route Alternatives 2 and 3, respectively. The remaining woodlands are located along the periphery of the PSA.

Following the 2020 field investigations, additional forest communities were identified during ELC surveys. As a result of the 2020 field investigations, four additional forest communities met criteria for woodland significance; three of the four woodlands were associated with Route Alternative 2 (two significant woodlands) and Route Alternative 3 (one significant woodland). These three forest communities met criteria for significance as they consisted of natural vegetation communities greater than 2 ha in size (Table 3, County of Essex Official Plan, 2014). The fourth additional woodland is associated with Route Alternative 1, and is considered significant as it met criteria (≥ 2 ha in size) of Section 4.3.2 of the Chatham-Kent Official Plan (2018).

Based on the results of the initial background review and 2020 field investigations, a total of seven significant woodlands are associated with Route Alternative 1, six significant woodlands are associated with Route Alternative 2, and five significant woodlands are associated with Route Alternative 3. Significant woodlands within the PSA are mapped within Figure 5 of the Natural Environment Existing Conditions Technical Report (**Appendix C-1**). Overall, the woodland communities identified were often isolated in the landscape and were limited in connectivity to adjacent natural heritage features. Each of the significant woodland communities are considered common or secure in Ontario. Although they are common or secure in Ontario, it is acknowledged that several woodlands in Ontario have been utilized for hunting and trapping, as well as plant and medicinal harvesting in association with cedars, hickory nuts, root plants and willows as identified by CFN. Woodlands are also known to support walnut trees, wild onions, burdock root, sweet flag, sumac which were identified as

culturally important by COTTFN. With exception to wild onions, sweet flag and willows, each of the aforementioned species were observed within the PSA.

Valleylands

Under the PPS, significant valleylands are protected in Ecoregions 7E. No valleylands were identified within the PSA as part of the background review. In addition, no topographic features or valleylands meeting criteria of Section 8.0 of the 2010 NHRM were observed during the 2020 field investigations.

Areas of Natural and Scientific Interest

Areas of Natural and Scientific Interest (ANSI) are contiguous lands and waters officially designated by the province that have geological or ecological features of significant representative provincially, regionally, or locally. These features are important and valued for natural heritage protection, appreciation, scientific study or education. No Life Science or Earth Science ANSIs were identified within the PSA based on secondary source reviews.

Species at Risk

In June 2008, the Endangered Species Act, 2007 (ESA) came into effect in Ontario; the ESA applies to lands under provincial jurisdiction. The purpose of the ESA is to identify SAR based on the best available scientific information; to protect SAR and their habitats, to promote the recovery of SAR; and to promote stewardship activities to assist in the protection and recovery of SAR in Ontario. There are two applicable regulations under the ESA; O.Reg. 230/08 (Species at Risk Ontario [SARO] list), and O.Reg. 242/08 (General). These regulations serve to identify which species and habitat receive protection and provide direction on the current implementation of the ESA by the MECP.

Similarly, the Species at Risk Act (SARA) was adopted in 2002 by the Government of Canada to protect SAR and their habitat. The SARA applies to lands under federal jurisdiction. Section 27 under SARA provides a list of SAR that are protected under the Act, while Sections 32 and 56 outline general prohibitions and protection of critical habitat.

A screening to identify potential SAR and SAR habitat within the PSA was completed in support of the Natural Environment Field Program TOR. In total, 16 SAR were identified as having the potential to occur within the general vicinity of the PSA (**Table 4-6**).

Table 4-6: SAR with the Potential to Occur within the General Vicinity of the PSA

Group	Scientific Name	Common Name	SARA ³	ESA ⁴	SRank ⁵	Information Source ⁶
Botanicals	<i>Cornus florida</i>	Eastern Flowering Dogwood	END	END	S2?	NHIC
Botanicals	<i>Juglans cinerea</i>	Butternut	END	END	S3?	NHIC
Birds	<i>Hirundo rustica</i>	Barn Swallow	THR	THR	S4B	OBBA
Birds	<i>Dolichonyx oryzivorus</i>	Bobolink	THR	THR	S4B	OBBA, NHIC
Birds	<i>Sturnella magna</i>	Eastern Meadowlark	THR	THR	S4B	OBBA, NHIC
Mammals	<i>Myotis leibii</i>	Eastern Small-footed Myotis	Not Listed	END	S2S3	MWH
Mammals	<i>Myotis lucifugus</i>	Little Brown Myotis	END	END	S4	MWH
Mammals	<i>Myotis septentrionalis</i>	Northern Myotis	END	END	S3	MWH
Mammals	<i>Pipistrellus subflavus</i>	Tri-colored Bat	END	END	S3?	MWH
Herpetofauna	<i>Pantherophis gloydi</i> pop. 2	Eastern Foxsnake (Carolinian population)	END	END	S2	OHA
Fish and Molluscs	<i>Erimyzon sucetta</i>	Lake Chubsucker	END	THR	S2	DFO
Fish and Molluscs	<i>Lampsilis fasciola</i>	Wavy-rayed Lampmussel	SC	THR	S1	NHIC

³ Federal Species at Risk Act, 2002 (SARA), where SC = special concern, THR = threatened and END = endangered;

⁴ Provincial Endangered Species Act, 2007 (ESA), where THR = threatened and END = endangered;

⁵ Provincial Conservation Ranking (SRank) where S5 = secure, S4 = apparently secure, S3 = vulnerable, S2 = imperiled, S1 = critically imperiled, SX = extirpated, SH = possibly extirpated, SNA = A conservation status rank is not applicable because the species is not a suitable target for conservation activities, SE = exotic, SU = unranked, B = breeding, N = non-breeding, and ? = some uncertainty with the classification due to insufficient information.

⁶ NHIC = Natural Heritage Information Centre (MNRF, 2018), OBBA – Ontario Breeding Bird Atlas (Bird Studies Canada, 2017), MWH = Mammals of the Western Hemisphere (Patterson et al, 2007), OHA – Ontario Reptile and Amphibian Atlas (Ontario Nature, 2013), DFO – Fisheries and Oceans Canada SAR Mapping (DFO, 2019).

Group	Scientific Name	Common Name	SARA ³	ESA ⁴	SRank ⁵	Information Source ⁶
Fish and Molluscs	Obovaria subrotunda	Round Hickorynut	END	END	S1	DFO
Fish and Molluscs	Opsopoeodus emiliae	Pugnose Minnow	SC	THR	S2	DFO
Fish and Molluscs	Pleurobema sintoxia	Round Pigtoe	END	END	S1	DFO
Fish and Molluscs	Toxolasma parvus	Lilliput	Not Listed	THR	S1	DFO

Results of the screening and field investigations were summarized in the Natural Environment Existing Conditions Technical Report (**Appendix C-1**). Throughout the 2020 field season, SAR (Butternut, Barn Swallow and Bobolink) were observed within the PSA. While Eastern Flowering Dogwood (*Cornus florida*) and Eastern Meadowlark (*Sturnella magna*) were identified as having the potential to occur within the PSA, neither species was observed during the botanical surveys or breeding bird surveys, respectively.

The following aquatic SAR were identified as having the potential to occur within the PSA based on background review:

- Lake Chubsucker, Erimyzon sucetta
- Wavy-rayed Lampmussel, Lampsilis fasciola
- Round Hickorynut, Obovaria subrotunda
- Pugnose Minnow, Opsopoeodus emiliae
- Round Pigtoe, Pleurobema sintoxia
- Lilliput, Toxolasma parvum

Following the 2020 field assessments, suitable habitat was identified for Lake Chubsucker and Lilliput within the PSA in association with Route Alternative 2. If effects to aquatic habitat capable of supporting Lake Chubsucker and Lilliput are anticipated, consultation with DFO will occur during detailed design to confirm next steps.

Based on the background review and habitat screening, habitat for Wavy-rayed Lampmussel, Round Hickorynut and Pugnose Minnow, was not identified within 100 m of any of the aquatic survey stations within the PSA. Furthermore, while Round Pigtoe was identified as having the potential to occur within the McGregor Creek Drain based on background mapping (DFO, 2019), given its current Canadian range (Lake St. Clair delta, Sydenham River, Middle Thames and Grand River) McGregor Creek Drain is beyond the range of this species (DFO, 2019).

Although SAR bats, Eastern Foxsnake, Lake Chubsucker and Lilliput were not observed, natural features within the PSA were assessed as having the potential to support the species habitat based on the 2020 field survey results. Descriptions of suitable habitat for each species are provided in the following subsections.

Butternut

Nine Butternut trees were observed within significant woodlands (FODM5-7) and a hedgerow (TAGM5) located near survey station 2 in association with Route Alternative 1 (Figure 5B-15, **Appendix C-1**). While formal Butternut Health Assessments (BHA) were not conducted, there is evidence that the observed Butternut trees are infected with Butternut Canker disease. Cankers and canopy loss were observed for several of the Butternut. A 25 m buffer is identified by the Butternut Recovery Strategy (Poisson and Uric, 2013) to protect the canopy and root zone of 'retainable' Butternut. Based on the aforementioned, Route Alternative 1 would require the removal of three Butternut trees.

Should Butternut and Butternut habitat have the potential to be impacted as a result of the Project, formal BHAs are required? It is recommended that genetic testing be completed concurrent with the BHA to confirm genetic purity. Removal of Non-retainable (Category 1) and Retainable (Category 2) trees may occur via Project registration under Section 23 of *O. Reg. 242/08*, so long as the conditions in the Regulation are followed.

Barn Swallow

As stated previously, Barn Swallow observations were documented during the 2020 breeding bird surveys. Individuals were observed foraging over agricultural lands in association with each of the Route Alternatives. Although suitable nesting habitat has the potential to occur within the PSA in association with residential homes, agricultural buildings and culverts, the presence of active Barn Swallow nests was not observed during the 2020 field investigations. Mitigation for potential impacts to this species as a result of the Project are further discussed in **Section 7.7.8**.

Bobolink

Bobolink observations were documented during the 2020 breeding bird surveys; three observations of Bobolink were reported in association with annual row crop (wheat fields) adjacent to survey stations 2 and 12 of Route Alternative 1, and survey station 10 of Route Alternative 3. Annual row crops are not considered suitable breeding habitat for Bobolink. Furthermore, large hayfields (5 ha or larger; MNRF, 2019) conducive

to Bobolink (and Eastern Meadowlark) nesting were not observed within the PSA during ELC surveys.

Potential Habitat for SAR Bats

As a result of the ELC mapping, the significant woodlands and smaller forest and swamp communities identified within the PSA were assessed as potential SAR bat habitat. Given that habitat is limited across the landscape, and although confirmation of SAR bat habitat is traditionally based on acoustic survey results, the forest communities identified as potential SAR bat habitat is consistent with previous MNRF/MECP guidance (Figure set 5 in **Appendix C-1**).

Furthermore, where access was permitted, snag/cavity trees were identified concurrently during ELC surveys and botanical assessments. A total of 15 potential suitable snag trees were identified; 11 snag trees were identified along Route Alternative 1 while two snag trees were identified along each Route Alternative 2 and 3, respectively. Refer to Figure set 5 in **Appendix C-1** for the locations of snag trees identified within the PSA. Although snags were observed, the density of snags did not meet criteria outlined in the 2017 Survey Protocol for Species at Risk Bats within Treed Habitats for high quality SAR bat habitat (MNRF, 2017).

Mitigation for potential impacts to SAR bats are provided in **Section 7.7.8.4**. In brief, direct impacts to SAR bats from tree clearing can be avoided if trees representing potential roosts are cleared during the non-active bat season (October – March). However, should it be determined that the Project has the potential to impact forest communities within the PSA, further studies may be required to confirm the presence of SAR bat habitat, and whether permitting under the ESA is required.

Eastern Foxsnake

According to the Recovery Strategy for the Eastern Foxsnake (*Pantherophis gloydi*) – Carolinian and Georgian Bay populations in Ontario (MNRF, 2010), Eastern Foxsnake prefer a variety of habitats, with a strong preference towards hedgerows, marshes, naturalized pasture, and open woodland areas. Eastern Foxsnake Habitat is regulated per Section 24.3 of *Ontario Regulation 242/08*. Nest sites include rotting cavities of downed trees, decaying vegetation piles, rodent burrows, and hay piles. From late-October until April, the species hibernates in burrows, limestone bedrock fissures, canals, and old building foundations. Although specific surveys to identify hibernacula habitat for Eastern Foxsnake were not included as part of the 2020 field surveys, hibernacula habitat has the potential to occur within the PSA. Burrows incidentally observed at survey station 1 of Route Alternative 3 have the potential to support hibernacula

habitat for the species (**Appendix C-1** – Photo 74 of Appendix E). No other features identified as potential hibernacula habitat were identified within the PSA during the 2020 field surveys.

Based on the species habitat description, hedgerows, marsh, meadow, forests and naturalized riparian corridors with a mix of canopy and meadow coverage were identified as potential Eastern Foxsnake habitat within the PSA. Refer to Figure set 5B of **Appendix C-1** for the locations of potential Eastern Foxsnake habitat within the PSA. Based on this rationale, potential habitat for the species was observed throughout the PSA in association with all three Route Alternatives.

Mitigation for potential impacts to Eastern Foxsnake is provided in **Section 7.7.8.4**. Given that Eastern Foxsnake have Regulated habitat protection under the ESA, in the event the Project has the potential to impact Eastern Foxsnake and/or its Habitat, the MECP should be consulted to determine whether a permit under the ESA is required in support of the Project.

Lake Chubsucker

As mentioned previously, Route Alternative 2 has the potential to provide suitable habitat for Lake Chubsucker in association with the Bullis Creek Drain (Bullis Creek). Refer to Figure set 5 of **Appendix C-1** for the location of Lake Chubsucker habitat identified within the PSA.

The preferred habitat of Lake Chubsucker consists of clear, still, well-vegetated waters, including backwaters, bayous, drainage ditches, floodplain lakes, marshes, oxbows, sloughs and wetlands, with substrates of gravel, sand and silt mixed with organic debris (COSEWIC, 2008). In Ontario, Lake Chubsucker has been captured primarily in heavily vegetated, stagnant bays, channels, ponds, and wetlands with low turbidity and substrates of clay, silt, sand and organic debris (COSEWIC, 2008). Due to unsafe conditions for wading, a shoreline aquatic assessment was completed and identified abundant aquatic vegetation and clay substrate at survey station 3 along Route Alternative 2 which is anticipated to provide potential suitable habitat for the species. No critical habitat has been identified by DFO for Lake Chubsucker at or adjacent to survey station 3 along Route Alternative 2. In addition, the 2021 eDNA samples were assessed for presence of Lake Chubsucker based on qPCR analysis. Lake Chubsucker was not detected in association with the 2021 eDNA sampling program.

Should potential impacts to Lake Chubsucker habitat be anticipated as a result of the Project, additional consultation with DFO and the MECP is recommended during detailed design to confirm whether permitting under the ESA and/or the *Fisheries Act*

may be required. Mitigation for potential impacts to this species are further discussed in **Section 7.7.8.4**.

Lilliput

As mentioned previously, Route Alternative 2 has the potential to provide suitable habitat for Lilliput in association Baptiste Creek Drain (Baptiste Creek). Refer to Figure set 5 **Appendix C-1** for the location of Lilliput habitat identified within the PSA.

The preferred habitat of Lilliput consists of small to large rivers, wetlands, shallows of lakes, ponds and reservoirs with soft substrates such as mud, sand and silt (COSEWIC, 2013). Due to unsafe conditions for wading, shoreline aquatic assessments were completed and identified a wide, deep watercourse with turbid conditions at survey stations 6 and 15 along Route Alternative 2 which are anticipated to provide potential suitable habitat for the species. No critical habitat has been identified by DFO for Lilliput at or adjacent to survey stations 6 or 15 along Route Alternative 2.

Should potential impacts to Lilliput habitat be anticipated as a result of the Project, additional consultation with DFO and the MECP is recommended during detailed design to confirm whether permitting under the ESA and/or the *Fisheries Act* may be required. Mitigation for potential impacts to this species are further discussed in **Section 7.7.8.4**.

Wildlife and Significant Habitat

Species of Conservation Concern (SCC) are defined as:

- Species listed as Special Concern, Threatened, or Endangered under SARA.
- Species that are provincially rare/tracked (i.e., have a Sub-national (provincial) Rank of S1 – Critically Imperiled, S2 – Imperiled, or S3 – Vulnerable).
- Species that are designated as Special Concern under the ESA.

Based on desktop background review previously summarized in the Natural Environment Field Program TOR, the following 11 SCC were identified as having the potential to occur within the general vicinity of the PSA Area (**Table 4-7**).

Table 4-7: SCC with the Potential to Occur within the General Vicinity of the PSA

Group	Scientific Name	Common Name	SARA ⁷	ESA ⁸	SRank ⁹	Information Source ¹⁰
Botanicals	<i>Quercus shumardii</i>	Shumard Oak	Not Listed	SC	S3	NHIC
Botanicals	<i>Rosa setigera</i>	Climbing Prairie Rose	SC	SC	S3	NHIC
Botanicals	<i>Vernonia gigantea</i>	Giant Ironweed	Not Listed	Not Listed	S1?	NHIC
Birds	<i>Contopus virens</i>	Eastern Wood-pewee	SC	SC	S4B	OBBA
Birds	<i>Melanerpes erythrocephalus</i>	Red-headed Woodpecker	THR	SC	S4B	OBBA
Herpetofauna	<i>Chelydra serpentina</i>	Snapping Turtle	SC	SC	S3	NHIC, OHA
Fish and Molluscs	<i>Ichthyomyzon unicuspis</i> pop.1	Silver Lamprey (Great Lakes - Upper St. Lawrence populations)	Not Listed	SC	S3	DFO
Fish and Molluscs	<i>Minytrema melanops</i>	Spotted Sucker	SC	SC	S2	DFO
Fish and Molluscs	<i>Quadrula quadrula</i>	Mapleleaf Mussel (Great Lakes - Upper St. Lawrence population)	SC	SC	S2	DFO

⁷ Federal Species at Risk Act, 2002 (SARA), where SC = special concern, THR = threatened

⁸ Provincial Endangered Species Act, 2007 (ESA), where SC = special concern

⁹ Provincial Conservation Ranking (SRank) where S5 = secure, S4 = apparently secure, S3 = vulnerable, S2 = imperilled, S1 = critically imperilled, SX = extirpated, SH = possibly extirpated, SNA = A conservation status rank is not applicable because the species is not a suitable target for conservation activities, SE = exotic, SU = unranked, B = breeding, N = non-breeding, and ? = some uncertainty with the classification due to insufficient information.

¹⁰ NHIC = Natural Heritage Information Centre (MNR, 2018), OBBA – Ontario Breeding Bird Atlas (Bird Studies Canada, 2017), OHA – Ontario Reptile and Amphibian Atlas (Ontario Nature, 2013), DFO – Fisheries and Oceans Canada SAR Mapping (DFO, 2019).

Group	Scientific Name	Common Name	SARA ⁷	ESA ⁸	SRank ⁹	Information Source ¹⁰
Fish and Molluscs	Villosa iris	Rainbow	SC	SC	S2S3	DFO
Lepidoptera	Danaus plexippus	Monarch	SC	SC	S4	NHIC

As the Project is located in Ecoregion 7E (the Carolinian Zone), the presence of significant wildlife habitat (SWH) was assessed according to the Significant Wildlife Habitat Technical Guide (MNRF, 2000) and the Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015a). Habitat types considered include: seasonal concentration areas of animals; rare vegetation communities or specialized habitat for wildlife; habitat for species of conservation concern; and animal movement corridors. Based on the list of SCC identified in **Table 4-7**, the following Candidate SWH were assessed as having the potential to occur within the PSA based on the background review:

Seasonal Concentration Areas of Animals

- Bat Maternity Colonies.
- Turtle Wintering Areas.

Specialized Habitat for Wildlife

- Bald Eagle and Osprey nesting, Foraging and Perching Habitat.
- Amphibian Breeding Habitat (woodland).

Habitat for Species of Conservation Concern

- Special Concern and Rare Wildlife Species
- Shumard Oak (*Quercus shumardii*)
- Climbing Prairie Rose (*Rosa setigera*)
- Giant Ironweed (*Vernonia gigantea*)
- Eastern Wood-pewee (*Contopus virens*)
- Red-Headed Woodpecker (*Melanerpes erythrocephalus*)
- Mapleleaf (*Quadrula quadrula*)
- Rainbow (*Villosa iris*)
- Silver Lamprey (*Ichthyomyzon unicuspis* population)
- Spotted Sucker (*Minytrema melanops*)

SWH identified within the PSA was confirmed, identified as candidate, or ruled out using criteria outlined in the Ontario Significant Wildlife Habitat Criteria Schedules for Ecoregion 7E (MNRF, 2015a), habitat mapping reviewed from aerial imagery, and

information collected during the 2020 field surveys. Incidental observations of wildlife (including dens, tracks and scats, and other wildlife evidence) were recorded during the 2020 field surveys. Observations of SCC made during the 2020 field surveys are illustrated in Figure set 4 in **Appendix C-1**. Descriptions of candidate and confirmed SWH within the PSA are provided below, and illustrated in Figure set 5 in **Appendix C-1**.

Seasonal Concentrations of Animals

While surveys for snag and cavity trees were not formally conducted throughout the PSA, forest and swamp communities identified within the PSA (i.e., FOD, FODM9-4, FODM6-4, FODM5-7, SWDO2-1, SWD02, and SWDM4-2; **Table 4-5**) have the potential to provide Candidate SWH for Bat Maternity Colonies.

Similarly, swamp (SWD, SWDO2-1, SWD02, and SWDM4-2), marsh (MAS) and open aquatic (OA) communities were assessed as Candidate SWH for Turtle Wintering Areas. One area of deciduous thicket swamp (SWT) was ruled out as potential overwintering habitat for reptiles as the vegetation community was observed to be dry during summer ELC surveys. Shallow Aquatic (SA) communities identified within the PSA appeared to consist of man-made ponds; as man-made features do not meet criteria for significance under the Ecoregion criteria, these areas were not included in the classification for SWH.

Specialized Habitat for Wildlife

While amphibians were observed at each of the survey stations during the 2020 amphibian breeding surveys, low call codes documented for individual species did not meet criteria for SWH for amphibian breeding (wetland or woodland) within the PSA.

While suitable combinations of riparian, deciduous forest and aquatic habitat exist within the PSA, no evidence of active or old Bald Eagle or Osprey nests were documented during the 2020 field surveys. Furthermore, no breeding evidence or observations of Bald Eagle or Osprey were noted incidentally or during the 2020 breeding bird surveys. As a result, SWH for Bald Eagle and Osprey Nesting, foraging and Perching Habitat has been ruled out for the PSA.

Habitat for Species of Conservation Concern

Eastern Wood-pewee (Special Concern) was observed at several stations throughout the PSA during the 2020 breeding bird surveys. Based on the results of the 2020 breeding bird surveys, each of the habitats associated with Eastern Wood-pewee observations are considered Confirmed SWH for Special Concern and Rare Wildlife Species: Eastern Wood-pewee.

Additional Confirmed SWH for Special Concern and Rare Wildlife Species exists within the PSA in association with two botanical species (i.e. Climbing Prairie Rose and Honey Locust). Both species were identified during the 2020 ELC and botanical assessment. Multiple stems of Climbing Prairie Rose (Special Concern) were observed within swamp (SWDO2-1 – 40 stems) and deciduous forest (FOD – 12 stems) communities located at survey station 14 of Route Alternative 1, and survey station 19 of Route Alternative 2, respectively. In accordance with Ecoregion 7E Criterion Schedules, these aforementioned ELC communities are therefore considered Confirmed SWH for Species Concern and Rare Wildlife Species: Climbing Prairie Rose. Similarly, Confirmed SWH for Species Concern and Rare Wildlife Species for Honey-locust exists within hedgerows (TAGM5) near survey station 10 of Route Alternative 1 (13 stems), and survey station 14 of Route Alternative 3.

Although Shumard Oak and Giant Ironweed (both SCC) had the potential to occur within the PSA based on background review, neither species was observed during ELC and/or botanical assessments or incidentally in 2020. As such, no SWH for either species exists within the PSA.

Candidate SWH for Special Concern or Rare Wildlife Species was identified for the following aquatic species within the PSA:

- Mapleleaf (*Quadrula quadrula*)
- Rainbow (*Villosa iris*)
- Silver Lamprey (*Ichthyomyzon unicuspis* population)
- Spotted Sucker (*Minytrema melanops*)

As mentioned previously, each of the aforementioned species were identified as having the potential to occur within watercourses during the background review. Although targeted fish and mussel surveys were not completed, based on suitable habitat observed during the 2020 aquatic surveys, candidate SWH for Special Concern and Rare Wildlife Species was identified for:

- Mapleleaf - in McGregor Creek associated with Route Alternatives 1 and 2, and Baptiste Creek Drain (Baptiste Creek) in association with Route Alternatives 1 and 2.
- Spotted Sucker - in Baptiste Creek Drain (Baptiste Creek), Tremblay Creek Drain (Tilbury Creek), and Little Creek in association with Route Alternative 2.

Based on the background review and habitat screening, Rainbow and Silver Lamprey were not identified as having potential habitat at survey stations within the PSA. Therefore, the PSA was assessed as not containing candidate SWH for Special Concern and Rare Wildlife Species for Rainbow and Silver Lamprey.

Non-Native and Invasive Species

During ELC and botanical surveys, vegetation communities throughout the PSA exhibited signs of disturbance by past and ongoing land use, and as a result contained non-native species which are not associated with conservation rankings. Of the 111 botanical species observed during the 2020 botanical assessment, 47 were listed as introduced species and were not considered suitable targets for conservation activities by the province (SRank of SE, SU or SNA). A complete list of species observed is provided in the Natural Environment Existing Conditions Technical Report in **Appendix C-1**.

4.7 Recreational Resources

There are several outdoor recreation areas serving the region, including Lake Erie, Lake St. Clair and Rondeau Provincial Park. Within the LSA there are three conservation areas including Rowsom's Tilbury West Conservation Area, C.M. Wilson and Big O. Conservation Areas, all operated by the LTVCA (**Section 4.6.6**).

Trail networks are also present within the region including the Great Lakes Waterfront Trail which follows the Thames River from Jeannettes Creek to Pain Court, outside of the LSA. The CASO Trail extends through the LSA following the former Canadian Southern Railway line which is south of Highway 401, and forms part of the TransCanada Trail through the region (Schedule B1; **Appendix C-3**).

The County of Essex adopted in 2012 the County Wide Active Transportation System (CWATS) Master Plan, which calls for a dramatic expansion of active transportation corridors like walking paths and bicycle lanes to encourage healthy, active living and enhance regional recreational opportunities. In addition to the trails described above, the PSA crosses multi-use trails near Comber, and proposed future CWATS trails just west of Comber, associated with the former Canadian Southern Railway Line in the County of Essex. The CWATS Master Plan notes the opportunities provided by this potential connection to the CASO trail system in the neighbouring Municipality of Chatham-Kent.

4.8 Visual and Aesthetic Resources

This factor considers the change to physical appearances across the landscape and their susceptibility to change as a result of the Project.

The Project is located within predominantly flat agricultural lands, providing views that are open and expansive. Natural elements include isolated woodlots, tree canopies of rural communities, as well as forest cover and other successional riparian vegetation adjacent to waterways. Existing vertical elements include traffic and light standards,

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existing transmission lines and wind turbines. The majority of sensitive receptors are residences with wide views into the horizon. Many of the properties have existing tree lined wind breaks and hedgerows that offer localized privacy from adjacent visual elements.

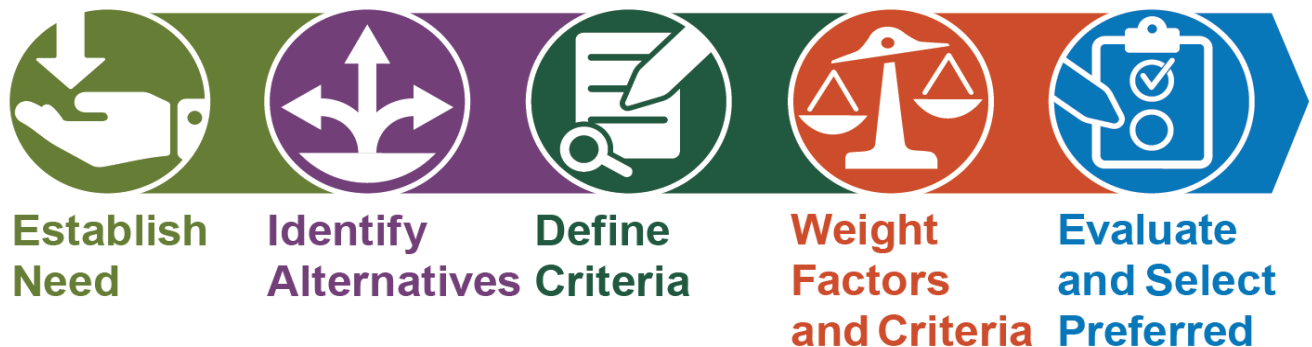
5 Identification and Evaluation of Alternative Routes

This section describes the identification and evaluation of the alternative methods for carrying out the proposed Project. “Alternative methods” refer to different means of carrying out the same task to achieve the purpose of the undertaking, which in this case; involves the construction of a double-circuit 230 kV transmission line to transmit electricity between two transmission stations. Following the identification of “alternative methods” for the undertaking, evaluation criteria are established, through which, a comparative evaluation results in the selection of a preferred alternative.

Hydro One’s Class EA for Minor Transmission Facilities (Class EA) process (**Section 1.4**) requires the identification of feasible alternatives that can be compared and evaluated on the basis of natural environment, socio-economic environment, and technical and cost factors following the recommendations of the Provincial Policy Statement (PPS) to determine a preferred alternative. Potential quantitative and qualitative effects associated with each of the alternatives identified are considered. For this undertaking, a weighted Multi-Criteria Decision Making Analysis (MCDA) was used.

A weighted MCDA is a common decision-making approach involving a five-step process outlined below (**Figure 5-1**).

Figure 5-1: Multi-Criteria Decision Making Process



5.1 Step 1: Establish Need



As outlined in Section 1.1, IESO identified the need for a new double-circuit 230 kV transmission line in Southwestern Ontario. Hydro One received direction from the IESO to initiate work on development activities, including seeking relevant approvals to construct the line from the Chatham SS in the Municipality of Chatham-Kent, to the future Lakeshore TS in the Town of Lakeshore (**Appendix A**).

5.2 Step 2: Identify Alternatives



The Class EA process requires identification of technically feasible alternatives to address the need of the Project.

Following direction from the IESO in June 2019, Hydro One conducted an internal preliminary assessment to identify feasible routes (the “Route Alternatives”) for the new 230 kV transmission line. The project team researched and mapped clear technical, socio-economic, and natural environment constraints and identified potential opportunities to parallel linear infrastructure, such as existing transmission lines and highways, where possible.

Technical and environmental constraints were identified from desktop data and orthophotos, and were categorized as High, Medium or Low constraints, and mapped. High constraints included features that would likely preclude technical or economic feasibility, such as large waterbodies, dense residential areas, and close proximity to known wind turbines, etc.

Medium and Low constraints included features which may not individually render an alternative to be not viable, however they represented an important, early consideration, which would be best to avoid, to the extent practical. Examples of Medium and Low constraints considered include wetlands, Environmentally Significant Areas (ESAs), Areas of Natural and Scientific Interest (ANSIs), standalone structures/buildings, and woodlots.

Using this constraint mapping, the Hydro One project team applied technical transmission line engineering principles (best practices and industry drivers such as NERC standards) to identify viable transmission alternatives which would meet the need for the Project. In addition to the above-mentioned constraints, considerations were given to minimizing unnecessary costs and total project footprint (e.g., potential routes which had no apparent advantages but were longer or more complex than other similar routes, were discarded). Consideration was also given to opportunities to parallel existing linear infrastructure, particularly existing transmission corridors.

Based on the preliminary assessment, three feasible Route Alternatives and associated variations were identified (**Figure 5-2**):

- **Route Alternative 1**, shown in yellow in **Figure 5-2**, largely parallels an existing 230 kV transmission line (similar to what will comprise the new line to be constructed). Route Alternative 1 contains a total of four variations (1A, 1B, 1C and 1D). The variations include different combinations of changes to the route, one around the south end of Tilbury and another closer to the City of Chatham, which parallels the Highway 401 corridor.
- **Route Alternative 2**, shown in red in **Figure 5-2**, largely parallel two existing 115 kV transmission lines (including a portion of one of the lines which is an idle 115 kV transmission line between Tilbury and Chatham). Route Alternative 2 and its variations also parallel portions of the Highway 401 corridor. There are a total of three variations (2A, 2B and 2C) associated with Route Alternative 2.
- **Route Alternative 3**, shown in purple in **Figure 5-2**, is a greenfield option. While it does not parallel any existing transmission lines or other linear infrastructure for any significant distance, this was determined to be a feasible Route Alternative for the new 230 kV transmission line. As a result, it was prudent to include for consideration during the Class EA. There are no variations associated with Route Alternative 3.

In October 2020, prior to VIS #2, Hydro One made four refinements to the Route Alternatives and identified a need to expand the Chatham SS east based on advancement of preliminary engineering work related to the station and technical and environmental information acquired through the Class EA process and consultation with stakeholders. Specifically, the advancement of technical studies and input received from Anishnawbek and Haudenosaunee communities and stakeholders identified technical and land use constraints/opportunities which resulted in refinements to the routes. The four refinements are detailed below and shown on **Figure 5-2**.

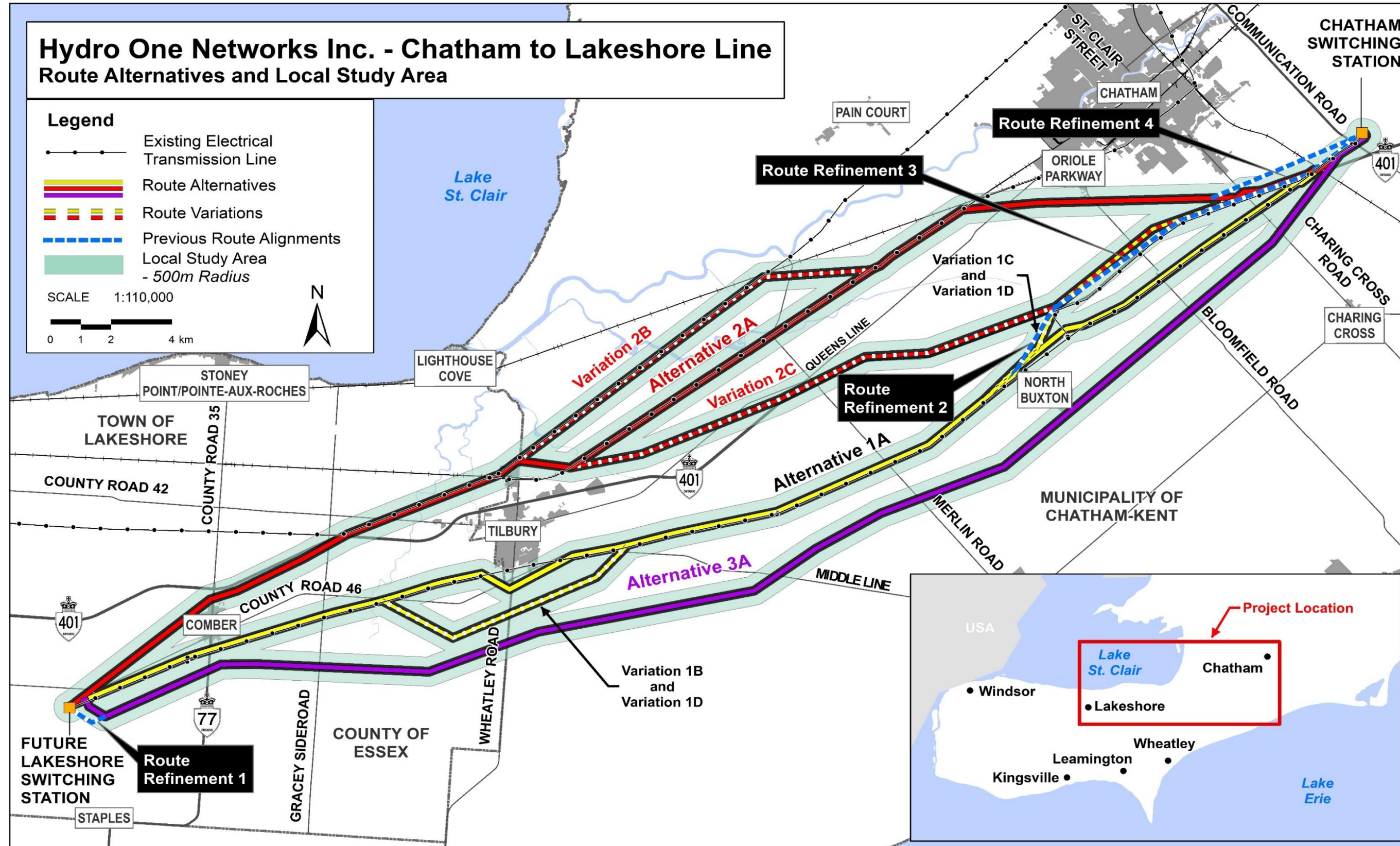
- **Route Refinement 1:** A portion of Route Alternative 3 was refined to connect to the future Lakeshore TS north of the existing 230 kV transmission lines.
- **Route Refinement 2:** A portion of Route Alternative 1, variations C and D, were refined to adjust the angle towards the highway to reduce effects to vegetated watercourses, avoid a known archaeological site and to increase distance from a wind turbine.
- **Route Refinement 3:** A portion of Route Alternative 1, variations C and D, and Route Alternative 2, variation C, were refined and shifted further north from Highway 401 and away from the interchange ramp at Bloomfield Road, to accommodate required setback distances from the Highway 401 corridor and interchanges, as provided by the MTO.

- **Route Refinement 4:** A portion of Route Alternative 2, variations A and B, were consolidated with the other Route Alternatives paralleling Highway 401, and the existing transmission line corridor. Additionally, a portion of Route Alternative 1, variations C and D, and Route Alternative 2, variation C, were refined and shifted further north from the underpass at Charing Cross Road. Both of these route refinements are now consolidated with the route leading into the south end of the Chatham SS. These refinements accommodate certain setback distances from the Highway 401 corridor and Charing Cross overpass, as provided by the MTO; address technical constraints with an existing wind farm transmission line crossing; further align with existing infrastructure; avoid known archaeological sites; and meet the requirements to connect the new transmission line to the south side of the Chatham SS.

The Route Alternatives, including the route refinements made as shown in **Figure 5-2**, were carried forward for the comparative evaluation.

No other viable alternatives were identified for the expansion of the Chatham SS, due to the configuration of equipment within and around the station.

Figure 5-2: Route Alternatives, Variations and Refinements



5.3 Step 3 – Define Criteria



The next step in the weighted MCDA process, following identification of the Route Alternatives and variations, was the establishment of criteria (with associated quantitative and qualitative metrics) to compare and evaluate Route Alternatives against.

The development of the evaluation criteria was based on input and comments provided by Anishnawbek and Haudenosaunee communities, the public, members of the TAC and project team members (see Section 3.0). Criteria for the Project were grouped into four key Evaluation Categories, as follows:



Natural Environment



Socio-Economic Environment



Technical and Cost



Anishnawbek and Haudenosaunee Culture, Values and Land Use

5.3.1 Natural Environment Factor

The natural environment factor comprises six criteria, as shown in **Table 5-1**. The criteria aim to measure the potential effects of the Project on the natural environment.

Table 5-1: Natural Environment Factor Criteria

Criteria	Measure
Effects to Fish and Aquatic Habitat	Effects to aquatic habitat including total number of watercourse crossings, effects to bank and riparian vegetation, and potential effects to surface flows
Effects to Vegetation	Effects to vegetation including potential effects to incompatible vegetation communities and disturbance/alteration/destruction of existing windbreaks
Terrestrial and Wildlife Habitat	Effects to terrestrial wildlife and habitat including footprint effects, potential removal, disturbance and/or destruction of habitat, potential disturbance to wildlife movement/habitat fragmentation
Species at Risk & Species of Conservation Concern	Effects to Species at Risk and Species of Conservation Concern, and their habitats
Natural Hazards, Wetlands and Floodplain Areas	Distance of the route that occurs within/in close proximity to floodplain areas, wetlands, areas of erosion concern
Designated Natural Areas	Alignment with existing land use designations as defined by the PPS, local Municipal Official Plans and the Important Bird Area (IBA)

The following data sets were used to evaluate Natural Environment criteria:

- Field surveys and GIS analysis and interpretation, including:
 - Aquatic habitat assessments
 - Ecological Land Classification
 - Botanical assessment
 - Breeding bird surveys
 - Amphibian breeding surveys
 - Species at Risk habitat assessments
 - Publicly accessible Land Information Ontario (LIO) geographic datasets
 - Aerial photography

5.3.2 Socio-Economic Environment Factor

The socio-economic environment factor comprises ten criteria, as shown in **Table 5-2**. The criteria generally aim to measure the potential effects of the Project on the social and economic environments that the Project is located in, including the Municipality of Chatham-Kent, County of Essex and Municipality of Lakeshore.

Table 5-2: Socio-Economic Environment Factor Criteria

Criteria	Measure
Existing Land Use Designations	Alignment with existing land use designations as defined by the PPS and local Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS*)
Future Land Use Designations	Alignment with future land use designations including potential future settlement area expansion plans, growth areas and development boundaries, as defined by the PPS and local Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS)
Agricultural Operations	Effects to agricultural operations including farming of land, movement of farm machinery and access to processing facilities
Petroleum Operations	Effects to petroleum operations including access to petroleum wells or resources and distribution networks/ pipelines
Effects to residential buildings, properties or site plans	Effects to existing residential properties including proximity to existing homes, site plan alteration or building effects
Effects to commercial/industrial buildings, properties, site plans or business operations/ supply chains	Effects to existing commercial or industrial properties including proximity to commercial/industrial operations, building effects or supply chain effects
Source water Protection	Effects to source water resources including policy areas and drinking water sources for private landowners
Cultural Resources	Effects to properties or landscapes with cultural heritage resource potential

Criteria	Measure
Archaeological Resources	Effects to lands with archaeological potential proximity to known archaeological sites
Aggregate Resources Extraction Areas/Operations (Pits/Quarries)	Effects to aggregate extraction site operations including expansion plans, and site operations

*Natural Environment designated areas under Official Plans and the PPS are included in the Designated Natural Areas criterion under the Natural Environment Factor Area.

To evaluate Socio-Economic Environment criteria a wide range of data was used, including:

- Statistics Canada census community profiles.
- Canadian Land Inventory information.
- Field data collection and GIS analysis and interpretation of Ecological Land Classification.
- Local Official Plans and policies.
- Ontario Provincial Policy Statement (2020).
- Publicly accessible LIO geographic datasets.
- Aerial photography.
- Source Water Protection Mapping and Policy documents for the Thames-Sydenham Source Water Protection Region and Essex Region Source Protection Area.
- Cultural Heritage Existing Conditions Report completed for the Project.
- Stage 1 Archaeology Assessment completed for the Project.

5.3.3 Technical and Cost Factor

The technical and cost factor comprises seven criteria, as shown in **Table 5-3**. The criteria aim to measure the technical and cost considerations of the Project including potential effects associated with land acquisition in support of the ROW and constructability concerns, including construction complexity associated with line angles and distances.

Table 5-3: Technical and Cost Factor Area Criteria

Criteria	Measure
Line Length	Total length of each route or variation
Line Angles	Number of turns in each route/variation, as well as the angle of the turn (sharper or wider than 30°)
Crossings	Total number of crossings of: Rivers, Railways, Highways, Existing 230 kV transmission lines, etc.
Parallel & Adjacent to Existing Infrastructure	Total distance of each route/variation that parallels an existing transmission line corridor (preference to routes/variations with longer parallel distance) Total distance of each route/variation that parallels a non-TX linear infrastructure/corridor (e.g., Highway 401; preference to routes/variations with longer parallel distance) Total distance parallel/adjacent to underground facilities (pipelines, sewers, communication/power line, etc.) preference to routes/variations with less parallel distance
Proximity to Existing Wind Turbines	Proximity to the wind turbines
Impacted Property Parcels and Property Acquisition	Real Estate and land acquisition considerations, including the total number of property parcels traversed and the anticipated number of property buyouts
Overall Constructability	Other considerations affecting the complexity of construction, such as information on soils, construction obstacles and potential construction conflicts

Data used to evaluate criteria in the Technical and Cost factor area included:

- Property parcel fabric.
- Publicly accessible LIO geographic datasets.
- Information provided by third parties including mapping data for wind turbine facilities, gas pipeline, utility line information, etc.
- Engineering standards and best practices.

5.3.4 Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor

The Anishnawbek and Haudenosaunee Culture, Value and Land Use factor comprises seven criteria, as shown in **Table 5-4**. As described in **Section 3.6**, Hydro One provided several opportunities for Anishnawbek and Haudenosaunee communities to participate

in the route evaluation process, including opportunities to participate in the Technical Advisory Committee (TAC), opportunities to hold community-specific route evaluation workshops and discussions, and the provision of project data (such as results of environmental field surveys and Archaeological and Cultural reports) and workbooks to collect information and input from communities which could help inform the route evaluation. The sections below summarize the discussions with Anishnawbek and Haudenosaunee communities revolving around the route evaluation and how the input provided was ultimately reflected in the route evaluation framework.

Bkejwanong (Walpole Island) First Nation

On November 27, 2020, Hydro One hosted a virtual route evaluation workshop with staff from Walpole Island First Nation (WIFN). Following brief introductions and clarification of staff roles, Hydro One provided an overview of the Class EA process conducted to date including the route alternatives that were being considered for the new transmission line, and the anticipated timeline for selection of the preferred route in early 2021. Feedback provided by WIFN staff at the workshop included:

A preference for Route Alternatives that would utilize existing transmission line assets or parallel existing infrastructure;

- Interest in the comparative cost of the Route Alternatives, and preference for lower costs.
- Preference for the avoidance of woodlots, particularly a woodlot and adjacent hedgerow along Route Alternatives 1A and 1B that were found during recent field studies (attended by WIFN staff) to contain several young, relatively healthy butternut trees. WIFN staff reiterated a strong desire to protect these butternut trees for their ability to contribute to overall species recovery.
- Preference for the avoidance of natural features such as watercourses, wetlands and other natural habitats.
- Noted that while the regional landscape is largely disturbed, some small pockets of remnant native species and habitats (e.g., Carolinian species and patches of native Tallgrass prairie habitat) had been identified by previous projects, and that these species and habitats were important to the WIFN.
- Concern regarding the large number of known archaeological sites in the south Chatham area.
- Identified the lands near the Thames River as an area of historical significance and importance.
- Identified a number of wind farm projects of which the WIFN is a partner in ownership, and noted that these projects provide an important revenue stream for the community, and that any potential loss of this revenue (e.g., through

transmission line outages or impacts to the facilities) would adversely affect the WIFN.

Following the workshop, WIFN staff provided additional information to Hydro One, including copies of historical maps outlining the areas of historical significance and importance mentioned previously. On January 4th, 2021, Hydro One staff had a follow-up virtual meeting with WIFN to further discuss the items raised at the November workshop and how they related to the Route Alternatives. At the meeting, Hydro One and WIFN further discussed the areas of historical significance identified and their relation to the Route Alternatives. Hydro One also inquired further as to particular areas or current land uses where harvesting or fishing activities were being conducted, or species of interest; WIFN staff advised that current uses did not reflect the entirety of WIFN's interests in their traditional territory, and that potential harvesting areas should be considered more generally to reflect potential future uses by community members.

The feedback and information provided by WIFN was used to inform the development of the Anishnawbek and Haudenosaunee Culture, Values and Land Use criteria.

Caldwell First Nation

On October 27, 2020, Hydro One hosted a virtual route evaluation workshop with staff from Caldwell First Nation (CFN). Following brief introductions and clarification of staff roles, Hydro One provided an overview of the Class EA process conducted to date including the Route Alternatives that were being considered for the new transmission line, and the anticipated timeline for selection of the preferred route in early 2021. Hydro One also provided information on how input received from CFN would be considered during the route evaluation.

On December 15, 2020, CFN provided a technical memorandum to Hydro One summarizing the findings of CFN's study of the Route Alternatives and identification of route evaluation criteria. The technical memo laid out the methodology that CFN had undertaken to date, their observations, concerns and preferences and conclusions about the Route Alternatives, and stated an overall preference for Route Alternative 1A as it had the greatest overall distance parallel to existing transmission lines. The technical memo also outlined the key considerations and criteria that CFN had identified as priorities in the evaluation of the Route Alternatives, specifically:

Caldwell participants identified ecological protection and restoration as their primary criteria for route selection, including:

- Protection, to the greatest extent possible, of existing ecological systems;

Identification and Evaluation of Alternative Routes

- Avoidance of habitat required to support Species at Risk and poses least risk of adverse effects on species at risk.
- Poses least risk (i.e., from erosion, construction impacts) to fish-bearing streams, avoid loose soils, steep terrain, and other areas with erosion potential;
- Selection of route with the least new impacts and disturbances, i.e., the Route Alternative that has the highest percentage of length following existing transmission line or road (ROWs), in order to minimize area of new clearance.
- Avoid a route that requires new access roads for construction and maintenance.
- Avoid important or endangered (threatened) habitat (wetlands, forested areas, waterways, etc.).
- Incorporation of Caldwell's requests for modification of the selected route to adhere as tightly as possible to existing ROWs.
- For greater certainty, Caldwell participants do not want their input and influence to be limited to choosing between the presented Route Alternatives. While they may prefer Option 1a, they request that that route be modified to reduce the total amount of new cut.
- If Caldwell's preferred Route Alternative 1A is selected, Caldwell would still like Hydro One to explore the feasibility of further modifications of the routing to reduce the remaining 13% of new ROW that would be required.
- Caldwell participants also considered the following criteria in their review of each option.
- Protection and restoration of harvesting areas.
- Avoid country food harvesting locations, e.g., berry picking, fishing, hunting, plant and medicine gathering sites.
- Avoidance of areas that have been used historically or could potentially be used in the future, for other cultural uses (e.g., instruction, camping, etc.).
- Cultural heritage protection and restoration.
- Avoid building transmission towers that might impact sight-lines of cultural value (e.g., cultural landscape).
- Avoidance of sites with known or potential Caldwell archaeological values.
- Avoidance of specific high value cultural and spiritual sites.

Hydro One held a subsequent virtual meeting with CFN staff on December 18, 2020, to review the technical memo provided by CFN and provide some additional context on the Route Alternatives, including sections of Route Alternatives 2A and 2B which represented opportunities to repurpose an existing idle line, and the constraints and other existing features which lead to deviations from the existing transmission lines on Route Alternative 1A (i.e., that Route Alternative 1A represented the greatest extent to which paralleling the existing transmission line had been deemed viable by Hydro One).

Hydro One also provided further information on the research and environmental studies that had been undertaken along the Route Alternatives over the past year. Hydro One staff also asked some questions and sought clarification on the contents of the technical memo, including whether CFN could identify any specific traditional use species of interest, or current harvesting areas or other land uses, which could be considered. CFN replied that identification of specific species would be difficult as that knowledge was spread over many community members, and also that current land uses did not reflect the entirety of CFN's interests within their traditional territory, and that potential harvesting areas should be considered more generally to reflect potential future uses by community members.

On February 17, 2021, CFN emailed Hydro One a letter following up on the December 18 meeting. In the letter, CFN thanked Hydro One for the opportunities to discuss the Project and route evaluation and reiterated the importance that CFN places on ecological protection and restoration for the long-term well-being of Caldwell members and opportunity to exercise their rights within their territory. In the letter, CFN also reiterated their previously stated preference for Route Alternative 1A over Route Alternatives 2A and 2B as the former maximizes the distance parallel to existing transmission lines, and the latter overlap with the Eastern Lake St. Clair IBA and are closer in proximity to the lake itself. CFN stated that if one of Route Alternative 2A or 2B were to be selected, that additional research would be required to understand effects to fish and fish habitat in the creeks traversed by these routes. CFN closed the letter by reiterating a desire to participate in the Biodiversity Initiative for the Project.

On February 19, 2021, Hydro One held a virtual meeting with CFN to provide an early briefing on the selection of preferred Route Alternative 2A and to explain the outcome of the route evaluation process. At the meeting, Hydro One staff explained how they had focused on the key criteria and considerations that CFN had provided in the technical memo, and utilized those along with similar input from other communities to develop a set of criteria in the Anishnawbek and Haudenosaunee Culture, Values and Land Use category that were fairly applied across all of the Route Alternatives. Hydro One noted that CFN's stated preference for Route Alternative 1A had been captured specifically in a new criteria relating to overall distance parallel to existing infrastructure, but that other criteria in this category, particularly criteria relating to the natural environment aspects such as Species at Risk, fish and aquatic habitats, and areas of potential hunting and harvesting uses, generally ended up favouring Route Alternatives 2A and 2B as these Route Alternatives had less overall potential effects when compared to other Route Alternatives. Hydro One staff also noted that Route Alternative 1A, while favoured by CFN for its larger overall distance parallel to existing transmission lines, ended up scoring poorly in many of the natural environment criteria,

and provided examples such as traversal of the Big O Conservation Area woodlot in Comber, greater extent of fish and aquatic habitat traversed, and the effects to endangered Butternut trees identified adjacent to the existing transmission lines.

Following the announcement of the preferred Route Alternative 2A, Hydro One formally responded on March 22, 2021, to CFN's letter dated February 17. In the response, Hydro One thanked CFN staff for the input provided into the Project and route evaluation and reiterated many of the key points of the discussion and explanation of the selection of Route Alternative 2A from the February 19 meeting. Hydro One also reiterated their desire to work with CFN to further characterize the aquatic habitats along Route Alternative 2A as requested in the February 17 letter from CFN, and also committed to engaging CFN on the biodiversity initiative for the Project.

Oneida Nation of the Thames

A representative from Oneida Nation of the Thames participated in the second TAC workshop on September 22, 2020. At the workshop, the representative inquired as to whether traditional medicinal species and harvesting areas would be considered during the route evaluation, as these were of importance to the Oneida Nation. Hydro One staff responded that one of the four categories of the route evaluation criteria would capture specific criteria related to Anishnawbek and Haudenosaunee Culture, Values and Land Use, and that criteria could be developed within this category to capture specific traditional use or medicinal species or harvesting areas but that the effects assessment would largely depend on input provided directly from communities.

The representative for the Oneida Nation also stated that he felt that the exercise of utilizing weighted criteria, particularly for the natural environment factor area, was flawed as his Nation's perspective was that all of these factors should be considered equally. Hydro One staff replied that the purpose of including criteria weighting was to provide an additional means of incorporating input, both from Anishnawbek and Haudenosaunee communities and from project stakeholders into the route evaluation process, in addition to just identifying criteria to be included. Hydro One stated that they would consider this comment for future planning process.

Table 5-4: Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area Criteria

Criteria	Measure
Proximity to Areas of Historical Significance	Relative proximity to Anishnawbek and Haudenosaunee identified areas of historical significance associated with the Thames River
Effects to First Nations revenue generating projects	Potential for effects to identified project sites (eg. Belle River and North Kent Wind Farms)
Areas that support hunting/trapping/harvesting grounds	Effects on lands with habitat or vegetation types that support or have potential to support hunting/trapping/harvesting activities and medicinal plants
Areas that support fish bearing waters with identified or inferred habitat of game fish	Effects to identified aquatic habitat and/or known watercourses with fishery management programs
Effects to rare/undisturbed native habitats/ ecosystems	Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism
Rare/sensitive species regeneration potential	Long-term effects to SAR and their regeneration potential
Co-location of existing	Length of line that is sited within or beside existing linear infrastructure

Evaluation infrastructure of Anishnawbek and Haudenosaunee Culture, Values and Land Uses was based on similar data sources to other criteria but adapted to suit the intent of Anishnawbek and Haudenosaunee interests as discussed with these communities, where possible. Data included:

- Field surveys and GIS analysis and interpretation, including:
 - Ecological Land Classification (ELC) focusing on vegetation communities that support hunting/trapping and harvesting
 - Aquatic habitat assessments with a focus on waterbodies that support fisheries including fish stocking information
 - Botanical assessment
 - Breeding bird surveys

- Amphibian breeding surveys
- Species at Risk habitat assessment
- Publicly available data on wind energy ownership/partnerships
- Information provided by Anishnawbek and Haudenosaunee communities
- Publicly accessible LIO geographic datasets
- Aerial photography
- Cultural Heritage Existing Conditions Report completed for the Project
- Stage 1 Archaeology Assessment completed for the Project

5.4 Step 4 – Weight Criteria



Following identification of the evaluation criteria and their measures, the project team, using input provided by the TAC, including Anishnawbek and Haudenosaunee communities, and members of the public, assigned weights for the evaluation. Weights are used to identify key factors and criteria most important to the local community. The higher the weighting, the more important the factor or criteria was considered in the outcome of the evaluation.

At the outset of this step, the project team determined that the importance of each factor area (natural environment, socio-economic environment, technical and cost and Anishnawbek and Haudenosaunee Culture, Values and Land Use) was equal. This ensured one factor area was not elevated over another, such as technical and cost being given more weight ahead of natural environment interests. For this reason, weighting was only completed at the criteria level.

To complete weighting of the criteria, each factor area was given an assigned value of 100. To complete this process input from the public consultation process was considered together with direct input from TAC members through a weighting workshop (**Section 3.11**) and input from Anishnawbek and Haudenosaunee communities. **Table 5-5** summarizes the weights applied to each criteria.

Table 5-5: Criteria Weighting

Table 5.5 A: Natural Environment Factor Area

Criteria	Measure	Weight
Effects to Fish and Aquatic Habitat	Effects to aquatic habitat including total number of watercourse crossings, effects to bank and riparian vegetation, and potential effects to surface flows	15
Effects to Vegetation	Effects to vegetation including potential effects to incompatible vegetation communities and disturbance/alteration/destruction of existing windbreaks	15
Terrestrial and Wildlife Habitat	Effects to terrestrial wildlife and habitat including footprint effects, potential removal, disturbance and/or destruction of habitat, potential disturbance to wildlife movement/habitat fragmentation	20
Species at Risk & Species of Conservation Concern	Effects to Species at Risk and Species of Conservation Concern, and their habitats	20
Natural Hazards, Wetlands and Floodplain Areas	Distance of the route that occurs within/in close proximity to floodplain areas, wetlands, areas of erosion concern	15
Designated Natural Areas	Alignment with existing land use designations as defined by the PPS, local Municipal Official Plans and the Important Bird Area (IBA)	15
Factor Area	Total	100

Table 5.5 B: Socio-Economic Environment Factor Area

Criteria	Measure	Weight
Existing Land Use Designations	Alignment with existing land use designations as defined by the PPS and local Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS*)	10
Future Land Use Designations	Alignment with future land use designations including potential future settlement area expansion plans, growth areas and development boundaries, as defined by the PPS and local Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS)	7.5

Criteria	Measure	Weight
Agricultural Operations	Effects to agricultural operations including farming of land, movement of farm machinery and access to processing facilities	20
Petroleum Operations	Effects to petroleum operations including access to petroleum wells or resources and distribution networks/ pipelines	2.5
Effects to residential buildings, properties or site plans	Effects to existing residential properties including proximity to existing homes, site plan alteration or building effects	15
Effects to commercial/industrial buildings, properties, site plans or business operations/supply chains	Effects to existing commercial or industrial properties including proximity to commercial/industrial operations, building effects or supply chain effects	10
Source water Protection	Effects to source water resources including policy areas and drinking water sources for private landowners	10
Cultural Resources	Effects to properties or landscapes with cultural heritage resource potential	10
Archaeological Resources	Effects to lands with archaeological potential proximity to known archaeological sites	15
Aggregate Resources Extraction Areas/Operations (Pits/Quarries)¹¹	Effects to aggregate extraction site operations including expansion plans, and site operations	0
Factor Area	Total	100

¹¹ Aggregate resources extraction areas/operations was provided a weighting of 0 because there are no active licensed aggregate extraction areas/operations within the PSA. While it is recognized that this criteria is important based on comments received, the weighting was removed based on its inability to impact the Project and was re-assigned to other criteria to better reflect existing local conditions in the community

Table 5.5 C: Technical and Cost Factor Area

Criteria	Measure	Weight
Line Length	Total length of each route or variation	20
Line Angles	Number of turns in each route/variation, as well as the angle of the turn (sharper or wider than 30°)	20
Crossings	Total number of crossings of: Rivers, Railways, Highways, Existing 230 kV transmission lines, etc.	12.5
Parallel & Adjacent to Existing Infrastructure	Total distance of each route/variation that parallels an existing transmission line corridor (preference to routes/variations with longer parallel distance) Total distance of each route/variation that parallels a non-TX linear infrastructure/corridor (E.g., Highway 401; preference to routes/variations with longer parallel distance) Total distance parallel/adjacent to underground facilities (pipelines, sewers, communication/power line, etc.) preference to routes/variations with less parallel distance	5
Proximity to Existing Wind Turbines	Proximity to the wind +turbines	5
Impacted Property Parcels and Property Acquisition	Real Estate and land acquisition considerations, including the total number of property parcels traversed and the anticipated number of property buyouts	25
Overall Constructability	Other considerations affecting the complexity of construction, such as information on soils, construction obstacles and potential construction conflicts	12.5
Factor Area	Total	100

Table 5.5 D: Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Area

Criteria	Measure	Weight
Proximity to Areas of Historical Significance	Relative proximity to Anishnawbek and Haudenosaunee identified areas of historical significance associated with the Thames River	14.3
Effects to First Nations revenue generating projects	Potential for effects to identified project sites (eg. Belle River and North Kent Wind Farms)	14.3
Areas that support hunting/trapping/harvesting grounds	Effects on lands with habitat or vegetation types that support or have potential to support hunting/trapping/harvesting activities and medicinal plants	14.3
Areas that support fish bearing waters with identified or inferred habitat of game fish	Effects to identified aquatic habitat and/or known watercourses with fishery management programs	14.3
Effects to rare/undisturbed native habitats/ecosystems	Effects to rare habitats in southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism	14.3
Rare/sensitive species regeneration potential	Long-term effects to SAR and their regeneration potential	14.3
Co-location of existing infrastructure	Length of line that is sited within or beside existing linear infrastructure	14.3
Factor Area	Total	100



5.5 Step 5 – Evaluate and Select

Following identification and weighting of the evaluation criteria, the project team completed a geographic information system (GIS) analysis of the measures identified for each criteria for each Route Alternative based on available data sources. The information was then fed into a comparative evaluation matrix where numerical weighted scores were provided per criterion and totalled for each factor area. The analysis for each criterion was rationalized with a reasoned argument statement that identified the measured differences and similarities between each Route Alternative. Following completion of the comparative evaluation matrix, a summary was provided for each factor area and a reasoned argument for the overall technically preferred alternative route. The results of the weighted MCDA are found in **Table 5-6**.

Table 5-6: Comparative Evaluation Results by Factor

Table 5-6 A: Natural Environment Factor

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Effects to Fish and Aquatic Habitat	Effects to aquatic habitat including total number of watercourse crossings, effects to bank riparian vegetation, potential effects to surface flows	15	Reasoned Argument	Traverses 2.11 km of watercourse (surface flow), crossing 43 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 2	Traverses 2.21 km of watercourse (surface flow), crossing 46 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 2	Traverses 1.89 km of watercourse (surface flow), crossing 42 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 3	Traverses 1.99 km of watercourse (surface flow), crossing 43 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 2	Traverses 1.57 km of watercourse (surface flow), crossing 26 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 5	Traverses 1.63 km of watercourse (surface flow), crossing 28 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 5	Traverses 1.94 km of watercourse (surface flow), crossing 32 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 4	Traverses 2.59 km of watercourse (surface flow), crossing 46 watercourses in total, with potential to affect fish and fish habitat and riparian vegetation. Score: 1
Effects to Vegetation	Effects to vegetation including potential effects to incompatible vegetation communities and disturbance/alteration/destruction of existing windbreaks	15	Reasoned Argument	Traverses 6.92 ha of vegetation communities including hedgerows (e.g. windbreaks). 4.05 ha (59%) are incompatible with transmission lines (long term effects) while 2.87 ha (or 41%) are compatible (short term effects). Score: 1	Traverses 6.99 ha of vegetation communities including hedgerows (e.g. windbreaks). 4.20 ha (or 60%) are incompatible (long term effects) with transmission lines, while 2.79 ha (or 40%) are compatible (short term effects). Score: 1	Traverses 6.29 ha of vegetation communities including hedgerows (e.g. windbreaks). 3.79 ha (or 60%) are incompatible (long term effects) with transmission lines, while 2.50 ha (or 40%) are compatible (short term effects). Score: 2	Traverses 6.37 ha of vegetation communities including hedgerows (e.g. windbreaks). 3.95 ha (or 62%) are incompatible (long term effects) with transmission lines, while 2.41 ha (or 38%) are compatible (short term effects). Score: 1	Traverses 6.18 ha of vegetation communities including hedgerows (e.g. windbreaks). 3.05 ha (49%) are incompatible (long term effects) with transmission lines, while 3.13 ha (or 51%) are compatible (short term effects). Score: 5	Traverses 5.51 ha of vegetation communities including hedgerows (e.g. windbreaks). 2.88 ha (52%) are incompatible (long term effects) with transmission lines, while 2.64 ha (or 48%) are compatible (short term effects). Score: 5	Traverses 6.92 ha of vegetation communities including hedgerows (e.g. windbreaks). 3.41 ha (or 49%) are incompatible (long term effects) with transmission lines, while 3.51 ha (or 51%) are compatible (short term effects). Score: 3	Traverses 6.73 ha of vegetation communities including hedgerows (e.g. windbreaks). 4.02 ha (or 60%) are incompatible (long term effects) with transmission lines, while 2.71 ha (or 40%) are compatible (short term effects). Score: 1

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Terrestrial and Wildlife Habitat	Effects to terrestrial wildlife and habitat including footprint effects, potential removal, disturbance and/or destruction of habitat, potential disturbance to wildlife movement/habitat at fragmentation	20	Reasoned Argument	Affects 2.52 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts, special concern and rare wildlife species, and turtle wintering areas. Located along the periphery, and slightly within the Important Bird Area; not anticipated to impact movement of avian species. Score: 3	Affects 2.52 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts, special concern and rare wildlife species, and turtle wintering areas. Located along the periphery, and slightly within the Important Bird Area; not anticipated to impact movement of avian species. Score: 3	Affects 2.19 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts, special concern and rare wildlife species, and turtle wintering areas. Located along the periphery, and slightly within the Important Bird Area; not anticipated to impact movement of avian species. Score: 3	Affects 2.19 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts, special concern and rare wildlife species, and turtle wintering areas. Located along the periphery, and slightly within the Important Bird Area; not anticipated to impact movement of avian species. Score: 3	Affects 3.0 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts, special concern and rare wildlife species, and turtle wintering areas. Located within the Important Bird Area with the potential of impacting movement of avian species. Score: 2	Affects 3.55 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts, special concern and rare wildlife species, and turtle wintering areas. Located within the Important Bird Area with the potential of impacting movement of avian species. Score: 1	Affects 2.66 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts, special concern and rare wildlife species, and turtle wintering areas. Located within the Important Bird Area with the potential of impacting movement of avian species. Score: 2	Affects 1.04 ha of terrestrial and wildlife habitat, including SWH for bat maternity roosts and special concern and rare wildlife species. Located outside of Important Bird Area; not anticipated to impact movement of avian species. Score: 5
Species at Risk & Species of Conservation Concern	Effects to Species at Risk and Species of Conservation Concern, and their habitats	20	Reasoned Argument	Affects 6.60 ha of confirmed and/or potential Species at Risk habitat (Butternut, Eastern Foxsnake, SAR Bats) and species of conservation concern (Climbing Prairie Rose, Honey Locust and Mapleleaf). Score: 1	Affects 6.66 ha of confirmed and/or potential Species at Risk habitat (Butternut, Eastern Foxsnake, SAR Bats) and species of conservation concern (Climbing Prairie Rose and Mapleleaf). Score: 1	Affects 5.59 ha of potential Species at Risk habitat (Eastern Foxsnake, SAR Bats) and species of conservation concern (Climbing Prairie Rose, Honey Locust and Mapleleaf). Score: 3	Affects 5.65 ha of potential Species at Risk habitat (Eastern Foxsnake, SAR Bats) and species of conservation concern (Climbing Prairie Rose and Mapleleaf). Score: 3	Affects 4.94ha of potential Species at Risk habitat (Eastern Foxsnake, Lake chubsuker, Lilliput and SAR bats) and species of conservation concern (Eastern Wood-pewee, Mapleleaf and Spotted Sucker). Score: 5	Affects 4.58 ha of potential Species at Risk habitat (Eastern Foxsnake, Lake chubsuker, Lilliput and SAR bats) and species of conservation concern (Eastern Wood-pewee, Mapleleaf and Spotted Sucker). Score: 5	Affects 5.47 ha of potential Species at Risk habitat (Eastern Foxsnake, Lilliput and SAR bats) and species of conservation concern (Eastern Wood-pewee, Mapleleaf and Spotted Sucker). Score: 3	Affects 5.12 ha of potential Species at Risk habitat (Eastern Foxsnake and SAR bats) and species of conservation concern (Eastern Wood-pewee, Honey Locust and Mapleleaf). Score: 4

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Natural Hazards, Wetlands and Floodplain Areas	Distance of the route that occurs within/in close proximity to floodplain areas, wetlands, areas of erosion concern	15	Reasoned Argument	Traverses 1.78 ha of regulated lands, including potential impacts to 0.65 ha of wetland. Score: 3	Traverses 1.78 ha of regulated lands, including potential impacts to 0.65 ha of wetland. Score: 3	Traverses 1.78 ha of regulated lands, including potential impacts to 0.65 ha of wetland. Score: 3	Traverses 1.78 ha of regulated lands, including potential impacts to 0.65 ha of wetland. Score: 3	Traverses 3.74 ha of regulated lands, including potential impacts to 0.49 ha of wetland. Score: 1	Traverses 3.74 ha of regulated lands, including potential impacts to 0.49 ha of wetland. Score: 1	Traverses 3.74 ha of regulated lands, including potential impacts to 0.49 ha of wetland. Score: 1	Traverses 0.33 ha of regulated lands, none of which are wetlands. Score: 5
Designated Natural Areas	Alignment with existing land use designations as defined by the PPS, local Municipal Official Plans and the Important Bird Area (IBA)	15	Reasoned Argument	Traverses 1.47 ha of designated Significant Woodland, 2.85 ha of designated Important Bird Area lands and 0.37 ha of the Big "O" Conservation Area. Score: 5	Traverses 1.47 ha of designated Significant Woodland, 2.85 ha of designated Important Bird Area lands and 0.37 ha of the Big "O" Conservation Area. Score: 5	Traverses 1.13 ha of designated Significant Woodland, 2.85 ha of designated Important Bird Area lands and 0.37 ha of the Big "O" Conservation Area. Score: 5	Traverses 1.13 ha of designated Significant Woodland, 2.85 ha of designated Important Bird Area lands and 0.37 ha of the Big "O" Conservation Area. Score: 5	Traverses 1.53 ha of designated Significant Woodland and 43.09 ha of designated Important Bird Area lands. Score: 2	Traverses 1.30 ha of designated Significant Woodland and 59.73 ha of designated Important Bird Area lands. Score: 1	Traverses 1.30 ha of designated Significant Woodland and 58.41 ha of designated Important Bird Area lands. Score: 1	Traverses 0.96 ha of designated Significant Woodland and 0.24 ha of the C.M. Wilson Conservation Area. Does not impact designated Important Bird Area lands. Score: 5

Table 5-6 B: Socio-Economic Environment Factor

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Existing land use designations	Alignment with existing land use designations as defined by the Provincial Policy Statement and local Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS)	10	Reasoned Argument	Local Official Plans (OPs) permit transmission facilities on any land use designation provided development satisfies applicable legislation. Alternative 1A generally follows existing transmission ROWs (as encouraged by local OPs) but approaches Tilbury's fringe area where the line deviates south around the community. This deviation aligns with the OP but is not as pronounced as Alternative 1B and 1D. Alternative 1A co-locates with 41.67km of existing infrastructure. Score: 5	Local Official Plans (OPs) permit utility/transmission facilities on any land use designation provided development satisfies applicable legislation. Alternative 1B generally follows existing transmission ROWs (as encouraged by local OPs) but approaches Tilbury's fringe area where the line deviates south around the community. This deviation aligns with the official plan and is further from the fringe area compared to Alternative 1A and 1C. Alternative 1B co-locates with 36.4km of existing infrastructure. Score: 5	Local Official Plans (OPs) permit utility/transmission facilities on any land use designation provided development satisfies applicable legislation. Alternative 1C generally follows existing transmission ROWs (as encouraged by local OPs) but approaches Tilbury's fringe area where the line deviates south around the community. This deviation aligns with the official plan but is not as pronounced as Alternative 1B and 1D. Alternative 1C co-locates with 34.75km of existing infrastructure. Score: 5	Local Official Plans (OPs) permit utility/transmission facilities on any land use designation provided development satisfies applicable legislation. Alternative 1D generally follows existing transmission ROWs (as encouraged by local OPs) but approaches Tilbury's fringe area where the line deviates south around the community. This deviation aligns with the official plan and is further from the fringe area compared to Alternative 1A and 1C. Alternative 1D co-locates with 29.5km of existing infrastructure. Score: 5	Local Official Plans (OPs) permit utility/transmission facilities on any land use designation provided development satisfies applicable legislation. All variations of Alternative 2 cross through a built-up area/Urban Area designation at the northern area of Comber which is not preferred by the municipality. Alternative 2A is separated from Tilbury's Urban Fringe Area. Alternative 2A co-locates with 26.04km of existing infrastructure of which 15.66 km involves repurposing an existing idle transmission line. Score: 4	Local Official Plans (OPs) permit utility/transmission facilities on any land use designation provided development satisfies applicable legislation. All variations of Alternative 2 cross through a built-up area/Urban Area designation at the northern area of Comber which is not preferred by the municipality. Alternative 2B is separated from Tilbury's Urban Fringe Area. Alternative 2B co-locates with 24.29km of existing infrastructure of which 3.65 km involves repurposing an existing idle transmission line. Score: 4	Local Official Plans (OPs) permit utility/transmission facilities on any land use designation provided development satisfies applicable legislation. All variations of Alternative 2 cross through a built-up area/Urban Area designation at the northern area of Comber which is not preferred by the municipality. Alternative 2C is separated from Tilbury's Urban Fringe Area. Alternative 2C co-locates with 19.81km of existing infrastructure. Score: 3	Local Official Plans (OPs) permit utility and transmission facilities on any land use designation provided development satisfies applicable legislation. Unlike other alternatives, Alternative 3 does not parallel existing transmission lines which is discouraged in local OP policies. It does avoid built-up areas and Urban Fringe Areas as identified in the Municipality of Lakeshore OP. Alternative 3 co-locates with 1.5km of existing infrastructure. Score: 1

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Future land use designations	Alignment with future land use designations including potential future settlement area expansion plans, growth areas and development boundaries, as defined by the Provincial Policy Statement and local Municipal Official Plans (does not include Designated Natural Areas or Natural Environment designations under the PPS)	7.5	Reasoned Argument	Does not traverse land identified for future development potential. Score: 5	Does not traverse land identified for future development potential. Score: 5	Right of way traverses 10.78 ha of lands identified for future development potential by local municipality. Score: 2	Right of way traverses 10.78 ha of lands identified for future development potential by local municipality. Score: 2	Right of way traverses 14.65 ha of lands identified for future development potential by local municipality. Score: 1	Right of way traverses 14.65 ha of lands identified for future development potential by local municipality. Score: 1	Right of way traverses 9.85 ha of lands identified for future development potential by local municipality. Score: 2	Does not traverse land identified for future development potential. Score: 5

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Agricultural Operations	Effects to agricultural operations including farming of land, movement of farm machinery and access to processing facilities	20	Reasoned Argument	Traverses 164.06 ha of prime agricultural land, of which 41.67 km is co-located with existing infrastructure. Score: 5	Traverses 173.65 ha of prime agricultural land, of which 36.40 km is co-located with existing infrastructure. Score: 4	Traverses 177.74 ha of prime agricultural land, of which 34.75 km is co-located with existing infrastructure. Score: 4	Traverses 187.31 ha of prime agricultural land, of which 29.50 km is co-located with existing infrastructure. Score: 3	Traverses 165.74 ha of prime agricultural land, of which 10.38 km is co-located with existing infrastructure and an additional 15.66 km includes reusing an existing idle transmission corridor (including replacing existing Tx towers) which provide easier ROW access and maximizes the use of existing ROW corridors without widening or creating new corridors. Score: 5	Traverses 183.6 ha of prime agricultural land, of which 20.64 km is co-located with existing infrastructure and an additional 3.65 km includes reusing an existing idle transmission corridor (including replacing existing Tx towers) which provide easier ROW access and maximizes the use of existing ROW corridors without widening or creating new corridors. Score: 3	Traverses 195.74 ha of prime agricultural land, of which 19.81 km is co-located with existing infrastructure. Score: 2	Traverses 211.91 ha of prime agricultural land, of which 1.50 km is co-located with existing infrastructure. Score: 1
Petroleum Operations	Effects to petroleum operations including access to petroleum wells or resources and distribution networks/ pipelines	2.5	Reasoned Argument	Alternative 1A has 2 abandoned petroleum wells within the ROW and crosses 24.96 ha of petroleum pool resources. Score: 2	Alternative 1B has 2 abandoned petroleum wells within the ROW and crosses 24.96 ha of petroleum pool resources. Score: 2	Alternative 1C has 2 abandoned petroleum wells within the ROW and crosses 26.18 ha of petroleum pool resources. Score: 2	Alternative 1D has 2 abandoned petroleum wells within the ROW and crosses 26.18 ha of petroleum pool resources. Score: 2	Alternative 2A has 2 abandoned petroleum wells within the ROW and crosses 5.48 ha of petroleum pool resources. Score: 5	Alternative 2B has 2 abandoned petroleum wells within the ROW and crosses 5.48 ha of petroleum pool resources. Score: 5	Alternative 2C has 2 abandoned petroleum wells within the ROW and crosses 13.46 ha of petroleum pool resources. Score: 4	Alternative 3A has 2 abandoned petroleum wells within the ROW and crosses 32.99 ha of petroleum pool resources. Score: 1

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Effects to residential buildings, properties or site plans	Effects to existing residential properties including proximity to existing homes, site plan alteration or building effects	15	Reasoned Argument	92 residential homes and/or residential parcels are located within the project study area for Alternative 1A. Score: 2	79 residential homes and/or residential parcels are located within the project study area for Alternative 1B. Score: 3	76 residential homes and/or residential parcels are located within project study area for Alternative 1C. Score: 4	63 residential homes and/or residential parcels are located within the project study area for Alternative 1D. Score: 5	107 residential homes and/or residential parcels are located within the project study area for Alternative 2A. Score: 1	80 residential home and/or residential parcels are located within the project study area for Alternative 2B. Score: 3	103 residential homes and/or residential parcels are located within the project study area for Alternative 2C. Score: 1	58 residential homes and/or residential parcels are located within the project study area for Alternative 3. Score: 5
Effects to commercial/ industrial buildings, properties, site plans or business operations/ supply chains	Effects to existing commercial or industrial properties including proximity to commercial/industrial operations, building effects or supply chain effects	10	Reasoned Argument	5 commercial properties are located within the right of way for Alternative 1A. Score: 1	5 commercial properties are located within the right of way for Alternative 1B. Score: 1	4 commercial properties are located within the right of way for Alternative 1C. Score: 2	4 commercial properties are located within the right of way for Alternative 1D. Score: 2	3 commercial properties are located within the right of way for Alternative 2A. Score: 3	3 commercial properties are located within the right of way for Alternative 2B. Score: 3	3 commercial properties are located the right of way for Alternative 2C. Score: 3	No commercial properties are located within the right of way for Alternative 3. Score: 2
Source water Protection	Effects to source water resources including policy areas and drinking water sources for private landowners	10	Reasoned Argument	Crosses 91.21 ha of Source Water Protection designated areas. Score: 5	Crosses 94.56 ha of Source Water Protection designated areas. Score: 5	Crosses 129.56 ha of Source Water Protection designated areas. Score: 1	Crosses 132.86 ha of Source Water Protection designated areas. Score: 1	Crosses 125.8 ha of Source Water Protection designated areas. Score: 1	Crosses 129.14 ha of Source Water Protection designated areas. Score: 1	Crosses 104.81 ha of Source Water Protection designated areas. Score: 4	Crosses 117.97 ha of Source Water Protection designated areas. Score: 5

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Cultural Resources	Effects to properties or landscapes with cultural heritage resource potential	10	Reasoned Argument	Potentially affects 24 properties with cultural heritage value or interest as well as four properties within the nationally significant Buxton NHSC and one property listed on the Lakeshore Municipal Heritage Register. Score: 1	Potentially affects 24 properties with cultural heritage value or interest as well as four properties within the nationally significant Buxton NHSC and one property listed on the Lakeshore Municipal Heritage Register. Score: 1	Potential to affect 27 properties with cultural heritage value and interest including sites at the Buxton NHSC and a property listed on the Lakeshore Municipal Heritage Register. Score: 2	Potential to affect 26 properties with cultural heritage value and interest including sites at the Buxton NHSC and a property listed on the Lakeshore Municipal Heritage Register. Score: 2	Potential to affect 28 properties with cultural heritage value or interest but does not impact the Buxton NHSC. Score: 3	Potential to affect 25 properties with cultural heritage value or interest but does not impact the Buxton NHSC. Score: 3	Potential to affect 18 properties with cultural heritage value or interest but does not impact the Buxton NHSC. Score: 4	Potential to affect 17 properties with cultural heritage value or interest while also affecting the Buxton NHSC. Score: 3
Archaeological Resources	Effects to lands with archaeological potential, proximity to known archaeological sites	15	Reasoned Argument	Traverses 79 features with archaeological potential. Score: 1	Traverses 69 features with archaeological potential. Score: 2	Traverses 73 features with archaeological potential. Score: 2	Traverses 65 features with archaeological potential. Score: 3	Traverses 52 features with archaeological potential. Score: 5	Traverses 46 features with archaeological potential. Score: 5	Traverses 54 features with archaeological potential. Score: 4	Traverses 69 features with archaeological potential. Score: 2
Aggregate Resources Extraction Areas/ Operations (Pits/Quarries)	Effects to aggregate extraction site operations including expansion plans, and site operations	0	Reasoned Argument	No aggregate resources or operations were identified within the PSA Score: 5	No aggregate resources or operations were identified within the PSA Score: 5	No aggregate resources or operations were identified within the PSA Score: 5	No aggregate resources or operations were identified within the PSA Score: 5	No aggregate resources or operations were identified within the PSA Score: 5	No aggregate resources or operations were identified within the PSA Score: 5	No aggregate resources or operations were identified within the PSA Score: 5	No aggregate resources or operations were identified within the PSA Score: 5

Table 5-6 C: Technical and Cost Factor

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Line Length	Total length of each route or variation	20	Reasoned Argument	Total line length is 48.04 km. Score: 5	Total line length is 48.68 km. Score: 3	Total line length is 48.48 km. Score: 3	Total line length is 49.11 km. Score: 1	Total line length is 48.26 km. Score: 4	Total line length is 48.32 km. Score: 4	Total line length is 47.74 km. Score: 5	Total line length is 49.35 km. Score: 1
Line Angles	Number of turns in each route/variation, as well as the angle of the turn (sharper or wider than 300)	20	Reasoned Argument	Alternative 1A requires 5 turns greater than 300. Score: 4	Alternative 1B requires 6 turns greater than 300. Score: 3	Alternative 1C requires 7 turns greater than 300. Score: 2	Alternative 1D requires 8 turns greater than 300. Score: 1	Alternative 2A requires 7 turns greater than 300. Score: 2	Alternative 2B requires 7 turns greater than 300. Score: 2	Alternative 2C requires 8 turns greater than 300. Score: 1	Alternative 3 requires 3 turns greater than 300. Score: 5
Crossings	Total number of crossings of: watercourses, railways, Highways, Existing 230 kV transmission lines, etc.	12.5	Reasoned Argument	Crosses 0.04 km of railway, 1.81 km of roadway, 0.81 km of utilities, 2.11 km of watercourse, 2.47 km of constructed drains, and 0.13 km of wind farm transmission line for a total of 7.38 km of infrastructure crossings within the ROW. Score: 4	Crosses 0.04 km of railway, 1.94 km of roadway, 0.69 km of utilities, 2.21 km of watercourse, 2.47 km of constructed drains and 0.13 km of wind farm transmission line for a total of 7.48 km of infrastructure crossings within the ROW. Score: 3	Crosses 0.04 km of railway, 2.19 km of roadway, 0.80 km of utilities, 1.89 km of watercourse, 2.22 km of constructed drains and 0.13 km of wind farm transmission line for a total of 7.27 km of infrastructure crossings within the ROW. Score: 4	Crosses 0.04 km of railway, 1.59 km of roadway, 0.68 km of utilities, 1.99 km of watercourse, 2.21 km of constructed drains and 0.13 km of wind farm transmission line for a total of 6.64 km of infrastructure crossings within the ROW. Score: 5	Crosses 0.29 km of railway, 1.93 km of roadway, 1.24 km of utilities, 1.57 km of watercourse, 2.65 km of constructed drains and 0.04 km of wind farm transmission line for a total of 7.72 km of infrastructure crossings within the ROW. Score: 3	Crosses 0.31 km of railway, 1.71 km of roadway, 1.27 km of utilities, 1.63 km of watercourse, 2.46 km of constructed drains and 0.04 km of wind farm transmission line for a total of 7.41 km of infrastructure crossings within the ROW. Score: 4	Crosses 0.29 km of railway, 1.85 km of roadway, 0.56 km of utilities, 1.94 km of watercourse, 2.89 km of constructed drains and 0.04 km of wind farm transmission line for a total of 7.56 km of infrastructure crossings within the ROW. Score: 3	Crosses 0.05 km of railway, 2.06 km of roadway, 0.35 km of utilities, 2.59 km of watercourse, 3.38 km of constructed drains and 0.15 km of wind farm transmission line for a total of 8.58 km of infrastructure crossings within the ROW. Score: 1

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Parallel & Adjacent to Existing Infrastructure	Total distance of each route/variation that parallels an existing transmission line corridor (preference to routes/variation s with longer parallel distance) Total distance of each route/variation that parallels a non-TX linear infrastructure/c orridor (E.g., Highway 401; preference to routes/variation s with longer parallel distance) Total distance parallel/adjacent to underground facilities (pipelines, sewers, communication /power line, etc.) preference to routes/variation s with less parallel distance	5	Reasoned Argument	Parallels 41.67 km of existing infrastructure but does not reuse the existing idle line corridor. Score: 5	Parallels 36.40 km of existing infrastructure but does not reuse the existing idle line corridor. Score: 5	Parallels 34.75 km of existing infrastructure but does not reuse the existing idle line corridor. Score: 5	Parallels 29.50 km of existing infrastructure but does not reuse the existing idle line corridor. Score: 4	Parallels 26.04 km of existing infrastructure of which reuses 15.66 km of existing idle line ROW which parallels an existing active rail line. Score: 4	Parallels 24.29 km of existing infrastructure of which reuses 3.65 km of existing idle line ROW which parallels an existing active rail line. Score: 3	Parallels 19.81 km of existing infrastructure but does not reuse the existing idle line corridor. Score: 3	Parallels 1.5 km of existing infrastructure but does not reuse the existing idle line corridor. Score: 1

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Proximity to Wind Turbines	Proximity to wind turbines	5	Reasoned Argument	Similar to Alternatives 1B, 1C and 1D, Alternative 1A does not directly impact any existing wind turbines. There are however, 2 turbines within a 150-200m radius and one turbine within 100-150m radius of the ROW. This is similar to other Alternative 1 options but worse than Alternative 2 and 3 options. Score: 3	Similar to Alternatives 1A, 1C and 1D, Alternative 1B does not directly impact any existing wind turbines. There are however, 2 turbines within a 150-200m radius and one turbine within 100-150m radius of the ROW. This is similar to other Alternative 1 options but worse than Alternative 2 and 3 options. Score: 3	Similar to Alternatives 1A, 1B and 1D, Alternative 1C does not directly impact any existing wind turbines. There are however, 2 turbines within a 150-200m radius and one turbine within 100-150m radius of the ROW. This is similar to other Alternative 1 options but worse than Alternative 2 and 3 options. Score: 3	Similar to Alternatives 1A, 1B and 1C, Alternative 1D does not directly impact any existing wind turbines. There are however, 2 turbines within a 150-200m radius and one turbine within 100-150m radius of the ROW. This is similar to other Alternative 1 options but worse than Alternative 2 and 3 options. Score: 3	Similar to Alternatives 2B and 2C, Alternative 2A does not directly impact any existing wind turbines. There is however one turbine within 150-200m of the ROW and two turbines within 200-250m of the ROW. This is similar to Alternatives 2B, 2C, and 3 but better than Alternative 1A, 1B, 1C and 1D. Score: 4	Similar to Alternatives 2A and 2C, Alternative 2B does not directly impact any existing wind turbines. There is however one turbine within 150-200m of the ROW and two turbines within 200-250m of the ROW. Which is similar to Alternatives 2A, 2B and 2C but better than Alternative 1A, 1B, 1C and 1D. Score: 4	Similar to Alternatives 2A and 2B, Alternative 2C does not directly impact any existing wind turbines. There is however one turbine within 150-200m of the ROW and two turbines within 200-250m of the ROW. Score: 4	Alternative 3 does not directly impact any existing wind turbines. There is however one turbine within 150-200m of the ROW and one turbine within 200-250m of the ROW which is similar to Alternatives 2A, 2B and 2C but better than Alternative 1A, 1B, 1C and 1D. Score: 4
Impacted Property Parcels and Property Acquisition	Real Estate and land acquisition considerations, including the total number of property parcels traversed and the anticipated number of property buyouts	25	Reasoned Argument	Property rights required on 164 property parcels and requires a buy-out of 6 identified properties. Score: 2	Property rights required on 166 property parcels and requires a buy-out of 3 identified properties. Score: 2	Property rights required on 174 property parcels and requires a buy-out of 4 identified properties. Score: 2	Property rights required on 177 property parcels and requires a buy-out of 1 identified property. Score: 3	Property rights required on 123 property parcels and requires a buy-out of 4 identified properties. Score: 4	Property rights required on 132 property parcels and requires a buy-out of 1 identified property. Score: 5	Property rights required on 163 property parcels and requires a buy-out of 1 identified property. Score: 3	Property rights required on 165 property parcels. Score: 3

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Overall Constructability	Other considerations affecting the complexity of construction, such as information on soils, construction obstacles and potential construction conflicts	12.5	Reasoned Argument	<p>Alternative 1 line options located in soil type composed of course-grained glaciolacustrine deposits (Sand and gravel with minor silt) and till (Clayey to silty in composition and stiff to very stiff). These options are less favorable than option 3A but better than option 2A, 2B and 2C based on the publicly available geotechnical data. Routes 1C and 1D are less desirable due to conflicts with MTO.</p> <p>Score: 3</p>	<p>Alternative 1 line options located in soil type composed of course-grained glaciolacustrine deposits (Sand and gravel with minor silt) and till (Clayey to silty in composition and stiff to very stiff). These options are less favorable than option 3A but better than option 2A, 2B and 2C based on the publicly available geotechnical data. Routes 1C and 1D are less desirable due to conflicts with MTO.</p> <p>Score: 3</p>	<p>Alternative 1 line options located in soil type composed of course-grained glaciolacustrine deposits (Sand and gravel with minor silt) and till (Clayey to silty in composition and stiff to very stiff). These options are less favorable than option 3A but better than option 2A, 2B and 2C based on the publicly available geotechnical data. Routes 1C and 1D are less desirable due to conflicts with MTO.</p> <p>Score: 2</p>	<p>Alternative 1 line options located in soil type composed of course-grained glaciolacustrine deposits (Sand and gravel with minor silt) and till (Clayey to silty in composition and stiff to very stiff). These options are less favorable than option 3A but better than option 2A, 2B and 2C based on the publicly available geotechnical data. Routes 1C and 1D are less desirable due to conflicts with MTO.</p> <p>Score: 2</p>	<p>Alternative 2 options located in soil type composed of course-grained glaciolacustrine deposits (Sand and gravel with minor silt) and till (Clayey to silty in composition and stiff to very stiff). For these reasons, these options are the least favorable based on the publicly available geotechnical data and will be the most expensive area to design and build the tower foundations. Variation 2A and 2B will required to dismantle the 115 kV circuit K6Z (~16km along Route 2A and ~3.6 km along Route 2B). Route 2C does not require removal of idle TX towers, and less distance in undesirable soil types, but not preferred by MTO and will have much more involved permitting/review process and potential for conflicts with MTO construction and maintenance work).</p> <p>Score: 1</p>	<p>Alternative 2 options located in soil type composed of course-grained glaciolacustrine deposits (Sand and gravel with minor silt) and till (Clayey to silty in composition and stiff to very stiff). For these reasons, these options are the least favorable based on the publicly available geotechnical data and will be the most expensive area to design and build the tower foundations. Variation 2A and 2B will required to dismantle the 115 kV circuit K6Z (~16km along Route 2A and ~3.6 km along Route 2B). Route 2C does not require removal of idle TX towers, and less distance in undesirable soil types, but not preferred by MTO and will have much more involved permitting/review process and potential for conflicts with MTO construction and maintenance work).</p> <p>Score: 1</p>	<p>Alternative 2 options located in soil type composed of course-grained glaciolacustrine deposits (Sand and gravel with minor silt) and till (Clayey to silty in composition and stiff to very stiff). For these reasons, these options are the least favorable based on the publicly available geotechnical data and will be the most expensive area to design and build the tower foundations. Variation 2A and 2B will required to dismantle the 115 kV circuit K6Z (~16km along Route 2A and ~3.6 km along Route 2B). Route 2C does not require removal of idle TX towers, and less distance in undesirable soil types, but not preferred by MTO and will have much more involved permitting/review process and potential for conflicts with MTO construction and maintenance work).</p> <p>Score: 1</p>	<p>This line route option is located primarily in a most appropriate and favorable soil type composed of till (Clayey to silty in composition and stiff to very). This route will be the most cost effective to design and build the tower foundation.</p> <p>Score: 5</p>

Table 5-6 D: Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Proximity to Areas of Historical Significance	Relative proximity to Anishnawbek and Haudenosaunee identified areas of historical significance associated with the Thames River	14.3	Reasoned Argument	Not in close proximity to identified areas of historic significance. Score: 5	Not in close proximity to identified areas of historic significance. Score: 5	Not in close proximity to identified areas of historic significance. Score: 5	Not in close proximity to identified areas of historic significance. Score: 5	Alternative 2A is closer (than other alternatives) in proximity to identified area of historic significance, but not as close as Alternative 2B. Score: 3	Alternative 2B is in closest proximity to identified area of historic significance. Score: 1	Not in close proximity to identified areas of historic significance. Score: 5	Not in close proximity to identified areas of historic significance. Score: 5
Effects to First Nations revenue generating projects	Potential for effects to identified project sites (eg. Belle River and North Kent Wind Farms)	14.3	Reasoned Argument	Effects to revenue generating projects are not anticipated. Score: 5	Effects to revenue generating projects are not anticipated. Score: 5	Effects to revenue generating projects are not anticipated. Score: 5	Effects to revenue generating projects are not anticipated. Score: 5	Effects to revenue generating projects are not anticipated. Score: 5	Effects to revenue generating projects are not anticipated. Score: 5	Effects to revenue generating projects are not anticipated. Score: 5	Effects to revenue generating projects are not anticipated. Score: 5
Areas that support hunting/trapping/harvesting grounds	Effects on lands with habitat or vegetation types that support or have potential to support hunting/trapping/harvesting activities and medicinal plants	14.3	Reasoned Argument	Affects 6.92 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 1	Affects 6.99 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 1	Affects 6.29 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 3	Affects 6.37 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 3	Affects 6.18 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 3	Affects 5.51 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 5	Affects 6.92 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 1	Affects 6.73 ha of lands identified that have potential to support hunting, trapping, and harvesting activities. Score: 1

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Areas that support fish bearing waters with identified or inferred habitat of game fish species	Effects to identified aquatic habitat and/or known watercourses with fishery management programs	14.3	Reasoned Argument	Traverses 2.11 km of watercourse, crossing 43 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 2	Traverses 2.21 km of watercourse, crossing 46 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 2	Traverses 1.89 km of watercourse, crossing 42 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 3	Traverses 1.99 km of watercourse, crossing 43 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 2	Traverses 1.57 km of watercourse, crossing 26 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 5	Traverses 1.63 km of watercourse, crossing 28 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 5	Traverses 1.94 km of watercourse, crossing 32 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 4	Traverses 2.59 km of watercourse, crossing 46 watercourses in total with potential to effect fish habitat. Does not cross any watercourses with publicly known fish stocking programs. Score: 1
Effects to rare/ undisturbed native habitats/ ecosystems	Effects to rare habitats in Southwestern Ontario including tall grass prairies, savannah, native woodlands, natural wetlands, etc. and measured level of disturbance of native habitat and ecosystems based on calculated average coefficient of conservatism	14.3	Reasoned Argument	Affects 1.85 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 1 routes) is calculated at 3.83 average coefficient of conservatism (highly disturbed). Score: 1	Affects 1.85 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 1 routes) is calculated at 3.83 average coefficient of conservatism (highly disturbed). Score: 1	Affects 1.51 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 1 routes) is calculated at 3.83 average coefficient of conservatism (highly disturbed). Score: 2	Affects 1.51 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 1 routes) is calculated at 3.83 average coefficient of conservatism (highly disturbed). Score: 2	Affects 1.90 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 2 routes) is calculated at 3.21 average coefficient of conservatism (highly disturbed). Score: 3	Affects 1.67 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 2 routes) is calculated at 3.21 average coefficient of conservatism (highly disturbed). Score: 4	Affects 1.67 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 2 routes) is calculated at 3.21 average coefficient of conservatism (highly disturbed). Score: 4	Affects 1.03 ha of native habitat. The measured level of disturbance to native habitats (within Alternative 2 routes) is calculated at 3.72 average coefficient of conservatism (highly disturbed). Score: 3

Criteria	Metric of Measurement/ Scoring	Criteria Weight	Scoring Scale: 1= Most Effect 3= Neutral 5= Least Effect	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Rare/Sensitive species regeneration potential	Long-term effects to SAR and their regeneration potential	14.3	Reasoned Argument	Affects 6.58 ha of potential SAR habitat (Butternut, Eastern Foxsnake and SAR bats) and subsequent regeneration potential. Score: 1	Affects 6.64 ha of potential SAR habitat (Butternut, Eastern Foxsnake and SAR bats) and subsequent regeneration potential. Score: 1	Affects 5.57 ha of potential SAR habitat (Eastern Foxsnake and SAR bats), including subsequent species regeneration potential. Score: 3	Affects 5.63 ha of potential SAR habitat (Eastern Foxsnake and SAR bats), including subsequent species regeneration potential. Score: 3	Affects 4.79 ha of potential SAR habitat (Eastern Foxsnake, Lake Chubsucker, Lilliput and SAR bats), including subsequent species regeneration potential. Score: 5	Affects 4.42 ha of potential SAR habitat (Eastern Foxsnake, Lake Chubsucker, Lilliput and SAR bats), including subsequent species regeneration potential. Score: 5	Affects 5.27 ha of potential SAR habitat (Eastern Foxsnake, Lilliput and SAR bats), including subsequent species regeneration potential. Score: 4	Affects 5.12 ha of potential SAR habitat (Eastern Foxsnake and SAR bats), including subsequent species regeneration potential. Score: 4
Co-Location of existing infrastructure	Length of line that is cited within or beside existing linear infrastructure	14.3	Reasoned Argument	Parallels 41.67 km of existing infrastructure. Score: 5	Parallels 36.40 km of existing infrastructure. Score: 5	Parallels 34.75 km of existing infrastructure. Score: 5	Parallels 29.50 km of existing infrastructure. Score: 4	Parallels 26.04 km of existing infrastructure. Score: 4	Parallels 24.29 km of existing infrastructure. Score: 3	Parallels 19.81 km of existing infrastructure. Score: 3	Parallels 1.5 km of existing infrastructure. Score: 1

Table 5-6 E: Final Accumulated Total Overall Weighted Score

Criteria	Alternative Route 1A	Alternative Route 1B	Alternative Route 1C	Alternative Route 1D	Alternative Route 2A	Alternative Route 2B	Alternative Route 2C	Alternative Route 3
Natural Environment Factor Total Weighted Score	245 Least Preferred	245 Least Preferred	315 Medium Preference	285 Least Preferred	335 Most Preferred	300 Medium Preference	235 Least Preferred	360 Most Preferred
Socio-Economic Factor Total Weighted Score	307.8 Medium Preference	317.5 Most Preferred	290 Least Preferred	300 Medium Preference	320 Most Preferred	310 Medium Preference	280 Least Preferred	275 Least Preferred
Technical and Cost Factor Total Weighted score	357.5 Most Preferred	285 Medium Preference	265 Least Preferred	237.5 Least Preferred	310 Medium Preference	342.5 Most Preferred	280 Least Preferred	295 Medium Preference
Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Total Weighted Score	285.7 Least Preferred	285.7 Least Preferred	371.4 Medium Preference	342.9 Medium Preference	400.0 Most Preferred	400.0 Most Preferred	371.4 Medium Preference	285.7 Least Preferred
Final Accumulated Total Overall Weighted Score	1195.7 Medium Preference	1133.2 Least Preferred	1241.4 Medium Preference	1165.4 Least Preferred	1365.0 Most Preferred	1352.5 Most Preferred	1166.4 Least Preferred	1215.7 Medium Preference

5.6 Summary of Comparative Evaluation

5.6.1 Natural Environment Factor Summary

Alternative 3 is the technically preferred alternative from a Natural Environment perspective. Route Alternative 3 has the least impact on terrestrial and wildlife habitat, designated natural areas and natural hazards, wetlands, and floodplain areas, while also minimizing impacts to species at risk and SCC. Route Alternative 2A scored very high in the Natural Environment factor, as it minimizes potential effects to fish and aquatic habitat, and effects to vegetation while also having the least effect to potential SAR and SCC habitat.

5.6.2 Socio-Economic Environment Factor Summary

Route Alternative 2A is the technically preferred in the Socio-Economic Factor overall. Route 2A conforms well to the recommendations of the PPS, although it traverses a portion of Employment lands in Comber. Route Alternative 2A impacts the least amount of prime agricultural land while also maximizing reuse of the existing idle line corridor. Route Alternative 2A traverses few features associated with archaeological potential and avoids a National Historic Site of Canada.

5.6.3 Technical and Cost Factor Summary

Overall for technical and cost, Route Alternative 1A is preferred because it parallels the largest amount of existing infrastructure, minimizes line length, reduces the need for line angles and crossings of existing infrastructure. From a technical and cost perspective Route Alternative 2A is more complex and costlier to construct due to the number of line angles and construction complexity associated with surrounding topography. Route Alternative 2A traverses the fewest property parcels along its entire length, but does require some buyouts.

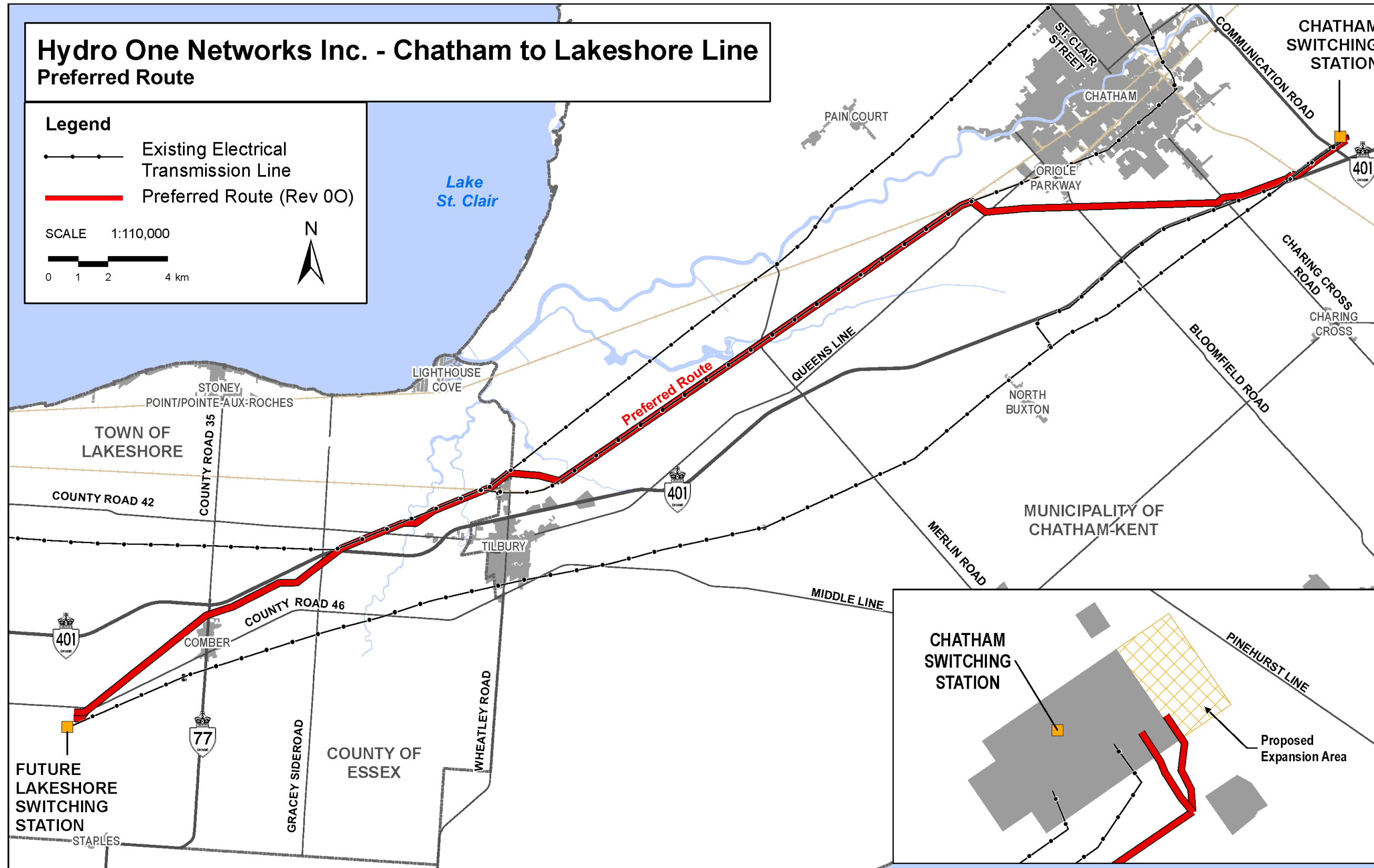
5.6.4 Anishnawbek and Haudenosaunee Culture, Values and Land Use Factor Summary

Route Alternative 2A is preferred as it balances opportunities to co-locate with existing infrastructure while minimizing impacts to native, undisturbed, natural areas. It is recognized that Route Alternatives 2A and 2B score the same in this category; however, Route Alternative 2A is located further away from historic sites identified by Anishnawbek communities, and is therefore preferred over 2B.

5.6.5 Technically Preferred Route Alternative

Overall, Route Alternative 2A (**Figure 5-3**) is preferred because it minimizes the overall impact to the natural and socio-economic environments compared to the other Route Alternatives and minimizes impacts to agricultural lands by utilizing an existing idle transmission corridor for nearly 1/3 its length. From a technical perspective, Route Alternative 2A is more complex to construct (soil conditions, line angles, etc.) but crosses the fewest number of property parcels and makes use of the existing idle line corridor. From an Anishnawbek and Haudenosaunee Culture, Values and Land Use perspective, Route Alternative 2A minimizes impacts to the natural environment while balancing opportunities to co-locate with existing infrastructure and proximity from identified areas of historical significance to Anishnawbek communities.

Figure 5-3: Technically Preferred Route Alternative



6 Project Description

The proposed Project is similar to many other projects completed by Hydro One. Based on the need identified by the IESO on the electrical load forecast for Essex County, the IESO requested Hydro One to construct a new double-circuit 230 kV transmission line between the Chatham SS in the Municipality of Chatham-Kent, to the future Lakeshore TS in the Municipality of Lakeshore. The purpose of the new double-circuit 230 kV transmission line is to:

- Increase the overall transfer of the bulk transmission system west of Chatham in order to reliably supply the forecast load growth in the Kingsville-Leamington area and the broader Windsor-Essex Region in the near- to mid-term due to a strong growth in the agricultural sector.
- Permit the resources and bulk facilities in this region to operate efficiently for local and system needs.
- Maintain existing interchange capability on the Ontario-Michigan interconnection between Windsor and Detroit.

Refer to **Figure 6-6-1** and **Figure 6-6-2** for examples of the types of transmission structures (i.e. towers) proposed for the Project. The structures shown in these figures are considered preliminary illustrative examples as they subject to the continuation of engineering and design work.

As the preferred Route Alternative will repurpose approximately 16 km of an existing idle 115 kV transmission line corridor between Tilbury and Chatham, the Project will involve dismantling and removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the idle transmission line, to be replaced with the new 230 kV double-circuit transmission structures, conductors and associated components.

The Project will also involve the expansion of the Chatham SS to facilitate connection of the new transmission circuits. This expansion will occur at the eastern end of the station (within lands owned by Hydro One and Infrastructure Ontario), and will involve an expansion of the fenceline, grounding grid and station drainage systems, construction of access roads within the station fence, construction of additional buswork and associated equipment, and the construction of one additional relay building. No new permanent access road or entrance outside of the station fence will be required for the expanded station.

Figure 6-6-1: Example of Transmission Structure Proposed for the Project

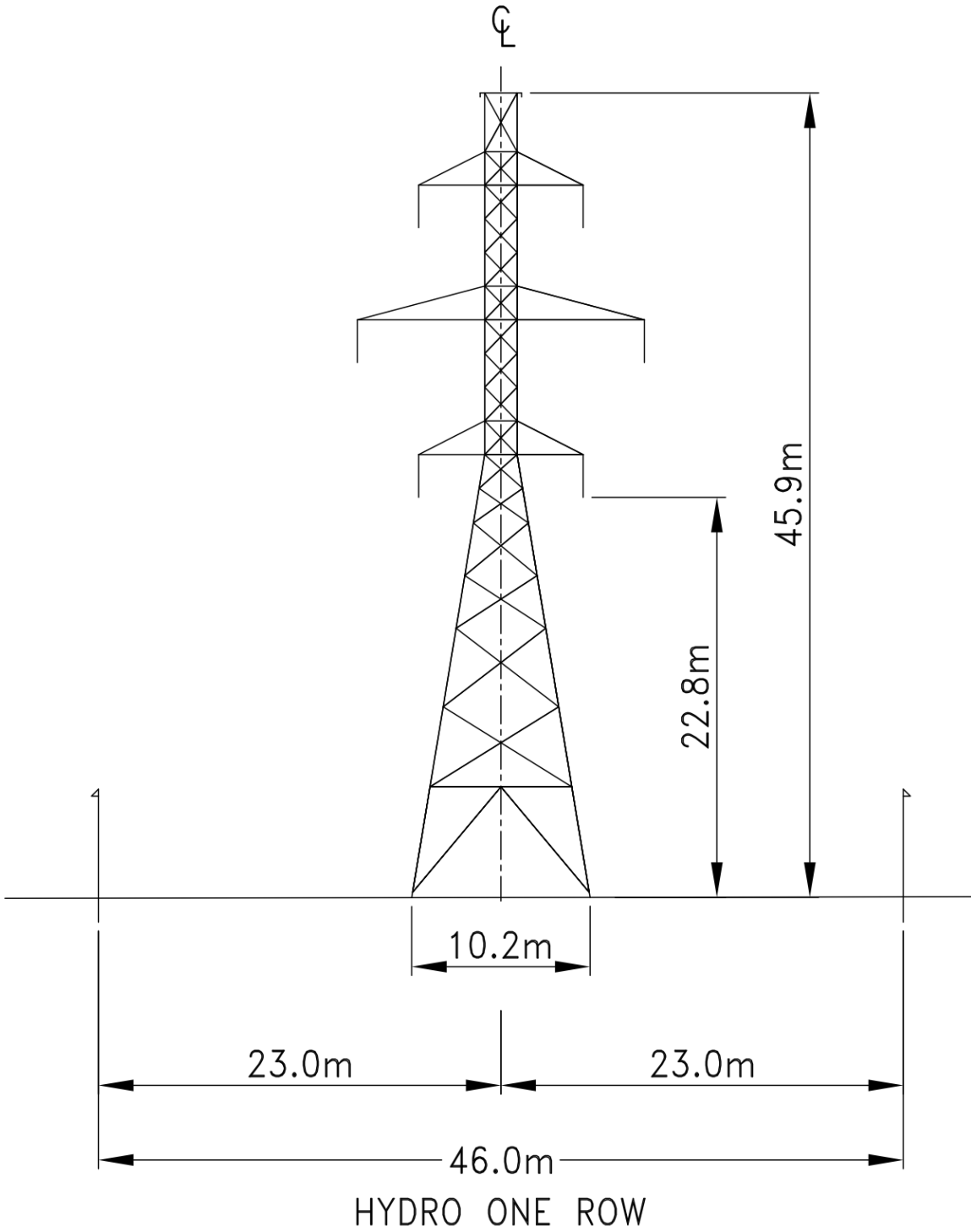
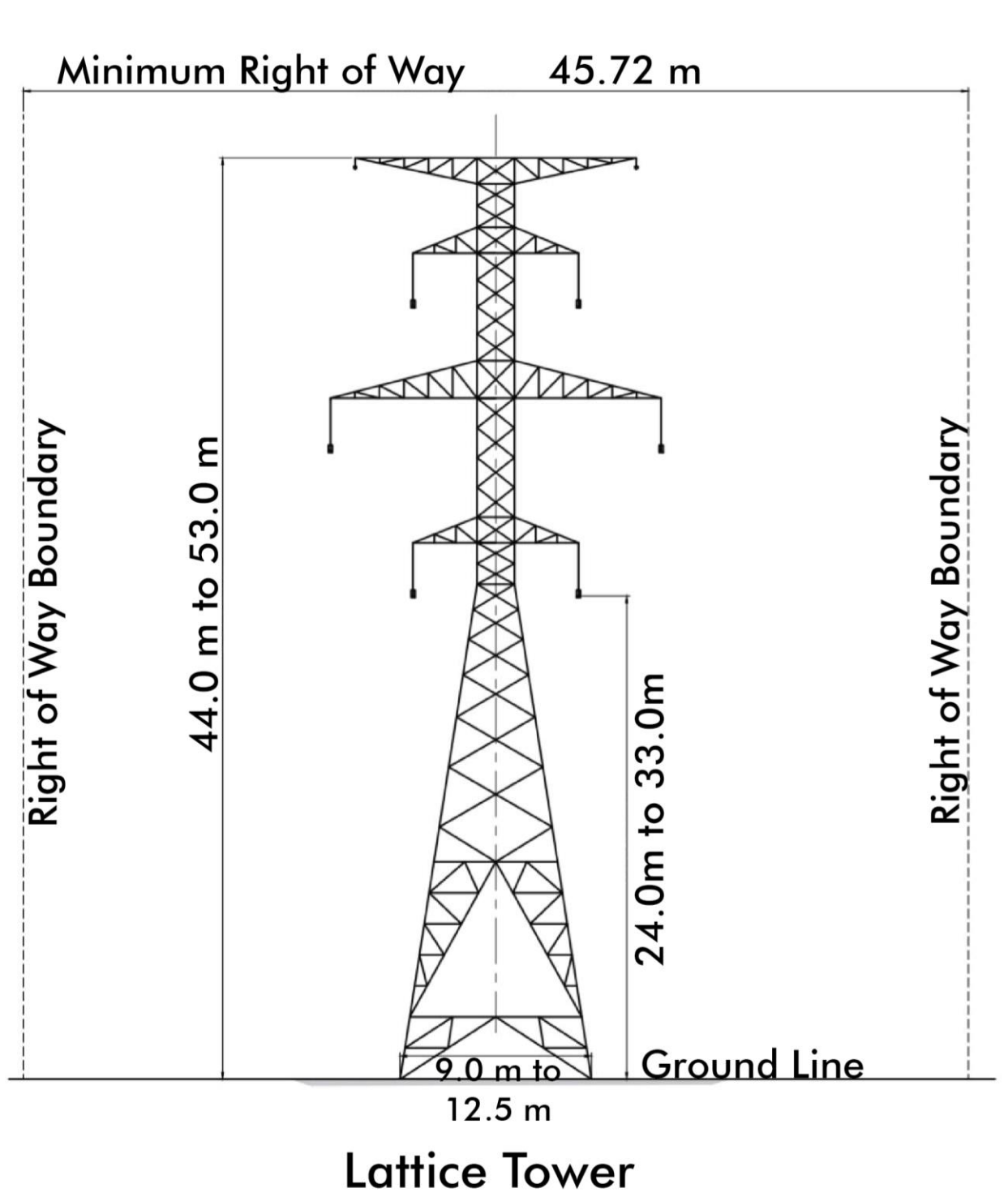


Figure 6-6-2: Preliminary Right-of-way Cross Section



6.1 Design Phase

Following completion of the Class EA process, detailed engineering and design for the proposed Project will be undertaken. The final design plans will be based on necessary surveys, including a geotechnical survey, and consultation with stakeholders. During the design phase, additional studies and surveys (e.g., Stage 2 Archaeological Assessment, geotechnical investigations) will be conducted as required, and since the release of the draft ESR these surveys have commenced on lands where access for these surveys has been obtained. Based on geotechnical data that has been collected following release of the draft ESR, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations. Additionally, based on the current geotechnical data and the preliminary helical pile designs, pile embedment depths are anticipated to be relatively shallow (9-12 m below ground surface) vs other foundation types (e.g., driven pile), and are not anticipated to be installed to bedrock depths.

Concurrent with finalization of the design, required permits, licences and approvals, as listed in **Section 1.4**, will be obtained. Hydro One will also finalize restoration plans in consultation with appropriate stakeholders and the local communities, as necessary.

Hydro One recognizes that a changing climate is likely to result in an increase of unusual weather patterns and severe weather events, which could potentially damage or adversely affect infrastructure and other public facilities. Hydro One is confident that the facilities being planned for this project have been engineered to adequately withstand the effects of climate change throughout the duration of their planned lifespan.

6.2 Construction Phase

Construction activities will be guided by Hydro One standards and guidelines as well as project-specific documents; these are to be adhered to by all construction personnel including contractors and sub-contractors. In addition, a project-specific Environmental Specifications will be prepared, outlining specific requirements to be followed for the proposed Project.

Prior to construction, a detailed construction plan will be developed. Construction activities will be restricted to designated work areas and protective barriers, such as fencing, will be erected to protect against features from construction related effects.

Throughout the construction period, an Environmental Specialist will be available to address unforeseen environmental effects and mitigation requirements. The Environmental Specialist will monitor activities to ensure conformance with the requirements set out in the Environmental Specification.

Should any archaeological finds be uncovered during construction, work will stop immediately pending assessment by the Project archaeologist and further consultation with the Ministry of Tourism, Culture and Sport (MTCSS) – Heritage Program Unit, as well as the appropriate Anishnawbek and Haudenosaunee communities.

Upon completion of construction, clean up and restoration (e.g., seeding, plantings, etc.) of areas disturbed by construction would occur, as required. Documents covering ongoing commitments, including monitoring and notification requirements will be prepared, and operation and maintenance staff will be briefed, as necessary.

Construction of the new double circuit 230 kV transmission line will involve the following activities:

- Site preparation including clearing, demolition and removal of existing structures (including dismantling and removal of existing idle transmission line structures, conductors and associated equipment) as required, and grading.
- Installation of foundations at the new structure locations.
- Assembly and construction of the transmission structures.
- Stringing new transmission conductors (wires) on the structures and installation of associated equipment.
- Clean up and site restoration.

Expansion of Chatham SS will involve the following activities:

- Site preparation including clearing and grading.
- Expansion of the station grounding grid.
- Expansion of any sub-grade station drainage systems.
- Installation of a new portion of station fence.
- Installation of foundations at the new structure locations.
- Construction of one new relay building.
- Connection of new buswork and associated equipment.
- Relocation and reconfiguration of existing structures outside of the station fence, as required.
- Clean up and site restoration.

Temporary facilities for the purpose of the proposed Project may include equipment staging areas and temporary stockpile areas, temporary rider poles or similar protective

measures required during conductor stringing, and temporary structures near the transmission stations for the staging of outages. Temporary facilities will be required prior to, and during, the construction period. The location of the temporary facilities will be determined by the project team and their contractor(s) during detail design/construction planning.

6.3 Maintenance, Operation and Retirement Phases

The proposed Project is planned to be in service by 2025 or earlier. The new double circuit 230 kV transmission line and the new expanded portion of the Chatham SS would undergo regular maintenance in adherence with Hydro One's maintenance standards and regulatory requirements to maintain a safe and reliable electricity transmission system.

When transmission facilities become obsolete or unserviceable and/or deemed to be at end-of-life, the equipment is retired from service. Transmission facilities that are retired from service are often left in place (idle) for potential future use. The facilities may eventually be removed and the site made suitable for other purposes. The foundations are typically cut back 1.0 m below ground surface when transmission structures are removed. As mentioned above, the Project involves the removal of approximately 16 km of idle 115 kV transmission line.

If a station site is suspected to be environmentally contaminated, the decommissioning of facilities will follow the guidance provided by O. Reg. 153/04 of the Environmental Protection Act.

6.4 Project Schedule

The anticipated schedule for the proposed Project activities is provide below in **Table 6-1**. This schedule shows key steps remaining in the Class EA process and subsequent anticipated timing of the start of construction and commissioning of the proposed Chatham SS expansion.

Table 6-1: Project Schedule

Activity	Period
Draft ESR released for 60-day public review and comment period	June 11, 2021
Extension of draft ESR review period for Indigenous communities	August 11 to September 11, 2021
Submission of Section 92 application to the Ontario Energy Board	May 2022

Chatham to Lakeshore 230 kV Transmission Line Class Environmental Assessment
Final Environmental Study Report
Project Description

Activity	Period
MECP Acknowledgement of withdrawal of all outstanding Section 16 Order Requests	October 14, 2022
Filing of final ESR and Class EA Statement of Completion with the MECP	October 2022
Ontario Energy Board Section 92 Approval (Anticipated)	December 2022
Construction Start	Spring 2023
Planned in-service date	2025 or earlier

7 Potential Environmental Effects and Mitigation Measures

This section describes the potential environmental effects and mitigation measures associated with both the short-term (construction) and long-term (operation/maintenance) activities of the proposed Project. The assessment of potential environmental effects for the proposed Project considered the baseline information on the environmental features that was collected for the PSA as presented in **Section 4**. It should be noted that since the release of the draft ESR, consistent with guidance provided by Hydro One through the class EA and in support of ongoing consultation with property owners, some minor refinements were made to the preferred alignment within the existing property fabric (e.g., within the same property parcels), where such refinements were deemed to be technically feasible and reasonable and provided further avoidance or mitigation of environmental effects. As a result, some of the affected areas presented within this section vary slightly from those presented in **Section 5**.

The potential environmental effects resulting from the construction and operation/maintenance of the proposed Project are similar to other projects undertaken by Hydro One and are well understood by the project Team. Hydro One has a strong track record of environmental compliance and stewardship and is committed to the completion of comprehensive environmental and social analysis and mitigation of potential effects.

The selection of mitigation measures are based on the following seven guiding principles:

- Avoidance of sensitive areas, where practical.
- Avoidance of watercourse crossings, where feasible, by use of an existing nearby crossing, access to structures from either side of the watercourse, or use of off-corridor access.
- Appropriate timing of construction activities, where feasible, to avoid sensitive time periods, such as fish spawning and egg incubation periods, or migratory bird nesting periods.
- Proactive communication with area residents, property owners and businesses on the proposed Project timelines and construction areas.
- Proactive communication with Anishnawbek and Haudenosaunee communities, government agencies, stakeholders and interest groups regarding the proposed Project.

- Implementation of conventional, proven mitigation measures during construction consistent with the criteria set out in Appendix E of the Class EA (Hydro One, 2016), and in accordance with applicable legislative requirements.
- Development of environmental enhancement or compensation measures to offset the unavoidable effects of construction and operation where such effects exist and where practical.

Based on the Project design and implementation of the proposed mitigation measures, no “significant” adverse net effects (e.g., effects following the implementation of mitigation) are anticipated. The following subsections detail the effects assessment and identify avoidance, mitigation and/or compensation commitments required for the proposed project.

7.1 Agricultural Resources

Agriculture is a predominant land use within southwestern Ontario and is an important component of the regional economy. The majority of agricultural land use in southwestern Ontario is designated for production of cash crops and agricultural greenhouses (OMAFRA, 2020) as outlined in **Section 4.1**. The PSA is dominated by prime agricultural soils (Class 1-3). The preferred alternative will cross several agricultural property parcels and will have temporary and long-term effects on agricultural operations in the area. Potential effects from the Project include:

- Permanent loss of agricultural land for production of crops in the areas of new tower locations.
- Temporary loss of agricultural land for production of crops associated with construction activities in the ROW.
- Temporary soil compaction from construction vehicles.
- Potential for excavation activities to mix soil horizons, lowering the quality of soil or mixing of soil across agricultural properties.
- Potential disturbance to farm operations including planting and harvesting schedules, spraying and tilling activities.
- Removal of sections of agricultural hedgerows.
- Application of herbicides within the ROW with potential to spread into adjacent farm operations.
- Potential damage to field tile drains.
- Potential effects to adjacent livestock including stress, injury or loss from construction activities including use of implosive conductor splicing methods.
- Potential for transmission line interference with automated GPS guided farm equipment.

While some of the effects to agricultural operations will be long-term and result in net effects, many are temporary in nature and can be mitigated with diligent construction planning and implementation of mitigation measures during construction. No significant net effects to agricultural resources are anticipated. The following subsections outline the effects assessment for each potential agricultural effect and outline anticipated avoidance, mitigation and/or compensation strategies to be employed by Hydro One.

7.1.1 Loss of Agricultural Lands and Crops

The Project will result in temporary removal of planted/established crops and/or lands available for crop production to facilitate construction activities within the transmission line ROW. Also, some agricultural lands will be permanently lost as a result of project infrastructure (e.g., tower footing locations). All lands and crops lost will be compensated in accordance with Hydro One real estate practices as agreed upon with landowners during the property acquisition process. Additionally, the following mitigation measures are proposed for effects to agricultural lands and crops:

- Contact will be maintained with landowners and stakeholders regarding work schedules and other items of interest (e.g., access routes, minimizing disturbances to existing and planned farm operations, etc.).
- Where practical, construction and maintenance activities will be scheduled to avoid the growing season or sensitive times of year (e.g., extreme wet periods). To the extent practical, activities will be scheduled to occur during non-growing seasons or during frozen conditions.
- Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment.
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance.
- Towers will be located along fence/property lines where practical to minimize impeding on agricultural operations, to the extent practical.
- Existing farm lanes and other existing access routes will be used whenever possible. In the event farm lanes are absent, access will be focused along field edges, to the extent practical.
- Restoration measures, as informed by discussions with landowners, to cultivate or otherwise alleviate soil compaction on areas affected by construction, may be undertaken following the completion of construction and removal of temporary construction access, as necessary.

7.1.2 Soil Compaction

Project activities have potential to cause soil compaction through the use of heavy equipment. Compaction of soil may occur during both the construction and operation/maintenance phases of the Project. Soil compaction resulting from these activities is largely unavoidable and is anticipated to be temporary in nature. Measures to mitigate soil compaction include:

- Equipment with low bearing capacity will be used, where practical.
- Access will be located along existing farm lanes or field edges, where practical.
- Access roads, staging areas and tower and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment.
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance.
- Where practical, temporary access roads and work pads will be built in agricultural fields using mats, or geotextile and crushed rock, or equivalent means, which can be easily removed when construction is complete to allow for re-cultivation of the area.
- Restoration measures, as informed by discussions with landowners, to cultivate or otherwise alleviate soil compaction on areas affected by construction, may be undertaken following the completion of construction and removal of temporary construction access, as necessary.

7.1.3 Soil Mixing

Mixing of soil including soil horizons and movement of soil between property parcels is a potential effect of the Project. Excavations may be required for construction activities. Excavation has the potential to result in mixing of soil horizons, reducing the quality of surface topsoil for agricultural purposes. This effect is anticipated to be minimal and limited to areas of deep excavation (tower locations), but may be permanent. Additionally, movement of construction equipment through the ROW may cause migration of soils from one agricultural field to another. Mitigation measures to minimize topsoil and subsoil mixing will include:

- Helical pile foundations will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and involve less overall ground disturbance than augered concrete footing foundations.
- Stripping or excavation of soils will be minimized to the extent practical.

- Where soil stripping is required, topsoil and subsoils will be removed and stockpiled separately.
- Depths of soil being removed will be carefully monitored and minimized during stripping activities.
- Volume of topsoil and subsoil salvaged will be maximized, where practical.
- Soils will be stripped under generally dry conditions (not saturated), such that rutting, soil mixing, or other undesired ground disturbance is minimized to the extent practical.
- Vegetation, stone piles, fencing and deleterious materials will be removed prior to stripping.
- For backfilling operations, topsoil and subsoil will be replaced in reverse order of excavation to minimize the potential for additional mixing and maximizing future growing potential.
- Soil cover on exposed areas within agricultural areas will be discussed with the landowner, and if hydro seed application is used, will be limited to annual rye or similar, and will not contain any potential noxious weed species or invasive species.
- Equipment and vehicle inspections and cleaning will be conducted as required during construction, to minimize the potential for inadvertent transport of trace soils between contaminated and non-contaminated agricultural fields.
- Cleaning will be conducted using a risk-based approach, whereby vehicles and equipment that have come in contact with soils will be inspected and cleaned of dirt/debris/seeds.
- Cleaning will occur in a manner that ensures that runoff is contained and waste materials can be collected.

7.1.4 Disturbance to Farm Operations

Project activities will require construction and maintenance of the transmission line ROW. These activities inherently involve activities during times of the year typical to agricultural production activities. Effects to agricultural operations from construction and maintenance activities may include impediments to farm vehicle maneuverability or disruption to farm operations including planting and harvesting or tilling and spraying times of the year. Generally, disruption effects are anticipated to be temporary in nature and can be mitigated by:

- Where practical, the location of towers will be placed to minimize impacts to maneuverability of agricultural equipment (e.g., along lot lines or field boundaries).

- Contact will be maintained with affected landowners regarding work schedules and other items of interest (e.g., access routes, minimizing disturbances to farm operations, etc.).
- Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment.
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance.
- To the extent practical, construction and maintenance activities will be scheduled to avoid sensitive times of the year with regards to agricultural operations.
- Crossovers and feathering of constructed access roads will be implemented to allow for vehicular and equipment crossing, where practical.

7.1.5 Vegetation Removal

Construction and maintenance of the transmission line ROW will require removal of 2.78 ha of incompatible vegetation including trees typically found in hedgerows or windbreaks. Incompatible vegetation communities associated with the Project include the following:

- Fresh-Moist Shagbark Hickory Deciduous Forest (FODM9-4) – less than 0.001 ha
- White Elm Mineral Deciduous Swamp (SWDM4-2) – 0.49 ha.
- Deciduous Woodland (WOD) – 0.94 ha.
- Fencerow (TAGM5) – 1.35 ha.

Construction and maintenance activities may require mechanical removal of vegetation (tree felling) and/or application of herbicides to control noxious weeds. Effects from vegetation removal include potential for herbicide overspray and/or fragmentation of existing hedgerows and windbreak systems. Compensation measures will be employed to restore vegetated areas with compatible vegetation (bushes) where practical. Additional mitigation measures include:

- A project-specific Weed Control Plan will be developed for implementation during construction, and will incorporate feedback from landowners to the extent practical.
- The Project ROW will be monitored for establishment of weeds until the Project is completed.
- The Weed Control Plan will be managed by an Ontario Professional Agrologist.

- Vegetation that will not affect construction or line clearances will be retained, where possible.
- Hedgerows and windbreak areas impacted by construction will be replaced with compatible vegetation post-construction, in consultation with the landowner.
- Consult with Indigenous communities and private landowners to identify potential opportunities to facilitate pre-construction harvest of plant species of interest to Indigenous communities.
- Measures to address potential contamination of organic or Identity Preserved (IP) Crops.

Construction and maintenance activities have potential to utilize herbicides to control noxious weeds and/or vegetation. There is also potential for inadvertent movement of trace soils between agricultural fields. Chemical control methods have potential to overspray to adjacent crops and movement of soils has potential to transport undesirable soil types and compounds. It is recognized that some agricultural operations in the PSA are certified organic or produce Identity Preserved (IP) crops. Other agricultural operations are transitioning to organic/IP crop types. To minimize potential disruption or contamination to organic or IP agricultural operations the following mitigation measures will be implemented:

- Contact will be made with landowners to determine if organic or IP operations are present which may require additional considerations during construction planning.
- Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of trace soils.
- Cleaning will occur in a manner that ensures that runoff is contained and waste materials can be collected.
- Field crews will be informed if working in organic or IP croplands.
- Mitigation strategies will be discussed with landowners prior to construction and field crews will be informed of the required mitigation and monitored to ensure these strategies are properly implemented.

7.1.6 Damage to Field Tile Drains

The use of heavy equipment for construction and maintenance activities has potential to cause damage to agricultural tile drains. If damage to tile drains occurs as a result of construction or maintenance activities the tile will be repaired by a licensed tile drainage contractor in consultation with the affected landowner. To minimize potential

for tile drain damage the following mitigation measures will be implemented for the Project:

- Landowners will be consulted to determine existing field tile locations in support of avoidance/protection measures.
- Tile drains will be avoided and/or protected (e.g., tower locations, temporary construction access), to the extent practical.
- Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment.
- Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance.
- Temporary access roads and work pads will be built in tiled agricultural areas using mats, or geotextile and crushed rock, or equivalent means, to protect tile drains.
- Equipment with low bearing capacity will be used to minimize potential damage to tile drains, where practical.

7.1.7 Livestock Stress, Loss or Injury

Construction and maintenance activities are inherently loud and will occur in proximity to livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss. Some construction activities such as the potential use of implosive conductor splicing may scare or startle agricultural livestock. These effects are anticipated to be temporary in nature and of a relatively short duration. To minimize impacts to livestock the following mitigation measures will be implemented:

- Landowners will be informed in advance of upcoming work activities which may disturb or pose a risk to livestock, and consulted with respect to potential mitigation measures, such as moving or containing livestock, as necessary.
- Vehicle and equipment travel on agricultural lands will follow existing roads, trails and paths to the extent practical.
- Field crews will be informed about livestock in the vicinity of work areas to confirm they are aware of the need to secure gates, are cognizant of noise sensitivity controls, and to ensure clean-up of construction materials and debris at the end of each day to minimize potential livestock ingestion.
- If excavations cannot be closed immediately, exclusion fencing will be erected to protect livestock from entering.
- Vehicles/Equipment will be inspected and cleaned as necessary prior to entering onto designated lands to prevent the potential introduction of diseases.

- Existing gates and fences will be used as required. All fences and gates will be left in "as-found" condition following construction.
- Livestock access control gates and fencing will be installed during construction at roads and between fenced fields as necessary to prevent escape of livestock or movement of livestock into work areas.
- Equipment and machinery used on site will be maintained in good working condition with functioning mufflers.
- Prior to any use of implosive splicing, a Blasting Communication and Management Plan will be developed outlining proper storage, security, detonation, and notification requirements.
- Notify area residents, municipal authorities, police department, and other crews within 1.6 km about the use of implosive splicing, one week prior to the work commencing.
- Signs shall be posted on all roadways leading to a blasting area in accordance with government rules and regulations.
- Maintain safe distances of the blasting site from other employees, vehicles, equipment, structures, and fire hazard sources. Perform blasts during pre-determined times.

7.1.8 Electric and Magnetic Interference

Operation of the transmission line may produce low level electric and magnetic fields with potential to interfere with automated or GPS-guided agricultural equipment (e.g., auto-steer). Hydro One acknowledges the concerns raised as well as insistence by some farmers currently working fields below transmission lines, that localized issues have been observed beneath the transmission lines. While we do not anticipate effects to communication systems in farm equipment, Hydro One will work with concerned farmers to collect information on the systems of concern, and contact manufacturers of these systems to gain further insight into potential concerns and possible solutions if applicable. While obstructions such as buildings or trees are known to block reception of GPS signals, published studies assessing these concerns indicate that overhead power line conductors are too thin to cause appreciable screening.

7.2 Forestry Resources

As indicated in **Section 4.2**, there is no potential for the proposed Project to affect forestry resources; therefore; no potential effects have been identified for the proposed Project.

7.3 Archaeological Resources

As noted in **Section 4.3.1**, a Stage 1 Archaeology Assessment was completed by TMHC (2020). The Stage 1 Archaeological Assessment determined that the PSA for the preferred Route Alternative contains lands with potential to support archaeological resources. A Stage 2 Archaeological Assessment is required for the technically preferred Route Alternative, for all lands exhibiting archaeological potential that have not been previously assessed. Prior to construction, a Stage 2 Archaeological Assessment will be completed within the identified areas of archaeological potential along the new transmission line corridor in accordance with MHSTCI requirements. If the Stage 2 Archaeological Assessment identifies the need for further assessment, a Stage 3/4 Archaeological Assessment will occur as required and as outlined in the "Standards and Guidelines for Consultant Archaeologists", Ministry of Tourism, Culture and Sport (2011)." Copies of all Archaeological Assessment will be filed for acceptance with MHSTCI prior to construction.

In the event that archaeological material is encountered during construction, all activities with the potential to affect these materials will cease immediately and a licensed archaeologist will be engaged. Notification of such findings will be communicated to MHSTCI. In the event that human remains are encountered, Hydro One will immediately stop work in the area and notify local police, the coroner's office, MHSTCI and the Registrar of Cemeteries. In addition, all Anishnawbek and Haudenosaunee communities that have an interest in the Project and/or location will also be immediately contacted so that, in the event such resources or remains are Anishnawbek and Haudenosaunee in origin, protocols for handling such resources can be established immediately prior to the disturbance or removal of such from the property.

7.4 Cultural Heritage Resources

Based on the findings of the Cultural Heritage Existing Conditions Report, there is the potential for project-related works to adversely affect 28 known and/or potential built heritage resources within the study area for the preferred Route Alternative. No cultural heritage landscapes were identified in the study area associated with the preferred Route Alternative.

To minimize potential adverse effects to built heritage resources, work will be planned in a manner that avoids adverse effects to the identified potential built heritage resources to the extent practical. Where an identified built heritage resource cannot be feasibly avoided and will be directly impacted through destruction, alteration, or disruption,

Hydro One will undertake property specific Cultural Heritage Evaluation Reports (CHERs) and/or Heritage Impact Assessments (HIAs). The additional study will confirm the cultural heritage value or interest and heritage attributes of the impacted built heritage resource and identify all adverse effects. All evaluation and assessment will be in compliance with the Hydro One Cultural Heritage Identification and Evaluation Process and MHSCTI Standards and Guidelines.

7.5 Land Use and Communities

7.5.1 Business Operations

Project activities are required in areas of existing commercial operations such as those located in the community of Comber or adjacent to Highway 401 (e.g., truck stop areas). There is potential for disruption to the function and to the access of commercial operations during the construction phase of the Project; however, it is expected to be minimal and temporary in nature.

To minimize disruptions and/or impacts, contact will be maintained with commercial property owners during construction. Business access will be maintained at all times during construction, and in instances where access cannot be maintained, arrangements will be made for alternate access prior to construction activities starting and appropriate road signage will be provided. Access to construction areas will be carefully designed to avoid and minimize adverse effects. Advanced notice will be provided to nearby residences, farmers, landowners and commercial operations, the MTO, and emergency response services outlining the location of entry/exit points for the construction site (e.g., at the transmission line and Highway 401), as well as the schedule for construction work or construction related traffic in those areas. Road signage will also be created and installed to reflect this information.

7.5.2 Effects to Existing and Future Land Use Designations and Potential Future Development

The Project is within the County of Essex, Municipality of Lakeshore and Municipality of Chatham-Kent's OP designated areas. The outline of land use policies and OP acceptable uses and how the Project fits into provincial policy and local OPs is outlined in **Section 4.4.1**. Generally, OPs include support towards energy transmission and investment in southwestern Ontario. Specifically, the local OPs allow for the provision of opportunities to develop energy supply including electricity transmission facilities in all land use types. It is recognized that the proposed Project will cross multiple types of current and future land use designations, including agricultural lands, commercial lands and lands designated for future development. While transmission lines are largely

compatible with development, the location of a transmission line corridor will introduce certain restrictions to future uses within 2 m of the corridor.

Throughout the province, development (both residential and commercial/industrial) occurs around and adjacent to existing transmission line corridors and stations. Uses deemed to be compatible with overhead transmission lines are often approved within transmission line ROWs. Hydro One has existing departments and processes to review proposals for developments that are planned adjacent to or within transmission line ROWs, and facilitate compatible uses of these corridors. Typically, there are no restrictions placed on development or new construction outside of the transmission line ROW itself.

Where and when future development projects or initiatives are proposed to occur along or within the ROW for the new Chatham to Lakeshore transmission line, Hydro One will apply its existing processes to review and facilitate these future developments, including potential compatible uses within the transmission line ROW. In addition, Hydro One will work with local Municipalities to consider potential means of accommodating potential future development during design of the transmission line, within the property fabric traversed by the transmission line ROW.

7.5.3 Effects to Local Roads and Traffic

The proposed Project is located within a rural landscape, with Highway 401 serving as a key access route through southwestern Ontario. Construction activities have potential to cause disruption to Provincial highway traffic and to local traffic on municipal and county roads during construction phases of the proposed Project. Specifically, stringing of conductors across road and highways may require temporary road closures, rolling closures and/or detours. The presence of heavy equipment may also increase traffic and loads which may result in localized wear and tear on lower order roadways. Effects to road and highway traffic and roadways are expected to be minimal and temporary in nature. Potential disruption to airports/aerodromes and railway lines are not anticipated.

Temporary effects to roads and traffic are largely unavoidable. To mitigate potential impacts from construction activities, Hydro One will:

- Complete a pre and post-construction road survey to document impacts to local roads caused by heavy equipment and increased construction traffic during construction activities. Survey results will be shared with Municipal staff in advance of construction work commencing. Damage caused as a direct result of construction activities on the Chatham to Lakeshore project will be repaired upon completion of construction activities.

- The proposed Project will adhere to seasonal load restrictions.
- Where required, a Traffic Control Plan will be developed and shared with local municipalities, as necessary.
- Construction haul routes and schedules will be shared with local municipalities in advance of construction, as necessary.
- Construction traffic will access the construction area from the existing road network at specified construction access/egress locations.
- Common parking areas will be established for construction crews.
- To the extent practical, in an effort to avoid road closures and other disruptions during stringing, conductor stringing will utilize rider poles, boom-tipped riders, or other protective measures.
- If temporary road or highway closures (e.g., rolling closures) are required during stringing or other construction activities, the construction contractor will coordinate closely with the appropriate road authority to ensure that proper notice is provided and that required signage and traffic controls are utilized, and that the duration of any temporary closures will be minimized to the extent practical.
- Local advertisements (e.g., radio, newspaper, etc.) will be issued and road signage will be erected to provide notification / pre-construction information to area residents on timelines and construction routes, and potential detours, if required.
- Traffic control officers or flag persons will be assigned to assist with construction entry/exit, as necessary.

With the implementation of the mitigation measures described above, the proposed Project is not anticipated to have a long-term net effect on local roads and traffic.

7.5.4 Mud and Construction Debris

Construction activities may result in the accumulation of mud and construction debris on and adjacent to local roads in construction areas. These effects have the potential to migrate to areas outside of the construction zone.

Construction will be completed with general clean site policies enforced requiring pick-up and disposal of refuse and construction waste on a regular basis. Mud related to construction activities will be removed from local roads and access roads as necessary throughout construction. Mud mats will be installed (as needed) as a mechanism to reduce the transport of debris off-site. Vehicles and equipment will be washed and maintained at work areas as necessary. Formal cleanup and site

restoration (e.g., restoration planting and seeding) will further minimize this potential effect as construction progresses and is completed.

With the implementation of the mitigation measures described above, mud and construction debris generated by the proposed Project is not anticipated to have a long-term net effect.

7.5.5 Electric and Magnetic Fields (EMF)

EMF are invisible forces that surround electrical equipment, power cords, and wires that carry electricity. Although they are often referred to together as EMF, electric fields and magnetic fields are actually two distinct components of electricity. Hydro One is committed to meet safe EMF exposure levels for the proposed Project and EMF are taken into consideration during the design of any new electrical transmission project. This commitment ensures that both employees maintaining the infrastructure, as well as members of the public in the vicinity of transmission infrastructure are not exposed to elevated EMF levels.

EMFs are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly. Standards specifying limits on exposure to EMFs include those published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP, 2010) and by Institute of Electrical and Electronics Engineers (IEEE, 2005). Within the transmission line ROW, only the IEEE Standard provides guidance for directly below overhead transmission line conductors, accepting electric field strengths up to 10,000 volts per metre (V/m). For magnetic fields, ICNIRP (2010) specifies 2000 milligauss (mG) for general public exposure outside of transmission ROWs. The World Health Organization (WHO) has concluded that EMF exposures below the limits recommended in the ICNIRP/IEEE guidelines do not appear to have any known consequence on health.

Regarding research on EMF, Health Canada's conclusion is that there is no conclusive evidence of adverse effects caused by EMF exposure from power lines (Health Canada, 2016). Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at extremely low frequencies. Health Canada's Fact Sheet that addresses issues related to EMF is available in **Appendix D**.

EMF values from the proposed Project are expected to remain significantly below the general public exposure guidelines.

7.5.6 Noise and Vibration

Construction and maintenance activities have the potential to affect ambient noise and vibration levels. These effects, in turn, may create temporary nuisance or disturbance effects for local residents, land users and wildlife.

All work is expected to be completed using common construction methods. The noise and vibration associated with construction would most likely be a result of activities, such as general site grading, foundations work, construction traffic and implosive splicing. Each of the aforementioned activities require the use of various pieces of heavy equipment, such as bulldozers, front-end loaders, small trucks, backhoes, bobcats, dump trucks, compactors, concrete trucks and/or cranes. The movement or delivery and worker vehicles would also add to the noise levels during the construction period.

Noise and vibration effects are anticipated to be short-term, temporary and transient during the construction period. Specific to vibration, it is expected to be temporary in nature, occur only during specific activities (e.g., implosive splicing), and limited to the immediate vicinity of the construction work area. Indirect noise disturbance effects on wildlife during construction can include temporary declines in habitat occupancy, as well as changes to mobility and feeding habitat patterns. Mitigation measures to reduce potential nuisance effects resulting from noise and vibration include:

- Equipment and machinery used on site will be maintained in good working condition.
- Prior to any use of implosive splicing, a Blasting Communication and Management Plan will be developed outlining proper storage, security, detonation, and notification requirements.
- Area residents, municipal authorities, police department, and other crews within 1.6 km will be notified about the use of implosive splicing one week prior to the work commencing.
- Signs shall be posted on all roadways leading to a blasting area in accordance with government rules and regulations.
- A safe distance of the blasting site will be maintained from other employees, vehicles, equipment, structures, and fire hazard sources. Blasts will be performed during pre-determined times and outside of electrical storms or adverse weather conditions.

Construction activities will also conform to local noise control by-laws (Municipality of Lakeshore Noise By-Law 106-2007 and Municipality of Chatham-Kent Noise By-Law

178-2017). Noise By-Law exemptions will be sought if work is required outside of the hours specified in the aforementioned by-laws (e.g. overnight).

Noise sources and vibration levels from maintenance activities after construction would be variable, are expected to be limited to a short duration, and would occur periodically over the life of the proposed Project. With exception of periodic maintenance activities (e.g., inspection from ground-based vehicles and vegetation maintenance, etc.), no additional noise (or vibration) sources are expected during maintenance and operation of the proposed Project. Therefore, no additional mitigation is required during the maintenance and operation of the proposed project.

With the implementation of the mitigation measures described above, noise sources and vibration levels generated by the proposed Project are not anticipated to have a long-term net effect.

7.5.7 Community Benefits Initiative

While Hydro One always strives to avoid and mitigate potential effects to the socio-economic environment, and restore areas that are affected by the Project, Hydro One acknowledges that there may be net effects. Because these net effects cannot be further avoided or mitigated, they are typically compensated for by undertaking positive activities. In an effort to offset net effects, Hydro One is committed to working with municipalities in the area to identify opportunities that could enhance and contribute to the broader landscape, recognizing that community benefits can be varied and diverse in nature. Hydro One will continue to engage and work with project stakeholders to identify and implement such opportunities. To date, a Community Support Agreement has been signed with the Municipality of Chatham-Kent that provides the Municipality with direct community support as part of all of Hydro One's transmission infrastructure expansion in the region. Hydro One continues to engage with the Municipality of Lakeshore to identify and implement community investment opportunities.

7.6 Mineral and Petroleum Resources

7.6.1 Aggregate Extraction

As discussed in **Section 4.5**, there are no areas within the PSA used for the extraction of aggregate; therefore; no potential effects have been identified for the proposed Project.

7.6.2 Petroleum Resources

Although the proposed project falls within portions of a petroleum pool resource area, the proposed Project is not anticipated to have a temporary and/or permanent effect on petroleum pools in proximity to the proposed Project.

7.7 Natural Environment Resources

7.7.1 Physical Environment

7.7.1.1 Physiography and Geology

The existing physiography, topography and geology is expected to remain as is following the construction of the proposed Project. Therefore, no net effects on the physical environment have been identified for the proposed Project.

7.7.1.2 Spills

During construction and maintenance activities, there is the possibility of spills from the release of oils and fuels from construction/maintenance vehicles and equipment. There are a number of mitigation measures to reduce the risk of spills and to minimize the effect in the unlikely event that a spill occurs.

An Emergency Response Plan and spill cleanup equipment will be maintained and readily accessible at all times during construction and maintenance activities. Refueling of vehicles and equipment will be completed in designated locations, a minimum of 30 m away from sensitive receptors (e.g. source water protection areas, watercourse, wetlands, etc.) while utilizing emergency spill trays. In the event refueling is required outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized. Fuelling operations will require the operator to visually observe the fuelling process at all times.

There are a number of additional mitigation measures to reduce the risk of spills and to minimize the effect in the unlikely event that a spill occurs. These measures include the following:

- Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted.
- Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines.

- Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas.
- Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures.
- Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]) will be avoided or limited, where practical.
- ERCA, the LTVCA and/or the Municipality of Lakeshore, County of Essex and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas.

Should a spill occur, the MECP Spills Action Centre (SAC) will be notified of all reportable spills and containment and remediation should occur as soon as possible.

7.7.1.3 Waste Generation

Construction waste would be generated by the proposed Project, and would need to be disposed of in regional landfills and recycling facilities. Waste produced during the construction period may include non-hazardous wastes (packaging, spent lubricating cartridges, coffee cups, etc.) and hazardous wastes (pneumatic oils from hydraulic systems, gasoline and other lubricants/oils).

Hazardous waste (solid and liquid) should be transported by MECP licensed waste haulers to MECP registered disposal sites. Good management practices are recommended to prevent spills and contamination during construction (see above). Any temporary waste on-site should include the use of secured containers in designated sites away from sensitive areas and removed from the site on an ongoing basis. With respect to concrete wash water, all water from concrete chute washing activities will be contained in leak proof containers or in an approved settling pond off site. Waste produced will be minimized, segregated, and recycled where possible, and all testing, handling, storage, transport and disposal of waste will be completed in accordance with all applicable legislation.

With the implementation of the mitigation measures described above, waste generated by the proposed Project is not anticipated to have a long-term net effect.

7.7.1.4 Excess Materials Management

Project activities have the potential to produce excess materials during construction and maintenance phases. Excess materials can include topsoil and subsoil from

excavation or stripping activities. All efforts will be made to reuse soils onsite where practical and feasible; however, excess materials that cannot be managed onsite will be handled in accordance with O.Reg. 406/19.

Soil testing to meet the requirements of O.Reg. 406/19 will be completed, if necessary, during geotechnical investigations prior to or during construction. If excess material is deemed suitable, Hydro One will work with landowners to explore opportunities for beneficial reuse within the property parcel. Any excess soil required to leave the site will be taken to an approved facility licensed to accept excess soil based on its characterization or other off-site location that can demonstrate beneficial reuse.

7.7.2 Atmospheric Environment

7.7.2.1 Climate Change

It is important to note that the proposed Project is not a power generation project and its operation would not emit greenhouse gases. However, there would be temporary emission of fossil fuels from the vehicles and equipment used during construction and maintenance activities associated with the proposed Project. Idling of construction vehicles and equipment will be kept to a minimum and GPS or other navigational tools will be utilized to optimize routing to reduce fossil fuel emissions. The emissions directly related to the construction and maintenance of this project would be minimal.

Hydro One recognizes that a changing climate is likely to result in an increase of unusual weather patterns and severe weather events, which could potentially damage or adversely affect infrastructure and other public facilities. The infrastructure being planned for this proposed Project will be engineered to adequately withstand the effects of climate change.

7.7.2.2 Air Quality

Construction activities have the potential to create temporary, localized effects on air quality in the immediate vicinity of the proposed Project. Emissions from construction activities are primarily comprised of fugitive dust and combustion products from the movement and operation of construction equipment and vehicles. These emissions, in turn, may create a nuisance or disturbance effect for local residents and land users during the construction phase.

During construction, equipment and machinery will be maintained in good working condition to minimize excessive exhaust. Idling of construction vehicles and equipment will be kept to a minimum and GPSs will be installed in vehicles to optimize routing to

reduce fossil fuel emissions. Additional mitigation measures to reduce nuisance effects of dust and air emissions during construction include the following:

- Vehicles will not exceed posted speed limits.
- Minimize and stabilize vehicular traffic and exposed soils in high traffic areas with suitable cover material.
- Avoid excavation and other construction activities that have the potential to release airborne particulates during windy and prolonged dry periods, to the extent practical.
- If excavation or other construction activities with a potential to release airborne particulates must occur during windy conditions, dust controls will be utilized.
- Effective dust suppression techniques, such as on-site watering, will be implemented as necessary. Non-chloride dust suppressants will be used.
- Cover or otherwise contain loose construction materials with the potential to release airborne particulates during transport, installation or removal.
- Disturbed areas will be restored as soon as practical to minimize duration of soil exposure.

Significant emissions from maintenance activities during operation will be variable, are expected to be short-term in duration, and would occur periodically over the life of the proposed Project. Nuisance effects posed by these temporary activities are expected to be negligible and would not result in noticeable or long-term changes to local air quality.

7.7.3 Noise and Vibration

There is the potential for increased noise and vibration during the construction and maintenance activities; however, as noted in **Section 7.5.6**, they are anticipated to be short-term, temporary, transient and intermittent. This is because the proposed Project is linear and activities would be planned sequentially. The duration of construction and maintenance activities at any one location along the transmission line corridor would be limited and intermittent; thereby, reducing the amount of time of noise and vibration at any given area. **Section 7.5.6** provides additional information.

Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance than augered concrete footing foundations.

7.7.4 Surface Water Resources

During construction and certain maintenance activities, the potential effects of the proposed Project on surface water include changes in surface water quantity or quality conditions in nearby municipal drains or watercourses due to site preparation, earthworks, discharge of construction water, and operation of vehicles and equipment.

7.7.4.1 Potential Effects on Surface Water Quantity

Project activities during the construction phase that have the potential to influence surface water quantity conditions in nearby municipal drains and watercourses include:

- Site preparation for the new transmission towers, construction of temporary access roads and temporary laydown areas.
- Construction adjacent to municipal drains, watercourses and in/adjacent to wetland areas.
- Discharge of construction water from dewatering activities.

Site preparation, including activities such as removal of vegetation, locates/daylighting of potential existing buried utilities, and construction of temporary access roads would be required in support of transmission tower installation. Vegetation removals during construction have the potential to result in a temporary increase in overland flows, potential organic and sediment loading to nearby municipal drains and water courses, as well as potential water temperature increases in instances where vegetation removal adjacent to watercourses is required. Similarly, vehicle and construction equipment have the potential to create temporary rutting in soils which have the potential to result in localized ponding and/or channelization leading to additional erosion of soils.

To avoid or minimize the potential adverse effects related to vegetation removals and soil rutting on surface water quantity, the following mitigation measures would be implemented:

- Where practical, activities with potential to cause rutting, ponding/channelization or erosion will be planned during stable and dry ground conditions.
- Existing watercourse crossings and constructed access routes will be utilized to the extent practical
- The use of ESC measures (e.g., erosion blankets/coir mats, silt socks, etc.) will be utilized, where necessary.

- Where required, temporary crossing structures will be installed for construction access at watercourses and other low lying areas, and will be removed upon completion of construction.
- The use of constructed access (e.g., mats or geotextile/crushed stone) roads will be utilized and will be monitored to ensure there is no surface ponding to minimize rutting and pooling of water.
- Vegetation removals will be minimized to the extent practical. Compatible vegetation will be retained within riparian areas adjacent to watercourses.
- Machine clearing and grubbing will be restricted near sensitive environmental areas; hand clearing will be required within watercourse banks/riparian areas or in wetlands.
- Replant with compatible vegetation as required.
- Where erosion is of a concern, exposed soils in previously vegetated areas will be re-vegetated as practical, or have other erosion or sedimentation measures applied as necessary.
- Where applicable and possible, vegetative buffers will be maintained to protect receptors.
- Construction access and laydown areas will be restored following completion of construction.
- Work will be staged to minimize the extent of exposed and disturbed areas at any given time.
- Cleared vegetation will be relocated to designated areas away from water features.
- Topsoil will be stockpiled in designated areas away from water features and will utilize containment measures such as erosion and sediment control as appropriate.
- Disturbed areas will be stabilized and restored as soon as practical.
- Equipment operation adjacent to water features will be minimized, where possible.
- Works adjacent or around water feature banks will be conducted during appropriate conditions and times of the year (e.g., dry or frozen conditions), to the extent practical.
- Vegetation buffers along water feature banks will be maintained to the extent practical, and restored.
- ERCA and LTVCA will be consulted (specifically for ESC measures within regulated areas) during detail design.

With the implementation of the mitigation measures described above, vegetation removals and temporary soil rutting are not anticipated to have a long-term net effect on surface water quantity in the receiving municipal drains/watercourses.

The proposed project is predominantly located within agricultural lands. It is anticipated that the proposed Project will utilize existing access roads wherever practical; the number and location of access roads would be established during the detailed design phase. Access roads will be chosen where possible to avoid crossing municipal drains or watercourses. In the event the proposed Project requires the construction of new access roads, their construction has the potential to disrupt sheet flow of surface waters over agricultural lands.

To avoid or minimize the potential adverse effects associated with the installation of access roads on surface water quantity, the following mitigation measures would be implemented:

- Existing, natural drainage patterns and flows will be identified and maintained to the extent practical.
- Equalization culverts or similar methods may be used in construction of access roads.
- Existing watercourse crossings and constructed access routes will be utilized to the extent practical.
- Construction and access planning will take into account tiles drains to ensure continued function of drainage tiles to the extent practical. Discussions with landowners will be held where further information is needed to avoid adverse effects.
- The use of ESC measures (e.g., erosion blankets/coir mats, silt socks, etc.) will be utilized, where necessary.

With the implementation of the mitigation measures described above, installation of access roads is not anticipated to have a long-term net effect on surface water quantity in the receiving municipal drains/watercourses.

Site preparation would also be required for temporary laydown areas, and conductor “pulling pads”; the locations of which have not been established. Where practical, these areas would be placed away from sensitive areas (e.g., municipal drains, watercourses, wetlands, woodlots) to the extent feasible.

During construction, it is expected that changes to streamflow and water levels in the municipal drains and watercourses downgradient of disturbed lands would reflect the proportion of disturbed area relative to the total watercourse catchment area. In the

case of adjacent wetlands, where construction dewatering associated with nearby transmission tower pads and foundations may be undertaken; the zones of influence of this dewatering are expected to be measured in the range of several to tens of metres radius for a brief period of time. As a result, changes to water levels in adjacent wetlands would be ephemeral and negligible in quantity.

Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations. Additionally, based on the current geotechnical data and the preliminary helical pile designs, pile embedment depths are anticipated to be relatively shallow (9-12 m below ground surface) vs other foundation types (e.g., driven pile), and are not anticipated to be installed to bedrock depths. Given our current understanding of site conditions, and the helical pile design and installation methodology being proposed for this project and the findings of the geotechnical study, it is not currently anticipated that an EASR or PTTW will be required during construction as any construction-related water taking or discharge is expected to be negligible. As such, major sources of water taking/construction de-watering are not anticipated on the Project.

If, during detailed design and/or construction, it is identified that dewatering activities over 50,000 L/day may be required, Hydro One commits to proactively preparing and submitting to the Ministry a PTTW application or EASR registration.

The most likely source for a potential need to manage water during construction involves potential damage or disruption to agricultural field tile drains during periods when they are conveying water; these features are generally ubiquitous in agricultural fields across the Project area, and commitments made to manage and mitigate effects to agricultural tile drainage are currently described in **Section 7.1.6** of the ESR, and any water managed in this manner during construction will be returned to the same area/drain network that it originated from. The discharge of construction water from dewatering activities may result in slight increases to surface water levels of aquatic features; however, much of the surface water discharged onto land could infiltrate through permeable agricultural lands.

To avoid or minimize the potential adverse effects of dewatering activities on surface water quantity, the following mitigation measures would be implemented:

- Construction water will be discharged in compliance with permits and/or approvals from MECP and the Municipality of Lakeshore, County of Essex and Municipality of Chatham-Kent, as required.
- A construction water management plan will be developed prior to construction and implemented appropriately (e.g., passing discharge water through a filter bag or drum before discharge to the environment to capture sediment and slow down the water velocity, etc.), as required.
- Where possible, opportunities to maximize retention times and reduce surface flow velocities will be executed.

With the implementation of the preliminary designs and mitigation measures described above, and the short duration of the dewatering activities, these activities are not anticipated to have a long-term net effect on surface water quantity in the receiving municipal drains/watercourses.

There is potential for project infrastructure (access roads, towers) to be located within ERCA/LTVCA regulated lands with the potential to result in impacts to natural hazard lands, wetlands and/or areas of interference. The location of project infrastructure will be determined during detail design. Net effects on surface water quantity in association with project infrastructure is addressed in the text above.

To avoid or minimize potential adverse effects of project infrastructure within ERCA/LTVCA regulated lands on surface water quantity, the following mitigation measures would be implemented:

- ERCA and LTVCA will be consulted during detailed design and construction planning.
- Design of the transmission line will avoid or minimize the extent to which transmission towers are located within regulated areas, to the extent practical.
- If necessary, a Permit for Development, Interference with Wetlands and Alternation to Shorelines and Watercourses will be obtained through the applicable Conservation Authority (ERCA and LTVCA) prior to construction.
- Construction work (e.g., tower construction) within Regulated Areas will be conducted during stable (frozen/dry) ground conditions, to the extent practical or isolated with appropriate sediment and erosion control and other environmental mitigation measures.
- Temporary construction access through regulated areas may involve additional ESC or other environmental mitigation measures.

At the end of construction, the work areas (i.e., tower foundation areas, access roads, pulling pads and temporary laydown areas) will be seeded/re-vegetate and the

temporary laydown areas would be restored to their original condition to the extent feasible. The construction phase of the proposed Project is not anticipated to have a long-term net effect on surface water quantity.

Maintenance activities will be variable, are expected to be short-term in duration, and would occur periodically over the life of the proposed Project. Though short-term in duration, maintenance activities have the potential to result in soil rutting, disrupt sheet flow of surface water over agricultural lands, increase overland flow and mobilization/transportation of organic debris and sediment loading in nearby municipal drains and watercourses.

To avoid or minimize the potential adverse effects of maintenance activities on surface water quantity, the implementation of the mitigation measures outlined above for construction related activities (where applicable) would be implemented during maintenance activities. As a result, maintenance activities are not anticipated to have a long-term net effect on surface water quantity.

7.7.4.2 Potential Effects on Surface Water Quality

Project activities during the construction phase that have the potential to influence surface water quality conditions in nearby aquatic features (e.g., municipal drains, watercourses) include:

- Site preparation for the new transmission towers, construction of access roads, and temporary laydown areas.
- Earthworks associated with the construction of access roads, temporary laydown areas, puller pads, etc.
- Discharge of construction water from dewatering activities to nearby lands.
- Operation of vehicles and equipment throughout the construction phase.

Site preparation would consist of removal of vegetation, rough grading, and stockpiling of materials. These activities would result in the temporary exposure and disturbance of soil with the potential for wind and water erosion and the transport of sediment to aquatic features. Site preparation would also result in the temporary accumulation of cleared vegetation with the potential for mobilization of organic debris and its transport to aquatic features during runoff events. Earthworks would consist of excavation, fill, and stockpiling activities, and would similarly result in disturbance and exposure of soil to wind and water erosion and the transport of sediment to aquatic features. It is expected that the transmission right-of-way associated with the proposed Project will be restored to similar grades at the various areas of disturbance.

Earthworks will also be required for the construction of temporary access roads, temporary laydown areas, and pulling pads within the various disturbed work areas along the transmission line ROW. Earthworks may also be required for the installation of temporary culverts, including excavation, preparation of culvert pipe bedding, culvert pipe placement, and backfilling. Stockpiling of soil and aggregate materials will also be required in support of earthworks.

Earthworks for the construction of temporary laydown areas, pulling pads, etc., would similarly consist of excavation, fill and sub-grade preparation, followed by the installation of crushed stone otop of geotextile fabric. Soil and aggregate materials would be stockpiled.

Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations. Additionally, based on the current geotechnical data and the preliminary helical pile designs, pile embedment depths are anticipated to be relatively shallow (9-12 m below ground surface) vs other foundation types (e.g., driven pile), and are not anticipated to be installed to bedrock depths. Given our current understanding of site conditions, and the helical pile design and installation methodology being proposed for this Project and the findings of the geotechnical study, it is not currently anticipated that an EASR or PTTW will be required during construction as any construction-related water taking or discharge is expected to be negligible. As such, major sources of water taking/construction de-watering are not anticipated on the Project.

If, during detailed design and/or construction, it is identified that dewatering activities over 50,000 L/day may be required, Hydro One commits to proactively preparing and submitting to the Ministry a PTTW application or EASR registration.

The most likely source for a potential need to manage water during construction involves potential damage or disruption to agricultural field tile drains during periods when they are conveying water; these features are generally ubiquitous in agricultural fields across the Project area, and commitments made to manage and mitigate effects to agricultural tile drainage are currently described in **Section 7.1.6** of the ESR, and any water managed in this manner during construction will be returned to the same area/drain network that it originated from.

The measures outlined above to avoid or minimize potential impacts the proposed Project may have on surface water quantity will also serve to avoid or minimize the potential adverse effects of site preparation and other earthwork activities on surface water quality in aquatic features.

In addition, and in support of site preparation and earthwork activities, the following ESC measures will be implemented as a mechanism to avoid and minimize impacts on surface water quality:

- An ESC plan will be developed prior to construction and ESC measures will be identified and implemented as required. Measures such as erosion blankets/coir mats, silt socks, etc., or similar, are expected to form part of the ESC plan.
- Areas with high erosion potential will be identified and avoided, where possible.
- Construction activities near sensitive features or areas may be suspended during extreme wet weather events, and crews will review and consider weather forecasts in their planning of such work.
- ESC installations will only be removed after disturbed areas are restored, accumulated sediment has been disposed, and construction activities in the vicinity are completed.
- In an effort to reduce potential erosion, mechanical or vegetation erosion control measures will be employed, such as buffer strips, erosion control blankets and sedimentation fences, as required;
- Equipment operation on slopes adjacent to streams will be minimized to the extent practical.
- Disturbed areas near water features or sensitive environmental areas will be restored as soon as practical.
- ESC measures will be regularly inspected, including after each significant [>10 mm] rainfall event, and repaired where necessary to maintain functionality.

With the implementation of the mitigation measures described above, and the limited duration of the construction works, site preparation and earthwork activities are not anticipated to have long-term net effects on surface water quality conditions in aquatic features.

The removal and discharge of construction water may be required as a result of dewatering activities in holes or trenches related to foundations of transmission towers. The measures outlined above to avoid or minimize discharge of construction water on surface water quantity will also serve to avoid or minimize the potential adverse effects on surface water quality. As a result, dewatering activities are not anticipated to have long-term net effects on surface water quality in the receiving aquatic features.

7.7.5 Source Water Protection

- During construction and maintenance activities, there is the possibility of contamination of surface water through spills or leaks from the release of oils and fuels from vehicles and equipment. There are a number of mitigation measures to reduce the risk of contamination of source water in the unlikely event that a spill or leak occurs. These measures include the following:

Maintain an Emergency Response Plan and have readily accessible cleanup materials and equipment at all times during construction and maintenance activities.

Remediate spills/leaks as soon as possible upon identification, and notify the MECP SAC as required.

Refuelling will be conducted in designated areas with appropriate protective measures and equipment available.

Refuelling areas will be located outside of SWP areas to the extent practical. If refuelling must occur within SWP areas, additional protective measures (emergency spill trays, etc.) may be employed as necessary.

- Construction and maintenance activities also have the potential for impacts to designated surface water Intake and Wellhead Protection Areas and Significant Groundwater Recharge Areas. Similar to the above, there are a number of project specific mitigation measures which will be implemented as a mechanism to reduce potential impacts. These measures include the following:

Identify and protect surface water intake protection zones during construction and maintenance activities, as required.

Comply with relevant legislation and policies such as: Clean Water Act, Provincial Policy Statement, Official Plans, and ERCA/LTVCA Source Water Protection Plans, where applicable.

Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; and Intake Protection Zones [IPZs]) will be avoided, where practical.

Consult with ERCA and the LTVCA and/or the Municipality of Lakeshore/County of Essex and Municipality of Chatham-Kent during detailed design and construction planning on project specific mitigation measures.

- As outlined in **Section 4.6.5**, both SPAs that fall within the PSA have policies related to fuel handling and storage. Both SPAs also identify the requirement for development of a Risk Management Plan if significant threats to SWP are identified based on project activities. Based on the scope of work for

construction, operation and maintenance of the Project, significant threats to SWP have not been identified. For example, handling and storage of fuel is anticipated to be limited to the amount needed for running equipment and bulk fuel storage tanks are not required. Project specific mitigation measures and best management practices have been detailed, above, to further minimize the potential threat within SWP areas.

7.7.6 Groundwater Resources

During construction, the potential effects of the proposed Project on groundwater include changes in water quality due to disturbance of pre-existing soil contamination which may exist, changes to existing groundwater quality or quantity due to excavation and construction dewatering, and changes in groundwater flow regime due to the installation of foundations for transmission line towers. It is not expected that there would be any effects on groundwater during the maintenance and operation phase.

Changes in groundwater due to project activities during construction could also affect the amount of groundwater discharged to nearby watercourses and natural environmental features (e.g. vegetation, fish habitat, wetlands, etc.).

Effects on groundwater due to dewatering would be ephemeral and have a zone of influence measured in the range of several tens of metres. This effect would be limited to the construction phase only.

7.7.6.1 Potential Effects on Groundwater Quality

Contaminated soil and groundwater containment and disposal measures would be implemented according to the pertinent regulations, as required.

No adverse effects have been identified for changes in groundwater quality due to the construction of the proposed Project. If changes in groundwater quality were to occur, it is anticipated that groundwater quality would return to baseline conditions following the implementation of mitigation measures previously outlined above, such as containment and removal of contaminated soils.

7.7.6.2 Potential Effects on Groundwater Quantity

Groundwater base flow (quantity) is seasonally important to nearby waterbodies and natural environment features, including vegetation, fish and aquatic habitat. The effects on groundwater quantity associated with construction of transmission towers are anticipated to be local to the hole or excavation. Foundation excavations would be backfilled in a timely manner. As such, it is predicted that there would be limited to no

temporal effects on groundwater levels and quantity as a result of construction activities.

Construction is occurring predominantly within active agricultural lands. It is anticipated that discharge would be to nearby agricultural lands. There would be some runoff from this discharge and some infiltration.

Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations. Additionally, based on the current geotechnical data and the preliminary helical pile designs, pile embedment depths are anticipated to be relatively shallow (9-12 m below ground surface) vs other foundation types (e.g., driven pile), and are not anticipated to be installed to bedrock depths. Given our current understanding of site conditions, and the helical pile design and installation methodology being proposed for this Project and the findings of the geotechnical study, it is not currently anticipated that an EASR or PTTW will be required during construction as any construction-related water taking or discharge is expected to be negligible. As such, major sources of water taking/construction de-watering are not anticipated on the Project.

Though currently not anticipated, if detailed design suggests that construction dewatering of transmission tower foundation holes/excavations is required at a rate greater than 50,000 L/day, a PTTW or EASR would be obtained from the MECP. The proposed Project would comply with applicable guidelines and legislation, including Provincial Water Quality Objectives, Ontario Drinking Water Standards, Objectives and Guidelines and Ontario Regulation (O. Reg.) 153/04. Adequate dewatering and discharge plans would be developed prior to construction, and collected water would be contained and tested prior to disposal, if required.

It is anticipated that the municipal wells and local private water wells within the area will not be significantly affected as a result of dewatering activities associated with transmission line tower foundation holes or excavations. The zone of influence of such dewatering activities is very localized, and the majority of water wells exploit aquifer(s) that are at a much greater depth than the proposed excavations (i.e. bedrock aquifers; **Section 4.6.4**).

The effects of any dewatering activities during construction are expected to be temporary, and groundwater levels and flow are expected to return to pre-construction conditions following the construction period. The nature of the subsurface soils, the existence of a high water table regime, and the small zone of influence to be created by construction dewatering is expected to result in a recovery to the pre-disturbance state in a matter of several days.

7.7.7 Designated or Special Natural Areas

7.7.7.1 East Lake St. Clair Important Bird Area

The proposed project overlaps with portions of the Eastern Lake St. Clair Important Bird Area (IBA) which is identified as a critical feeding, resting and staging area for several species. The majority of the aforementioned IBA overlap contains an existing 115 kV idle transmission line corridor which will be repurposed to accommodate the proposed Project. Although IBAs are not legally protected in their own right, they promote conservation and stewardship of migratory stopover and staging habitat for water birds along the eastern shoreline of Lake St. Clair, while ensuring recreational practices and hunting traditions are maintained.

While the IBA was identified as a mid-point between two migratory flyways (the Atlantic and Mississippi), it is noted that the migration routes differ among species. Telemetry data collected in support of scientific studies track the trajectory of some individual birds in Ontario during spring and fall migration. Through review of available data, flight paths for water bird species commonly associated with the IBA do not appear to extend through the eastern extents of the IBA that overlap with the proposed Project. While suitable habitat conditions for water birds within the IBA were not identified within the transmission ROW associated within the proposed Project, potential suitable habitat does exist adjacent to the transmission ROW. As a result, there is potential for birds to collide with the transmission line during the construction and operational phases associated with the proposed Project.

There are a number of mitigation measures to reduce the risk of bird collisions. These measures include the following:

- Reuse of the existing 115 kV idle transmission line corridor within the IBA.
- Incorporate visual mitigation measures (e.g., bird diverters and/or similar measures) during detailed design as a mechanism to improve visibility of the transmission line within the IBA.
- Towers and access roads will be located to avoid sensitive habitats, where practical.

- Vegetation removal will be completed outside of the migratory bird breeding season (i.e., April 5 to August 31, zone C1 as provided by ECCC 2018), where practical.
- In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified terrestrial/avian biologist will be completed.

7.7.7.2 Significant Woodlands

Significant woodlands were determined to occur in six locations within the PSA associated with the preferred Route Alternative based on a combination of the municipalities of Lakeshore and of Chatham-Kent Official Plan schedules, the 2020 field survey results, and the municipalities of Lakeshore and Chatham-Kent Official Plan criteria for woodland significance. Each of the significant woodland units were considered common or secure by the province of Ontario. Only three of the six significant woodlands fall within the transmission line ROW for the proposed Project; one of which is associated with the existing 115kV idle transmission line corridor. Significant woodlands will be taken into account during project planning as a mechanism to minimize adverse effects.

Vegetation clearing will be required for the portion of the significant woodlands within the new transmission line ROW to ensure the safe and reliable operation of the transmission line. These removals will be limited to the extent practical and will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible (for an aggregate total of 2.78 ha) with transmission line corridors, to vegetation that is compatible (e.g. shrubs, meadow species). Hydro One will undertake a Biodiversity Initiative to offset habitat loss or transition (e.g., from trees to compatible vegetation communities) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.

Woodlands play an important role with Indigenous Communities as they support elements required for continued practice of Indigenous culture and rights (e.g. hunting, trapping, plant harvesting, ceremony, etc.). Although vegetation clearing for the new transmission line will not represent a complete removal of vegetation on the new ROW, it will result in changes in vegetation composition within an existing woodland community (e.g., transition from taller tree/large shrub communities to shorter-growing forb and shrub communities). Such changes have the potential to produce edge effects (positive, negative and/or neutral), as well as result in habitat fragmentation (e.g. dividing an existing woodland community). Changes in habitat composition has the potential to result in changes in habitat quality for some flora and fauna, while

fragmentation of woodlands has the potential to result in a decline in species occupancy. In recognition of the aforementioned, minor refinements to the proposed Project alignment have been made, where feasible and reasonable within the existing property fabric traversed by the transmission line ROW, since the draft ESR review period which have reduced the Project's level of adverse effects to significant woodlands. The refinements minimize the extent of newly created edges and limit the amount of incompatible vegetation clearing required within significant woodlands, while retaining larger patches of intact woodlands.

In addition to the above, there are a number of mitigation measures to reduce the proposed projects impact on significant woodlands. These measures include the following:

- Minimize the extent of vegetation clearing required for the Project.
- Incompatible vegetation will be salvaged or felled as appropriate.
- Refueling of vehicles and/or equipment will occur within a designated refuelling area located away from significant woodlands.
- Tree removals and other vegetation clearing will be completed outside of the migratory bird breeding season (i.e., April 5 through August 31, nesting zone C1; ECCC, 2018) and the bat active season (i.e. April 1 through September 30), where practical.
- Where vegetation clearing is required during the breeding bird season, nest searches will be conducted by a qualified person in accordance with applicable provincial and federal requirements.
- In the event significant woodlands with the potential to support bats require tree removals, bat acoustic surveys will be completed during the month of June in accordance with agency approved protocols to determine SAR bat habitat use (or lack thereof). Where acoustic surveys confirm SAR bat habitat use, the MECP will be consulted regarding permitting/approvals next steps under the ESA. As per the comments received from the MECP on the draft ESR, adherence to the timing windows for SAR bats and Eastern Foxsnake are sufficient mitigation measures to avoid permitting under *Endangered Species Act*.
- Snags (dead standing trees) and cavity trees that do not pose a risk to the operation of the transmission line will be identified and retained.

Hydro One further commits to supporting Indigenous Communities with land use planning initiatives, including traditional plant rehabilitation efforts.

7.7.7.3 Conservation Areas

There are no Conservation Areas located within the PSA associated with the preferred alternative; therefore, no effects on Conservation Areas as a result of the proposed Project are anticipated.

7.7.7.4 Areas of Natural and Scientific Interest

There are no ANSI's located within the PSA associated with the preferred alternative; therefore, no effects on ANSIs as a result of the proposed Project are anticipated.

7.7.7.5 Valleylands

There are no valleylands located PSA associated with the preferred alternative; therefore, no effects on valleylands as a result of the proposed Project are anticipated.

7.7.7.6 Provincially Significant Wetlands

While no Provincially Significant Wetlands (PSW) were identified within the PSA in current land use planning documents and LIO data, the five wetland units observed during ELC investigations may meet criteria for significance under the Natural Heritage Reference Manual (NHRM; 2010) and Ontario Wetland Evaluation system (OWES; MNRF, 2002) based on their potential to support SAR habitat (e.g., SAR bats, Eastern Foxsnake) and/or their potential to be complexed in other wetland units located outside of the PSA (e.g., the Tilbury North PSW Complex).

As described in Section 6.3.1 of the NHRM (2010) and under Section 6.3.3 of the OWES (MNRF, 2002), the wetland units have the potential to meet criteria for significance as they have the potential to provide biological, hydrological, and special feature components.

Environmental effects and associated mitigation measures for wetland communities encountered on the Project are described in **Section 7.7.8.1** and **Table 7-1, Table 7-2,** and **Table 7-3** below.

7.7.8 Natural Heritage Features

As mentioned previously in **Section 4.6.7**, while the majority of the PSA consists of active agricultural lands, the preferred alternative was identified to contain woodlands, unevaluated wetlands, wildlife and SAR habitat, as well as direct and/or seasonal fish habitat. It should be noted that some of the minor refinements made (i.e. minimizing impacts on significant woodlands) to the Project alignment since the release of the

draft ESR have resulted in significant reductions in potential impacts to the aforementioned natural heritage features.

Construction associated with the proposed Project may induce both temporary and permanent disturbance to natural heritage features. Permanent adverse effects may include the potential removal of 2.78 ha of incompatible vegetation and associated wildlife habitat to accommodate the proposed double circuit 230 kV transmission line. With exception to the 2.78 ha incompatible vegetation removal requirements, it is anticipated that the long-term adverse effects to natural heritage features can generally be avoided or mitigated through tower placements and other mitigation measures; the locations for towers will be determined during the detailed design phase. Temporary adverse effects include those from work operations that physically, or visually disrupt wildlife during active construction. Although no effects on natural heritage features are anticipated during the maintenance and operation phase, as indicated in **Section 7.7.7.1**, there is potential for birds to collide with transmission lines during the operational phase of the proposed Project, and Hydro one commits to installing visual diverters to mitigate this effect.

Construction activities would be restricted to designated work areas and protective barriers, such as fencing, would be erected to protect adjacent features from construction related effects. For example, silt fencing and/or other sediment and erosion control measures would be installed as required to prevent the migration of sediment-laden water from the site. In addition, vegetation removal limits would be clearly demarcated. Prior to construction, a detailed construction plan would be developed and the Municipality of Lakeshore, the County of Essex, the Municipality of Chatham-Kent, and the ERCA and the LTVCA would be consulted for work in regulated areas. Based on input received during the draft ESR review period from Indigenous communities, Hydro One will work to facilitate the advance harvesting of plant species of interest through coordination with Indigenous communities and private landowners, where opportunities exist and landowners are amenable.

Other measures that would be undertaken to reduce adverse effects resulting from the construction of the proposed Project include:

- Restricting access and minimizing travel/work areas to maximize retention of compatible vegetation.
- Implementing sediment and erosion controls.
- Selectively cutting and retaining compatible vegetation to promote regeneration.
- Using geotextile and gravel for access, where feasible, to reduce compaction.
- Restoring compacted areas, as required.

- Retention of compatible vegetation.
- Installing barriers (e.g., silt fences) to promote protection of sensitive features.

Temporary construction access (e.g., access mats or geotextile and gravel) will be removed upon completion of construction. Temporary laydown areas will be constructed and these areas will be restored following removal of the laydown areas post-construction.

Most wildlife species that have the potential to occur within the Project work areas are habituated to human activities and are mobile. For the most part, sensitive resident animals can relocate temporarily to nearby habitats through flight or via existing corridors (e.g. fencerows, watercourse riparian areas, etc.) to seek shelter as a mechanism to avoid noise and disturbance associated with construction activities and return after construction completion. Construction disturbance would be sufficiently local and transitory that little displacement of wildlife is anticipated. Therefore, the effect of the proposed Project on wildlife will be minimal.

Removal of vegetation has the potential to disturb nesting migratory birds. The *Migratory Birds Convention Act, 1994* (MBCA) prohibits the disturbance, destruction or removal of a nest, egg or nest shelter of a migratory bird. In order to avoid contravention of the MBCA, vegetation removal should not be conducted during the migratory bird breeding season from April 5 to August 31 in nesting zone C1 as provided by ECCC (2018c), where feasible. With respect to buildings (residential or agricultural barns) impacted by the proposed Project, targeted surveys of these buildings should be completed in order to confirm or rule out the presence of potential breeding habitat for Barn Swallow. While Barn Swallow were observed within the PSA of the Preferred Alternative during breeding bird surveys, breeding behaviour and nesting habitat was not observed.

Removal of 2.78 ha of incompatible vegetation (trees) has the potential to impact SAR bats and potential Eastern Foxsnake habitat. In order to avoid impacts to SAR bats, tree removals should take place during the non-active bat period (October 1 to March 31). Trees that may be impacted by removal activities should be evaluated for their potential to provide suitable bat maternity roost habitat. Similarly, habitat with the potential to support Eastern Foxsnake should be flagged and protected (where practical). In instances where incompatible vegetation with the potential to support Eastern Foxsnake requires removal, the vegetation will be removed/trimmed to the extent that it no longer poses a risk to overhead transmission lines while still maintaining their potential SAR habitat characteristics. Should SAR bat and/or Eastern Foxsnake habitat be confirmed in association with the new transmission right-of-way, the MECP

should be consulted to determine if the aforementioned mitigation measures are sufficient to avoid contravention under the ESA

7.7.8.1 Wetlands

The new transmission line crosses three unevaluated wetland communities; shallow Marsh (MAS), White Elm Mineral Deciduous Swamp (SWDM4-2) and Thicket Swamp (SWT), respectively. Of the aforementioned wetlands, direct impacts are limited to the SWDM4-2 community given the community's association with 0.49 ha of incompatible vegetation. Although formal wetland evaluations were not completed for the aforementioned wetland communities, the shallow Marsh (MAS) and White Elm Mineral Deciduous Swamp (SWDM4-2) have the potential to be complexed in with the Tilbury North PSW Complex located outside of the PSA to the north.

Wetlands play an important role with Indigenous Communities as they support elements required for continued practice of Indigenous culture and rights (e.g., hunting, trapping, plant harvesting, ceremony, etc.). Although vegetation clearing will not represent a loss of vegetation on the landscape, it will result in changes in vegetation composition within an existing wetland community. Such changes have the potential to produce edge effects (positive, negative and/or neutral), as well as result in habitat fragmentation (e.g. dividing an existing wetland community). Changes in habitat composition has the potential to result in changes in habitat quality for some flora and fauna, while fragmentation of wetlands has the potential to result in a decline in species occupancy.

Nonetheless, the tower locations and access roads will be located such that they will avoid wetlands; therefore, adverse effects to MAS and SWT communities are not anticipated. The limits of wetlands will be demarcated to limit construction activities within wetland communities, where practical.

Hydro One will undertake a Biodiversity Initiative to offset habitat loss that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes in consultation with ERCA, LTVCA, Indigenous communities and other interested groups. Where practical, incompatible vegetation within SWDM4-2 will be cut during firm soil conditions and will be allowed to re-establish naturally and/or seeded with compatible vegetation. Wetland areas impacted during construction (directly or indirectly) will be restored to pre-construction drainage patterns.

Generally, mitigation measures described in **Section 7.7.2, 7.7.4, and 7.7.7** would also be employed with respect to wetland areas. In general, the removal of trees and ground

vegetation will be minimized during construction to the extent practical. In addition, construction activities for the proposed Project will be restricted to designated work areas. Wherever practical, access to the construction areas for the proposed Project will utilize existing access roads. An erosion and sediment control plan will be employed to identify mitigation for wetland communities and will identify locations for protective fencing. In addition, no refuelling of vehicles and/or equipment would be permitted adjacent to wetlands (i.e., a 30 m buffer) to avoid potential spills (e.g., fuel, oil, lubricant) from migrating and entering aquatic habitats. Spill kits will be located at work areas to mitigate the effects of accidental spills or releases, should they occur during construction.

7.7.8.2 Fish and Aquatic Habitat

The proposed Project crosses several watercourses identified as direct fish habitat. Although transmission towers will be located to avoid impacts to fish and aquatic habitat, there is potential for fish and aquatic habitat to be affected short-term during the construction phase of the proposed project through the removal of trees within riparian areas which are incompatible with overhead transmission lines (i.e. their height at maturity has potential to interfere with the safe and reliable operation of the line) and potential temporary watercourse crossings required to facilitate construction activities.

The removal of trees within riparian areas has the potential to affect fish habitat as it may reduce the amount of potential shade provided to fish and aquatic habitat, thereby influencing potential changes in water temperature; albeit over a small reach. Removal of trees within riparian areas also has the potential to affect fish and aquatic habitat cover as it would represent a reduction of potential overhanging vegetation. In instances where trees within riparian areas require removal, their root structures will remain intact (i.e., grubbing will not be conducted within riparian areas) as a mechanism to maintain their current soil stabilization characteristics. With respect to temporary watercourse crossings, potential effects on fish and aquatic habitat include alterations to riparian areas, increased turbidity and release of deleterious substances. In the event in-water works are required to support the construction of potential watercourse crossings, necessary permits and approvals from MECP, Conservation Authorities and DFO would be obtained before the commencement of work.

Other potential disturbances to fish and aquatic habitat resulting from construction activities near water would be minimized through the development of an ESC plan, which would include mitigation measures such as crossings during low flow conditions, retaining stream bank vegetation (where practical), and storing materials away from

water features. In addition, no refueling of vehicles and/or equipment would be permitted near a watercourse to prevent potential spills (e.g., fuel, oil, lubricant) from entering aquatic features.

As previously stated, although the transmission towers will be located to avoid impacts to fish and aquatic habitat, the aforementioned potential short-term effects on fish and aquatic habitat can be avoided and or mitigation through the application of mitigation measures included in **Sections 7.7.4, 7.7.5, and 7.7.8.**

7.7.8.3 Woodlands

As previously mentioned, the proposed Project's transmission line ROW crosses three significant woodlands; one of which is associated with the existing 115KV idle transmission line corridor. Woodlands will be taken into account during project planning as a mechanism to minimize project impacts.

Section 7.7.7 describes project impacts on woodlands and associated mitigation measures that would be employed with respect to woodlands during construction.

7.7.8.4 Species at Risk

As noted in **Section 4.6.7**, species designated as either endangered or threatened under the ESA and SARA (specific to municipal drains and watercourses) are provided species and habitat protection. Generally, impacts to SAR habitat will be avoided during detailed design, where possible. In addition, construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within work areas.

From a terrestrial perspective, the proposed Project was assessed as having the potential to provide habitat for Bank Swallow, SAR bats and Eastern Foxsnake. Habitat removal during the migratory bird breeding season (April 5 to August 31 in nesting zone C1: ECCC, 2018) and the bat active period (April 1 to September 30) would be avoided to the extent feasible. With respect to birds, a non-intrusive nest survey would be undertaken by a qualified individual if habitat removal is required during the April 5 to August 31 period. In the event the proposed project is determined to impact Barn Swallow habitat, the activity is eligible for registration under Section 23 of Ontario Regulation 242/08.

With respect to bats, habitat with the potential to support SAR bats will be assessed for presence of habitat trees (snags, cavities) during detailed design. In the event potential SAR bat habitat requires removal in support of the proposed Project, bat acoustic

surveys will be completed during the month of June in accordance with agency approved protocols to determine SAR bat use (or lack thereof).

Similarly, though the proposed project transmission line ROW is largely dominated by active agriculture, natural features (woodlands, wetlands, watercourses, etc.) have the potential to support regulated habitat for Eastern Foxsnake. In advance of construction, potential Eastern Foxsnake habitat will be demarcated and protected from impacts during construction, where practical.

Where acoustic surveys confirm SAR bat habitat use and/or impacts to potential Eastern Foxsnake habitat cannot be avoided, the MECP will be consulted regarding permitting/approvals next steps under the ESA. As per the comments received from the MECP on the draft ESR, adherence to the timing windows for SAR bats and Eastern Foxsnake are sufficient mitigation measures to avoid permitting under the *Endangered Species Act*.

From an aquatic perspective, the proposed Project was assessed as having the potential to provide habitat for Lake Chubsucker and Lilliput. The same impacts and associated mitigation measures outlined above under the Fish Habitat would be employed with respect to potential impacts to aquatic SAR. In the event the construction of watercourse crossings have the potential to impact habitat of Lake Chubsucker and Lilliput, consultation with, including necessary permits and approvals from MECP and DFO would be obtained before the commencement of work. As described in **Section 4.6.7**, eDNA surveys undertaken after the release of the draft ESR, including targeted qPCR analysis, did not yield detection of Lake Chubsucker.

Construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within the general work areas. Should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat.

7.7.8.5 Wildlife and Significant Habitat

Based on the results of the background review, ELC mapping, and results of the 2020 field investigations, the following confirmed and candidate SWH types were identified within the PSA for the proposed project:

- Candidate SWH for Bat Maternity Roosts.
- Candidate SWH for Turtle Wintering Areas.

- Confirmed SWH for Special Concern and Rare Wildlife Species:
 - Eastern Wood-pewee.
 - Maple leaf.
 - Spotted Sucker.

During project construction activities, the following would be taken into consideration as a mechanism to avoid and/or mitigate impacts to wildlife habitat:

- Retention of snags and cavity trees with potential to support bats where feasible.
- Tree/vegetation clearing will be avoided during the breeding bird and bat active period, where possible.
- General avoidance of wildlife habitats, where practical.
- Promotion of wildlife habitat through vegetation control.
- Retention of natural vegetation, where possible.
- Use of native plant species where seeding or planting is completed.

7.7.8.6 Invasive Species

There is potential for the proposed Project to facilitate the spread of non-native or invasive species that may occur within or adjacent to work areas during the construction phase. Construction staff will be educated on the identification of invasive species and the importance of avoiding their spread to new areas. Additional measures that would be undertaken to reduce the spread of invasive species include:

- Utilizing native plant species during construction restoration.
- Taking care to avoid spreading invasive species (especially invasive plant species) that occur in or adjacent to work areas, and educating crews on the importance of preventing the spread of invasive species.
- Abiding by the Invasive Species Act regulations.
- Proper handling, containment and disposal of invasive plant material, where required.
- Inspecting and cleaning equipment and vehicles as necessary to reduce potential for spreading invasive species propagules.

7.7.8.7 Biodiversity Initiative

While Hydro One always strives to avoid and mitigate potential effects to the natural environment, and restore areas that are affected by the Project, Hydro One acknowledges that there may be adverse effects to natural habitats that cannot be avoided, or that occur even when appropriate mitigation and restoration measures are employed. Examples include the long-term transition of incompatible vegetation such as forest communities to compatible vegetation communities such as meadows or

shrub thickets. Because these net effects cannot be further avoided or mitigated, they are typically compensated for by undertaking positive environmental activities (e.g. the creation of new naturalized habitats or enhancement of existing ones at other locations).

Hydro One has committed to undertaking a biodiversity initiative specific to this project to offset any habitat loss or transition (long-term change) that may occur as a result of the Project. The scope of the biodiversity initiative has not yet been fully determined but typically such initiatives involve the funding of third-party projects or proposals (opportunities), such as wetland and wildlife habitat creation and enhancement, or aquatic habitat restoration and enhancement activities, invasive species inventory or removal etc. Following completion of the Class EA and OEB Leave-to-Construction processes, Hydro One will engage with interested parties to discuss the implementation of the biodiversity initiative for the Project.

7.8 Anishnawbek and Haudenosaunee Lands and Territory

As indicated in **Section 4.4.3**, there are no Anishnawbek or Haudenosaunee Reserve Lands located in the PSA.

Hydro One is committed to developing and maintaining relationships of mutual respect with Anishnawbek and Haudenosaunee communities, and recognizes that Anishnawbek and Haudenosaunee communities and their lands are unique in Canada, with distinct legal, historical and cultural significance. Hydro One is committed to continue to engage with the Anishnawbek and Haudenosaunee communities to provide regular project updates, and actively identify and avoid geographically defined areas which support current or past traditional use for the harvesting of wildlife or fish, the harvesting of traditional plants, or use as sites of spiritual or cultural significance. Similarly, Anishnawbek and Haudenosaunee communities will be provided opportunities to review the findings of archaeological field surveys and assessment reports.

Hydro One understands that Bald Eagles are considered sacred. Given that Bald Eagles occasionally build nests on transmission line structures, in the event there are eggs or young present in the nest, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern.

Several communities have expressed a desire to protect and mitigate adverse effects to natural environment features such as SAR, wildlife, fish and aquatic habitat, and natural or naturalized areas with their traditional territory that could be used for hunting, gathering, harvesting or other traditional uses. Mitigation measures to address effects to

these features are described elsewhere in this chapter. Some communities expressed interest in being involved with future archaeological and natural environment field work. Hydro One and its consultants have been working closely with interested communities and have included representatives from interested communities in archaeological and environmental fieldwork. Anishnawbek and Haudenosaunee communities will be provided opportunities to review the findings of archaeological field surveys and archaeological assessment reports.

As part of the Project, CFN was provided resource capacity to conduct a TEK study and COTTFN was provided capacity to complete a CRS; both studies defined multiple VCs or impact aspects of the environment that the Project had potential to affect. Communities shared the findings of these studies with Hydro One. The findings of these studies have been incorporated into the final ESR where appropriate. **Table 7-2** and **Table 7-3** have been included herein to highlight the VCs from each community to identify mitigation and residual effects from the Project as they relate to each VC. This information will be shared with the construction contractor and will be taken into consideration during the construction planning of the proposed Project to the extent practical. This may include working with private landowners to provide potential opportunities to harvest traditional use plant species ahead of construction, or to provide input into post-construction restoration plans for natural or naturalized areas.

CFN completed a preliminary TEK study for the Chatham to Lakeshore Project and the final report was provided to Hydro One via email on September 8, 2021. Based on the data collected in the study, including from interviews and mapping exercises with several CFN members, it was identified that the Project area is of great importance to CFN members. The study identified key issues and project interactions with four primary CFN Valued Components (VCs), including the following:

- Water and Fishing
- Hunting and Trapping
- Plants and Medicines
- Cultural Continuity and Sense of Place

Each VC category represents an interest or right of these communities and contributes to forming a large portion of the basis for First Nation wellness. First Nation wellness is described as physical, spiritual, and mental well-being. It is acknowledged that each VC identified is interconnected to all of the other VCs identified. As described above, these VCs and other information presented in the TEK study have been incorporated into the ESR, including an additional environmental effects and mitigation table specific to the TEK study for those VCs and aspects of the study which are directly addressable

through the management of the Project (see **Table 7-2**. The VC effects assessment considered each of the potential project effects identified in **Section 7**. The effects identified were compared against mitigation measures developed for the Project to demonstrate the commitments and mitigation measures planned to address those VCs which can be addressed through management of the Chatham to Lakeshore Project (e.g., through mitigation measures during construction, or post-construction restoration).

In addition to the additional environmental effects and mitigation table described above, Hydro One provided the following acknowledgement of the broader issues and VCs that beyond Hydro One's scope, mandate or control, but which Hydro One recognizes as important issues for CFN, as sent to CFN on July 5, 2022:

Hydro One acknowledges that the Valued Components (VCs) described by Caldwell First Nation (CFN) in the Caldwell First Nation Traditional Ecological Knowledge Preliminary Study for Hydro One's Chatham-Kent To Lakeshore Project ("TEK study") dated August 10, 2021, are of significant importance to the CFN community. We also note that many of these VCs relate to broader historical, local and regional issues faced by Indigenous communities in southwestern Ontario. This includes VCs such as Land clearing for and other effects of farming, greenhouses and industrial development, Increased competition from other hunters, Increased land privatization, concerns about cultural continuity and feeling a sense of connection to the territory, and loss of community connection through traditional foods and food sharing.

Hydro One recognizes that these are important issues to CFN. However, these are not issues that are within the direct control of Hydro One, either within the context of a single undertaking (such as the Chatham to Lakeshore transmission project), nor on a regional level that includes multiple projects. Management of these issues, including control and/or mitigation of effects is well beyond the mandate of Hydro One.

That said, while Hydro One is not able to directly control or mitigate all the effects to these Valued Components, we would be pleased to consider potential opportunities to address concerns that are within our control and to help address these issues in other ways. For example, Hydro One will be conducting a Biodiversity Initiative for the Project which will include opportunities to create or enhance habitat; this will include opportunities to incorporate TEK and medicinal or other plant species of interest, as well as potential opportunities for community-led education and sharing of

traditional knowledge through the design and implementation of the habitat work. Hydro One is committed to and looks forward to working alongside the team at CFN to be involved in the Chatham to Lakeshore Biodiversity Initiative and would welcome the opportunity to meet to discuss in the near future.

The issue raised regarding the cumulative effects of development, and of infrastructure projects (such as the Chatham to Lakeshore project) enabling future growth and “induced” development, is also a broad issue that is outside the control of Hydro One. Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on CFN’s current and future use of lands and resources, and the exercise of their Aboriginal and Treaty Rights and Interests. However, Hydro One’s role is to provide the necessary electricity infrastructure based on planning conducted by, and direction received from the Independent Electricity System Operator (IESO). The Chatham to Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future.

Hydro One intends to further assess the cumulative effects of the Project per the requirements of the Class Environmental Assessment for Minor Transmission Facilities (MTF) (i.e., “within the immediate project area”).

We acknowledge the portions of CFN’s TEK study which speak to Hydro One-specific consultation, and the importance of not just traditional knowledge, but also considering Indigenous land and resource stewardship values in the planning of new projects. We acknowledge the challenges that communities have faced in recent years due to COVID-19, and that these challenges impact communities’ ability to address and respond to requests for engagement by proponents such as Hydro One.

To this end, we are committed to continuing to find innovative ways to address these issues on the Chatham x Lakeshore Project and future projects and we value our relationship with CFN. We know we have more work to do, but we are committed to continually learning and improving along the way. We appreciate and respect the information shared by CFN and thank you for your continued engagement and interest and look

forward to a meeting in the very near future to continue our work together.

COTTFN completed a CRS and associated implications letter, which were provided to Hydro One via email on December 15, 2021. The CRS contained a description of the methodologies undertaken, including interviews with COTTFN members, and the limitations of the study. Based on the data collected in the study, it was identified that the Project area is of great importance to COTTFN members. The study identified key issues and project interactions with COTTFN VCs, which were presented as grouped into the following three categories of VCs:

- Harvesting and Traditional Use
- Governance and Stewardship
- Cultural Continuity

Each VC category represents an interest or right of these communities and contributes to forming a large portion of the basis for First Nation wellness. First Nation wellness is described as physical, spiritual, and mental well-being. It is acknowledged that each VC identified is interconnected to all of the other VCs identified. For example, Harvesting and Traditional Use rights involve the type of activities that contribute to Cultural Continuity rights. Cultural Continuity is tied to practices of harvesting through hunting, trapping, fishing, etc. which are also identified VCs. For each of the three high-level VCs, specific subjects of interest were described (e.g., Plants and Medicines, Fishing and use of waterways etc.), including a description of the historical and ongoing changes from baseline conditions and COTTFN members' perspectives on the effects of the Chatham to Lakeshore Project as well as general continued development and growth in COTTFN's traditional territory.

As described above, these VCs and other information presented in the CRS have been incorporated into the ESR, including an additional environmental effects and mitigation table specific to the CRS for those VCs and aspects of the study which are directly addressable through the management of the Project (see **Table 7-3**). The VC effects assessment considered each of the potential Project effects identified in **Section 7**. The effects identified were compared against mitigation measures developed for the Project to demonstrate the commitments and mitigation measures planned to address those VCs (and subcategories within the high-level VCs) which can be addressed through management of the Chatham to Lakeshore Project (e.g., through mitigation measures during construction, or post-construction restoration).

In addition to the additional environmental effects and mitigation table described above, Hydro One provided the following acknowledgement of the broader issues and

VCs that beyond Hydro One's scope, mandate or control, but which Hydro One recognizes as important issues for COTT FN, as sent to COTT FN on March 23, 2022:

Hydro One acknowledges that all of the VCs described by COTT FN in the CRS are of significant importance to the COTT FN community. We also note that many of these VCs relate to broader historical, local and regional issues faced by Indigenous communities in southwestern Ontario.

This includes VCs such as:

- Access restrictions to areas of historical and potential future traditional uses;
- Inadequate land base for the community and food sovereignty/security;
- Lack of adequate housing;
- Effects of additional future development; and
- Concerns about knowledge transfer and loss of language.

Hydro One recognizes that these are very real issues facing COTT FN and other Indigenous communities in southwestern Ontario and across the country every day. However, these are not issues that are within the direct control of Hydro One, either within the context of a single undertaking (such as the Chatham to Lakeshore transmission project), nor on a regional level that includes multiple projects. Management of these issues, including control and/or mitigation of effects is well beyond the corporate mandate of Hydro One.

However, while Hydro One is not able to directly control or mitigate the effects to these Valued Components, we would be pleased to consider potential opportunities to help address these issues in other ways. For example, Hydro One will be conducting a Biodiversity Initiative for the Project which will include opportunities to create or enhance habitat; this will include opportunities to incorporate TEK and medicinal or other plant species of interest, as well as potential opportunities for community-led education and sharing of traditional knowledge through the design and implementation of the habitat work. As previously committed, Hydro One is committed to providing opportunities for COTT FN to be involved in the Chatham to Lakeshore Biodiversity Initiative. Hydro One is also aware that there are many community driven initiatives and projects to address these concerns and will consider how we can appropriately support such initiatives.

The issue raised regarding the cumulative effects of development, and of infrastructure projects (such as the Chatham to Lakeshore project)

enabling future growth and development, is also a broad issue that is outside the control of Hydro One. Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue, to put pressure on COTTFNs current and future use of lands and resources. However, Hydro One's role is to provide the necessary electrical infrastructure based on planning conducted by, and direction received from the Independent Electricity System Operator (IESO). In the case of the Chatham to Lakeshore Project and other Hydro One projects in southwestern Ontario, the need for this new infrastructure has been identified by the IESO in their regional planning framework and demand forecasts, with a formal direction provided to Hydro One to undertake planning and eventually construction and operation of the transmission assets. Additionally, the Ontario Energy Board (OEB) was issued an Order in Council to amend Hydro One's transmission license to include the development and construction of the Chatham x Lakeshore project. As such, Hydro One is acting on the direction provided by the IESO, as well as direction provided by the Crown via the OEB, to design and build the Chatham to Lakeshore transmission line.

As stated in Hydro One's initial response to COTTFN's comments (sent September 20, 2021), Hydro One intends to further assess the cumulative effects of the project per the requirements of the Class Environmental Assessment for Minor Transmission Facilities (MTF) (i.e., "within the immediate project area"). To extend beyond this, is outside the scope of the Class EA for MTF and Hydro One's mandate and control. The Chatham to Lakeshore transmission line, as with all regional transmission infrastructure, will provide benefit (by way of increased electrical supply capacity and reliability) to all end-users and consumers of electricity, both current and future.

Hydro One acknowledges the portions of the CRS which speak to Hydro-One specific consultation, and the importance of not just traditional knowledge, but also considering Indigenous land and resource stewardship values in the planning of new projects. We acknowledge the challenges that communities have faced in recent years due to COVID-19, and that these challenges impact communities' ability to address and respond to requests for engagement by proponents such as Hydro One. In projects such as Chatham to Lakeshore, Hydro One seeks to balance incorporation of Indigenous knowledge and respect for traditional

community decision-making practices, while considering other natural, socio-economic and technical factors, when planning new infrastructure on a timeline that meets the needs of the province.

To this end, we are committed to continuing to find innovative ways to address these issues on the Chatham x Lakeshore Project and future projects. We are committed to continually learning and improving along the way. We appreciate and respect the information shared by COTT FN and thank you for your continued engagement and interest.

COTT FN sent a letter to Hydro One dated April 22, 2022, following up on Hydro One's response to COTT FN's CRS for the Project, which had included a project effects and mitigation table relating to VCs raised in the CRS that were addressable within the context of the Chatham to Lakeshore Project and Class EA as well as a description of Hydro One's position on the VCs that revolved around broader historical, local and regional issues, both of which were to be included in the final ESR. COTT FN expressed disagreement with some of the assertions mentioned by Hydro One regarding broader historical and regional VCs, noting that while Hydro One's response acknowledged several of the key themes expressed by COTT FN citizens in the CRS, it denies the role of Hydro One's contributions to cumulative effects within the Nation's Traditional and Treaty Territory. The community stated that the tone of the message seems to conflict with Hydro One's commitment to reconciliation that had previously been expressed to the community.

COTT FN acknowledged the roles of the IESO, the OEB, and the Ministry of Energy (MOE) in the planning and approval of new transmission lines in the region, but noted that the functions of those entities does not negate Hydro One's role in the design, construction and operation of the transmission infrastructure. COTT FN stated that Hydro One has some responsibility for cumulative effects within the territory and measures need to be taken to address those effects throughout the Project planning process. COTT FN also expressed that the existing and legacy Hydro One infrastructure also contributes to the effects on the livelihoods and rights of their community.

COTT FN did not accept the viewpoint of cumulative effects detailed in Hydro One's response, stating that cumulative effects cannot be thoroughly addressed within the context of a single project. The community mentioned Hydro One's plans for future projects in the region, identifying that each project will have its own effects both individual and cumulative. COTT FN proposed a plan to develop a proposal to assess cumulative effects as part of the regional capacity funding agreement that has been introduced between Hydro One and COTT FN for the ongoing and future Hydro One projects in the region.

COTTFN expressed an interest in participating in the planned Biodiversity Initiative discussed in the mitigation table and viewed these commitments as a positive step forward, noting that the adequacy of the offset measures will depend on the implementation of the Biodiversity Initiative. The community discussed plans to engage closely with Hydro One over the upcoming years regarding the planned transmission projects in the region, noting the importance of acknowledging the effects these projects will have and ensuring alignment with Indigenous rights. COTTFN requested that Hydro One more fully considers and acknowledges its role in cumulative effects within the ESR, and at minimum, note and describes COTTFN's response.

Some communities have expressed an interest in participating in environmental monitoring during construction of the Project. With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it has not been Hydro One's historic practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by some Indigenous communities in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve Indigenous community staff in environmental monitoring work during construction.

Some communities have expressed an interest in participating in the Biodiversity Initiative that Hydro One is committing to for the proposed Project, which will seek opportunities to create or enhance habitats to offset any adverse effects to habitats as a result of the Project. Hydro One will involve interested communities in the Biodiversity Initiative, including potential incorporation of TEK where that information is willingly provided.

Hydro One will continue to seek to identify community concerns and build appropriate actions into proposed Project plans to address expressed concerns, as described in **Section 3.6**.

7.9 Recreational Resources

There is potential that some recreational resources (e.g. CASO trail, Great Lakes Waterfront Trail, CWATS Network) may be temporarily affected during the construction and maintenance phase of the proposed Project due to the presence of construction laydown areas within the corridor, as well as construction equipment and presence of construction crew members. Impacts during the operations phase are not anticipated.

While there may be some temporary impacts to the enjoyment of recreational resources adjacent to the proposed Project, such impacts are expected to be short-term in nature. Advanced notice will be provided to nearby residences, farms,

landowners and commercial operations, outlining the location of entry/exit points for the construction site (e.g., at Highway 401) as well as the schedule for construction work or construction related traffic in those areas. Clear and temporary road signage will also be created and installed to reflect this information.

Hydro One will commit to working with local Municipalities to identify community benefit opportunities to enhance the broader landscape.

7.10 Visual and Aesthetic Resources

The proposed Project is located within predominantly flat agricultural lands, providing views that are open and expansive. Existing vertical elements include traffic and light standards, existing transmission lines and wind turbines. The majority of sensitive receptors are residences with wide views into the horizon. Many of the properties have existing tree lined wind breaks and hedgerows that offer localized privacy from adjacent visual elements.

Location of transmission structures is one of the largest factors influencing the visual effects to specific receptors. Design of the transmission line (e.g., placement of structure locations) will be visible to nearby sensitive receptors.

During detailed design (selection of transmission structure placement), consideration will be given to proximity to nearby sensitive receptors, existing visual screening (e.g., vegetation), and existing infrastructure and other landscape characteristics, in order to mitigate the net visual change resulting from the new transmission structures.

While the new transmission structures will be of a greater height, the proposed Project will repurpose approximately 16 km of an existing idle 115 kV transmission corridor (including replacement of the existing structures), which will significantly reduce the net visual change for nearly 1/3 of the proposed Project's total length.

Hydro One is working with local Municipalities to identify community benefit opportunities to enhance recreational resource opportunities within the broader landscape (see **Section 7.5.7**).

7.11 Technical Considerations

7.11.1 Wind Turbines

The Municipality of Chatham Kent and Municipality of Lakeshore are hosts to several wind energy generation projects including wind turbines and their associated infrastructure, as well as overhead and buried collector lines. Several wind turbines are

located within the same landscape as the proposed Project. Effects to wind turbines or their collector transmission lines are not anticipated as a result of the proposed Project. Owners and operators of the adjacent wind energy facilities have been notified and consulted through the Class EA process, and contact will be maintained through design and construction to keep them apprised of the final design of the new transmission line, construction schedules and other items of interest.

7.11.2 Infrastructure Crossings

Construction of the proposed Project will require crossings of existing linear infrastructure; including provincial Highway 401, Highway 77 and Highway 40, constructed drains, railway line, as well as running parallel to existing highways, roadways and along and over several municipal roads. Permanent or long-term impacts to existing linear infrastructure are not anticipated. Rider poles, boom-tipped riders or similar protection will be utilized during conductor stringing. Disruption to traffic on roads and highways during construction is anticipated to be temporary and short in duration. Use of temporary or rolling closures of Highways may be required to facilitate stringing activities. Where the new transmission line parallels Highway 401, setback distances provided by MTO will be respected and adhered to. Work within MTOs highway ROW or permit control area (within 400 m of Highway 401) will require an Encroachment Permit and/or Land Use Permit as well as consultation with MTO during detailed design. Hydro One will obtain all necessary Encroachment Permits and Land Use Permits from MTO prior to the start of construction. To facilitate construction of the aerial crossings associated with railway lines, temporary flagging operations may be required. Lastly, Municipal drainage superintendents will be consulted during detailed design and construction planning to discuss effects to municipal drains.

7.12 Summary of Potential Environmental Effects, Mitigation Measures, and Net Effects

Table 7-1 provides a summary of potential effects, the associated mitigation, and the net effects identified for the proposed Project, during the construction and operation and maintenance phase. Similarly, **Table 7-2** and **Table 7-3** provides a summary of the Project's potential effects, the associated mitigation, and the net effects associated with the VCs identified by CFN and COTTFN in the TEK study and CRS, respectively.

Table 7-1: Summary of Potential Effects, Mitigation Measures and Net Effects

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
Agricultural Resources: Crop Loss	Construction & Maintenance: Temporary removal of crops and soils supporting crop production, as well as permanent removal of land available for agricultural production as a result of project infrastructure (e.g. tower footings).	The following mitigation is recommended to address these potential effects: <ul style="list-style-type: none"> • Contact will be maintained with landowners and stakeholders regarding work schedules and other items of interest (e.g., access routes, minimizing disturbances to existing and planned farm operations, etc.). • Where practical, construction and maintenance activities will be scheduled to avoid the growing season or sensitive times of year (e.g., extreme wet periods). To the extent practical, activities will be scheduled to occur during non-growing seasons or during frozen conditions. • Access roads, staging areas, tower construction and stringing activities will be constructed to a minimum length and width required to accommodate the safe movement of construction equipment. • Existing farm lanes and other existing access routes will be used whenever practical. In the event farm lanes are absent, access will be focused along field edges, to the extent possible. • Work will be limited to the planned access roads, staging and work areas. If a later expansion to these areas is required, it will be discussed with the landowner in advance. • Where practical, towers will be located along property lines to minimize impediment on agricultural operations, to the extent possible. • Lands will be restored following construction and maintenance activities (e.g., removal of temporary access roads, removal of erosion and sediment controls (ESC), disking of lands, aeration, and cultivation of soils to alleviate soils compaction where required), where feasible. 	Net effects include permanent removal of land available for agricultural production as a result of project infrastructure (e.g. tower footings); not considered significant. Crop loss and lands out of production as a result of the proposed Project will be compensated.
Agricultural Resources: Soil Compaction	Construction & Maintenance: Compaction of soil caused by movement of construction equipment or maintenance vehicles over agricultural lands.	In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects: <ul style="list-style-type: none"> • Equipment with low bearing capacity will be used, where practical. • Where practical, temporary access roads and work pads will be built in agricultural fields using measures such as mats or, geotextile and crushed rock, or equivalent means, which can be easily removed when construction is complete to allow for re-cultivation of the area. 	No significant net effects are predicted.
Agricultural Resources: Soil Mixing	Construction: Potential for excavation activities to cause mixing of soil horizons, thus lowering the quality of soil.	In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects: <ul style="list-style-type: none"> • Helical piles will be used for tower foundations. This foundation type minimizes surface disturbance and does not require soil excavation or soil stripping of the foundation site. • Stripping or excavated soils will be minimized to the extent practical. • Where soil stripping is required, topsoil and subsoils will be removed and stockpiled separately. • Depths of soil being removed will be carefully monitored and minimized during stripping activities. • Volume of topsoil and subsoil salvaged will be maximized, where practical. • Soils will be stripped under generally dry conditions (not saturated), such that rutting, soil mixing, or other undesired ground disturbance is minimized to the extent practical. • Vegetation, stone piles, fencing and deleterious materials will be removed prior to stripping. • For backfilling operations, topsoil and subsoil will be replaced in reverse order of excavation to minimize the potential for admixing and maximizing future growing potential. • Soil cover on exposed areas within agricultural areas will be discussed with the landowner, and if hydroseed application is used, it will be limited to annual rye or similar, and will not contain any weed species. 	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Agricultural Resources: Disturbance to Farm Operations</p>	<p>Construction: Potential to disturb farm operations including planting and harvesting schedules, spraying, tiling activities, etc. Operation: Impediments to the maneuverability of agricultural equipment.</p>	<p>The mitigation outlined above addresses these potential effects.</p>	<p>Some agricultural fields will have new transmission structures. No significant net effects are predicted.</p>
<p>Agricultural Resources: Vegetation Removal</p>	<p>Operation: Partial removal or fragmentation of existing hedgerows and windbreaks between agricultural land parcels.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Vegetation that will not affect construction or line clearances will be retained, where possible. • Hedgerows and windbreak areas impacted by construction will be replaced with compatible vegetation post-construction, in consultation with the landowner. • Hydro One will undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes. 	<p>Net effects include permanent removal of incompatible vegetation (hedgerows/windbreaks) to ensure the safe operation of the transmission line; not considered significant. Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Agricultural Resources: Contamination of Organic or Identity Preserved (IP) Crops</p>	<p>Construction & Maintenance: Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types. Potential for inadvertent movement of trace soils between agricultural fields which contain organic or IP crops.</p>	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Contact will be made with landowners to determine if organic or IP operations are present which may require additional considerations during construction planning. • Field crews will be informed if working in organic or IP croplands. • Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of trace soils between contaminated and non-contaminated agricultural fields. • Cleaning will be conducted using a risk-based approach, whereby vehicles and equipment that have come in contact with soils will be inspected and cleaned of dirt/debris/seeds. • Cleaning will occur in a manner that ensures that runoff is contained and waste materials can be collected. • Work areas will be assessed during pre-construction activities to identify the presence of weed species, degree of infestation, and the distribution of weeds within the Project footprint and the immediately adjacent areas. • Work areas will be monitored for weeds throughout the Project and until the Project has been completed. • A project-specific Weed Control Plan will be developed in consultation with landowners prior to construction, as necessary. • The Weed Control Plan will be managed by an Ontario Professional Agrologist to meet the requirements of the municipal and land use authority. • The transmission ROW will be monitored for establishment of weeds until the Project is completed; • Corrective measures for managing weeds may include herbicide application, mowing, and hand pulling. • Weed control during construction will be conducted by the construction contractor. 	<p>No significant net effects are predicted.</p>
<p>Agricultural Resources: Damage to Field Tiles</p>	<p>Construction & Maintenance: Potential for equipment to damage or crush existing agricultural tile drains.</p>	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Landowners will be consulted to determine existing field tile locations in support of avoidance/protection measures. • Tile drains will be avoided and/or protected (e.g., through tower locations, temporary construction access), to the extent practical. • Where practical, temporary access roads and work pads will be built in agricultural fields using measures such as mats or, geotextile and crushed rock, or equivalent means. 	<p>No significant net effects are predicted. If tile damage to tile drains occurs as a result of construction activities and/or maintenance activities, the tile will be repaired by a licensed tile drainage contractor in consultation with affected landowner.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Agricultural Resources: Livestock Stress, Loss or Injury</p>	<p>Construction & Maintenance: Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss. In addition, potential use of implosive splicing may scare or startle agricultural livestock.</p>	<p>In addition to the mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Landowners will be informed in advance of upcoming work activities which may disturb or pose a risk to livestock, and consulted with respect to potential mitigation measures, such as moving or containing livestock, as necessary. • Field crews will be informed about livestock in the vicinity of work areas to confirm they are aware of the need to secure gates, are cognizant of noise sensitivity controls, and to ensure clean-up of construction materials and debris at the end of each day to minimize potential livestock ingestion. • If excavations cannot be closed immediately, exclusion fencing will be erected to protect livestock from entering. • Vehicles/Equipment will be inspected and cleaned as necessary prior to entering onto designated lands to prevent the potential introduction of diseases. • Existing gates and fences will be used as required. All fences and gates will be left in "as-found" condition following construction. • Livestock access control gates and fencing will be installed during construction at roads and between fenced fields as necessary to prevent escape of livestock or movement of livestock into work areas. • Prior to any use of implosive splicing, a Blasting Communication and Management Plan will be developed outlining proper storage, security, detonation, and notification requirements. • Area residents, municipal authorities, police department, and other crews within 1.6 km will be notified about the use of implosive splicing, one week prior to the work commencing. • Signs shall be posted on all roadways leading to a blasting area in accordance with government rules and regulations. • Maintain safe distances of the blasting site from other employees, vehicles, equipment, structures, and fire hazard sources. Perform blasts during pre-determined times. 	<p>No significant net effects are predicted.</p> <p>Compensation will be made for loss or injury to livestock directly resulting from activities associated with the proposed Project.</p>
<p>Agricultural Resources: Electric and Magnetic Interference</p>	<p>Operation: Some farmers have raised concerns regarding potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment, when said equipment is directly below the conductors.</p>	<p>Hydro One acknowledges the concerns raised, as well as insistence by some farmers currently working fields below transmission lines, that localized issues have been observed beneath the transmission lines. While we do not anticipate effects to communication systems in farm equipment, Hydro One will work with concerned farmers to collect information on the systems of concern, and contact manufacturers of these systems to gain further insight into potential concerns and possible solutions, if applicable.</p>	<p>No significant net effects are predicted.</p> <p>While obstructions such as buildings or trees are known to block reception of GPS signals, published studies assessing these concerns indicate that overhead power line conductors are too thin to cause appreciable screening. Likewise, corona or sparking on a power line generates insufficient noise at frequencies used for GPS to interfere with its operation.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
Archaeological Resources	Construction: Disturbance to lands with potential to support archaeological resources.	<p>Prior to construction, a Stage 2 Archaeological Assessment will be completed within the identified areas of archaeological potential along the new transmission line corridor in accordance with Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) requirements. In the event the Stage 2 Archaeological Assessment identifies the need for further assessment, a Stage 3/4 Archaeological Assessment will occur as required and as outlined in the "Standards and Guidelines for Consultant Archaeologists", Ministry of Tourism, Culture and Sport (2011).</p> <p>Should archaeological artifacts be encountered during construction, work in the vicinity will cease and a licensed archaeologist will be engaged immediately to ensure compliance with the provincial Heritage Act. Likewise, should any human remains be encountered during construction, work in the vicinity will cease and the police and coroner notified immediately as well as the Registrar of Cemeteries to ensure compliance with the Funeral, Burial and Cremation Services Act.</p>	<p>No significant net effects are predicted.</p> <p>Additional archaeological investigations will be completed prior to construction, as required.</p>
Cultural Heritage Resources	Construction: Based on the baseline findings of the Cultural Heritage Existing Conditions Report, there is the potential for project-related works to adversely affect known and potential built heritage resources within the study area. No cultural heritage landscapes were identified in the study area associated with the preferred route for the new transmission line.	<p>Additional studies are required to confirm potential built heritage resources along the transmission line ROW for the proposed Project. To the extent practical, work will be planned in a manner that avoids adverse effects to identified built heritage resources.</p> <p>In the event a built heritage resources cannot be feasibly avoided and will be directly impacted through destruction, alternation, or disruption, a property specific Cultural Heritage Evaluation Report (CHER) and/or Heritage Impact Assessments (HIAs) will be completed to confirm the cultural heritage value or interest, and heritage attributes of the impacted built heritage resource and identify all adverse effects. All evaluation and assessments will be in compliance with the Hydro One Cultural Heritage Identification and Evaluation Process and MHSTCI Standards and Guidelines.</p> <p>Appropriate mitigation or conservation measures that reduce or avoid potential adverse effects will be recommended based on the understanding of the cultural heritage value or interest, and heritage attributes of potential affected built heritage resources.</p>	<p>No significant net effects are predicted.</p> <p>Additional cultural heritage evaluations and/or heritage impact assessments will be completed prior to construction where impacts to potential built heritage resources may occur.</p>
Land Use and Communities: Business Operations	Construction: Potential for activities to disrupt commercial or industrial operations.	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Contact will be maintained with business owners regarding work schedule and other items of interest. • Access to businesses will be maintained at all times during construction to the extent feasible. If existing access cannot be maintained, arrangements will be made for alternate access, including public signage as required. • Construction activities and equipment will be managed to avoid damage and disturbance to adjacent properties, structures and operations. 	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Land Use and Communities: Existing and Future Land Use Designations and Potential Future Development</p>	<p>Operation: While transmission lines can be largely compatible with development, its location within areas zoned to allow future commercial/industrial development, or otherwise targeted/identified for future development potential, will introduce certain restrictions to future uses within the lands occupied by the transmission line ROW.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Throughout the province, development (both residential and commercial/industrial) occurs around existing transmission line corridors and stations. Uses deemed to be compatible with overhead transmission lines are often approved within transmission line ROWs. Hydro One has existing departments and processes to review proposals for developments that are planned adjacent to or within transmission line ROWs, and facilitate compatible uses of these corridors. • Typically, there are no restrictions placed on development or new construction outside of the transmission line ROW itself. • Where and when future development projects or initiatives are proposed to occur along or within the ROW for the new transmission line, Hydro One will apply its existing processes to review and facilitate these future developments, including potential compatible uses within the transmission line ROW. • Hydro One will work with Municipalities to consider potential means of accommodating potential future development during design of the transmission line, within the property fabric traversed by the line. 	<p>No significant net effects are predicted.</p> <p>While there will be restrictions to future development within 2 m of the transmission line ROW, the Project will not impede development of adjacent lands, and there will be opportunities for compatible uses to be developed within the ROW.</p> <p>Hydro One will commit to working with local Municipalities to identify community benefit opportunities to enhance the broader landscape.</p>
<p>Land Use and Communities: Local Roads and Traffic</p>	<p>Construction: Potential for increased traffic, including heavy equipment, on local and regional roads. In addition, stringing of conductors across highways and roadways may require temporary road closures and detours.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • A pre and post-construction road survey will be completed to document impacts to local roads caused by heavy equipment and increased construction traffic during construction activities, and will be shared with Municipal staff in advance of construction work commencing; • Adherence to seasonal load restrictions. • Damage to local and regional roads as a direct result of construction activities associated with the proposed Project will be repaired. • Where required, a Traffic Control Plan will be developed and shared with local municipalities, as necessary. • Construction haul routes and schedule will be shared with local Municipalities in advance of construction, as necessary. • Construction traffic will access the construction area from the existing road network at specified construction access/egress locations. • Common parking areas will be established for construction crews. • Conductor stringing will utilize rider poles, boom-tipped riders or other protective measures in an effort to avoid road closures and other disruptions during stringing, to the extent practical. • If temporary road or highway closures (e.g., rolling closures) are required during stringing or other construction activities, the construction contractor will coordinate closely with the appropriate road authority to ensure that proper notice is provided and that required signage and traffic controls are utilized. The duration of any temporary closures will be minimized to the extent practical. • Local advertisements (e.g. radio, newspaper, etc.) will be issued and road signage will be erected to provide notification / pre-construction information to area residents on timelines and construction routes, and potential detours, if required. • Traffic control officers or flag persons will be assigned to assist with construction entry/exit, as necessary. 	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Land Use and Communities: Mud and Construction Debris</p>	<p>Construction & Maintenance: Potential for tracking of mud and migration of construction debris to areas outside of the construction zone.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> Roads will be cleaned/scraped to remove mud on an as needed basis. Mud mats will be installed (on an as need basis) as a mechanism to reduce the transport of mud; Vehicles / equipment will be inspected and cleaned as necessary, Construction sites will be kept tidy at all times and waste bins will be available wherever solid wastes are generated. Waste materials will be collected and transported to a licensed or approved waste management facility on a regular basis. General clean site policies will be implemented requiring pick-up and disposal of refuse and construction waste on a regular basis. 	<p>No significant net effects are predicted.</p>
<p>Land Use and Communities: Electric and Magnetic Fields (EMF)</p>	<p>Operation: Potential exposure to increased EMF once the transmission line is energized.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> EMF levels associated with the proposed Project are anticipated to remain significantly lower than the general public exposure limits. The proposed Project will be designed and operated in accordance with appropriate regulatory requirements. 	<p>No significant net effects are predicted</p> <p>Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at extremely low frequencies. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those located just outside the boundaries of power line corridors.</p>
<p>Land Use and Communities: Noise & Vibration</p>	<p>Construction & Maintenance: Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> Construction will be completed in accordance with local noise control by-laws (Municipality of Lakeshore Noise By-Law 106-2007 and Municipality of Chatham-Kent Noise By-Law 178-2017), or applicable exemptions. <p>Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations.</p>	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Physical Environment: Spills</p>	<p>Construction & Maintenance: Potential inadvertent release of deleterious substances including oil, gasoline or other liquids.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Refueling of vehicles and equipment will be completed in a designated location located away from sensitive receptors, such as designated source water protection areas, watercourses, surface drainage features, wetlands, etc. • Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture any accidental release of fluids. • Fuelling operations will require the operator to visually observe the fuelling process 100% of the time. • If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized. • An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities. • Spills will be addressed and remediated as soon as possible after a spill. • Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted. • Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines. • Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas. • Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures. • Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]; and Highly Vulnerable Aquifers [HVAs]) will be avoided or limited, where practical. • ERCA, the LTVCA and/or the Municipality of Lakeshore/County of Essex and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas. • The MECP Spills Action Centre (SAC) will be notified of all reportable spills. 	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources - Physical Environment: Waste Generation</p>	<p>Construction & Maintenance: Solid and/or liquid waste will be generated.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Waste and recyclables will be sorted, segregated and removed to a licensed or approved waste management facilities site and/or recycling facility. • Excess construction materials (i.e., waste, granular fill, clay) will be removed from construction sites and areas on an ongoing basis. • Concrete wash water will not be discharged onto the ground at the Project site. All water from concrete chute washing activities will be contained in leak proof containers or in an approved settling pond. • Liquid and solid sewage wastes held in portable tanks will be removed by a licensed contractor and taken to licensed or approved disposal areas. • Waste materials will be contained and not allowed into sensitive receptors such as waterbodies, riparian areas, wetlands or agricultural fields. • Waste materials will be collected and transported to a licensed or approved waste management facility. • All testing, handling, storage, transport and disposal of waste will be completed in accordance with all applicable legislation. 	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Physical Environment: Excess Materials Management</p>	<p>Construction & Maintenance: Excess materials including topsoil and subsoil, may be produced during site excavations.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • All excess materials will be tested, if necessary, and managed in accordance with O. Reg. 406/19. All efforts will be made to manage soils onsite. • Soil testing to meet the requirements of O. Reg. 406/19, will be completed, if necessary, during geotechnical investigations and prior to or during construction. • If excess soil is deemed to be suitable, Hydro One will work with landowners to explore opportunities for re-use within the property. • Any excess soil required to leave the site will be taken to an approved facility licensed to accept the soil based on its characterization. 	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources – Atmospheric Environment: Climate Change</p>	<p>Construction & Maintenance: Emissions will be generated from vehicles and equipment.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Equipment will be properly serviced and maintained. • Idling of construction vehicles and equipment will be kept to a minimum and GPS or other navigation tools will be used in vehicles to optimize routing. • The transmission line will be designed to adequately withstand the effects of climate change. 	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources - Atmospheric Environment: Air Quality</p>	<p>Construction & Maintenance: Potential for fugitive dust and impacts to air quality from vehicle emissions.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Vehicles will not exceed posted speed limits. • Minimize and stabilize vehicular traffic and exposed soils in high traffic areas with suitable cover material. • Avoid excavation and other construction activities that have the potential to release airborne particulates during excessively windy and prolonged dry periods, to the extent practical. • If excavation or other construction activities with a potential to release airborne particulates must occur during windy conditions, dust controls will be utilized. • Cover or otherwise contain loose construction materials with the potential to release airborne particulates during transport, installation or removal. • Disturbed areas will be restored as soon as practical to minimize duration of soil exposure. • Effective dust suppression techniques, such as on-site watering, will be implemented as necessary. Non-chloride dust suppressants will be used. 	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources – Atmospheric Environment: Noise and Vibration</p>	<p>Construction & Maintenance: Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels. Indirect noise disturbance effects on wildlife during construction can include temporary declines in habitat occupancy, as well as changes to mobility and feeding habitat patterns.</p>	<p>Refer to the mitigation recommended for Noise and Vibration under Land Use and Communities above.</p>	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Surface Water Resources: Soil Rutting & Vegetation Removals</p>	<p>Construction & Maintenance: Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils.</p> <p>Vegetation removals (5.76 ha; of which 2.98 ha is compatible, with transmission lines and will be retained) have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Where practical, activities with potential to cause rutting, ponding/channelization or erosion will be planned during stable and dry ground conditions. • Existing watercourse crossings and constructed access routes will be utilized to the extent practical. • Where required, temporary crossing structures will be installed for construction access at watercourses and other low lying areas and will be removed upon completion of construction; • Existing, natural drainage patterns and flows will be identified and maintained to the extent possible. • Equalization culverts or similar methods may be used in construction of access roads; • Compatible vegetation will be retained and buffered to protect sensitive receptors, where practical. • Machine clearing and grubbing will be restricted near sensitive environmental areas, hand clearing will be required within watercourse banks/riparian areas or in wetlands. • Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required. • Where erosion is of a concern, exposed soils in previously vegetated areas will be re-vegetated as practical, or have other ESC measures (e.g., erosion blankets/coir mats, silt socks, etc.) applied as necessary. • Construction access and laydown areas will be restored following completion of construction. • Cleared vegetation will be relocated to designated areas away from aquatic features. • Equipment operation adjacent to water features will be minimized, where practical. • Works adjacent or around watercourse banks will be conducted during appropriate conditions and times of the year (e.g., dry or frozen conditions), to the extent practical. • ERCA and LTVCA will be consulted (specifically for ESC measures) during detail design. 	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources - Surface Water Resources: Dewatering</p>	<p>Construction: Potential increase in surface water flows resulting from dewatering activities.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Construction water will be discharged in compliance with permits and/or approvals from MECP and the Municipality of Lakeshore/County of Essex and Municipality of Chatham-Kent, as required. • A construction water management plan will be developed prior to construction and implemented appropriately (e.g., passing discharge water through a filter bag or drum before discharge to the environment to capture sediment and slow down the water velocity, etc.), as required. • Where practical, opportunities to maximize retention times and reduce surface flow velocities will be executed. <p>Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Given our current understanding of site conditions, and the helical pile design and installation methodology being proposed for this project and the findings of the geotechnical study, it is not currently anticipated that an EASR or PTTW will be required during construction as any construction-related water taking or discharge is expected to be negligible. As such, major sources of water taking/construction de-watering are not anticipated on the Project.</p>	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Surface Water Resources: Erosion and Sedimentation</p>	<p>Construction: Potential for erosion, sedimentation and soil loss during site preparation and construction.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • An ESC plan will be developed prior to construction and ESC measures will be identified and implemented as required. Measures such as erosion blankets/coir mats, silt socks, etc., or similar, are expected to form part of the ESC plan, where appropriate. • Areas with high erosion potential will be identified and avoided, to the extent practical. • Construction activities near sensitive features or areas may be suspended during extreme wet weather events, and crews will review and consider weather forecasts in their planning of such work. • ESC installations will only be removed after disturbed areas are restored, accumulated sediment has been disposed, and construction activities in the vicinity are completed. • In an effort to reduce potential erosion, mechanical or vegetation erosion control measures will be employed, such as buffer strips, erosion control blankets and sedimentation fences, as required. • Equipment operation on slopes adjacent to streams will be minimized to the extent practical; • Disturbed areas near water features or sensitive environmental areas will be restored as soon as practical. • ESC measures will be regularly inspected (including after each significant rainfall event; >10 mm) and repaired where necessary to maintain functionality. 	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources - Surface Water Resources: Construction work within areas regulated by Conservation Authorities</p>	<p>Construction: Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • ERCA and LTVCA will be consulted during detailed design and construction planning. • Design of the transmission line will avoid or minimize the extent to which transmission towers are located within regulated areas, to the extent practical. • If necessary, a Permit for Development, Interference with Wetlands and Alternation to Shorelines and Watercourses will be obtained through the applicable Conservation Authority (ERCA and LTVCA) prior to construction. • Construction work (e.g., tower construction, temporary construction access) within regulated areas will be conducted during stable (frozen/dry) ground conditions, to the extent practical or isolated with appropriate ESC measures and other environmental mitigation measures. 	<p>No significant net effects are predicted.</p> <p>Permit for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses will be obtained in advance of construction, where necessary.</p>
<p>Natural Environment Resources - Source Water Protection: Source Water Protection (SWP)</p>	<p>Construction and Maintenance: Potential for contamination of surface water through spills or leaks.</p>	<p>Refer to the mitigation recommended for Spills under Physical Environment.</p>	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources - Source Water Protection: Source Water Protection (SWP)</p>	<p>Construction and Maintenance: Potential for impacts to designated surface water Intake and Wellhead Protection Area(s) and Significant Groundwater Recharge Areas.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • The Project will comply with relevant legislation and policies such as: Clean Water Act, Provincial Policy Statement, Official Plans, and Source Water Protection Plans. 	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
Natural Environment Resources - Source Water Protection: Source Water Protection (SWP)	Construction: Potential for impacts to private drinking water wells.	In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects: <ul style="list-style-type: none"> • Municipal wells and local private water wells within the area are not anticipated to be affected in any measurable way by potential construction dewatering of tower foundation holes or excavations from tower construction. • The majority of wells exploit aquifer(s) that are at much greater depth than the proposed tower excavations. In the event dewatering activities create a minor radius of influence, shallow well aquifers, groundwater levels and flows are expected to return to pre-construction conditions during the construction period. 	No significant net effects are predicted.
Natural Environment Resources - Groundwater Resources: Groundwater Quality	Construction: Disturbance of contaminated soil has the potential to contribute to groundwater contamination.	Refer to the mitigation recommended for Spills and Excess Materials Management under Physical Environment.	No significant net effects are predicted.
Natural Environment Resources - Groundwater Resources: Groundwater Quantity	Construction: Disturbance and compaction to soil has the potential to inhibit infiltration.	Refer to mitigation recommended for Soil Compaction under Agricultural Resources.	No significant net effects are predicted.
Natural Environment Resources - Groundwater Resources: Groundwater Quantity	Construction: Dewatering activities / removal of groundwater have the potential to result in temporary lowering of aquifers.	Refer to mitigation recommended for Dewatering under Surface Water Resources. Additional mitigation recommended includes: <ul style="list-style-type: none"> • If deemed necessary, a hydrogeological assessment will be conducted to inform construction planning, permitting and management. • A construction water management plan will be developed prior to construction. • Groundwater resources within the area are not anticipated to be adversely affected by dewatering of tower foundation holes or excavations from tower construction. Such effects will cease upon the completion of construction dewatering. Based on geotechnical data that has been collected following the Class EA draft ESR submission, it has been confirmed by the design team that helical piles will be used for all transmission tower foundations on the Project. Helical piles use a rotary installation and do not produce impact vibrations like traditional driven piles, and involve less overall ground disturbance (excavation of soil and potential for construction dewatering) than augered concrete footing foundations. Additionally, based on the current geotechnical data and the preliminary helical pile designs, pile embedment depths are anticipated to be relatively shallow (9-12 m below ground surface) vs other foundation types (e.g., driven pile), and are not anticipated to be installed to bedrock depths. Given our current understanding of site conditions, and the helical pile design and installation methodology being proposed for this Project and the findings of the geotechnical study, it is not currently anticipated that an EASR or PTTW will be required during construction as any construction-related water taking or discharge is expected to be negligible. As such, major sources of water taking/construction de-watering are not anticipated on the Project.	No significant net effects are predicted.

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Designated or Special Natural Areas: Important Bird Area (IBA)</p>	<p>Construction and Operation: Potential for bird collisions within the Eastern Lake St. Clair IBA.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • The majority of the area of the IBA that is traversed by the proposed Project will involve replacement of an existing idle 115 kV transmission line. • Visual mitigation measures (e.g., bird diverters and/or similar measures) will be incorporated during detailed design as a mechanism to improve bird visibility of the transmission line within the IBA. • In support of detailed design, a review of potential wildlife habitat associated with the transmission line ROW will be used to identify locations for potential visual mitigation measures. • Towers and access roads will be located to avoid sensitive habitats, where practical. • Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. • In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements. 	<p>No significant net effects are predicted.</p>
<p>Natural Environment Resources - Designated or Special Natural Areas: Significant Woodlands</p>	<p>Construction: Removal of portions of woodlands (transition to compatible vegetation) within the ROW. Woodland removal is associated with the following communities: -FODM9-4 (less than 0.001 ha) -WOD (0.94 ha)</p> <p>Maintenance: Vegetation management within the ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical. • Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical. • Incompatible vegetation will be salvaged or felled as appropriate. • Conduct tree removals associated with woodlands outside of the migratory bird breeding season (i.e., April 5 through August 31, zone C1 as provided by ECCC 2018) and the bat active season (i.e. April 1 through September 30), where practical. • In the event vegetation clearing is required during the breeding bird season, nest searches will be conducted by a qualified person in accordance with applicable provincial and federal requirements. • In the event woodlands with the potential to support bats require tree removals, bat acoustic surveys will be completed during the month of June in accordance with agency approved protocols to determine Species at Risk (SAR) bat habitat use (or lack thereof). Where acoustic surveys confirm SAR bat habitat use, the MECP will be consulted regarding permitting/approvals next steps under the Endangered Species Act, 2007 (ESA). • Snags (dead standing trees) and cavity trees that do not pose a risk to the operation of the transmission line will be identified and retained. 	<p>Net effects include permanent removal of incompatible vegetation (portions of woodland) to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative to offset habitat loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Natural Heritage Features: Vegetation</p>	<p>Construction & Maintenance: Removal of 5.76 ha (2.98 ha compatible, and 2.78 ha of incompatible vegetation with transmission lines) of vegetation within proposed activity work areas. Up to 2.98 ha of compatible vegetation will be retained, where practical.</p>	<p>Refer to mitigation recommended for Hedgerows and Windbreak under Agricultural Resources and IBA and Significant Woodlands under Designated or Special Natural Areas. Additional recommended mitigation includes:</p> <ul style="list-style-type: none"> • Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary. • Non-salvageable limbs will be disposed of by chipping or removal to designated areas. • Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical. • Isolated trees (i.e., not associated with woodlands) identified as having the potential to support bats will be removed outside of the bat active season (i.e. April 1 through September 30). • In the event isolated trees with the potential to support bats require removal during the bat active season, exit surveys will be completed following agency approved protocols. Where surveys confirm no habitat use, the isolated tree(s) can be removed. In the event habitat use is confirmed, removals will be completed between October 1 and March 31. 	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>
<p>Natural Environment Resources - Natural Heritage Features: Vegetation</p>	<p>Construction: Accumulation of cleared vegetation.</p>	<p>In addition to the applicable mitigation outlined above, the following additional mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Essex County and the Municipality of Chatham-Kent are designated areas by the Canadian Food Inspection Agency (CFIA) prohibiting the movement of Ash firewood and wood Ash products. As such, wood waste will be managed in accordance with federal requirements and best practices. 	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Natural Heritage Features: Fish and Fish Habitat</p>	<p>Construction & Maintenance: Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc.</p>	<p>Refer to mitigation recommended for Spills under Physical Environment. Additional mitigation includes:</p> <ul style="list-style-type: none"> • The creation of new water crossings during construction will be avoided to the extent feasible by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of watercourses/drains, where practical. • Construction access, laydown and work areas will be planned to avoid waterbodies and potential fish habitat to the extent practical (e.g., maintaining distance from watercourse banks except where crossings exist or are required). • Any disturbance to waterbodies, shorelines, riparian areas, etc. will be stabilized to prevent erosion immediately. • An ESC plan will be developed to include mitigation measures such as constructing watercrossings during low flow conditions, retaining compatible stream bank vegetation, use of ESC during construction and restoration, and storing materials away from sensitive receptors (e.g., watercourses, drains, wetlands). • Project wastes will be stored and/or removed from all riparian areas immediately. • Disturbed areas will be restored to a pre-disturbed state or better, upon completion of construction, • If permanent or temporary works are required below the high water mark of a watercourse with potential fish habitat, a Request for Review will be prepared and submitted to the DFO in support of a Letter of Advance and/or approvals under the Fisheries Act, • Transmission line structures will be set back from watercourse banks and located outside of regulatory floodplains, to the extent practical, • Work will be conducted in accordance with a permit from the applicable Conservation Authority when working within their regulated area. 	<p>No significant net effects are predicted.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above where there is opportunity to create and/or enhance aquatic habitat.</p>
<p>Natural Environment Resources - Natural Heritage Features: Woodlands</p>	<p>Construction: Removal of woodlot (transition to compatible vegetation) within the transmission ROW. Woodland removal is associated with the following communities: FODM9-4 (0.06 ha) -WOD (1.37 ha)</p> <p>Maintenance: Vegetation management within the transmission ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.</p>	<p>Refer to mitigation recommended for Significant Woodlands under Designated or Special Natural Areas.</p>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Natural Heritage Features: Wetlands</p>	<p>Construction: Potential impacts to wetlands as a result of vegetation loss, soil erosion, sedimentation, etc. Wetland effects are associated with the following community: -SWDM4-2 (0.49 ha).</p>	<p>Refer to mitigation recommended for Spills under Physical Environment, Soil Rutting & Vegetation Removal under Surface Water Resources and Significant Woodland under Designated or Special Natural Areas.</p>	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Natural Heritage Features: Species at Risk (SAR)</p>	<p>Construction & Maintenance: Potential disturbance or loss of SAR and/or SAR habitat.</p>	<p>Refer to mitigation recommended for Soil Rutting & Vegetation Removal under Surface Water Resources, Significant Woodland under Designated or Special Natural Areas and Vegetation under Natural Heritage Features. Additional mitigation includes:</p> <ul style="list-style-type: none"> • Impacts to potential SAR habitat will be avoided, where possible. In the event impacts cannot be avoided, MECP will be consulted regarding permitting/approval requirements under the ESA during detailed design. • Boundaries of SAR habitats will be identified and flagged off and protected, • To the extent possible, incompatible vegetation/trees with the potential to provide SAR habitat will be removed/trimmed to the extent that they no longer pose a risk to overhead transmission lines while still maintaining their potential SAR habitat characteristics. Alternatively, incompatible vegetation will be replaced with compatible vegetation to maintain SAR habitat, • Snags (dead standing trees) and cavity trees with the potential to provide SAR habitat that do not pose a risk to the operation of the transmission line will be identified and retained to the extent practical, • Construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within the general work areas, • Should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat, • In the event the proposed Project has the potential to impact Barn Swallow nesting habitat, the activity qualifies for registration under Section 23 of Ontario Regulation 242/08, • If avoidance of SAR and/or SAR habitat is not possible, MECP and/or DFO will be consulted to mitigate the impact of the activities and/or assess the need for permitting/approvals under the ESA, SARA or the Fisheries Act, • If as SAR is harmed or killed as a result of work activities, the MECP will be notified and the relevant work activities will cease within the immediate area until the species has been removed by personnel authorized to handle SAR, • SAR observed during construction activities will be reported to the MECP. 	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary. As per the comments received from the MECP on the draft ESR, adherence to the timing windows for SAR bats and Eastern Foxsnake are sufficient mitigation measures to avoid permitting under Endangered Species Act.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Natural Environment Resources - Natural Heritage Features: Wildlife Habitat</p>	<p>Construction & Operation: Potential disturbance or loss of wildlife habitat, including habitat fragmentation.</p>	<p>Refer to mitigation recommended for Significant Woodland under Designated or Special Natural Areas and Vegetation under Natural Heritage Features. Additional mitigation includes:</p> <ul style="list-style-type: none"> • Boundaries of important wildlife habitats will be identified and flagged prior to clearing. • Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person. • Promotion of wildlife habitat through vegetation control and brush piles. • Birds of prey may construct stick nests on transmission structures. Osprey nests are most common on transmission structures, but Bald Eagle nests are occasionally encountered. If there are eggs or young in the nest, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern to be addressed. If there are no eggs or young observed, the nest will be removed and replaced. • Construction personnel will be aware of the potential for wildlife which may be encountered within the general work areas. 	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Hydro One will undertake a Biodiversity Initiative as outlined above.</p>
<p>Natural Environment Resources - Natural Heritage Features: Invasive Species</p>	<p>Construction: Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.</p>	<p>Refer to mitigation recommended for Agricultural Resource effects. Additional mitigation includes:</p> <ul style="list-style-type: none"> • Construction crews will be educated on the importance of avoiding inadvertent spread of invasive species, and to identify the invasive species that are known to occur or are likely to occur within work areas. • Areas identified as having invasive species present will be considered during access and construction planning. Stands of invasive plant species will be avoided to the extent practical during construction. • Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of invasive species propagules. • Crews will be educated and informed of invasive species known or with potential to occur in work areas. • Special treatment areas (e.g., invasive species) will be designated and tracked for future maintenance works. 	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Anishnawbek and Haudenosaunee Lands and Territory</p>	<p>All Phases Potential to affect First Nations and Haudenosaunee interests. See Tables 7-2 and 7-3 for effects and mitigation tables relating to the VCs as described in the CFN TEK study and COTTFN CRS.</p>	<ul style="list-style-type: none"> Some communities expressed interest in being involved with future archaeological and natural environment field work. Hydro One and its consulting archaeologist will work with interested communities to include representatives from interested communities in archaeological and environmental fieldwork. Anishnawbek and Haudenosaunee communities will be provided opportunities to review the findings of archaeological field surveys and archaeological assessment reports. If archaeological artefacts are encountered during construction, work in the vicinity will cease and a licensed archaeologist will be engaged immediately to ensure compliance with the provincial Heritage Act. Hydro One understands that Bald Eagles are considered sacred. Bald Eagles occasionally build nests on transmission line structures; if there are eggs or young in the nest, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern to be addressed. If there are no eggs or young, the nest will be removed and replaced. Should Hydro One become aware of a deceased Bald Eagle along the transmission line corridor, we will note their location and inform interested communities, in the event that they would like to provide a ceremony. Several communities have expressed a desire to protect and mitigate adverse effects to natural environment features such as SAR, wildlife and aquatic habitat, and natural or naturalized areas with their traditional territory that could be used for hunting, gathering, harvesting or other traditional uses. Mitigation measures to address effects to these features are described above under Natural Heritage Features. A community expressed concerns regarding potential effects to nearby projects which generate revenue for the community. Hydro One does not believe that these projects will be interrupted by the proposed Project, as the eventual in-servicing of the future Lakeshore TS will serve to avoid or mitigate any potential temporary outages required to the transmission circuits connecting these facilities as a result of construction of the proposed Project. Some communities are currently conducting Traditional Ecological Knowledge (TEK) studies. Should these communities wish to share some or all of the findings of these studies with Hydro One and the construction contractor, this information will be taken into consideration during the construction planning of the proposed Project to the extent practical. This may include working with private landowners to provide potential opportunities to harvest traditional use plant species ahead of construction, or to provide input into post-construction restoration plans for natural or naturalized areas. Some communities have expressed an interest in participating in the Biodiversity Initiative that Hydro One is committing to for the proposed Project, which will seek opportunities to create or enhance habitats to offset any adverse effects to habitats as a result of the Project. Hydro One will involve interested communities in the Biodiversity Initiative, including potential incorporation of TEK where that information is willingly provided. Based on input received from COTTFN during the draft ESR review period, Hydro One is committed to supporting COTTFN land use planning initiatives, including traditional plant rehabilitation efforts, for example through opportunities to participate in the Biodiversity Initiative for the project. 	<p>No significant net effects are predicted.</p>
<p>Recreational Resources</p>	<p>Construction & Maintenance: Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.).</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> Disturbance to existing recreational resources will be avoided, to the extent practical. Safety precautions will be utilized throughout the Project area to protect the public such as anti-climbing devices and appropriate signage, where necessary. 	<p>No significant net effects are predicted.</p> <p>Hydro One will commit to working with local Municipalities to identify community benefit opportunities to enhance the broader landscape.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Visual and Aesthetic Resources: Visibility of the Project by Sensitive Receptors</p>	<p>All Phases Potential visual impacts to sensitive receptors with views of the Project.</p>	<p>Location of transmission structures is one of the largest factors influencing the visual effects to specific receptors. Design of the transmission line (e.g., placement of structure locations) will consider visibility to nearby sensitive receptors.</p>	<p>Construction of the new transmission structures will result in a visual change to the landscape.</p> <p>Hydro One will commit to working with local Municipalities to identify community benefit opportunities to enhance the broader landscape.</p>
<p>Technical Considerations: Wind Turbines</p>	<p>Construction & Operation: The transmission line will be constructed and operated within proximity to adjacent established wind energy facilities, including turbines and overhead or buried collector lines.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Direct impacts to existing wind energy facilities or their transmission lines are not anticipated as part of the Project. • Contact will be maintained with wind facility operators regarding work schedule and other items of interest. 	<p>No significant net effects are predicted.</p>
<p>Technical Considerations: Infrastructure Crossings</p>	<p>All Phases: Permanent overhead crossing of Highway 401, Highway 77 and Highway 40 (Communication Road), as well as construction of a new transmission line parallel to Highway 401 and other highways, including municipal roads.</p>	<p>Refer to mitigation recommended for Local Roads & Traffic under Land Use Communities. Additional mitigation includes:</p> <ul style="list-style-type: none"> • Permanent impacts to Highway 401 or any other municipal road crossings are not anticipated as part of this project. • Temporary or rolling closure of Highway 401 may be required to facilitate stringing, and duration of any temporary closures will be minimized to the extent practical. • Where the new transmission line parallels the Highway 401, setback distances provided by the MTO will be respected. • Work within the MTO Highway 401 ROW will require an Encroachment Permit and consultation and input from Ministry staff during design. • Works within 400m of a 400-series highway will require a Land Use permit from the MTO. Site specific traffic control plans will be developed to accommodate crossings. 	<p>No significant net effects are predicted.</p>
<p>Technical Considerations: Infrastructure Crossings</p>	<p>Construction: Underground utility crossing.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Equipment with low bearing capacity will be used, where feasible. • Temporary access roads and work pads will be built using mats or geotextile and crushed rock, and/or other protective measures will be implemented as deemed necessary. • Contact will be maintained with applicable utility operators regarding work schedule and other items of interest. 	<p>No significant net effects are predicted.</p>
<p>Technical Considerations: Infrastructure Crossings</p>	<p>Construction and Operation, Permanent overhead crossing of the existing railway line ROWs.</p>	<p>The following mitigation is recommended to address these potential effects:</p> <ul style="list-style-type: none"> • Temporary flagging operations of railway lines may be required to facilitate construction of the aerial crossing. • Hydro One will work with applicable rail authorities during design. 	<p>No significant net effects are predicted.</p>

Environmental Concern	Project Phase & Potential Effects	Mitigation Measures	Net Effects
<p>Technical Considerations: Infrastructure Crossings</p>	<p>All Phases Crossings of constructed drains.</p>	<p>Refer to applicable mitigation recommended for Fish and Fish Habitat under Natural Heritage Features and Spills under Physical Environment. Additional mitigation includes:</p> <ul style="list-style-type: none"> • Municipal drainage superintendents will be consulted during design and construction planning, to discuss any potential effects to municipal drains. • Placement of transmission structures will avoid Municipal drains to the extent practical. • The creation of new crossings during construction will be avoided to the extent practical by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of drains, where feasible. • Disturbed areas will be restored to a pre-disturbed state or better, where feasible. 	<p>No significant net effects are predicted.</p>

Table 7-2 Caldwell First Nation – Valued Components, Summary of Potential Effects, Mitigation Measures and Residual Effects

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Water and Fishing</p>	<p>Watercourse crossings: The Project does not directly cross the Thames River. Crossings of many watercourses (such as Jeannette's creek) will involve replacement of an idle 115 kV transmission, such that the new ROW may be wider but will not represent a "brand new" watercourse crossing.</p> <p>Watercourses will be spanned by overhead transmission and in-channel works are generally not required, unless crossings (e.g., temporary construction crossings) cannot otherwise be avoided. Any new construction crossings will be temporary in nature.</p> <p>Some riparian areas with incompatible vegetation (e.g., trees) within the new or expanded ROW will have this vegetation removed, although compatible riparian vegetation (e.g., shrubs, grasses, sedges etc) will be retained and restored.</p>	<ul style="list-style-type: none"> • The creation of new water crossings during construction will be avoided to the extent feasible by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of watercourses/drains, where practical. • Construction access, laydown and work areas will be planned to avoid waterbodies and potential fish habitat to the extent practical (e.g., maintaining distance from watercourse banks except where crossings exist or are required). • Any disturbance to waterbodies, shorelines, riparian areas, etc. will be stabilized to prevent erosion immediately. • Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical. • Machine clearing and grubbing will be restricted near sensitive environmental areas, hand clearing will be required within watercourse banks/riparian areas or in wetlands. • Project wastes will be stored and/or removed from all riparian areas immediately. • Disturbed areas will be restored to a pre-disturbed state or better, using native species, upon completion of construction. • If permanent or temporary works are required below the high water mark of a watercourse with potential fish habitat, a Request for Review will be prepared and submitted to the DFO in support of a Letter of Advance and/or approvals under the <i>Fisheries Act</i>. • Transmission line structures will be set back from watercourse banks and located outside of regulatory floodplains, to the extent practical. • Work will be conducted in accordance with a permit from the applicable Conservation Authority when working within their regulated areas. 	<p>While there will be a change to some riparian areas (removal of incompatible vegetation and transition to compatible vegetation), any net effects to fish or fishing and other uses of waterways are predicted to be very localized to the transmission line corridor and minor in nature. Disturbed or altered vegetated areas will be restored following construction with native species, and Indigenous communities will have opportunities to provide input into the restoration plans.</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative to create or enhance habitats such as aquatic and riparian habitats. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Water and Fishing</p>	<p>During construction, work near watercourses/riparian areas (including the construction of temporary watercourse crossings) has the potential to cause erosion or sedimentation of watercourses.</p>	<ul style="list-style-type: none"> • An Erosion and Sediment Control (ESC) ESC plan will be developed to include mitigation measures such as constructing watercourse crossings during low flow conditions, retaining compatible stream bank vegetation, use of ESC during construction and restoration, and storing materials away from sensitive receptors (e.g., watercourses, drains, wetlands). • Where erosion is of a concern, exposed soils in previously vegetated areas will be re-vegetated as practical, or have other ESC measures applied as necessary. • Areas with high erosion potential will be identified and avoided, to the extent practical; • Where practical, activities with potential to cause rutting, ponding/channelization or erosion will be planned during stable and dry ground conditions. • Where required, temporary crossing structures will be installed for construction access at watercourses and other low-lying areas and will be removed upon completion of construction. • Existing, natural drainage patterns and flows will be identified and maintained to the extent possible. • Equalization culverts or similar methods may be used in construction of access roads. • Construction access and laydown areas will be restored following completion of construction. • Cleared vegetation will be relocated to designated areas away from aquatic features. • Equipment operation adjacent to water features will be minimized, where practical. • Works adjacent or around watercourse banks will be conducted during appropriate conditions and times of the year (e.g., dry or frozen conditions), to the extent practical. • Construction activities near sensitive features or areas may be suspended during extreme wet weather events, and crews will review and consider weather forecasts in their planning of such work. • ESC installations will only be removed after disturbed areas are restored, accumulated sediment has been disposed, and construction activities in the vicinity are completed. • In an effort to reduce potential erosion, mechanical or vegetation erosion control measures will be employed, such as buffer strips, erosion control blankets and sedimentation fences, as required. • Equipment operation on slopes adjacent to streams will be minimized to the extent practical. • Waste materials will be contained and not allowed into sensitive receptors such as waterbodies, riparian areas, wetlands or agricultural fields. • Disturbed areas near water features or sensitive environmental areas will be restored as soon as practical, using native species and with opportunities for Indigenous communities to provide input into the restoration plans. • ESC measures will be regularly inspected (including after each significant rainfall event; >10 mm) and repaired where necessary to maintain functionality. 	<p>Erosion and sediment control measures have proven to be effective at controlling these issues, and are only required temporarily during the construction phase of the project, and will be regularly inspected and repaired as required. Any sedimentation or erosion effects that do occur will be temporary in nature and therefore effects on the fish population and human health are anticipated to be minor and short-term in duration (i.e., during the construction stage of the project).</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
Water and Fishing	During construction, there is the potential for inadvertent release of deleterious substances including oil, gasoline or other liquids (i.e., spills)	<ul style="list-style-type: none"> • Refueling of vehicles and equipment will be completed in a designated location located away from sensitive receptors, such as designated source water protection areas, watercourses, surface drainage features, wetlands, etc. • Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture any accidental release of fluids. • Fuelling operations will require the operator to visually observe the fuelling process 100% of the time. • If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized. • An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities. • Spills will be addressed and remediated as soon as possible after a spill. • Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted. • Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines. • Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas. • Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures. • Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]; and Highly Vulnerable Aquifers [HVAs]) will be avoided or limited, where practical; • ERCA, the LTVCA and/or the Municipality of Lakeshore/County of Essex and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas. • The MECP Spills Action Centre (SAC) will be notified of all reportable spills. 	Given the protections that will be utilized during construction to prevent spills and the response procedures that will be developed to address minor spills during construction should they occur, no significant net effects on fisheries and water quality are anticipated.
Water and Fishing	During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line.	<ul style="list-style-type: none"> • Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices. • Restoration with compatible native vegetation species will compete with incompatible species that require treatment, and will help to reduce and/or postpone the eventual need for vegetation management of incompatible species. Indigenous communities will be provided opportunities to provide input into the restoration plans. 	No significant net effects are anticipated, due to the relatively small areas of the new CxL transmission line corridor that currently contain incompatible vegetation (areas that may require vegetation management during operation of the line) and adherence to the appropriate standards and protocols during application of herbicides.

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Water and Fishing</p>	<p>Effects to waterbodies from Agricultural practices: Hydro One does not control individual farmers' practices on their fields, and as such cannot influence factors which may affect the overall quality of runoff from agricultural fields.</p> <p>During construction there may be some temporary effects to existing agricultural drainage infrastructure.</p> <p>During construction, a project-specific Weed Control Plan will be developed in consultation with landowners prior to construction, as necessary. The transmission ROW will be monitored for establishment of weeds until the Project is completed, and corrective measures for managing weeds may include herbicide application, mowing, and hand pulling. Weed control during construction will be conducted by the construction contractor.</p>	<ul style="list-style-type: none"> • The Weed Control Plan will be managed by an Ontario Professional Agrologist to meet the requirements of the municipal and land use authority. • The mitigation measures listed above for Fishing and use of waterways will serve to address surface water quality affects from construction in general. 	<p>Overall, the CxL project will not significantly affect or contribute to agricultural impacts to water quality, as any use of herbicides or pesticides through the weed control plan for construction would be very small in comparison to existing uses on surrounding agricultural fields. Any additional effects from the project are expected to be temporary in nature (i.e., during the construction phase only)</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative that could include opportunities that address the issue of confidence of community members to practice their rights in areas of agricultural land use, by enabling the creation of, or enhancements to habitats in and adjacent to existing natural features and designated areas or within communities and Reserve lands.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Hunting and Trapping</p>	<p>Removal of vegetation (potential habitat for wildlife). The new transmission line ROW could result in the removal of plant species that could interfere with the safe operation of transmission towers/lines, changing the characteristics of the habitat in areas of predominantly incompatible vegetation (e.g., wooded areas).</p>	<p>During project construction activities, the following would be taken into consideration as a mechanism to avoid and/or mitigate impacts to wildlife habitat:</p> <ul style="list-style-type: none"> • Retention of snags and cavity trees with potential to support bats where feasible. • General avoidance of wildlife habitats, where practical. • Retention of natural vegetation, where practical. • Use of native plant species where restoration seeding or planting is completed. • Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary. • Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical. • Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required. Communities will have opportunities to review and provide input into restoration/revegetation plans (e.g., species selection). • Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements. • The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical. • Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical. • Boundaries of important wildlife habitats will be identified and flagged prior to clearing. • Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person. • Promotion of wildlife habitat through vegetation control and brush piles; • Construction personnel will be aware of the potential for wildlife which may be encountered within the general work areas. • Areas where incompatible vegetation is removed for the new ROW, will be restored following construction with compatible native species. • There may be potential opportunities to harvest traditional use plant species and wild foods ahead of construction. This may require permission from private landowners as well as coordination between several communities (if interested), and Hydro One can help to facilitate these opportunities where they may exist or be identified by communities. 	<p>Effects are expected to include the permanent removal of vegetation that at maturity could compromise the safe operation of the transmission line; these removals represent a very small portion of the new/expanded transmission line corridor as the majority of the new corridor will occur on agricultural fields, and the preferred route has low overall effects to the type of vegetation of concern when compared to other route alternatives. The total amount of expected incompatible vegetation removal will be documented in the final ESR.</p> <p>The removal of unsafe vegetation will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible, and could still provide habitat (e.g., early successional habitat types) for species of importance to Caldwell FN as mentioned in the TEK study (deer, muskrat, rabbit and other fur-bearing species etc). Hydro One will work with Indigenous communities to identify desired species (eg. wild food and medicines) that can be included in post-construction restoration plantings.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Hunting and Trapping</p>	<p>There is potential for the project to disturb Species at Risk (SAR), and to cause a loss of SAR habitat (or transition to other habitat types which do not provide the same habitat values)</p>	<p>In addition to the mitigation measures mentioned above relating to terrestrial and aquatic habitats in general, the following specific mitigation measures will be utilized to address potential SAR habitat:</p> <ul style="list-style-type: none"> • Impacts to potential SAR habitat will be avoided, where possible. In the event impacts cannot be avoided, MECP will be consulted regarding permitting/approval requirements under the ESA during detailed design. • Boundaries of SAR habitats will be identified and flagged off and protected. • To the extent possible, incompatible vegetation/trees with the potential to provide SAR habitat will be removed/trimmed to the extent that they no longer pose a risk to overhead transmission lines while still maintaining their potential SAR habitat characteristics. Alternatively, incompatible vegetation will be replaced with compatible vegetation to maintain SAR habitat. • Snags (dead standing trees) and cavity trees with the potential to provide SAR habitat that do not pose a risk to the operation of the transmission line will be identified and retained to the extent practical. • Construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within the general work areas. • Should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat. • In the event the proposed Project has the potential to impact Barn Swallow nesting habitat, the activity qualifies for registration under Section 23 of Ontario Regulation 242/08. • If avoidance of SAR and/or SAR habitat is not possible, MECP and/or DFO will be consulted to mitigate the impact of the activities and/or assess the need for permitting/approvals under the ESA, SARA or the Fisheries Act. • If as SAR is harmed or killed as a result of work activities, the MECP will be notified and the relevant work activities will cease within the immediate area until the species has been removed by personnel authorized to handle SAR. • SAR observed during construction activities will be reported to the MECP. 	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible.</p> <p>Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p> <p>The Biodiversity Initiative for the project will include projects involving the creation and enhancement of natural habitats, including potential SAR habitats. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Hunting and Trapping</p>	<p>There is potential for birds to collide with the overhead transmission, and the overhead transmission traverses a portion of the Lake St. Clair Important Bird Area (IBA).</p>	<ul style="list-style-type: none"> • The majority of the area of the IBA that is traversed by the proposed Project will involve replacement of an existing idle 115 kV transmission line. • Visual mitigation measures (e.g., bird diverters and/or similar measures) will be incorporated during detailed design as a mechanism to improve bird visibility of the transmission line within the IBA; • In support of detailed design, a review of potential wildlife habitat associated with the transmission line ROW will be used to identify locations for potential visual mitigation measures. • Towers and access roads will be located to avoid sensitive habitats, where practical. • Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. • In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements. Should active nests be identified, protective buffers will be utilized to ensure the nests are not disturbed until young have fledged. • Birds of prey may construct stick nests on transmission structures. Osprey nests are most common on transmission structures, but Bald Eagle nests are occasionally encountered. If there are eggs or young in the nest, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern to be addressed. If there are no eggs or young observed, the nest will be removed and replaced. • Construction personnel will be aware of the potential for wildlife which may be encountered with the within the general work areas. 	<p>Overhead transmission lines have potential for bird collisions, and while installation of visual mitigation (bird diverters) in key areas has been proven to be effective at reducing the number of these collisions, there remains the potential that some birds may collide with the transmission line. Approximately one third of the new transmission line, including the majority of the distance within the Lake St. Clair IBA, consists of an existing idle transmission line which will be removed and replaced by the new transmission line, such that this section does not represent a new feature on the landscape but rather an incremental increase in size of an existing feature. As a result, no significant effects to the migratory bird population, migratory bird habitat, or bird harvesting, are anticipated.</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative to create or enhance habitats, which will contribute to availability of bird habitat in the region. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Plants and medicines</p>	<p>The new transmission line ROW would remove species that at maturity would be unsafe during transmission line operations and restore with compatible species, so any plant medicines found in forested areas would be negatively affected but species that utilize meadow/thicket habitats may be positively affected.</p> <p>Some berry species and other species mentioned by Caldwell FN in the TEK study such as Stinging nettle may benefit from additional thicket/meadow communities and forest edges created along the ROW. Sweetgrass was not identified during the vegetation inventory along the preferred route.</p>	<ul style="list-style-type: none"> • Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary. • Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical. • Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required. Communities will have opportunities to review and provide input into restoration/revegetation plans (e.g., species selection). • Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements. • The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical. • Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical. • Boundaries of important wildlife habitats will be identified and flagged prior to clearing; • Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person. • Promotion of wildlife habitat through vegetation control and brush piles; • Areas where incompatible vegetation is removed for the new ROW, will be restored following construction with compatible native species with opportunities for Indigenous communities to provide input into the restoration plans. • There may be potential opportunities to harvest traditional use plant species and wild foods ahead of construction. This may require permission from private landowners as well as coordination between several communities (if interested), and Hydro One can help to facilitate these opportunities where they may exist or be identified by communities. This may include opportunities to collect seeds or fruit (e.g., black walnut), as large trees are not able to be transplanted. 	<p>Net effects include permanent removal of vegetation that at maturity could compromise the safe operation of the transmission line; these removals represent a very small portion of the new/expanded transmission line corridor as the majority of the new corridor will occur on agricultural fields, and the preferred route has low overall effects to incompatible vegetation when compared to other route alternatives. The total amount of expected vegetation removal will be documented in the final ESR.</p> <p>The removal of unsafe vegetation will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is unsafe for transmission line operations, to vegetation that is compatible. Hydro One will work with Indigenous communities to identify desired species (eg. wild food and medicines) that can be included in post-construction restoration plantings.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>
<p>Plants and medicines</p>	<p>During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line.</p>	<ul style="list-style-type: none"> • Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices. • Restoration with compatible vegetation species will compete with incompatible species that require treatment, and will help to reduce and/or postpone the eventual need for vegetation management of incompatible species. Indigenous communities will have opportunities to provide input into restoration plans. 	<p>Any residual effects are anticipated to be very minor, due to the relatively small areas of the new CxL transmission line corridor that currently contain incompatible vegetation (areas that may require vegetation management during operation of the line) and adherence to the appropriate standards and protocols during application of herbicides.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Plants and medicines</p>	<p>During construction, there is the potential for inadvertent release of deleterious substances including oil, gasoline or other liquids (i.e., spills)</p>	<ul style="list-style-type: none"> • Refueling of vehicles and equipment will be completed in a designated location located away from sensitive receptors, such as designated source water protection areas, watercourses, surface drainage features, wetlands, etc. • Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture any accidental release of fluids. • Fuelling operations will require the operator to visually observe the fuelling process 100% of the time. • If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized. • An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities. • Spills will be addressed and remediated as soon as possible after a spill. • Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted. • Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines. • Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas. • Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures. • Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]; and Highly Vulnerable Aquifers [HVAs]) will be avoided or limited, where practical. • ERCA, the LTVCA and/or the Municipality of Lakeshore/County of Essex and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas. • The MECP Spills Action Centre (SAC) will be notified of all reportable spills. 	<p>Given the protections that will be utilized during construction to prevent spills and the response procedures that will be developed to address minor spills during construction should they occur, no significant net effects to fisheries or water quality are anticipated.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Plants and medicines</p>	<p>Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.</p>	<ul style="list-style-type: none"> • Construction crews will be educated on the importance of avoiding inadvertent spread of invasive species, and to identify the invasive species that are known to occur or are likely to occur within work areas. • Areas identified as having invasive species present will be considered during access and construction planning. Stands of invasive plant species will be avoided to the extent practical during construction. • Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of invasive species propagules. • Crews will be educated and informed of invasive species known or with potential to occur in work areas. • Special treatment areas (e.g., invasive species) will be designated and tracked for future maintenance works. • Native plant species will be used to restore vegetated areas disturbed by construction activities, with opportunities for Indigenous communities to provide input into the restoration plans. 	<p>No significant increases (if any) of invasive species are anticipated, largely due to the relatively small areas of natural vegetation affected by the project and the low existing prevalence of invasive species in the surrounding landscape. Hydro One will work with Indigenous communities to identify species of interest that could be utilized during post-construction restoration plantings, to establish native species plant cover.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative for the project that may include projects which involve inventory, control and/or removal of certain invasive species as a form of habitat enhancement. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>
<p>Cultural Continuity and Sense of Place</p>	<p>Decreased number of places to practice harvesting and cultural activities, including knowledge transfer between generations.</p>	<p>While we acknowledge the concerns raised by Caldwell FN regarding future increases in land development in southwestern Ontario, the CxL project does not directly affect the ability of community members to access areas of interest for traditional uses.</p> <p>Hydro One will also be implementing a Biodiversity Initiative as part of the Chatham x Lakeshore project, to create or enhance habitat to offset the effects of the project to natural habitats and wildlife. Hydro One would welcome Caldwell FN's participation in the Biodiversity Initiative and the habitat creation/enhancement initiatives funded through the initiative may also serve to support wildlife populations or even create/enhance natural areas in which Caldwell FN members can exercise their Aboriginal and treaty rights into the future.</p>	<p>Given the low amount of natural habitat that will be removed or disturbed, the effect on access to lands for traditional uses is not considered significant. In addition, communities will be provided the opportunity to identify native species of interest to be used in the restoration of areas disturbed by construction.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative for the project that may include projects which involve inventory, control and/or removal of certain invasive species as a form of habitat enhancement. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

CFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Cultural Continuity and Sense of Place</p>	<p>Decreased quality of valued places in nature.</p>	<p>See above sections of this table on Water and Fishing, Hunting and Trapping, and Plants and Medicines for descriptions on how Hydro One plans to mitigate the effects of the project to the quality of the natural features and values which provide current and potential uses for Caldwell FN members to exercise their rights, including the passage of traditional knowledge to future generations.</p> <p>Hydro One will also be implementing a Biodiversity Initiative as part of the Chatham x Lakeshore project, to create or enhance habitat to offset the effects of the project to natural habitats and wildlife. Hydro One would welcome Caldwell FN's participation in the Biodiversity Initiative and the habitat creation/enhancement initiatives funded through the initiative may also serve to support wildlife populations or even create/enhance natural areas in which Caldwell FN members can exercise their Aboriginal and treaty rights into the future.</p>	<p>See above.</p>
<p>Cultural Continuity and Sense of Place</p>	<p>Decreased ability to enjoy the lands, waters and resources within the study area.</p> <p>There will be some visual changes along the transmission line route with the construction of new towers, or the replacement of idle 115 kV towers with taller 230 kV towers.</p>	<ul style="list-style-type: none"> • The repurposing of the idle 115 kV transmission line will mitigate the overall visual change of the project by replacing existing transmission towers, although the new ones will be taller. • The section of the idle transmission line being repurposed includes many of the larger watercourse crossings required (e.g., Jeannette's creek), such that these crossings will involve the replacement of the existing transmission line crossing rather than the construction of a brand new transmission line crossing. • Incompatible vegetation removed during construction will be restored with compatible, native plant species, to mitigate the overall change in vegetation communities. 	<p>Construction of the new transmission structures will result in a visual change to the landscape, primarily in portions of the corridor where the transmission line is a new feature on the landscape.</p>

Table 7-3: Chippewas of the Thames First Nation – Valued Components, Summary of Potential Effects, Mitigation Measures and Residual Effects

COTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Wild foods, Hunting</p>	<p>Removal of vegetation (potential habitat for game species or wild forage). The new transmission line ROW could result in the removal of desired species that could interfere with the safe operation of transmission towers/lines including wild foods and medicines that are often found in forested areas.</p>	<ul style="list-style-type: none"> • Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary. • Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical. • Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required. Communities will have opportunities to review and provide input into restoration/revegetation plans (e.g., species selection). • Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements. • The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical. • Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical. • Boundaries of important wildlife habitats will be identified and flagged prior to clearing; • Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person. • Promotion of wildlife habitat through vegetation control and brush piles; • Construction personnel will be aware of the potential for wildlife which may be encountered with the within the general work areas. • Areas where incompatible vegetation is removed for the new ROW, will be restored following construction with compatible native species. • There may be potential opportunities to harvest traditional use plant species and wild foods ahead of construction. This may require permission from private landowners as well as coordination between several communities (if interested), and Hydro One can help to facilitate these opportunities where they may exist or be identified by communities. 	<p>Effects are expected to include the permanent removal of vegetation that at maturity could compromise the safe operation of the transmission line; these removals represent a very small portion of the new/expanded transmission line corridor as the majority of the new corridor will occur on agricultural fields, and the preferred route has low overall effects to the type of vegetation of concern when compared to other route alternatives. The total amount of expected incompatible vegetation removal will be documented in the final ESR.</p> <p>The removal of unsafe vegetation will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible. Hydro One will work with Indigenous communities to identify desired species (e.g. wild food and medicines) that can be included in post-construction restoration plantings.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Fishing and use of waterways</p>	<p>The project does not directly cross the Thames River. Crossings of many watercourses (such as Jeannette's creek) will involve replacement of an idle 115 kV transmission, such that the new ROW may be wider but will not represent a "brand new" watercourse crossing.</p> <p>Watercourses will be spanned by overhead transmission and in-channel works are generally not required, unless crossings (e.g., temporary construction crossings) cannot otherwise be avoided. Any new construction crossings will be temporary in nature.</p> <p>Some riparian areas with incompatible vegetation (e.g., trees) within the new or expanded ROW will have this vegetation removed, although compatible riparian vegetation (e.g., shrubs, grasses, sedges etc) will be retained and restored.</p>	<ul style="list-style-type: none"> • The creation of new water crossings during construction will be avoided to the extent feasible by using existing access and crossings (e.g., bridges, culverts) and by accessing work areas from either side of watercourses/drains, where practical. • Construction access, laydown and work areas will be planned to avoid waterbodies and potential fish habitat to the extent practical (e.g., maintaining distance from watercourse banks except where crossings exist or are required). • Any disturbance to waterbodies, shorelines, riparian areas, etc. will be stabilized to prevent erosion immediately. • Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical. • Machine clearing and grubbing will be restricted near sensitive environmental areas, hand clearing will be required within watercourse banks/riparian areas or in wetlands. • Project wastes will be stored and/or removed from all riparian areas immediately; • Disturbed areas will be restored to a pre-disturbed state or better, upon completion of construction. • If permanent or temporary works are required below the high water mark of a watercourse with potential fish habitat, a Request for Review will be prepared and submitted to the DFO in support of a Letter of Advance and/or approvals under the <i>Fisheries Act</i>. • Transmission line structures will be set back from watercourse banks and located outside of regulatory floodplains, to the extent practical. • Work will be conducted in accordance with a permit from the applicable Conservation Authority when working within their regulated areas. 	<p>While there will be a change to some riparian areas (removal of incompatible vegetation and transition to compatible vegetation), any net effects to fish or fishing and other uses of waterways are predicted to be very localized to the transmission line corridor and minor in nature.</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative to create or enhance habitats such as aquatic and riparian habitats. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Fishing and use of waterways</p>	<p>During construction, work near watercourses/riparian areas (including the construction of temporary watercourse crossings) has the potential to cause erosion or sedimentation of watercourses.</p>	<ul style="list-style-type: none"> • An Erosion and Sediment Control (ESC) ESC plan will be developed to include mitigation measures such as constructing watercrossings during low flow conditions, retaining compatible stream bank vegetation, use of ESC during construction and restoration, and storing materials away from sensitive receptors (e.g. watercourses, drains, wetlands). • Where erosion is of a concern, exposed soils in previously vegetated areas will be re-vegetated as practical, or have other ESC measures applied as necessary. • Areas with high erosion potential will be identified and avoided, to the extent practical. • Where practical, activities with potential to cause rutting, ponding/channelization or erosion will be planned during stable and dry ground conditions. • Where required, temporary crossing structures will be installed for construction access at watercourses and other low lying areas and will be removed upon completion of construction. • Existing, natural drainage patterns and flows will be identified and maintained to the extent possible. • Equalization culverts or similar methods may be used in construction of access roads. • Construction access and laydown areas will be restored following completion of construction. • Cleared vegetation will be relocated to designated areas away from aquatic features. • Equipment operation adjacent to water features will be minimized, where practical. • Works adjacent or around watercourse banks will be conducted during appropriate conditions and times of the year (e.g., dry or frozen conditions), to the extent practical. • Construction activities near sensitive features or areas may be suspended during extreme wet weather events, and crews will review and consider weather forecasts in their planning of such work. • ESC installations will only be removed after disturbed areas are restored, accumulated sediment has been disposed, and construction activities in the vicinity are completed. • In an effort to reduce potential erosion, mechanical or vegetation erosion control measures will be employed, such as buffer strips, erosion control blankets and sedimentation fences, as required. • Equipment operation on slopes adjacent to streams will be minimized to the extent practical. • Waste materials will be contained and not allowed into sensitive receptors such as waterbodies, riparian areas, wetlands or agricultural fields. • Disturbed areas near water features or sensitive environmental areas will be restored as soon as practical. • ESC measures will be regularly inspected (including after each significant rainfall event; >10 mm) and repaired where necessary to maintain functionality. 	<p>Erosion and sediment control measures have proven to be effective at controlling these issues, and are only required temporarily during the construction phase of the project, and will be regularly inspected and repaired as required. Any sedimentation or erosion effects that do occur will be temporary in nature and therefore effects on the fish population and human health are anticipated to be minor and not significant.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Fishing and use of waterways</p>	<p>During construction, there is the potential for inadvertent release of deleterious substances including oil, gasoline or other liquids (i.e., spills)</p>	<ul style="list-style-type: none"> • Refueling of vehicles and equipment will be completed in a designated location located away from sensitive receptors, such as designated source water protection areas, watercourses, surface drainage features, wetlands, etc. • Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture any accidental release of fluids. • Fuelling operations will require the operator to visually observe the fuelling process 100% of the time. • If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized. • An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities. • Spills will be addressed and remediated as soon as possible after a spill. • Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted. • Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines. • Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas. • Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures. • Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]; and Highly Vulnerable Aquifers [HVAs]) will be avoided or limited, where practical. • ERCA, the LTVCA and/or the Municipality of Lakeshore/County of Essex and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas. • The MECP Spills Action Centre (SAC) will be notified of all reportable spills. 	<p>Given the protections that will be utilized during construction to prevent spills and the response procedures that will be developed to address minor spills during construction should they occur, no significant net effects on fisheries and water quality are anticipated.</p>
<p>Fishing and use of waterways</p>	<p>During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line.</p>	<ul style="list-style-type: none"> • Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices. • Restoration with compatible vegetation species will compete with incompatible species that require treatment, and will help to reduce and/or postpone the eventual need for vegetation management of incompatible species. 	<p>No significant net effects are anticipated, due to the relatively small areas of the new CxL transmission line corridor that currently contain incompatible vegetation (areas that may require vegetation management during operation of the line) and adherence to the appropriate standards and protocols during application of herbicides.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Plants and medicines</p>	<p>The new transmission line ROW would remove species that at maturity would be unsafe during transmission line operations and restore with compatible species, so any plant medicines found in forested areas would be negatively affected but species that utilize meadow/thicket habitats may be positively affected.</p> <p>Black walnut trees, specifically mentioned, are considered incompatible and would need to be removed. Wild onions/leeks are also a forest understory species that could be affected, if present.</p> <p>Some berry species (e.g., raspberry, blackberry) may benefit from additional thicket/meadow communities and forest edges created along the ROW.</p> <p>Other medicines and species of interest would need to be identified by communities (in some manner) in order to assess specifically- an alternate way of doing this could be through habitat type.</p> <p>Burdock was found generally along hedgerows and is fairly common, but could be affected by construction. Neither sweetgrass nor sweetflag was identified during the vegetation inventory along the preferred route.</p>	<ul style="list-style-type: none"> • Tree protection zones will be used to delineate and protect trees that do not require removal for construction activities or operation of the transmission line, as necessary; • Tree removals adjacent to watercourses will be cut such that their root systems remain intact to maintain soil stability, and compatible bank/riparian vegetation will be retained to the extent practical. • Vegetation removals will be minimized to the extent possible, and replanted/seeded with compatible vegetation as required. Communities will have opportunities to review and provide input into restoration/revegetation plans (e.g., species selection). • Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements. • The extent of clearing and vegetation removal required for the transmission line ROW within woodlands will be minimized to the extent practical. • Woodlands will be taken into account when planning access, and the footprint of work areas/access within woodlands will be minimized to the extent practical. • Boundaries of important wildlife habitats will be identified and flagged prior to clearing; • Trees containing stick nests and areas where active animal dens or burrows are encountered will be left undisturbed until unoccupied, as determined by a qualified person. • Promotion of wildlife habitat through vegetation control and brush piles. • Areas where incompatible vegetation is removed for the new ROW, will be restored following construction with compatible native species. • There may be potential opportunities to harvest traditional use plant species and wild foods ahead of construction. This may require permission from private landowners as well as coordination between several communities (if interested), and Hydro One can help to facilitate these opportunities where they may exist or be identified by communities. This may include opportunities to collect seeds or fruit (e.g., black walnut), as large trees are not able to be transplanted. 	<p>Net effects include permanent removal of vegetation that at maturity could compromise the safe operation of the transmission line; these removals represent a very small portion of the new/expanded transmission line corridor as the majority of the new corridor will occur on agricultural fields, and the preferred route has low overall effects to incompatible vegetation when compared to other route alternatives. The total amount of expected vegetation removal will be documented in the final ESR.</p> <p>The removal of unsafe vegetation will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is unsafe for transmission line operations, to vegetation that is compatible. Hydro One will work with Indigenous communities to identify desired species (eg. wild food and medicines) that can be included in post-construction restoration plantings.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative to offset vegetation loss or transition (e.g., from woodlot to a compatible vegetation community) that cannot otherwise be avoided or mitigated. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Declines in resource quantities (e.g., availability of healthy animals and plants, for both harvesting purposes and as indicators of overall ecosystem health)</p>	<p>See above rows on Wild foods/hunting, Fishing, and plants and medicines for effects to these resource quantities</p>	<p>See above rows on Wild foods/hunting, Fishing, and plants and medicines</p>	<p>See above rows on Wild foods/hunting, Fishing, and plants and medicines</p>
<p>Changes to migratory birds, migratory bird habitat and bird harvesting</p>	<p>There is potential for birds to collide with the overhead transmission, and the overhead transmission traverses a portion of the Lake St. Clair Important Bird Area (IBA).</p>	<ul style="list-style-type: none"> • The majority of the area of the IBA that is traversed by the proposed Project will involve replacement of an existing idle 115 kV transmission line. • Visual mitigation measures (e.g., bird diverters and/or similar measures) will be incorporated during detailed design as a mechanism to improve bird visibility of the transmission line within the IBA. • In support of detailed design, a review of potential wildlife habitat associated with the transmission line ROW will be used to identify locations for potential visual mitigation measures. • Towers and access roads will be located to avoid sensitive habitats, where practical. • Conduct vegetation removal outside of the migratory bird breeding season (i.e., April 5 to August 31; zone C1 as provided by ECCC 2018), where practical. • In the event vegetation clearing is required during the breeding bird season, nest searches conducted by a qualified person will be completed in accordance with applicable provincial and federal requirements. • Birds of prey may construct stick nests on transmission structures. Osprey nests are most common on transmission structures, but Bald Eagle nests are occasionally encountered. If there are eggs or young in the nest, it is Hydro One protocol to leave the nest until the young have fledged unless there is an immediate safety concern to be addressed. If there are no eggs or young observed, the nest will be removed and replaced; and • Construction personnel will be aware of the potential for wildlife which may be encountered with the within the general work areas. 	<p>Overhead transmission lines have potential for bird collisions, and while installation of visual mitigation (bird diverters) in key areas has been proven to be effective at reducing the number of these collisions, there remains the potential that some birds may collide with the transmission line. Approximately one third of the new transmission line, including the majority of the distance within the Lake St. Clair IBA, consists of an existing idle transmission line which will be removed and replaced by the new transmission line, such that this section does not represent a new feature on the landscape but rather an incremental increase in size of an existing feature. As a result, no significant effects to the migratory bird population, migratory bird habitat, or bird harvesting, are anticipated.</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative to create or enhance habitats, which will contribute to availability of bird habitat in the region. This initiative will be conducted subsequent to completion of the Class EA and OEB Leave-to-Construct processes.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Agricultural impacts to water quality</p>	<p>Hydro One does not control individual farmers' practices on their fields, and as such cannot influence factors which may affect the overall quality of runoff from agricultural fields.</p> <p>During construction there may be some temporary effects to existing agricultural drainage infrastructure.</p> <p>During construction, a project-specific Weed Control Plan will be developed in consultation with landowners prior to construction, as necessary. The transmission ROW will be monitored for establishment of weeds until the Project is completed, and corrective measures for managing weeds may include herbicide application, mowing, and hand pulling. Weed control during construction will be conducted by the construction contractor.</p>	<ul style="list-style-type: none"> • The Weed Control Plan will be managed by an Ontario Professional Agrologist to meet the requirements of the municipal and land use authority. • The mitigation measures listed above for Fishing and use of waterways will serve to address surface water quality affects from construction in general. 	<p>Overall, the CxL project will not significantly affect or contribute to agricultural impacts to water quality, as any use of herbicides or pesticides through the weed control plan for construction would be very small in comparison to existing uses on surrounding agricultural fields. Any additional effects from the project are expected to be temporary in nature (i.e., during the construction phase only).</p> <p>Where opportunities are identified, Hydro One will work with Indigenous communities to design and execute a Biodiversity Initiative that could include opportunities that address the issue of confidence of community members to practice their rights in areas of agricultural land use, by enabling the creation of, or enhancements to habitats in and adjacent to existing natural features and designated areas or within communities and Reserve lands.</p>
<p>Increased contamination of water and wild food sources</p>	<p>During operation of overhead transmission lines, herbicides are one of many tools that Hydro One employs to manage incompatible vegetation within the transmission line ROW to ensure the safe and reliable operation of the line.</p>	<ul style="list-style-type: none"> • Any herbicide use will be planned in accordance with integrated pest management standards and to limitations such as setbacks from water bodies and other best practices. • Restoration with compatible vegetation species will compete with incompatible species that require treatment, and will help to reduce and/or postpone the eventual need for vegetation management of incompatible species. 	<p>Any residual effects are anticipated to be very minor, due to the relatively small areas of the new CxL transmission line corridor that currently contain incompatible vegetation (areas that may require vegetation management during operation of the line) and adherence to the appropriate standards and protocols during application of herbicides.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Increased contamination of water and wild food sources</p>	<p>During construction, there is the potential for inadvertent release of deleterious substances including oil, gasoline or other liquids (i.e., spills)</p>	<ul style="list-style-type: none"> • Refueling of vehicles and equipment will be completed in a designated location located away from sensitive receptors, such as designated source water protection areas, watercourses, surface drainage features, wetlands, etc. • Fuelling of vehicles/equipment will occur utilizing an emergency spill tray to capture any accidental release of fluids. • Fuelling operations will require the operator to visually observe the fuelling process 100% of the time. • If refuelling must occur outside of designated areas, additional containment or other mitigation and spill prevention measures will be utilized. • An Emergency Response Plan and spill cleanup equipment will be maintained and be readily accessible at all times during construction and maintenance activities. • Spills will be addressed and remediated as soon as possible after a spill. • Areas impacted by a spill will be secured, and unauthorized personnel will be kept out of the affected area until further assessment and/or clean-up is conducted. • Clean-up and the disposal of contaminated materials will be managed in accordance with provincial regulations and guidelines. • Fuels, chemicals, lubricants or other deleterious substances will be stored on level ground in properly contained storage areas. • Only approved aboveground petroleum storage tanks will be used during the construction phase of the Project, and will be stored in designated fuelling areas and with additional temporary containment measures. • Work conducted near Provincially/locally designated Vulnerable Areas (namely Wellhead Protection Areas [WHPAs]; Intake Protection Zones [IPZs]; and Highly Vulnerable Aquifers [HVAs]) will be avoided or limited, where practical. • ERCA, the LTVCA and/or the Municipality of Lakeshore/County of Essex and Municipality of Chatham-Kent will be consulted in order to undertake the proper action for managing the potential threats to source water protection areas. • The MECP Spills Action Centre (SAC) will be notified of all reportable spills. 	<p>Given the protections that will be utilized during construction to prevent spills and the response procedures that will be developed to address minor spills during construction should they occur, no significant net effects to fisheries or water quality are anticipated.</p>
<p>Impacts to sense of place and human health</p>	<p>There will be some visual changes along the transmission line route with the construction of new towers, or the replacement of idle 115 kV towers with taller 230 kV towers.</p>	<ul style="list-style-type: none"> • The repurposing of the idle 115 kV transmission line will mitigate the overall visual change of the project by replacing existing transmission towers, although the new ones will be taller. • The section of the idle transmission line being repurposed includes many of the larger watercourse crossings required (e.g., Jeannette's creek), such that these crossings will involve the replacement of the existing transmission line crossing rather than the construction of a brand new transmission line crossing. • Incompatible vegetation removed during construction will be restored with compatible, native plant species, to mitigate the overall change in vegetation communities. 	<p>Construction of the new transmission structures will result in a visual change to the landscape, primarily in portions of the corridor where the transmission line is a new feature on the landscape.</p>

COTTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Impacts to sense of place and human health</p>	<p>The new transmission line will emit Electromagnetic fields (EMF). EMFs are invisible forces that surround electrical equipment, power cords, and wires that carry electricity.</p> <p>EMFs are strongest when close to their source. As you move away from the source, the strength of the fields fades rapidly.</p>	<ul style="list-style-type: none"> • EMF levels associated with the proposed Project are anticipated to remain significantly lower than the general public exposure limits. • The proposed Project will be designed and operated in accordance with appropriate regulatory requirements. 	<p>No effects to human health are predicted.</p> <p>Exposure to extremely low frequency EMF such as those produced by transmission lines has been extensively studied. Health Canada does not consider that any precautionary measures are needed regarding daily exposures to EMFs at extremely low frequencies. There is no conclusive evidence of any harm caused by exposures at levels found in Canadian homes and schools, including those located just outside the boundaries of power line corridors.</p>
<p>Habitat destruction (Species at Risk)</p>	<p>There is potential for the project to disturb Species at Risk (SAR), and to cause a loss of SAR habitat (or transition to other habitat types which do not provide the same habitat values)</p>	<p>In addition to the mitigation measures mentioned above relating to terrestrial and aquatic habitats in general, the following specific mitigation measures will be utilized to address potential SAR habitat:</p> <ul style="list-style-type: none"> • Impacts to potential SAR habitat will be avoided, where possible. In the event impacts cannot be avoided, MECP will be consulted regarding permitting/approval requirements under the ESA during detailed design. • Boundaries of SAR habitats will be identified and flagged off and protected. • To the extent possible, incompatible vegetation/trees with the potential to provide SAR habitat will be removed/trimmed to the extent that they no longer pose a risk to overhead transmission lines while still maintaining their potential SAR habitat characteristics. Alternatively, incompatible vegetation will be replaced with compatible vegetation to maintain SAR habitat. • Snags (dead standing trees) and cavity trees with the potential to provide SAR habitat that do not pose a risk to the operation of the transmission line will be identified and retained to the extent practical. • Construction personnel will be aware of the potential presence of, and able to identify, SAR with the potential to occur within the general work areas. • Should SAR be encountered during construction activities, activities will be stopped until it has been determined that harm will not occur. The required activities will be assessed to determine whether the work/schedule can be modified, or mitigation measures employed, to avoid potential effects on SAR and their habitat. • In the event the proposed Project has the potential to impact Barn Swallow nesting habitat, the activity qualifies for registration under Section 23 of Ontario Regulation 242/08. • If avoidance of SAR and/or SAR habitat is not possible, MECP and/or DFO will be consulted to mitigate the impact of the activities and/or assess the need for permitting/approvals under the ESA, SARA or the Fisheries Act. • If as SAR is harmed or killed as a result of work activities, the MECP will be notified and the relevant work activities will cease within the immediate area until the species has been removed by personnel authorized to handle SAR. • SAR observed during construction activities will be reported to the MECP. 	<p>Net effects include permanent removal of incompatible vegetation to ensure the safe operation of the transmission line; not considered significant.</p> <p>Incompatible vegetation removal will not represent a loss of vegetation on the landscape, but rather a transition from vegetation that is incompatible with transmission line corridors, to vegetation that is compatible. Permitting under the ESA, SARA and/or the Fisheries Act will be obtained in advance of construction, where necessary.</p> <p>The Biodiversity Initiative for the project will include projects involving the creation and enhancement of natural habitats, including potential SAR habitats.</p>

COTFN Valued Component/Issue	Potential Project Effects	Committed Mitigation Measures	Residual Effects After Mitigation
<p>Introduction or inadvertent spread of invasive species</p>	<p>Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.</p>	<ul style="list-style-type: none"> • Construction crews will be educated on the importance of avoiding inadvertent spread of invasive species, and to identify the invasive species that are known to occur or are likely to occur within work areas. • Areas identified as having invasive species present will be considered during access and construction planning. Stands of invasive plant species will be avoided to the extent practical during construction. • Equipment and vehicle inspections and cleaning will be established during construction, to minimize the potential for inadvertent transport of invasive species propagules. • Crews will be educated and informed of invasive species known or with potential to occur in work areas. • Special treatment areas (e.g., invasive species) will be designated and tracked for future maintenance works. • Native plant species will be used to restore vegetated areas disturbed by construction activities. 	<p>No significant increases (if any) of invasive species are anticipated, largely due to the relatively small areas of natural vegetation affected by the project and the currently existing prevalence of invasive species in the surrounding landscape. Hydro One will work with Indigenous communities to identify species of interest that could be utilized during post-construction restoration plantings, to establish native species plant cover.</p> <p>Hydro One will also work with Indigenous communities to design and undertake a Biodiversity Initiative for the project that may include projects which involve inventory, control and/or removal of certain invasive species as a form of habitat enhancement.</p>

7.13 Cumulative Effects Assessment

The Cumulative Effects Assessment (CEA) for the project has been completed in accordance with the Class EA for Minor Transmission Facilities requirements: “The assessment will include the proposed undertaking and any other proposed undertakings in the immediate project area where documentation is available (e.g., other environmental assessments”). For this project, the CEA involved the consideration of project effects combined with effects from other proposed undertakings in the immediate project area (overlapping the 500 m local study area) where documentation was publicly available. To extend a CEA beyond the immediate project area (i.e., to assess trajectories of change over time on a broader regional basis) is outside the scope of the Class EA and Hydro One's ability to influence, control, or reasonably predict.

7.13.1 Regional and Historic Cumulative Effects to Aboriginal Treaties and Indigenous Rights

Hydro One recognizes and appreciates that the legacies of settlement, including agricultural and land conversion and development activities have, and continue; to put pressure on Indigenous communities' current and future use of lands and resources. That said, Hydro One's role is to provide the necessary electrical infrastructure based on regional planning assessments and direction provided by the IESO. In the case of the Project and other Hydro One projects in southwestern Ontario, the need for this new infrastructure has been identified by IESO in their regional planning framework and demand forecasts, with a formal direction provided to Hydro One to undertake planning, and eventually construction and operation of the necessary transmission infrastructure. Additionally, the OEB was issued an Order-in-Council to amend Hydro One's transmission license to include the development and construction of the Project. As such, Hydro One is acting on the direction provided by IESO, as well as direction provided by the Crown via the OEB, to design and build the project.

7.13.2 Project Inclusion List

Figure 7-1 provides an overview of known projects that overlap with the local study area which have been included in this CEA. As summarized in **Table 7-4**, overlapping projects have been categorized into the following three tiers (in decreasing order of information available):

1. Projects with completed and publicly available impact assessments or environmental assessments.
2. Known current, and future Hydro One projects where the environmental assessment (including selection of a preferred alternative) is not yet completed

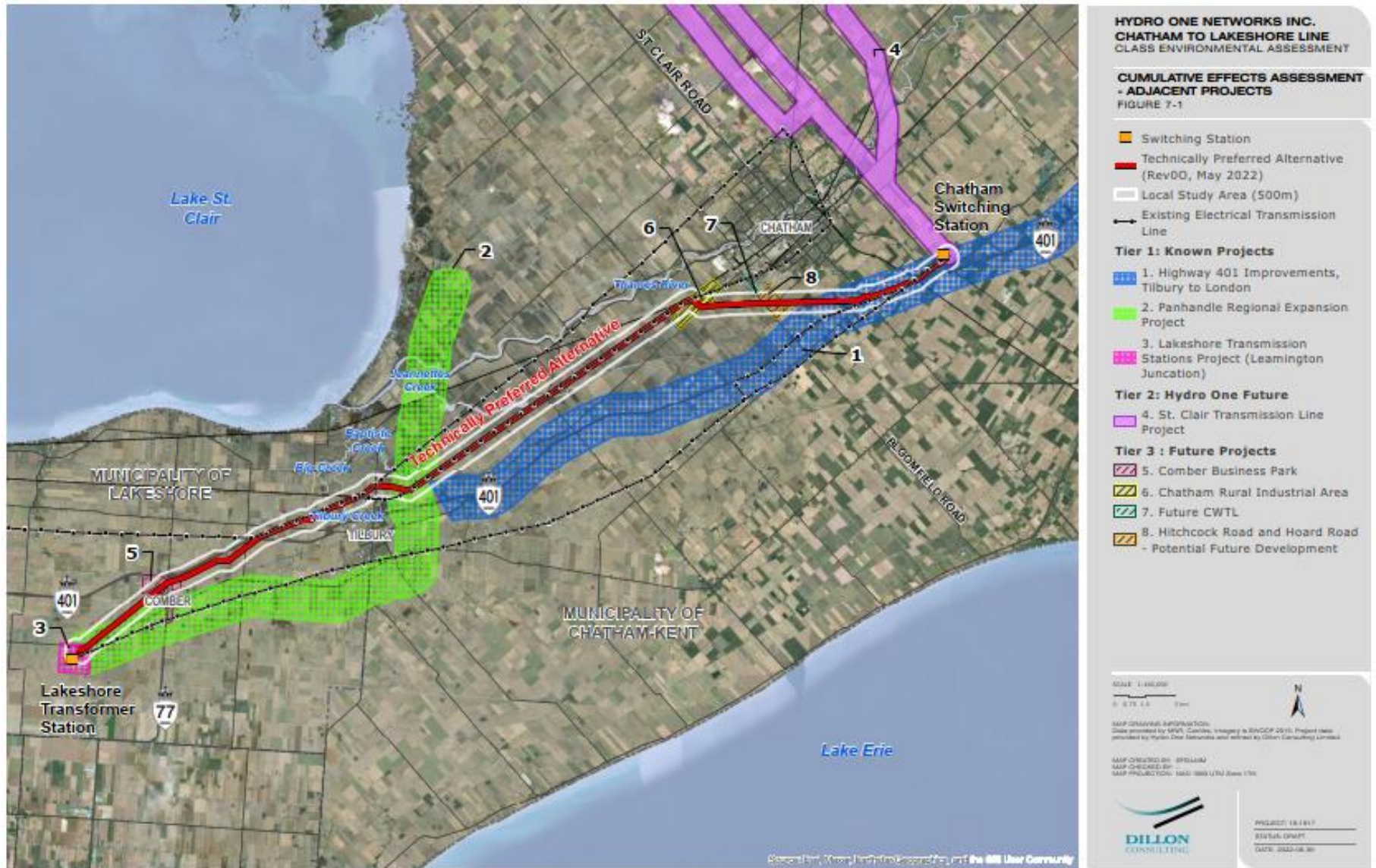
but where, as owners of transmission line infrastructure, Hydro One has a reasonable understanding of what future potential effects may be.

3. Other future projects where proponents have not yet started or completed an environmental assessment or other planning study such that insufficient information is publicly available to meaningfully assess interactions with the Project. It is noted that for these future projects, this Class EA and CEA will be available for consideration to their benefit, including the potential to assess cumulative effects of the Project combined with those future projects.

Table 7-4: Projects Included in the Cumulative Effects Assessment

Project Name	Proponent	Interaction with Chatham to Lakeshore Project
Tier 1 Projects: Effects Assessment Documentation Publicly Available		
Highway 401 Improvements, Tillbury to London	Ministry of Transportation, Ontario	The proposed highway 401 improvements overlap with the Chatham to Lakeshore Transmission Line in the area of the Chatham SS
Panhandle Expansion Project	Enbridge Gas	The proposed expansion project crosses the new Project right-of-way
Lakeshore Transmission Station Project	Hydro One Networks Inc.	The Transmission Station Project is the western terminal station for the Chatham to Lakeshore Transmission Line Project
Tier 2 Projects: Hydro One Planned Future Undertakings with Owner Predicted High-Level Effect Knowledge		
St. Clair Transmission Line Project	Hydro One Networks Inc.	St. Clair Transmission Line connects to the Chatham SS, which is also a terminal station for the Chatham to Lakeshore Project.
Tier 3 Projects: Future Projects in Area where Assessment of Effects are not yet known		
Comber Employment Lands	Town of Lakeshore	The project crosses the Comber Business Park development area
Chatham-Kent Rural Industrial Area	Municipality of Chatham-Kent	The project crosses the Chatham-Kent Rural Industrial Area development area.
Chatham West Transportation Link	Municipality of Chatham-Kent	The project crosses the Chatham-West Transportation Link right of way
Hitchcock Road and Hoard Road – Potential Future Development Area	Municipality of Chatham-Kent	The project crosses the Hitchcock Road and Hoard Road Future Development Area

Figure 7-1: Cumulative Effects Assessment



7.13.3 Analysis of Cumulative Effects

Table 7-5 summarizes the cumulative effects analysis completed for Tier 1 and Tier 2 projects on the Project Inclusion List. Cumulative effects were assessed by looking at each project's effects assessment tables, identifying potential temporary and long-term effects and net effects for each project and assessing potential for cumulative effects of multiple projects overlapping the Project LSA. Cumulative effects were analyzed from a "temporary effect" or a "long-term effect" perspective. Temporary effects are effects primarily related to construction activities associated with the respective infrastructure. Long-term effects represent potential project effects that may be experienced over the life of the project. It is noted however that some long-term effects are related to periodic maintenance activities which will not be persistent throughout the entire lifespan of the project but will be limited to periodic maintenance events (e.g. maintenance vehicles tracking mud on local roads will only occur if and when maintenance activities are required in muddy areas).

Table 7-5: Cumulative Effects Assessment

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Crop Loss	Yes Temporary removal of crops and soils supporting crop production.	Yes Permanent removal of land available for agricultural production as a result of project infrastructure.	Yes Any indirect impacts would be temporary (construction vehicles on side roads).	Yes The preferred interchange improvements, emergency access ramps and new road connections are expected to result in some direct and indirect impacts to agriculture.	No Not Applicable	No Not Applicable	Yes Temporary loss of agricultural productivity during construction as well as soil compaction from the movement of equipment, accelerated erosion and soil loss from clearing of land and the mixing of topsoil with less productive subsoil during stripping.	Yes Displacement of agricultural land by the SS and TS.	Yes Reasonable to assume there may be a temporary removal of crops and soils supporting crop production.	Yes Reasonable to assume there may be a permanent removal of land available for agricultural production as a result of project infrastructure.	Yes Multiple projects have a potential to temporarily remove crops and soils from agricultural production to accommodate construction activities of multiple projects. If multiple projects are under construction at the same time this may result in a temporary cumulative effect of reduced agricultural production.	Yes Multiple projects have a potential to permanently remove agricultural land from production to accommodate new infrastructure. Multiple projects on the landscape will compound this effect.	Not considered significant. Long-term permanent removal of land available for agricultural production is not considered significant in the larger landscape of southern Ontario.
Agricultural Resources: Soil Compaction	Yes Compaction of soil caused by movement of construction equipment over agricultural land.	Yes Compaction of soil caused by movement of vehicles over agricultural land as a result of periodic maintenance activities.	No Not Applicable	No Not Applicable	Yes Reduction in soil capability (quality) from mixing, compaction and rutting risk, accidental contaminant spills and erosion	No Not Applicable	Yes Temporary loss of agricultural productivity during construction as well as soil compaction from the movement of equipment, accelerated erosion and soil loss from clearing of land and the mixing of topsoil with less productive subsoil during stripping.	No Not Applicable	Yes Reasonable to assume there may be compaction of soil caused by movement of construction equipment over agricultural land.	Yes Reasonable to assume there may be compaction of soil caused by movement of maintenance vehicles over agricultural land	No Multiple projects have the potential for isolated soil compaction within their respective project limits. Cumulative effects are not anticipated as project specific mitigation measures can be implemented to address effect.	No While multiple projects have identified soil compaction in operation and maintenance phases, project specific mitigation measures can be employed to mitigate the effect.	Not considered significant. Effects from multiple projects can be mitigated at a project level.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Soil Mixing	Yes Potential for excavation activities to cause mixing of soil horizons, thus lowering the quality of soil.	No Not Applicable	No Not Applicable	No Not Applicable	Yes Reduction in soil capability (quality) from mixing, compaction and rutting risk, accidental contaminant spills and erosion	No Not Applicable	Yes Temporary loss of agricultural productivity during construction as well as soil compaction from the movement of equipment, accelerated erosion and soil loss from clearing of land and the mixing of topsoil with less productive subsoil during stripping.	No Not Applicable	Yes Reasonable to assume there is potential for excavation activities to cause mixing of soil horizons.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Multiple projects have the potential for soil mixing within their respective project limits. Cumulative effects are not anticipated as project specific mitigation measures can be implemented to address effect.	No Not Applicable	Not considered significant. Effects from multiple projects can be mitigated at a project level.
Agricultural Resources: Disturbance to Farm Operations	Yes Potential to disturb farm operations including planting and harvesting schedules, spraying, tiling activities, etc.	Yes Impediments to the maneuverability of agricultural equipment as a result of periodic maintenance activities.	Yes Any indirect impacts would be temporary (construction vehicles on side roads).	No Not Applicable	Yes Damaged or severed tile drainage	No Not Applicable	Yes Temporary loss of agricultural productivity during construction as well as soil compaction from the movement of equipment, accelerated erosion and soil loss from clearing of land and the mixing of topsoil with less productive subsoil during stripping.	No Not Applicable	Yes Reasonable to assume there is potential to disturb farm operations.	Yes Reasonable to assume there may be permanent impediments to the maneuverability of agricultural equipment.	No Multiple projects have the potential to temporarily disturb farm operations within their respective project limits. Cumulative effects are not anticipated as project specific mitigation measures can be implemented to address effect.	No Multiple projects have potential to create impediments to maneuverability of agricultural equipment. However, impediments would not impact the larger agricultural community and effects would be on a site by site basis. Project specific mitigation measures can be implemented to address effect.	Not considered significant. Effects from multiple projects can be mitigated at a project level.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Vegetation Removal	No Not Applicable	Yes Partial removal or fragmentation of existing hedgerows and windbreaks between agricultural land parcels as a result of periodic maintenance activities.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable
Agricultural Resources: Contamination of Organic or Identity Preserved (IP) Crops	Yes Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types.	Yes Potential for activities, including use of herbicides to control noxious weeds or vegetation, to contaminate organic or IP crops or agricultural fields transitioning to organic/IP crop types as a result of periodic maintenance activities	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable
Agricultural Resources: Damage to Field Tiles	Yes Potential for equipment to damage or crush existing agricultural tile drains.	No Not Applicable	Yes Any indirect impacts would be temporary (construction vehicles on side roads).	No Not Applicable	Yes Damaged or severed tile drainage.	No Not Applicable	No Not Applicable	No Not Applicable	Yes Reasonable to assume potential for equipment to damage or crush existing agricultural tile drains during construction.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Multiple projects have the potential for temporary impacts to agricultural tile drains. Cumulative effects are not anticipated as project specific mitigation measures can be implemented to address effect.	No Multiple projects have the potential for temporary impacts to agricultural tile drains. Cumulative effects are not anticipated as project specific mitigation measures can be implemented to address effect.	Not considered significant. Effects from multiple projects can be mitigated at a project level.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Agricultural Resources: Livestock Stress, Loss or Injury	Yes Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss. In addition, potential use of implosive splicing may scare or startle agricultural livestock.	Yes Potential for activities to be required within livestock managed areas (grazing fields, pastures, etc.) resulting in potential for livestock stress, injury or loss as a result of periodic maintenance activities	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable
Agricultural Resources: Electric and Magnetic Interference	No Not Applicable	Yes Some farmers have raised concerns regarding potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment, when said equipment is directly below the conductors.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Yes Potential exposure to increased EMF during operation.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Reasonable to assume construction of the new transmission line will raise concerns regarding potential for overhead transmission lines to interfere with automated or GPS-guided farm equipment when said equipment is directly below the conductors.	No Not Applicable	Yes Multiple projects have the potential to increase concerns related to EMF exposure, interruption to GPS-guidance systems and automation equipment in proximity to conductors.	Not considered significant. Not considered significant because potential effects from EMF would be localized to areas below conductors and handled on a project specific basis.
Archaeological Resources	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Cultural Heritage Resources	No Not Applicable	No Based on the baseline findings of the Cultural Heritage Existing Conditions Report, there is the potential for project-related works to adversely affect known and potential built heritage resources within the study area. No cultural heritage landscapes were identified in the study area associated with the preferred route for the new transmission line.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable
Land Use and Communities: Business Operations	Yes Potential for activities to disrupt commercial or industrial operations (construction)	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Yes Potential for short-term disruption to traffic in areas affected by construction (e.g. equipment /materials delivery, worker vehicular traffic)	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Multiple projects have identified potential for disruption to local business operations as a result of project specific activities. If multiple projects proceed simultaneously, the compounding effect to local business may result in a negative socio-economic effect that will be temporary in nature and duration.	No Not Applicable	Not considered significant. Not considered significant because potential impacts to business operations will be temporary in nature and can be mitigated on a project specific basis.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Land Use and Communities: Existing and Future Land Use Designations and Potential Future Development	No Not Applicable	Yes While transmission lines can be largely compatible with development, its location within areas zoned to allow future commercial/industrial development, or otherwise targeted/identified for future development potential, will introduce certain restrictions to future uses within the lands occupied by the transmission line ROW.	No Not Applicable	Yes Adjacent property is required to accommodate improvements to the six highway interchanges (including the alternate routes for the identified road closures), the installation of the emergency access ramps at Merlin Road, and the relocation of the carpool parking lot at the Bloomfield Road interchange.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	Yes Several projects have identified the need to acquire land designated for future development potential. This acquisition or building of infrastructure in close proximity will require also implement encroachment impacts and Right-of-way restrictions on future development.	Not considered significant. While several projects have identified potential impacts to future development, the impact is known ahead of the development taking place and impacts can be mitigated or avoided through development approvals processes.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Land Use and Communities: Local Roads and Traffic	Yes Potential for increased traffic, including heavy equipment, on local and regional roads. In addition, stringing of conductors across highways and roadways may require temporary road closures and detours.	No Not Applicable	Yes The exact construction staging/sequencing will be determined during the subsequent detail design phase. This will include a review of maintaining Highway 401 as two lanes in each direction at all times, or reducing Highway 401 to one lane per direction in construction phases. Full access between Highway 401 and all of the interchanges is expected to be maintained during construction. Short term, off-peak closures may be required during some operations. This will be confirmed during detail design.	No Not Applicable	Yes The transportation of project goods, services and workers has the potential to lead to increased use of existing transportation infrastructure. Also, increased traffic volumes along local road networks could increase travel times and reduce road safety, which might lead to increased use of local emergency services due to potential vehicle accidents and workplace accidents.	No Not Applicable	Yes There is some potential for disruption to vehicular traffic in the study area during the construction phase; however, it is expected to be minimal and temporary in nature.	No Not Applicable	Yes Reasonable to assume the potential increase in traffic, including heavy equipment on local and regional roads	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified temporary impacts from construction local road networks. This includes potential road closures, increased traffic, infrastructure crossings etc. If multiple projects proceed simultaneously impacts could be compounded having a negative effect on the larger road network.	No Not Applicable	Not considered significant. Not considered significant because potential impacts to local roadways would be temporary in nature. Road closures or disruptions to traffic require approvals from local municipalities or MTO prior to construction. Local municipalities and MTO have processes in place to coordinate multi-project impacts and mitigate network disruptions.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Land Use and Communities: Mud and Construction Debris	Yes Potential for tracking of mud and migration of construction debris to areas outside of the construction zone.	Yes Potential for tracking of mud and migration of construction debris to areas outside of the construction zone as a result of periodic maintenance activities	Yes Surplus materials will be generated during construction, such as old pavement, guardrail materials, and concrete.	No Not Applicable	Yes Residential and business properties may experience noise, dust and equipment exhaust associated with construction activity. However, during operation, no substantial air or noise emissions are anticipated to occur.	No Not Applicable	Yes There is potential for mud accumulation in the construction site and on public roads due to site preparation and construction activities	No Not Applicable	Yes Reasonable to assume potential for tracking of mud and migration of construction debris to areas outside of the construction zone	Yes Reasonable to assume potential for tracking of mud and migration of construction debris to areas outside of the construction zone	Yes Several projects have identified temporary effects from construction activities. Effects can be mitigated through project specific mitigation measures.	No Not Applicable	Not considered significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.
Land Use and Communities: Electric and Magnetic Fields (EMF)	No Not Applicable	Yes Potential exposure to increased EMF once the transmission line is energized.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Yes EMF values from the proposed Project are expected to remain significantly below the general public exposure guidelines	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Reasonable to assume construction of the new transmission line will result in potential exposure to increased EMF once the transmission line is energized.	No Not Applicable	Yes Multiple projects have the potential to increase concerns related to EMF exposure once transmission lines are energized.	Not considered significant. Not considered significant because potential effects from EMF would be localized to areas below conductors and handled on a project specific basis.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Land Use and Communities: Noise & Vibration	Yes Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Potential disturbance as a result of noise as a result of periodic maintenance activities.	Yes Construction noise issues.	Yes Noise mitigation was reviewed at specific locations where noise levels exceeded MTO/MOE noise criteria (e.g. ≥65 dBA). However, the assessment concluded that noise mitigation is not technically and/or economically feasible. Thus, noise mitigation is not recommended.	Yes Residential and business properties may experience noise, dust and equipment exhaust associated with construction activity. However, during operation, no substantial air or noise emissions are anticipated to occur.	No Not Applicable	Yes Noise from construction related activities could potentially cause temporary nuisance or disturbance effect for local residents.	Yes There will be some operational noise from equipment at the new stations, primarily from the 230 kV transformers within the TS.	Yes Reasonable to assume potential disturbance as a result of construction.	Yes Reasonable to assume potential disturbance as a result of noise.	Yes Several projects have identified noise and vibration effects associated with construction. Should several projects proceed at the same time these effects could be compounded.	Yes Several projects have indicated a potential for increased noise and vibration during operations and maintenance phases. Once built, these projects combined could have an increased negative effect resulting from increased background noise and vibration.	Not considered significant. Noise and vibration during construction is temporary in nature. Long-term increases in background noise and vibration effects can be mitigated on a project specific basis within permissible limits. Specific operations are required to comply with site specific Environmental Compliance Approvals, Licenses, authorizations and/or noise regulations.

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Natural Environment Resources - Physical Environment: Spills	Yes Potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	Yes Potential inadvertent release of deleterious substances including oil, gasoline or other liquids as a result of periodic maintenance activities.	Yes Comprehensive drainage, spills and erosion control plans will be in place during all stages of construction and operation of the site to avoid potential impacts to surface water and groundwater.	Yes Comprehensive drainage, spills and erosion control plans will be in place during all stages of construction and operation of the site to avoid potential impacts to surface water and groundwater.	Yes General construction activities, such as vehicular, machinery operation, and use of drilling fluids, have the potential to change groundwater quality through minor containment releases. Spills consisting of materials that constitute a contaminant may affect groundwater and have to be managed. Contamination of surface water could occur through accidental spills from vehicle and machinery operation (e.g. drilling fluids, leaks) near waterbodies and watercourses. Washing equipment (e.g. excavator) could also result in contaminant releases to surface water.	Yes Contamination of surface water could occur through accidental spills from vehicle and machinery operation (e.g. drilling fluids, leaks) near waterbodies and watercourses. Washing equipment (e.g. excavator) could also potentially result in contaminant releases to surface water.	Yes Potential inadvertent release of oil, gasoline or other liquid during construction and/or maintenance.	Yes Potential inadvertent release of oil, gasoline or other liquid during construction and/or maintenance.	Yes Reasonable to assume the potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	Yes Reasonable to assume the potential inadvertent release of deleterious substances including oil, gasoline or other liquids.	Yes Several projects have identified the inadvertent release of deleterious substances as a potential during construction activities. Project specific mitigation and spill response can be implemented to mitigate concerns.	Yes Several projects have identified the inadvertent release of deleterious substances as a potential during operation phases. Project specific mitigation and spill response can be implemented to mitigate concerns.	Not considered significant. While several projects have identified the risk of inadvertent release of deleterious substances the risk is at a project specific level. Project specific mitigation plans and spill response plans can be developed to manage project specific risks.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Physical Environment: Waste Generation	Yes Solid and/or liquid waste will be generated.	Yes Solid and/or liquid waste will be generated as a result of periodic maintenance activities	Yes Surplus materials will be generated during construction, such as old pavement, guardrail materials, and concrete.	No Not Applicable	Yes The production of project-related waste could place additional stress on the capacity of local landfills.	No Not Applicable	Yes Solid and/or liquid waste would be generated during construction.	No Not Applicable	Yes Reasonable to assume solid and/or liquid waste will be generated.	Yes Reasonable to assume solid and/or liquid waste will be generated.	Yes Several projects have potential to generate waste materials during construction which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.	No Not Applicable	Not considered significant. Several projects have potential to generate waste materials during construction which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.
Natural Environment Resources - Physical Environment: Excess Materials Management	Yes Excess materials including topsoil and subsoil, may be produced during site excavations.	Yes Excess materials including topsoil and subsoil, may be produced during site excavations as a result of periodic maintenance activities.	Yes Surplus materials will be generated during construction, such as old pavement, guardrail materials, and concrete.	No Not Applicable	Yes Although there are no known waste disposal sites located within or adjacent to the PSAs, improper disposal of waste material generated during construction activities could result in the contamination of soil, surface water and/or groundwater resources.	No Not Applicable	Yes Excess material requiring disposal of off-site will be sampled and analyzed to determine its disposal requirements.	No Not Applicable	Yes Reasonable to assume that excess materials including topsoil and subsoil, may be produced during site excavations.	Yes Reasonable to assume that excess materials including topsoil and subsoil, may be produced during site excavations.	Yes Several projects have potential to generate excess materials during construction which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.	No Not Applicable	Not considered significant. Several projects have potential to generate excess materials during construction which may have effects to local communities if not handled properly. Project specific mitigation measures can be implemented to mitigate concerns.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Atmospheric Environment: Climate Change	Yes Emissions will be generated from vehicles and equipment.	Yes Emissions will be generated from vehicles and equipment as a result of periodic maintenance activities.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Yes Emissions from vehicles and equipment during the construction and maintenance phases. Insulating mediums of Hydro One equipment contain Sulphur Hexafluoride, a commercially available non-toxic greenhouse gas.	Yes Emissions from vehicles and equipment during the construction and maintenance phases. Insulating mediums of Hydro One equipment contain Sulphur Hexafluoride, a commercially available non-toxic greenhouse gas.	Yes Reasonable to assume emissions will be generated from vehicles and equipment.	Yes Reasonable to assume emissions will be generated from vehicles and equipment.	Yes Several projects have identified increased potential for greenhouse gas emission releases associated with construction equipment not normally in operation in the construction area. These releases have potential to contribute to climate change through greenhouse gas emission releases. When combined, these projects together may produce larger emissions than individually on their own.	Yes Several projects have identified increased potential for greenhouse gas emission releases associated with operation activities. These releases have potential to contribute to climate change through greenhouse gas emission releases. When combined, these projects together may produce larger emissions than individually on their own.	Not considered significant. While it is acknowledged that development of these projects will create emissions during construction and operations contributing to greenhouse gas releases, the emission sources (individual vehicles) are not considered significant in the context of the small overlapping project areas.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Atmospheric Environment: Air Quality	Yes Potential for fugitive dust and impacts to air quality from vehicle emissions.	Yes Potential for fugitive dust and impacts to air quality from vehicle emissions as a result of periodic maintenance activities.	Yes Standard mitigation will be used for dust control during construction.	No Not Applicable	Yes Residential and business properties may experience noise, dust and equipment exhaust associated with construction activity. However, during operation, no substantial air or noise emissions are anticipated to occur.	No Not Applicable	Yes Exhaust emissions may be generated from vehicles and equipment during the construction phase. Dust may be generated from vehicles and equipment during construction, as well as the potential demolition of existing agricultural buildings and structures on the subject property.	No Not Applicable	Yes Reasonable to assume the potential for fugitive dust and impacts to air quality from vehicle emissions.	Yes Reasonable to assume the potential for fugitive dust and impacts to air quality from vehicle emissions.	Yes Several projects have identified increased potential for negative air quality effects through construction releases of dust and airborne particulates. These releases will be temporary in nature and project specific mitigation can be implemented to mitigate project specific effects.	No Not Applicable	Not considered significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources – Atmospheric Environment: Noise and Vibration	Yes Potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Potential disturbance as a result of noise from periodic maintenance activities.	Yes Construction noise issues.	Yes Noise mitigation was reviewed at specific locations where noise levels exceeded MTO/MOE noise criteria (e.g. ≥65 dBA). However, the assessment concluded that noise mitigation is not technically and/or economically feasible. Thus, noise mitigation is not recommended.	Yes Residential and business properties may experience noise, dust and equipment exhaust associated with construction activity. However, during operation, no substantial air or noise emissions are anticipated to occur.	No Not Applicable	Yes Noise from construction related activities could potentially cause temporary nuisance or disturbance effect for local residents.	Yes There will be some operational noise from equipment at the new stations, primarily from the 230 kV transformers within the TS.	Yes Reasonable to assume potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Reasonable to assume potential disturbance as a result of noise, including potential use of implosive splicing and their associated increased vibrations levels.	Yes Several projects have identified noise and vibration effects associated with construction. Should several projects proceed at the same time these effects could be compounded.	Yes Several projects have indicated a potential for increased noise and vibration during operations and maintenance phases. Once built, these projects combined could have an increased negative effect resulting from increased background noise and vibration.	Not considered significant. Noise and vibration during construction is temporary in nature. Long-term increases in background noise and vibration effects can be mitigated on a project specific basis within permissible limits. Specific operations are required to comply with site specific Environmental Compliance Approvals, Licenses, authorizations and/or noise regulations.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Surface Water Resources: Soil Rutting & Vegetation Removals	Yes Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils. Vegetation removals have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains.	Yes Potential for vehicles and equipment to create rutting in soils, creating ponding or channelization leading to additional erosion of soils as a result of periodic maintenance activities. Vegetation removals have the potential for increases in both overland flow and water temperature, as well as mobilization and transport of organic debris and sediment to nearby watercourses and municipal drains as a result of periodic maintenance activities.	Yes The majority of the direct removal impacts are into the median areas. At least a component of the direct impacts at the interchanges can be considered temporary in that they are improvements to existing interchanges, so the removals are usually combined with removal and potential re-naturalization of abandoned sections of ramp/roadway. Other areas of vegetation will be temporarily disturbed for construction access.	Yes Direct impacts to the right-of-way vegetation where construction is proposed are not anticipated to be significant due to the character, function and minor extent of the removal. A number of individual roadside trees found throughout the project study area are expected to be removed due to grading requirements.	Yes Site preparation (e.g. site grading), construction of temporary stockpile areas, and excavation may negatively affect vegetation and ecological communities through direct loss. In addition, these activities may damage vegetation or degrade ecological communities through soil removal and/or disturbance, compaction, increased erosion, or sedimentation, altered surface water drainage, soil or water contamination from construction equipment and/or materials storage and handling.	No Not Applicable	Yes Removal of vegetation within proposed construction activity areas during construction and maintenance activities. Accumulation of cleared vegetation during the construction phase.	Yes Removal of vegetation within proposed construction activity areas during construction and maintenance activities. Accumulation of cleared vegetation during the construction phase.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified soil rutting and vegetation removals effects associated with construction.	Yes Several projects have indicated a potential for soil rutting and vegetation removals during operations and maintenance phases.	Not considered significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Surface Water Resources: Dewatering	Yes Potential increase in surface water flows resulting from dewatering activities.	No Not Applicable	Yes Uncontrolled runoff during construction or operation of the Highway 401 improvements could result in contamination of groundwater through infiltration of potential contaminants, and/or surface water as a result of potential contaminants or sediment. There is also the potential for secondary effects via impacts to groundwater and surface water quality in relation to the watercourses within the study area.	No Not Applicable	Yes Construction dewatering during the pipeline installation has the potential to change surface water quantity. Where dewatering occurs, water level of waterbodies may be temporarily lowered during construction.	No Not Applicable	Yes Removal of groundwater may result in temporary lowering of aquifers.	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential negative effects from dewatering activities during construction. These effects are temporary in nature and project specific mitigation can be utilized to mitigate project specific concerns.	No Not Applicable	Not considered significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Surface Water Resources: Erosion and Sedimentation	Yes Potential for erosion, sedimentation and soil loss during site preparation and construction.	No Not Applicable	Yes Without the implementation of appropriate mitigation measures, creation of erosion and generation of sediment during excavation and grading activities associated with the construction of the proposed improvements may impact the watercourses/municipal drains within the study area.	No Not Applicable	Yes Potential effects to fish and fish habitat resulting from pipeline replacement activities are primarily due to erosion and sedimentation. Disturbance to surficial soils associated with clearing and grubbing of riparian vegetation in close proximity to waterbodies results in an increased risk of erosion.	No Not Applicable	Yes Mobilization and transport of organic debris to nearby municipal drains as a result of site preparation and earthworks during the construction phase. Erosion and transport of sediment to nearby municipal drain as a result of site preparation, earthworks, and discharge of construction water from dewatering activities during the construction phase. Soil may be lost during site preparation due to rainfall.	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified increased potential for erosion and sedimentation during construction activities. Project specific mitigation measures can be implemented to manage erosion and sedimentation issues.	No Not Applicable	Not considered significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.
Natural Environment Resources - Surface Water Resources: Construction work within areas regulated by Conservation Authorities	Yes Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.	Yes Potential for infrastructure (towers, watercourse crossings) to be located within Conservation Authority regulated lands.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Source Water Protection: Source Water Protection (SWP)	Yes Potential for contamination of surface water through spills or leaks. Potential for impacts to designated surface water Intake and Wellhead Protection Area(s) and Significant Groundwater Recharge Areas. Potential for impacts to private drinking water wells.	Yes Potential for contamination of surface water through spills or leaks as a result of periodic maintenance activities. Potential for impacts to designated surface water Intake and Wellhead Protection Area(s) and Significant Groundwater Recharge Areas as a result of periodic maintenance activities.	Yes Uncontrolled runoff during construction or operation of the Highway 401 improvements could result in contamination of groundwater through infiltration of potential contaminants, and/or surface water as a result of potential contaminants or sediment. There is also the potential for secondary effects via impacts to groundwater and surface water quality in relation to the watercourses within the study area.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to source water protection during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable	Not considered significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

<p>Natural Environment Resources - Groundwater Resources: Groundwater Quality</p>	<p>Yes Disturbance of contaminated soil has the potential to contribute to groundwater contamination. Disturbance and compaction to soil has the potential to inhibit infiltration. Dewatering activities / removal of groundwater have the potential to result in temporary lowering of aquifers.</p>	<p>No Not Applicable</p>	<p>Yes Uncontrolled runoff during construction of the Highway 401 improvements could result in contamination of groundwater through infiltration of potential contaminants, and/or surface water as a result of potential contaminants or sediment. There is also the potential for secondary effects via impacts to groundwater and surface water quality in relation to the watercourses within the study area.</p>	<p>No Not Applicable</p>	<p>Yes Excavations below the water table may be required for portions of the proposed pipeline alignment, particularly in areas where fine-textured surficial sediments occur at surface. In these areas, groundwater dewatering may be required to facilitate construction under dry working conditions. Construction dewatering has potential to change groundwater quality. Where dewatering occurs, local water table elevations may be temporarily lowered during construction. These effects are confined to the Zone of Influence (ZOI) formed from dewatering activities are typically temporary. Water wells located within the ZOI, where groundwater levels are lowered to facilitate construction, have potential to be affected</p>	<p>No Not Applicable</p>	<p>Yes Disturbance of contaminated soil during the construction phase may contribute to groundwater contamination</p>	<p>No Not Applicable</p>	<p>Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.</p>	<p>Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.</p>	<p>Yes Several projects have identified potential for effects to groundwater quality during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.</p>	<p>No Not Applicable</p>	<p>Not considered significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.</p>
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Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
					temporarily by lower well yields and/or changes in water quality. A reduction in well yield and/or quality may result in the temporary inability to use the well as a potable water source. General construction activities such as vehicle and machinery operation and use of drilling fluids have the potential to change groundwater quality through minor contaminant releases. Spills consisting of materials that constitute a contaminant may affect groundwater and have to be managed.								
Natural Environment Resources - Designated or Special Natural Areas: Important Bird Area (IBA)	Yes Potential for bird collisions within the Eastern Lake St. Clair IBA.	Yes Potential for bird collisions within the Eastern Lake St. Clair IBA.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Yes Reasonable to assume potential for bird collisions within the Eastern Lake St. Clair IBA.	Yes Reasonable to assume potential for bird collisions within the Eastern Lake St. Clair IBA.	No Not Applicable	No Not Applicable	No Not Applicable

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Designated or Special Natural Areas: Significant Woodlands	Yes Removal of portions of woodlands (transition to compatible vegetation) within the ROW.	Yes Vegetation management within the ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Natural Heritage Features: Vegetation	Yes Accumulation of cleared vegetation. Removal of vegetation within proposed activity work areas.	No Not Applicable	Yes Direct impacts to right-of-way vegetation in proposed construction area is not anticipated significant due to character, function, and minor extent of removal. Majority of direct removal impacts are into median areas. A component of the direct impacts at the interchanges can be considered temporary in that they are improvements to existing interchanges, removals are often combined with removal and potential re-naturalization of abandoned sections of ramp/roadway. Other areas of vegetation will be temporarily disturbed for construction access. Individual roadside trees throughout the project study area are expected to be removed for grading requirements.	Yes Direct impacts to right-of-way vegetation in proposed construction area is not anticipated significant due to character, function, and minor extent of removal. Majority of the direct removal impacts are into median areas. A component of the direct impacts at the interchanges can be considered temporary in that they are improvements to existing interchanges, removals are often combined with removal and potential re-naturalization of abandoned sections of ramp/roadway. Other areas of vegetation will be temporarily disturbed for construction access. Individual roadside trees throughout the project study area are expected to be removed due to grading requirements.	Yes Removal of and/or damage to vegetation. Loss and/or degradation of ecological communities including designated natural areas.	Yes Removal of and/or damage to vegetation. Loss and/or degradation of ecological communities including designated natural areas.	Yes Removal of vegetation within proposed construction activity areas during construction and maintenance activities. Accumulation of cleared vegetation during the construction phase.	Yes Removal of vegetation within proposed construction activity areas during construction and maintenance activities	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Yes Several projects have identified the need for permanent vegetation removal or removal of certain types of vegetation (compatible vs. non-compatible) as a result of infrastructure construction. The compounded effect of multiple infrastructure projects permanently removing vegetation could have a negative cumulative effect.	Not considered significant. Vegetation removal is required for several projects, however within the area of overlap there are minimal vegetation removals anticipated. Project specific mitigation measures can be implemented to restore vegetation where possible. Compared to the larger landscape the anticipated project footprint areas are not expected to result in a significant level of vegetation removal.

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Natural Environment Resources - Natural Heritage Features: Fish and Fish Habitat	Yes Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc.	Yes Potential disturbance to fish habitat as a result of vegetation loss, soil erosion, sedimentation, etc. as a result of periodic maintenance activities.	Yes Impact on fish habitat due to culvert extensions, new culverts and potential realignment of the McKoy Drain.	Yes Impact on fish habitat due to culvert extensions, new culverts and potential realignment of the McKoy Drain.	Yes Changes in fish habitat (including other aquatic biota habitat such as invertebrates). Fish mortality risk (including other aquatic such as invertebrates).	Yes Changes in fish habitat (including other aquatic biota habitat such as invertebrates).	Yes Disturbance to fish habitat as a result of activities (e.g. re-route of agricultural surface water feature, vegetation loss, soil erosion) during the construction phase.	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to fish and fish habitat during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	Yes Several projects have identified potential for permanent changes or effects to fish and fish habitat at specific water crossing locations and as a result of ancillary project activities.	Not Considered Significant. Several projects have identified permanent potential effects to fish and fish habitat, project specific mitigation measures carried out through permitting, approvals and license requirements can mitigate project specific concerns at the project level.
Natural Environment Resources - Natural Heritage Features: Woodlands	Yes Removal of woodlot (transition to compatible vegetation) within the transmission ROW.	Yes Vegetation management within the transmission ROW to ensure that incompatible vegetation does not threaten the safe and reliable operation of the transmission line.	Yes Removal of individual roadside trees.	Yes Removal of individual roadside trees.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown No woodlands are included in the area of overlap.	Unknown No woodlands are included in the area of overlap.	No Not Applicable	No Not Applicable	No Not Applicable

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Natural Heritage Features: Species at Risk (SAR)	Yes Potential disturbance or loss of SAR and/or SAR habitat during construction.	Yes Potential disturbance or loss of SAR and/or SAR habitat during maintenance activities.	No Not Applicable	No Not Applicable	Yes Loss and/or degradation of SAR habitat during construction. Changes in habitat, mortality risk or behaviour of SAR during construction.	No Not Applicable	Yes Disturbance or loss of SAR as a result of habitat loss from construction activities.	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to species at risk during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable	Not Considered Significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.
Natural Environment Resources - Natural Heritage Features: Wildlife Habitat	Yes Potential disturbance or loss of wildlife habitat, including habitat fragmentation during construction.	Yes Potential disturbance or loss of wildlife habitat, including habitat fragmentation during maintenance activities.	Yes Loss of wildlife during construction. Localized impacts due to removal of common vegetation /habitat. Localized potential for nesting by some species in adjacent vegetation that may be disturbed by the construction activities. Wildlife crossings.	No Not Applicable	Yes Loss and/or degradation of wildlife habitat. Mortality, harm and/or disturbance /displacement of wildlife.	No Not Applicable	Yes Disturbance to wildlife during activities in the construction phase.	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects to wildlife and wildlife habitat during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable	Not Considered Significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Natural Environment Resources - Natural Heritage Features: Invasive Species	Yes Potential for inadvertent spread of invasive species propagules through the movement of soil, debris and/or plant material via construction vehicles and equipment.	No Not Applicable	No Not Applicable	No Not Applicable	Yes Spread of invasive plant species could also occur as a result of vegetation clearing through the spread of invasive seeds on construction equipment and through disturbance of naturally vegetated areas allowing for colonization of invasive species	No Not Applicable	Yes There is the potential for the proposed Project to facilitate the spread of non-native or invasive species that may occur within or adjacent to work areas during the construction phase.	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for effects from invasive species during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable	Not Considered Significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.
Indigenous community valued components and interests	Yes Potential to effect traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during construction.	Yes Potential to effect traditional territories of Indigenous communities impacting areas of harvesting and hunting in the ROW during operation of the transmission line.	No Not Applicable	No Not Applicable	Yes Effects to traditional Indigenous territories, communities and practices. The project may affect traditional territories of Indigenous communities, and during construction, harvesting and hunting in the construction ROW could be impeded.	Yes Effects to traditional Indigenous territories, communities and practices. The project may affect traditional territories of Indigenous communities, and during construction, harvesting and hunting in the construction ROW could be impeded.	Yes The project could potentially affect First Nations interests.	Yes The project could potentially affect First Nations interests.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for temporary effects to Indigenous communities from construction activities including lands with potential for harvesting and hunting activities.	Yes Several projects have identified potential for permanent effects to Indigenous communities from infrastructure activities including effects to lands with potential for harvesting and hunting activities.	Not Considered Significant. Based on project specific mitigation and project specific net effects coupled with compensation commitments, cumulative effects are not considered significant within the area of overlap between project study areas used to assess this project.

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Recreational Resources	Yes Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.) from construction equipment.	Yes Potential for temporary disturbance to tourism and enjoyment of recreational resources (e.g., trails, etc.) from maintenance activities.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	No Not Applicable	No Not Applicable	No Not Applicable
Visual and Aesthetic Resources: Visibility of the Project by Sensitive Receptors	Yes Potential visual impacts to sensitive receptors with views of the Project during construction.	Yes Potential permanent visual impacts to sensitive receptors with views of the Project during its operation.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Yes Alteration to the existing visuals and aesthetics of the area during construction and operation.	Yes Alteration to the existing visuals and aesthetics of the area during construction and operation.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for negative visual effects associated with construction activities.	Yes Several projects have identified potential for negative visual effects associated with permanent construction of project infrastructure. Multiple projects being constructed in the same area could compound this effect.	Not Considered Significant. Several projects have identified potential for visual and aesthetic effects. Not considered significant because the area of overlap between projects is small and occurs in areas with multiple existing transmission lines and infrastructure of the same voltage (230 kV) and structures of similar height.

Environmental Concern	Chatham to Lakeshore Transmission Line -Temporary Effect	Chatham to Lakeshore Transmission Line -Long-Term Effect	Highway 401 Improvements Tilbury to London -Temporary Effect	Highway 401 Improvements Tilbury to London - Long-Term Effect	Enbridge Panhandle Expansion Project - Temporary Effect	Enbridge Panhandle Expansion Project - Long-Term Effect	Lakeshore Transmission Station Project - Temporary Effect	Lakeshore Transmission Station Project - Long-Term Effect	St. Clair Transmission Line -Temporary Effect	St. Clair Transmission Line - Long-Term Effect	Cumulative Effects Analysis - Temporary Effect	Cumulative Effects Analysis - Long-Term Effect	Determination of Significance
Technical Considerations: Wind Turbines	Yes The transmission line will be constructed and operated within proximity to adjacent established wind energy facilities, including turbines and overhead or buried collector lines.	Yes The transmission line will be constructed and operated within proximity to adjacent established wind energy facilities, including turbines and overhead or buried collector lines.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Yes Reasonable to assume the transmission line may be constructed and operated within proximity to adjacent established wind energy facilities, including turbines and overhead or buried collector lines.	Yes Reasonable to assume the transmission line may be constructed and operated within proximity to adjacent established wind energy facilities, including turbines and overhead or buried collector lines.	No Not Applicable	No Not Applicable	No Not Applicable
Technical Considerations: Infrastructure Crossings	Yes Temporary construction activities overhead of Highway 401, Highway 77 and Highway 40 (Communication Road). Temporary construction activities over underground utility crossing. Temporary construction activities overhead of existing railway line ROWs. Temporary construction activities overhead of constructed drains.	Yes Permanent overhead crossing of Highway 401, Highway 77 and Highway 40 (Communication Road). Permanent Underground utility crossing. Permanent overhead crossing of the existing railway line ROWs. Permanent crossings of constructed drains.	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	No Not Applicable	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Unknown Potential for effect unknown until St. Clair impact assessments and preferred route is identified.	Yes Several projects have identified potential for infrastructure conflicts during construction activities. Project specific mitigation measures can be implemented to manage potential temporary effects.	No Not Applicable	Not Considered Significant. Not considered significant because potential impacts are temporary in nature and can be mitigated through project specific measures.

7.13.4 Summary of Cumulative Effects

The potential cumulative effects for the project were assessed by considering potential effects from other undertakings that interact and overlap with the Project LSA (500 m from the preferred route for the Project). Potential effects were determined based on publicly available information from completed Environmental Assessments where possible, or based on anticipated potential project effects from other Hydro One projects being planned nearby.

The CEA determined that there are no areas of environmental concern that will result in a significant cumulative effect. The mitigation measures outlined for the Project, summarized in **Table 7-1** through to **Table 7-3**, provide adequate project specific mitigation that remain effective after considering cumulative effects from the other projects. In the event some or all of the projects identified proceed concurrently, temporary construction-related effects can be further coordinated for mitigation with project proponents.

8 Effects Monitoring

The purpose of effects monitoring is to confirm the extent of the proposed Project's environmental effects by comparing the actual effects with the predicted effects, to verify the effectiveness of mitigation measures, and to determine whether additional measures are warranted. Monitoring also confirms that the commitments, conditions of approval, where applicable, and compliance with other environmental legislation are met. An Environmental Specialist will be assigned to the Project for the duration of construction to monitor construction activities and provide guidance on needed field changes.

As previously noted in **Section 7**, a project-specific Environmental Management Plan will be prepared following the completion of the Class EA process and before start of construction. The Environmental Management Plan will:

- Summarize legislative requirements.
- Summarize environmental commitments set out in the final ESR, and terms and conditions of approval, if any.
- Ensure the documentation of pre-construction site conditions, where necessary.
- Provide specific directions to construction personnel on the implementation of environmental mitigation measures, response plans, and other information (e.g., identification of Species at Risk).
- Ensure that supporting protection plans have been implemented during construction.
- Describe the environmental monitoring process and frequency to be undertaken during construction;
- Outline steps to be taken when documenting monitoring and identify procedures for follow-up actions, as required; and,
- Provide specific directions on the post-construction restoration of work areas and access locations.

Some Indigenous communities have expressed an interest in participating in environmental monitoring during construction of the Project. With regards to environmental monitoring during construction, in the interest of prioritizing the safety of all parties it has not been Hydro One's historic practice to invite external monitors onto active construction sites. However, in recognition of the interest expressed by some Indigenous communities in monitoring during construction, Hydro One will work with its construction contractor to identify opportunities to safely involve Indigenous community staff in environmental monitoring work during construction.

At the end of construction, an as-constructed plan will be prepared to guide ongoing operation and maintenance activities. The plan will document “as constructed” conditions as well as ongoing monitoring requirements, if required.

9 Conclusion

Hydro One is seeking approval under the *Environmental Assessment Act* to construct a new 230 kV double-circuit transmission line based on direction provided by IESO in June 2019. The new 230 kV transmission line will be approximately 49 km in length and will connect the Chatham SS in the Municipality of Chatham-Kent to the future Lakeshore TS in the Municipality of Lakeshore. As the preferred Route Alternative will repurpose approximately 16 km of an existing idle 115 kV transmission corridor between Tilbury and Chatham, the Project will involve dismantling and removal of the existing transmission structures, conductor and associated components and equipment along this stretch of the idle transmission line. The Project will also involve an expansion of the Chatham SS to facilitate the connection of the new transmission lines.

The purpose of the Project is to increase the overall transfer capability of the bulk transmission system west of Chatham in order to reliably supply the forecast load growth in the Kingsville-Leamington area and the broader Windsor-Essex Region in the near-to mid-term; permit the resources and bulk facilities in this region to operate efficiently for local and system needs; and maintain existing interchange capability on the Ontario-Michigan interconnection between Windsor and Detroit. The proposed project was identified as a near- to mid-term initiative in the IESO's Need for Bulk Transmission Reinforcement in the Windsor-Essex Region (2019).

Following receipt of the IESO letter in June 2019, Hydro One conducted a preliminary assessment to identify viable Route Alternatives for the new 230 kV transmission line. As a result of this exercise, three viable Route Alternatives (including variations) were identified. Based on information obtained during the early stages of the Class EA process, Hydro One made four refinements to the Route Alternatives in October 2020.

Since the Notice of Commencement in January 2020, municipal, provincial and federal government officials, staff and agencies, Anishnawbek and Haudenosaunee communities, potentially affected and interested persons, and interest groups were consulted. Given the uniqueness of the ongoing public health emergency related to COVID-19, many of the traditional in-person meetings and Community Information Centres (CIC) were replaced with Virtual Open Houses and Virtual Information Sessions (VIS). A total of three VIS' for the general public and stakeholders were held (#1 - May 12 & 14, 2020, #2 - November 5, 2020 and #3 - March 11, 2021). An additional two rounds of VIS' were held separately for Anishnawbek and Haudenosaunee communities (Anishnawbek #1 - May 26, 2020 and #2 - March 22, 2021; Haudenosaunee #1 - May 25, 2021 and #2 - March 23, 2021). Similarly, as a mechanism to replicate a traditional CIC, two Virtual Open Houses were held allowing the Anishnawbek and

Haudenosaunee communities, interested members of the public and project stakeholders to view project specific information over an extended period of time (#1 - October 29, 2020, and #2 - February 25, 2021) in advance of VIS #2 and #3. Additionally, an interactive online mapping platform was hosted on the Project web page since the commencement of the Class EA process, with regular updates to reflect the progress of the Project and Class EA.

A Technical Advisory Committee (TAC) was established to help inform the comparative evaluation and route selection process used to identify the preferred Route Alternative for the new 230 kV transmission Line. The purpose of the TAC was to provide a platform for Hydro One to present information, hold discussions and draw upon the experience and knowledge of individuals and organizations. The TAC consisted of representatives from Anishnawbek and Haudenosaunee communities, government agencies, municipalities, and interest groups, and three virtual TAC workshops were held (#1 - June 2020, #2 - September 2020, and #3 - February 2021).

Feedback received from the various public engagement activities and the TAC was used to complete a Multi-Criteria Decision Making Analysis in support of the Class EA. The results of this analysis determined that Route Alternative 2A was selected as the preferred Route Alternative.

Potential short- and long-term environmental effects were identified for the proposed Project and corresponding mitigation measures were developed to address these effects. Based on information collected, project design and implementation of the proposed mitigation measures, no significant net adverse environmental effects are expected.

The draft ESR was being made available for public review and comment for 60 days (extended from the typical 30-day review period), from June 11, 2021, to 4:30 PM on August 10, 2021. Additionally, in response to requests received from some communities, Hydro One extended the draft ESR review period by an additional 30 days (90 days total, through September 10, 2021) for Indigenous communities. Hydro One has made best efforts to respond and resolve issues raised by concerned parties during the review period. Comments received during this period, and Hydro One's responses, are documented in this final ESR.

During the draft ESR review period, three Section 16 Order Requests were submitted to the Minister of the Environment, Conservation and Parks, requesting that the Project be elevated to a higher level of assessment (i.e., requiring an individual/comprehensive EA approval before being able to proceed) on the grounds that the requested Order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal

and treaty rights. Since the receipt of the Section 16 Order Requests, Hydro One has engaged and worked with the Indigenous communities that submitted the requests to respond to and address the issues raised. In September 2022, all three Section 16 Order requests were formally withdrawn by the communities that had submitted them. On October 14, 2022 the MECP provided a formal acknowledgement of the withdrawal of the three requests and noted that with no outstanding Section 16 Order Requests before the Minister, Hydro One can proceed with the Project, subject to any additional permits or approvals that may be required, and that Hydro One must ensure the Project is implemented in the manner it was developed and designed, as set out in the Project documentation, and inclusive of all mitigating measures, environmental and other provisions therein.

Upon filing of this final ESR with the MECP, the Class EA process for the Chatham to Lakeshore Project will be complete and the proposed Project will be implemented in full compliance with the requirements of the Class EA process as outlined in the final ESR. Hydro One will obtain the necessary environmental approvals and permits required for the proposed project prior to construction.

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