Ecological Land Classification (ELC) Study

Proposed Bay d'Espoir to Western Avalon Transmission Line (TL 267)

FINAL REPORT

Prepared for:

Newfoundland and Labrador Hydro
A Nalcor Energy Company
Hydro Place, 500 Columbus Drive
PO Box 12400
St. John's, Newfoundland and Labrador
A1B 4K7 Canada

Prepared by:

Resource Innovations Inc.
61 Riverside Drive, Suite 101 PO Box 121
Corner Brook, Newfoundland and Labrador
A2H 6C7 Canada

In association with:

Amec Foster Wheeler Environment & Infrastructure
A Division of Amec Foster Wheeler Americas Limited
133 Crosbie Road, PO Box 13216
St. John's, Newfoundland and Labrador
A1B 4A5 Canada

July 2015

IMPORTANT NOTICE

This report was prepared exclusively for Newfoundland and Labrador Hydro by Resource Innovations Inc. and Amec Foster Wheeler Environment & Infrastructure, a Division of Amec Foster Wheeler Americas Limited (Amec Foster Wheeler). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in the above noted companies' services and based on: i) information available at the time of preparation, ii) data supplied by outside sources and iii) the assumptions, conditions and qualifications set forth in this report. This report is intended to be used by Newfoundland and Labrador Hydro only, subject to the terms and conditions of its contract with Amec Foster Wheeler. Any other use of, or reliance on, this report by any third party is at that party's sole risk.

EXECUTIVE SUMMARY

Newfoundland and Labrador Hydro (Hydro) is proposing to develop a transmission line (TL 267) across southeastern Newfoundland, from Bay d'Espoir to the Western Avalon Peninsula (the Project). The development of the proposed TL 267 will involve the clearing and control of vegetation along the right of way and other ground disturbance which, given the linear nature and geographic extent of the Project, will cross through a variety of vegetation communities and habitats.

The purpose of this Ecological Land Classification (ELC) Study has been to identify, categorize and map local ecosystems, including vegetation types and communities and associated habitats, within and adjacent to the proposed Project Area (40 m wide right of way) and a larger, surrounding Study Area (1 km wide). This 2015 study has focused primarily on the section of TL 267 between Bay d'Espoir and Come By Chance, a summary of the main results of which is provided below:

2015 ELC Habitat Type	40 m Wide Right of Way (ha)	1 km Wide Study Area (ha)
Softwood Forest	108.66	2,509.49
Hardwood Forest	8.75	249.96
Mixedwood Forest	67.37	1,503.73
Softwood Scrub	66.10	1,527.65
Hardwood Scrub	0.74	22.21
Herbaceous	4.24	197.25
Barren	85.94	2,259.48
Shrub	37.67	895.67
Wetland	143.78	3,807.00
Anthropogenic / Other	37.37	1,085.51
Total	**560.62**	**14,057.95**

The remaining section of the proposed TL 267 between Come By Chance and the Western Avalon Terminal Station near Chapel Arm was the subject of a previous ELC Study (Stantec 2010), which included the classification of 184.82 and 4,591.37 ha of habitat within the above described right of way and Study Area, respectively, based on 11 defined habitat types. For completeness, the relevant results of that study are also summarized and mapped in this report.

The associated Map Atlas presents the detailed results of the ELC at the 1:15,000 scale. The resulting GIS system contains this information at a scale of 1:5,000, and can be further analyzed and queried in detail as required.

The information provided through this ELC Study is intended to support the Project's Environmental Assessment (EA) registration and review, and will be used in on-going Project planning and design as well as in the eventual permitting and construction / mitigation planning for the Project.

This page has been intentionally left blank for double-sided printing

TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1
1.1 Study Rationale and Purpose 3

2.0 APPROACH AND METHODS 4
2.1 Ecological Land Classification: An Overview 4
2.2 Study Areas 7
2.3 Analytical and Mapping Methods 7
2.3.1 Spatial Imagery and Otho-photography Data and Analysis 7
2.3.2 Vegetation Typing and Mapping 8

3.0 RESULTS 10
3.1 ELC Habitat Types / Classes 10
3.1.1 Softwood Forest 10
3.1.2 Hardwood Forest 10
3.1.3 Mixedwood Forest 10
3.1.4 Softwood Scrub 11
3.1.5 Hardwood Scrub 11
3.1.6 Herbaceous 11
3.1.7 Barren 11
3.1.8 Shrub 11
3.1.9 Wetlands 12
3.1.10 Anthropogenic / Other 12
3.2 ELC Results Summary 14

4.0 SUMMARY AND CONCLUSION 17

5.0 REFERENCES 18

LIST OF FIGURES

Figure 1 - The Proposed Bay d'Espoir to Western Avalon Transmission Line (TL 267) 2

Figure 2 - Ecoregions and Subregions in Newfoundland Crossed by the Proposed Project 6

LIST OF TABLES

Table 1 - Summary of ELC Habitat Types (Areas and Proportions) - 2015 ELC Study 14

Table 2 - Summary of Anthropogenic / Other ELC Type (Areas and Proportions) - 2015 ELC Study 15

Table 3 - Summary of ELC Habitat Types (Areas and Proportions) – 2010 ELC Study 16

LIST OF APPENDICES

Appendix A 2015 Ecological Land Classification: Vegetation Types by Segment

Appendix B Ecological Land Classification Map Atlas

1.0 INTRODUCTION

Newfoundland Labrador Hydro (Hydro) owns and operates an extensive electrical generation and transmission system on the Island of Newfoundland, which includes a 613 megawatt (MW) hydroelectric generation station at Bay d'Espoir in the south-central portion of the Island, as well as several transmission lines that extend between it and other electrical infrastructure and load centres across the Island. This includes two existing transmission lines that run from that facility to Sunnyside which were constructed in the late 1960s, as well as a transmission system that extends between Sunnyside and Chapel Arm.

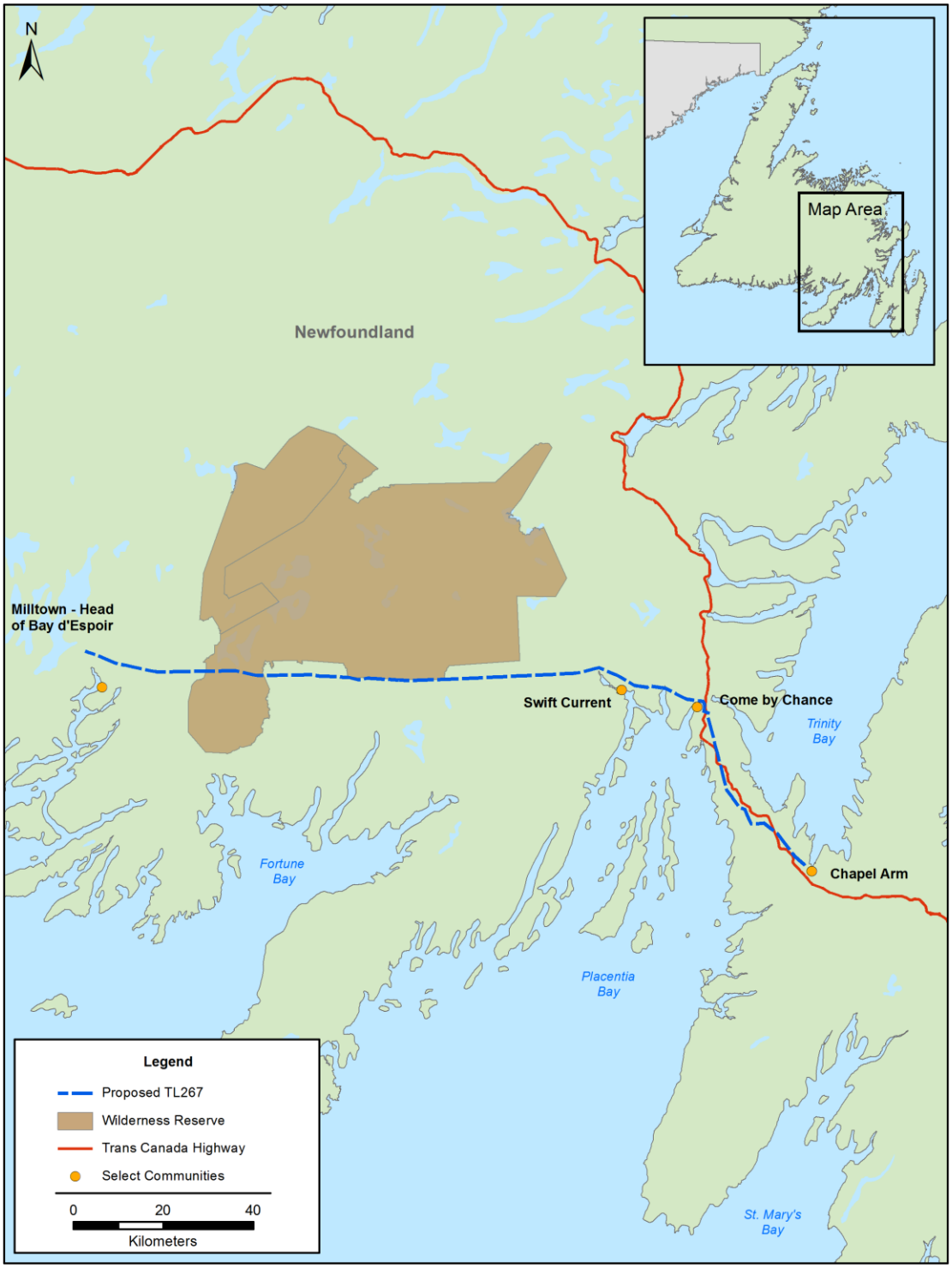
The proposed development project that is the subject of this study includes the construction and operation of a new 230 kilovolt (kV) transmission line that will be approximately 188 km long and connect the existing Bay d'Espoir and Western Avalon Terminal Stations (hereinafter also referred to as the "Project" or "TL 267"). The proposed TL 267 will parallel existing transmission line infrastructure from Bay d'Espoir to Come by Chance (TL 202 and TL 206) and further parallels TL 203 from Come by Chance to the Western Avalon substation in Chapel Arm (Figure 1). Upgrades to existing infrastructure at the Bay d'Espoir and Western Avalon terminal stations will also be completed as part of this Project. The existing transmission lines (TL 202, 203 and 206) were cleared and constructed within the boundaries of the easement granted to Hydro by Government at the time of their development, as will the proposed TL 267.

Given that this new transmission line and associated infrastructure will follow entirely along existing transmission lines and other infrastructure in the region, the Project is expected to have few if any environmental issues associated with it. Hydro is, however, committed to ensuring that Project construction and operations are conducted in an environmentally responsible and acceptable manner, in full compliance with associated environmental regulations and permits, as well as the company's own environmental policies, plans and standards.

The Proponent has therefore planned and completed an environmental study program in relation to the proposed Project, in order to obtain and compile information on key aspects of the existing biophysical and socioeconomic environments within and near the Project area. The information provided through this study program is intended to support the Project's Environmental Assessment (EA) registration and review, and will be used in on-going Project planning and design, as well as in the eventual permitting and construction / mitigation planning for the Project.

This *Ecological Land Classification (ELC) Study* comprises one component of that environmental study program.

Figure 1 - The Proposed Bay d'Espoir to Western Avalon Transmission Line (TL 267)



1.1 Study Rationale and Purpose

The development of the proposed transmission system will involve the clearing and control of vegetation along the right of way and other ground disturbance which, given the linear nature and geographic extent of the Project, will cross through a variety of vegetation communities and habitats.

The purpose of this ELC Study has therefore been to identify, categorize and map local ecosystems, including vegetation types and communities and associated habitats, within and adjacent to the proposed Project Area.

The ELC is a core environmental study that has formed the basis for several other study components and analyses, as well as associated environmental management and mitigation planning for the Project.

2.0 APPROACH AND METHODS

The following sections describe the general approach used in the completion of the ELC Study, including the Study Area, data sources and the overall methods used to compile and present the resulting environmental information.

2.1 Ecological Land Classification: An Overview

The fundamental basis for the delineation of ecological units is to identify and describe their main ecological composition and the linkages between their various components, including landforms, soils, water and vegetation (Marshall et al. 1999), as well as the occurrence, distribution and relative abundance of these components and characteristics within the geographic area of interest. The particular scale at which landscapes are defined and evaluated can also be variable, depending on the specific objectives and goals of the associated analysis and its geographic and ecological context.

In Canada, a hierarchical system has been developed to map and analyze the presence and characteristics of ecosystems at various geographic scales. This provides a relatively consistent spatial context within which ecosystems can be classified and described. This framework is comprised of a nested hierarchy that describes regional ecological units at various scales, in which larger ecological units encompass progressively smaller ones.

The *ecozone* is at the top of the ecological framework hierarchy in Canada, and defines the ecological mosaic of Canada on a sub-continental scale. Each ecozone represents an area of the earth's surface representative of large and very generalized ecological units that are characterized by interactive and adjusting abiotic and biotic factors (Marshall et al. 1999). Canada is divided into 15 ecozones, of which only one will be crossed by the proposed Project.

The Boreal Shield Ecozone includes parts of six Canadian provinces and covers more than 1.8 million square kilometers, including almost 20 percent of Canada's land mass and 10 percent of its surface water (Wiken 1986). The topography of this ecozone is comprised of rolling uplands that form poorly drained depressions blanketed with lakes, ponds, and wetlands. With a mostly continental climate, the region experiences long, cold winters with short warm summers with abundant precipitation. A short growing season coupled with acidic soils reduces vegetation productivity in this ecozone, although most of the area is forested primarily by coniferous species intermixed with hardwoods and wetlands. Lichens and shrubs are also common on areas of exposed rock (Wiken 1986).

Ecoregions are smaller ecological units that have distinctive, recurring patterns of vegetation and soil development, which are determined and controlled by local climate and geography. Also called "natural regions," ecoregions differ from each other in their combinations of plant communities, landscapes, geology, and other features (NL PNAD 2015). The proposed transmission line will pass through three of the Ecoregions that have been identified on the Island of Newfoundland (Damman 1983; NL DNR 2015), including (primarily) the large Maritime Barrens Ecoregion (79 percent of the transmission line's linear distance), along with smaller

portions of the Central Newfoundland Forest Ecoregion (18 percent) and Western Newfoundland Forest Ecoregion (three percent) at its ends. Within the Maritime Barrens Ecoregion, the proposed right of way occurs primarily within the Central Barrens Subregion with a smaller portion on the Avalon Peninsula falling within the Southeastern Subregion. The section of the transmission line within the Central Newfoundland Ecoregion crosses two Subregions, Twillick Steady near Bay d'Espoir and Northcentral near the Isthmus of the Avalon Peninsula (Figure 2).

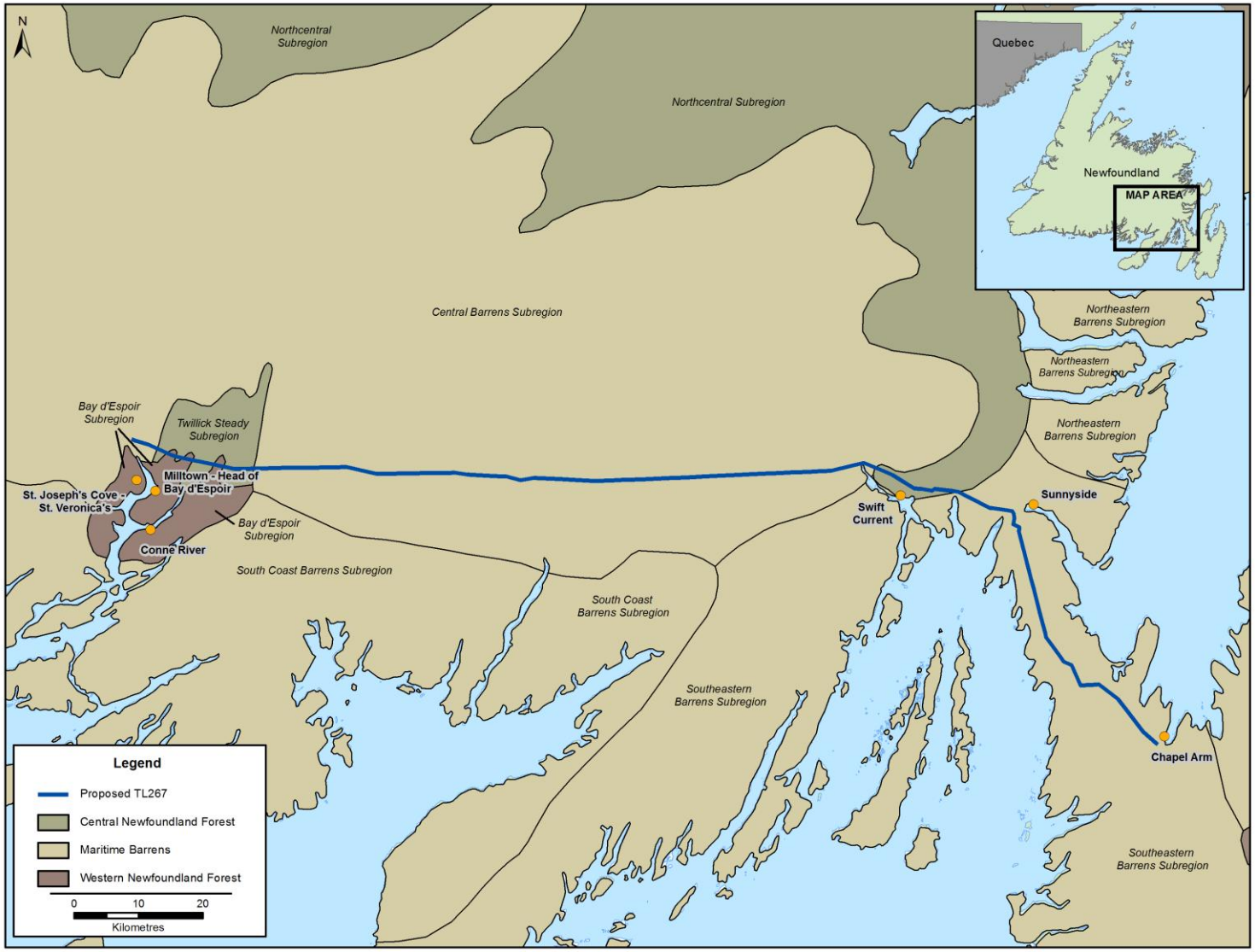
The Maritime Barrens Ecoregion is characterized by cool summers with frequent fog and strong winds. Winters are relatively mild with intermittent snow cover. Consequently, this ecoregion is dominated by open heathland and peat bog interspersed with patches of stunted balsam fir (*Abies balsamea*), black spruce (*Picea mariana*) and eastern larch (*Larix laricina*). Heath plants are primarily *Kalmia angustifolia* on protected slopes and *Empetrum nigrum* or *E. easmesii* on windswept ridges and headlands (Meades 1990; NL DNR 2015).

The Central Newfoundland Ecoregion has a more continental climate than the Maritime Barrens area, with cooler winter and higher summer temperatures. Forest fires have historically been more frequent in this ecoregion and have led to a replacement of balsam fir-*hyloconium* forest types over many areas. However, upland areas within the Twillick Steady Subregion remain dominated by balsam fir forest. Ground cover in the Northcentral Subregion is primarily dwarf shrub heath (*K. angustifolia*) with interspersed stands of balsam fir and black spruce. Topography in both subregions is less than 300 m above sea level and the topography is rugged and undulating (Meades 1990; NL DNR 2015).

The Western Newfoundland Forest Ecoregion (Bay d'Espoir Subregion) is characterized by a humid climate with a relatively longer frost-free period. Higher humidity reduces the prevalence of fire as a disturbance mechanism and favours the growth of *dryopteris*-balsam fir forest rather than black spruce as the dominant tree. Rich soils also support the growth of yellow birch (*Betula alleghaniensis*) in sheltered valleys of this subregion (Meades 1990; NL DNR 2015).

The proposed Project will also cross through a portion of the existing boundaries of the Bay du Nord Wilderness Reserve (2,895 km^2), which encompasses a vast landscape of ponds, rivers, barrens, bogs and fens, forests, and thickets in south-central Newfoundland.

Figure 2 - Ecoregions and Subregions in Newfoundland Crossed by the Proposed Project



2.2 Study Areas

The proposed Project will include construction and operation of a new electrical transmission system along existing transmission lines and roadways in south-central and eastern Newfoundland for a total distance of approximately 188 km. In completing this ELC Study, the associated analysis has focused upon a number of geographic scales, including:

> *Project Area* or *Transmission Line Right of Way*: A specific routing has been selected for the transmission line, which will involve a cleared right of way approximately 40 m wide.
>
> *Study Area*: The larger (1 km wide) Study Area extends 500 m on either side of the centre line of the identified right of way for the proposed TL 267, as described above. This surrounding area is considered in order to provide relevant, regional context for the analysis, as well as address the potential for Project-related activities to occur outside the 40 m wide transmission line routing itself.

Through the ELC analysis, a detailed overview and summary of the vegetation cover types within each of these areas is provided in the next Chapter and in the data tables included as Appendix A, with this information being shown graphically in the ELC Map Atlas included as Appendix B.

This study focuses primarily on ELC habitat types along the proposed TL 267 as far east as where the proposed transmission line meets the existing TL 203, near Come By Chance. The remaining section of the TL 267 right of way, between Come By Chance and the Western Avalon Terminal Station near Chapel Arm, was the focus of a similar ELC several years ago (Stantec 2010). For completeness and reference, the ELC habitats and associated areas identified within that section of the Study Area are summarized in Chapter 3 of this report and the associated Appendices. That previous study (Stantec 2010) should be consulted for further details on its ELC methodologies and findings.

2.3 Analytical and Mapping Methods

2.3.1 Spatial Imagery and Ortho-photography Data and Analysis

High resolution colour imagery acquired by Hydro was used as the basis for the ELC analysis and mapping. This imagery (flown by a fixed wing aircraft with an attached high resolution camera) consists of 3,504 individual images covering the Project and Study Areas extending from Bay d'Espoir to Sunnyside at a resolution of 15 cm per pixel. This imagery and its IMU (Inertial Measurement Unit) was utilized and incorporated within a developed geographic information system (GIS) workflow. In addition, a LiDAR (Light Detection and Ranging) dataset that was captured concurrently with the imagery was also acquired and used in the analysis. These LiDAR data were provided in LAS format and were then classified and processed into a compatible format to be utilized for feature extraction by the interpreters (see below). The Study Team produced several surface models to assist in feature identification and validation, including surface models containing ground elevation data, vegetation classification based on height as well as classified slope, aspect and hillshade rasters. Processed LiDAR datasets have been analyzed for the full extent of the Study Area and the 40 m wide transmission line right of way at a raster resolution of not less than 1 m per pixel.

These two data sources were combined in a GIS for analysis and eventual mapping. Data delineation, capture and analysis was performed within an RDBMS (Relational Database Management System) and SQL (Structured Query Language) Server utilizing Stereo Analyst (digital stereo viewing software) product extensions to enable the visualization and capture of true stereo features while enhancing feature integrity during both the capture and data cleaning process. This enabled interpreters to accurately assess ground and/or cover type over the extent of the Study Area. Factors such as topographical slope and vegetation height are readily apparent when using stereo mapping methods such as those described above.

Using the above described spatial imagery and topographical information, a stereo analysis (using stereo imaging software to view and collect true three dimensional values) was completed. Utilizing ArcGIS and industry standard spatial data protocols, preliminary mapping was conducted based on the initial classification list developed. Initial feature digitization was completed using 3D polyline features. Once linework had been completed, these lines were then transformed to polygon Z features (namely, polygons that store 3D data).

The ELC mapping was completed using polygons delineated during softcopy air photo interpretation. Delineation and classification both generally occurred at a scale of between 1:2,000 and 1:5,000. While efforts were made to maintain a scale close to 1:5,000 for the analysis, finer scales were necessary at times to ensure proper classification and/or feature extraction. The mapping was supported by the interpretation of LiDAR datasets to provide detailed slope, aspect and elevation models. ELC mapping completed for the entire Study Area followed 1 hectare minimum standards.

The proposed 40 m wide transmission line right of way and the adjacent 1 km wide Study Area was segmented (using stereo imagery and any additional pertinent data sources available) along its width by using the defining characteristics on which the previously mentioned classification system was founded. The interpreter physically assessed each of the resulting polygons in stereo (3D) and assigned an ecological land class based on local characteristics such as the presence / absence of vegetation communities, tree species, moisture (for wetlands, bogs, and riparian thickets), and other key and defining characteristics.

Through the support of the Study Team's geospatial analysts, ELC data validation was completed utilizing advanced geoprocessing tools to further analyze data derived by the interpreter to enhance output mapping products and data integrity. All spatial datasets developed were validated against input LAS datasets (industry-standard binary spatial data format used to store and distribute point cloud LiDAR datasets). LiDAR data was then classified, allowing the interpreter to delineate, classify and attribute feature classes using several 3D inputs for stereo data with the highest possible integrity.

2.3.2 Vegetation Typing and Mapping

Experienced digital aerial photography interpreters used the ArcGIS and Stereo Analyst combination to classify all ELC polygons within the previously mentioned spatial extents. Each individual polygon was visually assessed to determine its characteristics. Similar vegetation, wetland and anthropogenic features were grouped together while areas exhibiting characteristics significantly different were separated as necessary and classed appropriately. The environment in which interpreters delineated and classified allowed for multi-interpreter classification, through which the data were continuously

evaluated and validated for data integrity using spatial databases. Geodatabases were developed using domain and coded value tables which enable the interpreters to classify the data based on pre-defined variables, eliminating user error based on feature types within the database. This also allows for further refinement, classification and additions to the geodatabase. Each domain also contains coded value tables which further break down each domain value. For example, the Form – Bog domain contains nine possible bog types found within the Canadian Wetland Classification System. Each coded value table includes every feature type found within that classification system for the entire extent of the Study Area.

Areas determined to fit the wetland ecotype were intensely scrutinized and classified as per the Canadian Wetland Classification System guidelines, down to the individual wetland form or sub-form if applicable and where possible. It is important to note here that in some cases it appeared that certain areas within the landscape had experienced damage from ATV use and other factors, which did lead to some uncertainty surrounding the specific classification of for example individual wetlands as key features were obscured, changed, or unable to be determined. In addition, some determining factors for proper wetland classification (such as peat type and depth) may be somewhat difficult to determine from an ocular assessment alone.

ELC analysis and reporting was completed to produce statistical information of mapping units and ecological land classes, and a quantitative analysis of the amount and area in each class identified within the transmission line right of way and larger Study Area.

3.0 RESULTS

The following sections provide an overview of the key results and outcomes of the ELC Study, including the associated vegetation mapping results for the 40 m wide right of way and the 1 km wide surrounding Study Area.

3.1 ELC Habitat Types / Classes

The ELC analysis for this Project resulted in 10 primary ecotypes being identified, delineated and mapped for the TL 267 Study Area. Two of the primary ecotypes have a number of sub-ecotypes which have been identified during the analysis. Each ecotype is listed and described below, and were defined based on the dominant vegetation cover and the interpreter's field experience and familiarity with such ecotypes in Newfoundland and Labrador and elsewhere.

3.1.1 Softwood Forest

The softwood forest class describes areas of forested land which have:

- A combined total crown closure of greater than or equal to 20 percent.
- A species composition greater than or equal to 70 percent softwood.
- A site capability enabling the production of a merchantable forest at an average rotation age.

3.1.2 Hardwood Forest

The hardwood forest class describes areas of forested land which have:

- A combined total crown closure of greater than or equal to 20 percent.
- A species composition greater than or equal to 70 percent hardwood.
- A site capability enabling the production of a merchantable forest at an average rotation age.

3.1.3 Mixedwood Forest

The mixedwood forest class describes areas of forested land which have:

- A combined total crown closure of greater than or equal to 20 percent.
- A species composition where the dominant species is less than 70 percent hardwood or softwood.
- A site capability enabling the production of a merchantable forest at an average rotation age.

3.1.4 Softwood Scrub

The softwood scrub class describes treed areas which have:

- A combined total crown closure of greater than or equal to 20 percent.
- A species composition where the dominant species is greater than 50 percent softwood.
- A site capability which prevents the production of a merchantable forest at an average rotation age usually due to limiting environmental factors such as elevation, shallow soils, and/or nutrient deficient sites.

3.1.5 Hardwood Scrub

The hardwood scrub class describes treed areas which have:

- A combined total crown closure of greater than or equal to 20 percent.
- A species composition where the dominant species is greater than 50 percent hardwood.
- A site capability which prevents the production of a merchantable forest at an average rotation age usually due to limiting environmental factors such as elevation, shallow soils, and/or nutrient deficient sites.

3.1.6 Herbaceous

The herbaceous class describes areas dominated by herbaceous vegetation, which is defined as non-woody plants which die back at the end of a growing season.

3.1.7 Barren

The barren class describes areas which have:

- A combined total treed crown closure of less than 20 percent.
- Vegetation dominated by lichen and/or ericaceous plants.
- Substrates dominated by bedrock and/or thin layers of soil/organic matter over bedrock.

3.1.8 Shrub

The shrub class describes areas dominated by shrub vegetation, which is defined as small to medium sized woody plants (alder, willow, mountain maple, etc.).

3.1.9 Wetlands

The Canadian Wetland Classification System (National Wetlands Working Group 1997) describes a wetland as land that is saturated with water long enough to promote wetland or aquatic processes, as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity that are adapted to a wet environment.

As part of the ELC, wetlands have been identified and delineated and were classified down to the form and subform levels where possible and relevant, the detailed results of which are provided in a separate Wetlands Inventory and Classification Study Report (Amec Foster Wheeler 2015).

For the purposes of the ELC Report itself, identified wetlands are described and mapped as a single "wetlands" ELC type in the tables and mapping that follows.

3.1.10 Anthropogenic / Other

A number of non-vegetated ELC types were also identified and mapped through the ELC, which are collectively termed "Anthropogenic / Other". The various sub-classes within this category are described below.

Water

The water class is described as any permanent water feature where the surface area was determined to be greater than 1 hectare in size.

Exposed Bedrock

The exposed bedrock class includes any site where vegetation is generally absent and exposed bedrock is dominant.

Transportation Routes

The transportation route class includes permanent road structures which appear to be passable through visual assessment.

Disturbed – Industrial

The disturbed – industrial class comprises any permanent and/or semi-permanent structures associated with industrial activities such as (but not limited to) power generating stations and associated facilities.

Disturbed – Residential

The disturbed – residential class includes any cleared areas dominated by dwellings and/or urbanized features such as municipalities, cabin developments, or others.

Disturbed – Farmland

The disturbed – farmland class includes human worked land areas where the assumed purpose was the creation and use of productive farmland.

Disturbed – Insect

The disturbed – insect class includes areas which appear to have been depleted by a previous insect outbreak(s) and do not currently meet the definition of either the softwood, hardwood or mixedwood forest class.

Disturbed – Cutover

The disturbed – cutover class includes areas which appeared to have been exploited by modern timber harvesting methods and do not currently meet the definition of either the softwood, hardwood or mixedwood forest class.

It is recognized that a portion of the Study Area associated with the existing transmission line rights of way (TL 202 and 206) is considered to be previously disturbed habitat. A large portion of this area has been defined as shrub, scrub, wetland and barren ecotypes, and is essentially void of forest habitat due to previous clearing (Appendix B). There are also sections of the existing transmission line rights of way that would not be considered disturbed, especially in areas where forest habitat was not the original ecotype (scrub, wetlands and barrens). This is seen where ecotypes outside of the existing rights of way are contiguous with those inside it (see map pages 14-20 in Appendix B, for example). Keeping in mind that while the existing transmission line rights of way were originally developed through anthropogenic influences, these now provide important functional habitat and movement corridors for various wildlife in the area. For this reason, the existing transmission line rights of way were not grouped with the above described "Anthropogenic / Other" ELC type (which include roads, trails, buildings and other cleared area) but rather were classified according to the relevant vegetated (non-anthropogenic) habitat types described earlier.

3.2 ELC Results Summary

Table 1 provides a summary of the results of the ELC vegetation analysis for both identified transmission line right of way (40 m wide) as well as the overall (1 km wide) Study Area. A more detailed breakdown for the Anthropogenic / Other ELC Type is provided in Table 2.

Table 1 - Summary of ELC Habitat Types (Areas and Proportions) - 2015 ELC Study

ELC Habitat Type	Area (ha)	Percent
TL 267 Right of Way (40 m wide)		
Softwood Forest	108.66	19.4%
Hardwood Forest	8.75	1.6%
Mixedwood Forest	67.37	12.0%
Softwood Scrub	66.10	11.8%
Hardwood Scrub	0.74	0.1%
Herbaceous	4.24	0.8%
Barren	85.94	15.3%
Shrub	37.67	6.7%
Wetland	143.78	25.6%
Anthropogenic / Other	37.37	6.7%
Total	**560.62**	**100.0%**
ELC Study Area (1 km wide)		
Softwood Forest	2,509.49	17.9%
Hardwood Forest	249.96	1.8%
Mixedwood Forest	1,503.73	10.7%
Softwood Scrub	1,527.65	10.9%
Hardwood Scrub	22.21	0.2%
Herbaceous	197.25	1.4%
Barren	2,259.48	16.1%
Shrub	895.67	6.4%
Wetland	3,807.00	27.1%
Anthropogenic / Other	1,085.51	7.7%
Total	**14,057.95**	**100.0%**

Table 2 - Summary of Anthropogenic / Other ELC Type (Areas and Proportions) - 2015 ELC Study

Anthropogenic / Other ELC Type (*Detailed Breakdown*)	Area (ha)	Percent
TL 267 Right of Way (40 m wide)		
Water	31.53	84.4%
Exposed Bedrock	1.36	3.6%
Transportation Routes	0.69	1.8%
Disturbed - Commercial	0.03	0.1%
Disturbed - Residential	0.00	0.0%
Disturbed - Farmland	1.45	3.9%
Disturbed - Insect	0.28	0.7%
Disturbed - Cutover	2.03	5.4%
Total	**37.37**	**100.0%**
ELC Study Area (1 km wide)		
Water	947.22	87.3%
Exposed Bedrock	25.97	2.4%
Transportation Routes	24.78	2.3%
Disturbed - Commercial	6.19	0.6%
Disturbed - Residential	2.61	0.2%
Disturbed - Farmland	11.78	1.1%
Disturbed - Insect	4.33	0.4%
Disturbed - Cutover	62.63	5.8%
Total	**1,085.51**	**100.0%**

To allow for optimal presentation and analysis of key environmental characteristics and features in the Project area and surrounding region, the ELC Study Area and proposed transmission line right of way have also been sub-divided into a series of 5 km long segments, with summary data being provided for each segment in Appendix A.

As noted previously, this study has focused primarily on ELC habitat types along the proposed TL 267 as far east as where the proposed transmission line meets the existing TL 203, near Come By Chance. The remaining segment of the TL 267 right of way, between Come By Chance and the Western Avalon Terminal Station near Chapel Arm, was the focus of a similar ELC several years ago (Stantec 2010). Table 3 provides a summary of the ELC results from that previous (Stantec 2010) ELC Study, based on the various habitat types that were defined and used in that analysis.

Table 3 - Summary of ELC Habitat Types (Areas and Proportions) – 2010 ELC Study

ELC Habitat Type	Area (ha)	Percent
TL 267 Right of Way (40 m wide)		
Conifer Forest	11.91	6.4%
Conifer Scrub	0.13	0.1%
Cutover	31.99	17.3%
Exposed Earth / Anthro / Cutblock	0	0.0%
Exposed-Earth / Anthro	8.71	4.7%
Kalmia Lichen / Heathland	10.16	5.5%
Mixedwood Forest	20.53	11.1%
Open Water	3.94	2.1%
Rocky Barrens	10.31	5.6%
Scrub / Heathland / Wetland Complex	87.04	47.1%
Wetland	0.08	0.0%
Total	**184.82**	**100.0%**
ELC Study Area (1 km wide)		
Conifer Forest	315.47	6.9%
Conifer Scrub	6.48	0.1%
Cutover	711.14	15.5%
Exposed Earth / Anthro / Cutblock	15.83	0.3%
Exposed-Earth / Anthro	147.72	3.2%
Kalmia Lichen / Heathland	219.02	4.8%
Mixedwood Forest	660.4	14.4%
Open Water	147.61	3.2%
Rocky Barrens	261.29	5.7%
Scrub / Heathland / Wetland Complex	2,084.93	45.4%
Wetland	21.48	0.5%
Total	**4,591.37**	**100.0%**

The Map Atlas in Appendix B presents the detailed results of the ELC and associated mapping at the 1:15,000 scale. The associated GIS system contains this information at a scale of 1:5,000, and can be further analyzed and queried in detail as required.

4.0 SUMMARY AND CONCLUSION

The development of the proposed TL 267 will involve the clearing and control of vegetation along the right of way and other ground disturbance which, given the linear nature and geographic extent of the Project, will cross through a variety of vegetation communities and habitats.

The purpose of the ELC Study has been to identify, categorize and map local ecosystems, including vegetation types and communities and associated habitats, within and adjacent to the Project Area.

The information provided through this study is intended to support the Project's EA registration and review, and will be used in on-going Project planning and design as well as in the eventual permitting and construction / mitigation planning for the Project.

5.0 REFERENCES

Amec Foster Wheeler. (2015). Wetlands Inventory and Classification Study: Proposed Bay d'Espoir to Western Avalon Transmission Line (TL 267). Prepared for Newfoundland and Labrador Hydro.

Marshall, I. B., Schut, P. H., & Ballard, M. (1999). A National Ecological Framework for Canada: Attribute Data. Ottawa / Hull: Agriculture and Agri-Food Canada, Research Branch, Center for Land and Biological Resources Branch, and Environment Canada, State of the Environment Directorate, Ecozone Analysis Branch.

Meades, S.J. (1990). Natural Regions of Newfoundland and Labrador. Report prepared for the Protected Areas Association, St. John's, NL.

National Wetlands Working Group. (1997). The Canadian Wetland Classification System; Second Edition. Waterloo, Ontario: Wetlands Research Center, University of Waterloo.

NL DNR (NL Department of Natural Resources). (2015). Ecoregions of Newfoundland. Forestry Branch, Department of Natural Resources, Government of Newfoundland and Labrador. http://www.nr.gov.nl.ca/nr/forestry/maps/eco_nf.html

NL PNAD (NL Parks and Natural Areas Division). (2015). Protected Areas in Newfoundland and Labrador. Department of Environment and Conservation, Government of Newfoundland and Labrador. http://www.env.gov.nl.ca/parks

Stantec Consulting Limited. (2010). Labrador – Island Transmission Link: Ecological Land Classification Prepared for Nalcor Energy

Wiken, E. B. (1986). Terrestrial Ecozones of Canada; Ecological Land Classification. Hull, QC: Environment Canada.

Appendix A

Ecological Land Classification (2015)
Vegetation Types by Segment

(Bay d'Espoir to Come By Chance)

This page has been intentionally left blank for double-sided printing

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
KM 0 - 5	Softwood Forest	3.52	17.7%
	Hardwood Forest	3.40	17.1%
	Mixedwood Forest	4.50	22.6%
	Softwood Scrub	-	-
	Hardwood Scrub	-	-
	Herbaceous	0.34	1.7%
	Barren	0.48	2.4%
	Shrub	2.67	13.4%
	Wetland	2.37	11.9%
	Anthropogenic / Other	2.61	13.1%
KM 5 - 10	Softwood Forest	15.11	75.6%
	Hardwood Forest	-	-
	Mixedwood Forest	1.08	5.4%
	Softwood Scrub	0.69	3.4%
	Hardwood Scrub	-	-
	Herbaceous	0.01	0.1%
	Barren	-	-
	Shrub	0.20	1.0%
	Wetland	2.59	13.0%
	Anthropogenic / Other	0.32	1.6%
KM 10 - 15	Softwood Forest	8.57	42.9%
	Hardwood Forest	1.49	7.5%
	Mixedwood Forest	3.33	16.6%
	Softwood Scrub	3.33	16.6%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	-	-
	Shrub	0.83	4.2%
	Wetland	0.62	3.1%
	Anthropogenic / Other	1.83	9.1%
KM 15 - 20	Softwood Forest	7.52	37.6%
	Hardwood Forest	-	-
	Mixedwood Forest	4.55	22.8%
	Softwood Scrub	2.16	10.8%

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	0.64	3.2%
	Shrub	1.45	7.3%
	Wetland	3.08	15.4%
	Anthropogenic / Other	0.59	3.0%
KM 20 - 25	Softwood Forest	2.08	10.4%
	Hardwood Forest	-	-
	Mixedwood Forest	7.44	37.2%
	Softwood Scrub	2.29	11.4%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	0.23	1.1%
	Shrub	0.16	0.8%
	Wetland	6.67	33.3%
	Anthropogenic / Other	1.13	5.7%
KM 25 - 30	Softwood Forest	10.17	50.9%
	Hardwood Forest	-	-
	Mixedwood Forest	1.77	8.9%
	Softwood Scrub	0.52	2.6%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	2.85	14.3%
	Shrub	0.85	4.2%
	Wetland	2.56	12.8%
	Anthropogenic / Other	1.28	6.4%
KM 30 - 35	Softwood Forest	8.55	42.7%
	Hardwood Forest	-	-
	Mixedwood Forest	2.44	12.2%
	Softwood Scrub	0.74	3.7%
	Hardwood Scrub	0.12	0.6%
	Herbaceous	0.24	1.2%
	Barren	0.94	4.7%
	Shrub	0.32	1.6%

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Wetland	5.73	28.6%
	Anthropogenic / Other	0.94	4.7%
KM 35 - 40	Softwood Forest	3.66	18.3%
	Hardwood Forest	0.50	2.5%
	Mixedwood Forest	1.96	9.8%
	Softwood Scrub	5.63	28.2%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	0.88	4.4%
	Shrub	-	-
	Wetland	6.89	34.5%
	Anthropogenic / Other	0.48	2.4%
KM 40 - 45	Softwood Forest	1.45	7.2%
	Hardwood Forest	1.36	6.8%
	Mixedwood Forest	4.90	24.5%
	Softwood Scrub	2.52	12.6%
	Hardwood Scrub	0.62	3.1%
	Herbaceous	0.20	1.0%
	Barren	5.36	26.8%
	Shrub	0.87	4.3%
	Wetland	1.60	8.0%
	Anthropogenic / Other	1.12	5.6%
KM 45 - 50	Softwood Forest	2.20	11.0%
	Hardwood Forest	-	-
	Mixedwood Forest	0.94	4.7%
	Softwood Scrub	5.87	29.3%
	Hardwood Scrub	-	-
	Herbaceous	0.02	0.1%
	Barren	4.92	24.6%
	Shrub	-	-
	Wetland	3.97	19.9%
	Anthropogenic / Other	2.09	10.4%
KM 50 - 55	Softwood Forest	1.38	6.9%
	Hardwood Forest	-	-

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Mixedwood Forest	9.78	48.9%
	Softwood Scrub	0.60	3.0%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	0.64	3.2%
	Shrub	2.05	10.2%
	Wetland	4.07	20.4%
	Anthropogenic / Other	1.48	7.4%
KM 55 - 60	Softwood Forest	0.65	3.2%
	Hardwood Forest	-	-
	Mixedwood Forest	2.65	13.2%
	Softwood Scrub	1.17	5.8%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	1.14	5.7%
	Shrub	3.83	19.1%
	Wetland	7.53	37.7%
	Anthropogenic / Other	3.04	15.2%
KM 60 - 65	Softwood Forest	3.54	17.7%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	9.08	45.5%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	0.99	4.9%
	Shrub	0.45	2.2%
	Wetland	4.78	23.9%
	Anthropogenic / Other	1.14	5.7%
KM 65 - 70	Softwood Forest	1.12	5.6%
	Hardwood Forest	-	-
	Mixedwood Forest	0.57	2.9%
	Softwood Scrub	8.32	41.6%
	Hardwood Scrub	-	-
	Herbaceous	-	-

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Barren	0.74	3.7%
	Shrub	-	-
	Wetland	8.85	44.2%
	Anthropogenic / Other	0.40	2.0%
KM 70 - 75	Softwood Forest	0.14	0.7%
	Hardwood Forest	-	-
	Mixedwood Forest	0.19	1.0%
	Softwood Scrub	7.66	38.3%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	3.95	19.8%
	Shrub	-	-
	Wetland	7.21	36.1%
	Anthropogenic / Other	0.85	4.2%
KM 75 - 80	Softwood Forest	-	-
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	4.15	20.8%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	2.49	12.4%
	Shrub	1.27	6.3%
	Wetland	9.82	49.1%
	Anthropogenic / Other	2.27	11.4%
KM 80 - 85	Softwood Forest	0.53	2.7%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	3.48	17.4%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	3.40	17.0%
	Shrub	1.54	7.7%
	Wetland	9.13	45.7%
	Anthropogenic / Other	1.90	9.5%

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
KM 85 - 90	Softwood Forest	-	-
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	2.34	11.7%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	7.81	39.0%
	Shrub	0.10	0.5%
	Wetland	7.20	36.0%
	Anthropogenic / Other	2.54	12.7%
KM 90 - 95	Softwood Forest	-	-
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	1.51	7.5%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	8.31	41.6%
	Shrub	1.38	6.9%
	Wetland	6.05	30.3%
	Anthropogenic / Other	2.75	13.7%
KM 95 - 100	Softwood Forest	0.69	3.5%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	0.67	3.4%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	9.14	45.7%
	Shrub	2.08	10.4%
	Wetland	5.35	26.8%
	Anthropogenic / Other	2.07	10.3%
KM 100 - 105	Softwood Forest	0.63	3.2%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	-	-

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Hardwood Scrub	-	-
	Herbaceous	0.51	2.6%
	Barren	5.75	28.7%
	Shrub	5.06	25.3%
	Wetland	6.66	33.3%
	Anthropogenic / Other	1.39	6.9%
KM 105 - 110	Softwood Forest	1.81	9.1%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	-	-
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	3.34	16.7%
	Shrub	4.71	23.5%
	Wetland	8.06	40.3%
	Anthropogenic / Other	2.08	10.4%
KM 110 - 115	Softwood Forest	9.60	48.0%
	Hardwood Forest	0.70	3.5%
	Mixedwood Forest	1.71	8.5%
	Softwood Scrub	0.45	2.2%
	Hardwood Scrub	-	-
	Herbaceous	1.30	6.5%
	Barren	2.90	14.5%
	Shrub	0.86	4.3%
	Wetland	2.48	12.4%
	Anthropogenic / Other	-	-
KM 115 - 120	Softwood Forest	2.77	13.8%
	Hardwood Forest	1.29	6.4%
	Mixedwood Forest	6.92	34.6%
	Softwood Scrub	-	-
	Hardwood Scrub	-	-
	Herbaceous	1.04	5.2%
	Barren	5.54	27.7%
	Shrub	-	-

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Wetland	0.91	4.6%
	Anthropogenic / Other	1.54	7.7%
KM 120 - 125	Softwood Forest	10.33	50.7%
	Hardwood Forest	-	-
	Mixedwood Forest	1.19	5.8%
	Softwood Scrub	0.99	4.9%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	4.88	24.0%
	Shrub	0.42	2.1%
	Wetland	2.45	12.0%
	Anthropogenic / Other	0.12	0.6%
KM 125 – 130	Softwood Forest	7.13	37.3%
	Hardwood Forest	-	-
	Mixedwood Forest	2.10	11.0%
	Softwood Scrub	0.22	1.1%
	Hardwood Scrub	-	-
	Herbaceous	0.06	0.3%
	Barren	6.89	36.0%
	Shrub	0.67	3.5%
	Wetland	1.69	8.8%
	Anthropogenic / Other	0.39	2.0%
KM 130 - 135	Softwood Forest	1.90	9.5%
	Hardwood Forest	-	-
	Mixedwood Forest	5.30	26.5%
	Softwood Scrub	1.03	5.1%
	Hardwood Scrub	-	-
	Herbaceous	0.19	0.9%
	Barren	0.93	4.7%
	Shrub	3.46	17.3%
	Wetland	6.35	31.7%
	Anthropogenic / Other	0.85	4.2%
KM 135 - 140	Softwood Forest	3.60	18.0%
	Hardwood Forest	-	-

Table A1. ELC Vegetation Types by Segment: Transmission Line Right of Way (40 m wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Mixedwood Forest	4.06	20.3%
	Softwood Scrub	0.68	3.4%
	Hardwood Scrub	-	-
	Herbaceous	0.33	1.7%
	Barren	0.80	4.0%
	Shrub	2.32	11.6%
	Wetland	7.99	40.0%
	Anthropogenic / Other	0.18	0.9%
KM 140 - 145	Softwood Forest	-	-
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	-	-
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	-	-
	Shrub	0.14	11.4%
	Wetland	1.10	88.6%
	Anthropogenic / Other	-	-

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
KM 0 - 5	Softwood Forest	66.28	13.2%
	Hardwood Forest	53.62	10.7%
	Mixedwood Forest	97.90	19.6%
	Softwood Scrub	13.08	2.6%
	Hardwood Scrub	0.76	0.2%
	Herbaceous	8.24	1.6%
	Barren	16.68	3.3%
	Shrub	73.64	14.7%
	Wetland	98.31	19.7%
	Anthropogenic / Other	71.74	14.3%
KM 5 - 10	Softwood Forest	276.31	55.3%
	Hardwood Forest	21.34	4.3%
	Mixedwood Forest	77.19	15.4%
	Softwood Scrub	30.43	6.1%
	Hardwood Scrub	2.06	0.4%
	Herbaceous	4.51	0.9%
	Barren	2.66	0.5%
	Shrub	20.64	4.1%
	Wetland	57.72	11.5%
	Anthropogenic / Other	7.01	1.4%
KM 10 - 15	Softwood Forest	205.59	41.1%
	Hardwood Forest	14.69	2.9%
	Mixedwood Forest	96.89	19.4%
	Softwood Scrub	64.64	12.9%
	Hardwood Scrub	-	-
	Herbaceous	12.76	2.6%
	Barren	-	-
	Shrub	35.08	7.0%
	Wetland	46.98	9.4%
	Anthropogenic / Other	23.36	4.7%
KM 15 - 20	Softwood Forest	160.34	32.1%
	Hardwood Forest	7.69	1.5%
	Mixedwood Forest	82.96	16.6%
	Softwood Scrub	44.86	9.0%

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Hardwood Scrub	-	-
	Herbaceous	7.16	1.4%
	Barren	25.62	5.1%
	Shrub	13.97	2.8%
	Wetland	130.73	26.1%
	Anthropogenic / Other	26.60	5.3%
KM 20 - 25	Softwood Forest	70.76	14.2%
	Hardwood Forest	-	-
	Mixedwood Forest	135.37	27.1%
	Softwood Scrub	45.02	9.0%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	17.14	3.4%
	Shrub	10.35	2.1%
	Wetland	189.57	37.9%
	Anthropogenic / Other	31.80	6.4%
KM 25 - 30	Softwood Forest	208.43	41.7%
	Hardwood Forest	-	-
	Mixedwood Forest	21.98	4.4%
	Softwood Scrub	37.03	7.4%
	Hardwood Scrub	2.54	0.5%
	Herbaceous	-	-
	Barren	79.04	15.8%
	Shrub	25.57	5.1%
	Wetland	72.06	14.4%
	Anthropogenic / Other	53.36	10.7%
KM 30 - 35	Softwood Forest	175.45	35.1%
	Hardwood Forest	-	-
	Mixedwood Forest	55.25	11.0%
	Softwood Scrub	20.73	4.1%
	Hardwood Scrub	3.16	0.6%
	Herbaceous	6.77	1.4%
	Barren	11.15	2.2%
	Shrub	18.77	3.8%

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Wetland	129.75	25.9%
	Anthropogenic / Other	79.19	15.8%
KM 35 - 40	Softwood Forest	70.11	14.0%
	Hardwood Forest	28.27	5.7%
	Mixedwood Forest	77.44	15.5%
	Softwood Scrub	127.04	25.4%
	Hardwood Scrub	-	-
	Herbaceous	4.28	0.9%
	Barren	17.13	3.4%
	Shrub	3.31	0.7%
	Wetland	137.55	27.5%
	Anthropogenic / Other	34.81	7.0%
KM 40 - 45	Softwood Forest	45.56	9.1%
	Hardwood Forest	17.23	3.4%
	Mixedwood Forest	123.47	24.7%
	Softwood Scrub	98.07	19.6%
	Hardwood Scrub	2.44	0.5%
	Herbaceous	7.64	1.5%
	Barren	132.02	26.4%
	Shrub	6.64	1.3%
	Wetland	48.37	9.7%
	Anthropogenic / Other	18.55	3.7%
KM 45 - 50	Softwood Forest	83.92	16.8%
	Hardwood Forest	4.49	0.9%
	Mixedwood Forest	38.55	7.7%
	Softwood Scrub	103.23	20.6%
	Hardwood Scrub	4.21	0.8%
	Herbaceous	5.38	1.1%
	Barren	147.93	29.6%
	Shrub	1.61	0.3%
	Wetland	67.00	13.4%
	Anthropogenic / Other	43.68	8.7%
KM 50 - 55	Softwood Forest	112.08	22.4%
	Hardwood Forest	8.68	1.7%

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Mixedwood Forest	112.25	22.4%
	Softwood Scrub	21.93	4.4%
	Hardwood Scrub	3.27	0.7%
	Herbaceous	12.40	2.5%
	Barren	29.88	6.0%
	Shrub	35.15	7.0%
	Wetland	89.61	17.9%
	Anthropogenic / Other	74.78	15.0%
KM 55 - 60	Softwood Forest	16.57	3.3%
	Hardwood Forest	0.08	0.0%
	Mixedwood Forest	44.17	8.8%
	Softwood Scrub	38.70	7.7%
	Hardwood Scrub	-	-
	Herbaceous	0.72	0.1%
	Barren	17.33	3.5%
	Shrub	150.08	30.0%
	Wetland	165.70	33.1%
	Anthropogenic / Other	66.78	13.4%
KM 60 - 65	Softwood Forest	69.70	14.0%
	Hardwood Forest	1.98	0.4%
	Mixedwood Forest	4.56	0.9%
	Softwood Scrub	185.72	37.2%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	34.90	7.0%
	Shrub	2.34	0.5%
	Wetland	163.50	32.8%
	Anthropogenic / Other	36.53	7.3%
KM 65 - 70	Softwood Forest	11.48	2.3%
	Hardwood Forest	2.35	0.5%
	Mixedwood Forest	16.30	3.3%
	Softwood Scrub	178.73	35.7%
	Hardwood Scrub	3.76	0.8%
	Herbaceous	-	-

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Barren	38.44	7.7%
	Shrub	9.12	1.8%
	Wetland	206.81	41.4%
	Anthropogenic / Other	33.01	6.6%
KM 70 - 75	Softwood Forest	3.72	0.7%
	Hardwood Forest	-	-
	Mixedwood Forest	5.34	1.1%
	Softwood Scrub	176.93	35.4%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	91.08	18.2%
	Shrub	0.66	0.1%
	Wetland	187.28	37.5%
	Anthropogenic / Other	34.96	7.0%
KM 75 - 80	Softwood Forest	1.94	0.4%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	79.17	15.8%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	108.03	21.6%
	Shrub	19.63	3.9%
	Wetland	252.75	50.5%
	Anthropogenic / Other	38.49	7.7%
KM 80 - 85	Softwood Forest	31.11	6.2%
	Hardwood Forest	-	-
	Mixedwood Forest	2.03	0.4%
	Softwood Scrub	97.70	19.5%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	93.68	18.7%
	Shrub	6.65	1.3%
	Wetland	240.38	48.1%
	Anthropogenic / Other	28.46	5.7%

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
KM 85 - 90	Softwood Forest	-	-
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	43.83	8.8%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	194.98	39.0%
	Shrub	2.11	0.4%
	Wetland	222.57	44.5%
	Anthropogenic / Other	36.51	7.3%
KM 90 - 95	Softwood Forest	-	-
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	22.87	4.6%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	182.21	36.4%
	Shrub	13.25	2.6%
	Wetland	211.36	42.3%
	Anthropogenic / Other	70.32	14.1%
KM 95 - 100	Softwood Forest	24.30	4.9%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	10.06	2.0%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	198.35	39.7%
	Shrub	33.87	6.8%
	Wetland	191.62	38.3%
	Anthropogenic / Other	41.80	8.4%
KM 100 - 105	Softwood Forest	15.46	3.1%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	12.20	2.4%

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Hardwood Scrub	-	-
	Herbaceous	2.78	0.6%
	Barren	153.43	30.7%
	Shrub	74.59	14.9%
	Wetland	210.09	42.0%
	Anthropogenic / Other	31.47	6.3%
KM 105 - 110	Softwood Forest	62.19	12.4%
	Hardwood Forest	-	-
	Mixedwood Forest	-	-
	Softwood Scrub	3.97	0.8%
	Hardwood Scrub	-	-
	Herbaceous	-	-
	Barren	136.49	27.3%
	Shrub	73.93	14.8%
	Wetland	167.77	33.6%
	Anthropogenic / Other	55.65	11.1%
KM 110 - 115	Softwood Forest	119.60	23.9%
	Hardwood Forest	29.31	5.9%
	Mixedwood Forest	125.91	25.2%
	Softwood Scrub	17.73	3.5%
	Hardwood Scrub	-	-
	Herbaceous	36.17	7.2%
	Barren	60.81	12.2%
	Shrub	24.97	5.0%
	Wetland	70.74	14.1%
	Anthropogenic / Other	14.78	3.0%
KM 115 - 120	Softwood Forest	144.59	28.9%
	Hardwood Forest	45.40	9.1%
	Mixedwood Forest	92.35	18.5%
	Softwood Scrub	4.47	0.9%
	Hardwood Scrub	-	-
	Herbaceous	21.95	4.4%
	Barren	101.92	20.4%
	Shrub	21.04	4.2%

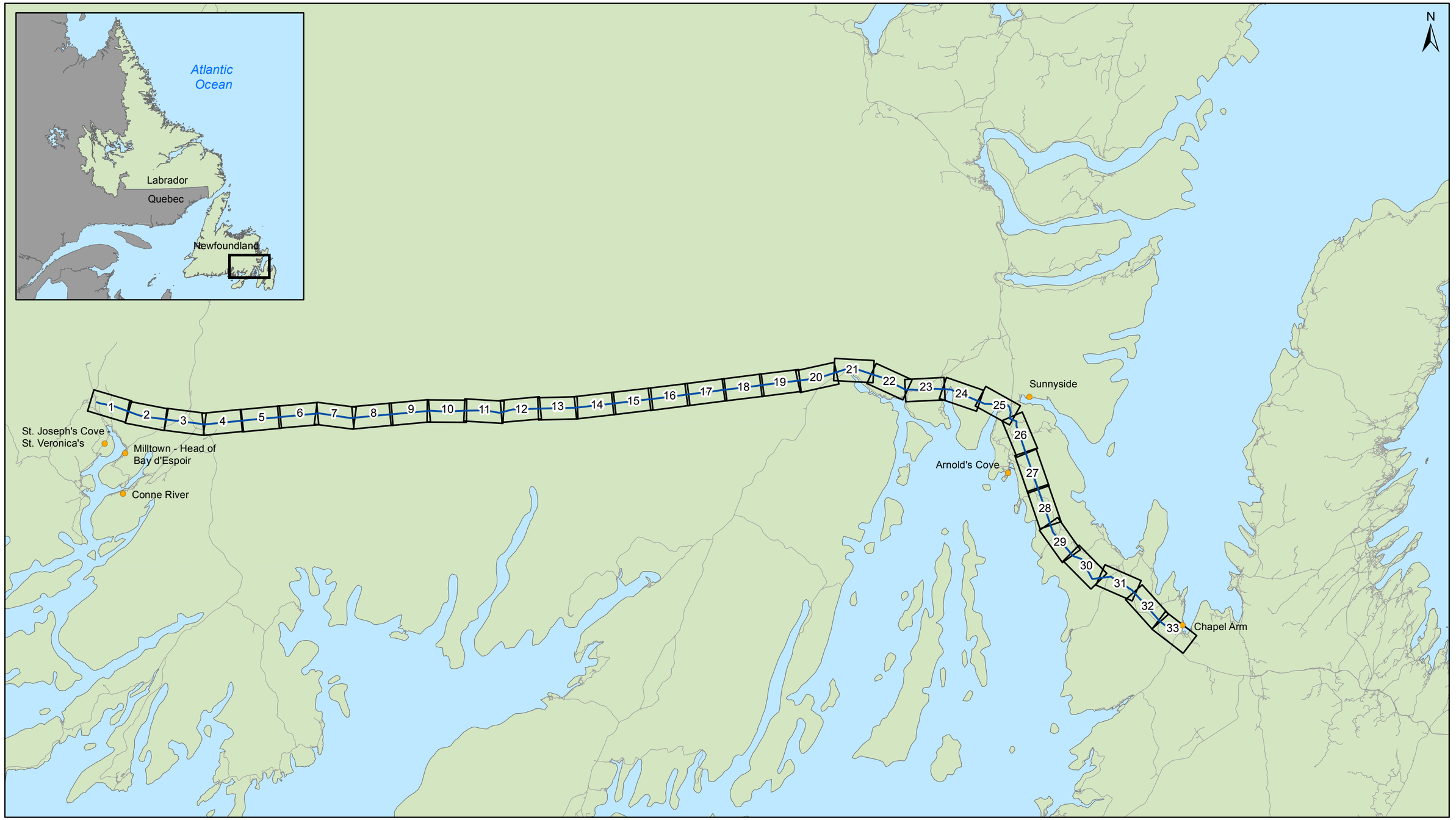
Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Wetland	32.68	6.5%
	Anthropogenic / Other	35.42	7.1%
KM 120 - 125	Softwood Forest	176.72	34.7%
	Hardwood Forest	1.82	0.4%
	Mixedwood Forest	101.45	19.9%
	Softwood Scrub	11.72	2.3%
	Hardwood Scrub	-	-
	Herbaceous	19.28	3.8%
	Barren	126.45	24.8%
	Shrub	16.64	3.3%
	Wetland	41.38	8.1%
	Anthropogenic / Other	14.25	2.8%
KM 125 – 130	Softwood Forest	143.04	29.9%
	Hardwood Forest	-	-
	Mixedwood Forest	36.47	7.6%
	Softwood Scrub	7.14	1.5%
	Hardwood Scrub	-	-
	Herbaceous	16.02	3.4%
	Barren	176.23	36.9%
	Shrub	15.23	3.2%
	Wetland	59.18	12.4%
	Anthropogenic / Other	24.35	5.1%
KM 130 - 135	Softwood Forest	85.16	17.0%
	Hardwood Forest	-	-
	Mixedwood Forest	67.16	13.4%
	Softwood Scrub	24.12	4.8%
	Hardwood Scrub	-	-
	Herbaceous	10.07	2.0%
	Barren	25.13	5.0%
	Shrub	112.66	22.5%
	Wetland	149.05	29.8%
	Anthropogenic / Other	26.80	5.4%
KM 135 - 140	Softwood Forest	117.57	23.6%
	Hardwood Forest	-	-

Table A2. ELC Vegetation Types by Segment: Study Area (1 km wide)			
Segment	**ELC Habitat Type**	**Area (ha)**	**Percent**
	Mixedwood Forest	77.61	15.6%
	Softwood Scrub	6.54	1.3%
	Hardwood Scrub	-	-
	Herbaceous	14.23	2.9%
	Barren	38.22	7.7%
	Shrub	66.29	13.3%
	Wetland	155.73	31.2%
	Anthropogenic / Other	22.61	4.5%
KM 140 - 145	Softwood Forest	11.52	30.7%
	Hardwood Forest	-	-
	Mixedwood Forest	0.01	0.0%
	Softwood Scrub	-	-
	Hardwood Scrub	-	-
	Herbaceous	3.94	10.5%
	Barren	2.56	6.8%
	Shrub	5.70	15.2%
	Wetland	10.75	28.6%
	Anthropogenic / Other	3.06	8.2%

Appendix B

Ecological Land Classification - Map Atlas

This page has been intentionally left blank for double-sided printing



MAP INDEX

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – ECOLOGICAL LAND CLASSIFICATION

590000
592000
5316000
594000
5316000
5314000
5314000
5312000
5312000
5310000
5310000
5308000
5308000
5306000
5306000
5304000
5304000
5302000
5302000
5300000
5300000
5298000
5298000
5296000
5296000
5294000
5294000
5292000
5292000
5290000
5290000
5288000
5288000
5286000
5286000
5284000
5284000
5282000
5282000
5280000
5280000
5278000
5278000
5276000

596000
598000
5314000
600000
5314000
600000
594000
5312000
N
Newfoundland
KM-10
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – ECOLOGICAL LAND CLASSIFICATION

newfoundland labrador hydro
a nalcor energy company
amec foster wheeler

602000
604000
606000
606000
600000
5312000
5310000
Newfoundland
N
KM-15
Whiskey Brook
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

606000

608000

610000

5312000

5310000

Newfoundland

N

KM-20

Long Pond

Legend

- Proposed TL267
- Study Area (1 km wide corridor)
- Existing Transmission Line
- Existing Road

ELC Habitat Types

- Anthropogenic
- Barren
- Hardwood Forest
- Hardwood Scrub
- Herbaceous
- Mixedwood Forest
- Shrub
- Softwood Forest
- Softwood Scrub
- Wetland

0 0.25 0.5

Kilometres

612000

614000

616000

5312000

5310000

Newfoundland

N

KM-25

Legend

- Proposed TL267
- Study Area (1 km wide corridor)
- Existing Transmission Line
- Existing Road

ELC Habitat Types

- Anthropogenic
- Barren
- Hardwood Forest
- Hardwood Scrub
- Herbaceous
- Mixedwood Forest
- Shrub
- Softwood Forest
- Softwood Scrub
- Wetland

0 0.25 0.5

Kilometres

618000
620000
622000
5312000
5310000
N
Newfoundland
KM-30
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – ECOLOGICAL LAND CLASSIFICATION

newfoundland labrador hydro
a nalcor energy company
amec foster wheeler

624000
626000
5312000
628000
5312000
5310000
N
Newfoundland
KM-35
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

630000
632000
634000
5310000
5310000
N
Newfoundland
KM-40
KM-45
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

634000

636000

638000

Newfoundland

N

KM-50

5310000

5310000

Legend

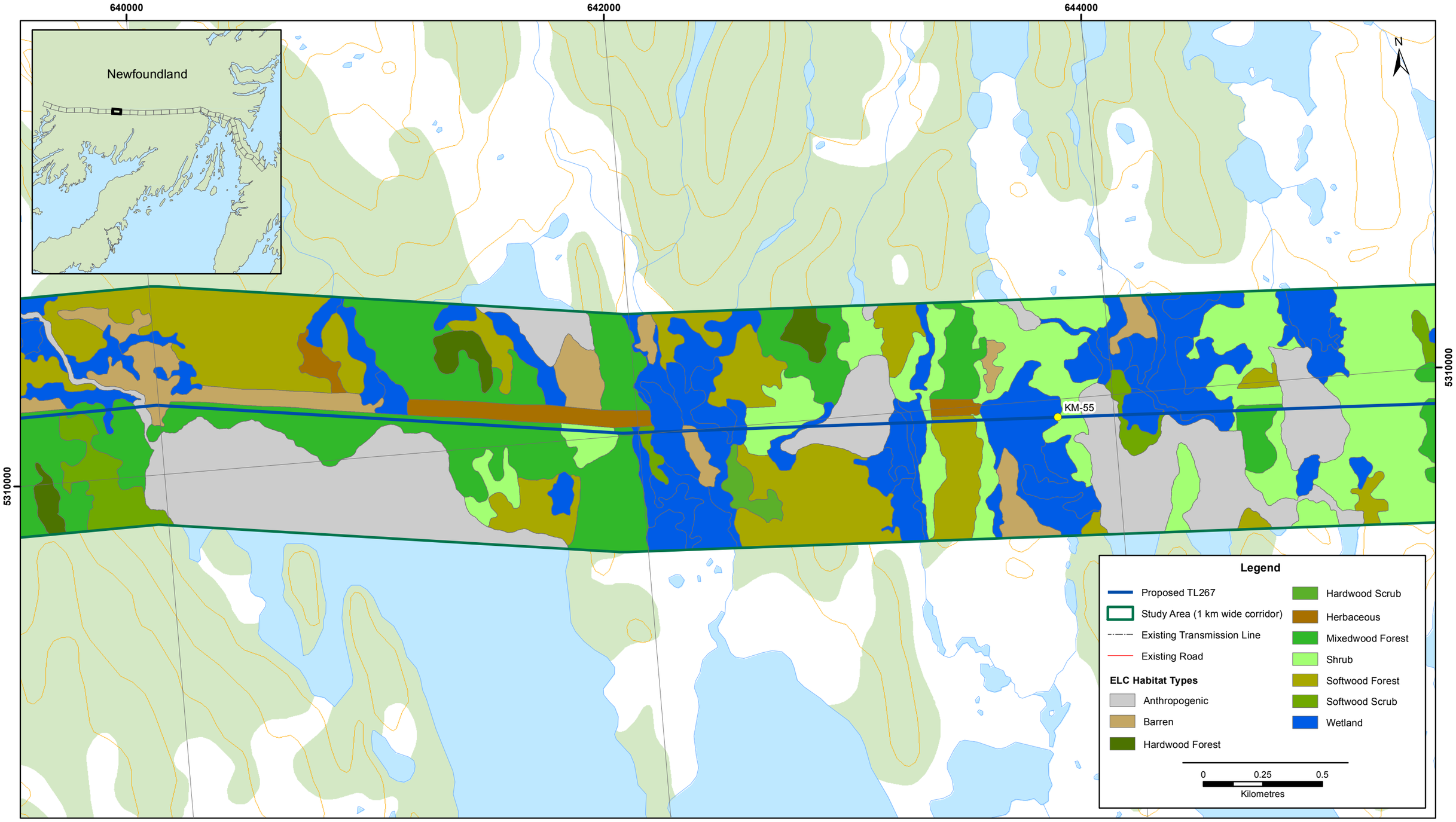
- Proposed TL267
- Study Area (1 km wide corridor)
- Existing Transmission Line
- Existing Road

ELC Habitat Types

- Anthropogenic
- Barren
- Hardwood Forest
- Hardwood Scrub
- Herbaceous
- Mixedwood Forest
- Shrub
- Softwood Forest
- Softwood Scrub
- Wetland

0 0.25 0.5

Kilometres



PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – ECOLOGICAL LAND CLASSIFICATION

646000

648000

650000

5310000

5308000

Newfoundland

N

KM-60

Legend

- Proposed TL267
- Study Area (1 km wide corridor)
- Existing Transmission Line
- Existing Road

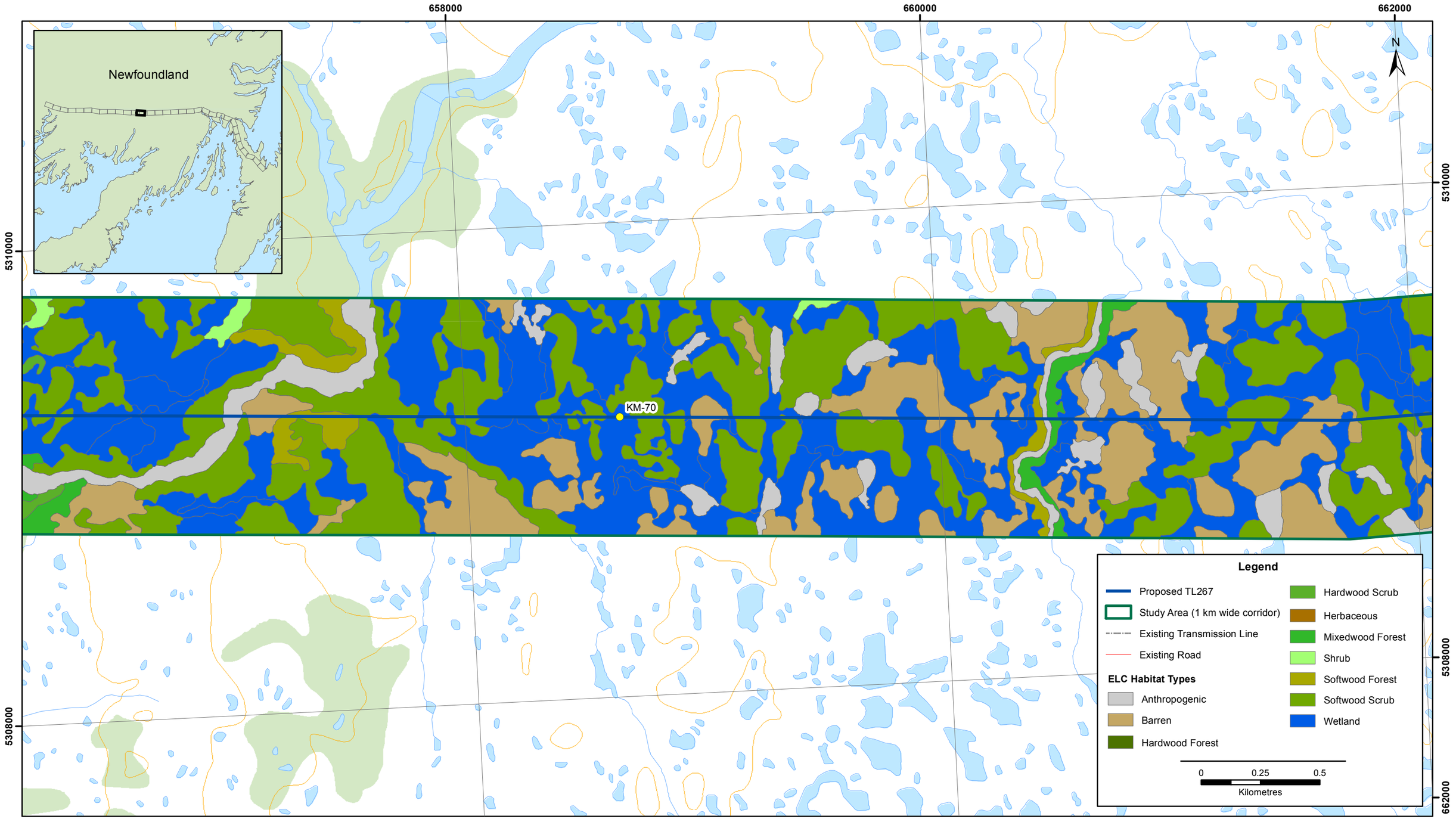
ELC Habitat Types

- Anthropogenic
- Barren
- Hardwood Forest
- Hardwood Scrub
- Herbaceous
- Mixedwood Forest
- Shrub
- Softwood Forest
- Softwood Scrub
- Wetland

0 0.25 0.5

Kilometres

652000
654000
656000
5310000
5308000
N
Newfoundland
KM-65
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres


658000
660000
662000
5310000
5308000
N
Newfoundland
KM-70
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

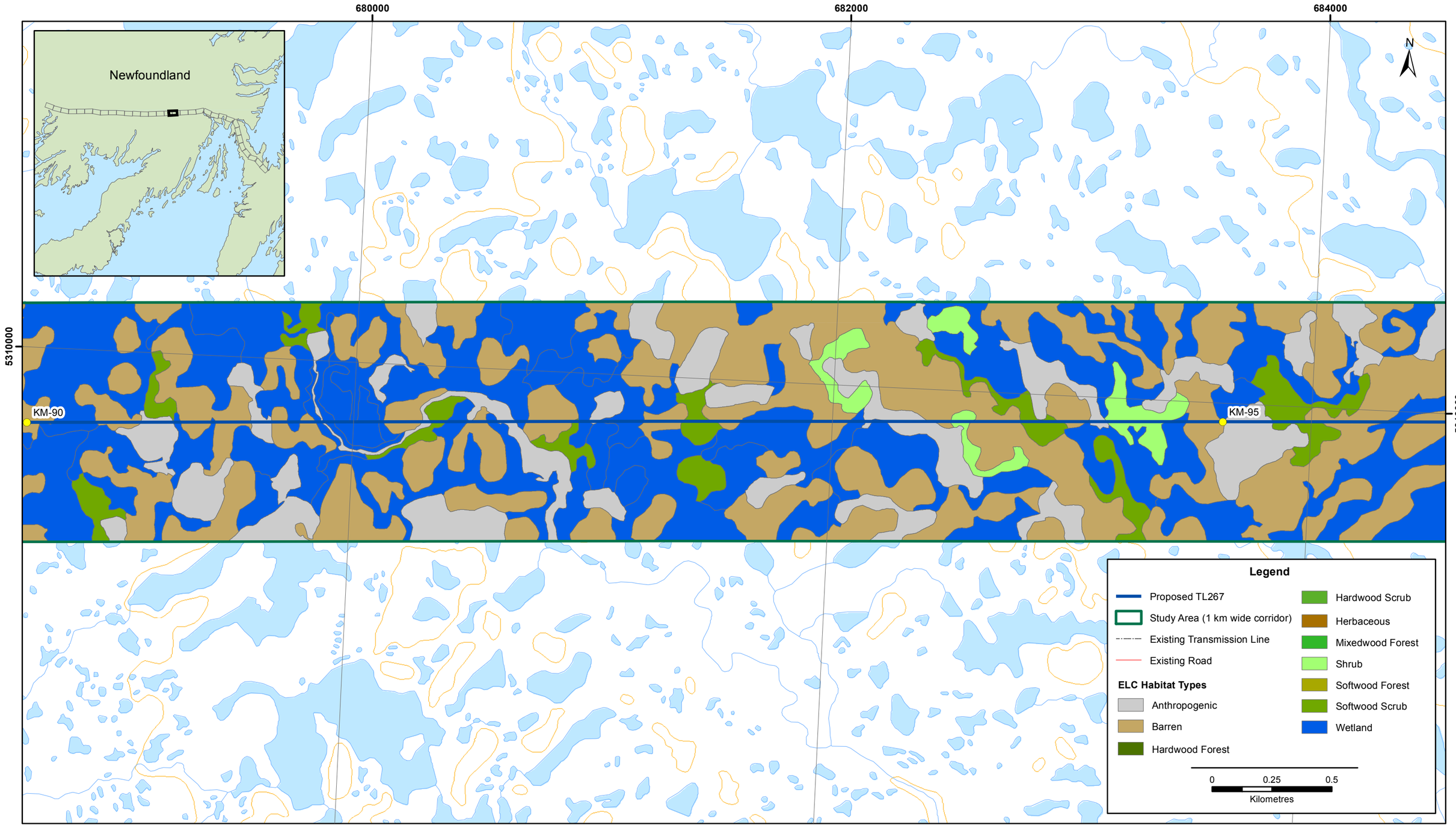
662000
664000
666000
5310000
5308000
N
Newfoundland
Pin Hill Pond
KM-75
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

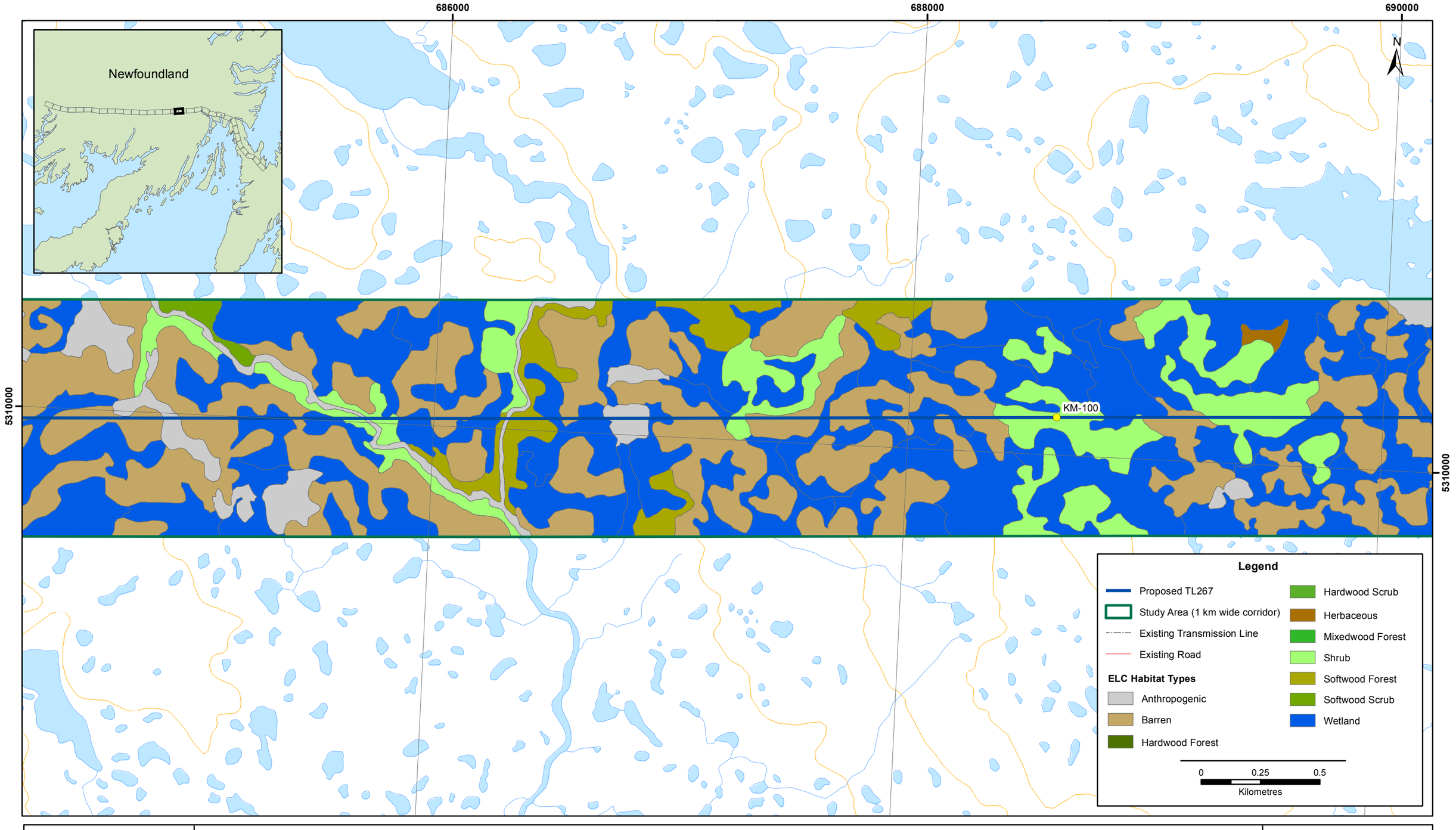
668000
670000
672000
5310000
5308000
Newfoundland
N
KM-80
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – ECOLOGICAL LAND CLASSIFICATION

newfoundland labrador hydro
a nalcor energy company
amec foster wheeler

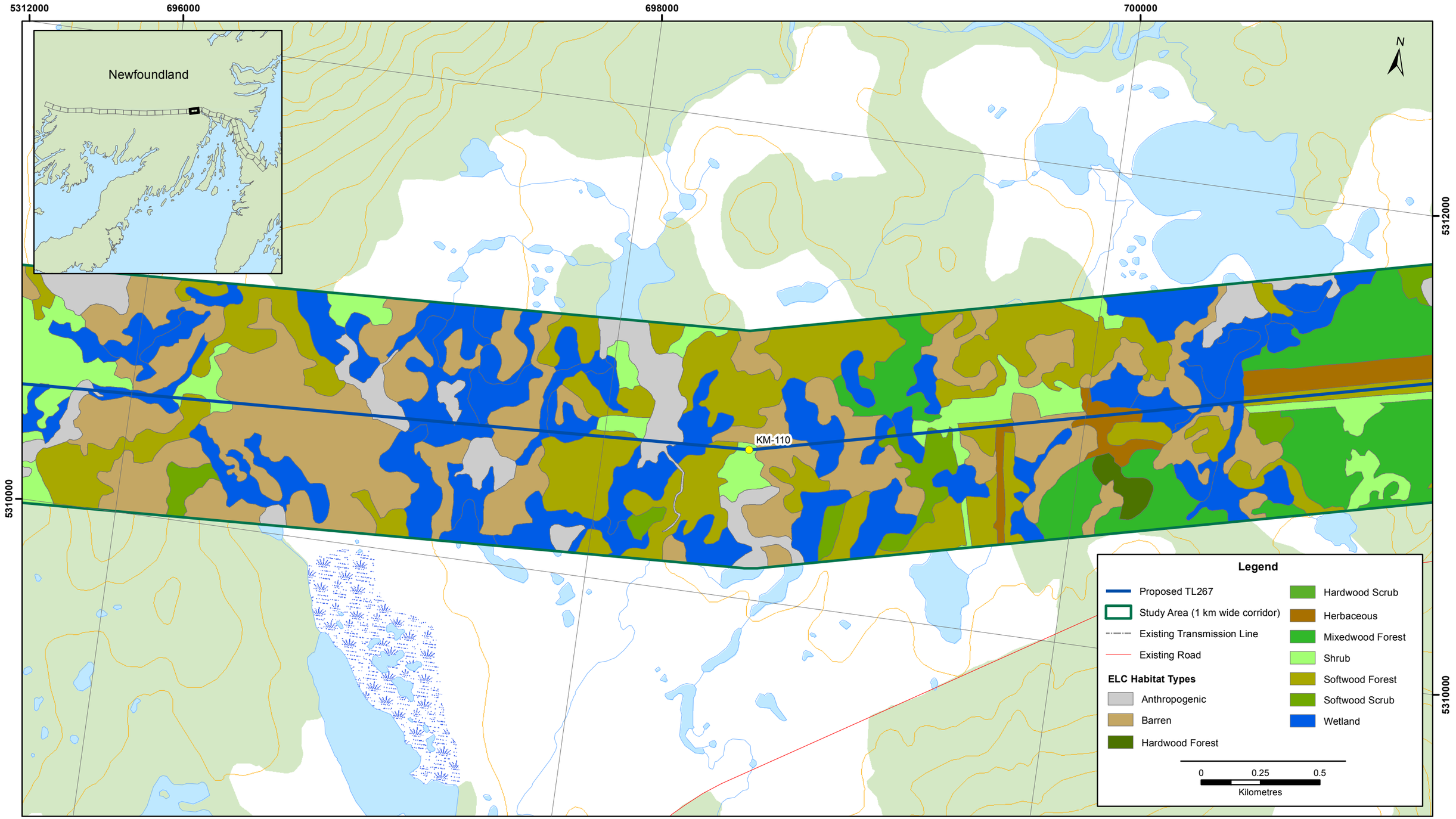
674000
676000
678000
5310000
5308000
N
Newfoundland
KM-85
KM-90
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

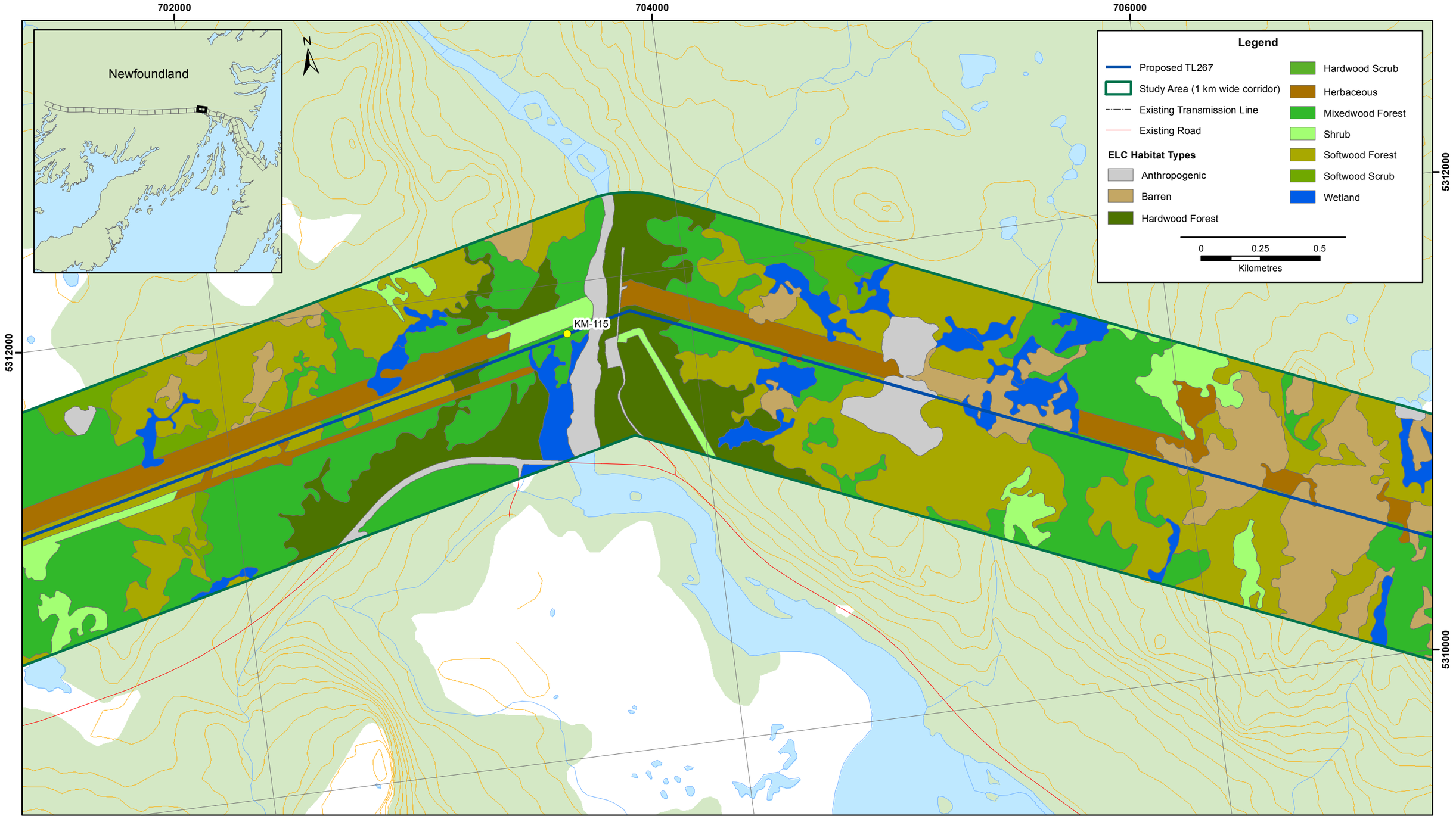

680000
682000
684000
5310000
5310000
KM-90
KM-95
N
Newfoundland
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres


686000
688000
690000
N
Newfoundland
5310000
KM-100
5310000
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

690000
692000
694000
5312000
5310000
N
Newfoundland
KM-105
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

PROPOSED BAY D'ESPOIR TO WESTERN AVALON TRANSMISSION LINE (TL 267) – ECOLOGICAL LAND CLASSIFICATION


5312000
696000
698000
700000
Newfoundland
N
KM-110
5310000
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres


702000
704000
706000
5312000
5312000
5310000
Newfoundland
N
KM-115
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

5312000 708000 710000 5310000 712000

5312000

Newfoundland

KM-120

712000

5310000

706000

Legend

Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road

ELC Habitat Types

Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland

0 0.25 0.5
Kilometres

712000
714000
716000
5308000
5306000
N
Newfoundland
KM-125
KM-130
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
0
0.25
0.5
Kilometres

718000

720000

5308000

722000

5306000

5308000

5304000

N

Newfoundland

KM-130

KM-135

Legend

- Proposed TL267
- Study Area (1 km wide corridor)
- Existing Transmission Line
- Existing Road

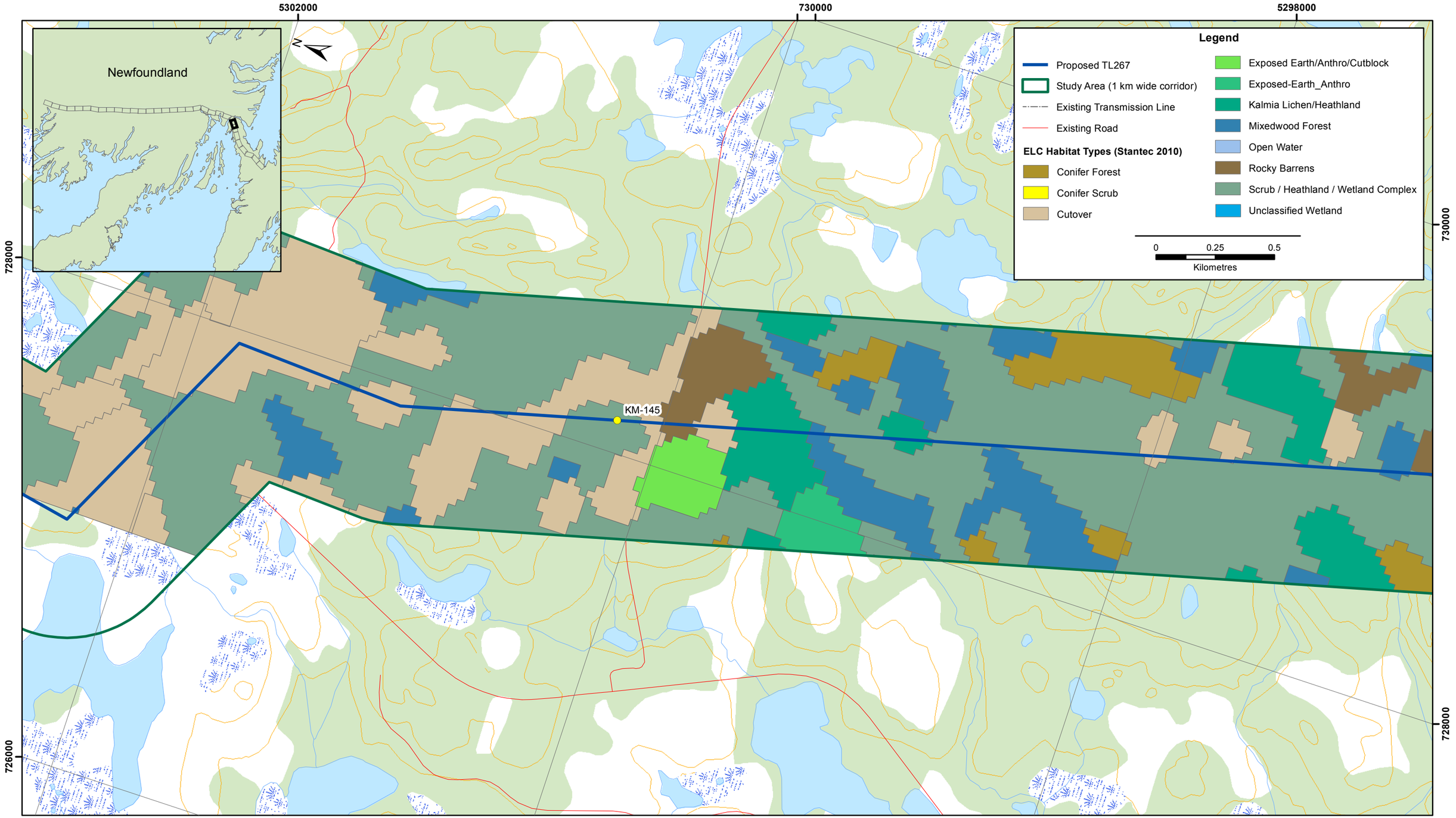
ELC Habitat Types

- Anthropogenic
- Barren
- Hardwood Forest
- Hardwood Scrub
- Herbaceous
- Mixedwood Forest
- Shrub
- Softwood Forest
- Softwood Scrub
- Wetland

0 0.25 0.5

Kilometres

724000
5306000
726000
728000
5304000
728000
5302000
722000
5306000
N
Newfoundland
KM-140
0
0.25
0.5
Kilometres
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types
Anthropogenic
Barren
Hardwood Forest
Hardwood Scrub
Herbaceous
Mixedwood Forest
Shrub
Softwood Forest
Softwood Scrub
Wetland
ELC Habitat Types (Stantec 2010)
Conifer Forest
Conifer Scrub
Cutover
Exposed Earth/Anthro/Cutblock
Exposed-Earth_Anthro
Kalmia Lichen/Heathland
Mixedwood Forest
Open Water
Rocky Barrens
Scrub / Heathland / Wetland Complex
Unclassified Wetland


5302000
730000
5298000
728000
730000
726000
728000
Newfoundland
N
KM-145
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types (Stantec 2010)
Conifer Forest
Conifer Scrub
Cutover
Exposed Earth/Anthro/Cutblock
Exposed-Earth_Anthro
Kalmia Lichen/Heathland
Mixedwood Forest
Open Water
Rocky Barrens
Scrub / Heathland / Wetland Complex
Unclassified Wetland
0
0.25
0.5
Kilometres

5296000
5294000
732000
730000
728000
N
Newfoundland
KM-150
Jacks Pond
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types (Stantec 2010)
Conifer Forest
Conifer Scrub
Cutover
Exposed Earth/Anthro/Cutblock
Exposed-Earth_Anthro
Kalmia Lichen/Heathland
Mixedwood Forest
Open Water
Rocky Barrens
Scrub / Heathland / Wetland Complex
Unclassified Wetland
0
0.25
0.5
Kilometres

732000

5290000

5288000

5286000

732000

730000

Newfoundland

N

KM-155

Legend

- Proposed TL267
- Study Area (1 km wide corridor)
- Existing Transmission Line
- Existing Road

ELC Habitat Types (Stantec 2010)

- Conifer Forest
- Conifer Scrub
- Cutover
- Exposed Earth/Anthro/Cutblock
- Exposed-Earth_Anthro
- Kalmia Lichen/Heathland
- Mixedwood Forest
- Open Water
- Rocky Barrens
- Scrub / Heathland / Wetland Complex
- Unclassified Wetland

0 0.25 0.5

Kilometres

5286000 734000 5284000 5282000 736000

736000

732000

5286000

734000

Newfoundland

KM-160

KM-165

N

Legend

Proposed TL267

Study Area (1 km wide corridor)

Existing Transmission Line

Existing Road

ELC Habitat Types (Stantec 2010)

Conifer Forest

Conifer Scrub

Cutover

Exposed Earth/Anthro/Cutblock

Exposed-Earth_Anthro

Kalmia Lichen/Heathland

Mixedwood Forest

Open Water

Rocky Barrens

Scrub / Heathland / Wetland Complex

Unclassified Wetland

0 0.25 0.5

Kilometres

736000
5282000
738000
5278000
5282000
734000
738000
5276000
N
Newfoundland
KM-170
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types (Stantec 2010)
Conifer Forest
Conifer Scrub
Cutover
Exposed Earth/Anthro/Cutblock
Exposed-Earth_Anthro
Kalmia Lichen/Heathland
Mixedwood Forest
Open Water
Rocky Barrens
Scrub / Heathland / Wetland Complex
Unclassified Wetland
0 0.25 0.5
Kilometres

740000
5278000
742000
744000
5276000
5274000

N

Newfoundland

KM-175

Beaver Pond

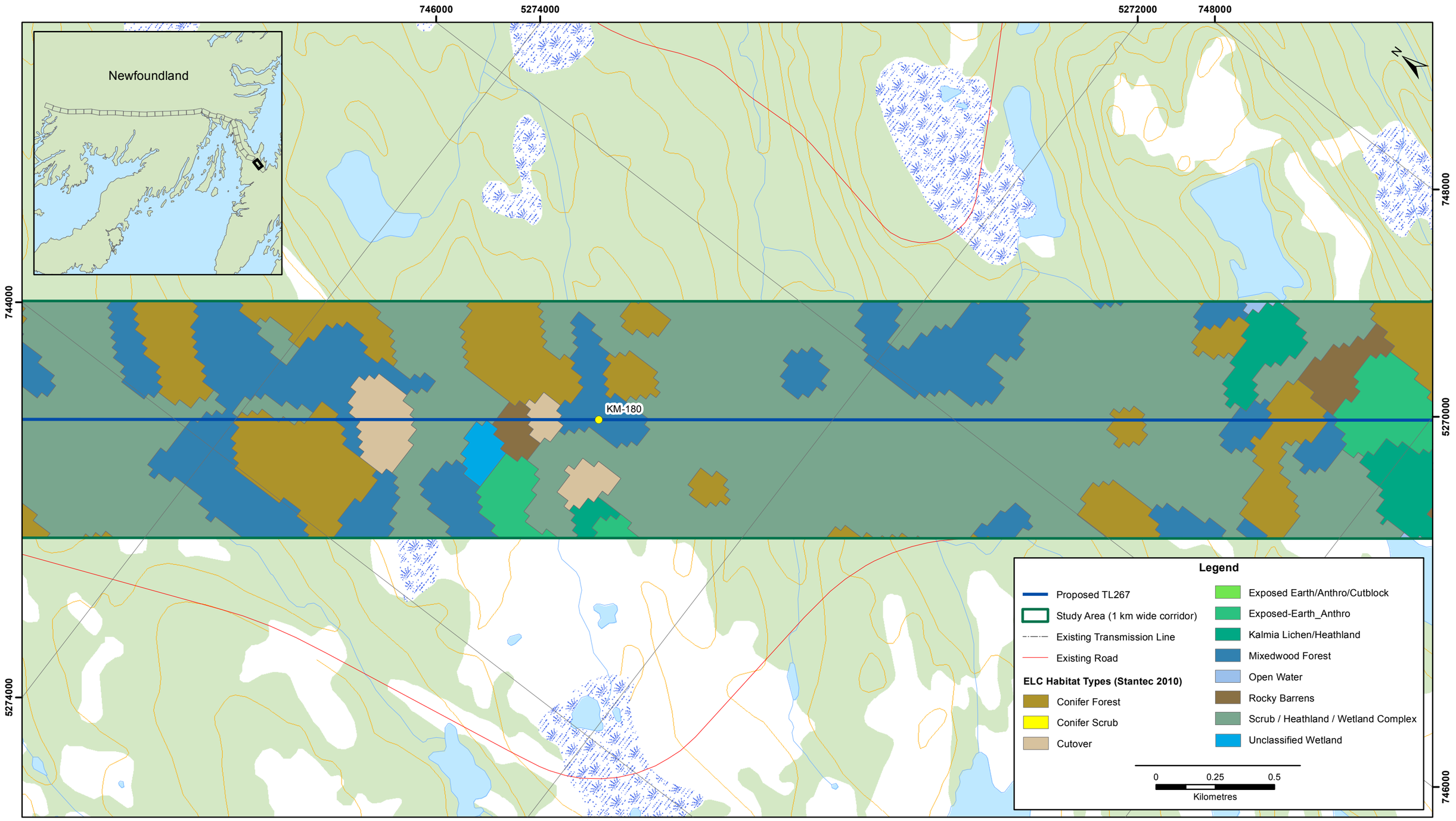
Legend

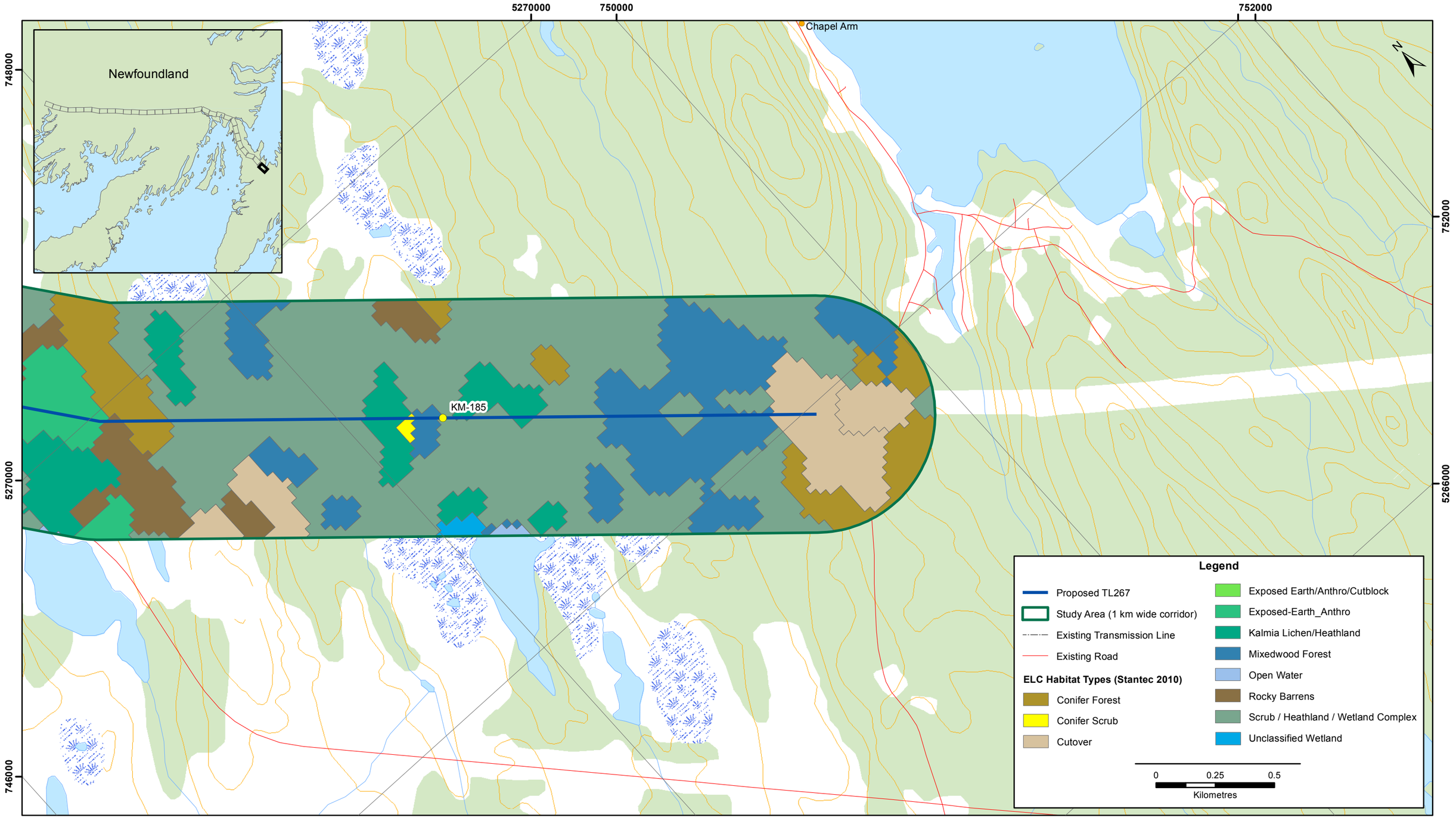
- Proposed TL267
- Study Area (1 km wide corridor)
- Existing Transmission Line
- Existing Road

ELC Habitat Types (Stantec 2010)

- Conifer Forest
- Conifer Scrub
- Cutover
- Exposed Earth/Anthro/Cutblock
- Exposed-Earth_Anthro
- Kalmia Lichen/Heathland
- Mixedwood Forest
- Open Water
- Rocky Barrens
- Scrub / Heathland / Wetland Complex
- Unclassified Wetland

0 0.25 0.5
Kilometres


746000
5274000
5272000
748000
744000
5270000
5274000
746000
N
Newfoundland
KM-180
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types (Stantec 2010)
Conifer Forest
Conifer Scrub
Cutover
Exposed Earth/Anthro/Cutblock
Exposed-Earth_Anthro
Kalmia Lichen/Heathland
Mixedwood Forest
Open Water
Rocky Barrens
Scrub / Heathland / Wetland Complex
Unclassified Wetland
0
0.25
0.5
Kilometres


5270000
750000
752000
748000
752000
5270000
5266000
746000
Newfoundland
Chapel Arm
N
KM-185
Legend
Proposed TL267
Study Area (1 km wide corridor)
Existing Transmission Line
Existing Road
ELC Habitat Types (Stantec 2010)
Conifer Forest
Conifer Scrub
Cutover
Exposed Earth/Anthro/Cutblock
Exposed-Earth_Anthro
Kalmia Lichen/Heathland
Mixedwood Forest
Open Water
Rocky Barrens
Scrub / Heathland / Wetland Complex
Unclassified Wetland
0
0.25
0.5
Kilometres