

**STRAIT OF CANSO TRANSMISSION LINE  
ARCHAEOLOGICAL ASSESSMENT  
INVERNESS COUNTY, NOVA SCOTIA**

**2015 SHOVEL TESTING REPORT**



**Submitted to:** Nova Scotia Special Places Program &  
Nova Scotia Power Incorporated

**Consulting Archaeologist:** Darryl Kelman  
**Report Preparation:** Darryl Kelman

**Heritage Research Permit #:** A2015NS061

**July 2015**

**K** KELMAN  
HERITAGE  
CONSULTING

6052 North Street  
Halifax, Nova Scotia  
B3K 1N8  
[www.kelmanheritage.ca](http://www.kelmanheritage.ca)

---

## **EXECUTIVE SUMMARY**

Nova Scotia Power Incorporated (NSPI) in proposing to construct a new transmission line crossing at the Strait of Canso. To reliably deliver the energy provided by the Maritime Link Project, the transmission lines across the Strait of Canso need to be reconfigured. The reconfiguration calls for the separation of the 345kV line and the 230kV line that currently share the existing double circuit tower at the Auld's Cove - Newtown crossing. The most feasible solution is to build a second crossing, directly adjacent to the existing tower crossing, to physically separate the two transmission lines. The project triggered a Class 1 Environmental Assessment, including an archaeological assessment. In May 2015, NSPI retained Kelman Heritage Consulting to conduct an archaeological screening and reconnaissance of the proposed transmission line. The screening and reconnaissance identified several small areas that exhibited high archaeological potential. Based on the final design for tower placement, Tower 4A located on the Cape Breton side, close to the shore of Long Pond, is positioned close to areas identified as exhibiting high archaeological potential. NSPI retained Kelman Heritage Consulting to conduct an archaeological assessment of the Tower 4A location.

The archaeological assessment consisted of a shovel testing program. A total of 66 shovel tests were excavated across the study area with none registering as positive for artifact recovery. The shovel testing program did not identify any significant archaeological features or deposits. Based on the results of the shovel testing, it is recommended that the proposed impact area as described in this report be cleared as there are no further archaeological concerns.

---

## TABLE OF CONTENTS

1.0	INTRODUCTION .....	1
2.0	STUDY AREA .....	2
3.0	METHODOLOGY .....	6
4.0	RESULTS .....	7
5.0	CONCLUSIONS AND RECOMMENDATIONS .....	10
6.0	REFERENCES CITED.....	12

## LIST OF FIGURES

Figure 1:	Study Area Overview .....	3
Figure 2:	High Potential Area Detail & Study Area .....	4
Figure 3:	Detailed Tower Plan .....	5
Figure 4:	Shovel Testing .....	8

## LIST OF PLATES

Plate 1:	Shovel testing Tower 4A location.....	9
Plate 2:	Shovel testing Tower 4A location .....	9

## 1.0 INTRODUCTION

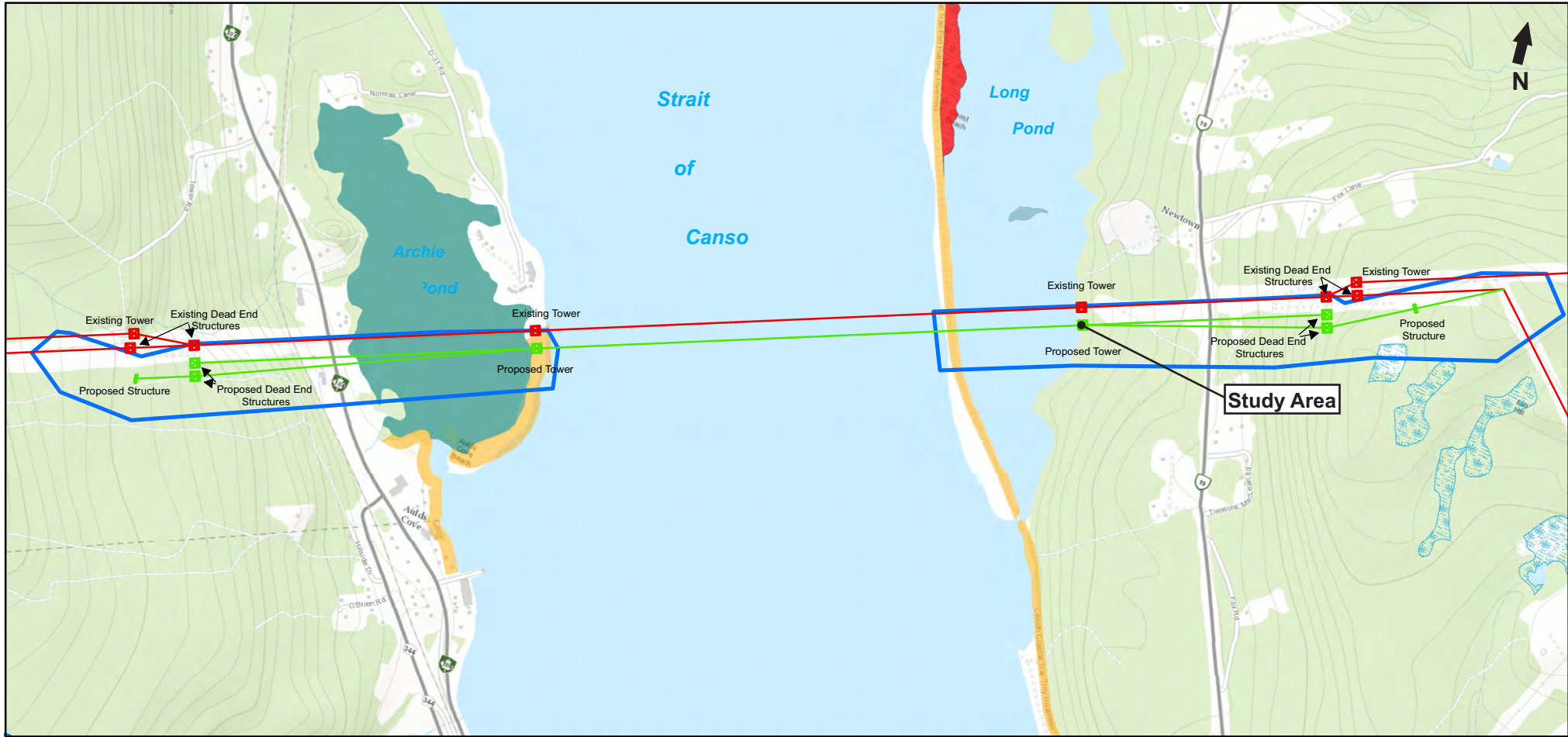
Nova Scotia Power Incorporated (NSPI) in proposing to construct a new transmission line crossing at the Strait of Canso. To reliably deliver the energy provided by the Maritime Link Project, the transmission lines across the Strait of Canso need to be reconfigured. The reconfiguration calls for the separation of the 345kV line and the 230kV line that currently share the existing double circuit tower at the Auld's Cove - Newtown crossing. The most feasible solution is to build a second crossing, directly adjacent to the existing tower crossing, to physically separate the two transmission lines. The project triggered a Class 1 Environmental Assessment, including an archaeological assessment. In May 2015, NSPI retained Kelman Heritage Consulting to conduct an archaeological screening and reconnaissance of the proposed transmission line. The screening and reconnaissance identified several small areas that exhibited high archaeological potential (Kelman 2015). Based on the final design for tower placement, Tower 4A located on the Cape Breton side, close to the shore of Long Pond, is positioned close to areas identified as exhibiting high archaeological potential. NSPI retained Kelman Heritage Consulting to conduct an archaeological assessment of the Tower 4A location. No other areas identified as exhibiting high archaeological potential are to be impacted.

The archaeological program was directed by Darryl Kelman, Principal Archaeologist with Kelman Heritage Consulting. The archaeological assessment was conducted according to the terms of Heritage Research Permit A2015NS061 (Category 'C'), issued to Kelman by the Special Places Program. Field assistance was provided by archaeological field technicians Allison Fraser and John MacDougall. This report describes the archaeological assessment, presents its results, and offers resource management recommendations.

## 2.0 STUDY AREA

The proposed transmission line crosses the Strait of Canso approximately 1.5 kilometres northwest of the Canso Causeway. The nearest communities, on either side of the Strait, are Aulds Cove (Antigonish County) and Newtown (Inverness County)(*Figure 1*). The specific study area for the archaeological assessment is the proposed location for Tower 4A, situated approximately 80 metres from the shore of Long Pond, on the Cape Breton side, and in close proximity to areas identified as exhibiting high archaeological potential (*Figure 2*). The study area includes the proposed footprint for the tower, as well as a small buffer around the tower. The entire area subjected to testing measures 40 metres by 40 metres (*Figure 3*).





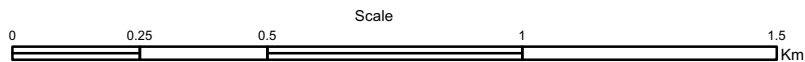
**Strait of Canso Transmission Line Archaeological Assessment**  
**Figure 1 - Study Area Overview**



Date: May 8, 2015  
 Projection: UTM Zone20 NAD83 CSRS  
 Sources: NSPI, NSDNR, RLUL, Significant Habitat, NSE, SNSMR

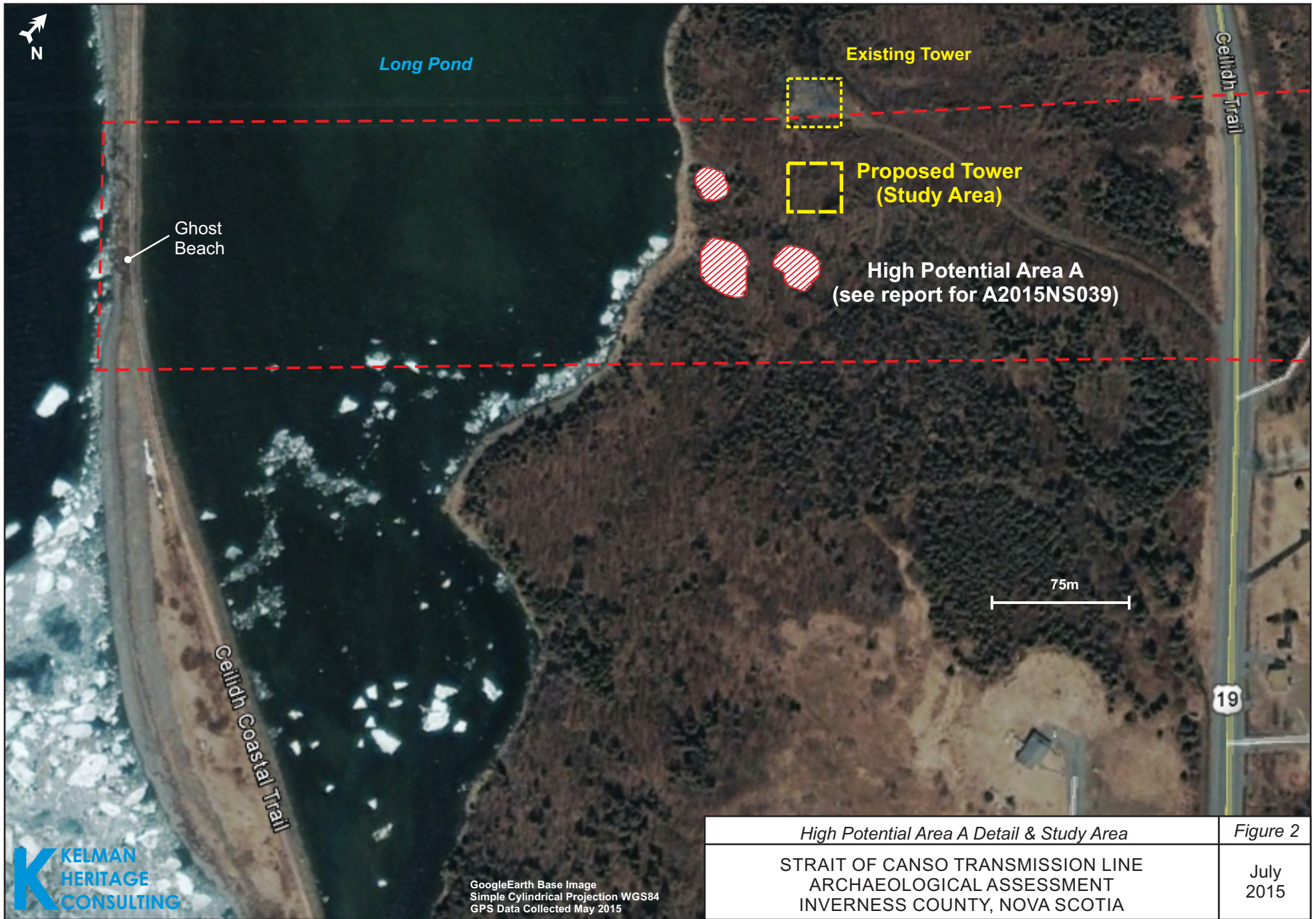
Disclaimer: This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

- Existing Transmission
- Proposed Transmission
- Area of Impact
- DNR - Restricted and Limited Use Land
- migratory bird of concern (NSDNR)
- Wetland of Special Significance (NSE)
- Wetland (NSDNR)



Review Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), Swisstopo, MapboxIndia, © OpenStreetMap

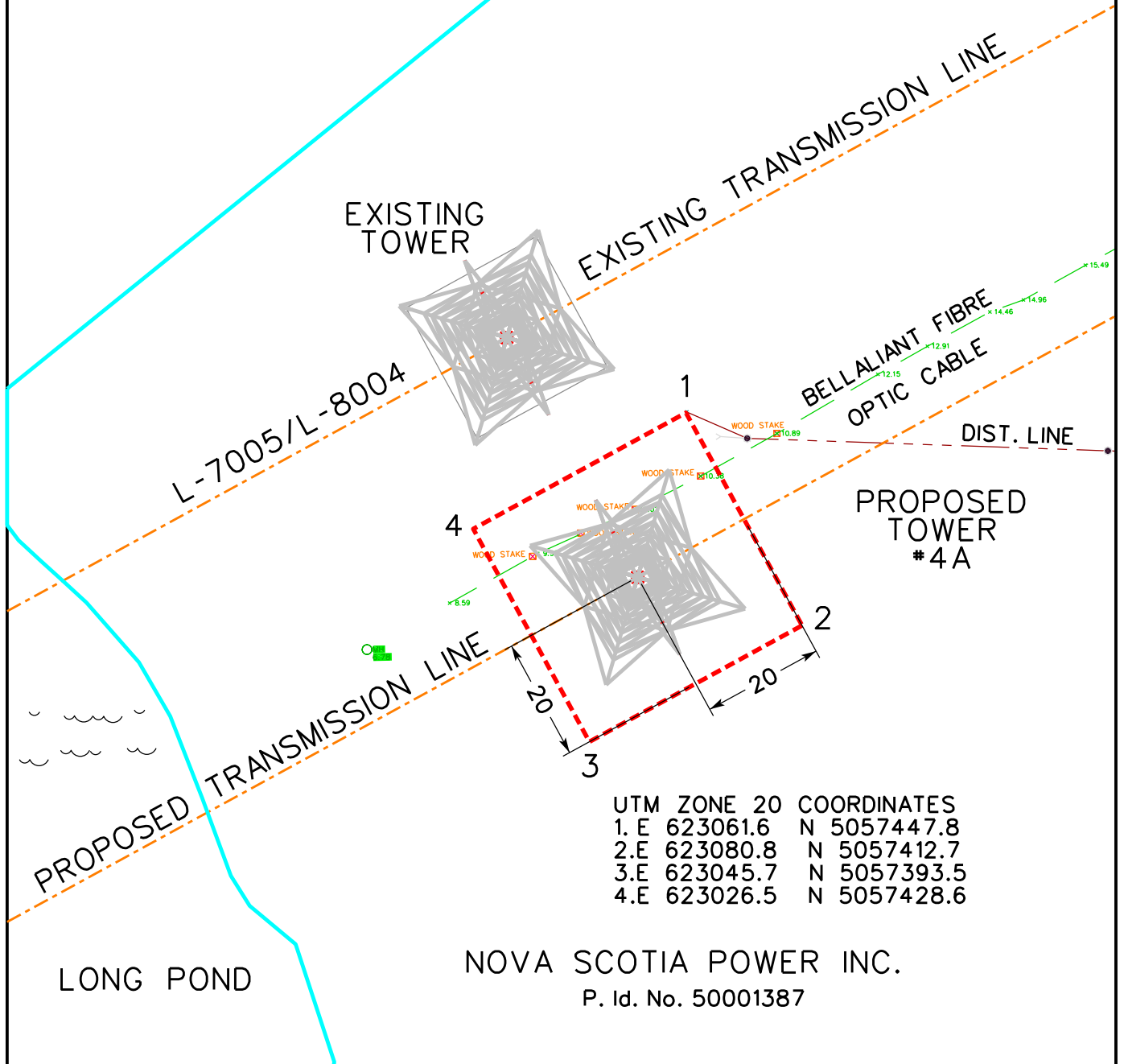




<i>High Potential Area A Detail &amp; Study Area</i>	<i>Figure 2</i>
STRAIT OF CANSO TRANSMISSION LINE ARCHAEOLOGICAL ASSESSMENT INVERNESS COUNTY, NOVA SCOTIA	July 2015





ROBERT FOX  
P. Id. No. 50018092



UTM ZONE 20 COORDINATES	
1.E	623061.6 N 5057447.8
2.E	623080.8 N 5057412.7
3.E	623045.7 N 5057393.5
4.E	623026.5 N 5057428.6

NOVA SCOTIA POWER INC.  
P. Id. No. 50001387

REFERENCE Figure 3 Detailed Tower Plan			 																
SCALE NONE	UNITS METRES	DRAWN J. SANDALL	SKETCH SHOWING PROPOSED TOWER 4A NEWTOWN, INVERNESS COUNTY																
CHECKED	DATE 2015/06/29	W.O.																	
STRAIT OF CANSO TRANSMISSION LINE ARCHAEOLOGICAL ASSESSMENT INVERNESS COUNTY, NOVA SCOTIA			<table border="1"> <tr> <td>R</td> <td>7</td> <td>0</td> <td>0</td> <td>5</td> <td>0</td> <td>0</td> <td>0</td> <td>1</td> <td>2</td> <td>0</td> <td>2</td> <td>0</td> <td>0</td> <td>4</td> </tr> </table>		R	7	0	0	5	0	0	0	1	2	0	2	0	0	4
R	7	0	0	5	0	0	0	1	2	0	2	0	0	4					
			REV																

DWG.NO.



### **3.0 METHODOLOGY**

The goals of the archaeological assessment were to assess the Tower 4A footprint through a program of shovel testing, to document any archaeological sites identified during the course of the testing program, and to design a strategy for the mitigation and documentation of any archaeological resources identified prior to any disturbance from construction related activities.

The study area was systematically shovel tested on a 5 metre staggered grid pattern. Shovel test pits, averaging 40 centimetres in diameter, were excavated through the topsoil into subsoil. All soil removed from the test pits was screened through 6 millimetre hardware cloth in order to standardize artifact recovery, if present, in the excavated soil. Details of the testing program were documented in field notes, site plans, stratigraphic drawings, and photographs.

#### ***Contact with Mi'kmaq***

As per Heritage Research Permit (Category 'C') guidelines, contact was initiated with the Mi'kmaq regarding the proposed development project. Contact was made through the Archaeological Research Division of the Kwiilmu'kw Maw-klusuaqn Negotiation Office (KMKNO).

## 4.0 RESULTS

The archaeological shovel testing program was conducted, on July 6, 2015, under clear, sunny and warm conditions. A total of 66 shovel tests were excavated across the study area with none registering as positive for artifact recovery (**Figure 4; Plates 1 & 2**). The shovel testing program did not identify any significant archaeological features or deposits.

Testing in the western and northern portions of the study area revealed subsurface disturbance, likely associated with the construction of the existing tower and/or an access road that leads to the shore. In the disturbed units, a mixed gravel fill overlay either sterile subsoil or a mixed and disturbed B horizon, indicating that the area had been stripped.

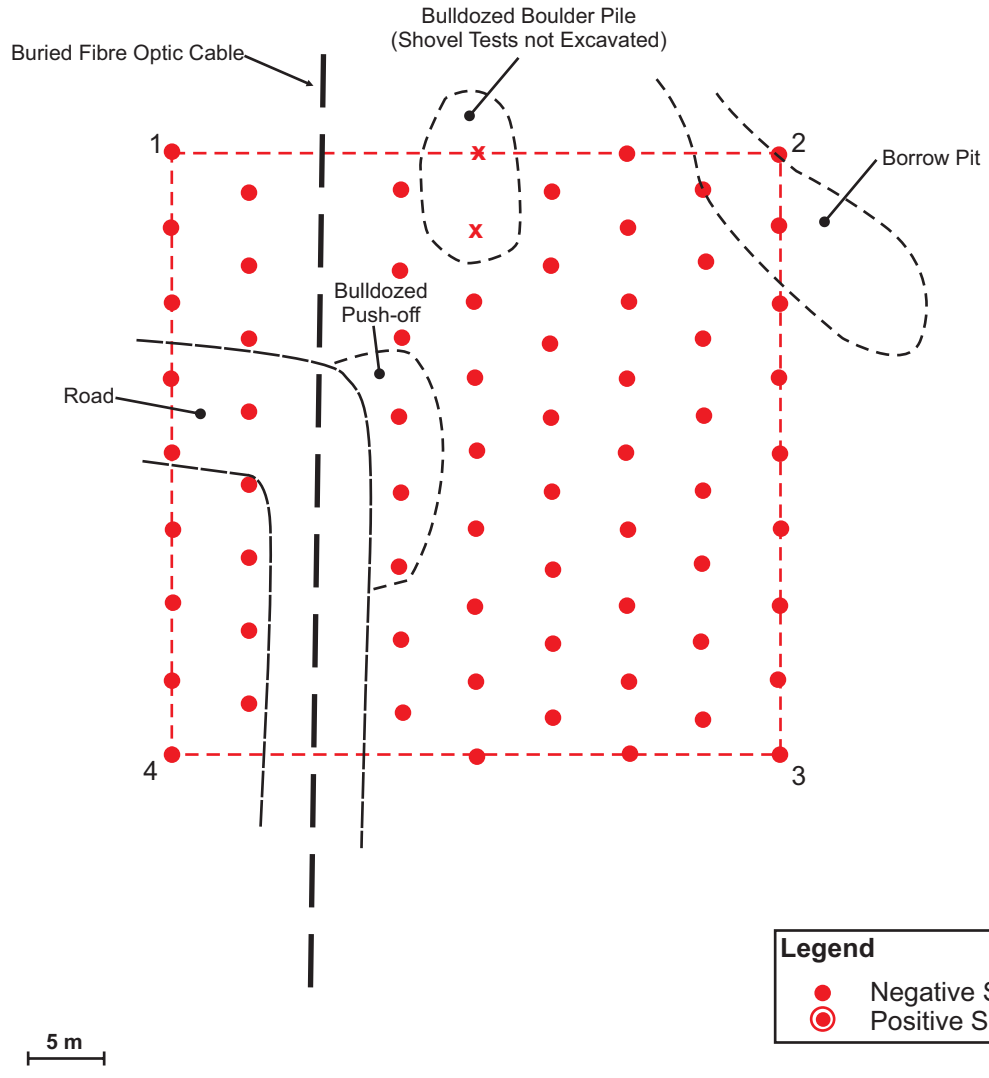
A buried fibre optic cable runs through the study area. The cable's location corresponds with one of the proposed testing lines (**Figure 4**). As a result, this line was not shovel-tested to avoid damaging the cable. Furthermore, the ground disturbance associated with the initial placement of the cable makes it unlikely that any archaeological materials would be encountered.

The remainder of the test pits that were excavated did not reveal signs of subsurface disturbance. These pits were excavated in forested areas and demonstrated a typical forested area soil development profile. Sterile subsoil was encountered between 25 and 40 centimetres below the surface.

Based on the results of the shovel testing program, the area to be impacted for construction of Tower 4A is considered to be void of any significant archaeological resources.

### ***Contact with Mi'kmaq***

Contact was initiated with the Archaeology Research Division (ARD) of the KMKNO via email on July 5, 2015, regarding the shovel testing program. The ARD had previously provided information during the archaeological screening and reconnaissance (Kelman 2015).





**PLATE 1: Shovel testing Tower 4A location; note existing tower at right of photo and road to water in background (gap in the trees). Looking southwest. July 6, 2015.**



**PLATE 2: Shovel testing Tower 4A location in forest; looking southwest. July 6, 2015.**



## **5.0 CONCLUSIONS AND RECOMMENDATIONS**

The 2015 archaeological assessment of the Strait of Canso Transmission Line, specifically the proposed location of Tower 4A in Inverness County, Nova Scotia, consisted of a program of archaeological shovel testing. No significant archaeological resources were identified.

Based on these results, Kelman Heritage offers the following management recommendations for the overall project:

1. It is recommended that the proposed impact area subjected to shovel testing as described in this report be cleared as there are no further archaeological concerns.
2. In the unlikely event that significant archaeological resources or human remains are encountered during any construction activities, all work in the associated area(s) should be halted and immediate contact should be made with the Coordinator of Special Places (Sean Weseloh McKeane: 902-424-6475).

## 6.0 REFERENCES CITED

- Kelman, Darryl  
2015 *Strait of Canso Transmission Line Archaeological Screening & Reconnaissance*. Unpublished report for Heritage Research Permit A2015NS039 on file with the Special Places Program.