



# Kemptown Wind Project

Archaeological Resource Impact Assessment

Heritage Research Permit A2013NS088

Davis MacIntyre & Associates Limited  
109 John Stewart Drive, Darmouth, NS B2W 4J7

# **Kempton Wind Project**

## **Archaeological Resource Impact Assessment**

Heritage Research Permit A2013NS088

Davis MacIntyre & Associates Limited  
Project No.: 13-036.1RMS

Principal Investigator: Laura de Boer  
Report Compiled by: Laura de Boer

Submitted to:

RMS Energy  
1383 Mt. Thom Road  
Salt Springs, NS B0K 1P0

-and-

Coordinator, Special Places  
Communities, Culture and Heritage  
PO Box 456, STN Central  
Halifax, NS B3J 2R5

Cover Image: Detail of Ambrose Church's map of Colchester County, showing the approximate positions of the three proposed turbines and associated access roads.

## Executive Summary

In September 2013, Davis MacIntyre & Associates Limited was contracted by RMS Energy to conduct an archaeological resource impact assessment of the proposed Kemptown Wind Farm. The purpose of the assessment was to determine the potential for archaeological resources within the development zone and to provide any recommendations for further mitigation, if deemed necessary. The assessment consisted of a background study and a reconnaissance of the study area.

This impact assessment has indicated that although historical activity has been recorded in the area surrounding the proposed wind farm, there is no evidence that significant archaeological resources, either historic or precontact in origin, will be disturbed by the current wind project layout. As such, no mitigation is currently recommended.

If the turbine or access road layout is significantly altered, it is recommended that the new layout be reassessed by a qualified archaeologist in order to determine the potential for significant heritage resources within a new impact area.

In the unlikely event that any archaeological material is encountered during ground disturbance activities, all activity should cease and the Coordinator of Special Places, Sean Weseloh-McKeane (902-424-6475) should be contacted immediately to determine a suitable method of mitigation.

# Table Of Contents

<b>LIST OF FIGURES.....</b>	<b>III</b>
<b>LIST OF PLATES.....</b>	<b>III</b>
<b>1.0 INTRODUCTION .....</b>	<b>1</b>
<b>2.0 STUDY AREA .....</b>	<b>1</b>
<b>3.0 METHODOLOGY .....</b>	<b>2</b>
3.1 MARITIME ARCHAEOLOGICAL RESOURCE INVENTORY .....	4
3.2 HISTORICAL BACKGROUND .....	5
3.2.1 The Precontact Period .....	5
3.2.2 European Settlement .....	6
3.3 FIELD RECONNAISSANCE.....	9
<b>4.0 RESULTS AND DISCUSSION .....</b>	<b>10</b>
<b>5.0 RECOMMENDATIONS AND CONCLUSIONS.....</b>	<b>10</b>
<b>6.0 REFERENCES CITED .....</b>	<b>11</b>
<b>PLATES.....</b>	<b>12</b>
<b>APPENDIX A: HERITAGE RESEARCH PERMIT .....</b>	<b>15</b>

## LIST OF FIGURES

Figure 2.0-1: A map showing the proposed turbine sites and access roads. Turbine data courtesy RMS Energy.....	3
Figure 2.0-2: A map showing Natural Theme Region #572 – St. Mary’s Fault Block (highlighted). The study area is indicated in red. ....	4
Figure 3.2-1: Map of the Mi’kmaq districts.....	6
Figure 3.2-2: Detail of a land grant map showing the approximate impact area (red) and the associated grants (yellow).....	7
Figure 3.2-3: Detail of Ambrose Church’s 1874 map of Colchester county, showing the approximate location of the proposed turbines and access roads in red.....	8
Figure 3.2-4: Detail of a 1902 geological survey map showing the study area.....	9

## LIST OF PLATES

Plate 1: The data collector tower, looking northwest. ....	13
Plate 2: Courtney Glen stands on an overgrown skidder trail resulting from logging activity at the site of Turbine #1, looking north.....	13
Plate 3: The site of Turbine #2 looking north, showing very young regrowth over a wet forest floor. ....	14
Plate 4: The site of Turbine #3 looking southeast. Note that a sign for the local exit from Highway 104 is visible (blue).....	14

## 1.0 Introduction

In September 2013, Davis MacIntyre & Associates Limited was contracted by RMS Energy to conduct an archaeological resource impact assessment of the proposed Kemptown Wind Farm, an Affinity Renewables (SPCA) development under the COMFIT (Community Feed-In Tariff) program. The purpose of the assessment was to determine the potential for archaeological resources within the development zone and to provide any recommendations for further mitigation, if deemed necessary. The assessment consisted of a background study and a reconnaissance of the study area.

This assessment was completed under Category C Heritage Research Permit A2013NS088 issued by the Nova Scotia Culture and Heritage Development Division. This report conforms to the standards required by the Department of Communities, Culture and Heritage as specified under the guidelines of the Special Places Protection Act (*R.S., c. 438, s. 1.*).

## 2.0 Study Area

The proposed wind project is a 4.99MW wind farm between Kemptown and Manganese Mines on Pictou Road, formerly known as the Old Truro-Pictou Telegraph Road (Figure 2.0-1). The site is southwest of the Colchester Municipal Waste Management Facility on Mingo Road. The proposed project includes three turbine sites connected by a single road that runs north from the Pictou Road, then northeast.

The study area is located in the St. Mary's Fault Block region (Natural Theme Region #572), which stretches in a narrow band across Nova Scotia from Salmon River Lake in the east to Economy in the west (Figure 2.0-2). This region is an area of coarse Horton sandstone lying in a graben, or "downfaulted block lying between two parallel faults." This narrow band is approximately 15km in width across central Nova Scotia, becoming more prominent when it extends east past the Eden Lake-Caledonia line. From the Trafalgar area westwards all drainage runs towards the St. Marys River at Melrose. The East River St. Marys branch lines up with the Chedabucto Fault, while West River St. Marys drains along the St. Marys Fault line. The river's erosion has exposed the fault scarp, and the shape of these rivers forms a rectangle on the landscape.

The St. Mary's Watershed is one of three key watersheds in the region, along with the Calvary River system and a network of smaller rivers that drain into the Stewiacke River. Drainage consists of a trellis-like network of first-, second-, and third-order streams.

The till in the area is formed from a hard grey Horton sandstone, and the soil in the region derives from this till. There are areas of Halifax soils, which are sandy loams that drain well, and patches of Aspotogan peat and soil. Shulie soils, Springhill sandy loams, and gravelly Millbrook soils can also be found.

Vegetation in the area includes trees such as Balsam Fir, White Spruce, White Pine, Red Spruce, Eastern Hemlock, and Red Oak, most existing in poorly-drained and previously cleared areas. Mixed hardwoods can be found in the areas of better drainage. There are two small floodplains, one near Kemptown and one near Glencoe, both consisting of diverse and sometimes rare intervalle flora.<sup>1</sup>

### 3.0 Methodology

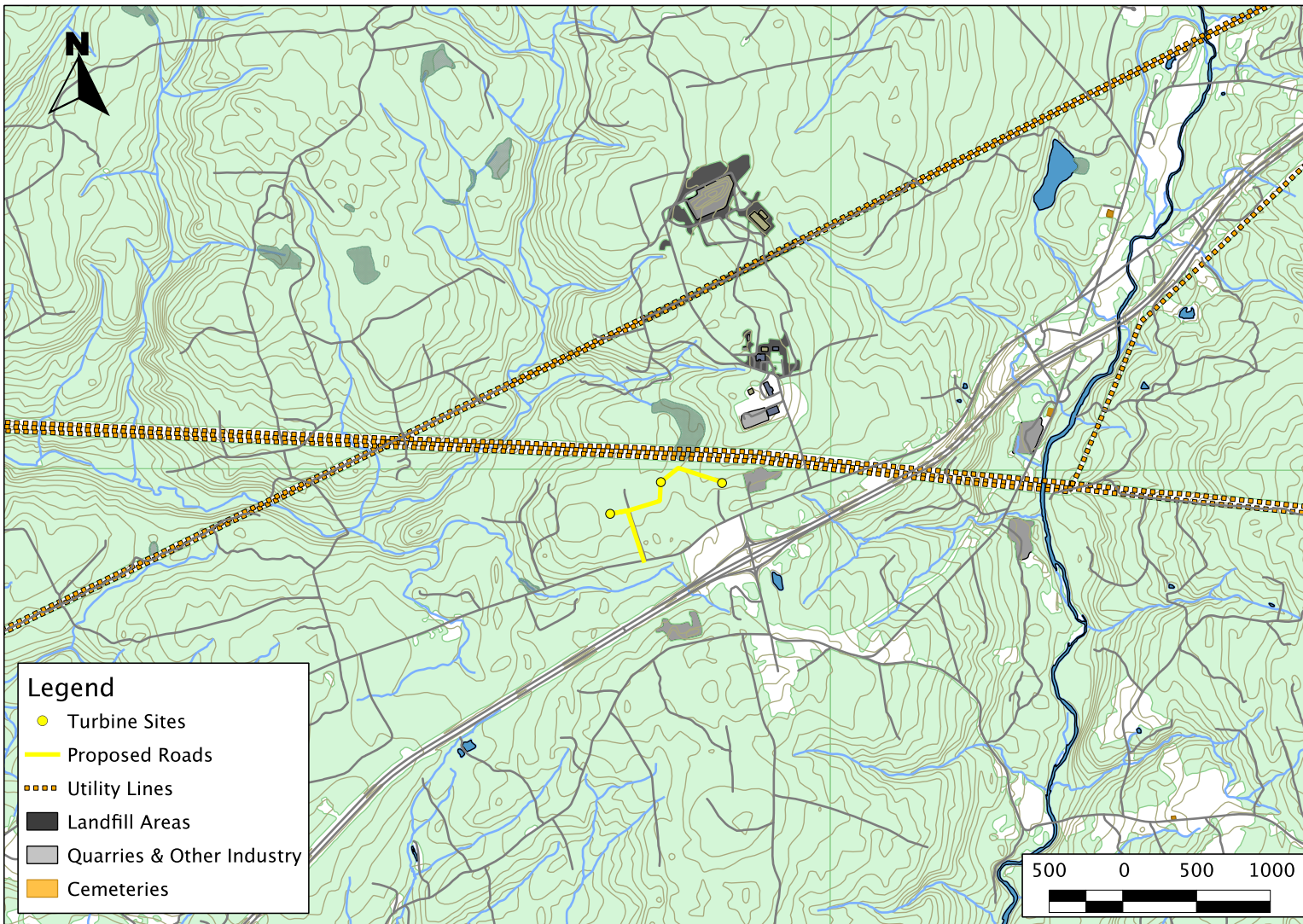
A historic background study was conducted to understand the area’s history and topography. This included consultation of historic maps and manuscripts at the Nova Scotia Archives as well as online resources.

A field reconnaissance of the proposed impact areas (proposed access roads and turbine sites) was conducted by Laura de Boer and Courtney Glen in October 2013. The survey was guided by a hand-held GPS unit. The terrain and vegetation changes within the study area were noted in the interest of recording negative evidence for historic cultural activity.

<b>Proposed Turbine</b>	<b>Coordinates (UTM NAD83)</b>
Turbine 1	20 T 490684 5032649
Turbine 2	20 T 491028 5032864
Turbine 3	20 T 491443 5032858

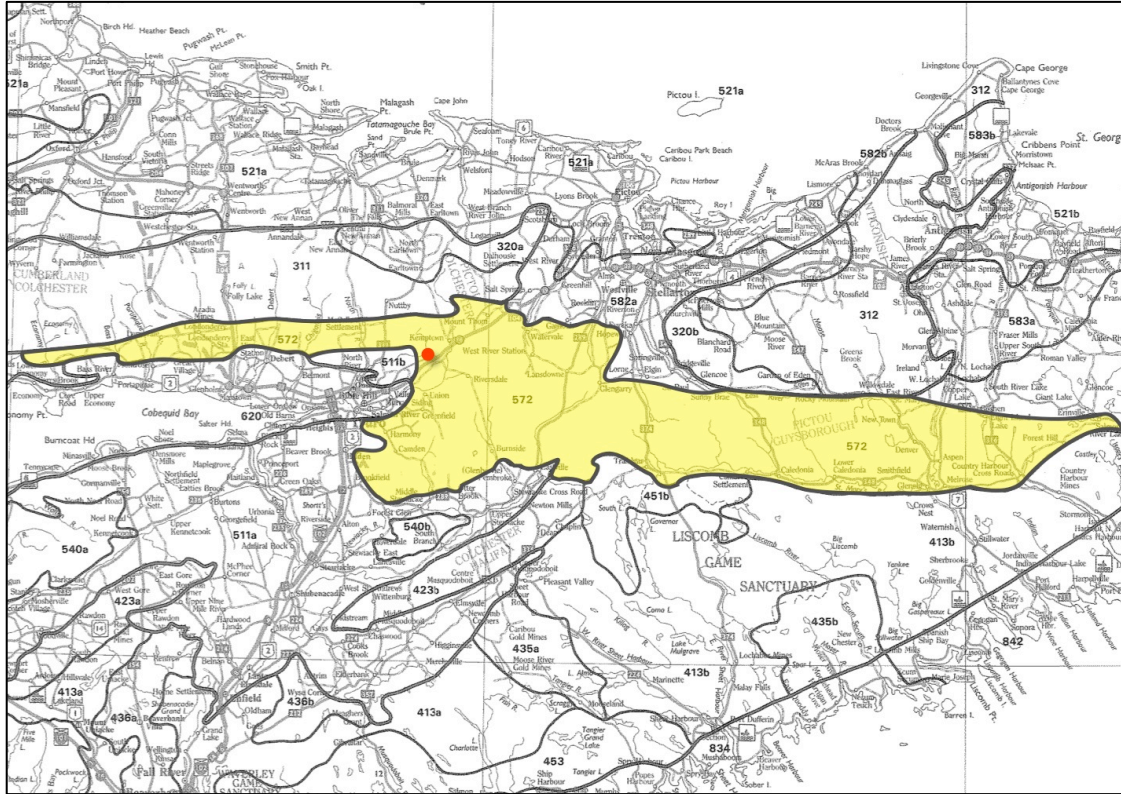
---

<sup>1</sup> Davis and Browne 1996:134-136.



**Figure 2.0-1: A map showing the proposed turbine sites and access roads. Turbine data courtesy RMS Energy.**





**Figure 2.0-2: A map showing Natural Theme Region #572 – St. Mary's Fault Block (highlighted). The study area is indicated in red. Map after Davis and Browne 1996.**

### 3.1 Maritime Archaeological Resource Inventory

Three historic sites representing domestic activity have been recorded less than a kilometer northeast of the study area, along Mingo Road at the site of the Colchester Waste Management Facility, also listed as Irishtown. The first is the remains of a small agricultural complex including stone piles resulting from field clearing as well as a stone foundation for a building, half-buried by soil and rock bulldozed from an adjacent road (BiCs-04). The second site consists of a small midden and two earthen or decayed wooden foundations, all most likely related to occupation in the 1930s or 1940s (BiCs-02). The final site is that of the W. Work House (originally registered as the J. Johnson House), consisting of a dry-laid stone foundation and cellar with stone piles marking the eastern perimeter of the site (BiCs-03).

A celt fragment was recovered as an isolated find in the Salmon River near Valley Station (BiCt-01), and a biface was also reported eroding from the bank of the same watercourse at Riversdale (BiCs-01). Another isolated find, a spurred end scraper, was recovered from Bible Hill at the site of the former Nova Scotia Agricultural College (now a branch of Dalhousie University) (BiCt-04). This find suggests the presence of a Palaeo-Indian site.

A general activity precontact site is known in Truro, near the shopping mall east of the Robie Street Cemetery (BiCt-02). A second general activity site has been identified on Churchill Street based upon a quartzite biface fragment and other detritus recovered from a garden plot (BiCt-03).

A mill and smithy complex is known in Bible Hill along Farnham brook, originating in the late eighteenth or early nineteenth century (BiCt-05).

## **3.2 Historical Background**

### **3.2.1 The Precontact Period**

The history of human occupation in Nova Scotia has been traced back approximately 11,000 years ago, to the Palaeo-Indian period or Sa'qewe'k L'nu'k (11,000 – 9,000 years BP). The only significant archaeological evidence of Palaeo-Indian settlement in the province exists at Debert/Belmont in Colchester County.

The Sagiwe'k Lnu'k period was followed by the Mu Awsami Kejikawe'k L'nu'k (Archaic period) (9,000 – 2,500 years BP), which included several traditions of subsistence strategy. The Maritime Archaic people exploited mainly marine resources while the Shield Archaic concentrated on interior resources such as caribou and salmon. The Laurentian Archaic is generally considered to be a more diverse hunting and gathering population.

The Archaic period was succeeded by the Woodland/Ceramic period or Kejikawek L'nu'k (2,500 – 500 years BP). Much of the Archaic way of subsistence remained although it was during this period that the first exploitation of marine molluscs is seen in the archaeological record. It was also during this time that ceramic technology was first introduced.

The Woodland period ended with the arrival of Europeans and the beginning of recorded history. The initial phase of contact between First Nations people and Europeans, known as the Protohistoric period, was met with various alliances particularly between the Mi'kmaq and French.

The Mi'kmaq inhabited the territory known as Mi'kma'ki or Megumaage, which included all of Nova Scotia including Cape Breton, Prince Edward Island, New Brunswick (north of the Saint John River), the Gaspé region of Quebec, part of Maine and southwestern Newfoundland. Halifax, Lunenburg, Kings, Hants and Colchester Counties were part of the district known as Sipekni'katik or “wild potato area” (Figure 3.2-1).

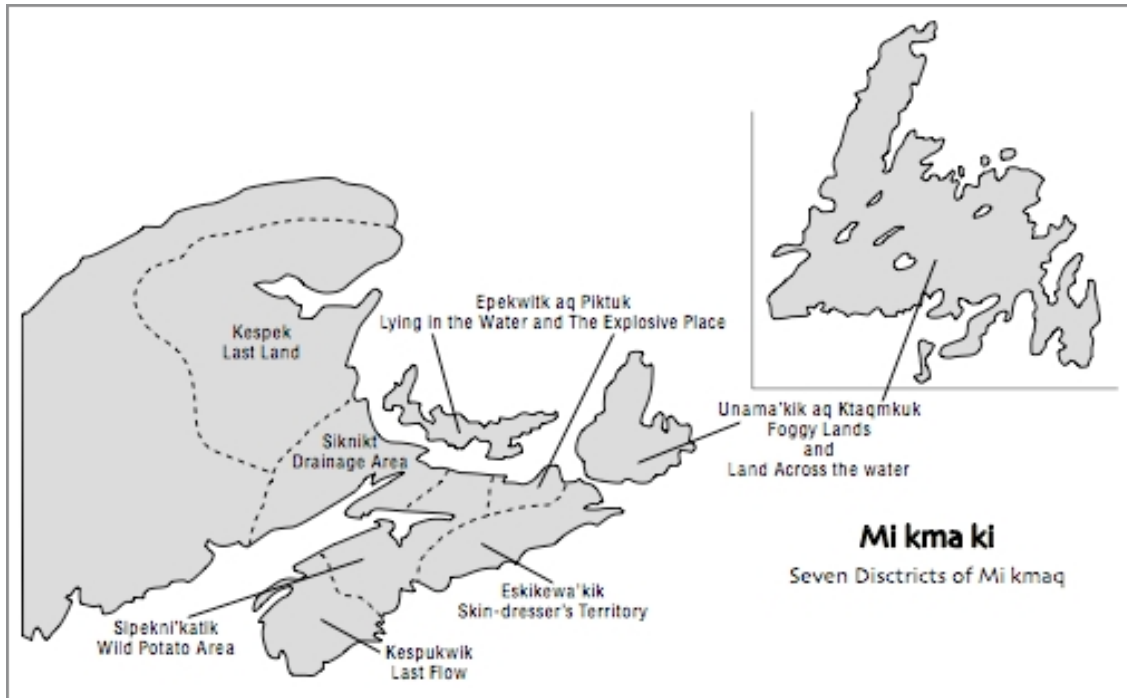


Figure 3.2-1: Map of the Mi'kmaq districts.<sup>2</sup>

The name Cobequid reportedly originated in the Mi'kmaq name *Way-Kob-begitk*, or “bound of the rushing water,” referring to the mountain range forming a boundary to the north of the Bay of Fundy.<sup>3</sup>

### 3.2.2 European Settlement

Although European settlement along Nova Scotia’s coasts and lowlands was well underway by the early eighteenth century, higher and more mountainous regions were not taken up until later decades. By June 1767, a trail cut to connect Truro to new settlers at Pictou crossed the Kemptown area or as it was then known, Salmon River Crossing.<sup>4</sup> There is little record of settlement in this area at the time, but it is known that mills (presumably sawmills) were built before 1790 at Kemptown by David Archibald II, one of the first European settlers to the area. Other grantees in proximity to the study area included Janet Askew, James Hogg, Thomas Robinson, and Alexander McKay (Figure 3.2-2).

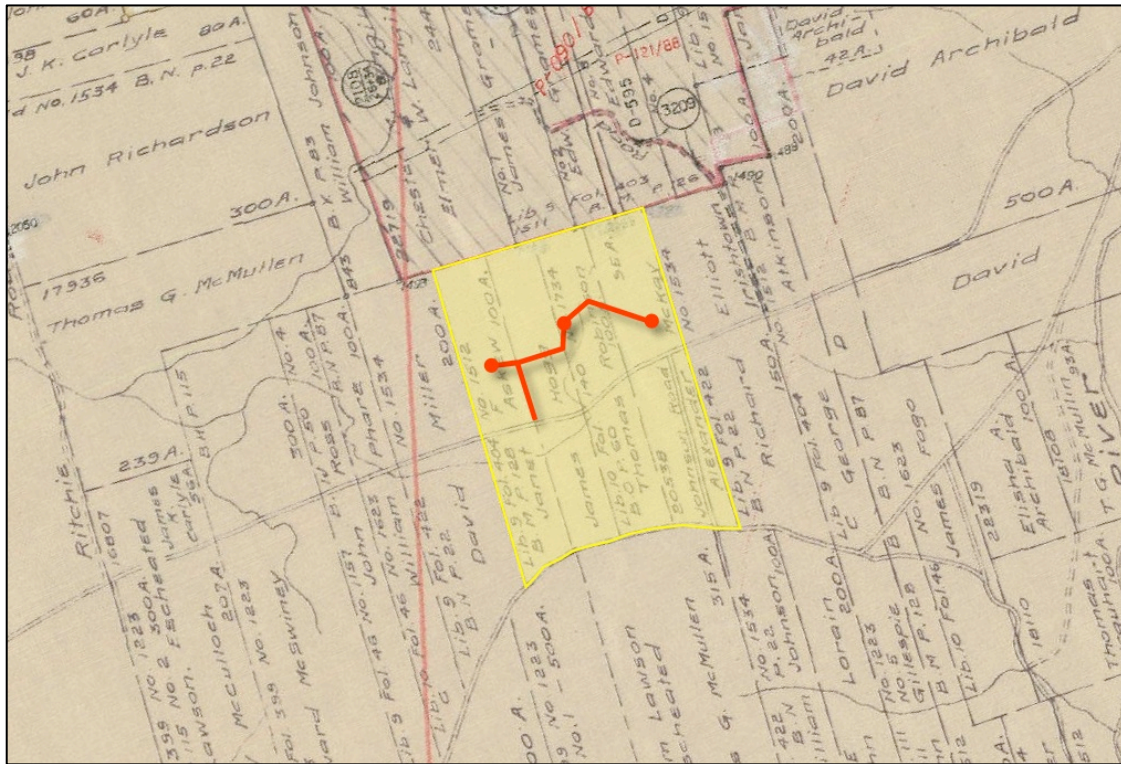
In its early years the community continued to be referred to as Salmon River Crossing. It was given the name Kemptown by surveyor Alexander Miller, who

<sup>2</sup> Confederacy of Mainland Mi'kmaq 2007:11,

<sup>3</sup> Longworth 1866:14.

<sup>4</sup> Yuill 1981:12.

named it for Sir James Kempt, Nova Scotia’s Lieutenant-Governor beginning in 1820.<sup>5</sup>



**Figure 3.2-2: Detail of a land grant map showing the approximate impact area (red) and the associated grants (yellow).<sup>6</sup>**

In 1825, the first gristmill in the area was established at Earltown by John McKay. In the absence of maintained roadways, the stones for the mill had to be dragged for eleven miles over “roads barely worthy of the name.”<sup>7</sup> By 1837 no gristmills existed at Kemptown, the nearest being twelve to fourteen miles distant (presumably at Earltown). Locals of Kemptown petitioned the Provincial Assembly for funds to help them as they built a new mill on the Salmon River.<sup>8</sup>

It appears that despite the road through Kemptown being a key route from Truro to Pictou, the journey could only be made with some difficulty. In 1842, the Truro to Salmon River Road (now most likely the Old Pictou Road) was in need of gravel before it could be “suitable for wheel travelling.”<sup>9</sup>

<sup>5</sup> Fergusson 1967:323-324.

<sup>6</sup> Department of Lands and Forests 1946.

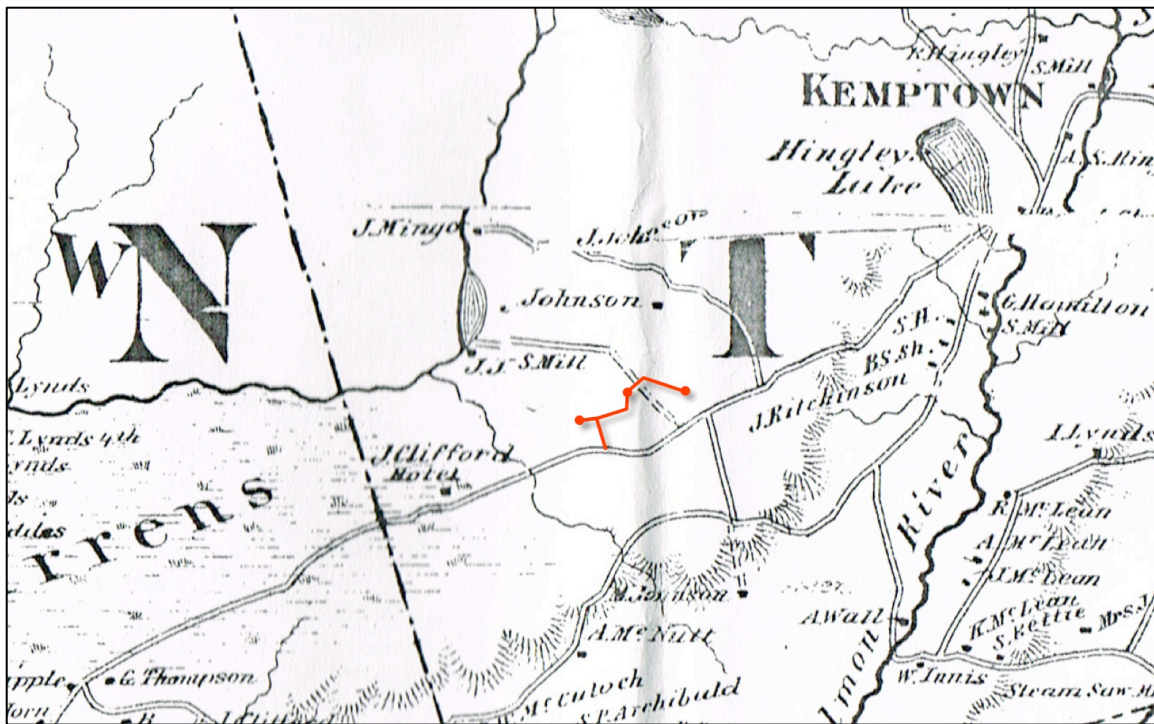
<sup>7</sup> Longworth 1866:138.

<sup>8</sup> Nova Scotia Archives 1837.

<sup>9</sup> Yuill 1981:14.

In the 1830s or early 1840s John Archibald, a resident of the nearby community of Salmon River, sunk a shaft less than twenty feet from the Pictou Road in search of a coal seam. Archibald raised only “a few cauldrons” of coal before his operation was stopped by agents representing the General Mining Association. In 1858, the shaft was reopened and cleared of rubbish to reveal a promising coal seam of four to six feet in thickness.<sup>10</sup> By October the Kemptown Mining Company offered coal at ten shillings per ton through their agents, Mr. Robert Smith of Truro and Mr. A. Scott Hingley of Salmon River.<sup>11</sup>

Historical mapping indicates that by the late nineteenth century there was some settlement in proximity to the study area. Church’s 1874 map of the county shows homesteads belonging to J. Mingo and two Johnsons, along with a notation for “J. S. Mill” (a steam-powered mill or a sawmill) and the J. Clifford Hotel (Figure 3.2-3). By 1902 the mill is no longer indicated, though a dam is still shown, as is the home of James Mingo along with several other unmarked buildings (Figure 3.2-4). Mingo’s home and those of the Johnsons are located along what is now the road to the Colchester Waste Management Facility.



**Figure 3.2-3: Detail of Ambrose Church’s 1874 map of Colchester county, showing the approximate location of the proposed turbines and access roads in red.**

<sup>10</sup> The Nova Scotian 1858.

<sup>11</sup> Nova Scotia Archives 1858.

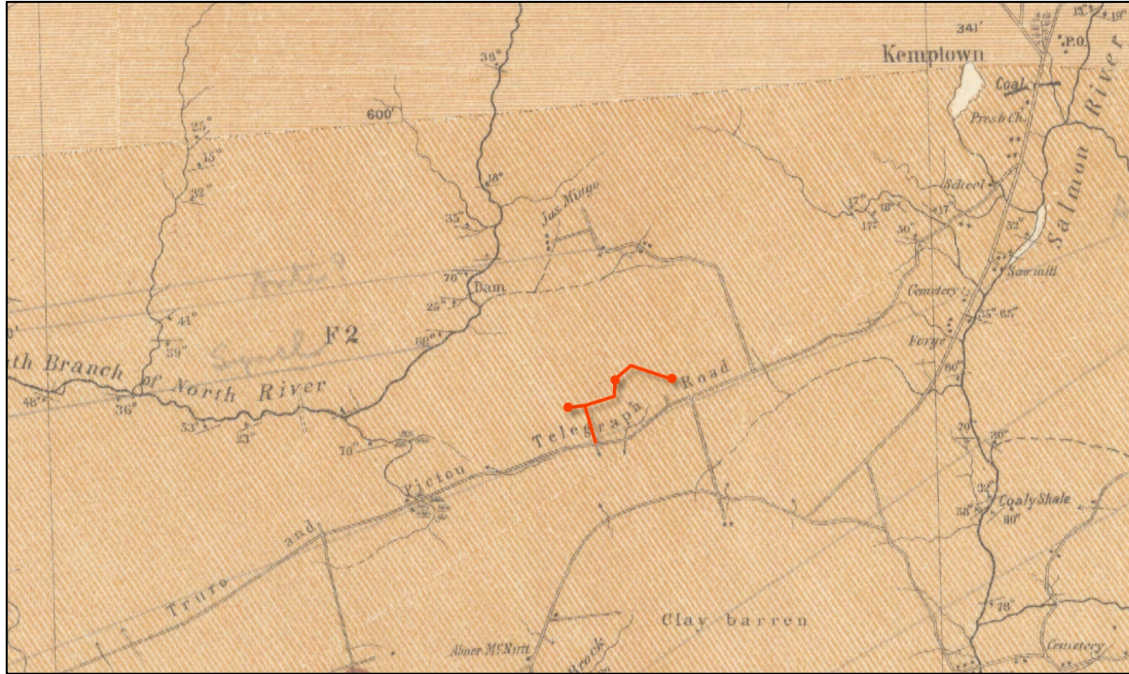


Figure 3.2-4: Detail of a 1902 geological survey map showing the study area.<sup>12</sup>

### 3.3 Field Reconnaissance

A field reconnaissance was conducted on 7 October 2013 by Laura de Boer and Courtney Glen. The reconnaissance began along an existing woods road which forms the main proposed access road to the three turbines. The surrounding forest is very young and extensive logging has occurred in recent years, with some stacks of logs being left behind along the sides of the road.

The existing road terminates as the proposed “T” in the access road between turbines #1 and #2, where a data collector tower has been erected (Plate 1). Here a broad swath of land was cleared prior to the tower’s construction, and regrowth consists only of some wildflowers and other small plants.

To the west, the site of turbine #1 is found just beyond the transition from recent clearing into regenerative forest. Maple and other hardwoods predominate, with a spruce sapling understory (Plate 2). The forest floor undulates and shows signs of skidder or harvester tracks, along with well-rotted stumps suggesting that a more mature forest was cut within the past three decades.

Proceeding east beyond the data collector tower, the proposed site of Turbine #2 is situated in an area that has been clear-cut approximately within the last five years (Plate 3). Regrowth includes rhodora, spruce saplings, and young tamarack. The terrain is mossy and more wet than that of Turbine 1.

---

<sup>12</sup> Fletcher 1902.

The third and final turbine site shows signs of having been clear-cut some ten to fifteen years ago, with skidder trails evident beneath an understory of ferns. Young birch and spruce are found throughout (Plate 4), although the proposed road between turbines #2 and #3 passes through a more mature spruce forest that has been almost completely knocked over in heavy winds.

## **4.0 Results And Discussion**

Signs of mechanical tree harvesting were observed throughout the study area, but there was no evidence of older cultural activity. The terrain, although not strongly unsuited to habitation, does not present any strong attraction for either First Nations or historic settlement. No major watercourses intersect or closely border the proposed impact zones, and there was no sign of the historic road to the “J. J. S. Mill” noted on historic mapping (refer back to Figure 3.2-3).

## **5.0 Recommendations And Conclusions**

This impact assessment has indicated that although historical activity has been recorded in the area surrounding the proposed wind farm, there is no evidence that significant archaeological resources, either historic or precontact in origin, will be disturbed by the current wind project layout. As such, no mitigation is currently recommended.

If the turbine or access road layout is significantly altered, it is recommended that the new layout be reassessed by a qualified archaeologist in order to determine the potential for significant heritage resources within a new impact area.

In the unlikely event that any archaeological material is encountered during ground disturbance activities, all activity should cease and the Coordinator of Special Places, Sean Weseloh-McKeane (902-424-6475) should be contacted immediately to determine a suitable method of mitigation.

## 6.0 References Cited

Church, Ambrose F. 1874. Topographical Township Map of Colchester County. Bedford: A. F. Church & Co.

Confederacy of Mainland Mi'kmaq. 2007. *Kekina'muek: Learning about the Mi'kmaq of Nova Scotia*. Truro: Eastern Woodland Publishing.

Davis, Derek and Sue Browne. 1996. *Natural History of Nova Scotia, Volume II: Theme Regions*. Halifax: Nimbus Publishing and Nova Scotia Museum.

Department of Lands and Forests. 1946. "Crown Lands Index Sheet, Colchester and Pictou Counties." Sheet No. 80.

Fergusson, C. Bruce. 1967. *Place-Names and Places of Nova Scotia*. Halifax; Public Archives of Nova Scotia.

Fletcher, Hugh. 1902. "Province of Nova Scotia (Colchester County)". Earltown Sheet, No. 58. Geological Survey of Canada no. 637.

Nova Scotia Archives. 1837. "Petition for Assistance to Build a Mill at Kempton." RG5 Series "P" Vol.52 #60. 25 February. MFM#9798.

Nova Scotia Archives. 1858. "Kempt Town Mining Compnay" (Advertisement). MG 100, Vol. 171, #16. 11 October. MFM#251.

The Nova Scotian. 1858. "Coal in the Vicinity of Truro." 30 August, p.3. Nova Scotia Archives Newspaper Collection, MFM#8086.

Yuill, Bradford G. 1981. *The Origin and Development of Colchester Roads to 1900*. Truro: Colchester Historical Museum.



## **PLATES**



**Plate 1: The data collector tower, looking northwest.**



**Plate 2: Courtney Glen stands on an overgrown skidder trail resulting from logging activity at the site of Turbine #1, looking north.**



**Plate 3: The site of Turbine #2 looking north, showing very young regrowth over a wet forest floor.**



**Plate 4: The site of Turbine #3 looking southeast. Note that a sign for the local exit from Highway 104 is visible (blue).**

**APPENDIX A: HERITAGE RESEARCH PERMIT**



# Heritage Research Permit (Archaeology)

**Office Use Only**  
**Permit Number:**

**Special Places Protection Act 1989**

(Original becomes Permit when approved by  
Communities, Culture and Heritage)

**A2013NS088**

*Greyed out fields will be made publically available. Please choose your project name accordingly*

Surname	de Boer	First Name	Laura
Project Name	Kemptown Wind Farm		
Name of Organization	Davis MacIntyre & Associates Limited		
Representing (if applicable)			
Permit Start Date	02 October 2013	Permit End Date	31 December 2013
General Location:	4 kms southwest of Kemptown on East Mountain, Colchester County		

**Specific Location:** *(cite Borden numbers and UTM designations where appropriate and as described separately in accordance with the attached Project Description. Please refer to the appropriate Archaeological Heritage Research Permit Guidelines for the appropriate Project Description format)*

20 T 490684 E 5032649 N (Turbine #1)

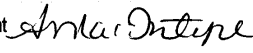
**Permit Category:**  
Please choose one

Category A – Archaeological Reconnaissance

Category B – Archaeological Research

Category C – Archaeological Resource Impact Assessment

I certify that I am familiar with the provisions of the *Special Places Protection Act* of Nova Scotia and that I have read, understand and will abide by the terms and conditions listed in the Heritage Research Permit Guidelines for the above noted category.

Signature of applicant   
for Laura de Boer

Date 18 September 2013

Approved by  
Executive Director



Date *SEPT 23-13*

Kempton COMFIT Wind Project: Environmental Assessment  
Affinity Wind LP

---

---

## **Appendix I**

### **Bat Population Study**