



## STAGE 2 ARCHAEOLOGICAL ASSESSMENT NEXTERA ADELAIDE WIND FARM

*Plate 7: Stage 2 Pedestrian Survey, Field Conditions, Walked at 5 Metre Intervals, Turbine Pad 25, Facing East*



*Plate 8: Stage 2 Pedestrian Survey, Field Conditions, Walked at 5 Metre Intervals, Collector Cable to Turbine 32, Facing South*





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*Plate 9: Stage 2 Pedestrian Survey, Field Conditions, Walked at 5 Metre Intervals, Turbine Pad 34, Facing North*



*Plate 10: West Side of Seed Road, North of Highway 402, Showing Typical Disturbed Road Right-of-Way, Facing North*





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## STAGE 2 ARCHAEOLOGICAL ASSESSMENT NEXTERA ADELAIDE WIND FARM

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*Plate 11: East Side of School Road, North of Highway 402, Showing Typical Disturbed Road Right-of-Way, Facing South*



*Plate 12: Intersection of Mullifarry Drive and Brown Road Showing Typical Disturbed Road Right-of-Way, Facing North*





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## STAGE 2 ARCHAEOLOGICAL ASSESSMENT NEXTERA ADELAIDE WIND FARM

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*Plate 13: South Side of Mullifarry Drive, East of Brown Road, Showing Typical Disturbed Road Right-of-Way, Facing East*



*Plate 14: West Side of School Road, South of Highway 402, Showing Typical Disturbed Road Right-of-Way, Facing North*





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*Plate 15: North Side of Mullifarry Drive, West of School Road, Showing Typical Disturbed Road Right-of-Way, Facing West*



*Plate 16: Precautionary Test Pit Showing Mottled Soil and Disturbance in Field Adjacent to Highway 402*





## 3.2 Stage 2 Field Assessment Results

The Stage 2 archaeological assessment was conducted using the methods described in Section 3.1. The Stage 2 archaeological assessment resulted in the identification of 13 locations in total, including nine pre-contact Aboriginal sites and four historic Euro-Canadian sites. Appendix A illustrates the areas assessed, the techniques employed, and the assessment results. A complete artifact catalogue of all Stage 2 sites can be found in Appendix B. The MGRS co-ordinates of the sites are found in Appendix C. Two First Nations monitors were also employed during the assessment and this Aboriginal engagement is summarized in Appendix D.

All of the pre-contact Aboriginal scatters are lithic scatters or findspots. The chert types identified in the discussion below include:

- **Kettle Point chert:** a relatively high quality raw material that outcrops between Kettle Point and Ipperwash, on Lake Huron. Currently, Kettle Point occurs as submerged outcrops extending for approximately 1350 metres into Lake Huron. Secondary deposits of Kettle Point chert have been reported in Essex County and in the Ausable Basin.
- **Onondaga chert:** a high quality raw material that outcrops along the north shore of Lake Erie east of the embouchure of the Grand River. This material can also be recovered from secondary, glacial deposits across much of southwestern Ontario, east of Chatham.

### 3.2.1 Location 1

Location 1 is a historic Euro-Canadian site consisting of a 25 metre (along the north-south axis) by 36 metre (along the west-east axis) scatter of late 19<sup>th</sup> to 20<sup>th</sup> century domestic debris. The location lies on the underground collector cable route for Turbine 26A (Appendix A, Tile F), just west of Brown Road and close to a culvert running underneath the road. A total of 45 Euro-Canadian artifacts were recovered during the Stage 2 assessment: 37 domestic, six recent, and two miscellaneous metal. Each artifact class is discussed in greater detail below. Table 1 provides a summary of the Stage 2 artifacts collected from Location 1.

**Table 1: Stage 2 Artifact Summary for Location 1**

Artifact	Freq.	%
domestic	37	82.23
recent	6	13.33
miscellaneous metal	2	4.44
<b>Total</b>	<b>45</b>	<b>100.00</b>



### 3.2.1.1 Domestic Artifacts

A total of 37 domestic artifacts were recovered during the Stage 2 assessment of Location 1. This collection includes four ceramic artifacts and 33 glass artifacts.

#### Ceramic Artifacts

In total, four fragments of ceramic hollowwares and flatwares were collected during the Stage 2 investigation of Location 1. Included in this total are two fragments of utilitarian earthenware, one fragment of ironstone, and one fragment of porcelain.

#### Utilitarian Earthenware

The assemblage consists of one fragment of red earthenware and one fragment of yellow earthenware. Red and yellow earthenware vessels were manufactured throughout the late 18<sup>th</sup> and 19<sup>th</sup> centuries and were the most common utilitarian ware in the first half of the 19<sup>th</sup> century, eventually being replaced by more durable stoneware vessels.

#### Ironstone

Ironstone or graniteware is a variety of refined white earthenware introduced in the 1840's that became extremely popular in Upper Canada by the 1860's (Kenyon 1985). It is usually much thicker than other whiteware, and often decorated with raised moulded designs of wheat or fruit. One ironstone sherd, classified as plain or undecorated, was collected (Plate 17:1).

*Plate 17: Sample of Location 1 Artifacts (actual size)*





### ***Porcelain***

One sherd of plain porcelain was collected. Porcelain is a type of earthenware fired at such a high temperature that the clay has begun to vitrify; consequently the ceramic is translucent when held up to a light. Because of its high cost, porcelain is extremely rare on 19<sup>th</sup> century sites in Ontario. However, by the turn of the century it becomes relatively common as production techniques were developed in Europe which greatly reduced costs.

### **Glass Artifacts**

A total of 25 bottle glass fragments, six white glass fragments, one lamp chimney fragment, and one glass dish fragment were recovered at Location 1. The colours represented in the bottle glass assemblage include 15 clear, five Vicks blue (Plate 17:2), three brown, one green, and one purple. Due to the fragmentary nature of the bottle glass shards, they can only be classified according to colour and the colour of bottle glass alone is very limited with regards to providing dates of manufacture for glass bottles (Lindsey 2010). The six shards of white or “milk glass” were likely manufactured after 1870. Milk glass was most commonly used for cosmetic containers, toiletry bottles or cream jars. The opaque white glass was very commonly used for such products dating from about 1870 through to the 20<sup>th</sup> century (Lindsey 2010). Finally, the one lamp chimney fragment and the glass dish fragment are temporally non-diagnostic shards.

#### **3.2.1.2 Recent Material**

Six examples of obviously late 20<sup>th</sup> and early 21<sup>st</sup> century material were recovered: four hydro insulator fragments (Plate 17:3) and two fuses (Plate 17:4).

#### **3.2.1.3 Miscellaneous Metal**

Two temporally non-diagnostic corroded metal fragments were collected.

#### **3.2.1.4 Summary**

The artifacts collected from Location 1 represent a range of late 19<sup>th</sup> century and 20<sup>th</sup> century Euro-Canadian cultural material. The small ceramic collection dates to the late 19<sup>th</sup> century or later; all other artifacts date to the late 19<sup>th</sup> century as well. Recent 20<sup>th</sup> or 21<sup>st</sup> century material was also recovered. Given the late dates attributed to the ceramic collection and the lack of earlier ceramics or other material classes, the cultural heritage value or interest of this site is judged to be low and no further archaeological assessment is recommended.



### **3.2.2 Location 2 (AfHk-29)**

Location 2 (AfHk-29) is a pre-contact Aboriginal site consisting of a scatter of two chert flakes (one Kettle Point and one Onondaga) and one projectile point manufactured from Kettle Point chert distributed in a linear fashion measuring 15 metres from north to south. The location lies on the underground collector cable route for Turbine 27 (Appendix A, Tile E). Both flakes are secondary flakes. The projectile point is a Saugeen point (Plate 18:1). Both lateral edges and the base are straight. The point is biconvex in cross-section with a summarily worked base exhibiting no grinding. All of these features are hallmarks of Saugeen projectile points (Kenyon 1979). The projectile point measures 43.6 millimetres long, 19.9 millimetres wide at the shoulder, 17.0 millimetres wide at the inter-notch width, 22.4 millimetres wide at the base, and 8.6 millimetres thick. This point is temporally diagnostic and dates to the Middle Woodland (*circa* 400 B.C. to 500 A.D.).

Due to the fact that Location 2 is a spatially discrete area producing pre-contact Aboriginal cultural material, some of which dates to the Middle Woodland, it is recommended that this site be subject to a Stage 3 archaeological investigation to further evaluate its cultural heritage value or interest. The Stage 3 assessment would include the mapping of any surface finds and the hand excavation of a series of one-metre square test units.

### **3.2.3 Location 3 (AgHk-66)**

Location 3 (AgHk-66) is a pre-contact Aboriginal site consisting of a scatter of two Kettle Point chert flakes, one biface manufactured from Kettle Point chert (Plate 18:2), and one projectile point manufactured from Onondaga chert (Plate 18:3) distributed over an area of 15 metres (along the north-south axis) by 35 metres (along the west-east axis). The location lies on the underground collector cable route for Turbine 8 (Appendix A, Tile B). Both flakes are secondary flakes. The biface has been broken at both ends, with one end subsequently retouched. It measures 89.7 millimetres long, 32.2 millimetres wide, and 9.9 millimetres thick. The projectile point is a Crawford Knoll point (Kenyon 1980a; Snarey and Ellis n.d.). The point is finely worked with convex lateral edges but the base has not been preserved. One distinct barb has been preserved and notching is evident although it cannot be conclusively demonstrated to be either corner or side notching. The projectile point measures 23.0 millimetres long, 20.4 millimetres wide at the shoulder, 11.5 millimetres wide at the inter-notch width, and 5.1 millimetres thick. The measurements are incomplete given that the projectile point is missing its base. This point is temporally diagnostic and dates to the Small Point Late Archaic (*circa* 1500 to 1100 B.C.).

Due to the fact that Location 3 is a spatially discrete area producing pre-contact Aboriginal cultural material, some of which dates to the Late Archaic, it is recommended that this site be subject to a Stage 3 archaeological investigation to further evaluate its cultural heritage value or interest. The Stage 3 assessment would include the mapping of any surface finds and the hand excavation of a series of one-metre square test units.



Plate 18: Sample of Pre-contact Aboriginal Artifacts from the Adelaide Wind Farm Lands (actual size)



1: Location 2  
(AfHk-29)  
Projectile Point

2: Location 3  
(AgHk-66)  
Biface

3: Location 3  
(AgHk-66)  
Projectile Point

4: Location 4  
Retouched Flake

5: Location 6  
Scraper



6: Location 8  
Retouched Flake



7: Location 10  
Biface



8: Location 12  
Chipping Detritus



9: Location 13  
Chipping Detritus

### 3.2.4 Location 4

Location 4 is a pre-contact Aboriginal site consisting of a single isolated retouched flake manufactured from Kettle Point chert (Plate 18:4). The location lies on the underground collector cable route for Turbine 8 (Appendix A, Tile B).



As detailed in Section 3.1, survey intervals were intensified to one metre within a twenty metre radius of the find but no further artifacts were found. Given this is the only find at Location 4 and is a non-diagnostic artifact, the cultural heritage value or interest of this site is judged to be low and no further archaeological assessment is recommended.

### 3.2.5 Location 5 (AgHk-67)

Location 5 (AgHk-67) is a historic Euro-Canadian site consisting of a 20 metre by 20 metre scatter of mid-to-late 19<sup>th</sup> century domestic debris. The location lies on the underground collector cable route for Turbine 8 (Appendix A, Tile B). A total of 60 Euro-Canadian artifacts were recovered during the Stage 2 assessment: all domestic artifacts including 35 ceramic and 25 glass. Each artifact class is discussed in greater detail below.

#### 3.2.5.1 Ceramic Artifacts

In total, 35 fragments of ceramic hollowwares and flatwares were collected during the Stage 2 investigation of Location 5 (AgHk-67). Included in this total are 24 fragments of ironstone, four fragments of semi-porcelain, two miscellaneous unidentified ceramic fragments, two fragments of rockinghamware, two fragments of utilitarian earthenware, and one fragment of porcelain. Table 2 provides a breakdown of the ceramic assemblage by ware type, while Table 3 provides a more detailed breakdown of the ceramic assemblage by decorative style.

**Table 2: Summary of Ceramic Collection According to Ware Type, Location 5 (AgHk-67)**

Artifact	Freq.	%
ironstone	24	68.58
semi-porcelain	4	11.43
ceramic, unidentified	2	5.71
rockinghamware	2	5.71
utilitarian	2	5.71
porcelain	1	2.86
<b>Total</b>	<b>35</b>	<b>100.00</b>

**Table 3: Summary of Ceramic Collection According to Decorative Style, Location 5 (AgHk-67)**

Artifact	Freq.	%
ironstone, transfer printed	10	28.58
ironstone, plain	8	22.86
ironstone, moulded	6	17.14
porcelain, semi	4	11.43



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Artifact	Freq.	%
ceramic, miscellaneous unidentified	2	5.71
earthenware, red	2	5.71
rockinghamware	2	5.71
porcelain, plain	1	2.86
<b>Total</b>	<b>35</b>	<b>100.00</b>

### Ironstone

Ironstone or graniteware is a variety of refined white earthenware introduced in the 1840's that became extremely popular in Upper Canada by the 1860's (Kenyon 1985). It is usually much thicker than other whiteware, and often decorated with raised moulded designs of wheat or fruit. Ironstone was the most common type of ceramic recovered from Location 5, with 24 fragments, comprising 68.58% of the total Stage 2 ceramic artifact collection. The ironstone assemblage included eight fragments classified as plain or undecorated including one fragment with a black transfer printed maker's mark (Plate 19:1). This mark can be attributed to W & E Corn of Burslem, England dating between 1864 and 1891 (Birks 2009).

The ironstone assemblage also included 10 transfer printed (Plate 19:2) and six moulded sherds. Transfer printing involved the transfer of an intricate pattern from a sheet of treated paper to the underglaze surface of the clay. The ironstone transfer printed sherds collected during the Stage 2 assessment of Location 5 (AgHk-67) include designs in green, teal, and grey. A floral motif decorates the moulded fragments.

### Semi-Porcelain

During the first half of the 19<sup>th</sup> century, the English improved pottery techniques resulting in the production of durable and decorative wares with trade names such as semi-porcelain. This hard earthenware sought to emulate imported porcelains but lacked true translucency. In 1850, semi-porcelains were reintroduced and this vitreous, hard-glazed white earthenware resembling bone china soon dominated the marketplace (Hughes 1961). The Location 5 (AgHk-67) assemblage contains four sherds of semi-porcelain (Plate 19:3).

### Undetermined Ceramic Type

Two of the ceramic pieces recovered from Location 5 (AgHk-67) could not be catalogued into a specific ceramic-ware classification. These pieces were so heavily damaged and fragmentary that it was impossible to accurately identify by ceramic type. In order to avoid altering the separate ceramic totals, percentages, and ultimately the temporal data for the site, the damaged pieces were simply classified as miscellaneous unidentified ceramic.



Plate 19: Sample of Location 5 (AgHk-67) Artifacts (actual size)



1: Location 5  
(AgHk-67)  
Ironstone With Maker's Mark



2: Location 5  
(AgHk-67)  
Transfer Printed Ironstone



3: Location 5  
(AgHk-67)  
Semi-Porcelain



4: Location 5  
(AgHk-67)  
Porcelain



5: Location 5  
(AgHk-67)  
Bottleneck With Finish

## Rockinghamware

Two fragments in the ceramic assemblage have been identified as earthenware with a Rockingham glaze. Rockinghamware became popular in the 1840's and continues to be manufactured in limited quantities today (Adams 1994: 100).

## Utilitarian Earthenware

A total of two utilitarian earthenware fragments were collected: two fragments of lead glazed red earthenware. Earthenware vessels were manufactured throughout the late 18<sup>th</sup> and 19<sup>th</sup> centuries and were the most common utilitarian ware in the first half of the 19<sup>th</sup> century, eventually being replaced by more durable stoneware vessels.



## **Porcelain**

Porcelain is a type of earthenware fired at such a high temperature that the clay has begun to vitrify; consequently the ceramic is translucent when held up to a light. Because of its high cost, porcelain is extremely rare on 19<sup>th</sup> century sites in Ontario. However, by the turn of the century it becomes relatively common, as production techniques were developed in Europe which greatly reduced costs. One plain sherd of porcelain (Plate 19:4) was collected at Location 5 (AgHk-67).

### **3.2.5.2 Glass Artifacts**

A total of 22 bottle glass fragments and three temporally non-diagnostic glass dish fragments were recovered at Location 5 (AgHk-67). The colours represented in the bottle glass assemblage include 10 clear, four aqua, two Vicks blue, two brown, two green, and two violet. Due to the fragmentary nature of the bottle glass shards, they can only be classified according to colour and the colour of bottle glass alone is very limited with regards to providing dates of manufacture for glass bottles (Lindsey 2010). However, one of the glass bottle fragments is a complete bottleneck and finish with the mould seam ending just before the finish (Plate 19:5). This seam pattern dates between 1880 and 1900 (Kendrick 1971).

### **3.2.5.3 Summary**

The artifacts collected from Location 5 (AgHk-67) represent a range of mid-to-late 19<sup>th</sup> century Euro-Canadian cultural material. The most common types of ceramic artifacts recovered from AeHa-36 were 19<sup>th</sup> century ironstone types such as transfer printed, plain, and moulded. A late 19<sup>th</sup> century bottle neck with finish was also recovered. The historic Euro-Canadian material cannot be attributed to any known historic structures depicted on the 1878 map of the Township of Adelaide (Figure 3).

Due to the fact that Location 5 is a spatially discrete area producing mid-to-late 19<sup>th</sup> century historic Euro-Canadian cultural material, it is recommended that this site be subject to a Stage 3 archaeological investigation to further evaluate its cultural heritage value or interest. The Stage 3 assessment would include the mapping of any surface finds and the hand excavation of a series of one-metre square test units. Further archival research to supplement the Stage 1 background study concerning the land use and occupation history specific to Location 5 will also be conducted.

## **3.2.6 Location 6**

Location 6 is a pre-contact Aboriginal site consisting of a single end scraper manufactured from Onondaga chert (Plate 18:5). The scraper measures 34.8 millimetres long, 26.5 millimetres wide, and 6.1 millimetres thick. The location lies on the underground collector cable route for Turbine 9 (Appendix A, Tile B).



As detailed in Section 3.1, survey intervals were intensified to one metre within a twenty metre radius of the find but no further artifacts were found. Given this is the only find at Location 6 and is a non-diagnostic artifact, the cultural heritage value or interest of this site is judged to be low and no further archaeological assessment is recommended.

### **3.2.7 Location 7 (AgHj-5)**

Location 7 (AgHj-5) is a pre-contact Aboriginal site consisting of a scatter of 18 chert flakes (17 Kettle Point and one Onondaga) distributed over an area of 25 metres (along the north-south axis) by 20 metres (along the west-east axis). The location lies on the underground collector cable route for Turbine 9 (Appendix A, Tile B). The chipping detritus was not retained for laboratory analysis at this time. Due to the fact that Location 7 is a spatially discrete area producing pre-contact Aboriginal cultural material, it is recommended that this site be subject to a Stage 3 archaeological investigation to further evaluate its cultural heritage value or interest. The Stage 3 assessment would include the mapping of any surface finds and the hand excavation of a series of one-metre square test units.

### **3.2.8 Location 8**

Location 8 is a pre-contact Aboriginal site consisting of a single isolated retouched flake manufactured from Onondaga chert (Plate 18:6). The location lies on the underground collector cable route for Turbine 11 (Appendix A, Tile B). As detailed in Section 3.1, survey intervals were intensified to one metre within a twenty metre radius of the find but no further artifacts were found. Given this is the only find at Location 8 and is a non-diagnostic artifact, the cultural heritage value or interest of this site is judged to be low and no further archaeological assessment is recommended.

### **3.2.9 Location 9 (AfHk-30)**

Location 9 (AfHk-30) is a historic Euro-Canadian site consisting of a diffuse 30 metre by 30 metre scatter of 19<sup>th</sup> century domestic debris. The location lies on the underground collector cable route for Turbine 28 (Appendix A, Tile F). A total of 14 Euro-Canadian artifacts were recovered during the Stage 2 assessment: all domestic artifacts including 10 ceramic and four glass. Each artifact class is discussed in greater detail below.

#### **3.2.9.1 Ceramic Artifacts**

In total, 10 fragments of ceramic hollowwares and flatwares were collected during the Stage 2 investigation of Location 9 (AfHk-30). Included in this total are three fragments of whiteware, two fragments of majolica, two fragments of rockinghamware, one fragment of creamware, one fragment of ironstone, and one fragment of porcelain. Table 4 provides a detailed breakdown of the ceramic assemblage by decorative style.



**Table 4: Summary of Ceramic Collection According to Decorative Style, Location 9 (AfHk-30)**

Artifact	Freq.	%
whiteware, plain	3	30.00
majolica	2	20.00
rockinghamware	2	20.00
creamware, moulded	1	10.00
ironstone, plain	1	10.00
porcelain, plain	1	10.00
<b>Total</b>	<b>10</b>	<b>100.00</b>

### White Earthenware

Whiteware is a variety of earthenware with a near colourless glaze that replaced earlier near white ceramics such as pearlware and creamware by the early 1830's. Early whiteware tends to have a porous paste, with more vitrified, harder, ceramics becoming increasingly common later in the 19<sup>th</sup> century. The three fragments of the whiteware assemblage are plain.

### Majolica

Victorian majolica ware was earthenware pottery with moulded surfaces and colourful clear lead glazes manufactured in the last half of the 19<sup>th</sup> century in Britain, continental Europe, and North America. It was first produced in England and was most popular during the 1870's. Two major manufacturers were Minton and Company and Josiah Wedgwood and Sons. Although available in a wide range of colours and designs, one of the most common surviving types are green salad plates with raised leaf designs (Karmason and Stacke 2002). The fragment recovered on Location 9 (AfHk-30) is a green sherd bearing a leaf design (Plate 20:1).

*Plate 20: Sample of Location 9 (AfHk-30) Artifacts (actual size)*



1: Location 9 (AfHk-30) Majolica



2: Location 9 (AfHk-30) Rockinghamware



3: Location 9 (AfHk-30) Moulded Creamware



4: Location 9 (AfHk-30) Ironstone



5: Location 9 (AfHk-30) Porcelain



## **Rockinghamware**

Two fragments in the ceramic assemblage have been identified as earthenware with a Rockingham glaze (Plate 20:2). Rockinghamware became popular in the 1840's and continues to be manufactured in limited quantities today (Adams 1994: 100).

## **Creamware**

Creamware, often referred to as "Queen's Ware" was first produced in the 1750's, and later perfected by Josiah Wedgwood in the 1760's. This type of tableware became very common in Upper Canada by 1770 and continued in popularity until about 1820 when it started to be replaced by later pearlware and whiteware types. Creamware is a refined, thin bodied earthenware with a clear lead-glaze that appears creamy yellow to yellowish-green in colour. Creamware was most often manufactured plain or decorated with moulded designs, however transfer printed, hand painted and banded examples of creamware do exist. One fragment of heavily crazed moulded creamware was collected (Plate 20:3).

## **Ironstone**

Ironstone or graniteware is a variety of refined white earthenware introduced in the 1840's that became extremely popular in Upper Canada by the 1860's (Kenyon 1985). It is usually much thicker than other whiteware, and often decorated with raised moulded designs of wheat or fruit. One plain sherd of ironstone was collected (Plate 20:4).

## **Porcelain**

Porcelain is a type of earthenware fired at such a high temperature that the clay has begun to vitrify; consequently the ceramic is translucent when held up to a light. Because of its high cost, porcelain is extremely rare on 19<sup>th</sup> century sites in Ontario. However, by the turn of the century it becomes relatively common as production techniques were developed in Europe which greatly reduced costs. One sherd of plain porcelain was collected (Plate 20:5).

### **3.2.9.2 Glass Artifacts**

A total of four bottle glass fragments were recovered at Location 9 (AfHk-30). The colours represented in the bottle glass assemblage include three clear and one Vicks blue. Due to the fragmentary nature of the bottle glass shards, they can only be classified according to colour and the colour of bottle glass alone is very limited with regards to providing dates of manufacture for glass bottles (Lindsey 2010).



### 3.2.9.3 Summary

The artifacts collected from Location 9 (AfHk-30) represent a range of 19<sup>th</sup> century Euro-Canadian cultural material. The moulded creamware fragment dates to the early 19<sup>th</sup> century and the majolica ware fragment to the mid-to-late 19<sup>th</sup> century. The historic Euro-Canadian material cannot be attributed to any known historic structures depicted on the 1878 map of the Township of Adelaide (Figure 3).

Due to the fact that Location 9 is a spatially discrete area producing early-to-late 19<sup>th</sup> century historic Euro-Canadian cultural material, it is recommended that this site be subject to a Stage 3 archaeological investigation to further evaluate its cultural heritage value or interest. The Stage 3 assessment would include the mapping of any surface finds and the hand excavation of a series of one-metre square test units. Further archival research to supplement the Stage 1 background study concerning the land use and occupation history specific to Location 9 will also be conducted.

### 3.2.10 Location 10

Location 10 is a pre-contact Aboriginal site consisting of a single isolated biface fragment manufactured from Onondaga chert (Plate 20:7). The location lies on the underground collector cable route for Turbine 34 (Appendix A, Tile G). As detailed in Section 3.1, survey intervals were intensified to one metre within a twenty metre radius of the find but no further artifacts were found. Given this is the only find at Location 10 and is a non-diagnostic artifact, the cultural heritage value or interest of this site is judged to be low and no further archaeological assessment is recommended.

### 3.2.11 Location 11 (AgHk-68)

Location 11 (AgHk-68) is a historic Euro-Canadian site consisting of a 10 metre by 10 metre scatter of mid-to-late 19<sup>th</sup> century domestic debris. The location lies on the underground collector cable route for Turbine 6 (Appendix A, Tile G). A total of 27 Euro-Canadian artifacts were recovered during the Stage 2 assessment: 25 domestic and two structural. Each artifact class is discussed in greater detail below. Table 5 provides a summary of the Stage 2 artifacts collected from Location 11 (AgHk-68).

**Table 5: Stage 2 Artifact Summary for Location 11 (AgHk-68)**

Artifact	Freq.	%
domestic	25	92.59
structural	2	7.41
<b>Total</b>	<b>27</b>	<b>100.00</b>



### 3.2.11.1 Domestic Artifacts

A total of 25 domestic artifacts were recovered during the Stage 2 assessment of Location 11 (AgHk-68). This collection includes 10 ceramic artifacts and 15 glass artifacts.

#### Ceramic Artifacts

In total, 10 fragments of ceramic hollowwares and flatwares were collected during the Stage 2 investigation of Location 11 (AgHk-68). Included in this total are five fragments of ironstone, three fragments of whiteware, two fragments of porcelain, and one fragment of utilitarian earthenware. Table 6 provides a breakdown of the ceramic assemblage by ware type, while Table 7 provides a more detailed breakdown of the ceramic assemblage by decorative style.

**Table 6: Summary of Ceramic Collection According to Ware Type, Location 11 (AgHk-68)**

Artifact	Freq.	%
ironstone	5	50.00
whiteware	3	30.00
porcelain	1	10.00
utilitarian	1	10.00
<b>Total</b>	<b>10</b>	<b>100.00</b>

**Table 7: Summary of Ceramic Collection According to Decorative Style, Location 11 (AgHk-68)**

Artifact	Freq.	%
ironstone, plain	5	50.00
whiteware, plain	2	20.00
porcelain, painted	1	10.00
stoneware	1	10.00
whiteware, flow transfer printed	1	10.00
<b>Total</b>	<b>10</b>	<b>100.00</b>

#### Ironstone

Ironstone or graniteware is a variety of refined white earthenware introduced in the 1840's that became extremely popular in Upper Canada by the 1860's (Kenyon 1985). It is usually much thicker than other whiteware, and often decorated with raised moulded designs of wheat or fruit.



Ironstone was the most common type of ceramic recovered from Location 11, with five fragments, comprising 50.00% of the total Stage 2 ceramic artifact collection. The ironstone assemblage comprised five fragments classified as plain or undecorated (Plate 21:1).

*Plate 21: Sample of Location 11 (AgHk-68) Artifacts (actual size)*



### **White Earthenware**

The second most common ceramic type (n=3 or 30.00% of the ceramic collection) is whiteware. Whiteware is a variety of earthenware with a near colourless glaze that replaced earlier near white ceramics such as pearlware and creamware by the early 1830's. Early whiteware tends to have a porous paste, with more vitrified, harder, ceramics becoming increasingly common later in the 19<sup>th</sup> century. Two fragments of the whiteware assemblage are plain and one is flow transfer printed (Plate 21:2).

Flow transfer printed whiteware, where the pigment is allowed to flow into the glaze, became popular in the 1840's and 1850's, with a later revival in the 1890's. One fragment of blue flow transfer printed ceramic was present in the whiteware assemblage.



### ***Porcelain***

One sherd of painted porcelain was collected (Plate 21:3). Porcelain is a type of earthenware fired at such a high temperature that the clay has begun to vitrify; consequently the ceramic is translucent when held up to a light. Because of its high cost, porcelain is extremely rare on 19<sup>th</sup> century sites in Ontario. However, by the turn of the century it becomes relatively common as production techniques were developed in Europe which greatly reduced costs. The sherd was painted with a green and orange floral motif.

### ***Utilitarian Earthenware***

The assemblage consists of one fragment of stoneware (Plate 21:4). Stoneware vessels were produced throughout the 19<sup>th</sup> century, becoming more durable and refined over time.

### ***Glass Artifacts***

A total of 12 bottle glass fragments, two white glass fragments, and one glass dish fragment were recovered at Location 11 (AgHk-68). The colours represented in the bottle glass assemblage include five clear, three aqua, two violet, one black (Plate 21:5), and one olive. Due to the fragmentary nature of the bottle glass shards, they can only be classified according to colour and the colour of bottle glass alone is very limited with regards to providing dates of manufacture for glass bottles (Lindsey 2010). However, one of the glass bottle fragments has been identified as black glass. “Black” glass has a date range from the early-to-mid 19<sup>th</sup> century. The addition of iron when making glass was common practice up until 1860 and produced dark olive or dark amber glass that became known as “black glass” (Kendrick 1971). The two shards of white or “milk glass” were likely manufactured after 1870. Milk glass was most commonly used for cosmetic containers, toiletry bottles or cream jars. The opaque white glass was very commonly used for such products dating from about 1870 through to the 20<sup>th</sup> century (Lindsey 2010). Finally, the one glass dish fragment is a shard of temporally non-diagnostic light green glass with a ribbed design.

#### ***3.2.11.2 Structural Artifacts***

Two structural artifacts were collected: a temporally non-diagnostic porcelain doorknob and a piece of window glass measuring 2.0 millimetres thick. Ian Kenyon (1980b) provides a pre-1850 date for window panes that have an average thickness of less than 1.6 millimetres. Window pane thickness increased throughout the 19<sup>th</sup> century as the trend shifted towards using larger windows when building homes.



### **3.2.11.3 Summary**

The artifacts collected from Location 11 (AgHk-68) represent a range of mid-to-late 19<sup>th</sup> century Euro-Canadian cultural material. The most common type of ceramic artifact recovered from AgHk-68 was 19<sup>th</sup> century ironstone. One fragment of flow transfer printed whiteware and one shard of black glass, both dating to the mid-19<sup>th</sup> century, were collected. The historic Euro-Canadian material cannot be attributed to any known historic structures depicted on the 1878 map of the Township of Adelaide (Figure 3).

Due to the fact that Location 11 is a spatially discrete area producing mid-to-late 19<sup>th</sup> century historic Euro-Canadian cultural material, it is recommended that this site be subject to a Stage 3 archaeological investigation to further evaluate its cultural heritage value or interest. The Stage 3 assessment would include the mapping of any surface finds and the hand excavation of a series of one-metre square test units. Further archival research to supplement the Stage 1 background study concerning the land use and occupation history specific to Location 11 will also be conducted.

### **3.2.12 Location 12**

Location 12 is a pre-contact Aboriginal site consisting of a scatter of three chert flakes (two Kettle Point and one Onondaga) distributed over an area of two metres by two metres (Plate 18:8). The location lies within the 100 metre buffer for Turbine 38 (Appendix A, Tile B). Given the limited number of artifacts observed at Location 12 and the fact that the artifacts are non-diagnostic, the cultural heritage value or interest of this site is judged to be low and no further archaeological assessment is recommended.

### **3.2.13 Location 13**

Location 13 is a pre-contact Aboriginal site consisting of a single Onondaga chert flake (Plate 18:9). The location lies on the access road route for Turbine 12 (Appendix A, Tile C1). As detailed in Section 3.1, survey intervals were intensified to one metre within a twenty metre radius of the find but no further artifacts were found. Given this is the only find at Location 13 and is a non-diagnostic artifact, the cultural heritage value or interest of this site is judged to be low and no further archaeological assessment is recommended.



## 4.0 RECOMMENDATIONS AND ADVICE ON COMPLIANCE WITH LEGISLATION

The Stage 2 assessment has been completed and has resulted in the documentation of 13 archaeological locations. Nine of those locations are pre-contact Aboriginal sites and four are historic Euro-Canadian sites. The following recommendations are made concerning these 13 locations:

■ **Sites recommended for Stage 3 assessment:**

- Table 8 lists the pre-contact Aboriginal sites requiring Stage 3 assessment. A total of three of the nine pre-contact Aboriginal archaeological locations recorded are being recommended for further archaeological assessment: Location 2 (AfHk-29), Location 3 (AgHk-66), and Location 7 (AgHj-5).
- Table 9 lists the historic Euro-Canadian sites requiring Stage 3 assessment. A total of three of the four historic Euro-Canadian archaeological locations recorded are being recommended for further archaeological assessment: Location 5 (AgHk-67), Location 9 (AfHk-30), and Location 11 (AgHk-68).

■ **Sites not requiring any further archaeological assessment:**

- Table 10 lists the pre-contact Aboriginal sites not requiring Stage 3 assessment. A total of six of the nine pre-contact Aboriginal archaeological locations recorded have been sufficiently documented and require no further archaeological assessment.
- Table 10 also lists the historic Euro-Canadian site not requiring Stage 3 assessment. One of the four historic Euro-Canadian archaeological locations recorded has been sufficiently documented and requires no further archaeological assessment.

**Table 8: Pre-contact Aboriginal Sites Requiring Stage 3 Archaeological Assessment**

Site Name	Borden Number	Cultural Affiliation	Date
Location 2	AfHk-29	Middle Woodland	400 B.C. - 500 A.D.
Location 3	AgHk-66	Small Point Late Archaic	1500 - 1100 B.C.
Location 7	AgHj-5	pre-contact Aboriginal	indeterminate

**Table 9: Historic Euro-Canadian Sites Requiring Stage 3 Archaeological Assessment**

Site Name	Borden Number	Cultural Affiliation	Date
Location 5	AgHk-67	historic Euro-Canadian	mid-to-late 19 <sup>th</sup> century A.D.
Location 9	AfHk-30	historic Euro-Canadian	early-to-late 19 <sup>th</sup> century A.D.
Location 11	AgHk-68	historic Euro-Canadian	mid-to-late 19 <sup>th</sup> century A.D.



**Table 10: Sites Not Requiring Stage 3 Archaeological Assessment**

Site Name	Borden Number	Cultural Affiliation	Date
Location 1	none	historic Euro-Canadian	late 19 <sup>th</sup> to 20 <sup>th</sup> century A.D.
Location 4	none	pre-contact Aboriginal	indeterminate
Location 6	none	pre-contact Aboriginal	indeterminate
Location 8	none	pre-contact Aboriginal	indeterminate
Location 10	none	pre-contact Aboriginal	indeterminate
Location 12	none	pre-contact Aboriginal	indeterminate
Location 13	none	pre-contact Aboriginal	indeterminate

The Ontario Ministry of Tourism and Culture is asked to review the results presented and to accept this report into the Provincial Register of archaeological reports. Additional archaeological assessment is still required; hence the archaeological sites recommended for further archaeological fieldwork remain subject to Section 48(1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed, except by a person holding an archaeological licence.

This report is submitted to the Minister of Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological licence, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with sec. 48(1) of the *Ontario Heritage Act*.

The Cemeteries Act requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries, Ministry of Consumer Services.

**GOLDER ASSOCIATES LTD.**

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Senior Archaeologist

Rebecca Balcom, M.A.  
Principal, Director of Cultural Sciences

JAW/RJB/JM/sc

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## STAGE 2 ARCHAEOLOGICAL ASSESSMENT NEXTERA ADELAIDE WIND FARM

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## **6.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT**

Golder Associates Ltd. (Golder) has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

This report has been prepared for the specific site, design objective, developments and purpose described to Golder, by Air Energy TCI Inc. and by NextEra Energy Canada, ULC. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the Client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges the electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder's report or other work products.

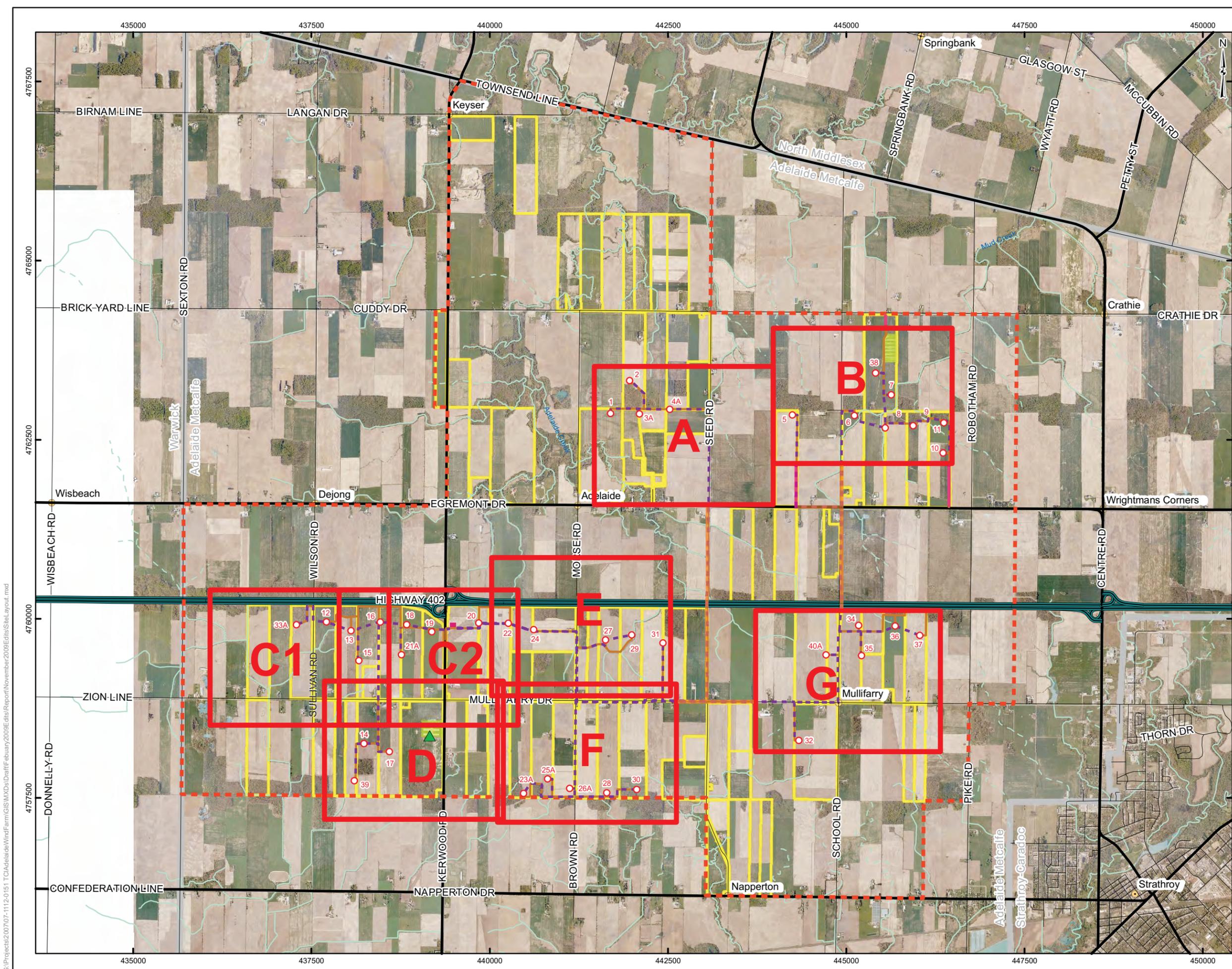
Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the Ministry of Tourism and Culture's Archaeological Assessment Technical Guidelines (1993) (Stages 1-3 and Reporting Format).

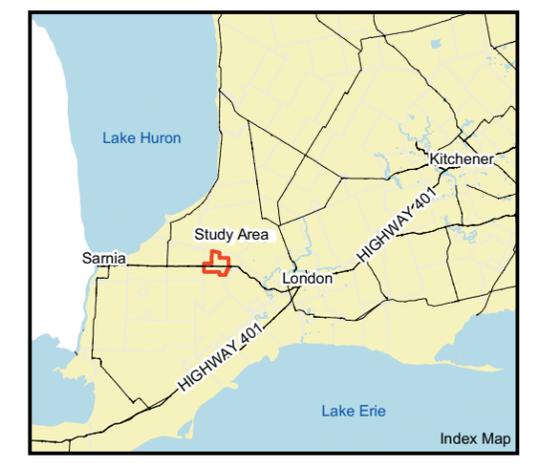


# **APPENDIX A**

## **Stage 2 Methods and Results**



- LEGEND**
- Turbine Layout 38
  - ▲ Permanent MET Mast
  - - Collector Cable
  - Access Road
  - Substation
  - Site Study Area
  - Expressway
  - Major Road
  - Local Road
  - Watercourse, Permanent
  - - Watercourse, Intermittent
  - Proposed Laydown / Staging Area
  - Optioned Lots
  - Municipal Boundary
  - Waterbody, Permanent
  - Wetland, Permanent
  - Map Tile With Detailed Stage 2 Methods and Results
  - Stage 2 Pedestrian Survey, 5m Intervals
  - Disturbed, Not Assessed



**REFERENCE**

Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4  
 Produced by Golder Associates Ltd under licence from Ontario Ministry of Natural Resources. © Queens Printer 2009  
 Air Photo - Spring 2006 First Base Solutions.  
 Datum: NAD 83 Projection: UTM Zone 17N

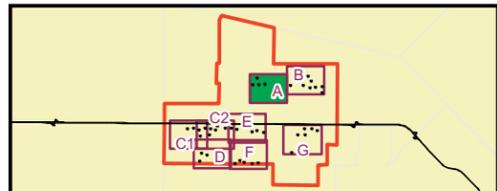


PROJECT		<b>Stage 2 Archaeological Assessment NextEra Adelaide Wind Farm Geo. Twp. of Adelaide, Middlesex County, Ontario</b>	
TITLE		<b>Stage 2 Methods and Results</b>	
	PROJECT NO.	07-1112-0151	SCALE AS SHOWN
	DESIGN	PP 5 Mar 2009	REV. 0
	CHECK	PP 16 Nov 2009	
	REVIEW		
<b>KEY TILE</b>			

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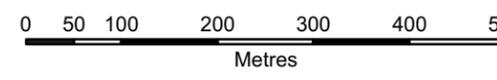


- LEGEND**
- Turbine Layout 38
  - Substation
  - Access Road
  - Collector Cable
  - Site Study Area
  - Expressway
  - Major Road
  - Local Road
  - Watercourse, Permanent
  - Watercourse, Intermittent
  - Proposed Laydown / Staging Area
  - Municipal Boundary
  - Waterbody, Permanent
  - Wetland, Permanent
  - Stage 2 Pedestrian Survey, 5m Intervals
  - Disturbed, Not Assessed
  - Archaeological Location, Stage 3 Required
  - Archaeological Location, Stage 2 Only



**REFERENCE**

Base Data - MNR NRVIS, obtained 2004, CANMAP v2006.4  
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PROJECT STAGE 2 ARCHAEOLOGICAL ASSESSMENT  
 NEXTERA ADELAIDE WIND FARM  
 GEO. TWP. OF ADELAIDE, MIDDLESEX COUNTY, ONTARIO

**TITLE**  
 STAGE 2 METHODS AND RESULTS

	PROJECT NO.	07-1112-0151	SCALE AS SHOWN	REV. 0
	DESIGN	PP	05 Mar. 2008	
	GIS	PP	16 Nov. 2009	
	CHECK			
	REVIEW			

**TILE A**

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