Appendix B

Archaeological Assessment Addendum

Ministry of Tourism, Culture and Sport

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Jan 31, 2014

Glenn Kearsley (P123) URS Canada Inc. 72 - 40 Vogell Richmond Hill ON L4B3N6

RE: Review and Entry into the Ontario Public Register of Archaeological Reports:
Archaeological Assessment Report Entitled, "ADDITIONAL STAGE 2
ARCHAEOLOGICAL ASSESSMENT: East Durham Wind Energy Project, Alternative Access to Turbines and Other Infrastructure, Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario FIT- F002177-WIN-130-601", Dated Jan 29, 2014, Filed with MTCS Toronto Office on Jan 30, 2014, MTCS Project Information Form Number P123-0215-2013

Dear Mr, Kearsley:

This office has reviewed the above-mentioned report, which has been submitted to this ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. ¹ This review has been carried out in order to determine whether the licensed professional consultant archaeologist has met the terms and conditions of their licence, that the licensee assessed the property and documented archaeological resources using a process that accords with the 2011 Standards and Guidelines for Consultant Archaeologists set by the ministry, and that the archaeological fieldwork and report recommendations are consistent with the conservation, protection and preservation of the cultural heritage of Ontario.²

The report documents the assessment of the study area as depicted in Figures 1 to 13 of the above titled report and recommends the following:

In light of these considerations, URS Canada makes the following recommendations:

- 1) If the Location 4 site (BbHe-3) on property EDU 1005 cannot be avoided by future development, it must be subject to a Stage 3 archaeological assessment. The Stage 3 assessment should consist of both the controlled surface pick-up and hand excavated test unit methodology as outlined in Sections 3.2 and 3.3, as well as Table 3.1, of the Ministry of Tourism, Culture and Sport's Standards and Guidelines for Consultant Archaeologists (MTCS 2011). Prior to conducting the field work, the area should be re-ploughed and allowed to weather for the controlled surface pick-up. The test unit excavation should consist of one metre by one metre square test units laid out in a five metre grid and should be excavated by hand to a depth of five centimetres within the subsoil. Additional test units (representing 20% of the initial grid) should be excavated in areas of interest within the site extent. Site specific land registry research to supplement the previous background study concerning the land use and occupation history specific to Location 4 should also be conducted as part of the Stage 3 assessment.
- 2) The Stage 2 assessment of the remaining properties (EDU1039, EDU1030, EDU1008, EDU1311 and EDU1062) determined that there are no significant archaeological resources present on these lands. Therefore, these areas are considered clear of further archaeological concern.

The above recommendation is subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any archaeological site without MTCS concurrence. No grading or other activities that may result in the destruction or disturbance of an archaeological site are permitted until notice of Ministry of Tourism, Culture and Sport approval has been received.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment are consistent with the ministry's 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences. This report has been entered into the Ontario Public Register of Archaeological Reports. Please note that the ministry makes no representation or warranty as to the completeness, accuracy or quality of reports in the register.

Should you require any further information regarding this matter, please feel free to contact me.

Sincerely,

Paige, Campbell Archaeology Review Officer

cc. Archaeology Licensing Officer
Andrea Garcia, NextEra Energy Canada, ULC
Mansoor Mahmood, Ministry of the Environment

¹This letter constitutes the Ministry of Tourism, Culture and Sport's written comments where required pursuant to section 22 of O. Reg. 359/09, as amended (Renewable Energy Approvals under the Environmental Protection Act), regarding the archaeological assessment undertaken for the above-captioned project. Depending on the study area and scope of work of the archaeological assessment as detailed in the report, further archaeological assessment reports may be required to complete the archaeological assessment for the project under O. Reg. 359/09. In that event Ministry comments pursuant to section 22 of O. Reg. 359/09 will be required for any such additional reports.

²In no way will the ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.

ADDITIONAL STAGE 2 ARCHAEOLOGICAL ASSESSMENT

East Durham Wind Energy Project Alternative Access to Turbines and Other Infrastructure Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario

FIT- F002177-WIN-130-601

Prepared for:

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PIF# P123-0215-2013

(Associated PIFs# P057-624-2010, P218-274-2012, P123-123-2013, P123-0208-2013, P123-125-2013 and P123-124-2013)

January 29, 2014

Project No.: 33017523 Report Type: Revised



EXECUTIVE SUMMARY

This report details the rationale, methods and results of additional Stage 2 archaeological assessment of alternative turbine access routes and other infrastructure located on various lots and concessions in the Geographic Township of West Grey (formerly Glenelg Township), Grey County, Ontario. The study areas consist of a total of eight study areas situated on properties EDU1039, EDU1030, EDU1008, EDU1005, and EDU1311, and EDU1062. URS Canada conducted the Stage 2 assessment of these study areas on behalf of East Durham Wind Inc., a wholly owned subsidiary of NextEra Energy Canada ULC (NEEC) as part of the revised East Durham Wind Energy Centre project.

A Stage 2 archaeological assessment of the wind turbine layout in West Grey Township (PIF P218-274-2012) was previously conducted in 2012 by Golder Associates (2012) on behalf of East Durham Wind Inc. (**Figure 1**). Approximately 134.73 hectares were subject to Stage 2 archaeological assessment involving pedestrian survey at 5m intervals. As a result of this work, Golder identified three 19th century Euro-Canadian historic locations: Location 1, the Ferguson site (BbHd-3), Location 2, the Boakes site (BbHd-4), and Location 3, the McInnes site (BbHe-2). These three locations were subsequently recommended by Golder (2012) for Stage 3 archaeological assessment.

URS Canada undertook the Stage 3 assessments of the Ferguson (BbHd-3), Boakes (BbHd-4) and McInnes (BbHe-2) sites in April and May, 2013 (URS 2013a, 2013b, 2013c). Based on the findings of this work all three sites were recommended for Stage 4 assessment. Stage 4 block excavation and mechanical stripping to expose subsurface features was performed at the McInnes site in July 2013 by URS Canada. Stage 4 assessment consisting solely of mechanical stripping was conducted by URS Canada at the Boakes site in June and July 2013. URS Canada recommended avoidance and protection of the Ferguson site (BbHd-3), which NextEra adopted by altering proposed construction impacts to bypass the site and its 20 metre protective buffer.

Further Stage 2 assessments were required in the East Durham Wind Energy Centre project in 2013 to determine if archaeological resources were present within the revised study area. Between October 29 and November 22, 2013 URS Canada completed this Stage 2 work, which consisted of test pitting and pedestrian survey at 5m intervals of the eight study areas. This Stage 2 assessment resulted in the identification of two artifact bearing locations, while the rest of the study areas contained no significant archaeological resources. The Location 4 site (BbHe-3) is a mid-19th to early 20th century artifact scatter located on property EDU1005. Given the relatively early date of its artifact assemblage, the site is considered high cultural heritage value and interest and with therefore will require a Stage 3 archaeological assessment to determine its exact nature, extent and temporal associations if it cannot be preserved or avoided by future construction disturbance. The Location 5 site is a late 19th to mid-20th century artifact scatter located in study area 4 on property EDU1030, and is not considered to have cultural heritage value or interest based on the recent age of the material, and thus this location does not require any further archaeological assessment. The remainder of the Stage 2 assessment determined that there are no significant archaeological resources present on these lands.



Additional Stage 2 Archaeological Assessment
East Durham Wind Energy Project
Alternative Access to Turbines and Other Infrastructure
Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario

In light of these considerations, URS Canada makes the following recommendations:

- 1) If the Location 4 site (BbHe-3) on property EDU 1005 cannot be avoided by future development, it must be subject to a Stage 3 archaeological assessment. The Stage 3 assessment should consist of both the controlled surface pick-up and hand excavated test unit methodology as outlined in Sections 3.2 and 3.3, as well as Table 3.1, of the Ministry of Tourism, Culture and Sport's Standards and Guidelines for Consultant Archaeologists (MTCS 2011). Prior to conducting the field work, the area should be reploughed and allowed to weather for the controlled surface pick-up. The test unit excavation should consist of one metre by one metre square test units laid out in a five metre grid and should be excavated by hand to a depth of five centimetres within the subsoil. Additional test units (representing 20% of the initial grid) should be excavated in areas of interest within the site extent. Site specific land registry research to supplement the previous background study concerning the land use and occupation history specific to Location 4 should also be conducted as part of the Stage 3 assessment.
- 2) The Stage 2 assessment of the remaining properties (EDU1039, EDU1030, EDU1008, EDU1311 and EDU1062) determined that there are no significant archaeological resources present on these lands. Therefore, these areas are considered clear of further archaeological concern.



URS CANADA

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Additional Stage 2 Archaeological Assessment
East Durham Wind Energy Project
Alternative Access to Turbines and Other Infrastructure
Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario

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1.0 PROJECT BACKGROUND

1.1 Development Context

This report details the rationale, methods and results of additional Stage 2 archaeological assessment of alternative turbine access routes and other infrastructure located on various lots and concessions in the Geographic Township of West Grey (formerly Glenelg Township), Grey County, Ontario. The study area consists of eight study areas in total located on properties EDU1039, EDU1030, EDU1008, EDU1005, and EDU1311, and EDU1062 (**Figure 1**). URS Canada conducted the Stage 2 assessment of these study areas on behalf of East Durham Wind Inc., a wholly owned subsidiary of NextEra Energy Canada ULC (NEEC) as part of the revised East Durham Wind Energy Centre project.

The Green Energy Act (2009) (Government of Ontario 2009) enabled legislation governing project assessments and approvals to be altered to allow for a more streamlined REA process. Under Section 22 (1) of the REA, an archaeological assessment must be conducted if the proponent concludes that engaging in the project may have an impact on archaeological resources. Currently, Ontario Regulation 359/09 of the *Environmental Protection Act* (Government of Ontario 1990a) governs the REA process for renewable energy projects such as wind, anaerobic digestions, and solar and thermal treatment facilities. The most recent East Durham Wind Energy Centre layout includes 16 turbines (rated at 2.221 megawatts each) with a 128.82 megawatt capacity, as well as associated infrastructure.

The Stage 1 archaeological background study was conducted previously by Archaeological Services Inc. (ASI 2010). The results of the Stage 1 assessment indicated that the properties on which the turbine locations are proposed contained moderate to high archaeological potential for pre-contact Aboriginal and Euro-Canadian historic sites. As a result, ASI recommended Stage 2 archaeological assessments for any areas to be impacted by turbine construction, access road construction and the construction of other related infrastructure (2010).

The Stage 2 archaeological survey was conducted by Golder Associates Ltd. on behalf of NEEC, in order to meet a condition imposed upon NEEC by the Ministry of Environment regarding the company's Renewable Energy Approvals (REA) submission, as outlined in Ontario Regulation 359/09 Section 22(3) (Government of Ontario 2011) of the *Environmental Protection Act* (Government of Ontario 1990a) and informed by the *Green Energy Act* (Government Ontario 2009) (Golder Associates 2012). A total of 134.73 hectares were subject to Stage 2 archaeological assessment using the standard pedestrian and test pitting methods of survey at five metre intervals. This Stage 2 archaeological assessment resulted in the identification of 3 historic Euro-Canadian archaeological site locations; Location 1 (BbHd-3, now known as the Ferguson site), Location 2 (BbHd-4, now known as the Boakes site) and Location 3 (BbHe-2, now known as the McInnes site) (Golder Associates 2012). All of these archaeological locations were recommended for



Stage 3 archaeological assessment in order to further evaluate their cultural heritage value or interest.

URS Canada conducted the Stage 3 site-specific assessments of all three of these archaeological locations in April and May 2013. Based on the findings of the Stage 3 assessment, the Ferguson (BbHd-3), Boakes (BbHd-4) and McInnes (BbHe-2) sites were recommended for Stage 4 mitigation in the event that these sites could not be avoided or protected.

In July 2013 Stage 4 block excavation and mechanical stripping to expose subsurface features was performed at the McInnes site by URS Canada. Stage 4 assessment consisting solely of mechanical stripping was conducted by URS Canada at the Boakes site in June and July 2013. URS Canada recommended avoidance and protection of Location 1, the Ferguson site (BbHd-3), which NextEra adopted by altering proposed construction impacts to bypass the site and its 10 metre protective buffer.

The most recent additional Stage 2 archaeological assessment of was conducted for alternative turbine access routes and other infrastructure on properties EDU1039, EDU1030, EDU1008, EDU1005, and EDU1311, and EDU1062. This assessment was conducted by URS Canada in November, 2013 and was carried out under the project direction of Charlton Carscallen [licence #P088] (URS Canada) and under archaeological licence #P123 issued to Glenn Kearsley (URS Canada). It was done in accordance with the provisions of the *Ontario Heritage Act* (2005) and with the Ontario's Ministry of Tourism and Culture's *Standards and Guidelines for Consultant Archaeologists* (2011). This report provides the results of the Stage 2 assessment of the eight study areas on these properties. Permission to access the property and to conduct all required archaeological fieldwork, including the recovery of artifacts, was granted by the landowner. Access was limited to those areas that lie within the CDA for which the landowner has provided an easement.

1.2 Historical Context

The subject properties are situated in the Geographic Township of West Grey (formerly Glenelg Township), west of the town of Priceville in Grey County, Ontario (**Supplementary Documentation, Figure 1**). The area was first surveyed in 1842 in free 50 acre lots after the first survey road from Fergus to Owen Sound was ordered in 1840 (Marsh, 1931; Neville, 1985). The survey of the Durham Road (now Grey Road 4) that extends from Simcoe County to Lake Huron was initiated in 1848 by David Gibson and A.P. Brough. The concessions being assessed for the East Durham Wind Energy project, Concession I north and south of Durham Road, were surveyed and settled between 1848 and 1851 (Golder, 2012:2). Grey County and the Township of Glenelg have a rich settlement history which is documented extensively in the several reports, as seen in **Table 1**.



TABLE 1: REPORTS CONTAINING RELEVANT INFORMATION REGARDING GREY COUNTY

Author	Date	Title	PIF Number
Archaeological Services Inc.	2010	Stage 1 Archaeological Resource Assessment (Revised),NextEra Wind Project: East Durham Wind Farm, West Grey Township (Former Township of Glenelg), County of Grey, Ontario	P057-624-2010
Golder Associates	2012	Stage 2 Archaeological Assessment [of] NextEra East Durham Wind Energy Project, Various Lots and Concessions, Geographic Townships of Glenelg, now West Grey Township, Grey County, Ontario	P218-274-2012
URS Canada	2013a	Stage 3 Archaeological Assessment: East Durham Wind Energy Project, Ferguson Site (BbHd-3)Part of Lot 45, Concession I SDR, Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario	P123-123-2013
URS Canada	2013b	Stage 3 Archaeological Assessment: East Durham Wind Energy Project, Boakes Site (BbHd-4), Part of Lot 48, Concessions II SDR Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario	P123-0208-2013
URS Canada	2013c	Stage 3 Archaeological Assessment: East Durham Wind Energy Project, The McInnes Site (BbHe-2), Part of Lot 37 Concession I NDR, Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario	P123-124-2013
URS Canada	2013d	Stage 2 Archaeological Assessment: East Durham Wind Energy Project, Additional Field Work, Part of Lots 48 and 49, Concessions II SDR, Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario	P123-125-2013

Priceville is the closest historic village to the study properties (nearly 2km to the east of EDU1311 via Grey Road 4) and is illustrated in the 1880 historical mapping for Glenelg Township (Page & Co. 1880). The town is situated east of the East Durham study area where the Saugeen River crosses beneath the historic Durham Road. During the 19th century, the settlement grew rapidly with a population of around 400 persons and amenities such as mills, stores, blacksmiths, wagon makers, hotels, churches and schools (Golder 2012: 2).

In addition to Priceville, the study area is bordered to the west by the 19th century town of Durham which is located partially in Bentinck Township and partially in Glenelg Township along the main branch of the Saugeen River. Durham was most noted for the saw mill and flour mill construction by John Edge in 1846 which



progressed in the early 1860s to include a woolen section. The area was considered a market town for the surrounding area by the early 1860s (Neville 1985). Immigrants to the area of Glenelg Township originated in Ireland and Scotland during the time of famine in their native countries (Neville 1985). It wasn't until the 1850's that most of the lots were attributed and thereafter saw, grist and flour mills started to become prevalent in the township.

The eight study areas impacted by the alternative turbine access routes and other infrastructure are listed, from west to east, in **Table 1**, with associated property, Concession and Lot numbers for historic Glenelg Township. The available information indicates that the subject properties have been in agricultural use off-and-on for at least the past 100 years, both as grazing land and in crop.

TABLE 2: STUDY AREAS FOR ALTERNATE TURBINE ACCESS ROUTES AND OTHER INFRASTRUCTURE

INITIASTITUCTURE			
Study Area	Associated Property	Concession & Lot	
1	EDU1062	CON 1 SDR, LOT 20	
2	EDU1039	CON 1 NDR, LOTS 21, 22, 23	
3	EDU1039	CON 1 NDR, LOTS 22, 23, 24	
4	EDU1030 & EDU1039	CON 1 NDR, LOTS 27, 28	
5	EDU1030 & EDU1039	CON 1 NDR, LOTS 27, 28	
6	EDU1005	CON 1 SDR, LOT 35	
7	EDU1008	CON 1 NDR, LOT 37	
8	EDU1311	CON 1 SDR, LOT 45	

To inform the interpretation of the assemblages recovered at Locations 4 and 5, additional historic research was done. This included a detailed review of the Built Heritage Study prepared for the project by SJAHCE (2012). It is clear from the report that the lots within the study area were patented by the mid-1850s. However, although Lot 28 Con I NDR (property 1030), where the Location 5 site is situated, was owned previously by Alexander Scott, the main occupation was not until the mid-1890s when the land was purchased by Archibald McArthur. It is McArthur who built the house and barn that are present on the property today.

Lot 35 Concession Con I SDR (Property 1005) where Location 4 is situated was acquired spme time prior to 1882 by Archibald Macdonald. MacDonald sold the land to John McInnis in 1882. It is un clear if MacDonald lived on the property but there was a house present prior to 1882.



1.3 Archaeological Context

Physiography of the Site Area

The general physiography of the site area has been described in detail in the aforementioned reports (ASI 2010; Golder 2012) and is briefly summarized here. It is located in the Horseshoe Moraines Physiographic Region of central Ontario which consist of two main "landform components: (a) irregular, stony knobs and ridges which are composed mostly of till and with some sand and gravel deposits (kames); and (b) the more or less pitted sand and gravel terraces and swamp valley floors" (Chapman and Putnam 1984: 127). Grey County is located in the northern section which contains several tracts of shallow, stony drift on the Niagara cuesta and a few scattered groups of drumlins (Chapman and Putnam 1984:127). Several townships, including Glenelg, are part of the 'toe' of the horseshoe, on the high country in Grey County. This area is covered by a "complex of till ridges, kame moraines, outwash plains and spillways interspersed with more smoothly moulded till plains and drumlinized areas" (Chapman and Putnam 1984:127). The tills tend to be loamy and contain many stones and boulders, and many small lakes and streams are dispersed in the area, along with swampy areas.

The two most westerly of the study areas are located along Baptist Church Road, one north of Grey Road 4, and the other south just where the road itself curves to the east-northeast and becomes the Glen Road. The remaining six study areas are distributed for 5 km eastward along Grey Road 4. The study areas occur in a rural area and include agricultural field, woodlots and residential property.

Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological registered sites within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on longitude and latitude. A Borden block is approximately 13 kilometers east to west, and approximately 18.5 kilometers north to south. Each Borden block is referred by a four letter designation and sites located within the block are numbered sequentially as they are found. The study areas are situated within the *BbHe and BbHd* Borden blocks.

According to the OASD, two archaeological sites have been registered within 1 kilometre of the subject property (MTCS 2013). The additional study area for Turbine 8 (on property EDU 1008) lies adjacent to the McInnes Site (BbHe-2) also known as East Durham Location 3. As previously discussed, the McInnes site is a 19th century Euro-Canadian historic occupation first identified during Stage 2 assessment by Golder Associates and subsequently subjected to Stage 3 and 4 assessments by URS Canada. Stage 3 and 4 recommendations for this site indicated that any land disturbance beyond the current CDA would require further Stage 3 assessment to verify the site limits and would likely proceed to Stage 4 mitigation. The new study area on property EDU1008 is close to but not immediately



adjoining the McInnes Site. It is therefore not known whether additional assessment beyond Stage 2 will be required here.

The alternative access for Turbine 16 passes through the area previously identified for the Ferguson Site (BbHd-3) (East Durham Location 1). In addition to the Stage 2 assessment, Stage 3 assessment and Stage 4 mitigation will be required in this location based on the results and recommendations of the previous Stage 3 assessment done within the original CDA.

In their Stage 1 report on the East Durham Wind Energy Project, ASI (2010) determined that potential existed in much of the study area for pre-contact Aboriginal and Euro-Canadian sites, and recommended that Stage 2 archaeological assessment for any areas to be impacted by turbine construction, access road construction or other infrastructure related activities. As a result, a total of 134.73 hectares were subject to Stage 2 archaeological assessment using the standard pedestrian and test pitting methods of survey at five metre intervals by Golder Associates Ltd. in 2012. This Stage 2 archaeological assessment resulted in the identification of 3 historic Euro-Canadian archaeological site locations; the Ferguson site (BbHd-3), the Boakes site (BbHd-4) and the McInnes site (BbHe-2), all of which were recommended for Stage 3 archaeological assessment to further evaluate their cultural heritage value or interest (Golder Associates 2012).

As a result of layout changes to the East Durham Wind Energy Centre project in 2012, further Stage 2 assessment was conducted by URS Canada to evaluate the archaeological potential within the study area for property EDU 1328, located on lots 48 and 49, Concession 2, associated with the Boakes Site. As a result of this Stage 2 assessment conducted on April 30 and May 15, 2013, a small cluster of four mid to late 19th century artifacts associated with the nearby Euro-Canadian Boakes site (BbHd-4) were identified. URS Canada recommended that study corridor be included in the recommended Stage 3 archaeological assessment of the Boakes site.

In April and May URS Canada conducted the Stage 3 site-specific assessments of the Ferguson site (BbHd-3), the Boakes site (BbHd-4) and the McInnes site (BbHe-2) in 2013. The Ferguson site was assessed through controlled surface pickup and the excavation of 37 strategically placed 1m units, resulting in the recovery of 907 historic artifacts and 22 faunal specimen fragments. The nature of the assemblage suggested this was the location of a domestic dwelling and farmstead. Archival research indicates that at least six families, including those of Donald Ferguson, Neil McLaughlan, John Keyland and the McLeod families, occupied this property during this time frame. URS Canada recommended avoidance and protection of Location 1, the Ferguson site (BbHd-3), which NextEra adopted by altering proposed construction impacts to bypass the site and its 10 metre protective buffer.

The Boakes site was assessed through controlled surface pickup and the excavation of 39 strategically placed 1m units resulting in the recovery of 816 mid to late 19th century (ca. 1850's-1890's) Euro-Canadian artifacts, 49 faunal specimens, and one pre-contact chipped lithic. The assemblage is consistent with the interpretation of this location as a domestic dwelling and farmstead. At least three families, including those of Jesse Boakes, William Boakes and Alfred Hincks, occupied this property



during this time frame. The Stage 3 assessment of the McInnes site consisted of controlled surface pickup and the excavation of 57 strategically placed 1m units. The mid to late 19th century Euro-Canadian assemblage included 1644 historic artifacts and 115 faunal specimen fragments. The nature of the assemblage in combination with archival research indicated this site was the location of a domestic dwelling and farmstead associated with the McInnes family during this period. Based on the findings of the Stage 3 assessment both the Boakes (BbHd-4) and McInnes (BbHe-2) sites were recommended for Stage 4 mitigation.

Stage 4 block excavation and mechanical stripping to expose subsurface features was performed at the McInnes site by URS Canada in July 2013. Stage 4 assessment consisting solely of mechanical stripping was conducted by URS Canada at the Boakes site in June and July 2013. Preliminary findings for these assessments support the earlier site interpretations. Final reports are currently in preparation for both locations.

To evaluate areas being considered for alternative access to turbines and other infrastructure for the East Durham Wind Energy Centre project in 2013 further Stage 2 assessments were required to assess the archaeological potential within the study area. The Stage 2 assessment was carried out by URS Canada between October 29 and November 22, 2013 in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).

2.0 STAGE 2 ASSESSMENT OF BORNISH TURBINE ACCESS ROADS

2.1 Field Methods

URS Canada conducted the additional Stage 2 archaeological assessment of the eight study areas for the alternative turbine access routes and other infrastructure between October 29 and November 22, 2013 under the field direction of Daesha Mackie [R473]. The Stage 2 assessment followed the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011a), including those related to weather and lighting conditions (**Table 3**). Despite the temperature being slightly below zero on November 18, the ground was not frozen and was able to be screened completely in order to look for artifacts. Additionally, snow cover hindered pedestrian survey on November 11, meaning only test pitting could be conducted that day.

The limits of the CDA for the eight study areas were identified through the use of mapping and GPS coordinates. Field methodology for each of the areas is detailed below with representative photos of crews at work and field conditions appearing in **Appendix B, Photo Plates 1-33.** Artifact photos are found in **Appendix C**. The results and estimated percentages of field survey techniques employed on each property are summarized in **Table 4 and 5** and visually represented in **Appendix A**. All collected artifacts discussed below will remain in the possession of the licence holder until such time as a transfer can be made to an appropriate, MTCS-approved repository. The artifacts will be held in URS Canada's secure laboratory facility in Richmond Hill, ON.



TABLE 3: WEATHER CONDITIONS ENCOUNTERED DURING THE STAGE 2 ASSESSMENT OF ALTERNATE ACCESS ROUTES AND OTHER INFRASTRUCTURE

Date	Weather Conditions	Temp. (°C)	Maximum Wind Speed (km/hr)
October 29, 2013	Cool and clear	5.5	9
October 30, 2013	Partially clear, warm	11	13
October 31, 2013	Overcast and warm, with rain showers	15	41
November 1, 2013	Overcast and cool; midday rain showers	8.1	37
November 11, 2013	Overcast and cold, snow covered ground	1.3	22
November 12, 2013	Overcast and cold	5.5	26
November 18, 2013	Overcast and cold	-1.0	26
November 22, 2013	Foggy, overcast, cool	5.4	30

A total of 8 study areas were surveyed on 6 properties during the Stage 2, along Grey Road 4 between Baptist Church Road and Artemesia Glenelg Townline. Approximately 5 kilometres in length, the properties assessed totaled 21.784 hectares in size. The assessment of the Nairn Road T-line has been completed with both pedestrian survey and test pitting conducted where slope and previous disturbance were not found (**Table 4**). The limits of the study corridor were not marked by survey stakes. Instead GPS coordinates were used to delineate the limits of the CDA.

Much of the study area consisted of agricultural fields, with a small percentage containing gently rolling terrain covered by scrub / meadows and densely forested areas. Those properties with recently cultivated lands were pedestrian surveyed at 5 metre intervals (82%), as per Section 2.1.1 Standard 1 of the Standards and Guidelines for Consulting Archaeologists. These areas were ploughed and weathered for this assessment and visibility at the time of survey was good to excellent (80-95%). On properties where ploughing was not possible (10.8%), and therefore required test pitting, test pits were excavated a minimum of 30 cm by 30 cm in diameter and extended at least 5cm into sterile subsoil, as per Section 2.1.2 of the S&G's. Test pitting was conducted in 5 metre intervals, with the exception of property EDU1008, where test pits were placed judgementally to confirm disturbance (1%). All soil was screened through 6mm (¼") mesh and each test pit was backfilled upon completion. A portion of the study area consisted of steep slope and disturbed



lands (6.2%). These areas of low archaeological potential were visually assessed and photo-documented.

Study Area 1: Property EDU1062

Stage 2 assessment of the study area on property EDU1062 took place on October 29, 2013. This study area consists of an agricultural field that slopes upward to the north. Pedestrian survey of the entire subject area was conducted at 5m intervals in a north-south direction. The ground had been recently ploughed and was clear, with excellent visibility (near 100%). Three modern artifacts were identified at the centre of the study area. Survey intervals were intensified in this area to 1m, following Standard 7, Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011). However, no further artifact recoveries were made. The locations of the modern artifacts were recorded in the field, but these items were not collected or retained, per Standard 8 of Section 2.1.1 of the *Standards and Guidelines*.

Study Area 2: Property EDU1039

Stage 2 assessment of the study area on property EDU1039 took place on October 29 and November 22, 2013. This study area consists of a roughly L-shaped portion of agricultural field bordered on the north by woodlot. A stream runs through the property less than 50m north of the study area. On October 29th, pedestrian survey of the study area was conducted at 5m intervals in an east-west direction. The ground had been recently ploughed and was clear, with excellent visibility (near 100%). Three historic artifacts, including a pipe stem were identified, and subsequently survey intervals in this area were intensified to 1m, following Standard 7, Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011). No additional finds were made. The locations of the artifacts were recorded in the field, but these items were not collected or retained.

Study Area 3: Property EDU1039

Stage 2 assessment of the study area on property EDU1039 took place on October 29, 2013. This area consists of agricultural field intersected by tree breaks, with residential lawn adjacent to a driveway connecting the farmstead on this property (outside the study area) to Grey Road 4. Pedestrian survey of the entire subject area was conducted at 5m intervals in an east-west direction. The ground had been recently plowed and was clear with excellent visibility (near 100%). No artifacts were identified or recovered in the Stage 2 assessment of this study area.

Study Area 4: Properties EDU1030 & EDU1039

Stage 2 assessment of the study area on properties EDU1030 and EDU1039 took place between October 30 and November 1, November 11 - 12, 18, 22, 2013. This study area lies immediately adjacent to Grey Road 4 (excluding the right of way) and consists of a mix of farmed trees, a farm house and shed with associated residential lawn and driveway, and rolling hills to the north and northwest with a refuse heap, gravel quarry and livestock paddocks.



The manicured, landscaped lawn in front of the residence was subjected to test pitting at 5m intervals consistent with Standards 1e and 2 of Section 2.1.2 of *The Standards and Guidelines* (MTCS 2011). Test pitting was conducted to within 1 m of the residential structures where permitted by tree-scaping. Test pits were a minimum of 30cm in diameter and were excavated at least 5cm into the subsoil. West of the driveway a total of 14 test pits were excavated to varying depths, from 25 to 90cm. In several instances, soil layers were evident. Only modern material was recovered from this area however, including plastic beads recovered from a 90cm test pit, and these materials came from units that showed clear disturbance. Due to the modern nature of these materials, finds were recovered but not retained, and test pitting was not intensified around the find spots.

Forty-six test pits were excavated in the lawn to the east of the driveway in front of the residence, using the same protocols followed for the western lawn. Pits were generally 30 cm deep with no obvious signs of disturbance. Fewer than 5 finds of modern material were made in this portion of the study area. These materials were recorded in the field but not retained. Following the same standards, test pitting at 5m intervals was also conducted in the area of manicured lawn northeast of the residence and east of the barn. The lawn here was dominated by a small mound and water pump with a well. A total of 56 test pits were dug across this area resulting in the recovery of artifacts including an array of modern debris, with a small number (<20) of historic artifacts, including square nails, whiteware, and thick bottle glass. These locations of these materials were recorded in the field and all artifacts were collected and retained. In all there were 23 positive test-pits in this area (See **Figure 13**).

As per Section 2.1.3 Standard 1 of the Standards and Guidelines, test pitting was continued along the 5 metre grid system within the study area. Then as per Section 2.1.3 Standard 2, option B of the Standards and Guidelines, three additional 1 metre test units were excavated. These test units were placed using the following criteria: Test Unit 1 was placed over test pit #34 that had a high count of 62 artifacts. Test Units 2 and 3 were placed in proximity to potential surface features. Together the three units were placed to assess the character of the site and recover a large enough assemblage (n=692) to appropriately evaluate whether to make a recommendation for further work for the site. The topsoil from each one metre test unit was screened through 6mm (1/4") mesh to facilitate artifact recovery. Of the 3 test units excavated, all were positive containing artifact counts from 74-103 per unit. All test units were excavated into at least the first 5cm of subsoil and the walls and floors of each unit were examined for the presence of subsurface features or soil strata. All three units showed clear evidence of disturbance including highly mottled soil with brick fragments and other structural debris along with a distribution of recent artifacts throughout the topsoil layer (See Photo Plate 34).

There were no subsurface features identified and soil strata were non-existent due to the disturbed nature of the soil. All excavated units were fully backfilled upon their completion. The locations of all test units were mapped in the field on graph paper. The soil across the site was medium-brown clay mixed with loam overlying mottled yellow-brown compact clay. On November 22, following the melting of the snow,



additional pedestrian survey was conducted to the east of the test pitted area and similar finds were recovered. All diagnostic and formal artifact types, were documented in the field, collected and retained, as per Standard 8, Section 2.1.1 of the S&G's. This site has been identified as Location 5, and is further discussed in Section 2.2 Record of Finds.

Per Section 2.1.2, Standards 1a and 1d of *The Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), the western portion of the study area covered by farmed trees was subjected to test pitting at 5 m intervals. Forty-two test pits were dug in this area. These were typically ca. 30cm in depth and with no visible disturbance. No artifact recoveries were made in this area.

The rolling hills to the north of the farm house, which also contained the refuse dump and animal paddocks, were subjected to test pitting at 5m intervals, where slope and disturbance were not apparent. The northern portion of the paddock field was tested at five metre intervals except where obvious disturbance was present (See **Figure 7**). A section of the paddock area was not tested as it had been disturbed by soil erosion and mixing associated with barnyard activities; notably the use of the paddock area as a feed lot for cattle (see **Photo Plates 35-36**). This farm usage has led to extensive erosion and mixing of the thin soils within this area such that the Field Director determined that testing would not be appropriate or productive. A total of 36 test pits were placed along the tops of hills and at the base. They were 30 cm deep on average, with a high gravel content and orange subsoil. No artifact recoveries were made in this area.

Study Area 5: Properties EDU1030 & EDU1039

Stage 2 assessment of the study area on properties EDU1030 and EDU1039 took place on November 12 and 22, 2013. This study area is adjacent to the northern boundary of study area 4. It consists of agricultural fields with rolling hills bordered in part on its western side by a tree farm. The entire study area was subjected to pedestrian survey at 5m intervals. Snow cover hindered this assessment prior to November 12. At the time of stage 2 assessment the ground had been recently plowed and visibility was excellent (near 100%). Apart from ploughing, no significant landform disturbance was apparent. No artifact recoveries were made.

Study Area 6: Property EDU1005

Stage 2 assessment of the study area on property EDU1005 took place on October 29, 2013. This area consists of an agricultural field on a gently eastward rising slope. At the time of Stage 2 assessment the field had been recently plowed and weathered and visibility was excellent (near 100%). Pedestrian survey of the entire subject area was conducted along 5m transects running in an east-west direction. Historic artifacts were encountered in the southeast corner of the study area on a rise in the land. Subsequently, per Standard 7 of Section 2.1.1 of *The Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), survey intervals around these find spots were intensified to 1 m. Following this intensification additional historic material was recovered, with more than 200 historic artifacts in total yielded from a ca. 34x40m cluster. Artifacts include historic machine cut nails, bottle glass,



refined white earthenware and general domestic items. A total of 43 artifacts, all diagnostic and formal artifact types, were documented in the field, collected and retained, as per Standard 8, Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011). This site has been identified as Location 4 site (BbHe-3), and is further discussed in **Section 2.2 Record of Finds**.

Study Area 7: Property EDU1008

Stage 2 assessment of the study area on property EDU1008 took place on October 30, 2013. The study area is situated off Grey Road 4 between Grey Road 23 and Bootjack Ranch Road. It consists of a lawn area in the front a residential structure with a surrounding (collapsing) barn and outbuilding. The built structures lie outside of the study area. A driveway exiting onto Grey Road 4 passes through the western end of the study area where the land is relatively flat. Much of the eastern portion of the study area is dominated by large, severely sloping hills which appear to have been artificially mounded. Test pitting at 5m intervals was conducted following standards set forth in Sections 2.1.2 and 2.1.3 of The Standards and Guidelines for Consultant Archaeologists along the western portion of the study area (MTCS 2011). A total of 10 test pits were dug across this portion study area, none of which were positive. In the area east of the driveway, most test pits indicated soil disturbance. As per Section 2.1.8 Standard 2 of the S&G's, test pits were placed strategically throughout the western section of the area, including the base and ridges of the mounds. These test pits located on the mounds contained gravel fill, confirming significant artificial landform disturbance in this portion of the study area. No artifact recoveries were made.

Study Area 8: Property EDU1311

Stage 2 assessment of the study area on property EDU1311 took place on October 29, 2013. EDU 1311 is located on the south side of Grey Road 4 east of Bootjack Ranch Road. This study area consists entirely of a gently undulating agricultural field with a relic or ephemeral watercourse crossing the southwestern edge of the assessment area. Stage 2 assessment at this area consisted of pedestrian survey conducted at 5m intervals. The ground had been recently ploughed and was clear, though partially frozen, with excellent visibility (near 100%). Two modern artifacts were identified during pedestrian survey. Therefore survey intervals around these findspots were intensified to 1m, following Standard 7, Section 2.1.1 of the *Standards* and *Guidelines for Consultant Archaeologists* (MTCS 2011). No further artifact recoveries were made. The locations of artifacts were recorded in the field, but due to their modern nature these items were not collected or retained.

TABLE 4: ESTIMATED PERCENTAGES OF FIELD SURVEY TECHNIQUES USED WITHIN THE STUDY

AREA

Survey Method	Hectares	%
Disturbed, No Archaeological		
Potential	0.362	1.7
Pedestrian Survey at 5 m Intervals	17.853	82.0
Slope	0.991	4.5



Sloped, Disturbed, Test Pitted Judgementally	0.222	1.0
Test Pitted at 5 m Intervals	2.356	10.8
TOTAL	21.784	100

TABLE 5: ESTIMATED PERCENTAGES OF FIELD SURVEY TECHNIQUES USED IN EACH STUDY
AREA

Area and Survey Method	Hectares Surveyed	% Surveyed
Area 1	0.459	
Pedestrian Survey at 5 m Intervals	0.459	100.0
Area 2	7.643	
Pedestrian Survey at 5 m Intervals	7.643	100.0
Area 3	3.589	
Disturbed, No Archaeological Potential	0.103	2.9
Pedestrian Survey at 5 m Intervals	3.486	97.1
Area 4	3.312	
Disturbed, No Archaeological Potential	0.138	4.2
Pedestrian Survey at 5 m Intervals	0.041	1.2
Slope	0.991	29.9
Test Pitted at 5 m Intervals	2.142	64.7
Area 5	4.108	
Pedestrian Survey at 5 m Intervals	4.108	100.0
Area 6	1.367	
Disturbed, No Archaeological Potential	0.103	7.5
Pedestrian Survey at 5 m Intervals	1.264	92.5
Area 7	0.454	
Disturbed, No Archaeological Potential	0.018	4.0
Sloped, Disturbed, Test Pitted		
Judgementally	0.222	48.9
Test Pitted at 5 m Intervals	0.214	47.1
Area 8	0.852	
Pedestrian Survey at 5 m Intervals	0.852	100.0
Total	21.784	

2.2 Record of Finds: Artifact Analysis

Two sites were recovered during the Stage 2 assessments of additional properties for the alternative access to turbines and other infrastructure in East Durham. The Location 4 site (BbHe-3), located on property EDU1005 and Location 5 on property EDU1030, are discussed below.



Location 4 Site (BbHe-3)

A total of 43 artifacts were recovered during the Stage 2 pedestrian survey of the Location 4 site (BbHe-3), on property EDU 1005, in study area 6. The mid-19th to early-20th Euro-Canadian assemblage included ceramic tableware (n=9; 20.93%), kitchen-related items (n=17; 39.53%), architectural remains (n=13; 30.23%), personal items (n=2; 4.65%), miscellaneous items (n=1; 2.33%) and hardware items (n=1; 2.33%). A summary of the artifacts collected can be found below (**Table 6**).

TABLE 6: SITE LOCATION 4 ARTIFACT SUMMARY

Ceramic Tableware					
Ceramic Type	Decoration	f	%		
Refined White Earthenware	Undecorated	2	22.22		
Refined White Earthenware	Painted Bands	1	11.11		
Refined White Earthenware	Stamped	3	33.33		
Refined White Earthenware	Banded ware	1	11.11		
Refined White Earthenware	Moulded	2	22.22		
Tableware Total		9	20.93		
Kitchen Related Items	and Faunal Remai	ns			
Artifact	Comments	f	%		
Glass	Bottle	15	88.24		
Spoon Fragment	Metal	1	5.88		
Utensil Handle	Bone/Metal	1	5.88		
Kitchenware/Faunal Total		17	39.53		
Architectura	I Remains				
Artifact	Material	f	%		
Machine Cut Nail	Metal	8	61.54		
Padlock	Metal	1	7.69		
Brick	Clay	2	15.38		
Window Glass	Thick	2	15.38		
Architectural Remains Total		13	30.23		
Persona	l Items				
Artifact	Material	f	%		
Smoking Pipe	White Ball Clay	2	100.00		
Personal/Clothing Total		2	4.65		
Miscellaneous Items					
Artifact	Material	f	%		
Misc. Metal	Metal	1	100.00		
Miscellaneous Total		1	2.33		
Hardware Items					
Artifact	Material	f	%		



Strap Claw Hammer	Metal	1	100.00
Hardware Total		1	2.33
Total		43	100.00

A total of 9 ceramic tableware fragments (20.93%) were recovered from the Stage 2 test pit survey and include only refined white earthenware (RWE). RWE has a clear glaze, nearly white paste and became a popular ceramic type after 1830 when it replaced pearlware (Kenyon and Doroszenko 1994: 100). RWE was in production throughout the 19th century and continues to be in production in the 21st century. The rest of the RWE assemblage were decorated with moulded ribbed motif (n=2), painted bands (n=1), stamped (n=3) and banded ware (n=1). The remaining RWE fragments were undecorated (n=2). The ceramic tableware assemblage recovered from the site was likely from table/serving and hollowware vessels.

The stamping technique (1843-1885) involves the transfer of paint to the ceramic ware through the use of a stamp made of sponge or some other material. The stamped ceramic fragments recovered at Location 4 displayed floral motifs in red and brown paint. This technique became popular post-1860 and continues to be in production in the early 20th century. Stamped ceramics was one of the cheapest pottery available with a decoration; it involved minimal skilled workers to produce the ceramic. Ceramics with a stamped design remained popular until the 1880s.

Banded ware (1830-1850) is a mochaware variant with raised decorative bands along the surface of the pottery; this technique was applied on utilitarian and table wares. Banded wares were typical of the late 18th and 19th centuries but are still present in the 21st century, however, in simpler form. Colours included light to dark brown, black, blue, yellow and green. The banded ceramic recovered from Location 4 was painted in blue paint.

A total of 17 kitchen-related items were recovered during the Stage 2 test pit survey. The assemblage included a spoon fragment (n=1), bone utensil fragment (n=1), bottle and container glass (n=15). The fifteen bottle and container glass assemblage includes shards from amber (n=1), agua (n=11), olive green (n=2) and purple (n=1). The bottle and container glass fragments were likely from beverage, jar or pharmaceutical bottles. Diagnostic artifacts include: aqua bottle fragments with an oil finish (1905+), patent finish (post 1850) and one torpedo-shaped agua glass fragment. The unusual bottle design helps withstand the carbonation pressure of the soda/mineral water and to ensure the cork does not dry out and/or shrink. The majority of bottles with a torpedo shape date from 1840 to 1910. And lastly, an aqua pharmaceutical bottle fragment displaying the following maker's mark - Dr. S. N. Thomas, Eclectric Oil was recovered. The Eclectric Oil was formulated by Dr. S. N. Thomas in the late 1840's. A pharmaceutical firm based in Toronto (Northrop and Lyman Company – established 1854) marketed the product in Canada. The inventor of the product claimed it cured the following ailments: toothache, backache, coughs, sore throat and even deafness. This pharmaceutical product was a liniment, it contained the following ingredients: spirits of turpentine, camphor, oil of tar, red thyme and fish oil. Eclectric Oil was a successful product and was sold domestically



and internationally (1840-1945). The bottle and container glass recovered at the site were manufactured in the mid-19th to early-20th century.

The 13 architectural remains from the site consist of machine cut nails (n=8), padlock (n=1), brick remains (n=2) and thick window glass (n=2). Machine cut nails were common after 1830 and was the leading nail type used in the 19th century. However, commencing in the 1850's wire nails began to replace machine cut nails. The presence of only machine cut nails at Location 4 may indicate that the occupation of the site did not extend beyond circa 1880. Window glass thickness can provide an estimated date of occupation. Thin window glass is dated pre-1850 and was manufactured up until 1845 when a change in English tax (based on weight) was lifted. Before the tax was lifted manufacturers made window glass as thin as possible to minimize the effect of the tax (Kenyon and Doroszenko 1994: 93). Only two thick window glass fragments were recovered during the excavation; this would suggest the occupational date range for Location 4 to be mainly post-1850. The presence of architectural debris such as window glass, nails and brick remains indicates that there was a structure on the site at one time.

Only 2 personal items were collected during the Stage 2 assessment. The assemblage includes two plain smoking pipe stem fragments and did not contain any diagnostic features. One miscellaneous metal corroded fragment was also retained for curation. The hardware item recovered from Location 4 includes one incomplete strap claw hammer.

Overall, the Euro-Canadian artifacts collected during the Stage 2 test pit survey of Location 4 show a typical debris representative of mid-19th to early-20th century domestic dwelling based on the utilitarian wares (tableware, utensil and pharmaceutical fragments), architectural debris (nails and brick remains), personal items (smoking pipe fragments) and hardware items recovered (strap claw hammer). Diagnostic artifacts included: RWE fragments stamped in a floral pattern (1843-1885), banded ware (1830-1850), torpedo-shaped bottle glass (1840 – 1910) and bottle glass with makers mark - Dr. S. N. Thomas, Eclectric Oil (1840-1945). A complete artifact inventory of Location 4 is provided in **Appendix D.** All recovered artifacts will remain in the possession of the licence holder until such time as a transfer can be made to an appropriate, MTCS-approved repository. The artifacts will be held in URS Canada's secure laboratory facility in Richmond Hill, ON.

Location 5 Site

A total of 692 artifacts were recovered during the Stage 2 test pit survey of Location 5, on property EDU 1030. The late-19th to mid-20th century Euro-Canadian assemblage consists of 673 historic artifacts and 19 faunal specimen fragments. The recovered material includes ceramic tableware (n=279; 40.32%), kitchen-related items (n=107; 15.46%), architectural remains (n=287; 41.47%), personal items (n=1; 0.14%), miscellaneous items (n=16; 2.31%) and, stable equipment (n=1; 0.14%) and hardware items (n=1; 0.14%). A summary of the artifacts collected can be found below (**Table 7**).



TABLE 7: SITE LOCATION 5 ARTIFACT SUMMARY

Ceramic Tableware				
Ceramic Type	Decoration	f	%	
Refined White Earthenware	Undecorated	167	59.86	
Refined White Earthenware	Transfer Print	82	29.39	
Refined White Earthenware	Stamped	1	0.36	
Refined White Earthenware	Moulded	9	3.23	
Semi-Porcelain	Gold Gilding	6	2.15	
Semi-Porcelain	Decal Ware	1	0.36	
Semi-Porcelain	Moulded	4	1.43	
Semi-Porcelain	Undecorated	6	2.15	
Porcelain	Undecorated	1	0.36	
Ironstone	Undecorated	2	0.72	
Tableware Total		279	40.32	
Kitchen Related Items	and Faunal Rema	ins		
Artifact	Comments	f	%	
Glass	Bottle	82	76.64	
Glass	Decorative	2	1.87	
Bottle Cap	Metal	1	0.93	
Rockingham (Yelloware)	Mottled Glaze	1	0.93	
Yelloware	Undecorated	1	0.93	
Refined Red Earthenware	Glazed	1	0.93	
Faunal	Bone	19	17.76	
Kitchenware/Faunal Total		107	15.46	
Architectura	Remains			
Artifact	Material	f	%	
Machine Cut Nail	Metal	15	5.23	
Wire Cut Nail	Metal	59	20.56	
Wire Fragments	Metal	14	4.88	
Fence - Barbed Wire	Metal	3	1.05	
Light Bulb	Glass	1	0.35	
Mortar	Cement	12	4.18	
Furniture Coaster	Glass	1	0.35	
Window Glass	Thick	182	63.41	
Architectural Remains Total		287	41.47	
Personal	Items			
Artifact	Material	f	%	
Black Plastic Button	Plastic	1	100.00	



Personal/Clothing Total		1	0.14			
Miscellaneous Items						
Artifact	Material	f	%			
Misc. Metal	Metal	13	81.25			
Battery Carbon Rod	Unknown	2	12.50			
Misc. Plastic	Plastic	1	6.25			
Miscellaneous Total		16	2.31			
Stable Equipr	nent Items					
Artifact	Material	f	%			
Horse Shoe Nail	Metal	1	100.00			
Hardware Total		1	0.14			
Hardware	Items					
Artifact	Artifact Material f %					
Wrench	Metal	1	100.00			
Hardware Total		1	0.14			
Total		692	100.00			

The 279 ceramic tableware fragments (40.32%) that were recovered during the Stage 2 test pit survey comprised of refined white earthenware (RWE) (n=259), semi-porcelain (n=17), porcelain (n=1) and ironstone (n=2).

The RWE assemblage were decorated with moulded floral motif (n=9), stamped (n=1) and transfer print (n=82); the remaining RWE fragments were undecorated (n=167). The ceramic tableware assemblage recovered from the site was likely from table/serving and hollowware vessels. The one stamped ceramic fragment (1843-1885) recovered at Location 5 displayed a rope/loop design in blue paint. Nine RWE fragments with moulded designs were recovered during the Stage 2 test pit survey; these fragments displayed a floral decorative pattern along the rim of the vessel.

Transfer printing represents an innovative decorative discovery in English history. Durable tissue paper was used to transfer an inked design from an engraved copper plate and then transferred to the ceramic. This printing method was used in the 19th century and onwards as the cost of manufacturing elaborate and identical pieces became more inexpensive than decorating by hand. Decorative trends changed throughout the 19th century; around 1815, blue-printed pottery featured only oriental designs. From 1815 to 1830 pastoral subjects became popular. Floral designs were favoured in the 1830's and continue to be a prevalent decorative technique in the 21st century (Kenyon and Doroszenko 1994: 101). Until the 1830's transfer prints were only available in blue. However, in the 1840's to 1850's new printing colours such as black, brown, red, mulberry and green became available (Kenyon and Doroszenko 1994: 101). The transfer printed ceramics collected at Location 5 displayed an assortment of decorative styles with the floral patterns. Some of the fragments collected were scalloped, gold gilded and embossed (dots). Four manufacturers were identified during the artifact analysis – Ruskin Pottery (1898-



1935), Colonial Potter (1890-1925), Keeling & Co. (1886-1936) and Alfred Meakin (1897-1907). Based on the diagnostic artifact assemblage these domestic items were manufactured in the late 19th to mid-20th Century.

One undecorated porcelain fragment was collected during the Stage 2 test pit survey of Location 5. Porcelain has a heavy translucent glass-like paste. This ceramic type is the most expensive ware and also difficult to date. Seventeen semi-porcelain fragments were recovered during the assessment. The items were gold gilding in a floral design (n=6), green decal ware – floral design (n=1), moulded – floral motif (n=4); the remaining fragments were undecorated (n=6). This ceramic type resembles porcelain but has little to no translucency. Semi-porcelain is an alternative to porcelain; it is heavier and thicker than porcelain as well as cheaper to manufacture. Semi-porcelain was most common after 1890 (Kenyon and Doroszenko 1994: 103). Decal ware was first introduced in the 1890's. It involved the application of a design over the glaze. This decorative technique was popular through the 1930's.

Ironstone is a more vitrified and durable ceramic than refined white earthenware (Kenyon 1980: 5). It was introduced into southern Ontario after 1840 and became a dominant tableware type by 1870. The two ironstone fragments recovered were undecorated.

A total of 88 kitchen-related items and 19 faunal specimen fragments were recovered during the Stage 2 test pit survey. The assemblage included a bottle cap (n=1), Rockingham – Yelloware (n=1), refined red earthenware (n=1), yelloware (n=1), decorative glass (n=2), bottle and container glass (n=82). The faunal assemblage comprises small, unanalyzable bone fragments some of which are thermally altered; one of the bone fragments had saw marks.

Refined Red Earthenware was used in the manufacturing of utilitarian wares such as mugs, flower pots and serving vessels. One black glazed fragment was recovered at Location 5. The refined red earthenware fragment did not contain any diagnostic features. Yelloware (1842-1910) has a yellow-buff paste with a lead clear glaze. It became popular in the 1840's and was used in the manufacturing of both tableware and kitchenware ceramics such as mixing bowls, plates and jugs. The yelloware assemblage was decorated with a brown mottled glaze (Rockingham) (n=1) and undecorated (n=1). The Rockingham glaze (1855-1890) was applied in such a way that it produced a mottled effect on the pottery.

The eighty-two bottle and container glass assemblage includes shards from amber (n=11), aqua (n=5), clear (n=56), olive green (n=4), opaque white (n=1) and purple (n=5). Two decorative glass shards in clear glass were recovered during the assessment; these items were decorated with moulded triangle-shaped design. The bottle and container glass fragments were likely from beverage, jar or pharmaceutical bottles. The decorative glass fragments were likely from a vase due to the moulded designs. Diagnostic artifacts include: olive green bottle glass finish with a crown finish (1905+) and glass fragments with an "C" in an upside down triangle – manufactured by Consumer Glass Company, Montreal in 1917-1962. The metal bottle cap displayed an embossed mark – J. R. Watkins Naturals (1868-Present).



This manufacturer created household products such as cleaning products, food extracts/flavourings and cosmetics, etc. The bottle and container glass recovered at the site were manufactured in the late 19th to late 20th century.

The 287 architectural remains from the site consist of machine cut nails (n=15), wire cut nails (n=59), wire fragments (n=14), fence-barbed wire (n=3), a light bulb fragment (n=1), mortar fragments (n=12), thick window glass (n=182) and an aqua furniture coaster (n=1). Both machine cut nails and wire cut nails were recovered at Location 5. Machine cut nails were in common use from the 1830's to the 1890's. Wire cut nails began to displace machine cut nails in the 1890's (Kenyon and Doroszenko 1994: 92). The majority of the nails from Location 5 were wire. Thick window glass (n=182) was the only window glass type recovered during the excavation; this would suggest the occupational date range for Location 5 to be mainly post-1900. A furniture coaster made with aqua glass was also collected; this item displayed embossed lettering along the base – "Pat'd April.25.82", the furniture coaster design may have been patented in 1882. The presence of architectural debris such as window glass, nails, barbed wire and mortar remains indicates that there was a structure on the site at one time.

Of the personal items, one modern black plastic button with a square design was collected during the Stage 2 assessment. The miscellaneous items recovered include 13 misc. metal, 1 misc. plastic and 2 battery carbon rods. Identifying the misc. metal was difficult due to the extensive corrosion and fragmentation of the material recovered. The stable equipment recovered from Location 5 includes one horse shoe nail. And lastly, of the hardware items one corroded wrench was found.

Overall, the Euro-Canadian artifacts collected during the Stage 2 test pit survey of Location 5 show a typical debris representative of late-19th to mid-20th century modern domestic dwelling based on the utilitarian wares (tableware, bottle glass), architectural debris (window glass, nails, furniture coaster & mortar), personal items (black plastic button) and hardware items recovered (corroded wrench). While the ceramic types recovered at Location 5 (semi-porcelain, ironstone and yelloware) can be indicative of a post-1850 date range, the diagnostic artifacts included: RWE fragments with maker's marks - Ruskin Pottery (1898-1935), Colonial Potter (1890-1925), Keeling & Co. (1886-1936) and Alfred Meakin (1897-1907), yelloware fragment with a Rockingham glaze (1855-1890), RWE blue stamped fragment (1843-1885) and bottle glass manufactured by Consumer Glass Company (1917-1962). These diagnostic artifacts support the late 19th to mid-20th century date for Location 5. A complete artifact inventory of Location 5 is provided in **Appendix D**.

TABLE 8: INVENTORY OF THE DOCUMENTARY RECORD

Study Area	Photographs	Maps	Field Notes	# of Banker Boxes for Artifacts
Study Area 1	3	1	Field Notes, Photo Log,	Not applicable



Study Area 2	8	1	Field Notes, Photo Log,	Not applicable
Study Area 3	3	1	Field Notes, Photo Log,	Not applicable
Study Area 4	40	1	Field Notes, Photo Log,	1
Study Area 5	15	1	Field Notes, Photo Log,	Not applicable
Study Area 6	8	1	Field Notes, Photo Log,	1
Study Area 7	16	1	Field Notes, Photo Log,	Not applicable
Study Area 8	4	1	Field Notes, Photo Log,	Not applicable

3.0 ANALYSIS AND CONCLUSIONS

URS Canada was contracted by East Durham Wind Inc., a wholly owned subsidiary of NextEra Energy Canada ULC (NEEC), as part of the East Durham Wind Energy Project to conduct the Stage 2 investigations of alternative access to turbines and other infrastructure. This work was completed between October 29 and November 22, 2013. A total of eight study areas were assessed on six properties (EDU1039, EDU1030, EDU1008, EDU1005, EDU1311 and EDU1062). One historic 19th century Euro-Canadian scatter was recovered from property EDU1005 in study area 6, and another, more recent, assemblage was found on property EDU1030 from study area 4. No other study areas contained archaeological materials.

Based on the artifact assemblage recovered during the pedestrian survey of property EDU1005, the Location 4 site (BbHe-3) is a mid-19th to early 20th century Euro-Canadian domestic dwelling. The scatter included ceramics, glass, metal, bone, and brick. The presence of more than 20 artifacts clearly dating to the period of use prior to 1900 suggests that the site has further cultural heritage value and interest. While no one is listed on the 1879 Historic mapping for Grey County, the artifacts alone fulfill the criteria in for a Stage 3 archaeological assessment, as per *Section 2.2 Standard 1.c of the Standards and Guidelines*.

Location 5, identified during test pit survey on property EDU1030, is a Euro-Canadian scatter of late-19th to mid-20th century artifacts. While relatively large (n=692), the scatter is from a clearly disturbed context and is predominantly modern, with few diagnostic artifacts, and likely relates to the 20th century dwelling located on the property. Historic research indicates that the principal occupation of the property commenced after 1895. Ultimately, given the disturbed nature of the site and the late (*i.e.* post 1900) character of the assemblage, the site likely relates to the later



dated farmhouse found on the property, and therefore does not meet the requirements for Stage 3 archaeological assessment.

Aside from the Location 4 site (BbHe-3), URS Canada recommends that the study area be considered clear of any further archaeological concern.

4.0 RECOMMENDATIONS

In light of these considerations, URS Canada makes the following recommendations:

- 1) If the Location 4 site (BbHe-3) on property EDU 1005 cannot be avoided by future development, it must be subject to a Stage 3 archaeological assessment. The Stage 3 assessment should **consist** of both the controlled surface pick-up and hand excavated test unit methodology as outlined in Sections 3.2 and 3.3, as well as Table 3.1, of the Ministry of Tourism, Culture and Sport's Standards and Guidelines for Consultant Archaeologists (MTCS 2011). Prior to conducting the field work, the area should be re-ploughed and allowed to weather for the controlled surface pick-up. The test unit excavation should consist of one metre by one metre square test units laid out in a five metre grid and should be excavated by hand to a depth of five centimetres within the subsoil. Additional test units (representing 20% of the initial grid) should be excavated in areas of interest within the site extent. Site specific land registry research to supplement the previous background study concerning the land use and occupation history specific to Location 4 should also be conducted as part of the Stage 3 assessment.
- 2) The Stage 2 assessment of the remaining properties (EDU1039, EDU1030, EDU1008, EDU1311 and EDU1062) determined that there are no significant archaeological resources present on these lands. Therefore, these areas are considered clear of further archaeological concern.

The above recommendation is subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any archaeological site without MTCS concurrence. No grading or other activities that may result in the destruction or disturbance of an archaeological site are permitted until notice of Ministry of Tourism, Culture and Sport approval has been received.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

a) This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licencing in accordance with Part IV of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport a letter will be issued by the



ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

- b) It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such a time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the Ontario Heritage Act.
- c) 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 Section 48 (1) of the Ontario Heritage Act.
- d) The Cemeteries Act, R.S.O. 1990, c.C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.
- e) Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

Documentation related to the archaeological assessment of this project will be curated by URS Canada until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the Ontario Ministry of Tourism, Culture and Sport, or any other legitimate interest groups.



6.0 REFERENCES CITED

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Additional Stage 2 Archaeological Assessment
East Durham Wind Energy Project
Alternative Access to Turbines and Other Infrastructure
Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario

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Additional Stage 2 Archaeological Assessment
East Durham Wind Energy Project
Alternative Access to Turbines and Other Infrastructure
Geographic Township of Glenelg, now West Grey Township, Grey County, Ontario

APPENDIX A: FIGURES

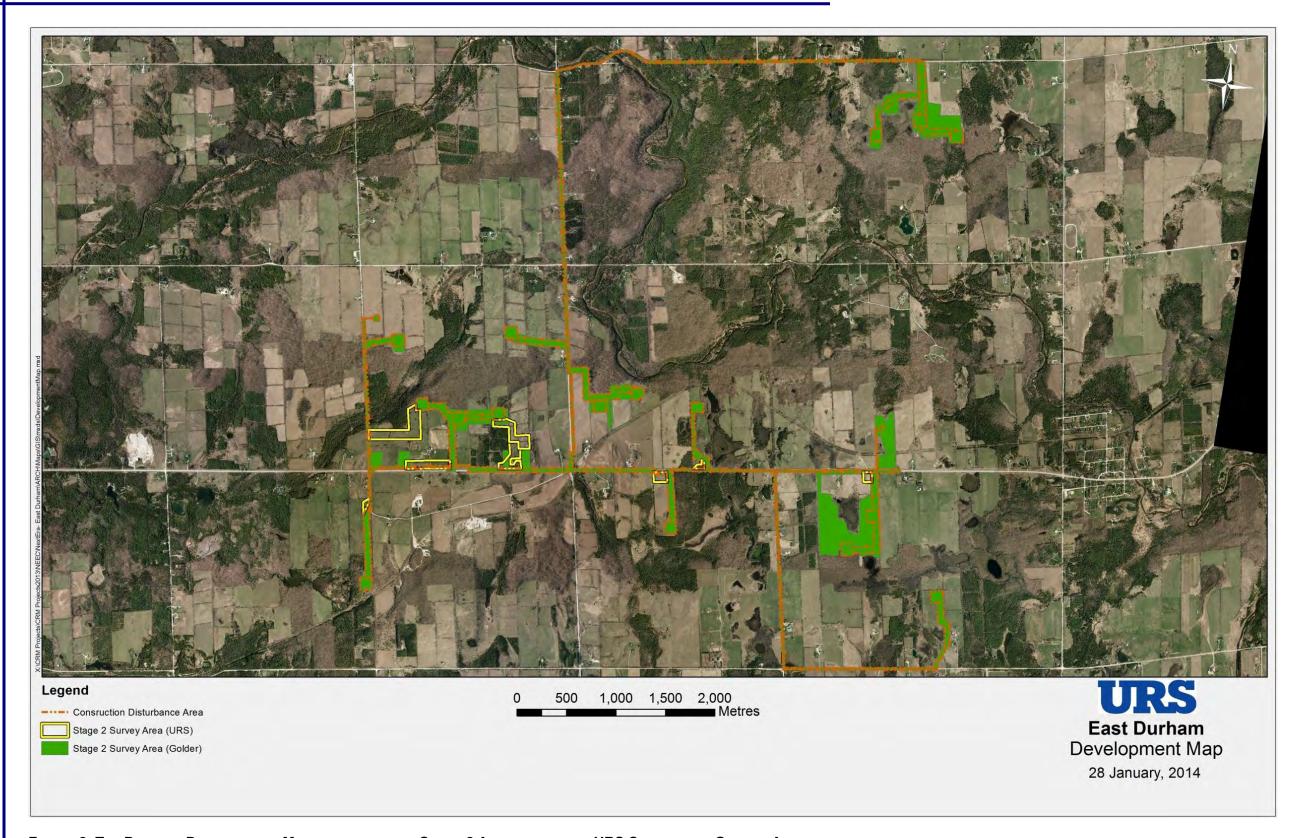




FIGURE 1: LOCATION OF THE OVERALL STUDY AREA



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FIGURE 2: THE PROJECT DEVELOPMENT MAP, INDICATING THE STAGE 2 ASSESSMENTS BY URS CANADA AND GOLDER ASSOCIATES



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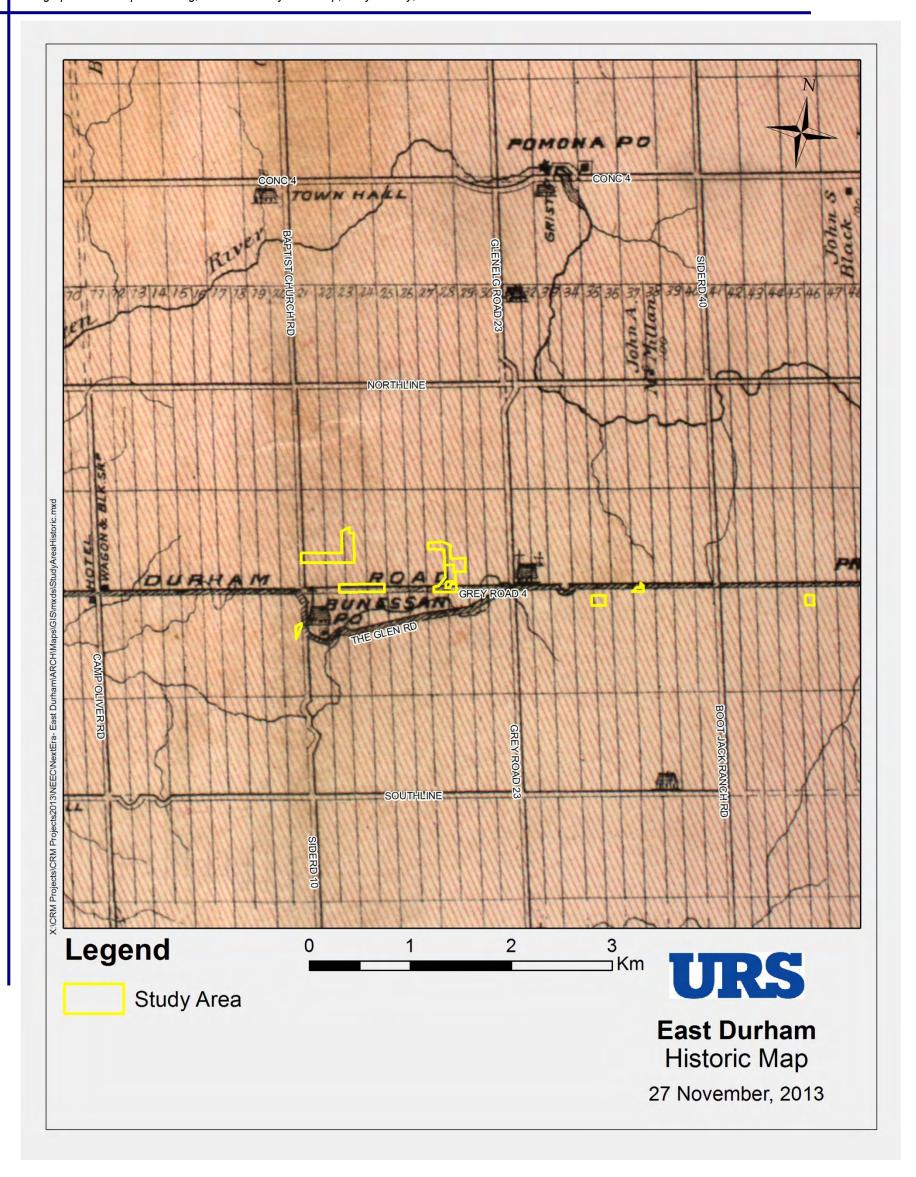


FIGURE 3: THE LOCATION OF THE ALTERNATIVE ACCESS TO TURBINES AND OTHER INFRASTRUCTURE OVERLAID ON THE GLENELG HISTORIC MAP.

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FIGURE 4: RESULTS AND SURVEY METHODS OF THE STAGE 2 ASSESSMENT OF STUDY AREA 1



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