

**The 2012 Stage 2 Archaeological Assessment
of Minor Modifications to the
Proposed Grand Bend Wind Farm,
FIT Contract # F-002178-WIN-130-601,
Municipalities of Bluewater, South Huron,
& East Huron, Huron County and
the Municipality of West Perth,
Perth County, Ontario**



D.R. POULTON & ASSOCIATES INC.

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Submitted to

Neegan Burnside Ltd.,
292 Speedvale Avenue West, Unit 7,
Guelph, Ontario
N1H 1C4
Telephone – 519 823-4995
Facsimile – 519 836-5477

and

The Ontario Ministry of Tourism, Culture and Sport

D.R. Poulton & Associates Inc.
69 Langarth Street West, London, Ontario, N6J 1P5
Telephone – 519 434-0319 Facsimile – 519 434-0517
E-mail - drpoulton@rogers.com

Licencee: Sherri Pearce (Licence #P316)

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Project Personnel

Project Manager	Dana R. Poulton (Licence #P116)
Project Archaeologist	Sherri H. Pearce (Licence #P316)
Field Supervisor	Sherri H. Pearce (Licence #P242)
Field Assistant	Daniella Horley
Photography	Sherri Pearce Daniella Horley
Report Preparation	Christine Dodd Dana Poulton
Draughting	Christine F. Dodd

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- *Robert von Bitter*, Archaeological Data Coordinator, Culture Services Unit, Ontario Ministry of Tourism, Culture and Sport; and
- *Shari Prowse*, Archaeological Review Officer, Culture Programs Unit, Ontario Ministry of Tourism, Culture and Sport.

Executive Summary

As stated on page 1 of this report, Grand Bend Wind Limited Partnership c/o Northland Power Inc. is proposing to construct a wind farm north of Grand Bend. It will involve the construction of 48 wind turbines and related access roads, construction areas, turbine pads, collector lines and transmission lines. The proposed development has been designated FIT Contract # F-002178-WIN-130-601. As described on page 2 of this report, the proposed wind farm is spread out over a number of lots and concessions in the southern portion of the County of Huron. It forms part of the Municipalities of South Huron and Bluewater. A short segment of the proposed 230 kV Transmission Line falls within the west edge of Perth County, in Hibbert Township. The proposed Grand Bend Wind Farm is subject to the Renewable Energy Approval (REA) process (O.Reg. 359/09) of the *Environmental Protection Act* (Government of Ontario 2012), and to the provisions of the *Ontario Green Energy Act* (Government of Ontario 2009).

In 2011, Neegan Burnside Ltd. contracted DPA to conduct a Stage 1-2 assessment of the proposed Grand Bend Wind Farm. The Stage 1 background research and Stage 2 field surveys were undertaken in the spring and summer of 2012. A report on the archaeological assessment was submitted to the Ministry of Culture, Tourism and Sport on August 17, 2012 (PIF 316-145-2011). The report was accepted into the Ontario Public Register of Reports on September 12, 2012. Appendix A is copy of that letter.

Subsequent to the acceptance of the report into the Public Register, minor changes and additions were made to the layout of the proposed Grand Wind Farm. Namely, two meteorological towers a construction compound and a switchyard were added, and the alignment of Turbine 21 was repositioned. As detailed in Section 2.0 of this report (page 13-14), the Stage 2 survey of these facilities was undertaken by Sherri Pearce (P316) and a crew of one on November 14, 2012. It was conducted at a five-metre interval and involved both pedestrian survey and test pit survey. The Stage 2 survey covered the meteorological towers, Turbine 21 and the construction compound but not the switchyard. No sites were discovered during the survey (pages 15).

As no sites were discovered during the survey of the meteorological towers, the construction compound or Turbine 21, no further work is recommended for these areas. However, two issues are still outstanding for the archaeological assessment of the proposed Grand Bend Wind Farm. One is the pedestrian survey of the switchyard, which will be undertaken early in the spring of 2013. The other is the recommendation, detailed in the original Stage 1-2 report (DPA 2012), concerning the assessment of the transmission line in proximity to the Hensall Union Cemetery (see Appendix A).

As detailed on page 17 of this report, it is requested that the Ministry of Tourism, Culture and Sport issue a letter accepting the present report into the Ontario Public Register of Reports. It is also requested that the letter include a statement that the Ministry concurs with the recommendations presented herein. Finally, it is requested that a copy of the letter be forwarded by e-mail to Lyle Parsons, Project Manager, Neegan Burnside Ltd. His email address is lyle.parsons@neeganburnside.com.

1.0 PROJECT CONTEXT

The 2011 Standards and Guidelines for Consultant Archaeologists define up to four sequential stages in an archaeological assessment. Stage 1 consists of background research to identify any past archaeological investigations or known sites. The background study also identifies the potential for as-yet undiscovered sites. Stage 2 consists of a field survey to confirm the presence or absence of archaeological sites. Stage 3 consists of a more detailed assessment of any sites that are of demonstrable or potential significance as heritage resources and planning concerns. Finally, Stage 4 consists of the mitigation of significant sites either by avoidance and preservation or by the implementation of salvage excavations.

Standard 3 of Section 7.2 of the Standards and Guidelines formulated by the Ministry of Tourism and Culture (2011: 115) states the following standard with respect to the reporting requirements for archaeological assessments: “*The final report must be filed in the form and manner as specified by the ministry in Section 7.5.*”

Standard 1 of Section 7.5 of the Standards and Guidelines (Ministry of Tourism and Culture 2011: 121) further states the following standard with respect to the reporting requirements for archaeological assessments: “*All project reports must contain the sections listed in the first column of Table 7.1.*” The present report conforms in all respects to the reporting requirements of the 2011 Standards and Guidelines.

Section 7.5.5 of the Standards and Guidelines formulated by the Ministry of Tourism and Culture (2011: 124) requires that the Project Context section of each report include the context for the archaeological investigations and that it cover three basic topics: development context; historical context; and archaeological context. They are covered in the following three subsections presented below.

1.1 Development Context

The information contained in this section of the report is being presented to satisfy Standards 1, 2, and 3 that are set out in Section 7.5.6 of the Standards and Guidelines formulated by the Ministry of Tourism and Culture (2011: 124-125).

Grand Bend Wind Limited Partnership, c/o Northland Power Inc., is proposing to develop, construct and operate a 100 MW wind facility located north of Grand Bend, Ontario. The proposed Grand Bend Wind Farm is subject to the Renewable Energy Approval (REA) process (O.Reg. 359/09) and to the provisions of the *Ontario Green Energy Act* (Government of Ontario 2009). An application for approval for the proposed development is being prepared under Ontario Regulation 359/09 of the *Environmental Protection Act* (Government of Ontario 2012). The project is classified as a Class 4 Wind facility under the Regulation. The proposed development has been designated FIT Contract # F-002178-WIN-130-601.

The Grand Bend Wind Farm is located in Huron County (Figure 1). It spans portions of the lower tier municipalities of Bluewater and Huron South. Portions of the proposed transmission line also traverse the Municipality of Huron East in Huron County and the Municipality of West

Perth in Perth County. The proposed wind farm covers portions of three geographic townships. From south to north, they are Stephen, Hay, and Stanley Townships in Huron County. A short segment of the proposed 230 kV Transmission Line falls within the west edge of Perth County, in Hibbert Township.

The basic project components of the proposed wind farm will include up to 48 turbines (Siemens SWT-2.3-113 direct drive wind turbine generators with a total name plate capacity of 100 MW), turbine access roads, a 36 kV electrical connection system, and a new transmission line within municipal road rights-of-way along Rodgerville Road and Road 183. It will connect to the provincial power grid at the 230 kV Transmission Line south of the Seaforth Transformer Station, in the Municipality of Huron East. A switchyard will be constructed at this terminus. During construction, temporary components will include access roads and work/storage areas at the turbine locations and transmission connections, and a construction compound.

In 2011, Neegan Burnside Ltd. contracted D.R. Poulton & Associates Inc. to conduct a Stage 1-2 archaeological assessment of the proposed Grand Bend Wind Farm. The Stage 1 background research and Stage 2 field surveys were undertaken in the spring and summer of 2012 and a report on the archaeological assessment was submitted to the Ministry of Culture, Tourism and Sport on August 17, 2012 (PIF 316-145-2011). The report was accepted into the Ontario Public Register of Reports on September 12, 2012. Appendix A is a copy of that letter.

Subsequent to the acceptance of the report into the Public Register, additional archaeological survey was required for the following:

- a minor realignment of Turbine 21,
- the location of two meteorological towers,
- the addition of a construction compound, and
- the switchyard.

The revised placement of Turbine 21 is situated 60 meters north-northeast of its original location. This re-alignment will result in minor adjustments to the access road, collector line and construction area for the turbine.

The footprint of the meteorological towers is encompassed within a 12 m². The northern of the towers is located just south of the access road for Turbines 11 through 16, in Lot 22, Concession 15, Hay Township. The southern meteorological tower is located in Lot 28, East of Lake Road, Hay Township. There is an existing tower at this location, which is to be replaced.

The construction compound, located in Lot 36, South Boundary, Hay Township, has a surface area of roughly 5.4 ha. The construction compound will be used to temporarily house construction trailers, materials, equipment, etc. It will also be used for on-site fabrication of project infrastructure such as well plate rings and cable modifications.

Lastly, the switchyard is located north of Road 183 in Lot 1, Concession 3 South of Huron Road, Tuckersmith Township, in the Municipality of East Huron. The switchyard is required at the connection point with the existing 230kV transmission line. An area roughly 203 metres by 55 metres will be surveyed for the switchyard. Until recently, the field containing the proposed switchyard was in no till soya beans. Although the crop has been removed, ground visibility is

less than 80% and therefore not adequate for a pedestrian survey. This field will be ploughed early in the spring of 2013 and will be surveyed after sufficient rainfall.

The standard concerning permission for access that is specified in the Standards and Guidelines is as follows: “Provide statements that the landowner or landowner’s representative (e.g. planner, engineer, lawyer) gave permission for the licensee to access the property to conduct all required archaeological fieldwork activities, including the recovery of artifacts, and state any limits placed on access (e.g. time limits, refusal of access to portions of property)” (Ministry of Tourism and Culture 2011, Section 7.5.6 Standard 3, page 125). In the present case, permission for access to conduct the archaeological survey and to remove and curate any artifacts that might be discovered was secured from the respective landowners in advance of the fieldwork.

The Ontario Ministry of Tourism, Culture and Sport designated the assessment as PIF #316-165-2012. The Stage 2 assessment was implemented under Archaeological Consulting License #P316, issued by the Province of Ontario to Sherri H. Pearce of D.R. Poulton and Associates Inc.; it was carried out under the direction of Sherri Pearce (License #P316).

The assessment was conducted in accordance with the provisions of the *Ontario Heritage Act* (Government of Ontario RSO 1990a), the *Green Energy Act* (Government of Ontario 2009) and the *Environmental Protection Act* (Government of Ontario 2012). Finally, the assessment conformed to the Technical Standards and Guidelines for Consultant Archaeologists formulated by the Ontario Ministry of Culture and Tourism (2011).

Further to the above, the assessment was also conducted in accordance with the 2005 Provincial Policy Statement 2.6.2, which has provisions for the conservation of archaeological resources, a definition of the same, and provisions for archaeological assessments. Finally, it was conducted in accordance with the Ontario Ministry of Culture’s 2006 Heritage Tool Kit, most particularly with respect to Infosheet #3 and Infosheet #6; they detail provisions for the conservation of archaeological resources and provisions for heritage impact statements, respectively.

Records pertaining to this project are currently housed in the corporate offices of D.R. Poulton & Associates Inc. If the opportunity permits, however, the project archive will be transferred to a suitable long-term repository. Potential repositories include local or other museums and the storage facilities maintained by the London office of the Ontario Ministry of Tourism, Culture and Sport.

1.2 Historical Context

Under the 2011 Standards and Guidelines, a required standard for the Historical Context section of a report is that, in documenting the rationale for the choice of fieldwork strategy or the recommendations that are being made, the report must include references to all other reports containing relevant information, including the title, author and PIF number (Ministry of Tourism and Culture 2011: Section 7.5.7 Standard 2, page 125).

In the present case, the purpose of the November 14th survey was to confirm the presence or absence of archaeological sites that could represent possible constraints to proposed revisions to the layout of the Grand Bend Wind Farm. It follows the 2012 spring and summer Stage 1 – 2

assessment of the Grand Bend Wind Farm (PIF #P316-145-2011). Results of that assessment are documented in the report entitled *The 2011-2012 Stage 1-2 Archaeological Assessment of the Proposed Grand Bend Wind Farm, FIT Contract # F-002178-WIN-130-601, Municipalities of Bluewater, South Huron, & East Huron, Huron County and the Municipality of West Perth, Perth County, Ontario* prepared by Dana R. Poulton, Rob Danter, Sherri H. Pearce, and Lorelyn Giese. The Stage 1 assessment determined that the Grand Bend Wind Farm had a low to moderate potential for the recovery of cultural remains (DPA 2012: 20). No significant archaeological sites that required a Stage 3 level of investigation were discovered during the course of the Stage 2 survey (ibid: 49-50).

This section of the report also provides the historic context for human settlement of the area of the proposed Grand Bend Wind Farm, as required by Standard 1 of Section 7.5.7 of the Standards and Guidelines (Ministry of Tourism and Culture 2011:125). In the interest of context, brief summaries are included on the major environmental changes through time, and on the characteristics of settlement and subsistence patterns for the relevant time periods and cultures represented in the history of the area. For reference purposes, a cultural chronology of the region is presented in Table 1.

The Paleo-Indian Period (9500-7000 B.C.)

The first known human occupation of the province took place ca. 9500 B.C., following the retreat of the Wisconsin glacier. During this period, the environment in southern Ontario was characterized by a cool climate. The vegetation, in transition from spruce to pine dominated forests, would have resembled the modern sub-arctic.

The initial occupation of southern Ontario by Paleo-Indian peoples took place toward the end of a period of high water levels in the Great Lakes, including Lake Algonquin in the Lake Huron Basin and early Lake Erie to the south. That ended when the North Bay outlet opened ca. 8500-8000 B.C., draining Lake Algonquin eastward. The result created Lake Stanley in the Lake Huron Basin, Lake Hough in the Georgian Bay Basin and what were in effect a series of large ponds in the Lake Erie Basin. During that period what are now Pelee Island and Middle Island were hills in the dry west end of the Lake Erie Basin.

Paleo-Indian sites in the Great Lakes region are presumed to relate to a focal adaptation based primarily upon the communal hunting of seasonally migrating herds of woodland caribou. In general, favourite Paleo-Indian site locations include areas adjacent to glacial spillways and kettle lakes, often near present-day swamps on loam soils proximal to muck soils representing the margins of relic pro-glacial or post-glacial lakes. The most diagnostic Paleo-Indian artifacts consist of various types of Early Paleo-Indian fluted projectile points (ca. 9500 - 8500 B.C.) and of projectile points of the Late Paleo-Indian Holcombe type (ca. 8400 B.C.) and Hi-Lo type (ca. 8300 - 7000 B.C.).

The Archaic Period (7700-500 B.C.)

Archaeologists divide the Archaic period into three sequential sub-periods: the Early Archaic (ca. 7700 – 6000 B.C.), the Middle Archaic (ca. 6000 – 2500 B.C.) and the Late Archaic (ca. 2500 – 500 B.C.). The Archaic period was characterized by gradually warming temperatures and

by the northward migration of modern flora and fauna that were established throughout their current range by around 4000 B.C. Water levels continued to rise throughout this period, but in the earlier millennia vast areas in the Lake Erie and Lake Huron basins were dry and habitable. Indeed, research suggests that these lake plains would have represented the richest environment for prehistoric hunters and gatherers in the entire Lower Great Lakes region, and that they probably contained a wealth of early camp sites and other archaeological resources that were later flooded.

Table 1 Cultural Chronology for Southwestern Ontario

PERIOD	GROUP	TIME RANGE	COMMENT
PALEO-INDIAN	Fluted Point Hi-Lo	9500 - 8500 B.C. 8300 - 7900 B.C.	Big game hunters; small nomadic groups
ARCHAIC			
Early	Side Notched	8050-7750 B.C.	Nomadic hunters and gatherers.
	Nettling	7900-6900 B.C.	
	Bifurcate Base	6800 - 6000 B.C.	
Middle	Laurentian	3500 - 2500 B.C.	Transition to territorial settlements.
Late	Lamoka	2500 - 1800 B.C.	Polished/ground stone tools
	Broad Point	1800 - 1400 B.C.	
	Crawford Knoll	1500 – 500 B.C.	
	Glacial Kame	ca. 1000 B.C.	Burial ceremonialism
WOODLAND			
Early	Meadowood	1000 - 400 B.C.	Introduction of pottery
	Red Ochre	1000 – 500 B.C.	
Middle	Saugeen Princess Point	400 B.C. - 500 A.D. 500 – 800 A.D.	Long distance trade networks. Incipient horticulture
Middle: Western Basin	Couture	300 B.C. –500 A.D.	Long distance trade networks
	Rivière au Vase	500-900 A.D.	Incipient horticulture
Late: Iroquoian	Early Iroquoian	800 – 1280 A.D.	Transition to village life and agriculture
	Uren	1280 - 1330 A.D.	Large village sites
	Middleport	1330 - 1400 A.D.	Widespread stylistic horizon
	Neutral	1400 - 1650 A.D.	Tribal differentiation and warfare
Late: Western Basin	Yonge Phase	900 – 1300 A.D.	Transition to village life and agriculture
	Springwells Phase	1300 – 1400 A.D.	Large village sites
	Wolf Phase	1400 – 1550 A.D.	Tribal differentiation and warfare
HISTORIC			
Early	Odawa, Ojibwa, Potawatomi	1700 - 1875 A.D.	Social displacement
Late	Odawa, Ojibwa, Potawatomi, Six Nations, Euro-Canadian	1800 A.D. - present	European settlement

In general, settlement and subsistence patterns of the Archaic Period are characterized by small camps and scattered finds related to a seasonal round of hunting, fishing and the gathering of wild plant foods. A significant development in settlement at the very end of the Late Archaic was

the use of communal cemeteries by peoples of the Glacial Kame Culture. These cemeteries date to ca. 1000 B.C. and typically feature rich mortuary ceremonialism.

The Woodland Period (1000 B.C. – 1650 A.D.)

The Woodland Period that follows the Archaic in the lower Great Lakes region spans a series of important changes in culture and adaptation. This period is most commonly divided into three chronological sub-periods: Early, Middle and Late. For the Woodland period archaeologists have recognized a cultural divide between the sites of the central and eastern portions of southwestern Ontario and those of the westernmost portion of the region. Sites in the latter portion of the region pertain to what is termed the Algonquian Western Basin Tradition while sites in the central and eastern portions of the region are ancestral Iroquoian.

Early Woodland (ca. 900 to 400 B.C.)

The Woodland Period is marked by the introduction into Ontario of pottery, the earliest of which dates to the Early Woodland sub-period. Beyond this, there appear to have been no substantial changes in the hunting, fishing and gathering settlement and subsistence patterns followed during the Late Archaic. Burial ceremonialism, however, suggests an increased social or territorial identity with a particular resource area such as a drainage system.

Mortuary ceremonialism is characteristic of this period, as expressed by the inclusion of elaborate grave goods in burials, and it represents the florescence of a pattern recorded for the slightly earlier Glacial Kame Culture of the Terminal Archaic. The evidence for the Early Woodland period suggests that it represents an increased social or territorial identity with a particular resource area such as a drainage system.

Middle Woodland (ca. 300 B.C. to 500 A.D.)

The Couture Complex of the Western Basin Tradition, which occupied this region during the Middle Woodland period, is the poorest known of the Middle Woodland cultural complexes of southern Ontario. This complex occupied the area drained by rivers flowing into Lake St. Clair and the northwest shore of Lake Erie.

The Couture Complex subsistence included the hunting of deer as well as the gathering of black walnut, hickory and acorn. There are some indications that mortuary practices of this complex included the use of burial mounds, and burial mounds have certainly been recorded on Pelee Island and on the mainland north of Point Pelee. Another characteristic of this time period is the presence of large caches of exotic artifacts that provide evidence of long distance contacts with peoples of the Hopewellian Interaction Sphere. One example from the Bothwell Sand Plain of Kent County is a cache of over 200 bifaces of Flint Ridge Chalcedony; the source for that material is in central Ohio.

Late Woodland (ca. A.D. 800-1650)

The Late Woodland sub-period in the Western Basin Tradition has been divided into four sequential phases: the Rivière au Vase Phase (ca. 500-900 A.D.); the Younger Phase (ca. 900-1300 A.D.); the Springwells Phase (ca. 1300-1400 A.D.); and the Wolf Phase (ca. 1400-1550 A.D.).

The Rivière au Vase Phase is best known from sites on Point Pelee. Sites of this phase include small camps as well as longer term occupations by larger populations exploiting the rich marsh and lakeshore environment. These sites were occupied during the warm seasons. It is believed that in the winter the population dispersed into a number of small groups to hunt elsewhere within their territory.

Our knowledge of the Rivière au Vase Phase is limited, as sites of that phase are generally rare. In contrast, the succeeding Younger Phase is represented by numerous well documented sites. Subsistence during that phase represented a continuation of the Rivière au Vase Phase, with a seasonal round that included the exploitation of seasonally abundant resources. Corn was grown by Younger Phase peoples, but it only occurs in small quantities on sites of this phase and it is evident that it only represented a supplementary food source. That is in sharp contrast to contemporary Iroquoian sites, where cultigens represented an ever increasingly important part of the diet. It has been hypothesized that the larger number of Younger Phase sites reflects an increase in population during the period ca. 900-1300 A.D; it has further been hypothesized that the people of this region expanded into previously uninhabited areas during this period (Murphy and Ferris 1990:262). The Younger Phase settlements included villages on the Thames River east of Thamesville.

Settlement and subsistence during the succeeding Springwells Phase represented a continuation of earlier patterns, but with an increased emphasis on warm season village sites located in areas with a diversity of natural resources. That pattern evidently reflects an increased reliance of agriculture to supplement the diet of Springwells Phase peoples. Winter camps occur on the Thames River during this period, but not village sites. At the same time, Springwells Phase peoples expanded into the East Dover Plain on the east side of Lake St. Clair. These moves may have been in response to a westward expansion of contemporary Iroquoian peoples into the Western Basin Tradition territory of the Bothwell Sand Plain during the 13th century.

The transition between the Springwells and Wolf Phases and the Wolf Phase itself are both marked by the use of village sites surrounded by protective earthworks. Contemporary villages of the pre-contact Neutral Iroquoians are also protected by earthworks with palisades, providing evidence of continued warfare and tension between the Iroquoians and Western Basin peoples of southwestern Ontario.

Although the study area fell within the limits of the Western Basin Tradition throughout most of the Late Woodland period, it was in reality part of the frontier that separated Western Basin peoples in extreme southwestern Ontario from the contemporary Iroquoian peoples of the Neutral tribal confederacy in the central and eastern parts of southwestern Ontario. In the late 15th century, during the Wolf Phase of the Western Basin Tradition, there was a westward expansion of Neutral (or Attawandaron) peoples into the Bothwell sand plain and a small number of Iroquoian villages were established in what is now Kent County, as far west as Chatham. This westward expansion reflects warfare between the Iroquoian Neutral peoples and their Algonquian-speaking Western Basin contemporaries. It was a conflict that extended back into the 15th century and that eventually led to the withdrawal of the Neutral to east of the Grand River by the late 16th century. By the time of the European fur trade in the first half of the 17th century, the conflict between the Neutral and the Algonquian Fire Nation who lived around the west end of Lake Erie was still ongoing.

As originally formulated by J.V. Wright (1966), the full sequence of the Ontario Iroquoian Tradition involves three main stages, termed Early, Middle, and Late Ontario Iroquoian. The Iroquoian peoples of southwestern Ontario consisted of the Neutral tribal confederacy and their prehistoric ancestors.

The Early Iroquoian stage in this region spans the period ca. 800-1280 A.D. and comprises the evolution of various communities. They were typically oriented to drainage systems on sand plains in the area of the Thames River and Sydenham River drainages, and on the stream courses that flowed south into Lake Erie and east into Lake Ontario. J.V. Wright (1966) distinguished between the Early Iroquoian peoples of southwestern Ontario and of south-central and southeastern Ontario as the Glen Meyer and Pickering Branches, respectively. However, those terms have fallen out of favour with more recent researchers, who don't accept the construct that two distinct branches existed during the Early Iroquoian stage.

The succeeding Middle Iroquoian stage subsumes the Uren sub-stage (ca. 1280-1330 A.D.) and the Middleport sub-stage (ca. 1330-1400 A.D.). This period was characterized by an increase in village size and, around the beginning of the Middleport substage, by the abandonment of sand plains and a shift into areas with heavier, more drought-resistant soils.

Archaeologists typically divide the Late Iroquoian stage in southwestern Ontario into three successive periods: the prehistoric (or pre-contact) Neutral (ca. 1400-1550 A.D.); the proto-historic Neutral (ca. 1550-1580 A.D.); and the historic Neutral (ca. 1580-1651 A.D.). Of these, the proto-historic Neutral marks the period of indirect contact with European fur traders and missionaries, while the historic Neutral marks the period of direct contact with Europeans.

Each of the Iroquoian villages in the Bothwell sand plain had a population of up to several hundred individuals and was protected by earthworks. The Iroquoian way of life was largely based on a subsistence pattern that involved the cultivation of corn, beans and squash, supplemented by hunting, fishing and the gathering of wild plant foods. Iroquoian villages were typically occupied year-round for some 12-20 years. They moved when the local supply of firewood had been exhausted and the soils in the surrounding agricultural fields were no longer fertile. Villages may cover from one to several hectares in size and included numerous dwellings known as longhouses. In addition to villages, satellite settlements consisting of smaller, more temporary habitations such as agricultural cabin sites and fishing and hunting camps may occur in the area surrounding the village.

The prehistoric Neutral were widely distributed throughout the southern part of southwestern Ontario, from Lake Ontario and the Niagara Peninsula westward to west of London. In the mid 16th century, however, the communities in the western part of the region moved east of the Grand River. The Neutral and the other Ontario Iroquoian tribal confederacies all met the same fate in the mid 17th century: first devastated by a series of plagues accidentally introduced by the Europeans; and finally dispersed and driven from their homelands by raids from the Iroquois of New York State in 1649-1651 A.D.

The Historic Period (A.D. 1700 to Present)

The history of the First Nations peoples during the second half of the 17th century and the succeeding 18th century was one of wide-scale cultural displacement. The displacement of the

Iroquoians from southern Ontario in 1649-51 and the Algonquian-speaking peoples from adjacent Michigan and Ohio resulted in a re-organization of the cultural landscape of southwestern Ontario towards the end of the 17th century. It was during this period that the Ojibwa established themselves in the region. The available natural resources also made the area attractive for hunting, fishing and foraging for plant foods. Maple sugar was also an important product during this period.

The loss of the Thirteen Colonies in the American Revolution provided the British Crown with an incentive to expand settlement into what became Upper Canada in 1791. To that end, the Crown negotiated a series of treaties with the resident First Nations peoples.

The early efforts to settle the Huron Tract are inextricably linked to John Galt and the Canada Company. Galt, a Scottish-born author of some fame in England, had been involved in Canadian affairs since his advocacy for war reparations claimants in the aftermath of the War of 1812. He was instrumental in the formation of the Canada Company in 1824, for the purposes of purchasing Crown and Church land en masse, and then selling it for settlement. As part of the complicated negotiations with Church and Crown involving these lands, the Company received one million acres of land in the Huron Tract, which had been recently acquired from the Ojibwa (Scott 1966: 13-14).

The first Euro-Canadian settlers in what would become Huron County arrived in the second half of the 1820s. However, by 1837, there were still less than 400 inhabitants in the county. The building of a major settlement road (the Huron Road) to Goderich in 1827 gradually changed this, and the London Road, another major settlement road, was opened in the fall of 1832 (Scott 1966:53). By 1842 the population of the Huron Tract had exploded to 7,190. Much of this settlement was centred on Goderich and along the London and Huron Roads, but settlement also began to expand to points north (Scott 1966: 52-57). In 1850 Huron County was created out of the District of Huron.

Goderich and Tuckersmith Geographic Townships were the earliest in the county to be settled, beginning as early as 1828 on a small scale. Stephen Geographic Township was settled beginning in 1832, located as it was to the south of the future county, closer to already existing population centres like London. Hay Geographic Township is located to the north of Stephen Geographic Township; it contains the majority of proposed turbine sites. Hay was surveyed in 1835. It has a surface area of approximately 54,527 acres (22,076 hectares); as of 1879, 26,000 acres (10,526 hectares) of the township were improved. The population at that time was 4,119, which was slightly smaller than its southern neighbour: Stephen Township. This is partly due to its later settlement date: the main source of new inhabitants for this part of Huron County was the London Road, which meant that many travelers simply stayed in Stephen Township. The earliest recorded settlers in Hay Township arrived in 1833; as was the case with Stephen Township, they settled along the London Road. The next highest concentration of settlers was along the Lake Road (now Bluewater Highway) (Hay Township Book Committee 1996: 51). Between 1846 and 1851 French Canadians from Quebec settled at St. Joseph. By 1861 new waves of German and Pennsylvania Dutch emigrants had arrived. The population of Hay Township that year was 3,054 (Hay Township Book Committee 1996: 30).

A prominent feature of Hay Township was Hay Swamp, also known as “the Big Marsh;” it extended from Concession 4 to Concession 8 and covered some 8,000 acres, representing 15% of

the surface area of the township (Hay Township Book Committee 1996: 12). It was and is very rich in wildlife, including deer.

Figures 4 to 6 inclusive are facsimiles of the 1879 Historical Atlas maps of the geographic townships that are involved in the minor modifications to the Grand Bend Wind Farm (Belden 1879). They show the locations of the individual proposed wind turbines and as well as the areas of additional survey in relation to the extent of the settlement as of the third quarter of the 19th century. As can be seen from these maps, none of the areas requiring additional survey is situated in proximity to any mapped structures.

1.3 Archaeological Context

This section of the report consists of several distinct elements as defined in Section 7.5.8 of the Standards and Guidelines (Ministry of Tourism and Culture 2011: 125-126). They are described below.

Previous Archaeological Fieldwork

The only previous archaeological fieldwork that the authors of this report are aware of was carried by staff of D. R. Poulton & Associates in 2012 (DPA 2012). That survey covered the vast majority of the lands that will be involved in the construction and maintenance of the Grand Bend Wind Farm. The previous survey of the proposed wind turbines, access roads and related facilities resulted in the discovery of nine archaeological sites. Six of the sites consist of isolated pre-contact First Nations find spots of unknown age and cultural affiliation. The remaining three sites consist of diffuse scatters of Euro-Canadian refuse. None of these sites was considered to have any heritage value or interest (DPA 2012: 49-50).

Registered Archaeological Sites

Data on registered sites within the study area were provided by Robert von Bitter, Archaeological Data Coordinator of the Ministry on November 15, 2011. Consultation with the Ministry of Tourism, Culture and Sport determined that five sites have been registered within the one-kilometre study area for the proposed development; although, none of the sites is located within or near any of the lands to be impacted. They are AhHk-117 (the M.T. Johnston site), AhHk-118, AhHk-119 (the Simmons Drain site), AiHj-2, and AiHj-3. Summary data on the registered archaeological sites are presented in Table 2. All five sites are First Nations components. Unfortunately, all five sites are of unknown age and cultural affiliation.

Two of the sites are isolated find spots; each consists of one or a few chipped lithic artifacts. The other three registered sites are lithic scatters. The term “*lithic scatter*” is used by archaeologists to refer to ploughed-disturbed sites where most or all of the artifacts consist of chipped stone tools and debitage, the waste product of chipped stone tool manufacture and maintenance. In most cases, lithic scatters represent temporary occupations by small groups of people; these are characteristic of sites such as hunting camps.

Table 2 Summary Data on Registered Archaeological Sites in the Study Area

Borden #	Site Name	Site Type	Cultural Affiliation
AhHk-117	M.T. Johnston	Lithic Scatter	First Nations, indeterminate age & cultural affiliation
AhHk-118	N/A	Lithic Scatter	First Nations, indeterminate age & cultural affiliation
AhHk-119	Simmons Drain	Lithic Scatter	First Nations, indeterminate age & cultural affiliation
AiHj-2	-	Isolated find spot	First Nations, indeterminate age & cultural affiliation
AiHj-3	-	Isolated find spot	First Nations, indeterminate age & cultural affiliation

Conditions in the Subject Lands

Figure 1 is an overview of the Grand Bend in relation to the additional archaeological work discussed in this report. As illustrated, the minor modifications to the Grand Bend Wind Farm are situated within two geographic townships, Hay and Tuckersmith, in the Municipalities of Bluewater of Huron East, respectively.

Figures 7 to 11 illustrate the layouts for the minor revisions to the Grand Bend Wind Farm. They also show the location and direction of the photographic plates that illustrate archaeological survey conditions in these areas. More detailed information on all of these facilities is provided in Section 2.0 of this report.

Turbine 21, the construction compound, and the switchyard are contained entirely within agricultural fields. The northern of the two meteorological towers is partly in an agricultural field and partly in a fencerow. The proposed location for the southern tower is in a grassed area that already contains a meteorological tower.

Three different soil types are represented in the revisions and additions to the Grand Bend Wind Farm. The northern meteorological tower and Turbine 21 are located on Berrien sandy loam. Berrien sandy loam is part of the Grey-Brown Podzolic Group (Hoffman et al. 1952, South Sheet). The drainage is imperfect, the soil materials of this soil consist of sandy outwash over fine textured till and the soil profile consists of 6" inches (15 cm) of dark brown sandy loam over slightly mottled sand horizons which are usually fairly well defined (Ibid). In this soil type heavy clay usually occurs at depths of 3' (92 cm) or less (Ibid).

The construction compound and the southern meteorological tower are located on Brady sandy loam. Brady sandy loam is part of the Azonal Alluvial Group (Hoffman et al. 1952, South Sheet). The soil materials of this soil consist of well sorted sandy outwash and the soil profile consists of 6" (15 cm) of dark grey sandy loam over slightly mottled sandy loam; the drainage is imperfect (Ibid).

The switchyard is located on Perth clay loam. This soil is part of the Grey Brown Podzolic Group (Hoffman et al. 1952, South Sheet). The soil materials of this soil consist of fine-textured

till and the soil profile consists of 6" (15 cm) of dark grey clay loam, or silty clay loam; the drainage is imperfect (Ibid).

The majority of the proposed Grand Bend Wind Farm lies within the Huron Fringe and Huron Slope physiographic regions. The Huron Slope is located between the Algonquin shore cliff and the Wyoming Moraine. Chapman and Putnam describe the area as a clay plain modified by a narrow strip of sand (1984:161). The Huron Slope rises gently from 475 to 700 metres a.s.l. (ibid: 160). The Huron Fringe is a narrow fringe of land, approximately 125 kilometres long, along the eastern shore of Lake Huron from Sarnia to Tobermory. It comprises wave-cut terraces of postglacial Lake Algonquin and Lake Nipissing and is characterized by boulders, gravel bars and sand dunes (Chapman and Putnam 1984:161). The switchyard for the wind farms is located with the Stratford Till Plain a clay plain characterized by mostly level gravel moraines (ibid: 133).

Dates of the 2012 Archaeological Fieldwork

Survey of the two meteorological towers, the construction compound and the new alignment of Turbine 21 were surveyed on November 14, 2012. However, conditions in the field containing the switchyard did not permit survey. This field will be surveyed in the spring of 2013 following ploughing. This information is being included herein to satisfy Standard 3 of Section 7.5.8 of the Standards and Guidelines (Ministry of Tourism and Culture 2011: 125).

2.0 STAGE 2 FIELD METHODS

Standard 2a of Section 7.8.1 of the Standards and Guidelines (Ministry of Tourism and Culture 2011: 137) requires that this section of Stage 1-2 or Stage 2 reports provide detailed and explicit descriptions of how each standard was addressed for the property survey generally. The following information is intended to satisfy this standard.

Survey of the changes to the proposed Grand Bend Wind Farm was conducted on November 14, 2012. As stated in Section 1.1 of this report, the Stage 2 archaeological assessment was conducted by Sherri Pearce (Licence #P316) and a crew of one. The weather on that day was seasonal but sunny and the lighting conditions were excellent. Prior to the survey northern of the meteorological towers, the construction compound and the new layout for Turbine 21 were staked by Colin Mackenzie of Neegan Burnside Ltd. In doing so, he used a GPS unit. It was a Trimble R8 rover used in conjunction with Cansels CANNET System, which is a series of GPS base stations spread throughout Canada. The proposed sites were calibrated to 17 survey monuments taken from the MNR Cosine website.

Standard 1 of Section 2.1 of the Standards and Guidelines (Ibid: 28) requires that the entire property be included in the survey. In the present case, with the exception of the switchyard, all of the lands that will be subject to potential impact from the changes and additions to the proposed Grand Bend Wind Farm were surveyed. As such, the November 14th 2012 survey satisfied Standard 1 of Section 2.1 of the Standards and Guidelines.

Pedestrian Survey

Turbine 21

The additional land required for the revised layout of Turbine 21 was ploughed prior to October 31, 2012. In the intervening two weeks, there were several light rainfalls and one substantial rainfall. The survey area was well-weathered and ground visibility was excellent at 95 to 100%. The survey was conducted at a 5 m interval. Figure 7 shows the extent of the November 14th survey, as well as the previous survey. It also shows the location and direction of the two photographic plates of the survey of Turbine 21 that are included in this report. Plate 1 is a view southwest of the realigned access road. Plate 2 is a view northwest of the area surveyed. The stake in the centre of the photo is the new location for the turbine.

Construction Compound

The field containing the proposed 5.4 hectare construction compound was ploughed prior to October 31, 2012. In the intervening two weeks, there were several light rainfalls and one substantial rainfall. The field was well-weathered and ground visibility was excellent at 90 to 95%. The surface survey covered the entire area required for the compound at a 5 m interval. Figure 8 illustrates the extent of the November 14th survey as well as the previous survey. This figure also includes the location and direction of the two photographic plates that illustrate field conditions. Plate 3 is a view southwest of the northern edge of the proposed construction compound. Plate 4 is a view northwest of the archaeological survey in progress.

Test Pit Survey

The requirements for shovel test pit survey are detailed in Standards 1-9 of Section 2.1.2 of the Standards and Guidelines (Ministry of Tourism and Culture 2011: 31-32). Standard 1a-e of Section 2.1.2 requires that test pit survey be limited to lands where ploughing is not possible or viable (Ibid: 31) and Standard 1f of Section 2.1.2 permits the test pit survey of linear corridors with widths of 10 m or less (Ibid: 32). Standard 2 of Section 2.1.2 requires that test pit survey be conducted at a five metre interval (Ibid: 32). Standards 5, 6 and 7 of Section 2.1.2 require that test pits be 30 cm in diameter, that they be excavated 5 cm into subsoil, and that the soils be screened through mesh no greater than 6 mm (Ibid). Finally, Standard 9 of Section 2.1.2 requires that all test pits be backfilled unless the landowner instructs otherwise (Ibid).

The locations for the two meteorological towers were surveyed by shovel test pit using a 5 m interval. The test pits were at least 30 cm in diameter, and were excavated 5 cm into subsoil. The soil from the test pits was screened through 6mm mesh and the soil was returned to the pit upon completion.

Northern Meteorological Tower

The proposed location for the meteorological tower in Lot 21, Concession 15 of Hay Geographic Township is adjacent to the access road that leads to Turbines 11 through 16 (Figure 9). Slightly less a 12 m² area is required for the construction of the meteorological tower. The southern seven metres is in a winter wheat field. The remaining five metres is part of a fencerow. A close interval examination of the winter wheat portion determined that ground surface visibility was roughly 60% to 70%. As these conditions are not adequate for a surface examination, therefore, the entire area needed for the construction of the tower was test pitted. Plate 5 is a view northwest of the test pit survey in progress (Figure 9). The stakes visible in this photo show the extent of the area required for the tower.

Southern Meteorological Tower

The location of the southern meteorological tower is situated north of a farm lane in Lot 28, East of Lake Road, in Hay Geographic Township. An existing tower at this location is to be replaced by a new version. The area containing the tower is in grass. As the area had not been staked, a larger area than required for construction of the tower was surveyed in order to ensure that the area was covered (Figure 10). Plate 6 is a view northeast to the test pit survey in progress. This photo also shows the existing tower.

Switchyard

Figure 11 is a layout of the proposed switchyard location. The field containing the switchyard was, until recently, in soya beans. The beans have since been harvested; however, ground visibility is not adequate for a pedestrian survey. The area will be ploughed early in the spring of 2013.

3.0 RECORDS OF FINDS

According to Standard 2 of Section 7.8.2 of the Standards and Guidelines formulated by the Ministry of Tourism and Culture (2011: 138), the Record of Finds section of the document requires that archaeological assessment reports include an inventory of the documentary record that was generated by the fieldwork. The documentary record that has been generated by the fieldwork documented in this report includes hand-made notations on printouts of digital aerial photographs of the proposed changes to the Grand Bend Wind Farm. It also includes field notes in a bound field notebook. Finally, it includes digital photographs of the fieldwork.

Section 7.8.2 of the Standards and Guidelines formulated by the Ministry of Tourism and Culture (2011: 137-138), which concerns the Record of Finds section of the document, requires that Stage 2 assessment reports provide specific types of information on all archaeological discoveries. The Stage 2 survey of the revisions to the Grand Bend Wind Farm did not discover any archaeological remains.

4.0 STAGE 2 ANALYSIS AND CONCLUSIONS

Standard 1 of Section 7.8.3 of the Standards and Guidelines formulated by the Ministry of Tourism and Culture (2011: 138) requires that the Analysis and Conclusions section of reports on Stage 2 fieldwork addresses the following statement: “*Summarize all findings from the Stage 2 survey, or state that no archaeological sites were identified.*” The information that is presented below is intended to satisfy the standard that is specified in Standard 1 of Section 7.8.3 of the 2011 Standards and Guidelines

No archaeological remains were discovered by the survey of the minor modifications to the Grand Bend Wind Farm.

5.0 RECOMMENDATIONS

The Stage 2 archaeological assessment of minor revisions to the Grand Bend Wind Farm resulted in the following recommendations.

1. It is recommended no further archaeological assessment be required for the proposed construction compound, the two meteorological towers and the realignment of Turbine 21.
2. It is recommended that the area for the proposed switchyard be ploughed following the standards set out in Standards and Guidelines (Ministry of Tourism and Culture 2011). A pedestrian survey at a 5 metre interval will be undertaken following sufficient rainfall.

The above conclude the recommendations concerning the minor modifications to the Grand Bend Wind Farm. However, it should be noted that the recommendation concerning construction in the area of the Hensall Union Cemetery, detailed in the Stage 1-2 report (DPA 2012: 51-52) (see Appendix A), is still outstanding. This issue is expected to be resolved once the detailed design for the transmission line in the vicinity of the Hensall Union Cemetery has been formulated.

It is requested that the Ministry of Tourism, Culture and Sport issue a letter accepting the present report into the Ontario Public Register of Reports. It is also requested that the letter include a statement of concurrence with the findings of the Stage 2 archaeological assessment that are documented in this report. Finally, it is requested that a copy of the Ministry's letter be forwarded to Lyle Parsons, Project Manager, Neegan Burnside Inc. His e-mail address is lyle.parsons@neeganburnside.com.

In the event that any deeply buried cultural remains should be discovered during future earthmoving or construction related to the project, it is recommended that the discovery be reported immediately to archaeological staff of the Ministry of Tourism, Culture and Sport. The pertinent telephone number is 416 212-8886 and the e-mail address is Archaeology.ontario.ca. Staff will then allocate an Archaeological Review Officer to respond to the reported discovery.

As stated in Section 6.0 of this report, the *Funeral, Burial and Cremation Services Act* (2002) has provisions concerning the discovery and disposition of human remains. In accordance with the Act, it is recommended that the proponent contact the appropriate authorities in the event that human remains should be discovered during earthmoving or construction related to the project. The individuals and agencies in question are the aforementioned archaeological staff of the Ministry of Tourism, Culture and Sport, the police, the coroner, and Michael D'Mello. Mr. D'Mello is the Registrar of the Cemeteries Regulation Unit of the Ontario Ministry of Consumer Services. His e-mail address is Michael.D'Mello@ontario.ca. His telephone number is 416 326-8404.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

The Standards and Guidelines formulated by the Ministry of Tourism and Culture (2011) that came into effect on January 1, 2011 have requirements that archaeological assessment reports must include statements that concern compliance with pertinent legislation. Those statements were draughted by the Ministry's legal department. Furthermore, it is understood that in order for reports to conform to the current Standards and Guidelines the pertinent statements regarding compliance legislation must not only be cited but must also be quoted verbatim.

The pertinent standards in the Standards and Guidelines are as follows:

1. Advice on compliance with legislation is not part of the archaeological record. However, for the benefit of the proponent and approval authority in the land use planning and development process, the report must include the following standard statements.
 - a. This report is submitted to the Minister of Tourism and 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 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 and Culture, 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 time as a licensed archaeologist has complete 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.

2. Reports recommending further archaeological fieldwork or protection for one or more archaeological sites must include the following statement: “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.”

The above standards are quoted verbatim from Section 7.5.9 of the Standards and Guidelines (Ministry of Tourism and Culture 2011: 126-127). All of them apply to the present report.

7.0 REFERENCES CITED

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Ontario Ministry of Tourism and Culture

2011 **Standards and Guidelines for Consultant Archaeologists**.

D. R. Poulton & Associates (DPA)

2012 The 2011-2012 Stage 1-2 Archaeological Assessment of the Proposed Grand Bend Wind Farm, FIT Contract # F-002178-WIN-130-601, Municipalities of Bluewater, South Huron, & East Huron, Huron County and the Municipality of West Perth, Perth County, Ontario. Report on file with the Ministry of Tourism, Culture and Sport, Toronto.

Scott, James

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Wright, J.V.

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FIGURES

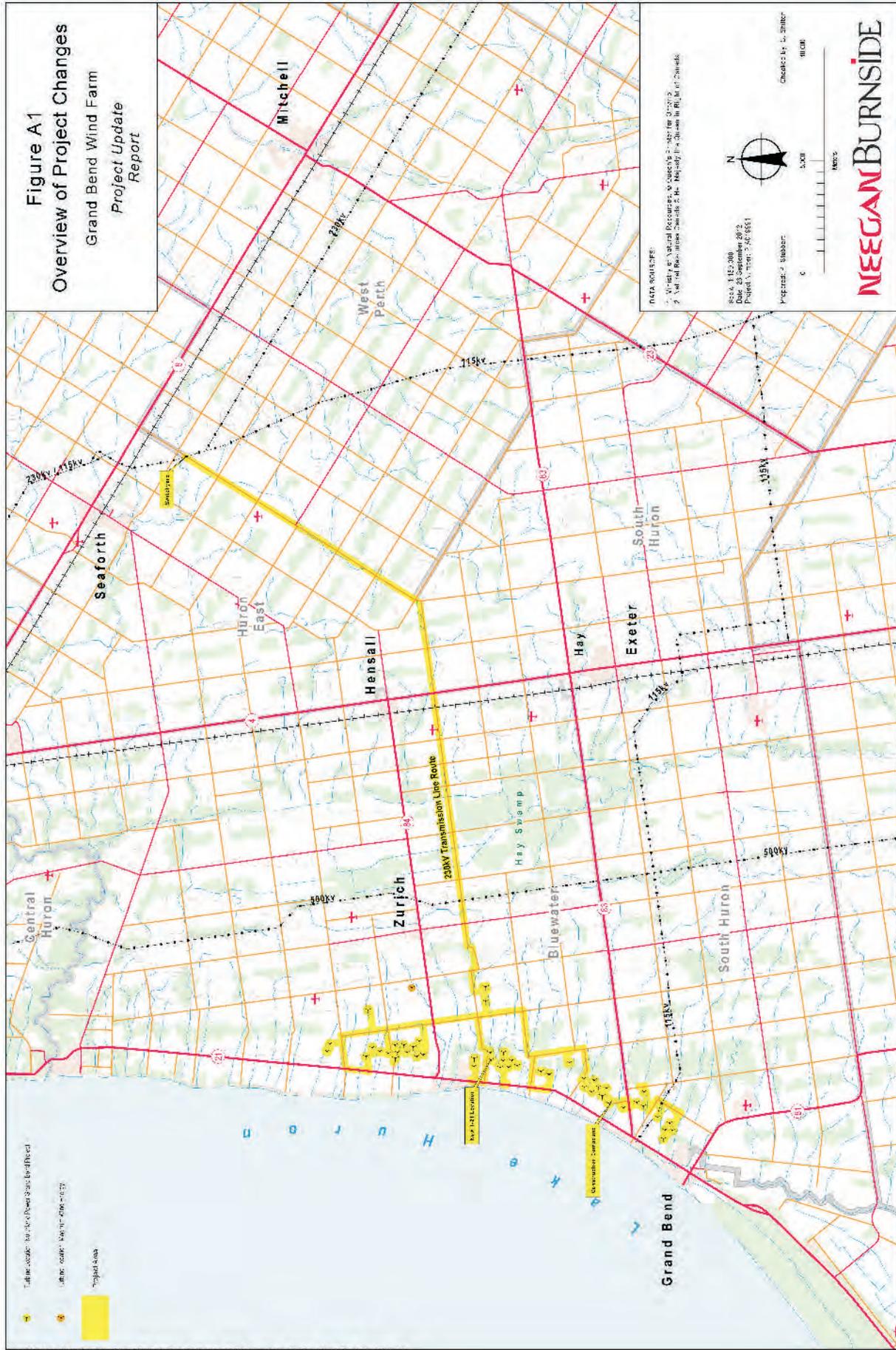


Figure 1 Overview of Project Changes for the Grand Wind Farm

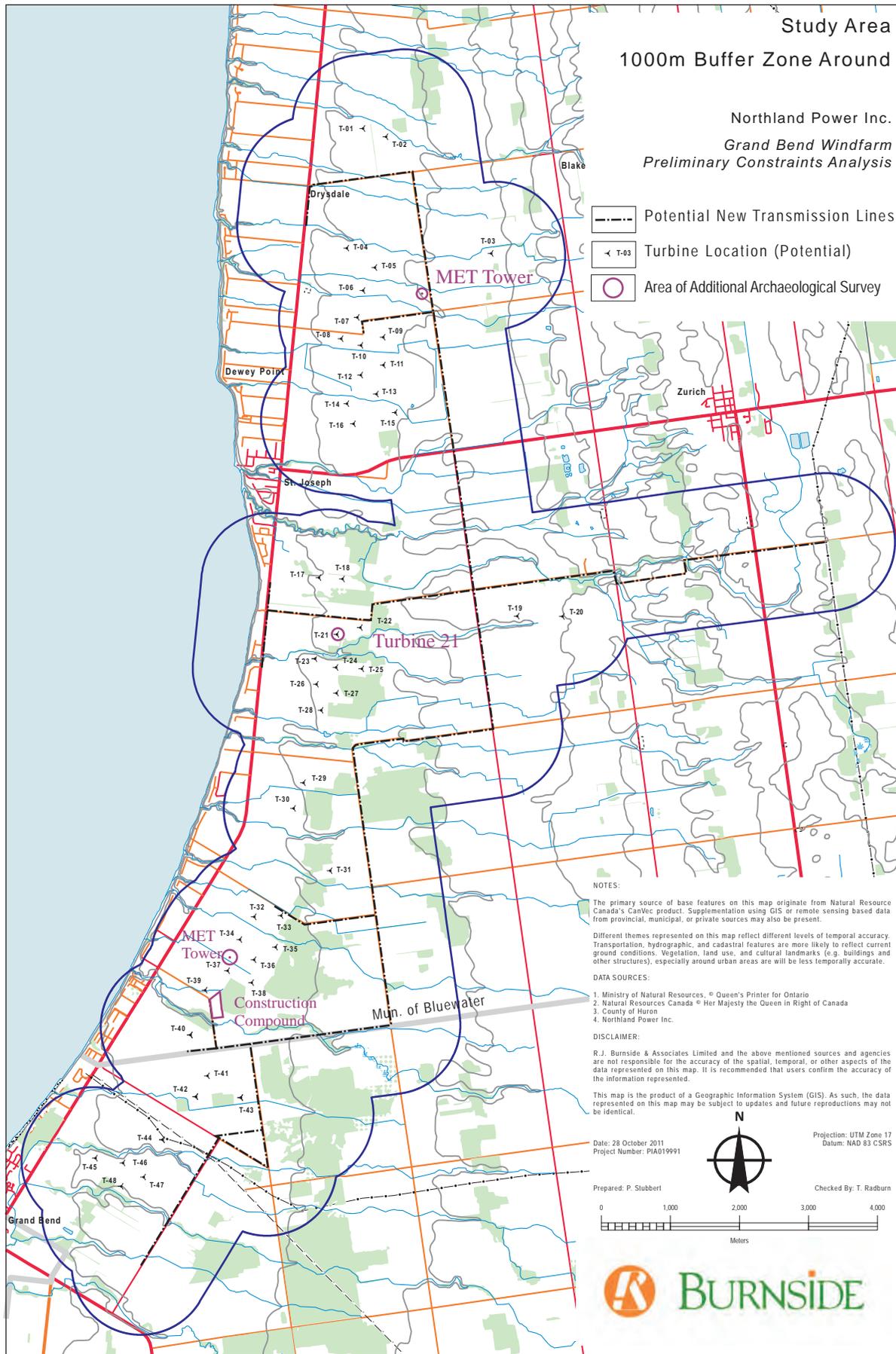


Figure 2 Location of the Construction Compound, MET Towers and Revised Turbine 21

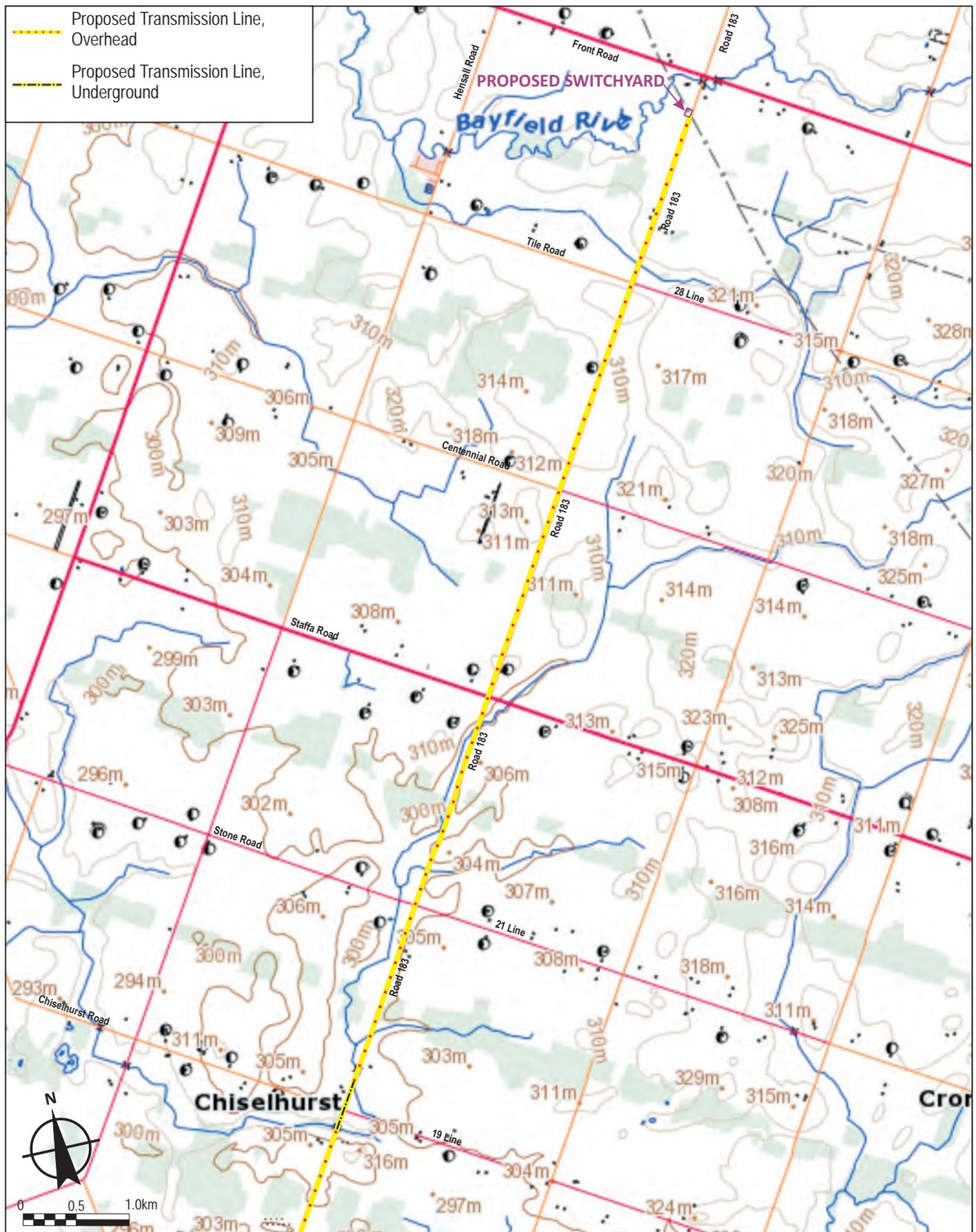


Figure 3 Location of the Proposed Switchyard



Figure 4 Facsimile of the 1879 Historic Atlas Map of Hay and Stanley Townships

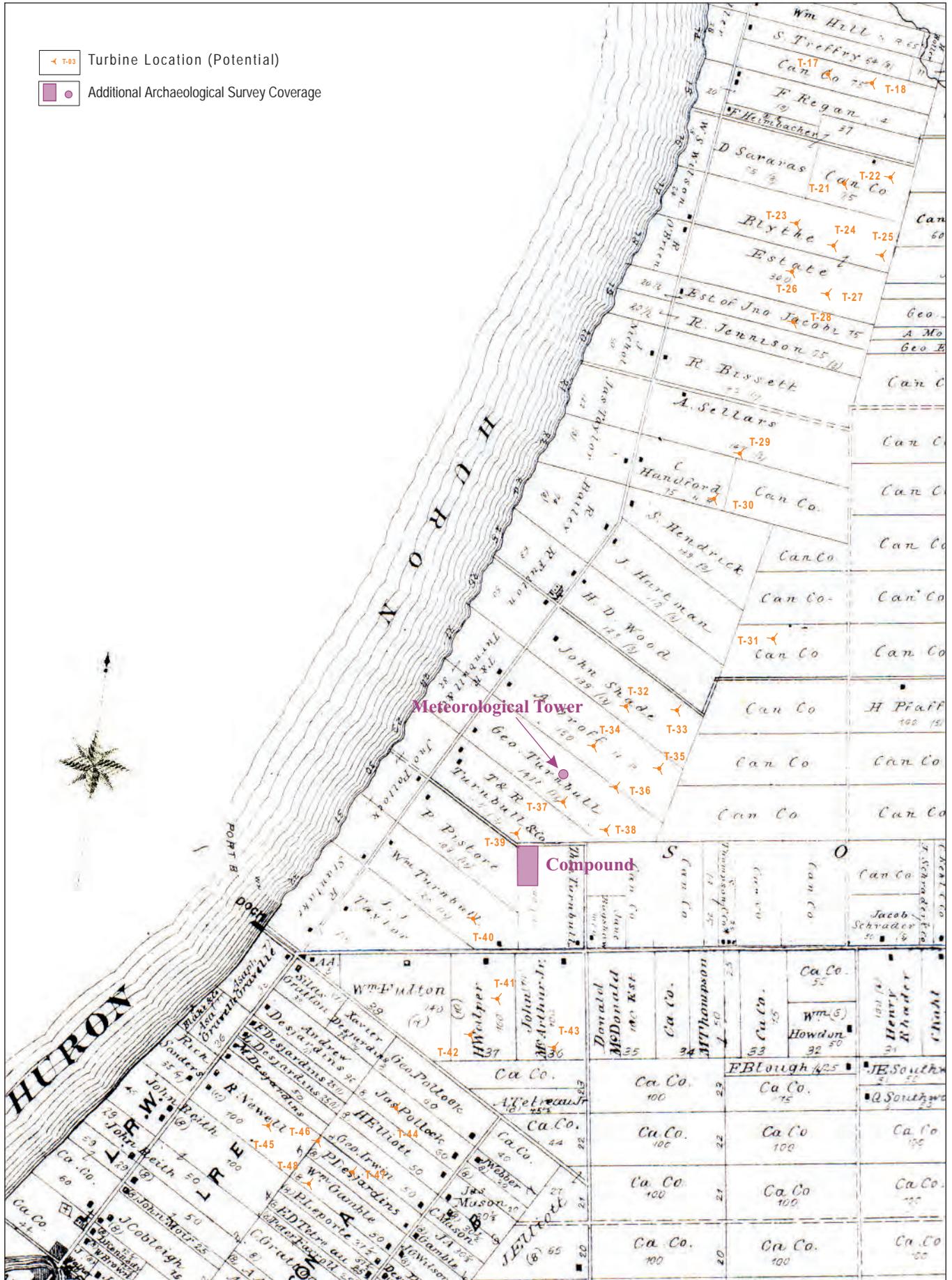


Figure 5 Facsimile of the 1879 Historic Atlas Map of Hay and Stephen Townships

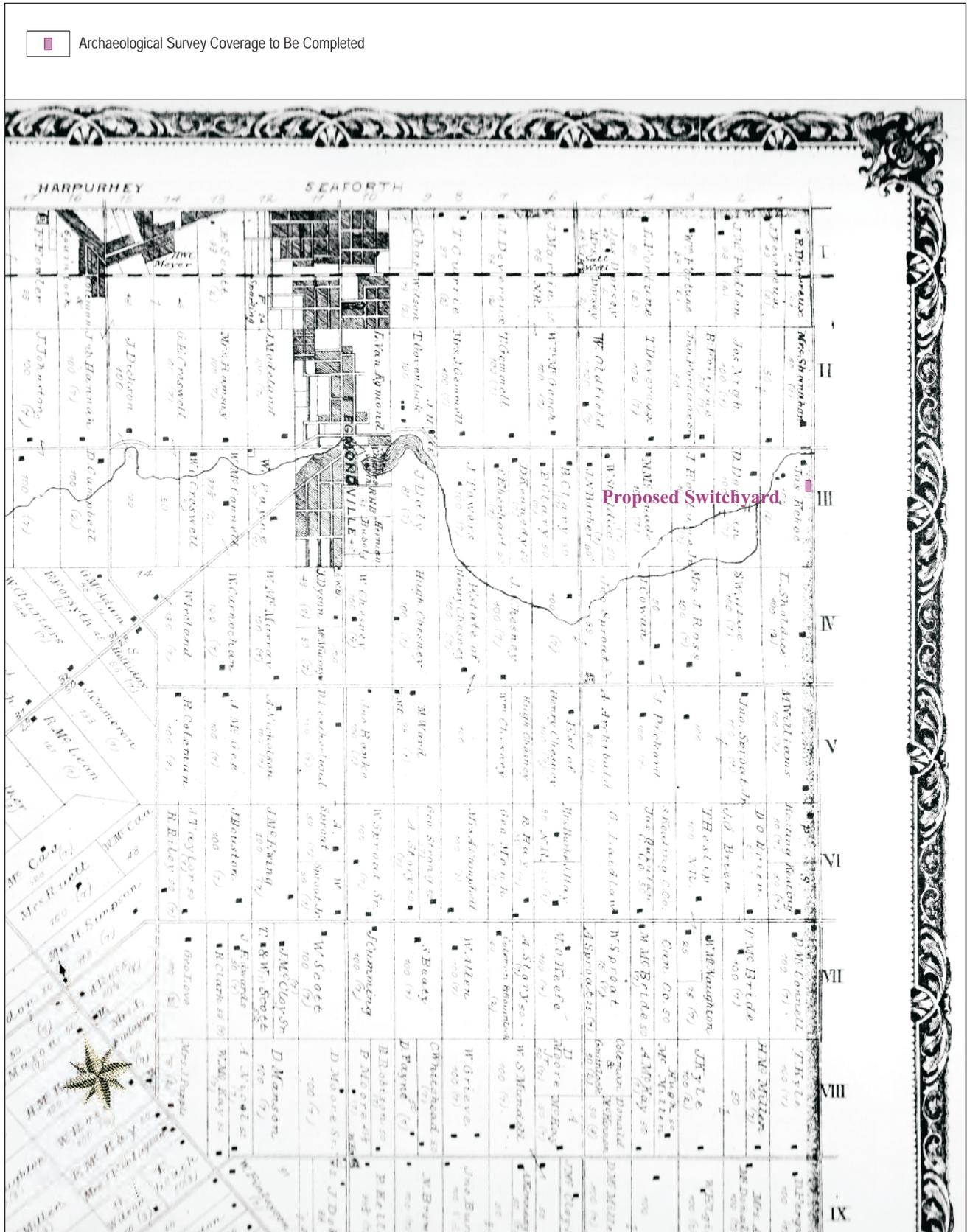


Figure 6 1879 Historic Atlas Map of the Tuckersmith Township

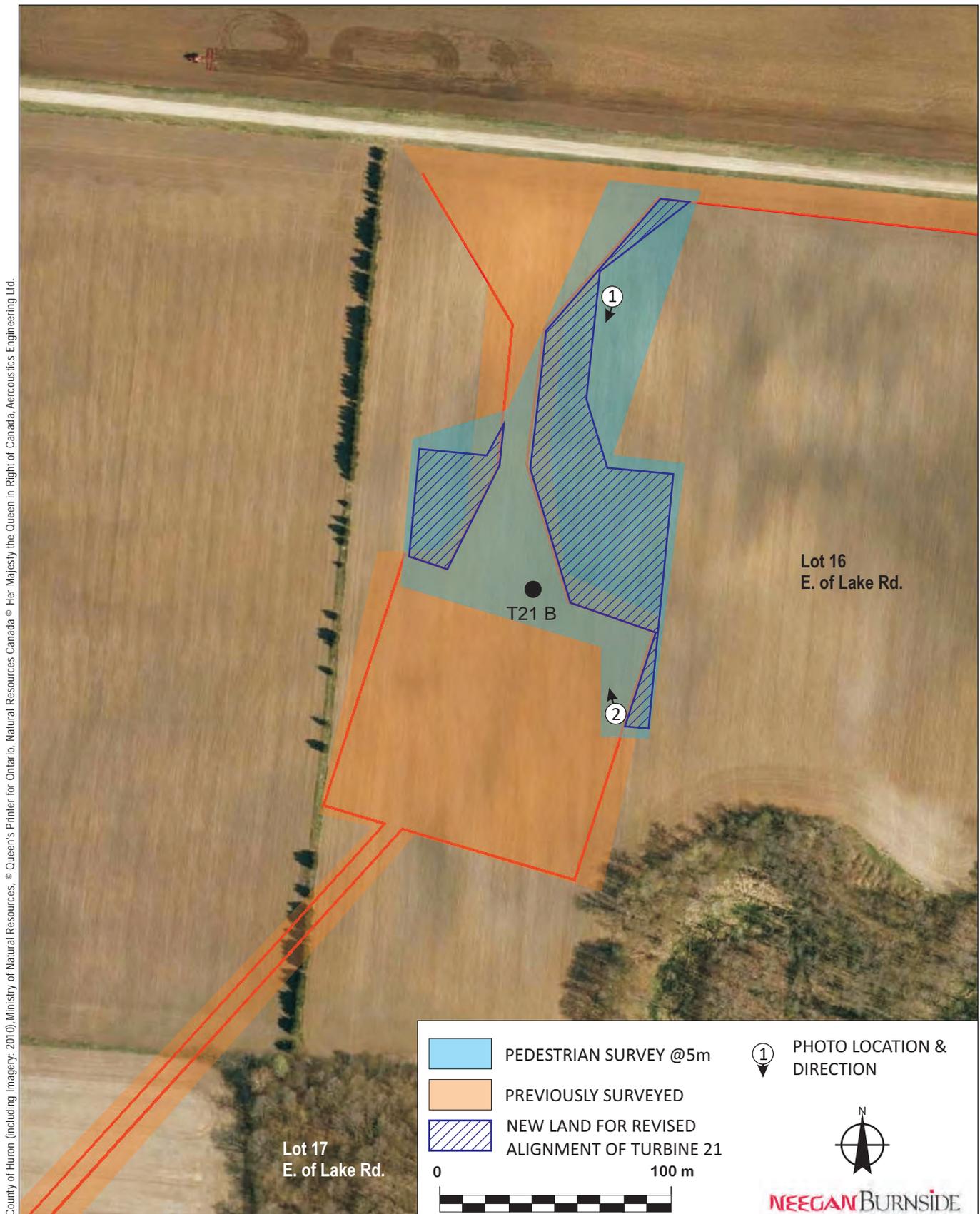


Figure 7 Revised Layout for Turbine 21, Survey Coverage and Key to Photographic Plates

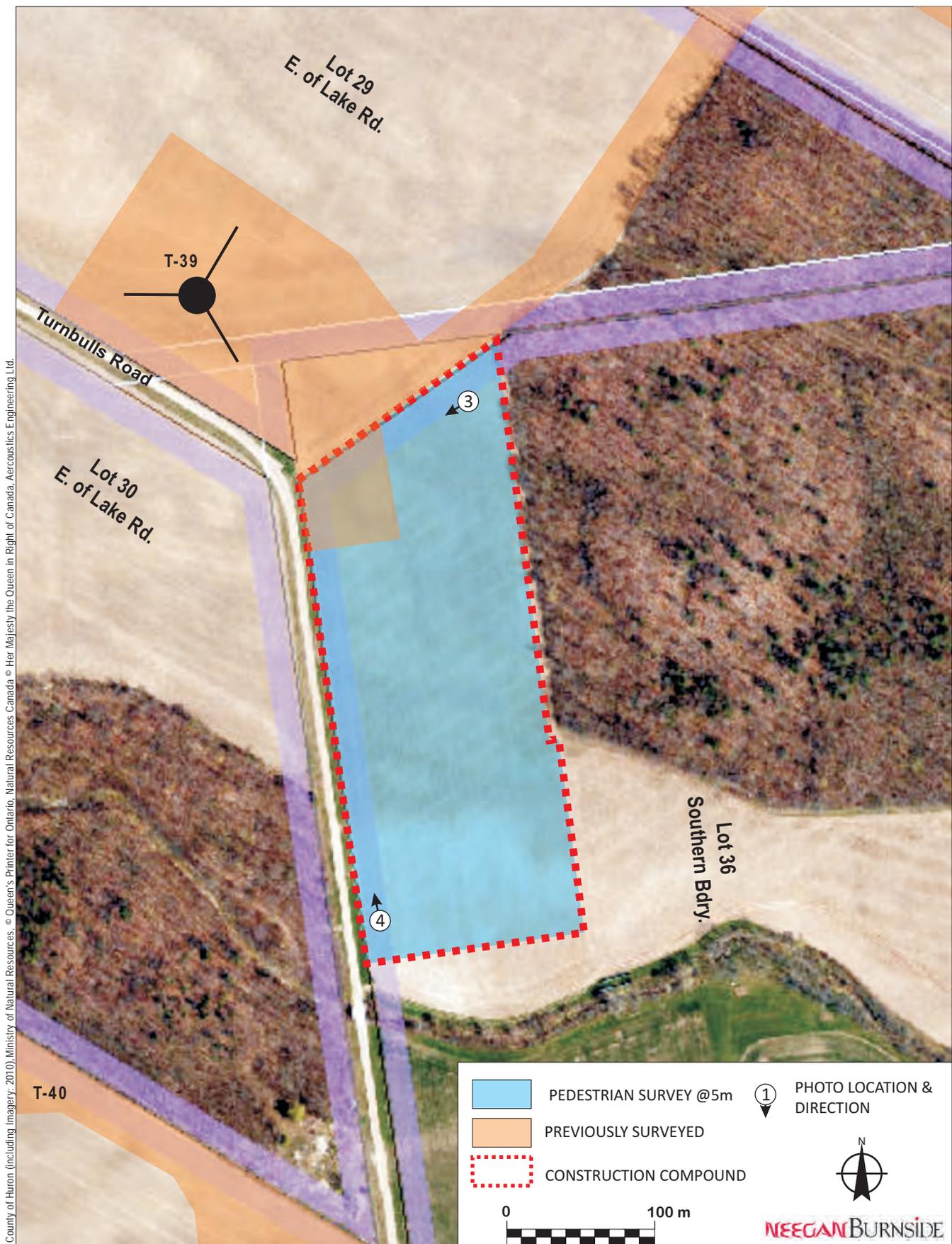


Figure 8 Construction Compound Layout, Survey Coverage and Key to Photographic Plates

County of Huron (including Imagery: 2010), Ministry of Natural Resources, © Queen's Printer for Ontario, Natural Resources Canada © Her Majesty the Queen in Right of Canada, Aercoustics Engineering Ltd.

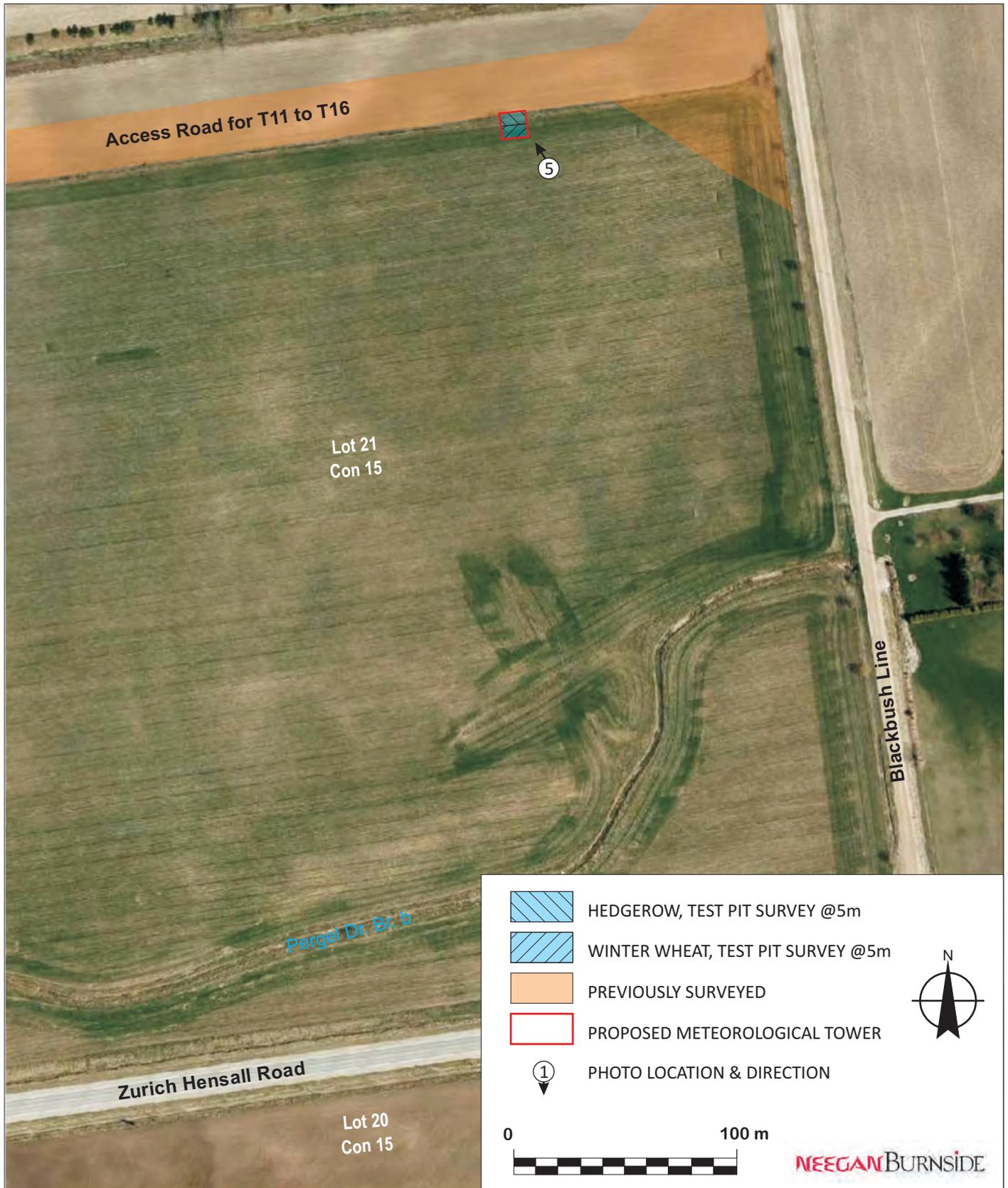


Figure 9 Meteorological Tower Layout, Survey Coverage and Key to Photographic Plate

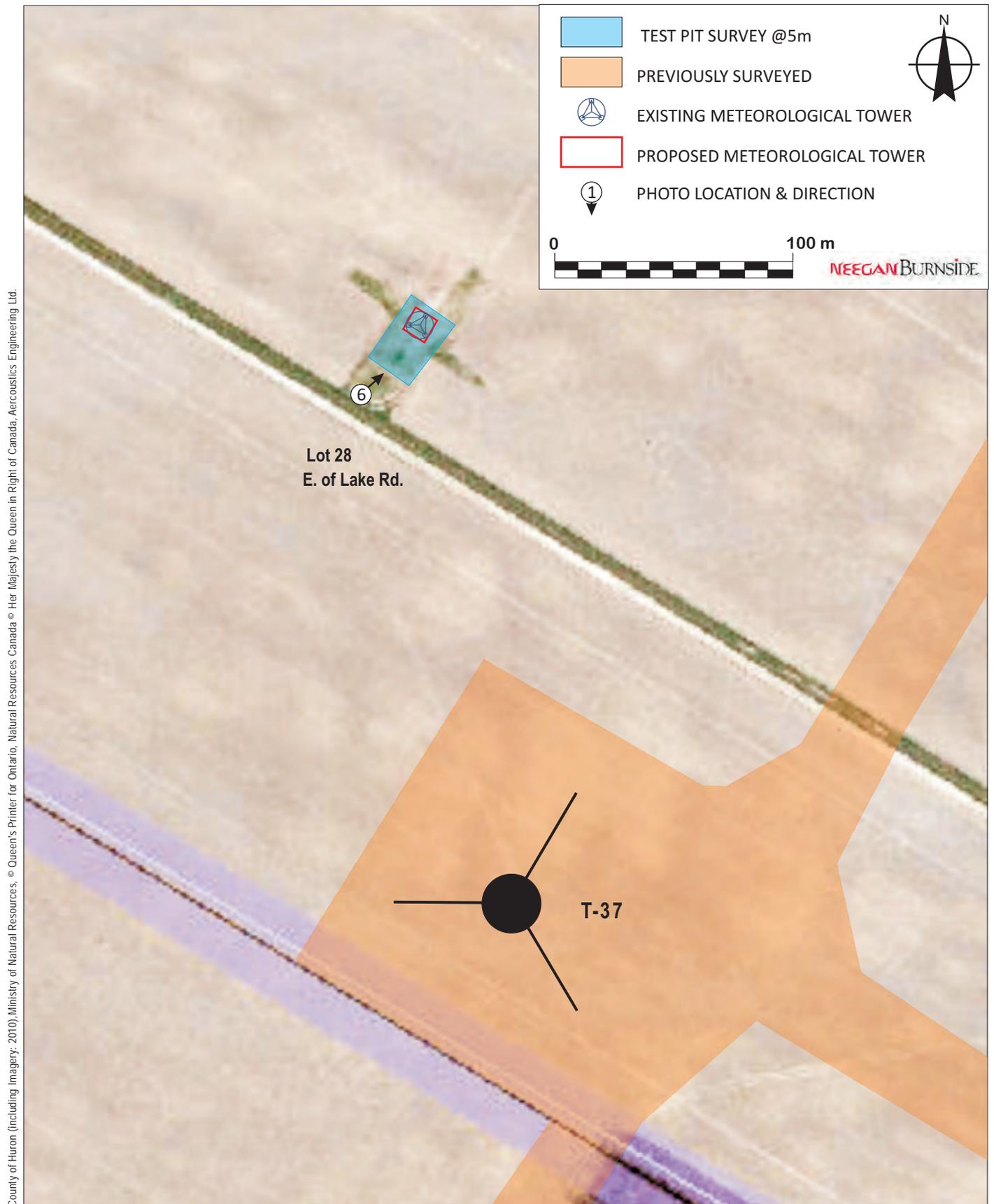


Figure 10 Meteorological Tower Layout, Survey Coverage and Key to Photographic Plate

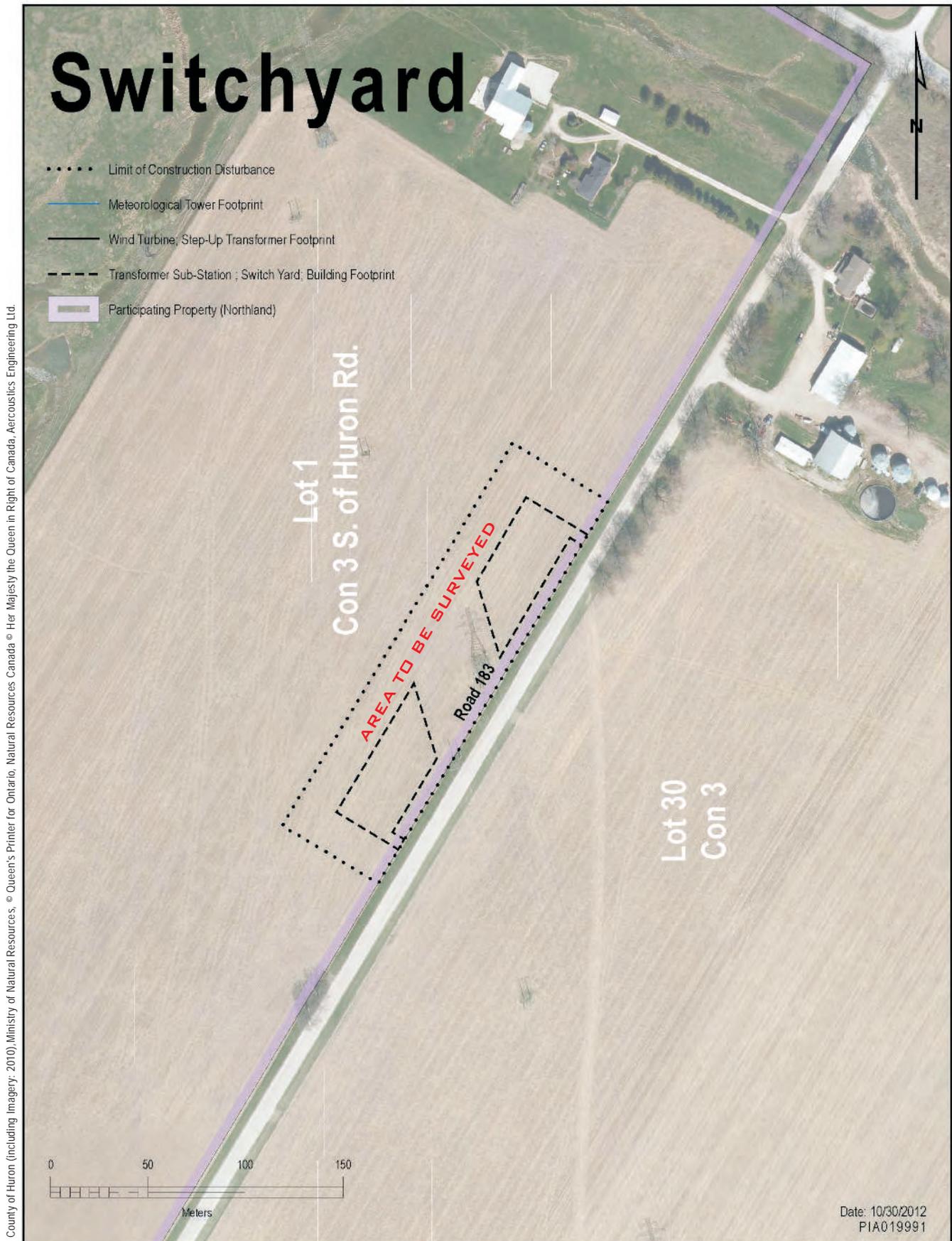


Figure 11 Layout of Switchyard

PLATES



Plate 1 Revised Turbine 21: Archaeological Survey Coverage, View Southwest



Plate 2 Revised Turbine 21: Archaeological Survey Coverage, View Northwest



Plate 3 Construction Compound: Archaeological Survey Coverage, View West Southwest



Plate 4 Pedestrian Survey of Construction Compound in Progress, View Northwest



Plate 5 Test Pit Survey of Meteorological Tower in Progress, View Northwest



Plate 6 Test Pit Survey of Meteorological Tower in Progress, View Northeast

APPENDIX A

**Ministry of Tourism,
Culture and Sport**

Culture Programs Unit
Programs & Services Br.
900 Highbury Avenue
London, ON N5Y 1A4
Tel: 519-675-6898
Fax: 519-675-7777
e-mail: shari.prowse@ontario.ca

**Ministère du Tourisme,
de la Culture et du Sport**

Unité des programmes culturels
Direction des programmes et des services
900, av. Highbury
London, ON N5Y 1A4
Tél: 519-675-6898
Télé: 519-675-7777
e-mail: shari.prowse@ontario.ca



September 17, 2012

Ms. Sherri Pearce
D.R. Poulton & Associates Inc.
69 Langarth Street West
London ON N6J 1P5

RE: Entry into the Ontario Public Register of Reports, Archaeological Assessment Report Entitled, "The 2011-2012 Stage 1-2 Archaeological Assessment of the Proposed Grand Bend Wind Farm, FIT Contract # F-002178-WIN-130-601, Municipalities of Bluewater, South Huron, & East Huron, Huron County and the Municipality of West Perth, Perth County, Ontario", August 14, 2012, Filed with MTCS Toronto Office on August 24, 2012, MTCS Project Information Form Number P316-145-2011, MTCS RIMS Number HD00767

Dear Ms. Pearce:

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. 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.*

The report documents the assessment of the project location as depicted in Figures 15-22 of the above titled report and recommends the following:

As detailed in Section 5.0 of this report, none of the nine archaeological sites discovered by the Stage 2 survey is considered to show any heritage value or interest and none warrants any further investigation or concern. In consequence, it is recommended that no further archaeological assessment is warranted for any of these nine sites.

The survey of the proposed collector and transmission lines did not result in the discovery of any archaeological remains. However, it did identify a concern for the potential for unmarked graves along a 140 metre long segment of the proposed transmission line that abuts Hensall Union Cemetery. This cemetery is the only potential archaeological planning concern that was identified

by the assessment of the proposed Grand Bend Wind Farm and OPA FIT Contract # F- 002178-WIN-130-601.

The cemetery is located on the south side of Rodgerville Road, east of Highway 4. Following the formulation of the detailed design for the proposed transmission line, it is recommended that a more detailed Stage 3 assessment of this segment of the line be conducted. One element of the assessment will consist of archival research on the history of the cemetery. The other element of the assessment will consist of fieldwork. The nature of the fieldwork will depend on whether the proposed construction will involve a buried cable or above ground hydro poles. If it will involve a buried cable, the fieldwork will consist of the archaeological monitoring of a one-metre wide trench. The trench will be excavated by a backhoe, excavator or Gradall with a straight-edged ditching bucket. If the construction will involve above ground hydro poles, the fieldwork will consist of the excavation of a block of four one-metre units for each proposed hydro pole location. In both cases, the objective of the fieldwork would be to identify the presence or absence of stains in the subsoil that could represent unmarked grave shafts. If any such features were identified, they would be fully exposed and recorded, then excavated to determine their nature.

Based on the information contained in the report, the ministry is satisfied that the fieldwork and reporting for the archaeological assessment is consistent with the ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences. This report will be 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,

Shari Prowse
Archaeology Review Officer

cc. Archaeological Licensing Office
Mr. Lyle Parsons, Neegan Burnside Ltd.

*In 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.

MINISTRY LETTER OF REVIEW

Ministry of Tourism, Culture and Sport

Culture Programs Unit
Programs and Services Branch
Culture Division
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel.: (416) 212-8442
Email: Irena.Jurakic@ontario.ca

Ministère du Tourisme, de la Culture et du Sport

Unité des programmes culturels
Direction des programmes et des services
Division de culture
401, rue Bay, bureau 1700
Toronto ON M7A 0A7
Tél. : (416) 212-8442
Email: Irena.Jurakic@ontario.ca



January 25, 2013

Ms. Sherri Pearce
D.R. Poulton & Associates Inc.
69 Langarth Street West
London, Ontario
N6J 1P5

RE: Review and Entry into the Ontario Public Register of Archaeological Reports: Archaeological Assessment Report Entitled, “*The 2012 Stage 2 Archaeological Assessment of Minor Modifications to the Proposed Grand Bend Wind Farm, FIT Contract # F-002178-WIN-130-601, Municipalities of Bluewater, South Huron, & East Huron, Huron County and the Municipality of West Perth, Perth County, Ontario*”, Dated December 14th, 2012, Filed by MTCS Toronto Office December 24th, 2012, MTCS Project Information Form Number P316-165-2012, MTCS File Number HD00767.

Dear Ms. Pearce:

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

¹ This 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.

² In 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.

The report documents the assessment of the study area as depicted in *Figure 7 Revised Layout for Turbine 21, Survey Coverage and Key to Photographic Plates*, *Figure 8 Construction Compound Layout, Survey Coverage and Key to Photographic Plates*, *Figure 9 Meteorological Tower Layout, Survey Coverage and Key to Photographic Plate*, and *Figure 10 Meteorological Tower Layout, Survey Coverage and Key to Photographic Plate* of the above titled report and recommends the following:

The Stage 2 archaeological assessment of minor revisions to the Grand Bend Wind Farm resulted in the following recommendations:

1. It is recommended no further archaeological assessment be required for the proposed construction compound, the two meteorological towers and the realignment of Turbine 21.

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,

Irena Jurakic
A/ Archaeology Review Officer

cc. *Mr. Lyle Parsons, Neegan Burnside Ltd.*
Agatha Garcia-Wright, Director, Ontario Ministry of the Environment

