

Henvey Inlet Wind LP

Henvey Inlet Wind
Henvey Inlet Wind Energy Centre
Stage 2 Archaeological Assessment



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Stage 2 Archaeological Assessment – Henvey Inlet Wind Energy Centre (HIWEC)

Henvey Inlet First Nation Indian Reserve No. 2 in the District of Parry Sound, Ontario

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Executive Summary

AECOM Canada Ltd. (AECOM) was contracted by Henvey Inlet Wind LP (HIW) to conduct a Stage 2 archaeological assessment for a proposed 300 megawatt wind energy generation centre, located in central Ontario. This assessment was undertaken by AECOM on behalf of HIW as a best practise exercise in advance of construction of the Henvey Inlet Wind Energy Centre (HIWEC) on Henvey Inlet First Nation Reserve No. 2 (HIFN I.R. #2). The Stage 2 archaeological assessment was conducted for the areas to be impacted by the proposed HIWEC infrastructure footprint on HIFN I.R. #2. The HIWEC consists of 120 turbine generators, of which up to 91 will be constructed, the road network, transmission lines, laydown yards, and transformer stations. The turbine pads will comprise an area of 60 m² and a 160 m radius around this was subject to archaeological assessment, the access roads will be 10 m to 20 m in width, the transmission line will be a maximum of 30 m, and a 50 m corridor was assessed for these components. The two temporary laydown yards and two transformer stations will each be approximately 100 m by 100 m and a 200 m² area was assessed. The HIWEC is not subject to provincial regulations due its location entirely on Federal Reserve land; however, at the request of HIW this archaeological assessment has been conducted to meet the requirements of the HIFN EA Guidance Document. Additionally, the HIWEC is not subject to the Ontario Heritage Act (Ontario Government 1990a) or the Standards and Guidelines for Consultant Archaeologists (Ontario Government 2011b) yet the Stage 2 archaeological assessment has been conducted to fulfill the requirements of these provincial regulations.

The HIWEC study area is located on HIFN I.R. #2, which is a parcel of Federal Crown land on the east shore of Georgian Bay approximately 80 km north of Parry Sound, Ontario (Figure 1 and Figure 2). It is held by the Crown subject to the Aboriginal title of and for the benefit of HIFN. HIFN has broad authority to manage and protect its Reserve lands. This authority comes from the First Nations Land Management Act (Canada Government 2015), related instruments, and the HIFN Land Code. HIFN I.R. #2 has been in active use by HIFN for habitation, hunting, fishing, cultural gathering, burial and, traditional use. In recent times, HIFN has used these lands for a variety of purposes including forestry, aggregate, waste management, and recreation. Overall, the HIWEC will include approximately up to 91 wind turbine generators with an operating footprint of approximately 173.1 ha within the 9,232.86 ha that constitutes HIFN I.R. #2. Access to the study area was granted by HIFN and HIW and a member of HIFN accompanied the archaeologists at all times.

The Stage 2 archaeological assessment resulted in the identification of the Hebert Site, a late 19th – early 20th century archaeological site determined to be a rail workers camp and area of aggregate industry occupied by both First Nation and Euro-Canadian people. Based on the cultural historical value and rarity of this type of site it is determined to have cultural heritage value or interest and should be preserved.

If the Hebert Site will be impacted by development processes a Stage 3 archaeological assessment must be conducted. The Stage 3 archaeological assessment should employ hand excavated test unit methodology as outlined in Section 3.2.2 and Table 3.1 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011), to further test the nature and density of the site.

A 50 m wide corridor south of the Hebert Site was assessed and found to be free of archaeological concerns. This re-route option should be used if development will occur here, thus avoiding impacts to the Hebert Site. In order to preserve the area and avoid disturbing the site it is recommended that a temporary fence be placed along the northern limit of the 50 m re-routed transmission line boundary and around the limits of the Hebert Site. This area must be clearly labelled on all construction drawings as a No-Go zone for all construction activities and personnel (see Supplementary Documentation).

It has been determined by the project team that Transmission Line – Route B is the preferred option and no development on Transmission Line – Route A will occur. As such no development activities are planned on Transmission Line – Route A in which the Hebert Site is adjacent to and no protective measures or further assessment is required. If HIWEC plans change in the future and impacts are planned in this area the above mitigation measures must be taken into account.



1. Project Context

1.1 Development Context

AECOM Canada Ltd. (AECOM) was contracted by Henvey Inlet Wind LP (HIW) to conduct a Stage 2 archaeological assessment for a proposed 300 megawatt wind energy generation centre, located in central Ontario. This assessment was undertaken by AECOM on behalf of HIW as a best practise exercise in advance of construction of the Henvey Inlet Wind Energy Centre (HIWEC) on Henvey Inlet First Nation Reserve No. 2 (HIFN I.R. #2). The Stage 2 archaeological assessment was conducted for the areas to be impacted by the proposed HIWEC infrastructure footprint on HIFN I.R. #2. The HIWEC consists of 120 turbine generators, of which up to 91 will be constructed, the road network, transmission lines, laydown yards, and transformer stations. The turbine pads will comprise an area of 60 m² and a 160 m radius around this was subject to archaeological assessment, the access roads will be 10 m to 20 m in width, the transmission line will be a maximum of 30 m, and a 50 m corridor was assessed for these components. The two temporary laydown yards and two transformer stations will each be approximately 100 m by 100 m and a 200 m² area was assessed. The HIWEC is not subject to provincial regulations due its location entirely on Federal Reserve land; however, at the request of HIW this archaeological assessment has been conducted to meet the requirements of the HIFN EA Guidance Document. Additionally, the HIWEC is not subject to the Ontario Heritage Act (Ontario Government 1990a) or the Standards and Guidelines for Consultant Archaeologists (Ontario Government 2011b) yet the Stage 2 archaeological assessment has been conducted to fulfill the requirements of these provincial regulations.

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1.1.1 Objectives

The objective of the Stage 2 property assessment is to provide an overview of archaeological resources on the property and make a determination of whether any of the resources might be artifacts or archaeological sites with cultural heritage value or interest requiring further assessment, and to recommend appropriate Stage 3 assessment strategies for any archaeological sites identified.

1.2 Historical Context

The HIWEC study area consists of a footprint of land in two separate parcels along the north and south side of Henvey Inlet. During the planning stages HIFN identified areas of cultural importance and excluded those areas from any development impacts (Figure 3). The Stage 1 archaeological assessment conducted by AECOM (2015a) provides an in-depth history of the settlement of this part of Ontario by First Nation people. The following sections include a condensed version of this information, for greater details readers should refer to the Stage 1 archaeological background research report (AECOM 2015a).



1.2.1 First Nation Settlement History

The first human settlement in this area can be traced back 10,000 years as the glaciers receded from the land. These earliest well-documented groups are referred to as Paleo, which literally translates to old or ancient. Paleo people were non-agriculturalists who depended on hunting and gathering of wild food stuffs. They would have moved their encampments on a regular basis to be in the locations where these resources naturally became available and the size of the groups occupying any particular location would vary depending on the nature and size of the available food resources (Ellis and Deller, 1990; Wright 1974).

The retreat of the glaciers allowed for Spruce dominated boreal forests to move quickly north, occupying the once open tundra (Hinshelwood, 2004; Phillips 1993). By 10,000 years ago the closed Spruce forest gave way to the rapid introduction of Jack Pine and White Birch as a result of the increasingly warm, dry and windy environment (Julig 1994; Phillips 1993; Wright 1974). Raw materials obtained from bedrock outcrops were used in the production of tools such as distinctive unfluted, ribbon flaked, lanceolate spear points and knives. The picture that has emerged for early and late Paleo people is of groups at low population densities who were residentially mobile and made use of large territories during annual cycles of resource exploitation (Ellis and Deller, 1990; Julig 1994). **Table 1** provides a breakdown of the pre-contact cultural and temporal history of past occupations of central Ontario.

Table 1: Pre-contact Settlement Chronology

Archaeological Period	Culture	Time Period	Comments
Paleo	Plano	8,000 – 4,500 BC	 Lancolate biface tools Big game hunters on relic lake shores north of Upper Great Lake
Archaic	Shield	5,400 – 250 BC	 Slight reduction in territory size Introduction of copper tools Broad spectrum seasonal resource exploitation Highly mobile Introduction of bow Domestication of dog
Middle Woodland	Laurel	550 BC – AD 950	Introduction of potteryHorticultural productionLarge earthen mounds
Late Woodland	Blackduck Selkirk	AD 750 - 1650	 Diverse ceramics – out-flaring vessel rims, textile impressions, punctates Communal burials
Contact Aboriginal	Northern Ojibway	AD 1650-1875	Early written records and treatiesEuropean trade
Euro-Canadian		AD 1749-present	European settlement

Note: taken from Dawson, 1984; Wright, 1981

The next major cultural period following the Paleo is termed the Archaic, where a change in technological and stylistic representations of the projectile points occurred in the archaeological record marking the beginning of the Archaic Period (Dawson 1983b). Wright (1972) referred to it as the Shield Archaic to indicate a long-lived tradition that encompassed much of the Canadian Shield from northern Quebec to southwest Northwest Territories. Dawson (1983) also refers to the Shield Archaic as a northern expression of the Archaic Tradition within the Precambrian Shield.



The Archaic occupation is poorly understood in central and northern Ontario because of the underrepresentation of Archaic sites. This is a result of the complex timing for the transition from late Paleo to Archaic that occurred when lake levels in the Great Lakes Basin were lower than they are today. As lake levels rose this caused the destruction of any shoreline sites, as they have been submerged or are present under sediments deposited post-8,000 years ago (Hinshelwood 2004). Throughout the Archaic period the natural environment warmed and vegetation changed from closed conifer-dominated vegetation cover, to mixed coniferous and deciduous forest to the mixed coniferous and deciduous forest in the north and deciduous vegetation we see in Ontario today (Ellis et al. 1900). During the Archaic period there are indications of increasing populations and decreasing size of territories exploited during annual rounds; fewer moves of residential camps throughout the year and longer occupations at seasonal campsites; continuous use of certain locations on a seasonal basis over many years; increasing attention to ritual associated with the deceased; and, long range exchange and trade systems for the purpose of obtaining valued and geographically localized resources (Ellis et al. 1990; Hinshelwood 2004).

The Woodland period is distinguished from the Late Archaic period primarily by the addition of ceramic technology, which provides a useful demarcation point for archaeologists, but is expected to have made less difference in the lives of the Woodland peoples. The Woodland period of central and northern Ontario observes only two distinct phases, the Middle and Late Woodland periods. The introduction of pottery is believed to have made its way into central and northern Ontario cultures from the southwest and east, creating the Laurel culture within the Boreal Shield stretching from Saskatchewan to Northern Quebec. Along with the introduction of pottery, the bow and arrow appears as the dominant hunting tool in the Middle Woodland period. This resulted in an increase in projectile points and scrapers developed using stone chipped technology (Wright 1995:272, 274). During the Middle Woodland groups would come together into large macro-bands through the spring-summer at lakeshore or marshland areas to take advantage of spawning fish; in the fall inland river valleys were occupied for deer and nut harvesting and groups split into small micro-bands for winter survival (Spence et al. 1990).

The Late Woodland period in central Ontario differed significantly from the settlement and subsistence shift that occurred in southern Ontario with the increasing reliance on maize horticulture. The climate and landscape of the Canadian Shield prohibited the agricultural shift occurring in the south, and consisted of continued reliance on fish and large game as in previous periods. Population growth was also restricted by the Canadian Shield environment and settlement patterns were similar to those of the Middle Woodland with large summer camps located close to fish resources and typically located on level, well drained ground with access to canoe landing beaches. Throughout the entirety of occupation in central and northern Ontario First Nations people utilized the many rivers and lakes as transportation routes, using birch bark canoes in the warmer seasons and as trails when frozen in the winter.

Within the Late Woodland period two distinct cultures arise; the Blackduck complex and the Selkirk complex. The Blackduck culture is identified by contrasting pottery tradition to the Laurel. Pottery vessels were large globular and were created using the paddle and anvil technique with decoration being horizontal and/or oblique lines along with circular indentations or puncates found on the neck, rim and inner rim. The Blackduck culture is considered to occur through central Ontario. The Selkirk culture is defined by its pottery style as well, with manufacturing technique similar to that of the Blackduck culture but with a distinct variation in decoration. The Selkirk style of pottery, if decorated, was simple with a single row of puncates or impressed with a cord wrapped stick (Dawson 1983). Selkirk pottery is found predominantly in the north portion of Northern Ontario close to Manitoba.

1.2.1.1 Pre-history of the Anishinabek (Ojibway)

The Anishinabek (Ojibway) were originally named for a group north of modern day Sault Ste. Marie. The term was then extended to include other groups in the Upper Great Lakes regions that shared the same culture and language. Congruent with Anishinabek legend, their initial origin appears to have been along the northern shores of Lakes Huron and Superior, at its centre was the major fishery at the rapids of Sault Ste. Marie (McMillan and



Yellowhorn 2004). From this broad base the Anishinabek expanded their territory dramatically, as new opportunities arose. Anishinabek history originates at the centre of their Creation Story, on Michilimakinac Island between Lakes Huron and Michigan. They continued to disperse and occupy a broad range of environments, utilizing different resources. When these people first encountered European fur traders, there were many similar but politically autonomous groups. Many of the Bands or Tribes were given a confusing number of names to describe the same peoples occupying different niches in a variety of environments in various geographic regions such as Algonquin, Ojibway, Odawa, and Chippewa. Today, many Ojibway people prefer to be known as Anishinabek, a term meaning "First People", and the concept of an Anishinabek Nation now links speakers of the Ojibway language. The Odawa, or Ottawa, occupied much of the north shore of Gregorian Bay and Manitoulin Island and Bruce Peninsula, where they bordered on the settlements of the Huron and Petun (McMillan and Yellowhorn 2004). Their role as intermediaries in the trade with these Iroquoian groups gave rise to calling them 'traders'. The Algonquian inhabited the Ottawa Valley and adjacent regions in the early contact period. They are all collectively referred to as Anishinabek or Ojibwa, because linguists determined they all speak the same language albeit in different dialects (McMillan and Yellowhorn 2004; Schmalz 1991).

Anishinabek society was divided into clans, each identified by a clan symbol or totem. The clan symbols or totems reflect the Anishinabek Creation Story. The Michilimackinac Island is where the First Animals named in the Creation Story ventured out to find and transform their own Country. For instance, the story tells of Beaver, who went traveling up French River upon leaving Lake Huron, and created lakes, rapids, portages and dams along the way. During his lifetime, Beaver populated his country with many Beaver children (HIFN n.d.). During his last days, Beaver traveled to Lake Nipissing as his final resting place. Upon his death, human children emerged from his remains. Anishinabek totems are patrilineal, and the totemic identity is created in the connection between the Anishinabek peoples and the Great Lakes Landscape (Johnson n.d.). Early documents from the Jesuits in 1640 make reference to totems, including Kinounchepirini (Pike People) who were located along the Ottawa River. Between the Hurons and French River were the Ousaouarini (possibly Birch Bark People), the Outchougai (Heron people) and the Atchiligouan (possibly Black Squirrel). The Amikouai (nation of the Beaver) were located north of the French River, the Oumisagaiat the Mississagi River and the Baouichtigouian, "the nation of the people of Sault", at Sault Ste. Marie (HIFN n.d.).

Anishinabek subsistence was based on the annual round of hunting, fishing and plant collecting. The winter was devoted to the pursuit of moose, deer, bear and other large game. In spring, families would return from their hunting camps to rejoin others at their major fishing sites. Pickerel, pike and suckers could be caught throughout the summer, and autumn spawning brought whitefish, trout and sturgeon close to shore. The Anishinabek netted or speared large quantities of fish, and the fisheries became centres of community life and cultural interaction. From writings of the Jesuits, it was documented during the mid-17th century that up to 2,000 individuals might converge at the rapids of Sault Ste. Marie (McMillan and Yellowhorn 2004). Plant foods have always played an important role in Anishinabek economy; maples were tapped, berries collected, and wild rice harvested from the shallow waters of nearby lakes. In order to transport food stuffs and travel between different resource areas Anishinabek people utilized birch bark canoes. These canoes were tough, but lightweight, which allowed for easy portage between waterways (McMillan and Yellowhorn 2004).

Living quarters consisted of dome-shaped structures, referred to by the Algonquin term, wigwams. Sheets of birchbark covered the structure, layered in a way to allow for moss in between acting as insulation. Conical or tipishaped structures were also not uncommon (McMillan and Yellowhorn 2004; Schmalz 1991). Hides were utilized for clothing, stitched together using sinew. Social interaction was essential to the survival of the peoples, in which activities included feasting, dancing, lacrosse and gambling with bone dice. Storytelling was at the heart of many social gatherings. Rich oral traditions consisted of Anishinabek mythology designed to both entertain and instruct, filled with powerful supernatural humans and animals (McMillan and Yellowhorn 2004). Every animal, bird, plant, or inanimate object had a power that could either help or hinder humans. The Anishinabek were widely respected for their shamanic abilities to cure illness, see spirits at work, and provide blessings for numerous activities.



1.2.2 Contact Period Settlement History

Etienne Brule and Samuel de Champlain were the first Europeans to come to the region, travelling the French River into Georgian Bay from the Ottawa River in 1610 and 1613 respectively. At the time of European contact, the Jesuits recorded a multitude of tribes in the Canadian Shield who spoke the Algonquin language (Thwaites 1896-1901). The Anishinabek seasonal cycle involved travel over large regions to exploit resources for food, tools, medicines and ceremonial use, with large groups congregating at summer camps and dispersing into small winter hunting groups (Allen 2002). The first European to describe the Ojibway who were located near the mouth of the French River and Georgian Bay was Samuel de Champlain:

We met with three hundred men of a tribe named by us the Cheveau releves or 'High Hairs', (Ojibwa?) because they had them elevated and arranged very high and better combed than our courtiers, and there is no comparison in spite of the irons and methods these have at their disposal. This, seems to give them a fine appearance. They wear no breech cloths, and are much carved about the body in divisions of various patterns. They paint their faces with different colours and have their nostrils pierced and their ears fringed with beads. When they leave their homes, they carry a club. I visited them and gained some slight acquaintance and made friends with them. I gave a hatchet to their chief who was as happy and pleased with it as if I had made him some rich gift and, entering into conversation with him, I asked him about his country, which he drew for me with charcoal on a piece of tree-bark. He gave me to understand that they had come to this place to dry the fruit called blueberries to serve them as manna in the winter when they can no longer find anything. For arms they have only the bow and arrow.

Schmalz 1991: 14-15

The fur trade in Canada provided the principal motivation and economic base for the exploration by Europeans of the Canadian interior. During the period between 1670 and 1713, French traders began to leave established settlements and construct trading posts that enabled traders to make direct contact with the people living in the interior. The Nipissings, Odawa and Anishinabek in Northern Canada were referred to as the 'middlemen' of the trade all the way north to James Bay (Hunt 1940: 35, 45; Pollock 1999). An examination of the Atlas of Canada's map "Posts of the Canadian Fur Trade, 1600-1870" indicates the presence of three Fur Trade Posts in close proximity to HIFN I.R. #2 (Figure 4). The Hudson's Bay Co. (HBC) had a post at the mouth of the French River, and one south of the HIWEC study area called Shawinaga, near Pointe au Baril. There were multiple Independent Canadian posts in the surrounding area, but a large number of them were located around Lake Nipissing to the northeast. The French River post was occupied in 1827 for an unknown length of time, but was a major stop for 20 to 50 years because of the significance of the French River. The Shawinaga post was also occupied in 1827 for an unknown amount of time, but represents a lengthy occupation also. The Independent Canadian post located along the south shore of Lake Nipissing at the mouth of the French River was occupied in 1825, but appears to have only been operational for 1-3 years. This could have been the result of multiple posts operating around Lake Nipissing, which facilitated access to the Great Lakes from the Ottawa River.

French explorers allied with the Huron and Ojibway people and participated in raids on Iroquoian settlements. So by 1615 the French-Huron alliance was cemented, contact had been made with the Nipissing, Odawa and Petun, and the geography of the eastern Great Lakes was roughly known (Heidenreich 1990). After 1615 the fur trade gained momentum with the Hurons playing a major role, utilizing existing trade routes between the Huron agriculturalists in the south and Ojibway bands to the north. In 1649 the Hurons experienced an Iroquoian attack on the Huron town of St. Ignace, as intertribal Indian wars for control of the fur trade came to a head (Hunt 1940: 92; Pollock 1999). The Henvey Inlet ancestors in this area felt the repercussions of the collapse of the Huronia, and temporarily relocated to other areas due to the recurring raids of the Iroquois between 1650 and 1660 only to return after 1667 (Day 1978: 789; Pollock 1999). As a result, the northern coasts of Georgian Bay and Lake Huron may have served as a transition zone or buffer between the Anishinabek and Iroquois, as it was sparsely occupied until



the return of the Ojibway along the Georgian Bay and Lake Huron in the 1700s (Pollock 1999). After this time, until the fall of New France in 1759, the Anishinabek found themselves in a position of relative control of the fur trade, as French and British encouraged the trade of the coveted furs from northern Ontario, for profit but also to secure First Nation allies (Schmalz 1991: 35; Pollock 1999).

Conflict again arose in the early 1800s, this time with the Canadian Government regarding mining rights along the northern shores of Lakes Superior and Huron. These areas were to be surrendered to the Government in order to prepare for European settlement, to enforce British jurisdiction against American incursions in the region, and the Provincial Governments desire to encourage mineral exploration without making a treaty (Morrison 1995; Pollock 1999). As a result, the Robinson-Huron Treaty was signed in 1850, and included Chief Louis Mishequanga's band at Pickerel River (HIFN I.R. #13) and Chief Wagamake's band at the mouth of Henvey Inlet on Georgian Bay (HIFN I.R. #2). The Robinson Huron treaty made on September 9th, 1850 between:

...the Honourable William Benjamin Robinson and the Principal Men of the Ojibwa Indians, inhabiting and claiming the eastern and northern shores of Lake Huron from Penetanguishene to Sault Ste. Marie, and thence to Batchewanaung Bay on the northern shore of Lake Superior, together within the Islands in the said lakes, opposite to the shores thereof and inland to the height of land which separates the territory covered by the Charter of the Honourable the Hudsons Bay Company from Canada, as well as all unconceeded lands within the limits of Canada West, to which they have any just claim of the other part...

Morris 1943:30

Robinson made an offer of £4,000 in cash and a perpetual annuity of £1,000 for the entire region, ensuring the bands would continue to enjoy their hunting and fishing rights because extensive settlement in the perceived "barren" regions of the Canadian Shield was considered unlikely. Hunting and fishing was to continue in the region for the bands, unlike the eastern regions of Upper Canada, where those activities had been hampered by extensive development (Surtees 1986). The two agreements for the lands bordering Lake Superior and Lake Huron were signed in Sault Ste. Marie referred to as the Robinson-Superior and Robinson-Huron Treaties respectively. The Robinson-Superior Treaty contained 16,700 square miles of territory and was occupied by 1422 people. The Robinson-Huron Treaty contained 35,700 square miles of land with 1240 people living within its boundaries. The treaties also offered significant differences from other treaties developed in Ontario; a schedule of reserves chosen by the chiefs and clauses regarding features of First Nation - Euro-Canadian relations (Surtees 1986). The reserves agreed upon consisted of three on Lake Superior and twenty-one under the Robinson-Huron agreement. The clauses stated that the reserves could not be sold or leased without the consent of the Chief Superintendent of Indian Affairs; First Nations would refrain from interfering with mineral activities in the ceded areas, though mineral rights on the reserves belonged to them; the rights of Métis who could declare whether they were First Nations or not; and hunting and fishing rights where First Nations were to have "the full and free privilege to hunt over the territory now ceded by them and to fish in the waters thereof as they have heretofore been in the habit of doing" (Surtees 1971: 149-152; Surtees 1986).

The Pickerel River band is now part of HIFN, and was first surveyed in May of 1853 by John Stoughten Dennis (Dennis 1851). HIFN I.R. #2 was surveyed in October and November of 1851 by Dennis, who met Chief Wagamake on the reserve "at their village for the purposes of pointing out the limits of their reserve" (Dennis 1851). The Band had chosen to reserve this location because of the valuable fisheries, the presence of an existing village on the south shore of the Inlet, a productive cornfield, and a sugar bush on the portage between the Key River and Henvey Inlet (Pollock 1999). HIFN I.R. #2 had been described in the Treaty text as: "... a tract of Land to commence at a place called Nekickshegeshing [Ojibway for 'place for otters'] six miles from east to west by three miles in depth" (Morrison 1995). Through discussions between Dennis and Chief Wagemake at the village site, it was evident the band wanted a reserve twelve miles by six miles, however Dennis could not authorize this extension (Dennis 1851). Dennis returned the following year, accompanied by J. William Keating, a former Assistant Indian Superintendent, to meet with Chief Wagemake and his band to try and resolve the boundary disagreement. The reason Chief Wagemake gave to J.W. Keating in the summer of 1852 for wanting more lands



was in order to relocate his village because the rattlesnakes had rendered the log huts inhabitable. The adjustment was made to the reserve lands, and is so reflected in the Treaty text, from 18 square miles (11,520 ac) to 41 square miles (26,000 ac) (Morrison, 1995: 109). Figure 5 illustrates the land surveyed by Dennis in 1851 and 1852 from his Field notebook. The two reserves are currently described as follows:

- HIFN I.R. #2 is located on the Northeast shore of Georgian Bay, approximately 90 km south of Sudbury on the west side of Highway 69 and 71 km north of Parry Sound, at approximately 40 degrees 50' North latitude and 80 degrees 40' west longitude.
- French River Reserve No.13, which is located 11 km north of the HIFN I.R. #2, is east of Highway 69 on Pickerel River, and approximately 45 degrees 58' North latitude and 80 degrees 30' West longitude. French River reserve No. 13 is the location for the community's main village. This village is located on Pickerel River Road. The community notes that Cantin Island is part of this Reserve, and the Island is located north of the mainland portion and separated by the Pickerel River and the French River on the north side.

The post-contact Aboriginal occupation of Ontario was heavily influenced by European diseases and population movements. As Iroquoian speaking peoples, such as the Huron, Petun and Neutral were dispersed by the New York State Confederacy of Iroquois, Algonquian speaking groups from Northern Ontario moved southerly into the land now abandoned. The Ojibwa of Southern Ontario date from about 1701 and occupied the territory between Lakes Huron, Erie and Ontario (Schmalz 1991). This is also the period in which the Mississaugas are known to have moved back into Southern Ontario and the Great Lakes watersheds (Konrad 1981) while at the same time the members of the Three Fires Confederacy, the Chippewa, Ottawa and Potawatomi were immigrating back from Ohio and Michigan (Feest and Feest 1978).

1.2.3 Recent History of Henvey Inlet

The eastern shore of Georgian Bay was considered a desolate and difficult place, originally thought to simply function as a hunting area for Huron, Ojibwa and Algonquin people. Initial survey consisted of efforts confined to canoe through rivers and water ways. The Northern and Pacific Junction Railway was constructed in the 1880s to connect the railways of Southern Ontario to the new transcontinental line of the Canadian Pacific Railway. Communities like Britt and Key Harbour survived as CNR ports to unload coal and oil off tankers that were coming from Lake Superior and Lake Huron (Campbell 2005). The Northern and Pacific Junction Railway became part of the Grand Trunk railroad system which opened up Parry Sound and Muskoka's isolation.

Located directly adjacent to the eastern portion of the reserve is the former town of Ludgate. Ludgate was initially a timber depot, named after one of the timber contractors, James Ludgate (Charbonneau 2000a). This flag station was established to supply surrounding lumber camps after the arrival of the CNR in 1908. Ludgate moved his milling operation from the McKellar area to this small siding and station stop south of Portage Lake around 1917. This move was precipitated by the additional purchase of timber reserves in the Mowat Township. The village consisted of the mill and spur line, blacksmith shop, cookery and office that later became a store, a slab and sawdust disposal yard, and various dwellings for employees. One of these dwellings would later be used as a school. The post office was situated in the store, which operated from 1927 to 1954 (Charbonneau 2000a). Only three structures remain today, including an office, one home and a bunkhouse. The structures are located on privately owned land. The sawmill village is located 2.8 kilometres south of Pakesley, where the CNR crosses the Key and Little Key River, east of Portage Lake. It was conveniently located near the intersection of the CPR and CNR lines (Charbonneau 2000a).

The area remained relatively untouched until the Muskoka and Parry Sound Districts were surveyed between 1866 and 1870 (Campbell 2005). Despite the surveyors reporting that the land was unfit for farming, the wealth in timber



was deemed highly profitable. Communities on Georgian Bay, i.e., Killarney, Byng Inlet/Britt, Parry Sound, developed not as service centres for surrounding farmlands, which was the case in Southern Ontario, but as isolated ports, railway stops, or company mill towns (Campbell 2005). Roads were not considered the main option for travel because of the intense difficulties in building and upkeep required in the rugged Canadian Shield environment. The small communities that appeared as a result of forestry or mineral exploration relied on the Bay and later the railway, as primary routes for communication and transportation (Campbell 2005). As interest in the forestry and mineral exploration grew roads became a necessity. These 'Colonization Roads' served to increase access to logging, but also to provide a way north for early settlers. The network of roads provided access between the Ottawa Valley and Georgian Bay (known as the Ottawa–Huron Tract). The government built over 1,600 kilometres of roads over two decades. The Great North Road extended from Parry Sound northeast to Lake Nipissing. By 1955 the modern day Highway 69 connected Parry Sound and the Trans-Canada Highway (Hwy 17) at Sudbury.

The main village on the French River Reserve No. 13 experienced industry growth while the French River was the main water artery from the St. Lawrence River to the Great Lakes from 1600 to the mid-1800s. The area prospered within the fur trade, as well as commercial logging and fishing. The French River Village eventually was developed in the late 1880s as a result of the extensive logging industry. Timber cutting, logging and lumber mills sprang up in the area in 1873 and boomed till the 1930s. A major catalyst for the logging industry occurred after the major fire in Chicago, Illinois. The logs were floated down the French River and the Wahnipitae River to aid in rebuilding the city. Today, many of the sunken logs still dot the rivers and are referred to as "dead heads" (HIFN n.d.).

The HIFN community relocated near Highway 69 in the fall of 1953, when the Chief was Henry Ashawasegai, now deceased. With the assistance of the Department of Indian Affairs, bunk houses were erected, as was a school. Originally the community was known as the Lower French River Indian Reserve #13 and located within the French River Reserve No. 13 is Pickerel Village. This was one of the first permanent settlements that sprang up along the tributary of the French River. The Pine Lake Lumber Company purchased the mill in the town of French River in 1910. The first store and post office in the area were located at the Wanikewin Lodge, situated on the north shore of Pickerel River along the CPR line (HIFN n.d.). Population then began to increase with the commercial development of the area by Martin Henry Fenton. In 1911 the post office was converted to a permanent office, and remained in operation until 1918 when Pickerel Village opened its own post office. It was operated by e.g., William until 1929, and was subsequently relocated many times to different store locations after that. Pickerel Village expanded along spur lines of the CPR, growing outward to include many different sites scattered over a long distance, consisting of a variety of houses, various businesses, churches, barns, wharfs, schools and boarding houses. In 1922, the water towers stood east of the CPR. However, the forestry industry in the area began to fall, as easier access was made to northeastern Ontario. The Tie & Lumber Co was the first to close its mill in 1928, followed in 1930 by the Pine Lake mill as a result of a fire and was never rebuilt. The Trottier Mill was built in 1941 and was operational until 1950. With the increased development of transportation routes, the area saw an influx of tourists and seasonal residences (HIFN n.d.).

Pickerel Village's population declined steadily during the depression years, but it was never totally abandoned. Today it continues to support a small population and enjoys a summer boom. A few original structures still remain, along with extensive foundations from the mill (HIFN n.d.). In the early 1960s, the Ontario Government closed the area for further development making it part of the North Georgian Bay Recreation Reserve. In 1986 French River was designated Canada's first Heritage River.

The main HIFN village is on the French River Reserve No. 13, along Pickerel River Road, which is where the HIFN Band Office is located. At the present time there are 50 houses; most have been built within the last 10 to 15 years. More housing is in the planning stages for along the Pickerel River Road and in the subdivision, should population continue to increase. There is a small population of permanent and semi-permanent dwellings in HIFN I.R. #2 (HIFN n.d.).



HIFN had negotiated a land claim for HIFN I.R. #2 for 1,112 acres at the northwest corner of the reserve south of the Key River. Those lands were expropriated in 1907 for railway purposes. After five years of non-use by the James Bay Railroad, the lands should have been returned to the First Nation's status, of which Canada has admitted to this breach of its fiduciary obligations. It was not returned to First Nation's status, but was sold or leased out as private patent land. HIFN successfully won the land claim, however it was decided to leave the private lands in exchange for lands granted by the Crown in a different location (Ken Noble, pers. comm. 2014).

1.3 Archaeological Context

1.3.1 Natural Environment

This part of Ontario consists of bedrock that is Precambrian in age (Dredge and Cowan 1983; Teller and Thorleifson 1983). The Canadian Shield is united by two distinctive characteristics, the mixed forest of coniferous and deciduous trees and the ancient bedrock of the southern edge of the Canadian Shield. The Hudson Bay Lowlands are found further to the north, and consist of Devonian and Silurian bedrock mantled by poorly drained marine (Tyrrell Sea) sediments. The Boreal Forest mantles the Shield, but with the southern edge containing the mixed wood Great Lakes-St. Lawrence Forest. The land consists of knobbly wooded hills incised by rivers and streams, often backed up by numerous beaver dams and rocky ledges, and dotted with thousands of lakes. Extensive areas of exposed bedrock are common, much of it having been scraped clean by glacial movement; while in other areas deposits left by glacial river meltwater soften the relief (Zoltai 1965). Glacial action contributed deposits of till in moraines or drumlins. Subsequent glacial lakes left beds of clay in some valleys, while sand deposits mark where the rivers met the lakes.

The complex history of deglaciation and meltwater lake formation and drainage in northern Ontario is not completely understood, although there is extensive literature presenting interpretations and hypotheses (Dyke 2004; Larson and Schaetzl 2001; Leverington and Teller 2003; Lowell et al. 2009; Teller 1995; Zoltai 1965). As previously noted, the complex formation processes and subsequent drainage of the glacial lakes, in combination with many geomorphic processes, had a profound effect on the surrounding topography and distribution of early archaeological sites in central and northern Ontario. Through a complex lake history, the intense convergence of water from Glacial Lake Agassiz in Manitoba and the Tyrell Lake over modern day Hudson's Bay, resulted in the erosion of a moranic barrier between Nadoway Point, Michigan and Gross Cap, Ontario that controlled the post-Minong levels of the Lake Superior Basin and Glacial Lake Algonquin levels over Lake Huron (Slatterly et al. 2007; Farrand and Drexler 1985; Yu et al. 2010; Booth 2002; Lewis 2007).

Glacial Lake Algonquin encompassed the modern Lake Michigan basin, the modern Lake Huron basin and the southeastern Lake Superior basin ~11,200 to 10,400 years ago (Jackson et al. 2000). It extended inland from modern Georgian Bay to the area surrounding the current Lake Simcoe basin (Karrow 1975). As the glaciers retreated, isostatic rebound resulted in the draining of the lake east through the Ottawa River into the St. Lawrence River. By approximately 10,000 years ago, water levels had dropped dramatically to much below those of modern times forming Lakes Stanley and Hough in the modern Huron and Georgian Bay basins, respectively (Jackson et al., 2000). These lake fluctuations resulted in the creation of moraines and beach ridges that became attractive to Paleo people. The glacial lake levels of all of the early Great Lakes are complex and inter-related; each affecting the other in various ways as ice retreated and melted. The lake levels rose and fell accordingly thereby creating the deposits observed within the existing topography. The HIWEC study area would have been under the Laurentian ice sheet until the glacier receded. After the recession of the ice sheet, the HIWEC study area would have been completely inundated by Glacial Lake Algonquian until this lake receded (**Figure 6**).

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As the glaciers and glacial lakes receded, forests spread into central Ontario approximately 10,000 years ago and, through the analysis of pollen, vegetation associations can be determined. **Table 2** provides details on the post-glacial vegetation of this part of Ontario.

Table 2: Post Glacial Vegetation History of Central Ontario

Time	Forest Characteristics	
>8600 BC	Open Spruce forest in dwarf-shrub tundra. Spruce (<i>Picea</i>) dominant, with Willow (<i>Salix</i>) and Pine (<i>Pinus</i>); weeds: Wormwood and Ragweed (<i>Ambrosia</i>)	
8600 – 5500 BC	Climate changing from cold to cool and dry. Open Pine forest. Pine dominant, declining spruce, modestly increasing Oak (<i>Quercus</i>).	
5500 – 2700 BC	Climate changing from cool and dry to warm and wet. Mixed coniferous-deciduous forest. Moving towards Hemlock (<i>Tsuga</i>) dominance, with decreasing Pine, rise of Bassword (<i>Tilia</i>) and Hickory (<i>Carya</i>)	
2700 – 1000 BC	Decline of Hemlock and rise of Birch (Betula)	
1000 BC - AD 1800	Recovery of Hemlock. Hemlock dominance, increasing Beech (<i>Fagus</i>), Elm (<i>Ulmus</i>) and Birch; declining Pine and Oak.	
1800 - present	Deforestation stage. Post-settlement vegetation. Increasing non-arboreal (not from trees) pollen, e.g., Ragweed denoting time transgressive onset of impacts of lumbering, mining, and agriculture 1880 CE: Chestnut decline 1930 CE: Elm decline	

Taken from Schoch and Rowsell (2015)

The HIWEC study area is characterized by undeveloped forest with numerous lakes, streams and bedrock outcrops. The topography and drainage of the area is controlled entirely by the bedrock. It is located on the Georgian Bay Fringe as defined by Chapman and Putnam (1984). The Georgian Bay Fringe area is approximately 334,000 ha in size and covers most of the District of Parry Sound. The area is characterized by very shallow soil with exposed rock knobs and ridges. The thin till cover was removed from the rock outcrops by the wave action within glacial Lake Algonquin. The physiography of the area is described as Shallow Till and Rock Ridges (Chapman and Putnam 1984).

The surficial geology is characterized by six main stratigraphic units: bedrock, bedrock drift, ice contact deposits, glaciolacustrine deposits, alluvium and organic deposits. The most prominent unit is also the most obvious, the bedrock, consisting of ridges and knobs of granite (i.e., unsubdivided granitic to mafic migmatite and gneiss (Neegan Burnside 2011). The bedrock drift areas contain thin deposits of sand a gravel overlie the bedrock. Pockets of organic deposits and alluvium are localized throughout, commonly associated with low-laying, poorly drained areas between bedrock knobs. The alluvium located in those areas consists of sand, silt, and organics, and the glaciolacustrine deposits consist of sand, silt, and clay, which were both deposited from the outwash of glacial meltwaters (Neegan Burnside 2011). **Figure 7** illustrates the current surficial geology within HIFN I.R. #2.

The HIWEC study area is part of the Georgian Bay watershed and includes numerous lakes, rivers, creeks and streams the shorelines of which retain potential for archaeological resources. The French River was a major artery connecting Georgian Bay and the Great Lakes to Ottawa, Montreal and the St. Lawrence River system. This route was utilized by early First Nation groups, and became increasingly significant during the fur trade after 1650 (Campbell 1992). The Key River was traveled to get back east towards Lake Nipissing, as an alternative to the French River. Canoeing up the French was more difficult and was quite congested. The Key River provided a gentle, rapid-free ride back to Lake Nipissing, and got its name from being the "Key to the East" (Joe Herbert, pers. com. 2014). The village of Key Harbour once existed on the north shore of the Key River at the mouth of Georgian Bay. In 1908 the Canadian National Railway (CNR) built a spur line to Key Harbour in order to transport large quantities of ore from Sudbury to the United States. The Key Harbour was utilized to facilitate the transfer of ore pellets from rail cars to tanker ships. Key Harbour was decommissioned in 1920 as larger quantities of ore were being shipped out of Depot Harbour near Parry Sound. During the 1920s and early 1930s, Key Harbour was used



to ship coal north to Sudbury. After 1938 the docks were abandoned and the tracks were mainly used by jitneys for bringing in cottagers and sending out frozen packed fish from Gauthier's fishery station, also located at Key Harbour. In 1960 the spur line was torn up and sold for scrap. The ruins of the old generating plant and rotting dock supports still remain in the Key River.

In addition to these sources of potable water and transportation are wetlands which were a source of rich natural resources related to hunting and plant collecting. Camps associated with wetlands would be located on well drained areas in close proximity, or on ridges that extend into the wetlands areas, the shorelines of wetlands alone do not retain archaeological potential.

1.3.2 Previous Archaeological Assessments

A Traditional Land use Study was conducted by HIFN to identify areas of cultural concern, including previous settlements, sacred burial locations, significant hunting and fishing areas, plant gathering, travel routes and archaeological sites. This was completed through interviews with community and council members, and was conducted by HIFN Chief and Council, led primarily by Community Co-ordinator Crystal DeLeskie (URS 2013). This study was conducted to identify and document the historical and current practices and values of HIFN people relative to the resources and landscapes that they have and continue to utilize across their traditional territory. The information collected from this exercise provided the community with a document containing the collective traditional knowledge of HIFN, and is a valuable resource for current and future generations.

Multiple archaeological assessments have been conducted along Highway 69 as part of an Environmental Assessment during the proposed road widening process. A Stage 1 archaeological assessment was conducted by Woodland Heritage Services Ltd. (WHS) in 2004 for a portion of Highway 69 that was to be widened, and identified a number of areas that required further work. WHS completed Stage 2 assessments in 2005 and 2007 and found no archaeological sites or material. As the design of the highway changed, URS was contracted by the Ministry of Transportation (MTO) to conduct Stage 2 assessments of lands included in the new designs. The Stage 2 was conducted between 2010 and 2013, and one archaeological site was identified (URS 2014). This site was previously registered as the Wagamake site (BIHd-2) by a local avocational archaeologist. URS conducted a Stage 3 of the Wagamake site (BIHd-2) in 2013, which included large piles of antiquated, but intentionally constructed piles of stone east of HIFN near Bekanon Road. The Stage 3 consisted of systematically excavating the piles of stone, but no archaeological materials were recovered (URS 2013). Upon further research, URS noted that similar stone piles elsewhere in central Ontario were the result of small-scale 19th to 20th century quarrying by landowners in order to sell building materials for road or railway construction, or for use in barn foundations (URS 2013:7). New Directions Archaeology Ltd. (New Directions) conducted the Stage 1 for the remainder of the road widening in 2004 from Six Mile Lake south to the portion of the current highway that is already been divided, north of Nobel. Stage 2 investigations were conducted within the proposed ROW in areas within 50 m of major water sources in 2004. The Shawanaga Site (BjHb-1) was discovered and the Stage 3 investigation (New Directions 2006) was followed by Stage 4 mitigation in 2006 (New Directions 2007). This site represented a campsite that yielded hundreds of lithic flakes and tools.

In 2015, AECOM conducted a Stage 1 archaeological assessment on H.I.F.N. I.R. #2. This consisted of a desktop analysis of the prehistory of the land and partial property inspection (AECOM 2015a). Other archaeological assessments in close proximity to the H.I.F.N. I.R.#2 include the Stage 1 archaeological assessment done by AECOM in 2015 for the HIWEC Transmission Line - Route A (AECOM 2015b) and HIWEC Transmission Line - Route B (AECOM 2015c) projects. All three of these reports identified areas that have archaeological potential and Stage 2 archaeological assessments were recommended.



1.3.3 Registered Archaeological Sites

A request was made to Archaeology Data Co-ordinator Robert von Bitter of the Ontario Ministry of Tourism, Culture and Sport (MTCS) on February 4, 2015 by AECOM for information on registered archaeological sites surrounding the HIWEC study area from the provincial Archaeological Sites Database (ASDB). The database search resulted in the identification of three registered archaeological sites located on HIFN I.R. #2, and two located within 1 km of the study area, listed in **Table 3** below.

Borden #	Site Name	Cultural Affiliation	Site Type/Feature	Researcher
BIHd-2	Wagamake	Historic	Rock Formations	URS 2013
BIHd-1	Percy Currie Site	Aboriginal	Campsite	ASI 1999, 2007
BIHd-3	Nekickshegeshine Wabanong	Aboriginal	Village	Allen 2008
BIHe-2	Nekickshegeshing	Contact Aboriginal	Village	Allen 2008
BIHe-3	Amikwa	Multi-Component	Campsite?	Allen 2008

Table 3: Registered Archaeological Sites within 1 km of HIWEC Study Area

Note: * Sites in bold are within HIFN I.R. #2

The Percy Currie Site (BIHd-1) was first identified by Archaeological Services Inc. (ASI) in 1999, where a known 20th century burial existed. In addition to the burial 12 artifacts were discovered, including four ceramic vessel fragments, one scraper, one bladelet, and modern garbage (ASI 1999). It was further explored in 2007 by ASI, which yielded positive Stage 2 test pits that contained Late Archaic lithics, and Middle Woodland pottery. Further Stage 3 work was recommended for that area, and in 2008 ASI identified two loci of pre-contact Aboriginal activity representing a minimum of three cultural affiliations (2008: 16). Further Stage 4 work is recommended for the area should any development impact it. The three remaining sites, (BIHd-3, BIHe-2 and BIHe-3) are all located on HIFN I.R. #2 lands. All three registered sites represent old village sites that yielded a small sample of pottery, ceramics, glass and nails. These areas were all identified in the Traditional Land Use Study completed by HIFN and URS in 2013, and the areas were completely removed from potential impact from the HIWEC footprint.

Though the ASDB only yielded five registered archaeological sites, other notable sites have been discovered in the surrounding region. For a more in depth summary of sites located beyond the 1 km buffer, reference should be made to the Stage 1 archaeological assessment report (AECOM 2015a).

1.3.4 Current Conditions

The typical natural environment of the HIWEC study area consists of forested hills, dominated by exposed Canadian Shield bedrock with rivers, lakes, streams and extensive wetlands cutting through it. This is a rural setting with a sparse population of small dwellings along Henvey Inlet, with a small community of permanent dwellings concentrated along Bekanon Road west of Highway 69. Current industry includes forestry, aggregate, waste management, and recreation activities.

Major roads in the area include Highway 69 which is part of the Trans-Canada Highway, linking Sudbury to Parry Sound. This highway is fairly modern, and does not represent a historic road route. Bekanon Road is the only road within the HIWEC study area, which begins west of Highway 69 and terminates at the Henvey Inlet boat launch. The existing Canadian Pacific Rail line is located east of the HIWEC study area.

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2. Field Methods

The Stage 2 field investigation involved the physical survey of all of the land to be impacted by the proposed HIWEC infrastructure footprint on HIFN I.R. #2, consisting of 120 turbine generators, the road network, transmission lines for both Route A and Route B, laydown yards, and transformer stations. The area subject to archaeological field investigation included: 160 m² at turbine locations, a 50 m wide corridor for the access roads and transmission lines, and 200 m² for the laydown yards, transformer stations and switchyards. Though not subject to MTCS approval, the field investigation was conducted in accordance with provincial regulations (Ontario Government 2011b). The study area consists almost entirely of exposed bedrock and permanently wet areas, with the exception of approximately 10%, which was found to be suitable for test pit assessment. There are a small number of modern residences, located along Henvey Inlet and along Bekanon Road. Small roads are located away from water sources that consist of logging and ATV trails. Photographs were taken of typical landscape features and current conditions within the HIWEC study area and are provided in **Section 7.1** of this report. **Figure 8**, Plates 1 to 112, provide an illustration of the methods and results of the Stage 2 field investigation, as well as location and direction of the photographs.

The entire study area was subject to a detailed property inspection by the archaeological team who walked the entire WEC footprint and subjected each area to the appropriate field investigation. If a quartz vein was present, it was examined in detail to determine if there were any cultural modifications related to quarrying activities. If any areas of steep slope containing exposed bedrock cliff faces were encountered, these areas were examined for rock art given the identification of pictograph sites in close proximity to the current study area. If well drained soil was present, test pits were excavated at a 5 m interval and approximately 30 cm in diameter. Each test pit was excavated at least 5 cm into subsoil or at bedrock and was examined for stratigraphy, cultural features or evidence of fill. All soil was screened though hardware mesh with an aperture of 6 mm to facilitate the recovery of cultural material and was then used to back-fill the pit. If an artifact is recovered from a test pit, intensified survey coverage is employed around the positive pit to determine whether a recommendation for a Stage 3 assessment can be supported. If an archaeological site was identified additional land in the vicinity was subject to Stage 2 archaeological assessment in order to provide infrastructure corridors free of archaeological material.

The Stage 2 field investigations were conducted between May 4th and July 17th, 2015. Weather conditions varied, but throughout the investigations visibility and lighting conditions were excellent and there were no conditions that were detrimental to the identification and recovery of archaeological material. The temperature during field investigations ranged from 10 to 25° Celsius.



3. Record of Finds

The Stage 2 archaeological assessment of the land to be impacted by the proposed HIWEC infrastructure footprint was conducted by employing the methods outlined in Section 2 of this report. AECOM's Stage 1 background research determined that the study area had areas of potential to contain both First Nation and Euro-Canadian archaeological resources, and the Stage 2 property inspection resulted in the identification of an area of First Nation and Euro-Canadian cultural material. Maps, photographs and field notes are saved digitally on the AECOM London office server and hard copies are archived at the London office. Any maps that show actual archaeological site locations and all UTM co-ordinates recorded during the assessment are provided in the supplementary documentation to this report as public release of this type of information in the past has led to illegal activities such as looting. All of the artifacts collected during the Stage 2 archaeological assessment are contained in one banker's box and will be temporarily housed at AECOM's London office.

3.1 Hebert Site

The Stage 2 archaeological assessment of the proposed HIWEC resulted in the identification of a multi-component site, named the Hebert Site, from which both 19th century Euro-Canadian artifacts and pre-contact First Nation lithic material was recovered within an area measuring approximately 130 m east-west by 80 m north-south. The site is located west of the CNR, south of the Key River on top of a triangular sandy plateau that is bordered by poorly drained areas and at one time in the past was likely surrounded by water. The eastern portion of the site drops 15 m and consists of a series of alternating flat areas and berms. The geography of the eastern portion of the site resembles an area that was step mined in the past for aggregate. The test pits in the east displayed homogenous grey sand and yielded artifacts related to the rail line. This is contrasted by the intact stratigraphy in the western portion of the site, which consists of a humic layer, followed by a yellow silty sand and a sterile orange sand layer. The disturbance in the eastern portion of the site can be attributed to the construction of the rail line during which the sand was used as aggregate to build up the rail bed.

A total of 85 artifacts were collected from 14 test pits and the ground surface and were returned to the laboratory for processing and analysis. The artifacts collected consist of 76 pieces of 19th and 20th century Euro-Canadian material and nice pieces of pre-contact First Nation material. **Table 5** provides a summary of the artifacts recovered from the Hebert Site. A complete catalogue of the artifacts recovered from the Hebert Site is provided as Appendix A.

Table 4: Summary of Artifacts Recovered from the Hebert Site

Artifact	Quantity	%
Glass	34	40.0
Metal	13	15.3
Nails	8	9.4
Chipped Stone Debitage	7	8.2
Personal	6	7.1
Rail Slag	6	7.1
Ceramics	5	5.9
Charcoal	3	3.5
Biface	1	1.2
Scraper	1	1.2
Brick	1	1.2
Artifact Total	85	100%

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3.1.1 Euro-Canadian Artifacts

Glass

A total of 34 pieces of glass were recovered from the Hebert Site, consisting of 30 pieces of bottle glass, three pieces of dish glass, and one piece of window glass. Of the 30 pieces of recovered bottle glass, 27 pieces are clear, two are aqua, and one piece is violet tinted glass. Of the clear pieces, one intact neck and rim and one base were determined to be machine-made based on the presence of seams and moulding. Additionally, six of the clear pieces appear to be re-worked and are either glass flakes (n=2), have evidence of glass flake removal (n=2), or have been fashioned into scrapers (n=2). One scraper in particular (Cat#20) has a steep worked edge and is similar in shape and outline to typical end scrapers created by pre-contact First Nation hunters on chert.

The typical types of early bottle glassware recovered from Euro-Canadian sites are usually dark bottle glass used to store liquor or aqua coloured bottles used for medicines. Aqua coloured glass, often referred to as "green" glass, was manufactured up until the 1880s (Kendrick, 1971). The use of clear bottle glass was mainly used for preserving food items in the canning process. This type of glassware typically dates from the 1880s up to the present day (Kendrick, 1971). Light violet, or amethyst glass tinted glass was popular from 1880-1920 (Kendrick, 1971). The identification of glass bottles from Euro-Canadian archaeological sites is often difficult as bottles are usually highly fragmented. If the lip area and/or base are intact, some dating clues may be found upon examination. Bases should be examined for the presence or absence of a "pontil mark" or scar where the bottle was attached to a rod during manufacture. By about 1850, a method of bottle manufacture known as "snap case" was developed which left no pontil scar. By 1870, this method became universal, so after this date, pontil scars are no longer seen. By the beginning of the 20th century, automatic bottle making machines were developed. A feature used for dating bottle glass is that 20th century bottle making machines produce a vertical mould seam that extends over the bottle lip. Nineteenth century bottle tops were usually finished by hand and the seam does not extend over the lip (Adams, 1994).

The three recovered pieces of dish glass are clear, moulded glass. Two of the pieces feature a sunburst pattern while one features a simple horizontal banding pattern. These pieces of glass likely date to the later 19th, early 20th century, based on their colour and moulding.

One piece of window glass was collected, measuring approximately 2.0 mm in thickness. This piece of glass appears to have been re-worked as there is evidence of flake removal on one side. There were two common methods of making window or "flat" glass before industrial improvements developed in the late 19th and early 20th centuries. The crown glass method involved spinning out molten glass into circular sheets, which were then cut into panes. A very visible change in window glass took place in the 1840s. In part this was due to English tax on window glass based on weight; before the tax was lifted in 1845 manufacturers made window glass as thin as possible (usually by the crown method) to minimize the effects of this tax. As a result, most window glass made before the mid-1840s tends to be less than 1.6 mm thick, while window glass made after this date is thicker. The window glass from the Hebert Site postdates 1860.

Generally speaking, the glass assemblage when diagnostic, suggests an occupation at this site in the late 19th and 20th century based on the two pieces of machine made bottle glass, the glass dish fragments, and thick window glass.

Metal

Miscellaneous metal is typically one of the largest artifact categories represented on Euro-Canadian sites. The miscellaneous metal category includes scraps of metal, including sheet metal and wire that may be identifiable as to their material as metal, but their intended use within the site is unclear. These items tend to represent structural items I or hardware items that cannot be identified due to their fragmentary nature. At the Hebert Site, 10 pieces of

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miscellaneous metal and three metal spikes were recovered. The miscellaneous metal hardware ranges from thin and fragile scraps of metal to thicker oxidized masses that not be identified as to form or function with any degree of certainty. Two of the metal spikes recovered are identified as rail spikes.

Nails

Eight nails were recovered from the Hebert Site, including four wire-drawn nails and four nails with types that could not be determined due to significant oxidation and degradation. Wire nails are manufactured from steel wire which is held in a gripper and headed, and then the wire is then advanced and sheared to length. By the late 1880s, wire nails superseded cut nails because of the lower cost of production. Wire drawn nails are identical to the type of nails in current use today. They were developed in the 1850s but did not become popular until the 1890s (Adams *et al.* 1994).

Personal Items

Personal items recovered from the Hebert Site include five shoe/boot eyelets and one utensil. The shoe/boot eyelets are metal and still retain some small pieces of the surrounding shoe leather. Due to their typical nature, these items are non-diagnostic. The utensil recovered from the site is a large spoon that has been purposefully bent at the neck of the bowl to create an L-shape. The spoon has been engraved on the front with "C.R.N. Co." and on the back with "Toronto Silver Plate Co. AJ". In 1890, the Canadian Railway News Co. (C.R.N. Co.) was founded by Cara, now Cara Operations, a Canadian catering company which provided catering services for rail passengers. We interpret the bent L-shaped spoon as purposely adapted to easily scoop food directly from a can. Based on the engravings on the spoon, it can be dated to sometime after 1890 when the C.R.N. Co. was originally founded and began servicing the rail companies.

Railway Material

A significant amount of rail slag was identified on both the surface and within the excavated test pits at the Hebert Site. Based on the non-diagnostic nature of rail slag, a representative sample of approximately 1% of the observed slag was collected from the field for processing and analysis (n=6). The presence of slag is not unexpected at the site given its close proximity and relationship to the railway. The two recovered metal railway spikes and the utensil are also reflective of the site's relationship to the railway.

Ceramics

Very few ceramics were recovered from the Hebert Site, which suggests that the site is not representative of a 19th century homestead. The ceramics recovered include two pieces of whiteware, two pieces of porcelain, and one piece of ironstone.

Whiteware is a variety of white earthenware with a near colorless glaze that replaced earlier near-white ceramics such as pearlware and creamware by the early 1830s and remained popular until the present day. Early whiteware tends to have a porous paste, with more vitrified, harder ceramics becoming increasingly common later in the 19th century (Kenyon 1985). There are a number of different methods used in decorating whiteware that changed over time and are useful for archaeologists in dating sites. The most common decorative techniques found in 19th century Ontario are painted, transfer-printed, edged, banded, sponged, moulded, and stamped. The proportion of these types will vary from site to site depending not only on the age of the site, but also according to the taste and wealth of the occupants (Kenyon 1985). Of the two pieces of recovered whiteware, one is plain and features no decoration and the other is transfer printed in blue displaying a Chinoiserie floral design popular throughout the 19th century.



Porcelain is a ware which has been fired at such a high temperature that it has begun to vitrify, or turn to glass. As a result of this process, the ceramic is translucent when held up to light (Kenyon 1980). Porcelain was fairly expensive in the 19th century and is rare on earlier Ontario archaeological sites. However, by the turn of the century it became relatively common as production techniques were developed in Europe, which helped to greatly reduce costs. Thus, most porcelain found on historic Euro-Canadian sites in Ontario was likely manufactured in the early 20th century.

Ironstone generally has a much harder, thicker body than ordinary white earthenwares. The glaze is often tinted slightly blue, but unlike earlier pearlware the glaze is smooth. White ironstone was introduced in the 1840s, and was the most popular type of tableware ceramic in Ontario during the 1870s to 1880s. White ironstone is rarely decorated with colour and often has moulded designs instead. The recovered piece of ironstone is small and the presence or absence of decoration and/or moulding could not be determined.

Charcoal and Brick

The remaining material recovered from the Hebert Site consists of three pieces of charcoal and one small piece of red brick. This material is non-diagnostic and with no further evidence of a structure, the origin of the recovered brick is unknown.

3.1.2 Pre-Contact First Nation Artifacts

The site documented during the Stage 2 archaeological assessment includes First Nation lithic artifacts. The raw materials identified include the following:

Onondaga Chert:

Onondaga chert is found throughout southern Ontario, derived either from the primary bedrock location along the northeast shore of Lake Erie (Niagara Peninsula), or in secondary glacial/riverine deposits (Eley and Von Bitter 1989). This raw material was utilized by Paleo, Archaic and Woodland cultural groups (see Section 1.2 of this report for complete details on the cultures of Ontario) for a variety of lithic tool manufacture.

• Kettle Point Chert:

Kettle Point chert is a relatively high quality raw material that outcrops between Kettle Point and Ipperwash on Lake Huron. Kettle Point occurs as submerged outcrops extending for approximately 1,350 m into Lake Huron. In addition, secondary deposits of Kettle Point chert have been reported in Essex County and in the Ausable Basin (Eley and Von Bitter 1989).

Quartz:

Quartz is a crystalline silicon dioxide mineral that is extraordinarily common and occurs in various types, colors and locations (Gramly 1981). Its extreme hardness makes it very abrasion resistant. It occurs in two different types, crystalline and cryptocrystalline. Forms of quartz typically seen in the archaeological record include, crystal quartz, milky, smoky, rose and amethyst (Gramly 1981). Quartz is a defining constituent of granite and other felsic igneous rocks, making it the second most abundant material in the earth's continental crust.

Collingwood Chert

Collingwood, or Fossil Hill, chert is a relatively high quality Middle Silurian material that outcrops in the southern Georgian Bay area and can be found in glacial deposits near the chert outcrops. Although Collingwood chert seldom appears in till in the southwestern part of the province, it was used extensively in fluted point industries during the Early Paleo-Indian Period.

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All raw material type identifications were accomplished visually using reference materials located at AECOM's London office. The assemblage of chipping detritus was subject to morphological analysis following the classification scheme described by Lennox et al. (1986) and expanded upon by Fisher (1997), with the exception that no attempt was made to distinguish "primary" flakes from "primary bipolar flakes". All cultural material has been catalogued according to the London Museum of Ontario Archaeology (MOA) classification scheme.

The Stage 2 resulted in the identification of nine pre-contact First Nation lithic artifacts, which were all collected for laboratory analysis and processing. The nine artifacts include seven pieces of chipping detritus, one biface and one scraper. Chipping detritus is defined as the waste products that result from the manufacture of lithic tools and are the most commonly recovered artifacts from pre-contact First Nation archaeological sites. Of the seven pieces of chipping detritus, three pieces were manufactured on Kettle Point chert, two on Onondaga chert, one on quartz and one on slate. Five of the pieces were secondary flakes, one was tertiary, and one was burnt.

In addition to the chipping detritus, a biface and scraper were recovered from the Hebert Site. The biface is made on Onondaga chert and measures 29 mm in length with a maximum width of 27 mm and maximum thickness of 13 mm. The tool is thick with relatively little flake removal on the ventral and dorsal surfaces. All edges display evidence of battering causing hinged flake removal. This bifacially worked tool may have functioned as a wedge, it has straight to convex lateral margins and flake removal through battering along all edges.

The scraper has been manufactured on a large Collingwood chert flake, it measures 55 mm in length with a maximum width of 34 mm and a maximum thickness of 6 mm. This tool has a wide base and contracts to a narrow protrusion, or beak, at the distal end. The scraping edge is steep, approximately 4 mm, and extends on the left side from the wide base up the narrow protrusion to where it is broken. This narrow 'beak' was longer and the scraping edge probably extended for the full length. The morphological silhouette of this tool is similar to that of side scrapers from the Paleo Period, as is the use of Collingwood chert.

Though no diagnostic lithic tools were present, the biface and retouched flake indicate tool production was occurring at the site. In addition, the presence of worked pieces of glass indicates that a person with the ability to knap was present at the site at the same time or after the 19th to 20th century occupation.



4. Analysis and Conclusions

The Stage 2 archaeological assessment of the land to be impacted by the proposed HIWEC infrastructure footprint on HIFN I.R. #2 resulted in the identification of one archaeological site. The site was identified as a multi-component site, consisting of pre-contact First Nation artifacts and Euro-Canadian cultural material and was named the Hebert site. An attempt has been made to register the site with the Ontario MTCS for inclusion in the ASDB; however, because this project is not being reviewed by the MTCS, and due to recent upgrades to their registration system, they are unable to determine how to register this site and provide us with a Borden designation. Currently we are waiting for advice from the MTCS and will register the site once they determine how to do so.

4.1 Hebert Site Data

The recovered chipping detritus is considered to be temporally non-diagnostic, other than being produced by precontact First Nation peoples; artifacts such as these cannot help to place the archaeological site within a specific time period or to a particular cultural group. Though the artifacts are temporally non-diagnostic, the artifact assemblage indicates tool production activities were conducted here. In addition, a biface, potentially intended as a wedge, and a side scraper demonstrate First Nation tool production activities were conducted here. Moreover, the presence of culturally modified historical material indicates some level of transfer of pre-contact lithic technology to glass (Deal and Hayden 1987). This has been documented in ethnographic studies from other sites around the world, particularly in North and Central America and Australia (Blume 2000; Deal and Hayden 1987).

The Euro-Canadian artifacts are clearly associated with the construction of the rail line that is located approximately 150 m east of the site. The Euro-Canadian artifact assemblage suggests that this may be the location of a camp site occupied by the workers during the construction of the rail line. The glass and ceramics indicate an occupation date of the late 19th century to early 20th century, and the presence of rail spikes and slag are also obviously indicative of rail line construction. Many of the 19th century railway, logging, and mining camps were provided with staple canned foods such as canned salmon and beans (Burns 1990). We interpret the bent L-shaped spoon as purposely adapted to easily scoop food directly from a can. Based on the engravings on the spoon and from company information this item can be dated to sometime after 1890 when the C.R.N. Co. was originally founded and began servicing the rail companies. The CNR was constructed in the 1880s and the CPR in 1908; these dates coincide with the date of material recovered from the Hebert site. Diagnostic artifacts suggest an association with the initial construction of the rail line in the area, prior to its completion in 1908.

In addition to the cultural material that points to an association with the rail line, the examination of the natural environment found indicators of aggregate activities which are also interpreted as related to the rail line construction. The ghost town of Ludgate, which was directly associated with the rail lines, was also located in the vicinity and the site could have associations with that community as well (Campbell 1983).

The natural environmental features make this spot ideal for a camp and would have been equally attractive to both pre-contact First Nation people and later rail line construction workers. The presence of worked glass, especially the glass scraper, demonstrates that First Nation lithic technologies were being applied to the 19th to 20th century material. While it is possible that a knapper came across the material once the rail camp had been abandoned and modified it to be utilized for other purposes, we interpret these tools as the result of First Nation people who were employed to construct the rail line and lived at the camp.

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4.2 Determination of Cultural Heritage Value or Interest

The material recovered here indicates an occupation by rail workers, both as a camp area and area for aggregate industry. The Hebert Site has cultural heritage value or interest based on a number of criteria. **Table 5** provides the rationale for determining cultural heritage value or interest.

Table 5: Cultural Heritage Value or Interest Criteria

Criteria	Indicators
Cultural Historical Value	The Hebert Site advances our understanding of local cultural history as a site that demonstrates both Euro-Canadian and First Nations industry in rail line construction.
Historical Value	The Hebert Site is associated with early exploration of the region, related to the construction of the rail line that was instrumental in providing effective transportation routes between this region and the more densely settled areas to the south.
Rarity or Frequency	The Hebert Site, as a multi-component site related to rail line construction, is of a type that is under-represented in archaeological research.

This site likely has some association with the town of Ludgate that existed near the rail line. The area retains significant cultural heritage value or interest because of the complexity of a multi-component site and the close proximity to the town of Ludgate and Little Key River.

4.3 Development Processes

The Hebert site was identified along a transmission line corridor, specifically Transmission Line – Route A. Once the site was identified and it was determined that further archaeological assessment was required a re-route of Transmission Line – Route A was planned and the transmission corridor was shifted south. This additional land was subject to Stage 2 field investigation and no archaeological material was identified.

As part of the HIWEC development two options for transmission lines were considered and studied, Transmission Line – Route A and Transmission Line – Route B. Only one will be used as part of the project. It has been determined by the project team that Transmission Line – Route B is the preferred option and no development on Transmission Line – Route A will occur.

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5. Recommendations

The Stage 2 archaeological assessment resulted in the identification of the Hebert Site, a late 19th – early 20th century archaeological site determined to be a rail workers camp and area of aggregate industry occupied by both First Nation and Euro-Canadian people. Based on the cultural historical value and rarity of this type of site it is determined to have cultural heritage value or interest and should be preserved.

If the Hebert Site will be impacted by development processes a Stage 3 archaeological assessment must be conducted. The Stage 3 archaeological assessment should employ hand excavated test unit methodology as outlined in Section 3.2.2 and Table 3.1 of the *Standards and Guidelines for Consultant Archaeologists* (Ontario Government 2011), to further test the nature and density of the site.

A 50 m wide corridor south of the Hebert Site was assessed and found to be free of archaeological concerns. This re-route option should be used if development will occur here, thus avoiding impacts to the Hebert Site. In order to preserve the area and avoid disturbing the site it is recommended that a temporary fence be placed along the northern limit of the 50 m re-routed transmission line boundary and around the limits of the Hebert Site. This area must be clearly labelled on all construction drawings as a No-Go zone for all construction activities and personnel (see Supplementary Documentation).

It has been determined by the project team that Transmission Line – Route B is the preferred option and no development on Transmission Line – Route A will occur. As such no development activities are planned on Transmission Line – Route A in which the Hebert Site is adjacent to and no protective measures or further assessment is required. If HIWEC plans change in the future and impacts are planned in this area the above mitigation measures must be taken into account.



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7. Images

7.1 Photographs



Photo 1: Example of areas of standing water/poor drainage, facing southwest



Photo 2: Example of a poorly drained, undulating forest floor, note standing water, facing southwest





Photo 3: Typical marsh on the northern side of the HIWEC study area, facing north



Photo 4: Typical exposed bedrock conditions on the northern side of the HIWEC study area, facing east





Photo 5: Example of exposed bedrock and permanently wet/marsh areas, facing west



Photo 6: Example of an area requiring test pitting on the south side of the HIWEC study area, facing southwest





Photo 7: Typical pond/wetland features on the south side of the HIWEC study area, facing south



Photo 8: Example of wetlands on the south side of the HIWEC study area, facing west





Photo 9: Stage 2 test unit (1 x 1 m) excavation at the Hebert Site, facing northwest



Photo 10: Test unit excavated at the Hebert Site, note the stratigraphy, facing east





Photo 11: Surface scatter of cultural material at the Hebert Site, note glass, metal and leather artifacts



Photo 12: Extreme slope along the eastern edge of the Hebert Site, approximately 15 m drop, facing north





Photo 13: Test pitting within the HIWEC transmission line corridor, facing south



7.2 Plates



Plate 1: Representative sample of glass from the Hebert Site
(A-C: Bottle glass; D: Glass detritus; E: Worked glass end scraper; F: Worked window glass; G: Dish glass)



Plate 2: Representative sample of metal from the Hebert Site (A: Miscellaneous metal; B: Rail spike; C: Wire drawn nails; D: Undetermined nail)





Plate 3: Representative Sample of Personal Artifacts and Rail Slag from the Hebert Site (A: Shoe/boot eyelets; B: C.N.R. Co Spoon; C: Rail slag

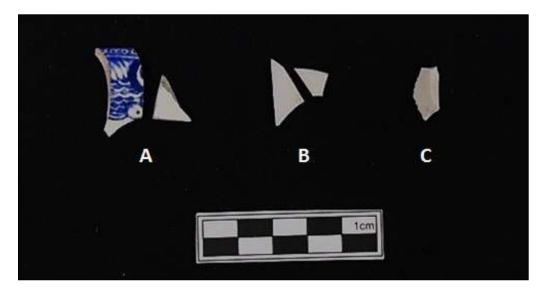


Plate 4: Representative Sample of Ceramics from the Hebert Site (A: Whiteware; B: Porcelain; C: Ironstone)



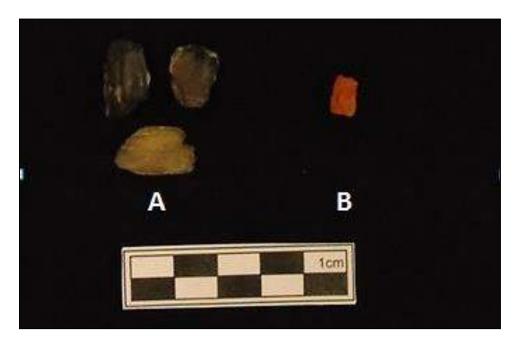


Plate 5: Representative Sample of Charcoal and Brick from the Hebert Site (A: Charcoal; B: Brick)



Plate 6: Representative Sample of First Nation Cultural Material from the Hebert Site

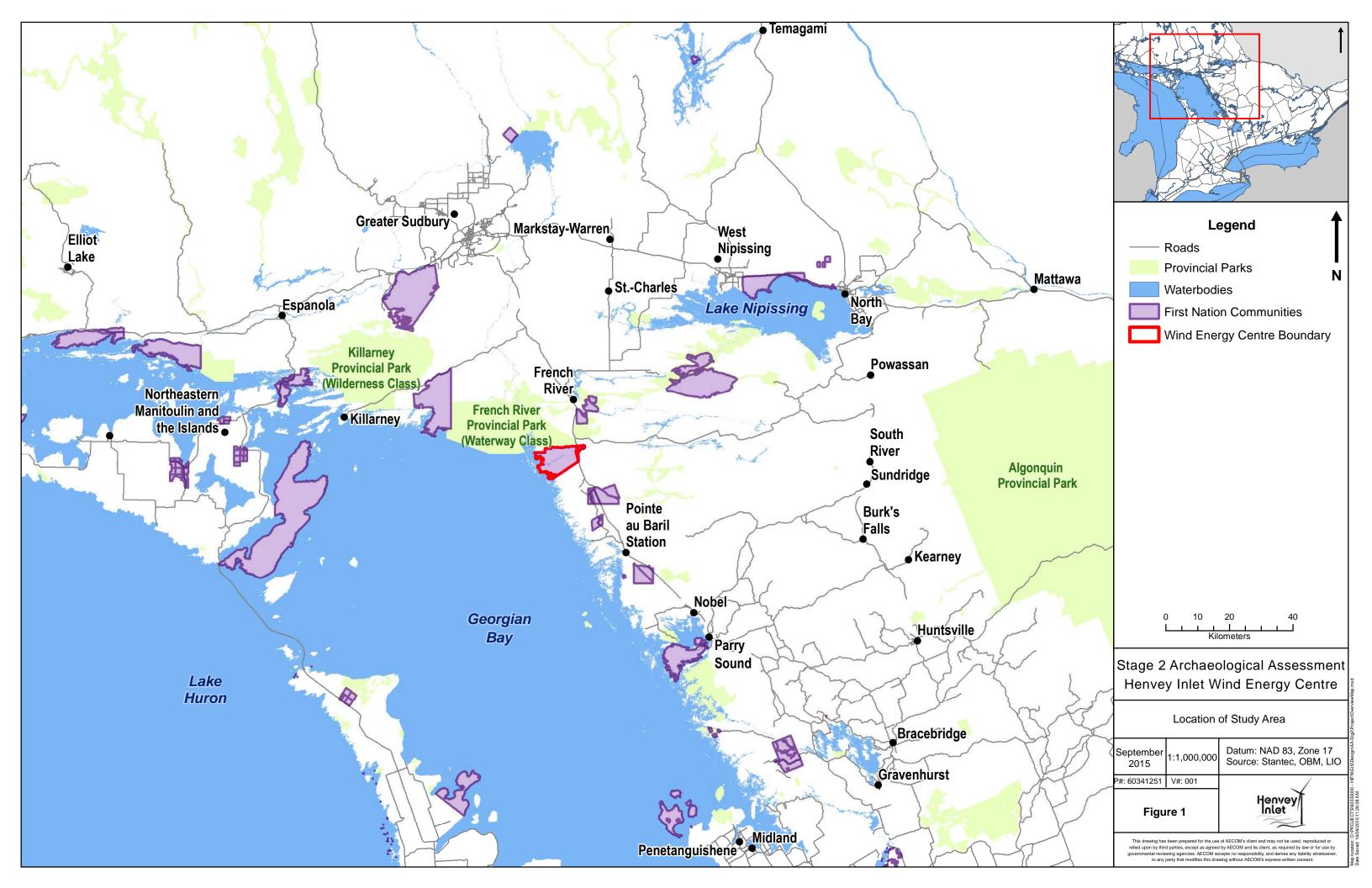
(A: Side-Scraper; B: Non-chert detritus; C: Chert detritus; D: Tertiary detritus; E: Quartz detritus

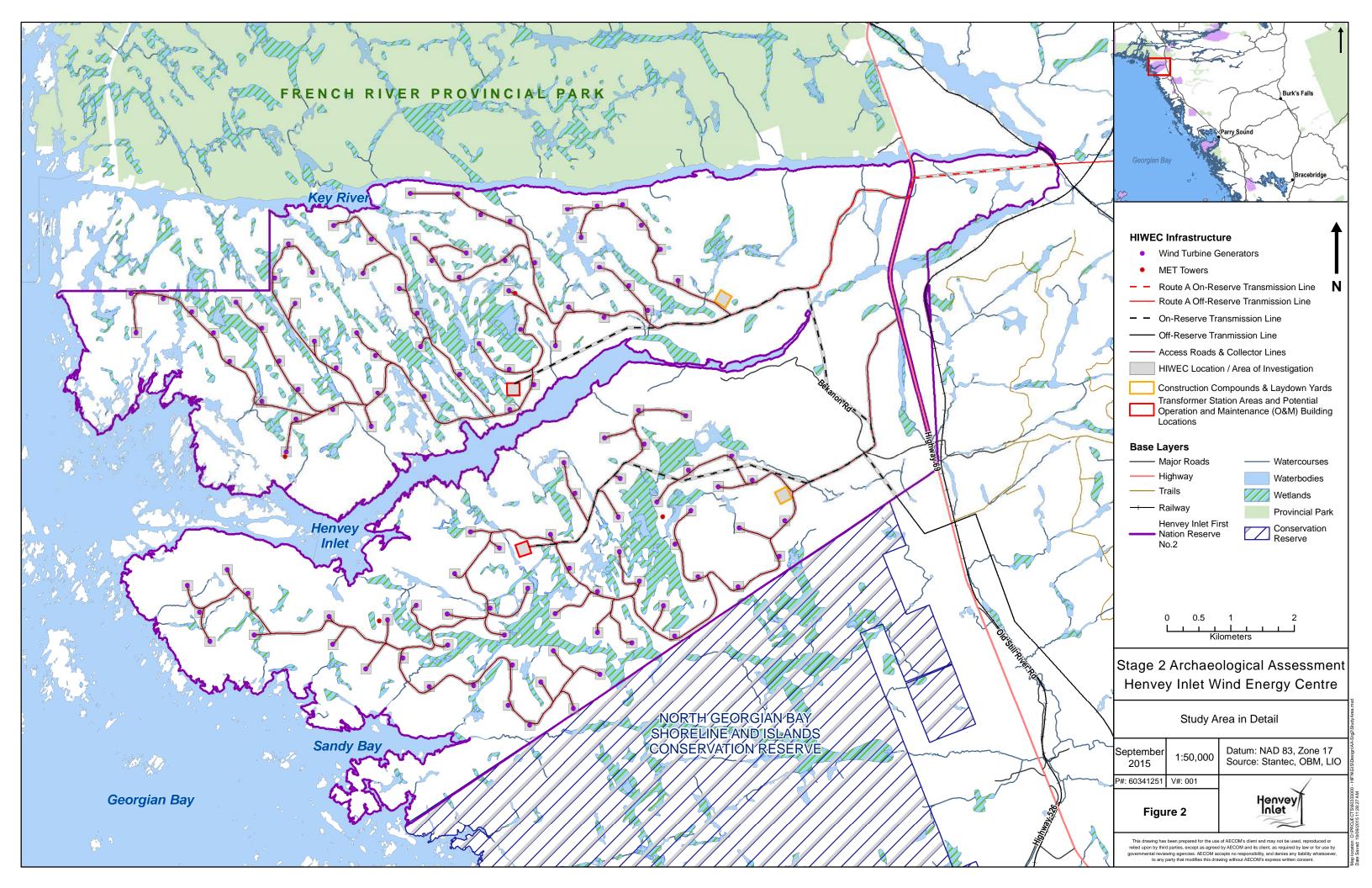
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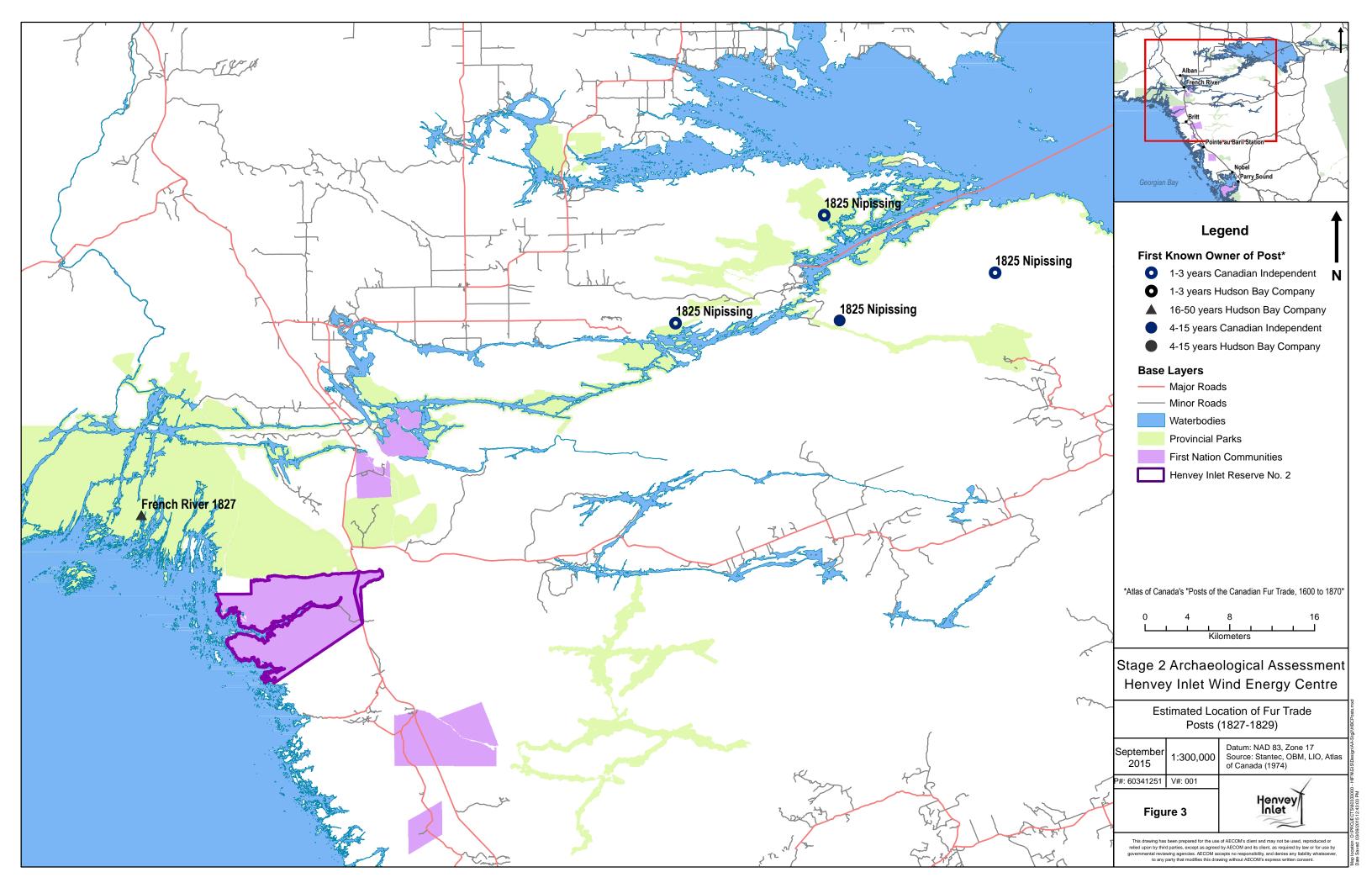


8. Maps

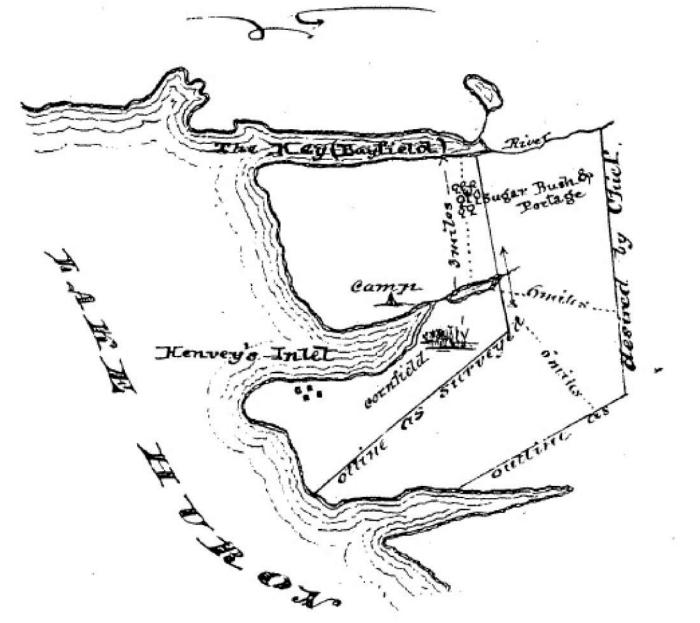
All maps for the Stage 2 archaeological assessment for the proposed HIWEC and associated infrastructure on reserve lands are provided on the following pages. Maps that provide specific archaeological site locations are included in the Supplementary Documentation to this report as public release of this information has led to illegally conducted activities such as looting in the past.







Sketch of Reserve No.2





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Stage 2 Archaeological Assessment Henvey Inlet Wind Energy Centre

Treaties & Purchases

September 2015 N.T.S Source: JS Dennis 1851

P#: 60341251 V#: 001

Figure 4



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