Stage 1 and 2 Archaeological Assessment
Class EA Sanitary Improvements
Connaught Park
Municipality of Kincardine
Part of Lots 12, 13, 14, 15, 16 and 17, Concession A
Geographic Township of Kincardine
Bruce County

Submitted to

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and

The Ontario Ministry of Tourism, Culture and Sport

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Our File: 2015-095
PIF Number: P1020-0033-2015

February 2016
(Original report submitted to Ministry of Tourism, Culture and Sport February 8, 2016)

Executive Summary

A Stage 1 and 2 archaeological assessment was conducted for proposed sanitary servicing line replacement, a new force main and a new sewage pumping station in the Town of Kincardine, Bruce County, Ontario. The project under consideration will include replacement of existing and installation of new collector sanitary sewer lines within road allowances and the construction of a new sewage pumping station (SPS) within Connaught Park. Our work was carried out as part of a Municipal Class Environmental Assessment and in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). Within the Class EA process, the purpose of the archaeological assessment was to establish if the project would have negative effects on known or potential archaeological resources.

The Stage 1 background study included a review of current land use, historic and modern maps, registered archaeological sites and previous archaeological studies, past settlement history for the area and a consideration of topographic and physiographic features, soils and drainage. According to the review, the survey area is intersected by or in proximity to at least four features signalling archaeological potential. Potential for the discovery of First Peoples sites is indicated by the proximity (within 300 m) of a substantial water source (Lake Huron and the Pentagore River) and previously documented sites. The potential for the discovery of Euro-Canadian and historic era sites is also demonstrated by proximity (within 300 m) to: 1) mapped 19th century transportation routes (namely Broadway, Queen and Harbour Streets) and the town harbour (shipping); and 2) major water source(s).

The review of details provided by the proponent indicated that the majority of the project area has witnessed prior disturbance. Excluding the proposed new sewage pumping station and sanitary line within Connaught Park, all portions of the line are to be placed within existing trenches under roads or within rights-of-way. It is understood that pipe placement will occur within areas of previous disturbance from landscaping, road construction and the installation of underground services. These areas were therefore determined to have low archaeological potential. However, the project area within Connaught Park had not witnessed these types of disturbances and therefore, this portion of the corridor was considered to retain its archaeological potential.

The sanitary sewer will generally follow existing sewer lines under the road and within the right-of-way. The road allowance consists of paved roadway with above- and below-ground utilities (water main, buried hydro, above-ground hydro, cable and telephone lines) and landscaped, manicured lawn that is interupted in places by paved and graveled laneways of the adjacent residential/commercial properties. These portions were photo-documented and not surveyed due to previous disturbance and low archaeological potential.

Connaught Park consists of grassed areas, a compact gravel horse racetrack and laneways within the proposed SPS and sanitary line project area. This area was subject to a standard test pit survey at a five metre transect interval excluding the horse track due to

disturbance and safety issues. Test pits measuring approximately 30-35 cm (shovel-width) were excavated through the first 5 cm of subsoil with all fill screened through 6 mm hardware cloth. When screening was completed, the soil strata in the test pits was examined before they were backfilled with soil and re-capped with sod as best as possible.

All work met provincial *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). The Stage 2 field inspection established that all lands within the previously serviced portion of the project area were entirely disturbed and had low archaeological potential. These lands are considered to be free of archaeological concern and no further archaeological assessment is recommended. The Stage 2 field survey of Connaught Park and the proposed sewage pumping station site established that some areas within the park had witnessed previous disturbance while others remained relatively natural. As such, the project lands that were surveyed or deemed to be of low archaeological potential have now been sufficiently studied based on provincial standards and should now be considered free of archaeological concern. No further work is recommended. If construction plans change to incorporate lands not subject to study in this report, further archaeological assessment may be required prior to construction commencing.

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Project Personnel

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Acknowledgements

TMHC would like to acknowledge the assistance of the following individuals:

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Robert von Bitter	*Archaeological Data Coordinator* Ministry of Tourism, Culture and Sport, Toronto, Ontario

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Connaught Park
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Geographic Township of Kincardine
Bruce County

1.0 PROJECT CONTEXT

1.1 Development Context

1.1.1 Introduction

A Stage 1 and 2 archaeological assessment was conducted for proposed sanitary servicing line replacement, new force main and new sewage pumping station in the Town of Kincardine, Bruce County, Ontario. The project under consideration will include replacement of existing and installation of new collector sanitary sewer lines within road allowances and the construction of a new sewage pumping station (SPS) within Connaught Park. Our work was carried out as part a Municipal Class Environmental Assessment and in accordance with the *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). Within the Class EA process, the purpose of the archaeological assessment was to establish if the project would have negative effects on known or potential archaeological resources.

All archaeological consulting activities were performed under the Professional Archaeological License of Janet Gardner, M.A. (P1020). Permission to enter properties and carry out all required archaeological work, including collecting artifacts when present, was provided by Lisa Courtney of B.M. Ross and Associates Limited.

1.1.2 Purpose and Legislative Context

The *Ontario Heritage Act* makes provisions for the protection and conservation of heritage resources in the Province of Ontario. Heritage concerns are recognized as a matter of provincial interest in Section 2.6.2 of the *Provincial Policy Statement* which stipulates that municipalities shall have regard for the conservation of features of significant architectural, cultural, historical, archaeological or scientific interest. The purpose of a Stage 1 background study is to determine if there is potential for cultural resources to be found on a property for which a change in land use is pending. It is used to determine the need for a Stage 2 field assessment involving the search for archaeological sites. In accordance with *Provincial Policy Statement* 2.6, if significant sites are found, a strategy (usually avoidance, preservation or excavation) must be put forth for their mitigation.

The *Environmental Assessment Act* also provides for the protection and conservation of the "environment," widely defined to cover "cultural heritage" resources. Section 5(3)(c) of the *Act* stipulates that heritage resources to be affected by a proposed undertaking be identified during the environmental screening process. Within the context of an Environmental Assessment, the purpose of a Stage 1 background study is to determine if the project has potential to negatively impact known or unknown archaeological resources. A Stage 2 assessment establishes if archaeological sites are present within the proposed impact areas, while a Stage 3 assessment evaluates their cultural heritage value. In the case of archaeological resources, potentially detrimental effects to archaeological resources are mitigated through Stage 4 protection and avoidance and/or excavation.

2.0 STAGE 1 ARCHAEOLOGICAL ASSESSMENT

2.1 Field/Research Methods and Sources

A Stage 1 overview and background study was conducted to gather information about known and potential cultural heritage resources within the project lands. According to the 2011 *Standards and Guidelines for Consultant Archaeologists*, a Stage 1 background study must include a review of:

- an up-to-date listing from the Ontario Archaeological Sites Database of registered archaeological sites within 1 km of the project lands;
- a review of previous archaeological fieldwork within a radius of 50 metres;
- topographic maps at 1:10,000 (recent and historical) or the most detailed scale available;
- historic settlement maps (e.g., historical atlas)
- archaeological management plans or other archaeological potential mapping (when available); and
- commemorative plaques or monuments on or near the property.

For this project, the following activities were carried out to satisfy or exceed the aforementioned requirements:

- a database search was filed with Robert von Bitter of the Ministry of Tourism, Culture and Sport requesting a listing of registered archaeological sites within 1 km;
- a review of known prior archaeological reports for the property and adjacent lands;
- a consideration of Ontario Base Mapping (1:10,000) through ArcGIS and mapping layers provided by geographynetwork.ca
- a review of detailed mapping providing by the proponent and all available public consultation documents; and
- a series of historic maps was reviewed relating to post-1800 land settlement.

There are no applicable archaeological management plans for the area.

Additional sources of information were also consulted, including soils and physiography data provided by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), and both 1:50,000 (Natural Resources Canada) and finer scale topographic mapping.

When compiled, this information was used to create a summary of the characteristics of the subject lands, in an effort to evaluate their archaeological potential. The Province (MTC 2011 – Section 1.3.1) has recently defined the criteria that identify archaeological potential as:

- previously identified archaeological sites
- water sources
    - primary water sources (lakes, rivers, streams, creeks)
    - secondary water courses (intermittent streams and creeks, springs, marshes, swamps)
    - features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in topography, shorelines of drained lakes or marshes, cobble beaches)
    - accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh)
- elevated topography (e.g., eskers, drumlins, large knolls, plateaux)
- pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground
- distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases; there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings
- resource areas, including:
    - food or medicinal plants (e.g., migratory routes, spawning areas, prairie)
    - scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert)
    - early Euro-Canadian industry (e.g., fur trade, logging, prospecting, mining)
- areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.
- early historical transportation routes (e.g., trails, passes, roads, railways, portage routes)
- property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial, or municipal historic landmark or site

- property that local histories or informants have identified with possible archaeological sites, historical events, activities or occupations.

In Southern Ontario (south of the Canadian Shield), any lands within 300 metres of any of the features listed above is considered to have potential for the discovery of archaeological resources.

Typically, a Stage 1 assessment will determine potential for pre-contact First Peoples' and historic era sites independently. This is due to the fact that lifeways varied considerably during these eras so that criteria used to evaluate potential for each type of site also differs.

Some factors can also negate the potential for discovery of intact archaeological deposits. Subsection 1.3.2 of the 2011 *Standards and Guidelines for Consultant Archaeologists* indicates that archaeological potential can be removed in instances where land has been subject to extensive and deep alterations that have severely damaged the integrity of any archaeological resources. Major disturbances indicating removal of archaeological potential include, but are not limited to:

- quarrying
- major landscaping involving grading below topsoil
- building footprints; and
- sewage and infrastructure development.

Some activities (agricultural cultivation, surface landscaping, installation of gravel trails, etc.) may result in minor alterations to the surface topsoil but do not necessarily affect or remove archaeological potential. It is not uncommon for archaeological sites, including structural foundations, subsurface features and burials, to be found intact beneath major surface features like roadways and parking lots. Archaeological potential is, therefore, not removed in cases where there is a chance of deeply buried deposits, as in a developed or urban context or floodplain where modern features or alluvial soils can effectively cap and preserve archaeological resources.

2.2 Project Context: Archaeological Context

2.2.1 Project Lands: Overview and Physical Setting

The Municipality of Kincardine is planning to replace existing municipal sanitary sewage lines in the north end of the town along a roughly 2.11km corridor (Maps 1-4). Two options are currently being explored to replace existing lines and construct new lines and may also involve the replacement of a sewage pumping station (Maps 3-4). A map review of the proposed project area shows that in the southern portion Option 2 (Map 3) would involve the replacement of an existing force main line from the SPS in Connaught Park to Huron Terrace SPS (Map 3). The line runs from the Huron Terrace SPS, located on the south side of the town harbor, and follows municipal streets through commercial

and residential areas. The sanitary line is located in heavily disturbed areas under roadways, within rights-of-way and other landscaped and serviced areas (Map 2). In the north portion of the project area the existing SPS is currently located within Connaught Park (Maps 3-4). A new SPS location is proposed within the park to the northeast of the existing location (Option 1- Map 3). Within Option 1 the proposed relocation of the sewage pumping station within Connaught Park would see the construction of a new force main to convey flows from the collector sewer to the municipal sanitary sewage collector system. The proposed new force main would run south from the SPS through the park and then east along Broadway Street to Huron Terrace (Option 1-Maps 3-4). A new sanitary line is required to travel north through the park from the new SPS to connect to existing sanitary lines located on Kingsway Street (Maps 3-4). The remaining sanitary lines slated for replacement within the project area in the north are located within residential areas and are at the western end of a golf course and trail (Map 2). This section of line will follow existing sanitary lines and will be placed within existing trenches within roads, rights-of-way and disturbed areas.

The project lands fall within the Huron Fringe physiographic region, as defined by Chapman and Putnam (1984:161) (Map 5). The region comprises the wave-cut terraces of glacial Lake Algonquin and Lake Nipissing. Although the fringe is narrow, it is over 300 kilometres long and encompasses more than 1,100 square kilometres (Chapman and Putnam 1984:161). The Huron Fringe is the result of the glacial scouring of limestone located just above the current lake level and is backed by either beaches or sand dunes and the occasional swamp (Chapman and Putnam 1984:161). This physiographic region lies over the Norfolk formation which consists of fine grained limestone, magnesium limestone and dolomite bedrock (Hoffman and Richards 1954:14). A shoreline of glacial Lake Algonquin runs parallel to the study area on the east and intersects the southern end of the study area on Huron Terrace and the central part on Broadway Street (Map 5).

The two primary soil types at the north end of the project area are Brady sandy loam and Sullivan sand while soils in the south half of the project area are classified as urban (Map 6). Brady sandy loam is a well-drained grey-brown podzolic developed on gravelly materials derived from dolomitic limestone. In some areas the surface soil contains a large amount of gravel (Hoffman and Richards 1954). Sullivan sand (Hoffman and Richards et al. 1952:50) is subject to low fertility and erosion not particularly well-suited to crop production. Drainage in the area is provided by the Pentagore River which lies within the southern portion of the project area (Map 7) and Lake Huron. The lakeshore is roughly 100-500 metres to the west.

2.2.2 Summary of Registered or Known Archaeological Sites

According to the Ontario Archaeological Sites Database (OASD), there are three registered archaeological sites within one kilometre of the project area (request received November 23, 2015). The three sites BbHj- 13, -14 and -15 were all recorded in 1960s by J.V. Wright, who made frequent research trips to the Bruce area. All three sites are recorded as find spots and are presumably pre-contact but little other information is

included in the original site record forms. BbHj-13, the Fourth Hole site is located east of the of the north end of study area, while BbHj-14 and BbHj-15 (Anderson site) are located in the southern portion of the study area near the mouth of the Pentagore River.

2.2.3 Summary of Past Archaeological investigations Within 50 Metres

During the course of this study, no previous archaeological assessments were identified for lands within 50 metres of the current survey area. Since the Ministry of Tourism, Culture and Sport currently does not keep a publicly accessible record of archaeological assessments carried out in the Province of Ontario, it is not known if this is an accurate inventory.

2.2.4 Dates of Archaeological Fieldwork

The Stage 2 fieldwork was conducted on November 5, 2015 under sunny and cool weather conditions.

2.3 Historical Context

2.3.1 Pre- and Early Post-Contact First Peoples Settlement in Bruce County

Through the integration of region-specific archaeological information and data from province-wide models, a baseline cultural chronology for pre-contact First Peoples settlement in Bruce County can be proposed as generalized below and in Table 1.

There is archaeological evidence in Southern Ontario of past native settlement from at least as early as 12,000 years to pre-Confederation times. The wildlife, physical and natural resources of the area are still of great concern to local native groups who continue to hunt, trap and fish.

Paleoindian

The first human populations to inhabit the area came to the region between 12,000 and 10,000 years ago, coincident with the end of the last period of glaciation. Climate and environmental conditions were significantly different then they are today; local environs would not have been welcoming to anything but short-term settlement. Termed Paleoindians by archaeologists, Ontario's first peoples would have crossed the landscape in small groups (i.e., bands or family units) searching for food, particularly migratory game species. In this area, caribou may have provided the staple of Paleoindian diet, supplemented by wild plants, small game and fish.

Table 1: Generalized Cultural Chronology of First Peoples Settlement in Bruce County

Period			Time Range (circa)	Diagnostic Features	Complexes
Paleoindian	Early		9000 - 8400 B.C.	fluted projectile points	Gainey, Barnes, Crowfield
	Late		8400 - 8000 B.C.	non-fluted and lanceolate points	Holcombe, Hi-Lo, Lanceolate
Archaic	Early		8000 - 6000 B.C.	serrated, notched, bifurcate base points	Nettling, Bifurcate Base Horizon
	Middle		6000 - 2500 B.C.	stemmed, side & corner notched points	Brewerton, Otter Creek, Stanly/Neville
	Late		2000 - 1800 B.C.	narrow points	Lamoka
			1800 - 1500 B.C.	broad points	Genesee, Adder Orchard, Perkiomen
			1500 - 1100 B.C.	small points	Crawford Knoll
	Terminal		1100 - 950 B.C.	first true cemeteries	Hind
Woodland	Early		950 - 400 B.C.	expanding stemmed points, Vinette pottery	Meadowood
	Middle		400 B.C. - A.D. 500	dentate, pseudo-scallop pottery	Saugeen
	Transitional		A.D. 500 - 900	first corn, cord-wrapped stick pottery	Princess Point
	Late	Early Iroquoian	A.D. 900 - 1300	first villages, corn horticulture, longhouses	Glen Meyer
		Middle Iroquoian	A.D. 1300 - 1400	large villages and houses	Uren, Middleport
		Late Iroquoian	A.D. 1400 - 1650	tribal emergence, territoriality	Odawa
Contact		Aboriginal	A.D. 1700 - 1875	treaties, mixture of Native & European items	Ojibway, Odawa populations
		Euro-Canadian	A.D. 1796 - present	English goods, homesteads	European settlement, pioneer life

Given the low density of populations on the landscape at this time and their mobile nature, Paleoindian sites are small and ephemeral. They are usually identified by the presence of fluted projectile points often manufactured on a highly distinctive whitish-grey chert named "Fossil Hill" (after the formation) or "Collingwood," from the Niagara Escarpment west of Collingwood. In Ontario, Paleoindian sites are often found in association with former glacial shorelines, beaches and embayments. Although there are no documented Paleoindian sites in the immediate vicinity of the study area, Paleoindian occupations and find spots have been recorded elsewhere in Bruce and Huron counties, some as a result of ongoing cultural resource management projects being carried out under the *Green Energy Act.* These finds have typically been associated with former glacial shorelines.

Archaic

Settlement and subsistence patterns change significantly during the Archaic period as both the landscape and ecosystem adjusted to the retreat of the glaciers. Building on earlier patterns, early Archaic populations continued the mobile lifestyle of their predecessors. Through time and with the development of more resource rich local environments, these groups gradually reduced the size of the territories they exploited on a regular basis. A seasonal pattern of warm season riverine or lakeshore settlements and interior cold weather occupations has been documented in the archaeological record.

Since the large cold weather mammal species that formed the basis of the Paleoindian subsistence pattern became extinct or moved northward with the onset of warmer climate conditions Archaic populations had a more varied diet, exploiting a range of plant, bird, mammal and fish species. Reliance on specific food resources like fish, deer and nuts becomes more pronounced through time and the presence of more hospitable environments and resource abundance led to the expansion of band and family sizes. In the archaeological record, this is evident in the presence of larger sites and aggregation camps, where several families or bands would come together in times of plenty. The change to more preferable environmental circumstances led to a rise in population density. As a result, Archaic sites are more abundant than those from the earlier period. Artifacts typical of these occupations include a variety of stemmed and notched projectile points, chipped stone scrapers, ground stone tools (e.g., celts, adzes) and ornaments (e.g., bannerstones, gorgets), bifaces or tool blanks, animal bone (where and when preserved) and waste flakes, a byproduct of the tool making process.

Early, Middle and Transitional Woodland Periods

Significant changes in cultural and environmental patterns are witnessed in the Early, Middle and Transitional Woodland periods (ca. 950 B.C. to 1000 A.D.). Occupations became increasingly more permanent in this period, culminating in major semi-permanent villages by roughly 1,000 years ago. Archaeologically, the most significant changes by Woodland peoples are the appearance of artifacts manufactured from modeled clay and the emergence of more sedentary villages. The earliest pottery was crudely made by the coiling method and early house structures were simple oval enclosures. The Early and Middle Woodland periods are also characterized by extensive trade in raw materials, objects and finished tools, with sites in Ontario containing trade items with origins in the Mississippi and Ohio River valleys. A rise in mortuary ceremonialism is also evident, culminating in the construction of large burial mounds.

Late Woodland Period

Beginning circa 1000 A.D. the archaeological record in Southern Ontario documents the emergence of more substantial, semi-permanent settlements and the adoption of corn horticulture. These developments are most often associated with Iroquoian-speaking populations, the ancestors of the Wendat (Huron), Petun (Tobacco Nation) and Attawandaron (Neutral) nations who were known to have resided in the province upon the arrival of the first European explorers and missionaries. Iroquoian villages incorporated a number of longhouses, multi-family dwellings that contained several families related through the female line. Pre-contact Iroquoian sites may be identified by a predominance of well-made pottery decorated with various simple and geometric motifs, triangular projectile points, clay pipes and ground stone artifacts. Sites post-dating European contact are recognized through the appearance of various items of European manufacture. The latter include materials acquired by trade (e.g. glass beads, copper/brass kettles, iron axes, knives and other metal implements) in addition to the personal items of European visitors and Jesuit missionaries (e.g. finger rings, stoneware, rosaries, and glassware).

Algonquian Populations

At the time of European contact in the early 17th century the Bruce peninsula was occupied by Algonkian speaking groups (Odawa, Potawatomi, Ojibwa) who maintained a close relationship with the Iroquoian speaking Petun peoples living along the southern end of Georgian Bay (Fox 1990:461). Like other First Peoples in the area, these groups were dispersed in the mid-17th century as a result of the conflict between the Five Nations Iroquois and the Huron-Petun. Many moved along the Lake Huron shoreline into Huron County, with others settling in the peninsula proper. Several probable Algonqain sites on the Bruce Peninsula and Georgian Bay have been documented, including a component on the Inverhuron-Lucas site on the Lake Huron shoreline (Lee 1960)

2.3.2 Historic Era of First Peoples Settlement

The Ojibwa (a.k.a. the "Chippewa", who also refer to themselves as "Anishnabe"), are Algonquian speakers, who lived in the region extending from the Georgian Bay area to the north shore of Lake Superior prior to European contact (Schmalz 1977). Both the Odawa and Ojibwa were disrupted and displaced by Iroquois hostilities in the 1650s (Schmalz 1977), but regrouped by the last quarter of the 17th century (Ferris 1989) and returned to their homeland. The 1690s witnessed significant battles between the Iroquois and Anishnabe Three Fires Confederacy (Ottawa, Ojibway, Pottawatomi), with the result being that Ojibway groups took control over Bruce County lands (Wilson McArthur 2005:49) and held them until the negotiation of Crown transfers a century later.

The (Saugeen) Ojibwa surrendered portions of Grey and Wellington Counties in 1818 (McMullen 1997:28). This was done with the understanding that they would have continued use of Bruce County and that they would receive annuities for the lands surrendered. Further land was surrendered in the area with the establishment of the Huron Tract in 1825, to be followed later by the surrender of Bruce County in 1836 (Lee 2004:21). The surrender of Bruce County did not include the Bruce Peninsula, known as the Saugeen Peninsula by the resident Ojibwa. The Neyaashiinigmiing Indian Reserve Number 27 on the southeast side of the Bruce Peninsula (Nawash Ojibwa) and the Saugeen Indian Reserve Number 29 above Southampton (Saugeen Ojibwa) were established in 1854 (Chippewas of Nawash 2010).

The Chippewas of Saugeen First Nation and the Chippewas of Nawash First Nation share the same traditional territories. They were part of the ancient Three Fires Confederacy of Ojibwa, Odawa, and Pottawatomi. Throughout the eighteenth century the Saugeen Territory was inhabited by several generations of Ojibwa whose immediate territory was threatened neither by war nor by European settlers.

What was to become Kincardine Township formed part of a parcel of land that was surrendered by the Ojibwa to the Crown in 1836 through the Treaty of Manitowaning (Lee 2004:21). The land surrendered accounted for 607,000ha (Schmalz

1977:233). The Treaty formalized the surrender of the County of Bruce which included the townships of Saugeen, Arran, Bruce, Elderslie, Kincardine, Greenock, Brant, Huron, Kinloss, Culross, and Carrick (Robertson 1906). The Treaty was concluded by Sir Francis Bond Head at Manitowaning on August 9, 1836. Shortly thereafter, the townships were surveyed for municipal settlement.

Historic native occupation of the region is poorly documented archaeologically. Many historic native sites were short-term occupied resource exploitation camps that left behind few archaeological remains, making them difficult to find. Later native sites of the 18th and 19th centuries may be difficult to recognize because their material culture assemblages are very similar to the more prevalent and better documented Euro-Canadian sites of the same time. Further, typical Euro-Canadian histories generally included little information on First Peoples groups, their land use or site locations during the 19th century municipal settlement period. Thus, information regarding the locales of historic-era native settlements is limited and difficult to collect through traditional historical sources. Additionally, the information bias is particularly strong for the northern reaches of southern Ontario, within the traditional territory of the Saugeen-Nawash Ojibwa Nation and the Saugeen Métis Nation.

The Township of Kincardine was surveyed by James W. Bridgland in 1850 whose notes make no reference to native presence in the area. Bridgland did, however, provide a thorough account of his survey which is accompanied by detailed mapping of conditions and the state of improvements (e.g., cleared lands, structures) within the township at that time. Improvements are scattered along the Lake Range of the township from north to south with concentrations in the town site of Penetangore (now Kincardine).

In summary, while the early surveyor's field notes do not specifically note any First Peoples' or other occupation within the study area, there is potential for historic-era native settlements to exist.

2.3.3 Historic Métis

The Historic Saugeen Métis are descendants of the Métis who traded at Saugeen (see Wilson McArthur 2005). Pierre Piché was considered this first Métis in the area, trading in about 1816. The Ojibwa invited Piché to share the resources within the Saugeen territory, but also required him to "share" in the protection of these same resources and the environment for mutual benefit. The Historic Saugeen Métis are descended from unions between European traders and native women. The Lake Huron watershed Métis lived, fished, hunted, trapped and harvested the lands and waters of the Bruce Peninsula, the Lake Huron proper shoreline and its watershed (Saugeen Métis 2013). These are considered the traditional Saugeen Métis territory.

2.3.4 Historic Euro-Canadian and Municipal Settlement

The study area falls within municipally owned road allowance and allotments that were formerly within the Town Plan of Kincardine and Lots 12, 13, 14, 15, 16 and 17,

Concession A in the Geographic Township of Kincardine, Bruce County, Ontario (Map 8). A brief discussion of early municipal settlement is provided below, along with a summary of historic land use. This will provide a general context for identifying features of archaeological potential.

Prior to the formation of Bruce County, this region was part of the "Queen's Bush," an extensive tract of land surrendered by local Ojibwa populations to the British through the Treaty of Manitowaning in 1836 (Robertson 1906:11). Some accounts suggest that the first Europeans to traverse through Bruce County were French explorer Samuel de Champlain and Jesuit missionaries who traveled here in the 17th century. It is reported that the first Euro-Canadian settlers to establish homes in Bruce County were William Withers and Allan Cameron (Robertson 1906:429). In the spring of 1848 these pioneers settled at the mouth of Penetangore River located in present day Kincardine.

The census of 1851 reported that there were no more than 499 families living in Bruce County, many of whom lived in temporary shanties. These shanties were typical dwellings for early settlers while their land was cleared, and were often a stipulation of the land grant process. The population of the county grew quickly into the 1860s, which was facilitated by the construction of a series of roads that provided access between the various settlements within the County.

Early on, the focal point for both residence and industry was the Lake Huron shoreline. The mouth of the Penetangore River was an attractive locale for docking and shipping. Its readiness for access by water gave Kincardine Township the earliest and largest pioneer settlement in the county. For the first 10 years after its formation Kincardine was the leading township in Bruce County. Unlike the other Bruce County townships Kincardine Township was surveyed in three sections at different times (Robertson 1906:429). The first survey in 1848 was the town plot that was formally dubbed "Penetangor." After the lands in Kincardine were offered for sale in 1851 its settlement was rapid. A large portion of the settlers who came in then were Highland Scotch, either by birth or descent. The name of the town was later changed to Kincardine when it was incorporated in 1858.

The project lands fall within a portion of the original Kincardine Town Plot and part of the township. The historic atlas map of the township and town from 1879 (Map 8) does not show any structures located on the properties in the study area, however the atlas cannot be taken as an accurate reflection of settlement at that time. A later 1914 Fire Insurance Plan Map (Map 9) that covers the southern portion of the study area shows that the streets are in the same location and that the line is located with the road allowance.

2.4 Analysis and Conclusions

As noted in Section 2.1, the Province of Ontario has identified numerous factors that signal the potential of a property to contain archaeological resources. Based on the

archaeological and historical context reviewed above, the archaeological potential of the survey area can be evaluated.

According to the map-based review, the survey area is intersected by or in proximity to at least four features signalling archaeological potential. Potential for the discovery of First Peoples sites is indicated by the proximity (within 300 m) of a substantial water source (Lake Huron and the Pentagore River) and previously documented sites. The potential for the discovery of Euro-Canadian and historic era sites is also demonstrated by proximity (within 300 m) to: 1) mapped 19th century transportation routes (namely Broadway, Queen and Harbour Streets) and the town harbour (shipping); and 2) major water source(s).

The review of details provided by the proponent indicated that the majority of the project area has witnessed prior disturbance. Excluding the proposed new sewage pumping station and sanitary line within Connaught Park and a small section on Broadway Street, all portions of the line are to be placed within existing sanitary line trenches under roads or within rights-of-way. It is understood that pipe placement will occur within areas of previous disturbance from landscaping, road construction and the installation of underground services. These areas were therefore provisionally determined to have low archaeological potential. However, the project area within Connaught Park had not witnessed these types of disturbances and therefore this portion of the project area was considered to retain its archaeological potential.

2.5 Recommendations

Given that a small portion of the project area provisionally retained potential for the discovery of archaeological resources, a Stage 2 archaeological assessment was recommended for this area. In keeping with provincial standards, the project area consisting of grassed and un-ploughable parklands was recommended for a test pit survey using a five metre transect interval. Areas identified as possibly having low potential were recommended for more detailed review in the field at which time a thorough inspection could be undertaken and photo-documentation could take place. In sum, as none of the project area was considered to definitely have low archaeological potential a separate map detailing zones of archaeological potential is not provided herein pending Stage 2 field inspection (as per Section 7.7.4 Standard 1 and 7.7.6 Standards 1 and 2: MTC 2011).

3.0 STAGE 2 ARCHAEOLOGICAL ASSESSMENT

3.1 Field Methods

The Stage 2 fieldwork was conducted on November 5, 2015 under sunny and cool weather conditions, in accordance with MTCS standards (MTC 2011:29, Section 2.1, Standard 3); there were no lighting or weather conditions that inhibited the recognition and recovery of archaeological resources.

A field inspection was conducted of the project area where the proposed new and replacement sewer lines and force mains will follow existing lines to confirm prior disturbance. The review was conducted from the Huron Terrace SPS located on the south side of the town harbor entrance (Image 1), and followed the existing line north on Huron Terrace (Image 2) across the Pentagore River (Image 3) and then west on Harbour Street (Images 4-5). At this juncture the existing line turns and runs through McPherson Park, a municipally owned recreational park with tennis courts and playground equipment (Map 3). Within the park the proposed replacement line will follow the existing force main which sits underneath concrete sidewalk and compact gravel pathways (Images 6-7; Map 3) and continues north to where it exits onto Lambeth Street and Saugeen Street (Image 8).The line runs under the road on Saugeen Street through a residential neighbourhood and crosses Durham St (Image 9) to where crosses Broadway Street and enters Connaught Park (Image 13; Map 3).

The existing sewage pumping station (SPS) is currently located within the park and a new location is proposed to the northeast of the existing location (Map 3). The proposed new force main is to run south from the SPS through the park and then east along Broadway Street to Huron Terrace (Map 3; Images 11-12). The field inspection determined that the proposed new force main on Broadway Street where there is no existing line will follow the roadway which has seen extensive disturbance due to road construction and other subsurface utilities (Image 12).

After entering Connaught Park off Broadway Street (Image 13) the sanitary line and new force main will follow existing lines until it branches northeast towards the proposed new SPS (Map 4; Image 14). Travelling north from the proposed SPS, a new sanitary line will run for 240 metres through the park (Images 15-19) and exit through a residential easement (Images 20-21) onto Kingsway Street. From here the new sanitary line will follow an existing line west on Kingway Street (Image 22) and north on Shevchenko Boulevard (Images 23-24) where it travels under the road or within the rights-of-way. At the north end of Shevchenko Boulevard the line crosses a cul-de-sac and is located within the municipal easement of several residential driveways (Map 3: Images 25-27). The sanitary line then enters the Kincardine Golf Course and follows a golf course path and edge of green (Image 28-30) where it terminates at Golf Links Road (Image 31) at the north end of the study area. Excluding those areas within Connaught Park as noted on Map 3, where the new sewage pumping station and sewer line are proposed all other areas within the study area contain existing sewer lines. The road allowance consists of paved roadway with above- and below-ground utilities (watermain, buried hydro, above-ground hydro, cable and telephone lines) and landscaped, manicured lawn that is cut in places by paved and graveled laneways of the adjacent residential/commercial properties (Images 1-31). These portions were photo-documented and not surveyed (90.6%) due to previous disturbance and low archaeological potential was confirmed.

Connaught Park consists of grassed areas, a compact gravel horse racetrack and laneways within the proposed SPS and sanitary line project area (Maps11-12; Images 14-20). This area was subject to a standard test pit survey at a five metre transect interval

(8.4%) (Images 18, 32) excluding the horse track due to safety and disturbance issues. Test pits measuring approximately 30-35 cm (shovel-width) were excavated through the first 5 cm of subsoil with all fill screened through 6 mm hardware cloth. When screening was completed, the soil strata in the test pits was examined before they were backfilled with soil and re-capped with sod as best as possible.

Typical test pits in the grassed area of the park contained medium brown loamy sand (0-10cm) over top orange sandy clay (10-15cm) over light brown beach sand (Image 33). In some areas there was a dark brown loamy sand layer noted in place of the orange sandy clay (Image 34). On the inside portion of the track where there was graveled parking area and limited grass, test pitting (Image 18) showed a 30cm deep layer of gravel and clay fill soils overtop brown beach sand (Image 35). This area was judgmentally test-pitted (1.06%) due to the presence of the disturbed fill layer and the proposed corridor here being primarily on the disturbed track.

Deep test pits confirmed that the beach sand extended to depths of over one metre and contained lens/pockets of organic sandy loam/humus (Image 36). At the far north end of the park where the sewer line exits the park through a grassed residential easement, test pits showed a layer of medium brown sandy loam (0-18cm) over light brown sandy with clay (18-28cm) over orange-brown clay (28-36cm) (Image 37).

Maps 10-13 illustrate the Stage 2 field conditions, assessment methods, and photo orientations on high resolution aerial photographs. Maps 14- 17 illustrate the location and orientation of the photographs used in this report. The same information is not presented on the proponent mapping (as required by the *Standards and Guidelines for Consultant Archaeologists*) due to the fact that it is generalized in nature and not at an appropriate scale to present the Stage 2 results in detail.

3.2 Record of Finds

No archaeological materials or sites were identified during the Stage 2 field inspection of the project area and Stage 2 test pit survey of the proposed SPS and sewer corridor in Connaught Park.

Table 2: Documentary Record

- Field notes and field maps – November 5, 2015
- Photo catalogue- images May 5, 2013 (PB050001- PB050068)
- Documents housed at the office of Timmins Martelle Heritage Consultants Inc., @ the Museum of Ontario Archaeology, 1600 Attawandaron Road, London, ON N6G 3M6

3.3 Analysis and Conclusions

A Stage 2 field assessment for a proposed sanitary sewer line replacement, a new force main and a new sewage pumping station was carried out in keeping with the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists*. The Stage 2 field assessment demonstrated that the majority of the lands within the servicing corridor were disturbed. The disturbed rights-of-way and roadways were heavily impacted and had low potential for the discovery of archaeological resources. The assessment of lands within the park also showed that some areas had been subject to previous disturbance due to grading for the track, laneways and parking. These areas were deemed to have low archaeological potential and not test pitted. Others areas showed no previous evidence of disturbance and were test pitted. No archaeological material was recovered during the Stage 2 assessment.

3.4 Recommendations

All work met provincial *Standards and Guidelines for Consultant Archaeologists* (MTC 2011). The Stage 2 field inspection established that all lands within the road rights-of-ways, including previously trenched portions of the project area were entirely disturbed and had low archaeological potential. These lands are considered to be free of archaeological concern and no further archaeological assessment is recommended. The Stage 2 field survey of the proposed new sewage pumping station site and new sanitary line within Connaught Park established that some areas within the park had witnessed previous disturbance and had low archaeological potential while others remained relatively natural and were assessed by test pitting. No archaeological resources were discovered and no further archaeological assessment is recommended. If construction plans change to incorporate lands not subject to study in this report, further archaeological assessment may be required prior to construction commencing.

The recommendations listed above are subject to the conditions laid out in Section 5.0 of this report and to Ministry of Tourism, Culture and Sport concurrence through their review and acceptance of this report into the provincial registry.

4.0 SUMMARY

A Stage 1 and 2 archaeological assessment was conducted for a proposed sanitary servicing line replacement, a new force main and a new sewage pumping station in the Town of Kincardine, Bruce County, Ontario. The Stage 1 assessment revealed that the project lands, that include a proposed pumping station and service line in Connaught Park, had potential for the discovery of archaeological resources due to the proximity of Lake Huron, historic 19th century transportation routes and known archaeological sites. A Stage 2 field assessment was undertaken and consisted of the photo-documentation of disturbance along the existing and proposed sanitary lines and a standard test pit survey of areas of archaeological potential within Connaught Park (5 m interval). No archaeological material was discovered during the Stage 2 assessment and no further assessment of the study area is warranted. If construction plans change to incorporate

lands not subject to study in this report, further archaeological assessment may be required prior to construction commencing.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Ministry of Tourism, Culture and Sport 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, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

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 completed archaeological fieldwork on the site, submitted a report to the minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

Should previously undocumented (i.e., unknown or deeply buried) 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*. Further, 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 *Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33* requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Small Business and Consumer Services. The Registrar of Cemeteries, Cemeteries Regulation Unit can be reached at (416) 326-8404 or (416) 326-8393.

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7.0 IMAGES

Image 1: Huron Terrace Sewage Pumping Station (SPS), on South Side of Pentagore River (looking northeast)

Image 2: Existing Conditions on South and North Side of Pentagore River at Huron Terrace SPS (looking north)

Image 3: Overview of Bridge on Huron Terrace across Pentagore River (looking south)

Image 4: West of Huron Terrace on Harbour Street (looking west)

Image 5: West End of Harbour Street, Showing Sewer Access (looking east)

Image 6: South Entrance to MacPherson Park, Showing Existing Conditions (looking north)

Image 7: North Entrance to MacPherson Park, Showing Existing Conditions (looking south)

Image 8: North of MacPherson Park, Intersection of Lambeth and Saugeen Streets (looking north)

Image 9: Saugeen Street, North of Durham Street (looking north)

Image 10: Saugeen Street, South of Broadway (looking south)

Image 11: Intersection of Huron Terrace and Broadway Street (looking west)

Image 12: Broadway Street, East of Connaught Park and Saugeen Street (looking west)

Image 13: Entrance to Connaught Park off Broadway Street (looking northeast)

Image 14: Course of the New Force Main and Sanitary Line from Park Entrance (looking southwest)

Image 15: Overview of Proposed Corridor and Location of SPS in South End of Connaught Park (looking northeast)

Image 16: Overview of Corridor Along Edge of Lane, Inside of Track (looking northeast)

Image 17: Overview of Horse Track and Laneway in Area of Corridor (looking southwest)

Image 18: Overview of Grassed Area between Track and Parking Area (looking north)

Image 19: Overview of Proposed Corridor at North End of Park (looking southeast)

Image 20: Overview of Track and Easement Area at North End of Park (looking north)

Image 21: Grassed Area within Easement, South of Kingsway Street (looking south)

Image 22: Course of Pipe on Kingsway Street (looking west)

Image 23: Existing Conditions at Intersection of Kingsway Street and Shevchenko Boulevard (looking north)

Image 24: Existing Conditions along Corridor on Shevchenko Boulevard (looking south)

Image 25: Existing Conditions along Corridor at End of Shakespeare Avenue and Shevchenko Boulevard (looking east)

Image 26: Existing Conditions on Corridor, Pathway to West of Shakespeare Avenue (looking east)

Image 27: Existing Conditions on Paved Laneway to Golf Course Pathway (looking north)

Image 28: Conditions along Corridor at South End of Golf Course Pathway (looking south)

Image 29: Existing Conditions in Central Part of Golf Course Pathway (looking south)

Image 30: Existing Conditions in North Part of Golf Course Pathway (looking south)

Image 31: Termination of Sanitary Line Improvements at Golf Links Road (looking south)

Image 32: Test Pit Survey of Grassed Area for Proposed SPS in Connaught Park (looking east)

Image 33: Typical Test Pit in Grassed Area of Park, with Orange Sandy Clay

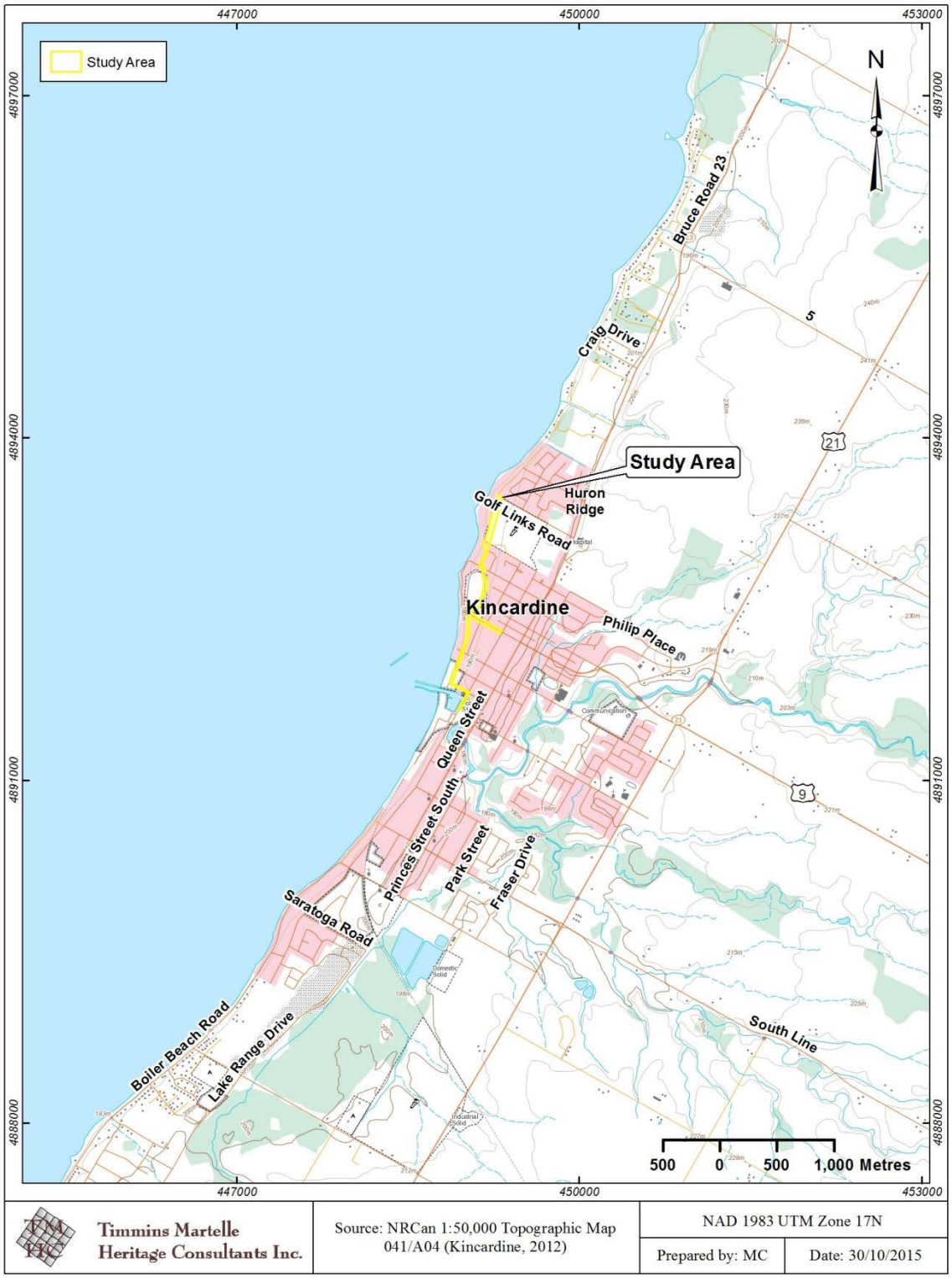
Image 34: Typical Test Pit in Grassed Area of Park, with Brown Loamy Sand Layer

Image 35: Deep Test Pit on Inside Portion of Track, Showing Top Layer of Disturbed Gravel Fill

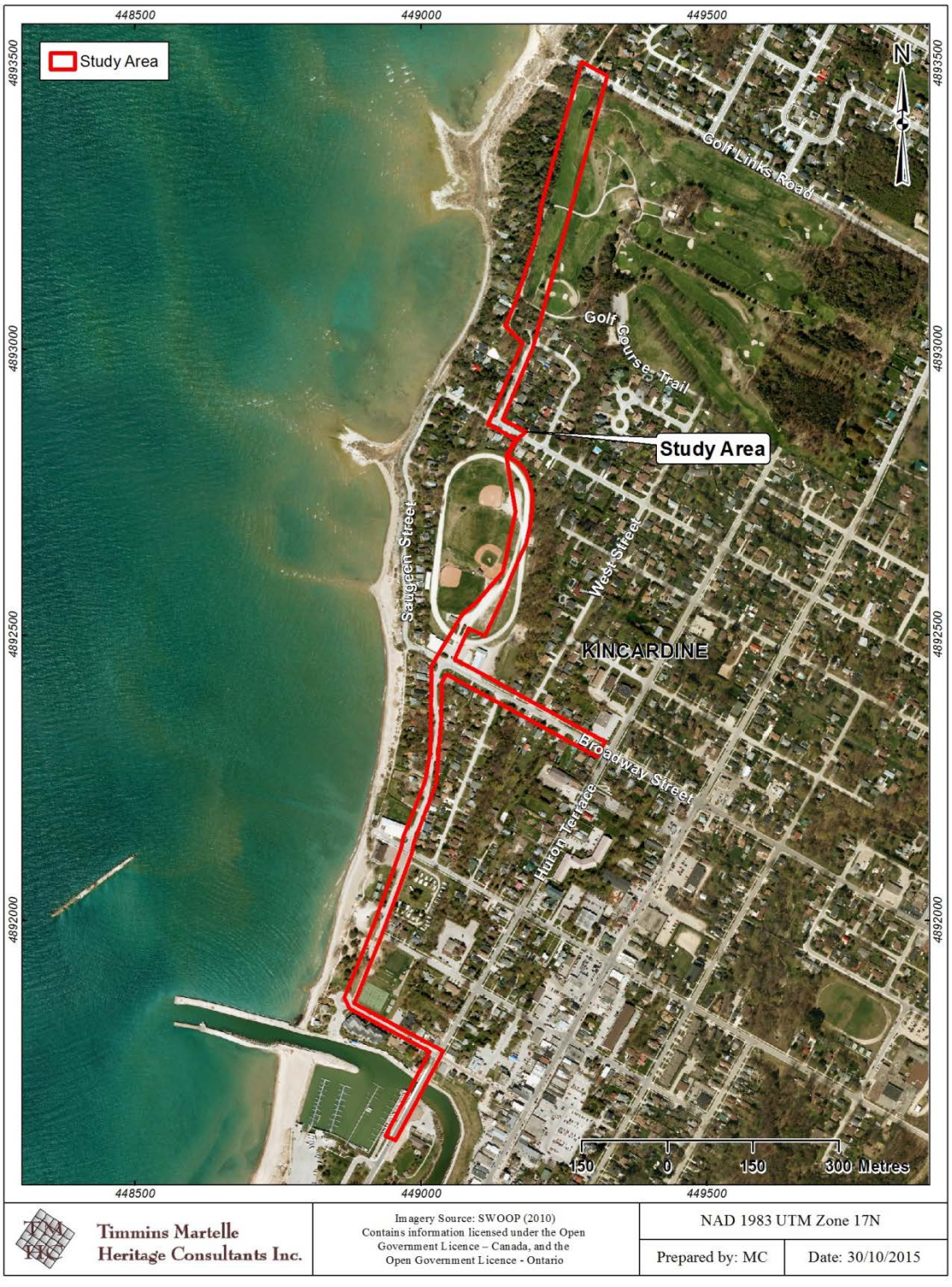
Image 36: Deep Test Pit Showing Beach Sand with Pockets of Loamy Sand

Image 37: Typical Test Pit on Grassed Easement at North End of Connaught Park

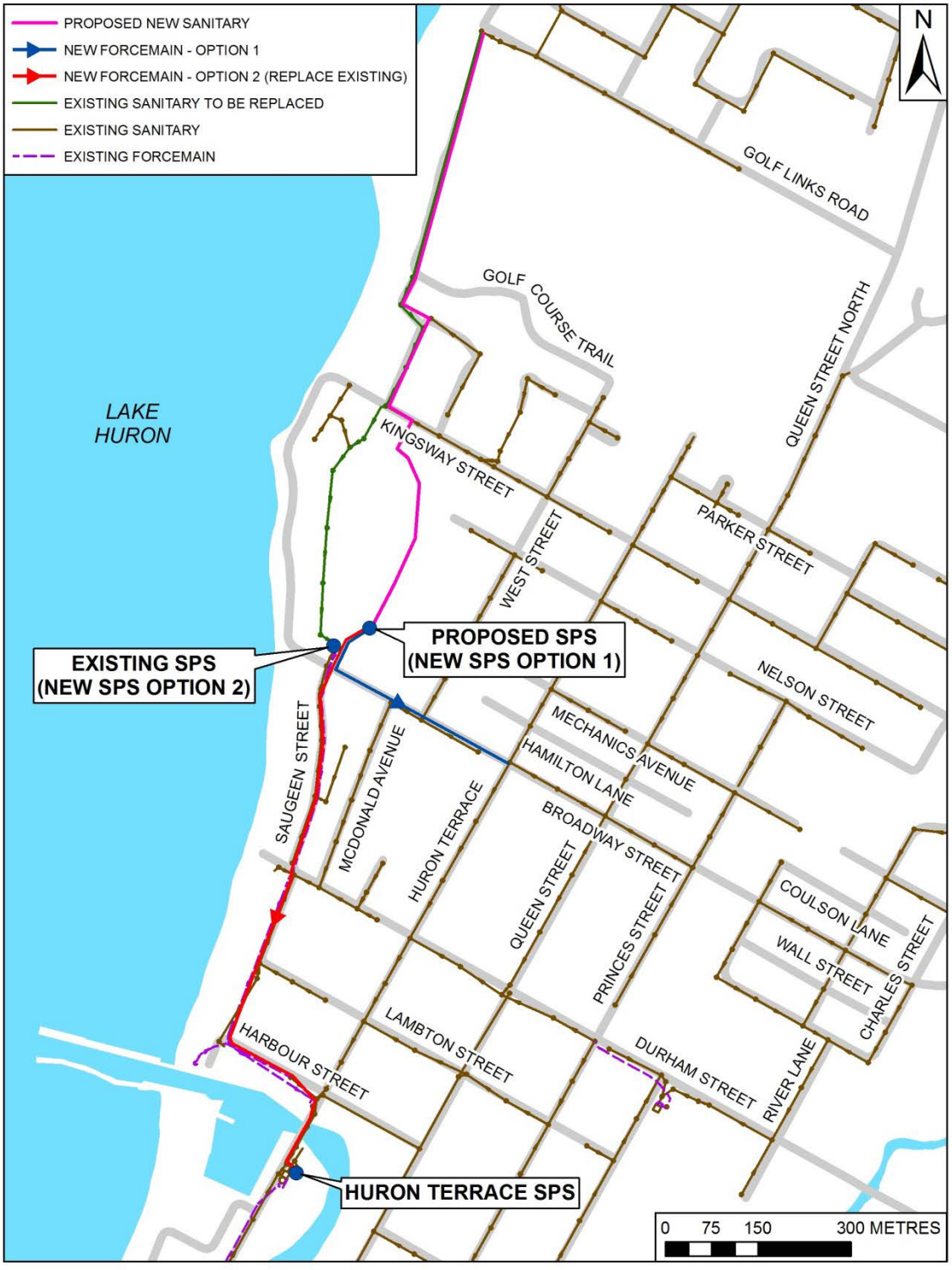
8.0 MAPS



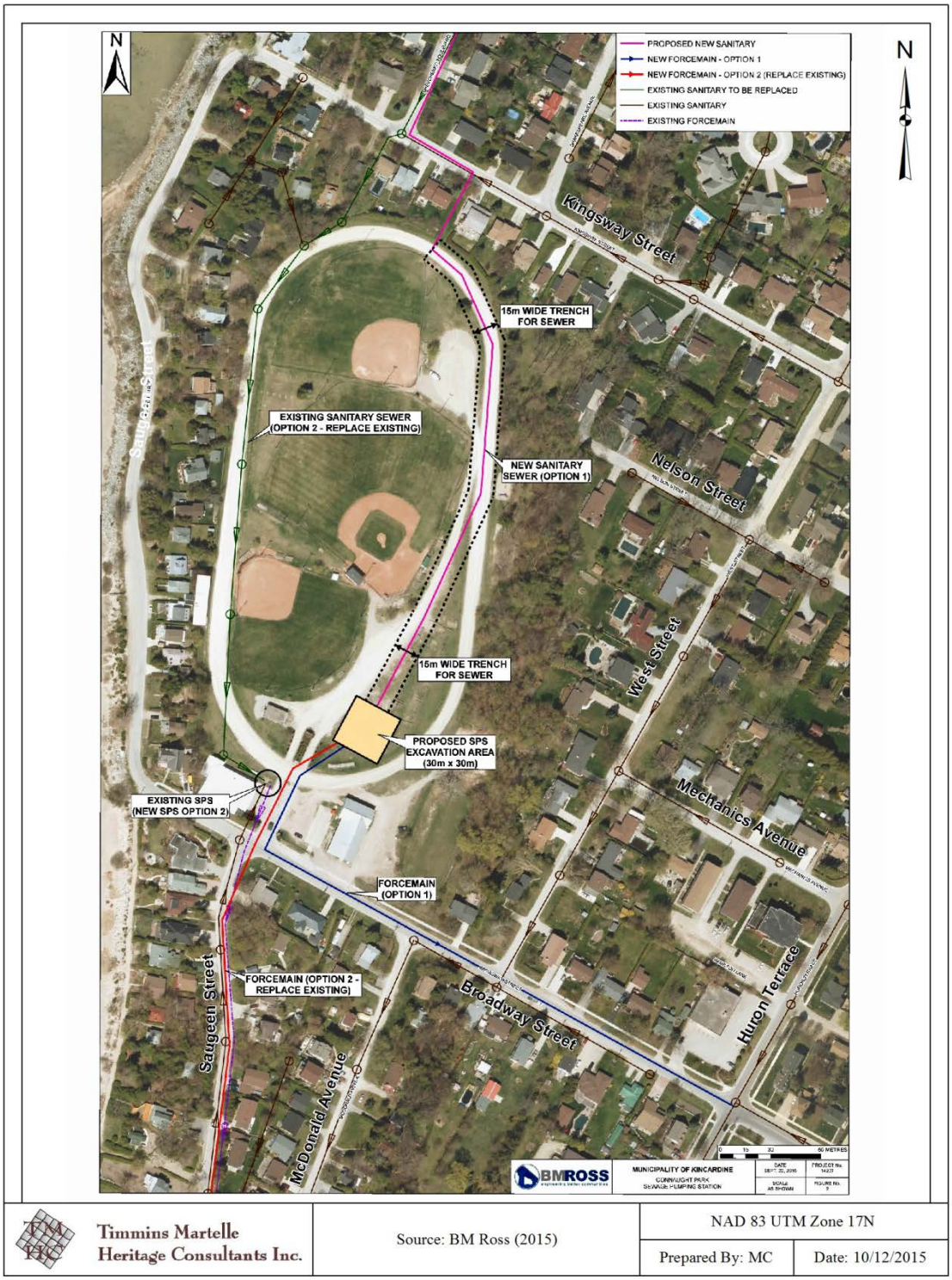
Map 1: Location of the Project Area in Kincardine, ON



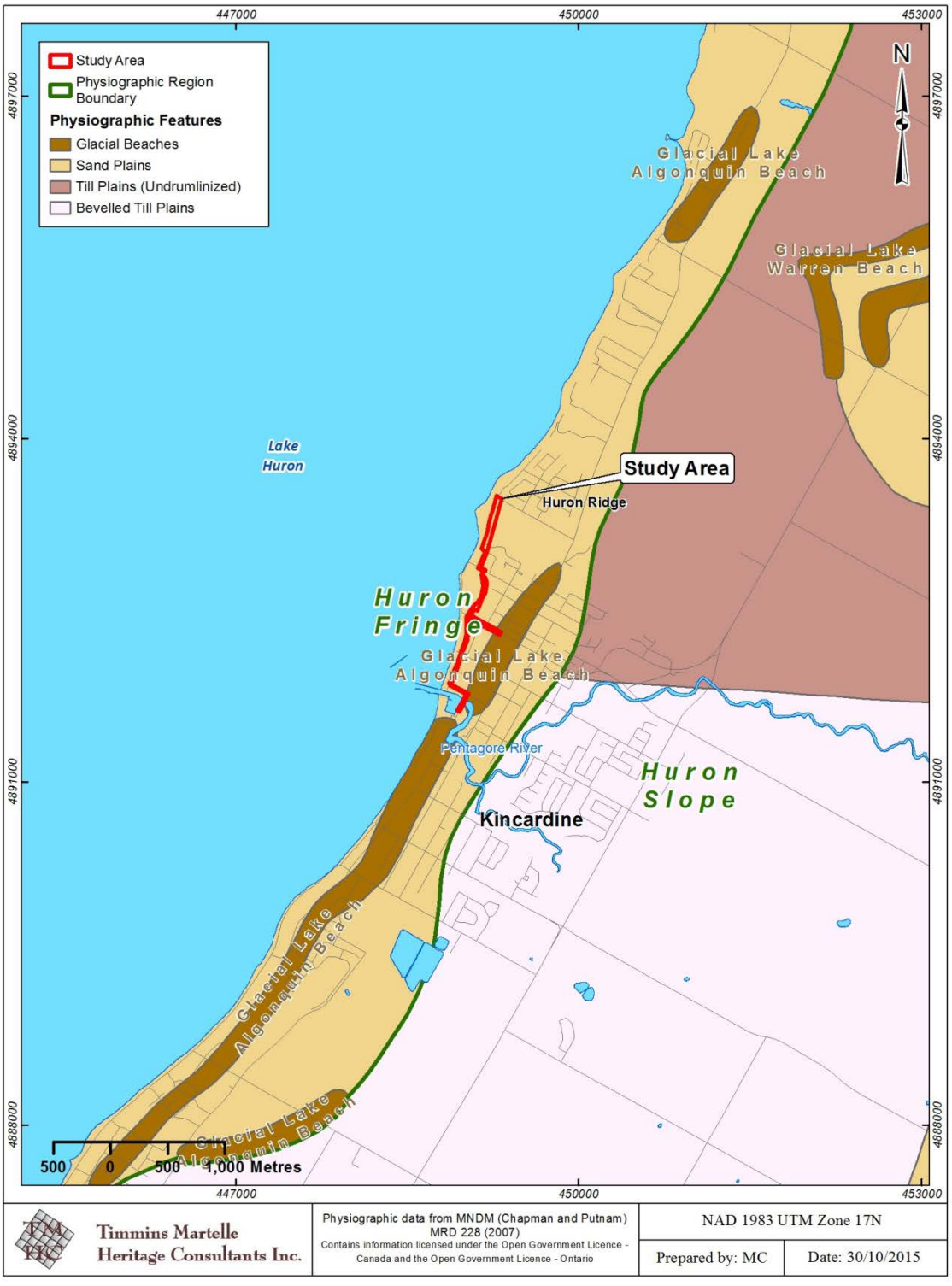
Map 2: Aerial Photograph Showing the Location of the Study Area in Kincardine, ON



Map 3: Proponent Mapping Showing the Location of the Study Area



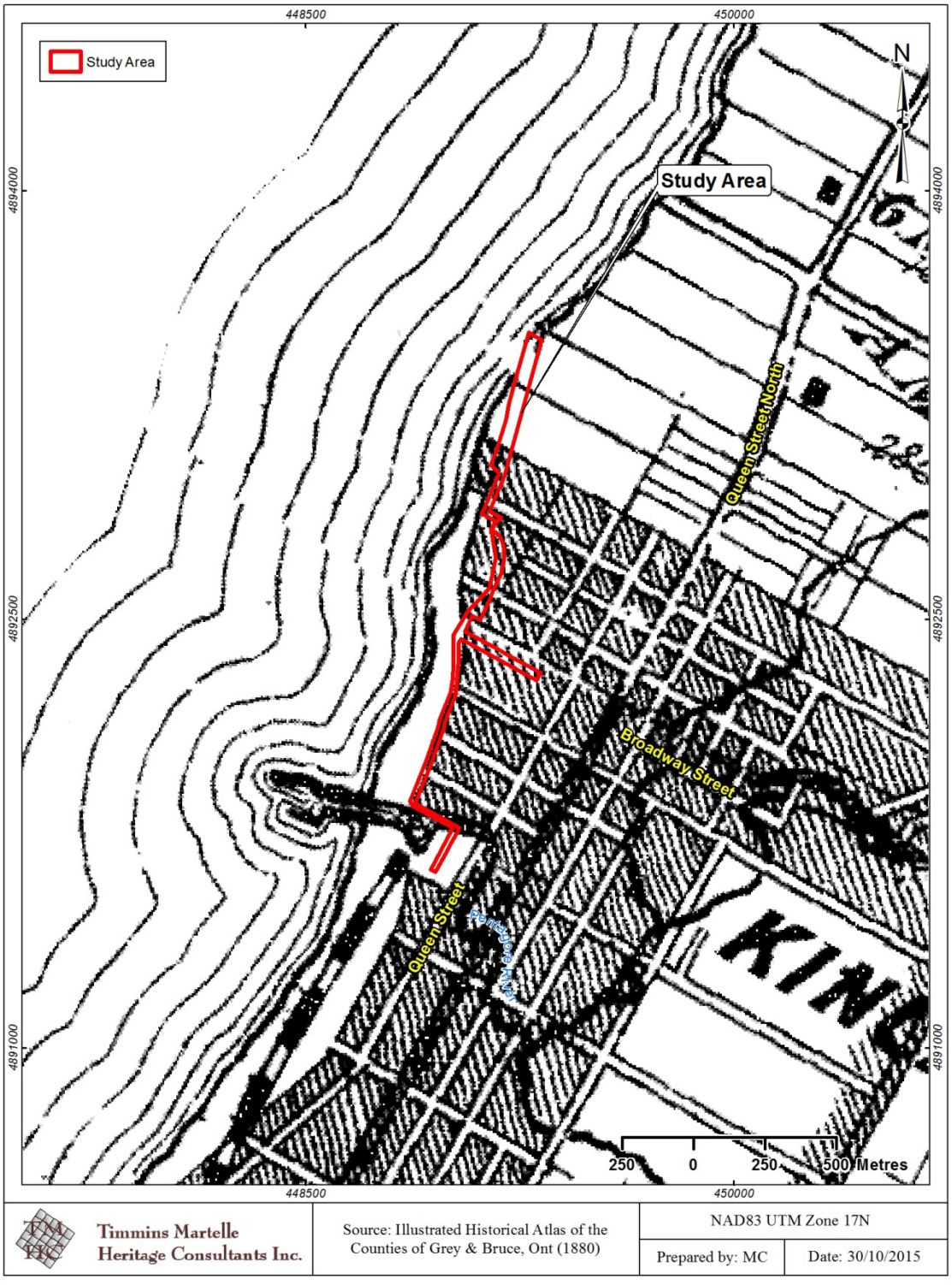
Map 4: Proponent Map Showing Detail of Connaught Park



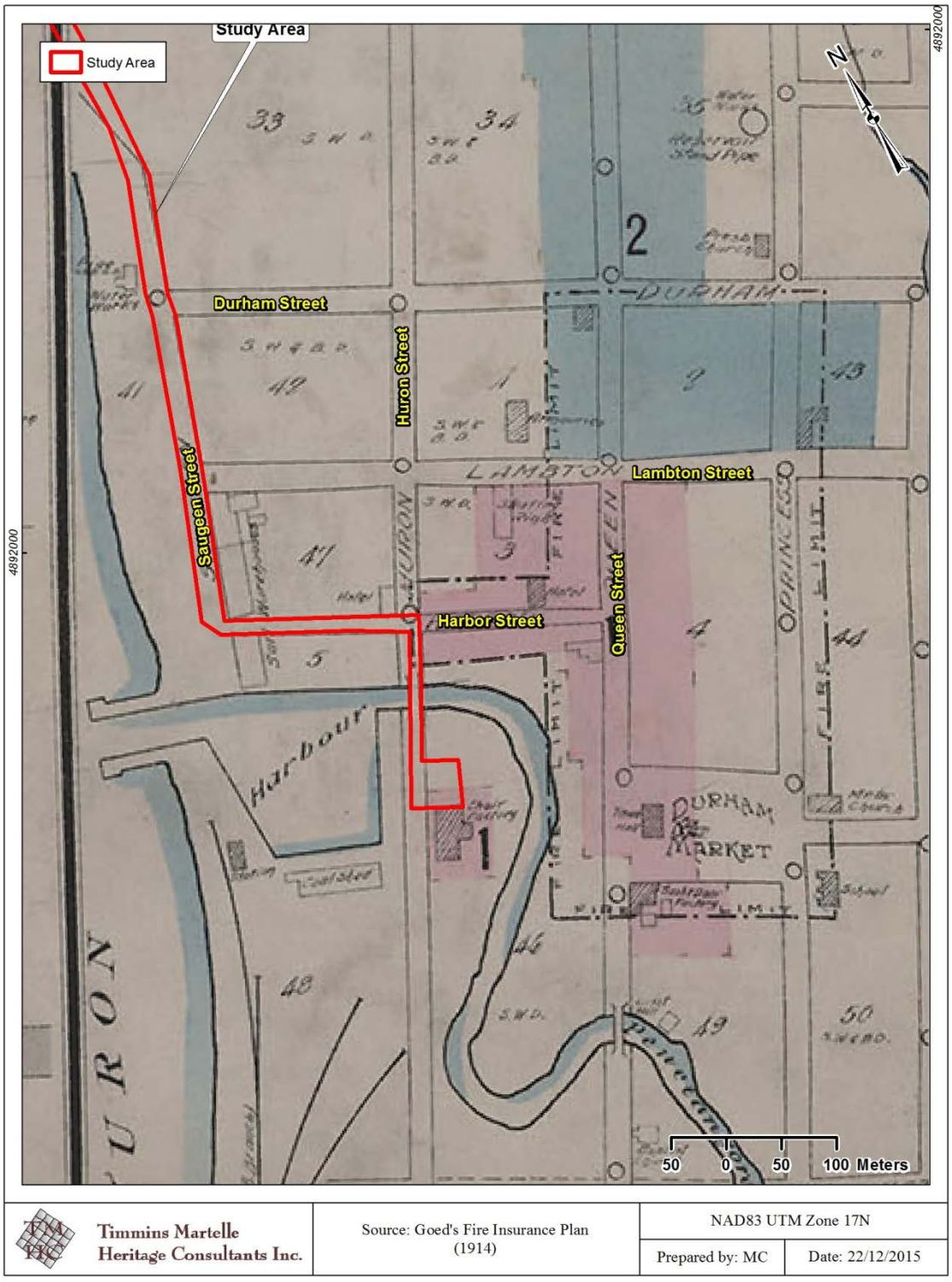
Map 5: Physiography within the Vicinity of the Project Area

Map 6: Soils within the Vicinity of the Study Area

Map 7: Drainage within the Vicinity of the Project Area



Map 8: Study Area Shown of the 1880 Map of the Town of Kincardine and Kincardine Township



Map 9: Southern Portion of Study Area Shown on 1914 Fire Insurance Plan of the Town of Kincardine

Timmins Martelle Heritage Consultants Inc.

- Report Photo/Image Location & Orientation
- Study Area
- Replacing Existing Sanitary Line
- Proposed New Sanitary

Areas of Archaeological Potential

- Manicured Lawn (Test Pitted, 5m)
- Judgementally Test Pitted

Areas of Low Archaeological Potential

- Disturbed (Photographed)

Source: BM Ross (2015) and SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 10: Stage 2 Field Conditions and Assessment Methods -South Portion

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Timmins Martelle Heritage Consultants Inc.

- Report Photo/Image Location & Orientation
- Study Area
- Replacing Existing Sanitary Line
- Proposed New Sanitary

Areas of Archaeological Potential

- Manicured Lawn (Test Pitted, 5m)
- Judgementally Test Pitted

Areas of Low Archaeological Potential

- Disturbed (Photographed)

Source: BM Ross (2015) and SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 11: Stage 2 Field Conditions and Assessment Methods- Central Portion

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Timmins Martelle Heritage Consultants Inc.

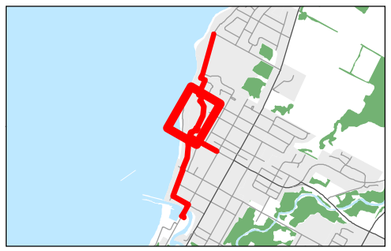
(2) Report Photo/Image Location & Orientation
Study Area
Replacing Existing Sanitary Line
Proposed New Sanitary

Areas of Archaeological Potential

Manicured Lawn (Test Pitted, 5m)
Judgementally Test Pitted

Areas of Low Archaeological Potential

Disturbed (Photographed)



Source: BM Ross (2015) and SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 12: Stage 2 Field Conditions and Assessment Methods- Connaught Park

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Timmins Martelle Heritage Consultants Inc.

- Report Photo/Image Location & Orientation
- Study Area
- Replacing Existing Sanitary Line
- Proposed New Sanitary

Areas of Archaeological Potential

- Manicured Lawn (Test Pitted, 5m)
- Judgementally Test Pitted

Areas of Low Archaeological Potential

- Disturbed (Photographed)

Source: BM Ross (2015) and SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 13: Stage 2 Field Conditions and Assessment Methods -North Portion

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Timmins Martelle Heritage Consultants Inc.

- Report Photo/Image Location & Orientation
- Replacing Existing Sanitary Line
- Proposed New Sanitary

Source: SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 14: Photo Orientation Map-South Portion

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Timmins Martelle Heritage Consultants Inc.

(2) Report Photo/Image Location & Orientation
Replacing Existing Sanitary Line
Proposed New Sanitary

Source: SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 15:Photo Orientation Map-Central Portion

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Timmins Martelle Heritage Consultants Inc.

Report Photo/Image Location & Orientation

Replacing Existing Sanitary Line

Proposed New Sanitary

Source: SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 16:Photo Orientation Map- Connaught Park

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Timmins Martelle Heritage Consultants Inc.

2 Report Photo/Image Location & Orientation
Replacing Existing Sanitary Line
Proposed New Sanitary

Source: SWOOP (2010)	
Coordinate System: NAD 1983 UTM Zone 17N	
Date: 05/02/2016	Prepared By: MC

Map 17:Photo Orientation Map-North Portion

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