

Stage 1-2 Archaeological Assessment 10410 Bessey Road, Wainfleet

Part of Lot 4, Concession 1,
Geographic Township of Wainfleet,
Historical County of Welland,
now Regional Municipality of Niagara, Ontario

Submitted to:

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and

Ontario's Ministry of Citizenship and Multiculturalism

Submitted by:



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ORIGINAL REPORT

September 13, 2024

Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Mike Petrus of Tasbra Communities ('the Proponent') to conduct a Stage 1-2 archaeological assessment on part of Lot 4, Concession 1 in the Geographic Township of Wainfleet within the historical County of Welland, now Regional Municipality of Niagara, Ontario (Figure 1). This assessment was undertaken in advance of a proposed subdivision on the property at 10410 Bessey Road, Wainfleet (the 'Study Area'; Figure 5).

This assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario, 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (Government of Ontario, 1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved." To meet this condition, a Stage 1-2 assessment was conducted as part of the application phase of development under archaeological consulting license P389 issued to Dr. Walter McCall by the Ministry of Citizenship and Multiculturalism ('MCM') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario, 1990b) and the MCM's *Standards and Guidelines for Consultant Archaeologists* ('*Standards and Guidelines*'; (Government of Ontario, 2011)

The Study Area comprises an irregularly shaped parcel located on Bessey Road measuring approximately 4.14 hectares. At the time of assessment, the Study Area included 19 separate structures, gravel and dirt driveways, gravel parking areas, a creek, and manicured grass with mature trees throughout. The structures were comprised of a mix of permanent residential buildings, storage facilities, semi-permanent trailer homes, and other outlying structures associated with residential buildings, such as sheds. The Study Area is bound to the north by a private residential road, to the east by Bessey Road, to the west by a wood lot, and to the south by a residential property.

The Stage 1 background research indicated that the Study Area is located within an area of archaeological potential, therefore the Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. A Stage 2 property survey was recommended for the Study Area.

The subsequent Stage 2 field assessment was conducted on September 29th, 2023 (Figure 3). This investigation began with a property inspection, conducted according to Section 2.1.8, which is informed by Section 1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). A judgemental test pit survey of the gravel and dirt driveways, and gravel parking areas, conducted according to Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011), determined that these areas were in fact disturbed. Additionally, the inspection revealed the aforementioned structures were determined to retain no or low archaeological potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources. A channelized creek transecting the property that was judged to be permanently wet but also the result of recent construction and as a result disturbed. As per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011), a survey of this area was not required. The previously disturbed and permanently wet components of the Study Area were mapped and photographed.

The manicured grass with mature trees throughout was assessed by means of a typical test pit survey at five-metre intervals. This investigation resulted in the identification and documentation of no archaeological resources.

The Executive Summary highlights key points from the report only; for complete information and findings, the reader should examine the complete report.

Table of Contents

1.0	Project Context.....	1
1.1	Development Context	1
1.2	Historical Context	2
1.2.1	Post-Contact Indigenous Resources	2
1.2.2	Euro-Canadian Resources	3
1.3	Archaeological Context	5
1.3.1	Property Description and Physical Setting.....	5
1.3.2	Pre-Contact Indigenous Land Use	5
1.3.3	Previous Identified Archaeological Work	6
1.3.4	Archaeological Potential.....	7
2.0	Field Methods.....	9
3.0	Record of Finds	10
4.0	Analysis and Conclusions	11
5.0	Recommendations	12
6.0	Advice on Compliance with Legislation.....	13
7.0	Bibliography.....	14
8.0	Maps	16
9.0	Images	21

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Acknowledgments

Generous contributions by Mike Petrus of Tasbra Communities and Craig Rohe of Upper Canada Consultants Ltd. made this report possible.

1.0 Project Context

1.1 Development Context

Detritus Consulting Ltd. ('Detritus') was retained by Mike Petrus of Tasbra Communities ('the Proponent') to conduct a Stage 1-2 archaeological assessment on part of Lot 4, Concession 1 in the Geographic Township of Wainfleet within the historical County of Welland, now Regional Municipality of Niagara, Ontario (Figure 1). This assessment was undertaken in advance of a proposed subdivision on the property at 10410 Bessey Road, Wainfleet (the 'Study Area'; Figure 5).

This assessment was triggered by the Provincial Policy Statement ('PPS') that is informed by the *Planning Act* (Government of Ontario, 1990a), which states that decisions affecting planning matters must be consistent with the policies outlined in the larger *Ontario Heritage Act* (Government of Ontario, 1990b). According to Section 2.6.2 of the PPS, "development and site alteration shall not be permitted on lands containing archaeological resources or areas of archaeological potential unless significant archaeological resources have been conserved." To meet this condition, a Stage 1-2 assessment was conducted as part of the application phase of development under archaeological consulting license P389 issued to Dr. Walter McCall by the Ministry of Citizenship and Multiculturalism ('MCM') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario, 1990b) and the MCM's *Standards and Guidelines for Consultant Archaeologists* ('*Standards and Guidelines*'; (Government of Ontario, 2011).

The purpose of a Stage 1 Background Study is to compile all available information about the known and potential archaeological heritage resources within the Study Area and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario, 2011), the objectives of the following Stage 1 assessment are as follows:

- To provide information about the Study Area's geography, history, previous archaeological fieldwork and current land conditions;
- to evaluate in detail, the Study Area's archaeological potential which will support recommendations for Stage 2 survey for all or parts of the property; and
- to recommend appropriate strategies for Stage 2 survey.

To meet these objectives Detritus archaeologists employed the following research strategies:

- A review of relevant archaeological, historic and environmental literature pertaining to the Study Area;
- a review of the land use history, including pertinent historic maps; and
- an examination of the Ontario Archaeological Sites Database ('ASDB') to determine the presence of known archaeological sites in and around the Study Area.

The purpose of a Stage 2 Property Assessment is to provide an overview of any archaeological resources within the Study Area; to determine whether any of the resources might be archaeological sites with cultural heritage value or interest ('CHVI'); and to provide specific direction for the protection, management, and/or recovery of these resources. In compliance with the *Standards and Guidelines* (Government of Ontario, 2011), the objectives of the following Stage 2 assessment are as follows:

- To document all archaeological resources within the Study Area;
- to determine whether the Study Area contains archaeological resources requiring further assessment; and
- to recommend appropriate Stage 3 assessment strategies for archaeological sites identified.

The licensee received permission from the Proponent to enter the land and conduct all required archaeological fieldwork activities, including the recovery of artifacts.

1.2 Historical Context

1.2.1 Post-Contact Indigenous Resources

The earliest documented pre-European settlers arrived to the Niagara Peninsula from southwestern Ontario during the 14th century AD, at the peak of Iroquois culture. By 1400, the majority of the region was occupied by an Iroquoian-speaking tribe referred to as the Attawandaran (aka the Atiquandaronk or Attouanderonks), who exploited the fertile land and abundant water sources throughout the region for fishing, hunting and agriculture (Niagara Falls Info, 2022). This moniker was given to the community by the neighbouring Wendat as a slur against their unusual dialect. Those Attawandaran tribes who settled along the Niagara River were referred to as the Onguiaahra (later the Ongiara), which has been loosely translated as one of “the Straight,” “the Throat,” or “the Thunder of Waters” (Niagara-on-the-Lake Realty, 2022; Niagara-on-the-Lake, 2016). The Town of Niagara-on-the-Lake derives its name from the Onguiaahra village site on which it was founded. The name ‘Neutral’ was given to the Attawandaran by French explorers who began arriving in the 17th century. This new designation referred to the community’s status as peacekeepers between the warring Huron and Iroquois tribes (Niagara Falls Info, 2022).

The earliest recorded European visit to the Niagara region was undertaken by Étienne Brûlé, an interpreter and guide for Samuel de Champlain. In June 1610, Brûlé requested permission to live among the Algonquin people and to learn their language and customs. In return, Champlain agreed to take on a young Huron named Savignon and to teach him the language and customs of the French. The purpose of this endeavour was to establish good relations with Indigenous communities in advance of future military and colonial enterprises in the area. In 1615, Brûlé joined twelve Huron warriors on a mission to cross enemy territory and seek out the Andaste people, allies of the Huron, to ask for their assistance in an expedition being planned by Champlain (Heidenreich, 1978). It is believed that Brûlé first visited the future site of Niagara-on-the-Lake during this excursion (Niagara-on-the-Lake, 2016). The mission was a success, but took much longer than anticipated. Brûlé returned with the Andaste two days too late to help Champlain and the Hurons, who had already been defeated by the Iroquois (Heidenreich, 1978).

Throughout the middle of the 17th century, the Iroquois of the Five Nations sought to expand upon their territory and to monopolise the local fur trade as well as trade between the European markets and the tribes of the western Great Lakes. A series of bloody conflicts followed known as the Beaver Wars, or the French and Iroquois Wars, were contested between the Iroquois and the French with their Huron and other Algonquian-speaking allies of the Great Lakes region. Many communities were destroyed during this protracted conflict including the Huron, Neutral, Erie, Susquehannock, and Shawnee leaving the Iroquois as the dominant group in the region. By 1653 after repeated attacks, the Niagara peninsula and most of Southern Ontario had been vacated. By 1667, all members of the Five Nations had signed a peace treaty with the French and allowed their missionaries to visit their villages (Heidenreich, 1978).

Ten years later, hostilities between the French and the Iroquois resumed after the latter formed an alliance with the British through an agreement known as the Covenant Chain (Heidenreich, 1978). In 1696, an aging Louis de Buade, Comte de Frontenac et de Palluau, the Governor General of New France, rallied the Algonquin forces and drove the Iroquois out of the territories north of Lake Erie, as well as those to the west of present-day Cleveland, Ohio. A second treaty was concluded between the French and the Iroquois in 1701, after which the Iroquois remained mostly neutral (Jameison, 1992).

Throughout the late 17th and early 18th centuries, various Iroquoian-speaking communities had been migrating into southern Ontario from New York State. In 1722, the Five Nations adopted the Tuscarora in New York becoming the Six Nations (Pendergast, 1995). This period also marks the arrival of the Mississaugas into Southern Ontario and, in particular, the watersheds of the lower Great Lakes (Konrad, 1981; Schmalz, 1991). The oral traditions of the Mississaugas, as told by Chief Robert Paudash suggest that the Mississaugas defeated the Mohawk nation, who retreated to their homeland south of Lake Ontario. Following this conflict, a peace treaty was negotiated and, at the end of the 17th century, the Mississaugas settled permanently in Southern Ontario

(Praxis Research Associates, n.d.). Around this same time, members of the Three Fires Confederacy (the Chippewa, Ottawa, and Potawatomi) began immigrating from Ohio and Michigan into southwestern Ontario (Feest & Feest, 1978).

The current Study Area falls within the lands surrendered by Treaty Number 3. According to Morris, Treaty Number 3,

...was made with the Mississa[u]ga Indians 7th December, 1792, though purchased as early as 1784. This purchase in 1784 was to procure for that part of the Six Nation Indians coming into Canada a permanent abode. The area included in this Treaty is, Lincoln County excepting Niagara Township; Saltfleet, Binbrook, Barton, Glanford and Ancaster Townships, in Wentworth County; Brantford, Onondaga, Tusc[a]r[o]ra, Oakland and Burford Townships in Brant County; East and West Oxford, North and South Norwich, and Dereham Townships in Oxford County; North Dorchester Township in Middlesex County; South Dorchester, Malahide and Bayham Township in Elgin County; all Norfolk and Haldimand Counties; Pelham, Wainfleet, Thorold, Cumberland and Humberstone Townships in Welland County ...

(Morris, 1943, pp. 17-18)

Throughout southern Ontario, the size and nature of the pre-contact settlements and the subsequent spread and distribution of Indigenous material culture began to shift with the establishment of European settlers. By 1834 it was accepted by the Crown that losses of portions of the Haldimand Tract to Euro-Canadian settlers were too numerous for all lands to be returned. Lands in the Lower Grand River area were surrendered by the Six Nations to the British Government in 1832, at which point most Six Nations people moved into Tuscarora Township in Brant County and a narrow portion of Oneida Township. Following the population decline and the surrender of most of their lands along the Credit River, the Mississaugas were given 6000 acres of land on the Six Nations Reserve, establishing the Mississaugas of New Credit First Nation, now the Mississaugas of the Credit First Nation, in 1847 (Smith, 2022).

Despite the encroachment of European settlers on previously established Indigenous territories, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris, 2009, p. 114). As Ferris observes, despite the arrival of a competing culture, First Nations communities throughout Southern Ontario have left behind archaeologically significant resources that demonstrate continuity with their pre-contact predecessors, even if they have not been recorded extensively in historical Euro-Canadian documentation.

1.2.2 Euro-Canadian Resources

The Study Area is located on part of Lot 4, Concession 1 in the Geographic Township of Wainfleet within the historical County of Welland, now Regional Municipality of Niagara, Ontario.

On July 24, 1788, Sir Guy Carleton, the Governor-General of British North America, divided the Province of Québec into the administrative districts of Hesse, Nassau, Mecklenburg, and Lunenburg (Archives of Ontario, 2012-2024). Further change came in December 1791 when the former Province of Québec was rearranged into Upper Canada and Lower Canada under the provisions of the Constitutional Act. Colonel John Graves Simcoe was appointed as Lieutenant-Governor of Upper Canada and he spearheaded several initiatives to populate the province including the establishment of shoreline communities with effective transportation links between them (Coyne, 1895).

In July 1792, Simcoe divided Upper Canada into 19 counties stretching from Essex in the west to Glengarry in the east. Each new county was named after a county in England or Scotland; the constituent townships were then given the names of the corresponding townships from each original British county (Powell & Coffman, 1956).

Later that year, the four districts originally established in 1788 were renamed the Western, Home, Midland, and Eastern Districts. As population levels in Upper Canada increased, smaller and more manageable administrative bodies were needed resulting in the establishment of many new counties and townships. As part of this realignment, the boundaries of the Home and Western Districts were shifted and the London and Niagara Districts were established. Under this new territorial arrangement, the Study Area became part of the Niagara District (Archives of Ontario, 2012-2024). In 1845, after years of increasing settlement that began after the War of 1812, the southern portion of Lincoln County was severed to form Welland County (the two counties would be amalgamated once again in 1970 to form the Regional Municipality of Niagara).

Wainfleet Township was surveyed in 1788 by Lieutenant P.R. Frey at that time Wainfleet was part of Lincoln County. Early settlers of Wainfleet Township were United Empire Loyalists ('UEL'), who after the American Revolution wished to remain in Wainfleet Township. The UEL received land grants from the British Government as well as supplied to start a new life. The swampy conditions of the township made it difficult to travel as well as grow crops. The construction of the Welland feeder canal, completed in 1832, allowed for drainage of the land as well as the construction of a grid of roads through the low-lying sandy regions. The completed feeder canal was large enough to accommodate schooners loaded with cargo and horse drawn barges, giving those near the canal banks better access to shipping facilities. By 1850 the population of the township had increased to 1,500 from 460 in 1817. At that time the Air Line Railway was built between Detroit and Buffalo, transecting Wainfleet Township, this line was used as a short cut between the two cities. This railway allowed for the Marshville Station to be built to handle the local freights and passengers (Township of Wainfleet, 2015).

During the construction of the feeder canal in the 1820s a tavern and a hotel were built at the intersection of Highway 3 and the Feeder Canal, then known as Marshville, now known as the community of Wainfleet. Upon completion of the canal a grist mill was built in Marshville, using the diverted water from the canal to power the mill. Marshville then became a collecting centre for products, which were shipped out of the township via the Feeder Canal. Upon completion of the extension of the Welland Canal to Port Colborne in 1890, the canal was closed the shipping services in Marshville were reduced. The name of the community changed from Marshville to Wainfleet when flour sales had dropped due to people not buying from a marshy area (Township of Wainfleet, 2015).

The *Illustrated Historical Atlas of the Counties of Lincoln and Welland* ('*Historical Atlas*'; Figure 2) demonstrates the extent to which Wainfleet Township had been settled by 1876 (Page & Co, 1876). Landowners are listed for every lot within the township, many of which had been subdivided multiple times into smaller parcels to accommodate an increasing population throughout the late 19th century. Structures and orchards are prevalent throughout the township, almost all of which front early roads and water bodies.

According to the *Historical Atlas* map (Figure 2), the Study Area is located within Lot 4, Concession 1. At the time of publication, the Study Area was divided by a creek transecting the property. The northern portion of the Study Area is listed as being owned by Mathias Zavitz, while the southern portion is owned by John M. Culley and lies in marshland. The Grand Trunk or Buffalo and Lake Huron Rail Road is depicted traversing east-west through Wainfleet Township to the north of the Study Area.

Significant and detailed landowner information is available on the current *Historical Atlas*; however, it should be recognized that historical county atlases were funded by subscriptions fees and were produced primarily to identify factories, offices, residences and landholdings of subscribers. Landowners who did not subscribe were not always listed on the maps (Caston, 1997). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore & Head, 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Study Area comprises an irregularly shaped parcel located on Hunter Road measuring approximately 4.14 hectares. At the time of assessment, the Study Area included 19 separate structures, gravel and dirt driveways, gravel parking areas, a creek, and manicured grass with mature trees throughout. The structures were comprised of a mix of permanent residential buildings, storage facilities, semi-permanent trailer homes, and other outlying structures associated with residential buildings, such as sheds. The Study Area is bound to the north by a private residential road, to the east by Bessey Road, to the west by a wood lot, and to the south by a residential property.

The majority of the region surrounding the Study Area has been subject to European-style agricultural practices for over 100 years, having been settled by Euro-Canadian farmers by the middle 19th century. Much of the region continues to be used for agricultural purposes.

The Study Area is situated within the Haldimand Clay Plain physiographic region. According to Chapman and Putnam,

...although it was all submerged in Lake Warren, the till is not all buried by stratified clay; it comes to the surface generally in low morainic ridges in the north. In fact, there is in that area a confused intermixture of stratified clay and till. The northern part has more relief than the southern part where the typically level lake plains occur.

(Chapman & Putnam, 1984, p. 156)

Haldimand clay is slowly permeable, imperfectly drained with medium to high water-holding capacities. Surface runoff is usually rapid, but water retention of the clayey soils can cause it to be droughty during dry periods (Kingston & Presant, 1989). The soil is suitable for corn and soy beans in rotation with cereal grains as well as alfalfa and clover (Huffman & Dumanski, 1986).

The Niagara Region as a whole is located within the Deciduous Forest Region of Canada, and contains tree species which are typical of the more northern Great Lakes-St. Lawrence Biotic zone, such as beech, sugar maple, white elm, basswood, white oak and butternut (MacDonald & Cooper, 1997). During pre-contact and early contact times, the land in the vicinity of the Study Area comprised a mixture of hardwood trees such as sugar maple, beech, oak and cherry. This pattern of forest cover is characteristic of areas of clay soil within the Maple-Hemlock Section of the Great Lakes-St. Lawrence Forest Province-Cool Temperate Division (McAndrews & Manville, 1987). In the early 19th, Euro-Canadian settlers began to clear the forests for agricultural purposes.

As the Study Area lies between the Clay Pits and the Wainfleet Wetlands Conservation Area, the closest source of potable water is located in a human-made creek transecting the Study Area that runs between the two areas. The Clay Pits lie 30 metres ('m') to the east of the Study Area, while the Wainfleet Wetlands Conservation Area lies 450m to the west. Furthermore, Lake Erie is located approximately 300m to the south of the Study Area.

1.3.2 Pre-Contact Indigenous Land Use

This portion of southern Ontario was occupied by people as far back as 11,000 years ago as the glaciers retreated. For the majority of this time, people were practicing hunter gatherer lifestyles with a gradual move towards more extensive farming practices. Table 1 provides a general outline of the cultural chronology of Niagara Township (Ellis & Ferris, 1990).

Table 1: Cultural Chronology for Niagara Township

Time Period	Cultural Period	Comments
9500–7000 BC	Paleo Indian	first human occupation hunters of caribou and other extinct Pleistocene game nomadic, small band society

Time Period	Cultural Period	Comments
7500–1000 BC	Archaic	ceremonial burials increasing trade network hunter gatherers
1000–400 BC	Early Woodland	large and small camps spring congregation/fall dispersal introduction of pottery
400 BC–AD 800	Middle Woodland	kinship based political system incipient horticulture long distance trade network
AD 800–1300	Early Iroquoian (Late Woodland)	limited agriculture developing hamlets and villages
AD 1300–1400	Middle Iroquoian (Late Woodland)	shift to agriculture complete increasing political complexity large, palisaded villages
AD 1400–1650	Late Iroquoian	regional warfare and political/tribal alliances destruction of Huron and Neutral

1.3.3 Previous Identified Archaeological Work

In order to compile an inventory of known archaeological resources in the vicinity of the Study Area, Detritus consulted the ASDB. The ASDB, which is maintained by the MCM (Government of Ontario, n.d.), contains information concerning archaeological sites that have been registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13 kilometres (‘km’) east to west and approximately 18.5km north to south. Each Borden Block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The Study Area lies within block AfGt.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information and Protection of Privacy Act* (Government of Ontario, 1990c). The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

According to the ASDB, seven archaeological sites have been registered within a 1km radius of the Study Area (Table 2). Of these, four are pre-contact Indigenous sites, one is a Euro-Canadian site, one is a multi-component site. Three of the pre-contact Indigenous sites and some components of the multi-component site date from Early Archaic to Late Woodland time periods. The Reeks Bay site (AfGt-7) is located in a sand dune cut by an extension of Quarry Road, south of Lakeshore Road, on Reeks Bay. However, there are no additional reports or information available for this site.

Table 2: Registered Archaeological Sites within 1km of the Study Area

Borden Number	Site Name	Time Period	Affinity	Site Type
AfGt-7	Reeks Bay			
AfGt-103		Archaic	Indigenous	camp/campsite
AfGt-104		Archaic	Indigenous	camp/campsite
AfGt-105		Archaic, Middle	Indigenous	camp/campsite
AfGt-186		Pre-Contact	Indigenous	Unknown
AfGt-188		Post-Contact, Early Woodland, Late Woodland	Indigenous, Euro-Canadian, Iroquoian	Unknown, farmstead
AfGt-346	Sugarloaf Cemetery	Post-Contact	Euro-Canadian	Cemetery

To the best of Detritus' knowledge, no other assessments have been conducted adjacent to the Study Area, and no sites are registered within 50m of the Study Area.

1.3.4 Archaeological Potential

Detritus applied archaeological potential criteria commonly used by the MCM to determine areas of archaeological potential within the Study Area. According to Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario, 2011), these variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography, and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, when considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect site locations and types to varying degrees. As per Section 1.3.1 of the *Standards and Guidelines* (Government of Ontario, 2011), water sources may be categorized in the following manner:

- Primary water sources lakes, rivers, streams, creeks;
- secondary water sources intermittent streams and creeks, springs, marshes and swamps;
- past water sources, glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- accessible or inaccessible shorelines high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

As the Study Area lies between the Clay Pits and the Wainfleet Wetlands Conservation Area, the closest source of potable water is located in a human-made creek transecting the Study Area that runs between the two areas. The Clay Pits lie 30m to the east of the Study Area, while the Wainfleet Wetlands Conservation Area lies 450m to the west. Furthermore, Lake Erie is located approximately 300m to the south of the Study Area.

Soil texture is also an important determinant of past settlement, usually in combination with other factors such as topography. The Study Area is situated within the Haldimand Clay Plain physiographic region. As was discussed earlier, the primary soils within the Study Area, meanwhile, have been documented as being suitable for pre-contact Indigenous practices. Considering also the length of occupation in the vicinity of the Study Area prior to the arrival of European settlers, as evidenced by the four pre-contact Indigenous sites and one multi-component site registered within 1km of it, the potential for pre-contact and post-contact Indigenous artifacts within the Study Area is judged to be moderate to high.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; and properties listed on the municipal register or designated under the *Ontario Heritage Act* (Government of Ontario, 1990b) or property that local histories or informants have identified with possible historical events. The *Historical Atlas* (Page & Co., 1876; Figure 2) map of Niagara Township shows the Study Area in close proximity to historical roads, as well as the historic dwellings and orchards, and the Grand Trunk or Buffalo and Lake Huron Rail Road.

Considering the location of the Study Area is within 1km of one Euro-Canadian site and one multi-component site, the potential for post-contact Euro-Canadian archaeological resources is judged to be moderate to high.

Finally, despite the factors mentioned above, extensive land disturbance can eradicate archaeological potential within a Study Area, as outlined in Section 1.3.2 of the *Standards and Guidelines* (Government of Ontario, 2011). Current aerial imagery of the Study Area identified potential disturbance areas within the Study Area, including 19 structures, gravel and dirt driveways, gravel parking areas, and a creek. It is recommended that these areas be subject to a Stage 2 property inspection, conducted according to Section 2.1.8, Standard 1 of the *Standards*

Stage 1-2 Archaeological Assessment, 10410 Bessey Road, Wainfleet

and Guidelines (Government of Ontario, 2011), Section 1.2 of the *Standards and Guidelines* (Government of Ontario, 2011), to confirm and document the disturbance.

2.0 Field Methods

The Stage 2 assessment of the Study Area was conducted on September 29th, 2023 under archaeological consulting license P389 issued to Dr. Walter McCall by the MCM. Buried utility locates were obtained prior to initiating fieldwork.

During the Stage 2 field work, the weather was sunny with a temperature of 20°Celsius. Assessment conditions were excellent and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Photos 1 to 27 demonstrate the land conditions at the time of the survey throughout the Study Area, including areas that met the requirements for a Stage 2 archaeological assessment, as per Section 7.8.6, Standard 1a of the *Standards and Guidelines* (Government of Ontario, 2011). Figure 3 provides an illustration of the Stage 2 assessment methods, as well as photograph locations and directions. Figure 4 provides an illustration of the Stage 2 assessment methods in relation to the development.

The limits of the Study Area were identified in the field by a Detritus 9.7" Apple iPad tablet paired with a "Bad Elf" GPS Pro with a stationary accuracy of 2.5m and georeferenced shapefiles denoting the Study Area boundary.

The Stage 2 field assessment began with a property inspection conducted as per Section 2.1.8, of the *Standards and Guidelines* (Government of Ontario, 2011), complete with judgemental test pitting as per Standard 2 of this section. According to the results of this inspection, approximately 17% of the Study Area comprised the possible disturbance areas identified on the current aerial imagery of the Study Area (see Section 1.3.4 above). Of the 17%, 10% comprised gravel and dirt driveways and gravel parking areas. These gravel and dirt areas were subject to judgemental test pitting according to Section 2.1.8, Standard 2 of the *Standards and Guidelines* (Government of Ontario, 2011) to confirm their limits. No traces of the original topsoil were encountered across the gravel and dirt laneway or the gravel parking areas; no artifacts were encountered. The gravel and dirt laneway and the gravel parking areas (Photos 2, 6, 8, 15, 16, 19, 22-24) as well as the remaining 7% of disturbed areas observed on the current aerial imagery, which includes the 19 separate structures (Photos 2, 4-6, 9-16, 18-24), were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources, as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011). The areas of previous disturbance observed within the Study Area were mapped and photo documented in accordance with Section 2.1, Standard 6 and Section 7.8.1, Standard 1b of the *Standards and Guidelines* (Government of Ontario, 2011).

Approximately 1% of the Study Area was comprised of a channelized creek transecting the property that was judged to be permanently wet (Photo 26) but also the result of recent construction and as a result disturbed. As per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011), a survey of this area was not required.

The other 82% of the Study Area was comprised of manicured grass with mature trees throughout, which was deemed inaccessible for ploughing (Photos 28-31). The grass areas were subject to a typical test pit survey at 5m intervals in accordance with Section 2.1.2 of the *Standards and Guidelines* (Government of Ontario, 2011). The test pit survey was conducted to within 1m of the built structures or until test pits show evidence of recent ground disturbance, as per Section 2.1.2, Standard 4 of the *Standards and Guidelines* (Government of Ontario, 2011). Each test pit was at least 30 centimetres ('cm') in diameter and excavated 5cm into sterile subsoil as per Section 2.1.2, Standards 5 and 6 of the *Standards and Guidelines* (Government of Ontario, 2011). The soils were examined for stratigraphy, cultural features, or evidence of fill. All soil was screened through six-millimetre ('mm') mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit, as per Section 2.1.2, Standards 7 and 9 of the *Standards and Guidelines* (Government of Ontario, 2011). No further archaeological methods were employed since no artifacts were identified during the test pit survey.

3.0 Record of Finds

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 3 below.

Table 3: Inventory of Document Record

Document Types	Current Location	Additional Comments
1 Page of Field Notes	Detritus offices	Stored digitally in project files
1 Map provided by the Proponent	Detritus offices	Stored digitally in project files
1 Field Map	Detritus offices	Stored digitally in project files
31 Digital Photographs	Detritus offices	Stored digitally in project files

No archaeological resources were identified within the Study Area; therefore, no material culture was collected. As a result, no storage arrangements were required.

4.0 Analysis and Conclusions

Detritus was retained by the Proponent to conduct a Stage 1-2 archaeological assessment in advance of the proposed development at 10410 Bessey Road in Wainfleet.

The Stage 1 background research indicated that the Study Area exhibited moderate to a high potential for the identification and recovery of archaeological resources. As such, a Stage 2 field assessment was recommended for the manicured grass components of the Study Area. The remainder of the Study Area comprised 19 separate structures, gravel and dirt driveways, gravel parking areas, a channelized creek, and manicured grass with mature trees throughout, which were evaluated as having no potential based on the identification of extensive and deep land alteration that has severely damaged the integrity of archaeological resources, as per Section 2.1, Standard 2b of the *Standards and Guidelines* (Government of Ontario, 2011). These areas of disturbance, as confirmed during the Stage 2 field survey, were mapped and photo documented in accordance with Section 2.1, Standard 6 and Section 7.8.1, Standard 1b of the *Standards and Guidelines* (Government of Ontario, 2011).

The Stage 2 assessment was conducted on September 29, 2023, and consisted of a typical test pit survey across the manicured grass at 5m intervals. This investigation resulted in the identification and documentation of no archaeological resources.

5.0 Recommendations

No archaeological resources were documented during the Stage 1-2 assessment of the Study Area. Therefore, **no further archaeological assessment of the Study Area is recommended.**

6.0 Advice on Compliance with Legislation

This report is submitted to the Minister of Citizenship and Multiculturalism 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 Citizenship and Multiculturalism, 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 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*.

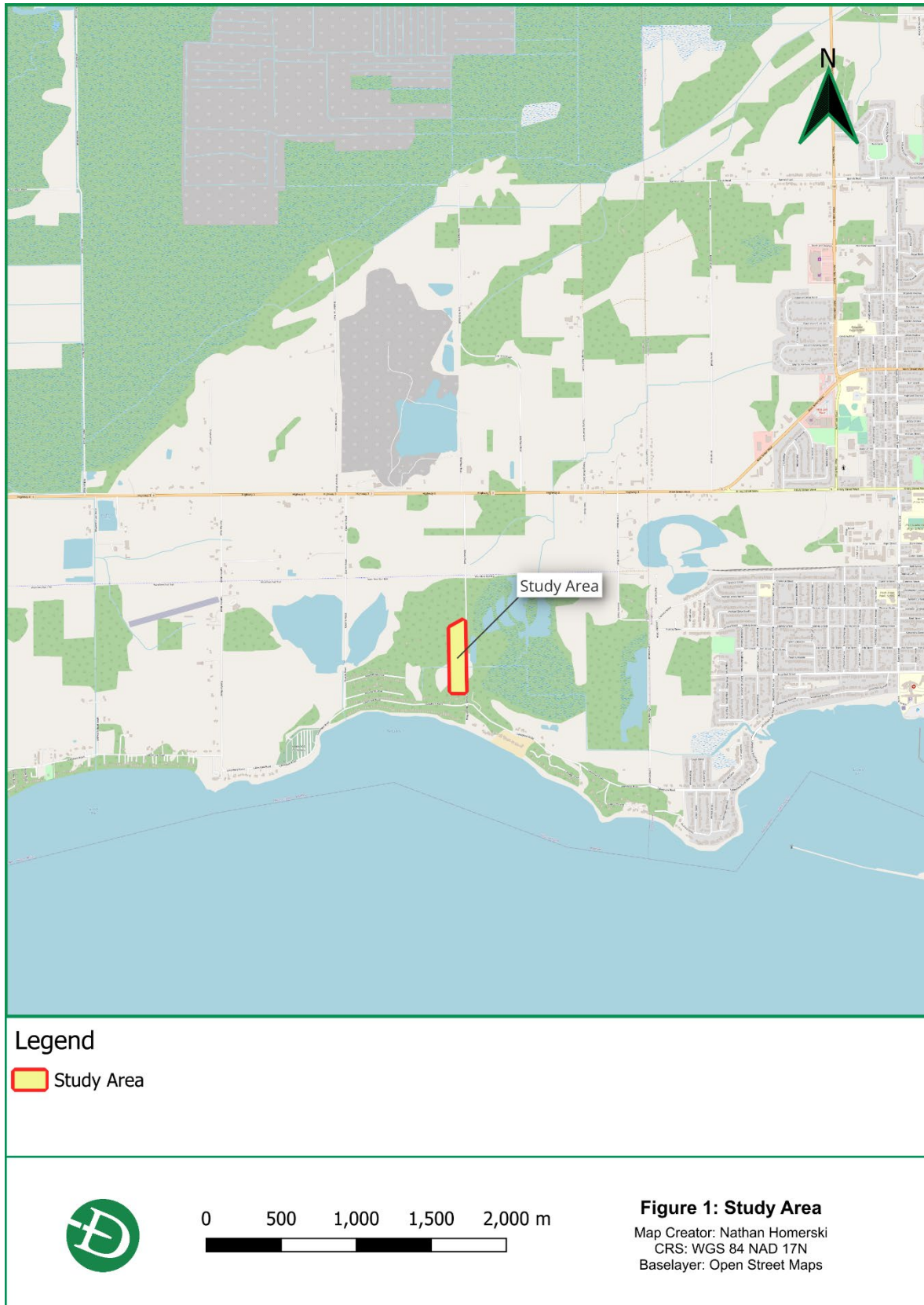
The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

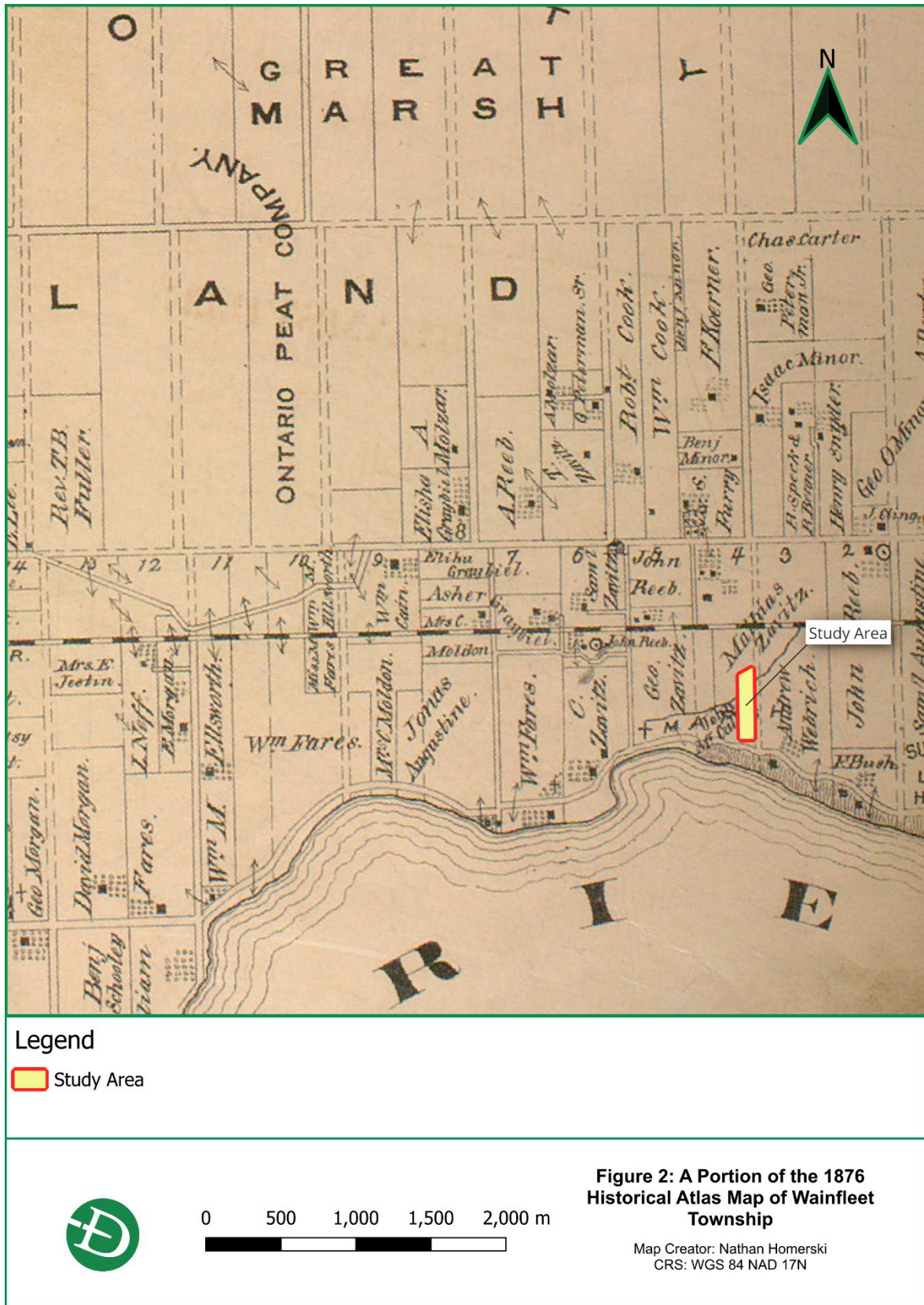
7.0 Bibliography

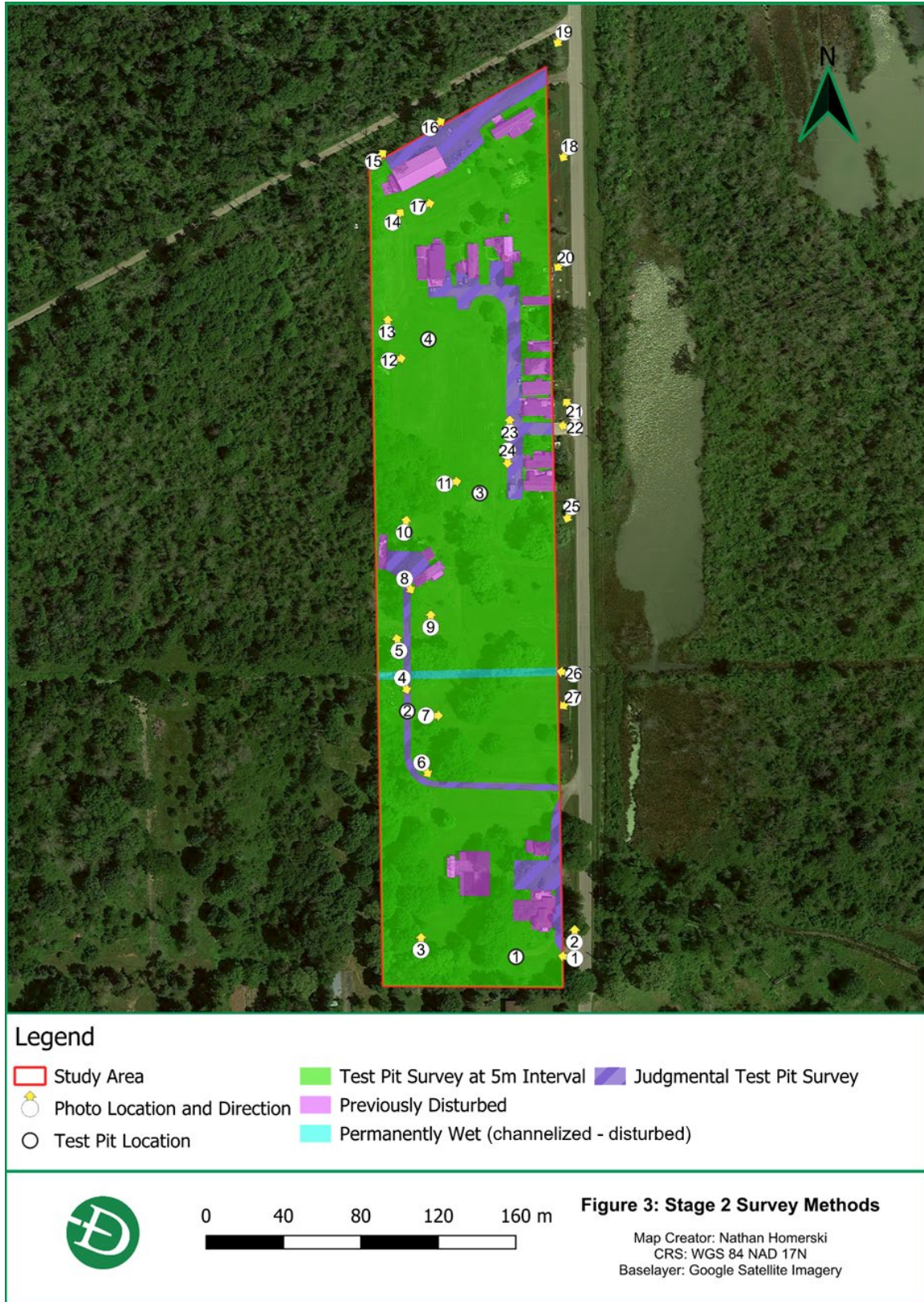
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8.0 Maps



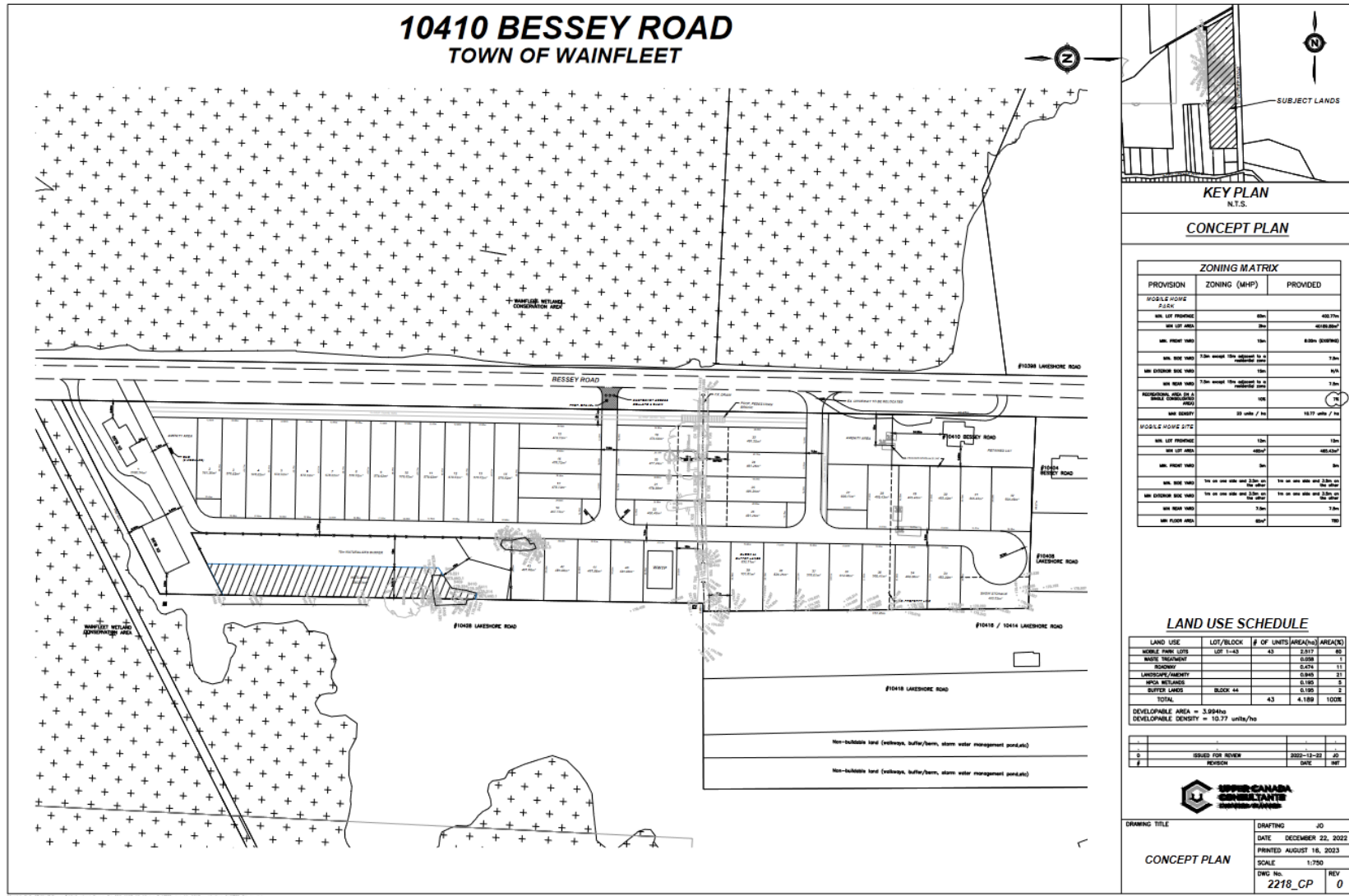






Stage 1-2 Archaeological Assessment, 10410 Bessey Road, Wainfleet

Figure 5. Development Plan



9.0 Images

Photo 1: Manicured Grass Test Pit Surveyed at 5m Intervals, facing west



Photo 2: Disturbed Building; Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed, facing north



Photo 3: Manicured Grass Test Pit Surveyed at 5m Intervals, facing north



Photo 4: Disturbed Building; Manicured Grass Test Pit Surveyed at 5m Intervals, facing north



Photo 5: Disturbed Building; Manicured Grass Test Pit Surveyed at 5m Intervals, facing north



Photo 6: Disturbed Buildings; Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed, facing southeast



Photo 7: Manicured Grass, Test Pit Survey at 5m Intervals, facing east



Photo 8: Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed, facing southeast



Photo 9: Disturbed Buildings; Manicured Grass Test Pit Surveyed at 5m Intervals, facing north



Photo 10: Disturbed Building; Manicured Grass Test Pit Surveyed at 5m Intervals, facing north



Photo 11: Disturbed Buildings; Manicured Grass Test Pit Surveyed at 5m Intervals, facing east



Photo 12: Disturbed Buildings; Manicured Grass Test Pit Surveyed at 5m Intervals, facing east



Photo 13: Disturbed Buildings; Manicured Grass Test Pit Surveyed at 5m Intervals, facing north



Photo 14: Disturbed Building; Manicured Grass Test Pit Surveyed at 5m Intervals, facing northeast



Photo 15: Distrubed Building; Gravel and Dirt Laneway Judgemental Test Pit Surveyed (Wooded area to the north of the building, left side of image, is outside of the Study Area), facing northeast



Photo 16: Distrubed Building; Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed (Wooded area to the north of the building, left side of image, is outside of the Study Area), facing northeast



Photo 17: Manicured Grass Test Pit Surveyed at 5m Intervals, facing northeast



Photo 18: Disturbed Buildings; Manicured Grass Test Pit Surveyed at 5m Intervals, facing southwest



Photo 19: Distrubed Building; Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed, facing southwest



Photo 20: Distrubed Building and Shed; Manicured Grass Test Pit Surveyed at 5m Intervals, facing southwest



Photo 21: Distrubed Building and Shed; Manicured Grass Test Pit Surveyed at 5m Intervals, facing northwest



Photo 22: Distrubed Building; Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed, facing west



Photo 23: Distrubed Buildings; Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed, facing north



Photo 24: Distrubed Building; Manicured Grass Test Pit Surveyed at 5m Intervals; Gravel and Dirt Laneway Judgemental Test Pit Surveyed, facing south



Photo 25: Manicured Grass, Test Pit Survey at 5m Intervals (Drainage Ditch running north-south, transecting image, is outside of the Study Area), facing southwest



Photo 26: Permanently Wet Creek; Manicured Grass, Test Pit Survey at 5m Intervals, facing west



Photo 27: Manicured Grass, Test Pit Survey at 5m Intervals (Drainage Ditch running north-south, bottom left of image, is outside of the Study Area), facing southwest



Photo 28: Sample Undisturbed Test Pit [1]



Photo 29: Sample Disturbed Test Pit [2]



Photo 30: Sample Undisturbed Test Pit [3]



Photo 31: Sample Undisturbed Test Pit [4]

