

Stage 1-2 Archaeological Assessment, Black Creek Capital South Addition

Part of Lot 19 of Niagara River Fronting Upper End of
GR & ISL and Part of Lot 22 Broken Front on Niagara
River & Adjoining Township
Geographic Township of Willoughby, Historical County
of Welland, Niagara Region, Ontario

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and

Ontario's Ministry of Heritage, Sport, Tourism and Culture
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Submitted by:



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ORIGINAL REPORT

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Executive Summary

Detritus Consulting Ltd. ('Detritus') was retained by Capital Consulting Group ('the Proponent') to conduct a Stage 1-2 archaeological assessment on Part of Lot 19 of Niagara River Fronting Upper End of GR & ISL and Part of Lot 22 Broken Front on Niagara River & Adjoining Township, Geographic Township of Willoughby, Historical County of Welland, Niagara Region, Ontario (Figure 1). This investigation was conducted in advance of the proposed Black Creek Road Subdivision development near the community of Douglastown in the northeastern section of Fort Erie, Ontario (Figure 6).

This investigation was conducted in advance of the proposed Black Creek Road Subdivision development in the community of Douglastown in the northeastern section of Fort Erie, Ontario (Figure 5). The proposed Black Creek Road Subdivision development (the 'Project Location') corresponds with the undeveloped property bounded by the QEW to the south, Black Creek Road to the east, Netherby Road to the west and Baker Road to the north (Figure 3). The current Study Area, identified as the Black Creek Capital South Addition, occurs in the approximate southern third of the Project Location (Figure 4).

An archaeological investigation of the Study Area 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 the conditions of this legislation, a Stage 1-2 assessment of the Study Area was conducted during the application stage of the development under archaeological consulting license PO17 issued to Garth Grimes by the Ministry of Heritage, Sport, Tourism and Culture Industries ('MHSTCI') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists* ('Standards and Guidelines'; Government of Ontario 2011).

The Study Area is roughly wedge-shaped and measures 2.02 hectares (Figure 4). At the time of assessment, the study area comprised an undeveloped woodlot inaccessible to ploughing. The Stage 1 background research indicated that the entire Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. The Stage 2 field assessment was recommended for the entire Study Area.

The Stage 2 field assessment was conducted on 9 July and 13 August 2021. The entire Study Area was subjected to a standard test pit survey at 5m intervals, as per Section 2.1.2, Standards 1 and 2 of the *Standards and Guidelines* (Government of Ontario 2011). This investigation resulted in the identification and documentation of two pre-contact Aboriginal sites, registered with the MHSTCI as Site P1 (AfGs-147) and Site P2 (AfGs-146).

Site P1 (AfGs-147) was identified during the test pit survey along the southwestern edge of the Study Area. The Stage 2 assessment of Site P1 resulted in the documentation of four pieces of Onondaga chert debitage from three test pits and one test unit in an area of 5m by 5m. Given the results of the Stage 2 assessment, Site P1 (AfGs-147) has been interpreted as a small activity area of unknown function, occupied by unspecified Aboriginal people during the pre-contact period. Given the fact that the Stage 2 assessment only recovered four non-diagnostic artifacts within a 10m-by-10m test pit survey, the site does not meet the criteria for a Stage 3 assessment as per Section 2.2 Standard 1.a.ii(2) of the *Standards and Guidelines* (Government of Ontario 2011). Therefore, Site P1 retains no further CHVI and **a Stage 3 archaeological assessment is not recommended for Site P1 (AfGs-147).**

Site P2 (AfGs-146) was identified during the test pit survey about 30 m to the southwest of P1. The Stage 2 assessment of Site P2 resulted in the documentation of six pieces of Onondaga chert debitage and one piece of Ancaster chert debitage from two test pits and one test unit in an area of 5m by 5m. Given the results of the Stage 2 assessment, Site P2 (AfGs-146) has been interpreted as a small activity area of unknown function, occupied by unspecified Aboriginal people during the

pre-contact period. Despite the non-diagnostic nature of the recovered artifacts, the Stage 2 assessment resulted in the documentation of at least five artifacts within a 10m-by-10m test pit survey. As a result, Site P2 (AfGs-146) fulfills the criteria for a Stage 3 assessment as per Section 2.2 Standard 1.a.ii(2) of the Standards and Guidelines (Government of Ontario 2011) and retains CHVI. To further evaluate the site's CHVI, **a Stage 3 archaeological assessment is recommended for Site P2 (AfGs-146).**

The above recommendations apply to the current Study Area only, which corresponds with the southern section of the Black Creek Road Subdivision Development identified in this report as the Black Creek Capital South Parcel (Figure 4-5). Detritus previously conducted a Stage 1-2 archaeological assessment of the center section of the Black Creek Road Subdivision (Detritus 2018). No material culture was encountered during that previous assessment and no additional archaeological work was recommended.

The Executive Summary highlights key points from the report only; for a more detailed discussion regarding the results of the current Stage 1-2 assessment, including a complete set of recommendations, the reader should examine the complete report.

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1.0 Project Context

1.1 Development Context

Detritus Consulting Ltd. ('Detritus') was retained by Upper Canada Consulting on behalf of Capital Contracting Group ('the Proponent') to conduct a Stage 1-2 archaeological assessment on Part of Lot 19 of Niagara River Fronting Upper End of GR & ISL and Part of Lot 22 Broken Front on Niagara River & Adjoining Township, Geographic Township of Willoughby, Historical County of Welland, Niagara Region, Ontario (Figure 1). This investigation was conducted in advance of the proposed Black Creek Road Subdivision development in the community of Douglstown in the northeastern section of Fort Erie, Ontario (Figure 5). The proposed Black Creek Road Subdivision development (the 'Project Location') corresponds with the undeveloped property bounded by the QEW to the south, Black Creek Road to the east, Netherby Road to the west and Baker Road to the north (Figure 3). The current Study Area, identified as the Black Creek Capital South Addition, occurs in the approximate southern third of the Project Location (Figure 4).

An archaeological investigation of the Study Area 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 the conditions of this legislation, a Stage 1-2 assessment of the Study Area was conducted during the application stage of the development under archaeological consulting license P017 issued to Garth Grimes by the Ministry of Heritage, Sport, Tourism and Culture Industries ('MHSTCI') and adheres to the archaeological license report requirements under subsection 65 (1) of the *Ontario Heritage Act* (Government of Ontario 1990b) and the MHSTCI's 2011 *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 a 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 Property 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 Study Area and conduct all required archaeological fieldwork activities, including the recovery of artifacts.

1.2 Historical Context

1.2.1 Post-Contact Aboriginal Resources

Prior to the arrival of European settlers, the Niagara region was occupied by the Neutral, or Attawandaron tribe. The earliest recorded visit 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 Aboriginal 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. 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 1990).

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 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 1990).

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, 1990). 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 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 (Jamieson 1992:80; Noble 1978:161).

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 1995:107). 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 (Chippewa, Ottawa, and Potawatomi) began immigrating from Ohio and Michigan into southwestern Ontario (Feest and Feest 1978:778-779).

The Study Area enters the Euro-Canadian historic record on May 9th 1781 as part of the Niagara Treaty No. 381 with the Mississauga and Chippewa. This treaty involved the surrender of ...

...all that certain tract of land situated on the west side of the said strait or river, leading from Lake Erie to Lake Ontario, beginning at a large white oak tree, forked

six feet from the ground, on the bank of the said Lake Ontario, at the distance of four English miles measured in a straight line, from the West side of the bank of the said straight, opposite to the Fort Niagara and extending from thence by a southerly course to the Chipewigh River, at the distance of four miles on a direct line from where the said river falls into the said strait about the great Fall of Niagara or such a line as will pass at four miles west of the said Fall in its course to the said river and running from thence by a southeasterly course to the northern bank of Lake Erie at the distance of four miles on a straight line, westerly from the Post called Fort Erie, thence easterly along the said Lake by the said Post, and northerly up the west side of the said strait to the said lake Ontario, thence westerly to the place of beginning.

Morris 1943: 15-16

The size and nature of the pre-contact settlements and the subsequent spread and distribution of Aboriginal material culture in Southern Ontario began to shift with the establishment of European settlers. 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 (Page & Co. 1879:8; Tanner 1987:127; Weaver 1978:526). Despite the inevitable encroachment of European settlers on previously established Aboriginal 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 2009:114). 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 current Study Area occupies Part of Lot 19 of Niagara River Fronting Upper End of GR & ISL and Part of Lot 22 Broken Front on Niagara River & Adjoining Township, Geographic Township of Willoughby, Historical County of Welland, Niagara Region, 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 2009). Further change came in December 1791 when the Province of Québec was rearranged into Upper Canada and Lower Canada under the Constitutional Act. Colonel John Graves Simcoe was appointed as Lieutenant-Governor of Upper Canada; he initiated several initiatives to populate the province including the establishment of shoreline communities with effective transportation links between them (Coyne 1895:33).

In July 1792, Simcoe divided Upper Canada into 19 counties, including Welland County, stretching from Essex in the west to Glengarry in the east. Later that year, the four districts originally established in 1788 were renamed as 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 Welland County in the Niagara District (Archives of Ontario 2009).

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). Willoughby Township was settled in 1784 and was surveyed in 1787 along with many of the townships in the area. By 1817 the township had almost 450 inhabitants and property value had increased from 1 shilling per acre, in 1787 to 25 shillings in 1817. It was not until after 1830 that land started to be cleared around the Tamarack Swamp, which runs through the township from the southeast

corner to the southwest corner. The soil of the township was a large attraction to early settlers as it was suitable for growing barley, wheat, oats amongst other things. Also, located in the Township of Willoughby is the Village of Chippawa where a single road following along the banks of Lyons Creek was established. Chippawa was for a time the half-way station for people with trade goods being shipped from Niagara to be reshipped on Lake Erie from many different stations on the upper lakes (Page & Co 1876).

The Illustrated Historical Atlas of the Counties of Lincoln and Welland ('Historical Atlas'), demonstrates the extent to which Willoughby Township had been settled by 1876 (Page & Co 1876; Figure 2). 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.

According to the Historical Atlas map of Willoughby Township, Part of Lot 19 of Niagara River Fronting Upper End of GR & ISL and Part of Lot 22 Broken Front on Niagara River & Adjoining Township was owned by H.J. Beam and Samuel Bucker. No structures or orchards are illustrated on either lot. Furthermore, the Grand Trunk Railway can be observed to the northeast, of the Study Area and the Black Creek post office is located to the north of the Study Area (Page & Co 1876; Figure 2).

Although significant and detailed landowner information is available on the current Historical Atlas map of Willoughby Township (Page & Co 1876: Figure 2), 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 1997:100). Moreover, associated structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

1.3 Archaeological Context

1.3.1 Property Description and Physical Setting

The Study Area is a large woodlot measuring approximately 2.02ha. It is roughly wedge shaped and is bound by the westbound off ramp for the Queen Elizabeth Way on the west, Black Creek Road to the east and a woodlot to the north. 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 mid-19th century. Much of the region today continues to be used for agricultural purposes.

The Study Area is situated within the Haldimand Clay Plain. 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 and Putnam 1984:156

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 and Presant 1989). The soil is suitable for corn and soy beans in rotation with cereal grains as well as alfalfa and clover (Huffman and Dumanski 1986). The closest source of potable water is a tributary of Black Creek, which runs approximately 140 metres (m) to the east of the Study Area and Black Creek itself is located 408m to the east of the Study Area.

1.3.2 Pre-Contact Aboriginal Land Use

The Study Area occupies a portion of Southwestern Ontario that has been 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 Willoughby Township (Ellis and Ferris 1990).

Table 1: Cultural Chronology for Willoughby 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
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 archaeological resources, the registered archaeological site records kept by the MHSTCI were consulted. In Ontario, information concerning archaeological sites stored in the ASDB (Government of Ontario n.d.) is maintained by the MHSTCI. This database contains archaeological sites 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 13km 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 under review is within Borden Block AfGs.

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 MHSTCI 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, 19 archaeological sites have been registered within a 1km radius of the Study Area (Table 2). All but one of these sites have been identified as pre-contact Aboriginal, including three Late Archaic camps (AfGs-19, AfGs-27 and AfGs-28) and one Middle Woodland findspot (AfGs-14). One site is classified as a Multi-Component findspot with pre-contact Aboriginal and post-contact Euro-Canadian artifacts (AfGs-20). Seventeen of these sites were recorded by the Museum of Indian Archaeology for the River Trail Estates development in the late 1980s (Museum of Indian Archaeology n.d.). The River Trail Estates development is located about 50m to the east of the Study Area.

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

Borden Number	Site Name	Time Period	Affinity	Site Type
AfGs-12	River Trail 1	Pre-Contact	Aboriginal	unknown
AfGs-13	River Trail 2	Pre-Contact	Aboriginal	unknown
AfGs-14	River Trail 3	Middle Woodland	Aboriginal	findspot
AfGs-15	River Trail 4	Pre-Contact	Aboriginal	unknown
AfGs-16	River Trail 5	Pre-Contact	Aboriginal	unknown
AfGs-17	River Trail 6	Pre-Contact	Aboriginal	unknown
AfGs-18	River Trail 7	Pre-Contact	Aboriginal	unknown
AfGs-19	Jessop	Late Archaic	Aboriginal	camp/campsite
AfGs-20	River Trail 9	Multicomponent: Post-Contact, Late Woodland	Aboriginal, Euro-Canadian, Iroquoian	findspot
AfGs-21	River Trail 10	Pre-Contact	Aboriginal	unknown
AfGs-22	River Trail 11	Pre-Contact	Aboriginal	unknown
AfGs-23	River Trail 12	Pre-Contact	Aboriginal	unknown
AfGs-24	River Trail 13	Pre-Contact	Aboriginal	unknown
AfGs-25	River Trail 14	Pre-Contact	Aboriginal	unknown
AfGs-26	River Trail 15	Pre-Contact	Aboriginal	unknown
AfGs-27	River Trail	Late Archaic	Aboriginal	camp/campsite
AfGs-28	Baker Road	Late Archaic	Aboriginal	camp/campsite
AfGs-127	Black Creek 6	Pre-Contact	Aboriginal	unknown
AfGs-128	Black Creek 7	Pre-Contact	Aboriginal	camp / campsite

To the best of Detritus' knowledge, none of the sites tabulated above have been registered within 50m of the Study Area.

Detritus previously conducted a Stage 1-2 assessment of the woodlot just to the north of the Study Area covering the central portion of the Project Location (Figure 3). This earlier investigation consisted of a standard test pit survey of the undeveloped wood lot. No archaeological materials were recovered during the investigation and no additional assessment was recommended. The results of this investigation are documented in the Stage 1-2 assessment report (Detritus 2018).

To the best of Detritus' knowledge, no other assessments have been conducted adjacent to the Study Area.

1.3.4 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Detritus applied archaeological potential criteria commonly used by the MHSTCI to determine areas of archaeological potential within 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 was discussed above, the closest source of potable water is a tributary of Black Creek, which runs approximately 140 metres (m) to the east of the Study Area and Black Creek itself is located 408m to the east of the Study Area.

The primary soils within the Study Area have been documented as being suitable for pre-contact Aboriginal practices. Add to this discussion the presence of 18 pre-contact Aboriginal sites and one multi-component site registered within 1km of the Study Area and the Aboriginal archaeological potential 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 map of Willoughby Township (Figure 2; Page & Co 1876), demonstrates that the township was densely occupied by Euro-Canadian farmers by the late 19th century. Much of the established road system and agricultural settlement from that time is still visible today. Also considering the proximity of the Study Area to the early post office of Black Creek as well as the Grand Trunk Railway, the Euro-Canadian archaeological potential of the Study Area is judged to be moderate to high.

When the above listed criteria are applied to the Study Area, the archaeological potential for pre-contact Aboriginal, post-contact Aboriginal, and Euro-Canadian sites is deemed to be moderate to high.

2.0 Field Methods

The Stage 2 assessment was conducted on 9 July and 13 August 2021 under archaeological consulting license PO17 issued to Garth Grimes by the MHSTCI. The limits of the Study Area were recognised in the field by means of Black Creek Road to the east, the Queen Elizabeth Way onramp to the west and by the boundary of the previously assessed wood lot to the north.

The weather during fieldwork on 9 July and 13 August 2021 was overcast and with a high of 16° Celsius and 20° Celsius respectively. Assessment conditions were excellent; at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Photos 1-9 demonstrate the field conditions throughout the Study Area at the time of the assessment, including areas that met the requirements for a Stage 2 archaeological assessment, as per Section 7.8.6, Standards 1a and b of the *Standards and Guidelines* (Government of Ontario 2011). Figure 3 illustrates the Stage 2 assessment methods, including all photograph locations and directions; Figure 4 illustrates the Stage 2 assessment methods in relation to the current development map.

The entire Study Area (2.02ha) is an undeveloped woodlot inaccessible for ploughing. Prior to the archaeological assessment the trees and vegetation were removed from the lot leaving numerous tree stumps and piles of wood chips (Photos 15-16). The entire Study Area was subjected to a standard test pit survey at 5m intervals, as per Section 2.1.2, Standards 1 and 2 of the *Standards and Guidelines* (Government of Ontario 2011; Photos 1-7). All test pits were at least 30 centimetres ('cm') in diameter and were 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 then examined for stratigraphy, cultural features, or evidence of fill.

All soil from the test pits was screened through six-millimetre ('mm') 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). Test pits ranged in depth from 25 to 35cm and contained a single stratigraphic layer; considering that each test pit was excavated 5cm into sterile subsoil, this observed soil layer ranged in depth from 20 to 30cm.

The test pit assessment resulted in the documentation of two pre-contact Aboriginal archaeological sites, P1 (AfGs-147) and P2 (AfGs-146).

P1 comprised three test pits (Find Spots 1-3) producing a total of four pre-contact Aboriginal artifacts and covering an area of about 5m by 5m. P1 was identified along the south-eastern edge of the Study Area. Given that insufficient resources were documented to meet the criteria for continuing to Stage 3, the survey coverage was intensified around the three positive test pits to determine whether a recommendation for Stage 3 could be supported, as per Section 2.1.3, Standard 2 of the *Standards and Guidelines* (Government of Ontario 2011). As per Option A of this Standard, eight additional test pits were excavated at a 2.5m interval around all sides of the three test pits. A single 1m test unit was then excavated directly over top of Find Spot 2. No additional cultural material was encountered, therefore no further archaeological methods were employed.

P2 comprised two test pits (Find Spots 4-5) producing a total of two pre-contact Aboriginal artifacts and covering an area of about 5m by 5m. P2 was identified 30m to the southwest of P1. Given that insufficient resources were documented to meet the criteria for continuing to Stage 3, the survey coverage was intensified around the three positive test pits to determine whether a recommendation for Stage 3 could be supported, as per Section 2.1.3, Standard 2 of the *Standards and Guidelines* (Government of Ontario 2011). As per Option A of this Standard, eight additional test pits were excavated at a 2.5m interval around all sides of the two test pits. A single 1m test unit was then excavated directly over top of Find Spot 5. The test unit recovered an additional five pre-contact Aboriginal artifacts. Combined the test pits and the test unit produced sufficient archaeological resources to document and delineate the archaeological location and met the criteria for making a recommendation to conduct a Stage 3 archaeological assessment as per Section 2.1.3, Standard 1 of the *Standards and Guidelines* (Government of Ontario 2011).

Stage 1-2 Assessment, Black Creek Capital South Addition

All cultural material encountered was collected and recorded to the associated test pit or excavation unit and returned for laboratory analysis. Universal Transverse Mercator ('UTM') coordinates were recorded for all positive test pits as well as a fixed landmark using a Garmin eTrex 10 GPS unit with a minimum accuracy 3m (North American Datum 1983 ('NAD83') and UTM Zone 17T). These coordinates are presented in the Supplementary Documentation to this report.

3.0 Record of Finds

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.0 above, resulting in the documentation of two pre-contact Aboriginal sites, P1 (AfGs-147) and P2 (AfGs-146). An inventory of the documentary record generated by the fieldwork is provided in Table 3 below.

Table 3: Inventory of Document Record

Document Type	Current Location	Additional Comments
3 page of field notes	Detritus office	Stored digitally in project file
1 map provided by the Proponent	Detritus office	Stored digitally in project file
1 field map	Detritus office	Stored digitally in project file
35 photographs	Detritus office	Stored digitally in project file

All the material culture collected during the Stage 2 survey are contained in one box and will be temporarily housed in the offices of Detritus until formal arrangements can be made for its transfer to Her Majesty the Queen in right of the Province of Ontario or another suitable public institution acceptable to the MHSTCI and the Study Area's owners.

3.1 Cultural Material

Two archaeological sites were documented during the Stage 2 assessment of the Study Area, P1 (AfGs-147) and P2 (AfGs-146). Site P1 consisted of entirely chipping detritus manufactured from Onondaga chert. Site P2 consisted of chipping detritus manufactured from Onondaga and Ancaster chert. Chert type identifications were accomplished visually using reference materials located online or in personal collections.

Onondaga formation chert is from the Middle Devonian age, with outcrops occurring along the north shore of Lake Erie between Long Point and the Niagara River (Eley and von Bitter 1989). Primary outcrops have also been reported along the banks of the Grand River (Ellis and Ferris 1990). It is a high-quality raw material frequently utilized by pre-contact people and often found at archaeological sites in southern Ontario. Onondaga chert occurs in nodules or irregular thin beds. It is a dense non-porous rock that may be light to dark grey, bluish grey, brown or black and can be mottled with a dull to vitreous or waxy lustre (Eley and von Bitter 1989).

Ancaster chert, also known as Lockport chert, is a moderate quality raw material that outcrops from the Lockport formation near Hamilton. Secondary deposits can be found as far east as Grimsby (Eley and von Bitter 1989).

Furthermore, all pieces of chipping detritus were subject to morphological analysis following the classification scheme described by Lennox et al. (1986:79-81) and expanded upon by Fisher (1997: 41-49). Flake types identified during the morphological analysis of the chipping detritus assemblages include primary, secondary, thinning, and fragmentary flakes. Cortical removal, primary and secondary flakes are produced during the initial reduction phases of raw material blanks and tend to exhibit minimal dorsal flake scarring. These flakes are also characterized by the presence of cortex, or original unflaked area, on their dorsal surfaces and proximal ends. For cortical removal flakes, cortex makes up over half of the dorsal surface. For primary flakes, cortex makes up less than half of the dorsal surface, while secondary flakes may not contain any. Thinning flakes are produced during the latter stages of reduction when raw material blanks are shaped into preforms and formal tools. They are the result of precise flake removal through pressure flaking, where the maker applies direct pressure onto a specific part of the tool in order to facilitate flake removal. Pressure flaking generally produces smaller, thinner flakes than does percussion flaking. Thinning flakes also exhibit more flake scars on their dorsal surface than do primary or secondary flakes. Fragmentary flakes are flakes that may have some identifiable flake characteristic, but cannot be classified with certainty into a specific category.

3.2 Site P1 (AfGs-147)

Site P1 was identified in the undeveloped woodlot along the south-eastern edge of the Study Area. The Stage 2 assessment of Site P1 resulted in the documentation of four pieces of Onondaga chert debitage from three test pits in an area of 5m by 5m. According to the morphological analysis, all the flakes recovered from Site P1 are secondary Onondaga flakes. The exclusive use of Onondaga chert indicates site occupants were largely relying on a single source of raw material. Outcrops of Onondaga chert are found along the north shore of Lake Erie between Long Point and the Niagara River, which is approximately 10km to the south of the site. Given the small sample size, however, it is difficult to draw any useful conclusions regarding site function.

3.2.1 Site P1 Artifact Catalogue

Table 4 provides a catalogue of the Stage 2 artifact assemblage recovered from Site P1. A sample of artifacts are depicted in Section 9.2 of this report.

Table 4: Site P1 Artifact Catalogue

Test Pit #	Cat #	Artifact	Freq.	Morphology	Chert Type	Notes
Find Spot 1	1	chipping detritus	1	secondary	Onondaga	
Find Spot 2	2	chipping detritus	1	secondary	Onondaga	
Find Spot 3	3	chipping detritus	1	secondary	Onondaga	
Find Spot 3	4	chipping detritus	1	secondary	Onondaga	equivocal

3.3 Site P2 (AfGs-146)

Site P2 was identified near the southern end of the Study Area. The Stage 2 assessment of Site P2 resulted in the documentation of six pieces of Onondaga chert debitage and one piece of Ancaster chert debitage from two test pits and one test unit in an area of about 5m by 5m. The results of the morphological analysis are detailed in Table 5.

Table 5: Chipped Stone Debitage Analysis

Chert Type	Primary		Secondary		Thinning		Fragment		Total	
	n	%	n	%	n	%	n	%	n	%
Onondaga	0	0	1	17%	2	33%	3	50%	6	100%
Ancaster	0	0%	1	100%	0	0%	0	0%	1	100%

According to the morphological analysis presented above, half of the flakes recovered during the Stage 2 assessment of Site P2 (AfGs-146) were fragments (n=3). The remaining specimens comprised two thinning flakes (33%) and one secondary flake (17%). The variety of flake types within the Stage 2 assemblage suggests a broad range of lithic reduction activities were undertaken at the site. Additionally, two of the flakes showed evidence of surface burning. Given the small sample size, however, it is difficult to draw any useful conclusions regarding site function.

The use of Onondaga and Ancaster chert, meanwhile, indicates that the occupants of Site P2 were utilizing a variety of regionally available lithic materials. Outcrops of Onondaga chert are found along the north shore of Lake Erie between Long Point and the Niagara River, which is approximately 10km to the south of the site. Ancaster chert outcrops from the Lockport formation near Hamilton though secondary deposits can be found as far east as Grimsby, which is approximately 45km to the northwest of the site (Eley and von Bitter 1989).

3.2.1 Site P2 (AfGs-146) Artifact Catalogue

Table 4 provides a catalogue of the Stage 2 artifact assemblage recovered from Site P2. A sample of artifacts are depicted in Section 9.2 of this report.

Table 6: Site P2 Artifact Catalogue

Test Pit #	Cat #	Artifact	Freq.	Morphology	Chert Type	Notes
Find Spot 4	5	chipping detritus	1	fragment	Onondaga	
Find Spot 5	6	chipping detritus	1	tool-thinning	Onondaga	
Find Spot 5 Unit Excavation	7	chipping detritus	1	fragment	Onondaga	heat-treated
Find Spot 5 Unit Excavation	8	chipping detritus	1	secondary	Onondaga	pot-lids
Find Spot 5 Unit Excavation	9	chipping detritus	1	tool-thinning	Onondaga	
Find Spot 5 Unit Excavation	10	chipping detritus	1	fragment	Onondaga	equivocal
Find Spot 5 Unit Excavation	11	chipping detritus	1	secondary	Ancaster	

4.0 Analysis and Conclusions

Detritus was retained by the Proponent to conduct a Stage 1-2 archaeological assessment in advance of the proposed Black Creek Road Subdivision development in the community of Douglstown in the northeastern section of Fort Erie, Ontario (Figure 5). The proposed Black Creek Road Subdivision development (the 'Project Location') corresponds with the undeveloped property bounded by the QEW to the south, Black Creek Road to the east, Netherby Road to the west and Baker Road to the north (Figure 3). The current Study Area, identified as the Black Creek Capital South Addition, occurs in the approximate southern third of the Project Location.

The Stage 1 background research indicated that the entire Study Area exhibited moderate to high potential for the identification and recovery of archaeological resources. A Stage 2 field assessment was conducted on 9 July 2021 and 13 August 2021 consisted of a typical test pit survey of the undeveloped woodlot that was inaccessible for ploughing.

The Stage 2 field assessment resulted in the identification and documentation of two Aboriginal sites identified in the field as Site P1 and Site P2.

4.1 Site P1 (AfGs-147)

The Stage 2 assessment of Site P1 resulted in the documentation of four pieces of Onondaga chert debitage from three test pits and a test square in an area measuring 5m by 5m. Given the small sample size, however, it is difficult to draw any useful conclusions regarding site function. The exclusive use of Onondaga chert, meanwhile, indicates that site occupants were largely relying on a single source of raw material. Outcrops of Onondaga chert are found along the north shore of Lake Erie between Long Point and the Niagara River, which is approximately 10 kilometres ('km') to the south of the site.

Based on these results, Site P1 has been interpreted as a small activity area of unknown function, occupied by unspecified Aboriginal people during the pre-contact period.

4.2 Site P2 (AfGs-146)

The Stage 2 assessment of Site P2 resulted in the documentation of six pieces of Onondaga chert debitage and one piece of Ancaster chert debitage from two test pits and one test unit in an area measuring 5m by 5m. The variety of flakes types within the Stage 2 assemblage suggests that a broad range of lithic reduction activities were undertaken at the site. Given the small sample size, however, it is difficult to draw any useful conclusions regarding site function. The use of Onondaga and Ancaster chert, meanwhile, indicates that site occupants were relying on a range of regionally available sources of raw material. Outcrops of Onondaga chert are found along the north shore of Lake Erie between Long Point and the Niagara River, which is approximately 10km to the south of the site. Whereas Ancaster chert outcrops from the Lockport formation near Hamilton though secondary deposits can be found as far east as Grimsby, which is approximately 45km to the northwest of the site

Based on these results, Site P2 has been interpreted as a small activity area of unknown function, occupied by unspecified Aboriginal people during the pre-contact period.

4.3 Preliminary Indication of Sites Possibly Requiring Stage 4 Mitigation of Developmental Impacts

This preliminary indication of whether any site could be eventually recommended for Stage 4 a mitigation of impacts is required under the *Standards and Guidelines* Section 7.8.3 Standard 2c.

Site P1 is a small activity area of unknown function, occupied by unspecified Aboriginal people during the pre-contact period. Based on the results of the Stage 2 assessment, P1 does not meet the minimum requirements for a Stage 3 assessment (see Section 5.0 below).

Site P2 is a small activity area of unknown function, occupied by unspecified Aboriginal people during the pre-contact period. Based on the results of the Stage 2 assessment, Site P2 does meet the minimum requirements for Stage 3 assessment (see Section 5.0 below). Therefore, no firm recommendation for or against Stage 4 mitigation at Site P2 will be made until the forthcoming Stage 3 assessment of the site has been conducted.

5.0 Recommendations

Given the results of the Stage 2 assessment Site P1 (AfGs-147) has been interpreted as a small activity area of unknown function, occupied by unspecified Aboriginal people during the pre-contact period. Given the fact that the Stage 2 assessment only recovered four non-diagnostic artifacts within a 10m-by-10m test pit survey, the site does not meet the criteria for a Stage 3 assessment as per Section 2.2 Standard 1.a.ii(2) of the Standards and Guidelines (Government of Ontario 2011). Therefore, Site P1 retains no further CHVI and **a Stage 3 archaeological assessment is not recommended for Site P1 (AfGs-147).**

Given the results of the Stage 2 assessment, Site P2 (AfGs-146) has been interpreted as a small activity area of unknown function, occupied by unspecified Aboriginal people during the pre-contact period. Despite the non-diagnostic nature of the recovered artifacts, the Stage 2 assessment resulted in the documentation of at least five artifacts within a 10m-by-10m test pit survey. As a result, Site P2 (AfGs-146) fulfills the criteria for a Stage 3 assessment as per Section 2.2 Standard 1.a.ii(2) of the Standards and Guidelines (Government of Ontario 2011) and retains CHVI. To further evaluate the site's CHVI, **a Stage 3 archaeological assessment is recommended for Site P2 (AfGs-146).**

The Stage 3 archaeological assessments of P2 will be conducted according to Section 3.2.2 of the Standards and Guidelines (Government of Ontario 2011). Site P2 was documented during a test pit assessment, therefore no CSP is required at this site.

Given that it is not yet evident that the level of CHVI at Site P2 will result in a recommendation to proceed to Stage 4 (see Section 4.3), the Stage 3 assessments of the sites will consist of the hand excavation of 1m square test units every 5m in systematic levels and into the first five centimetres of subsoil as per Table 3.1, Standard 1 of the Standards and Guidelines (Government of Ontario 2011). Additional 1m test units, amounting to 20% of the grid total, will be placed in areas of interest within the site extent as per Table 3.1, Standard 2 of the Standards and Guidelines (Government of Ontario 2011). All excavated soil will be screened through six-millimetre mesh; all recovered artifacts will be recorded by their corresponding grid unit designation and collected for laboratory analysis. If a subsurface cultural feature is encountered, the plan of the exposed feature will be recorded and geotextile fabric will be placed over the unit before backfilling the unit.

Furthermore, if in the future the remainder of the development property that will be impacted by future development, then a Stage 1 archaeological assessment is required, conducted according to Section 1.1 of the Standards and Guidelines (Government of Ontario 2011). This investigation will assess the development area's potential for the recovery of archaeological resources and will provide specific direction for the protection, management and/or recovery of these resources, as per Sections 1.3 and 1.4 of the Standards and Guidelines (Government of Ontario 2011).

6.0 Advice on Compliance with Legislation

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries 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 Heritage, Sport, Tourism and Culture Industries, 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.

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 license.

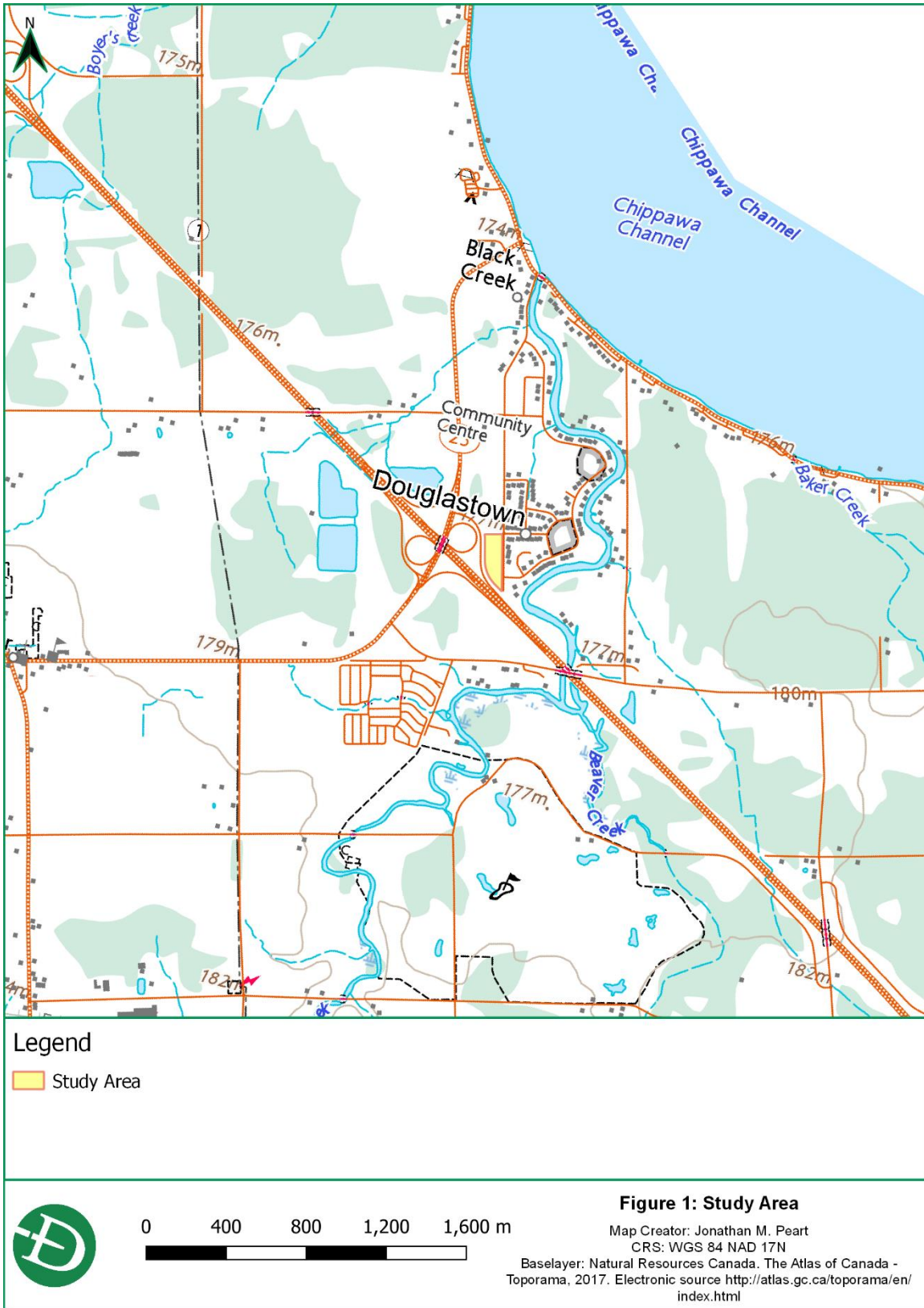
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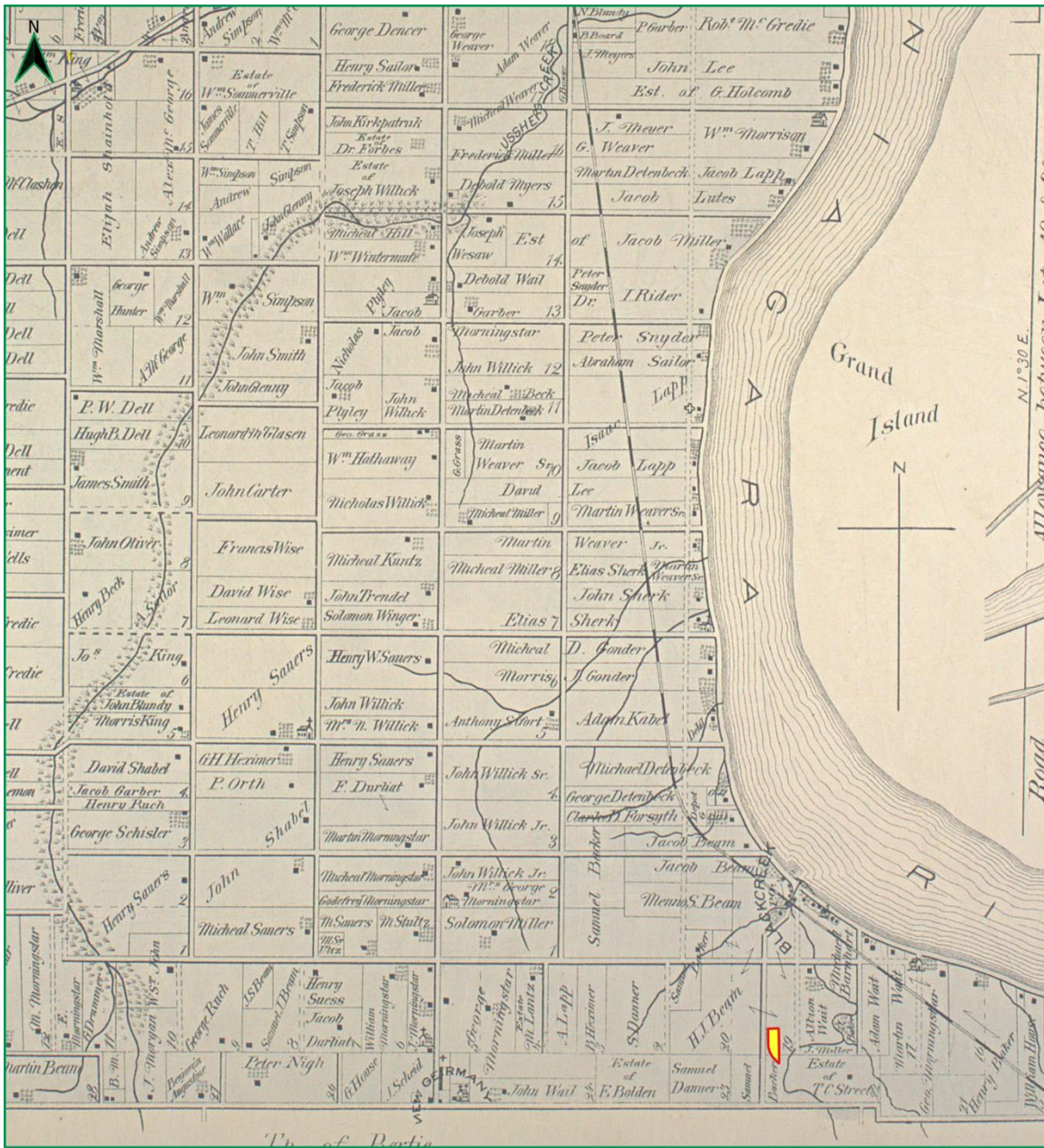
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8.0 Maps



Stage 1-2 Assessment, Black Creek Capital South Addition



Legend

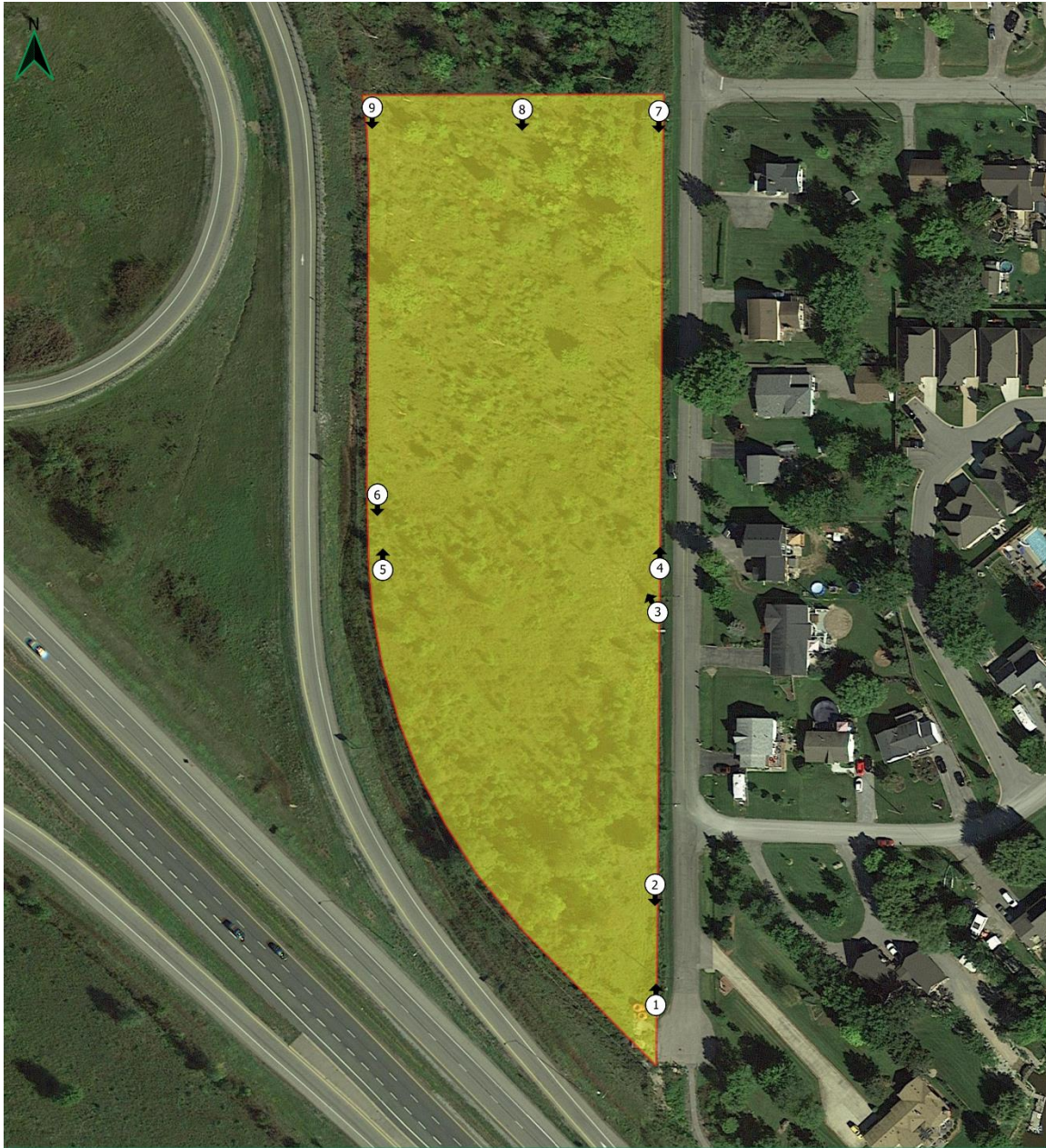
 Study Area



0 750 1,500 m

Figure 2: Portion of the 1876 Historical Atlas Map of Willoughby Township

Map Creator: Jonathan M. Peart
 CRS: WGS 84 NAD 17N
 Baselayer: Page, H.R. & Co. 1876. The Illustrated Historical Atlas of the Counties of Lincoln and Welland.



Legend

-  Photo Location and Direction
-  Test Pit Survey at 5m Intervals



Figure 3: Stage 2 Methodology

Map Creator: Jonathan M. Peart
CRS: WGS 84 NAD 17N
Baselayer: Google Satellite Imagery

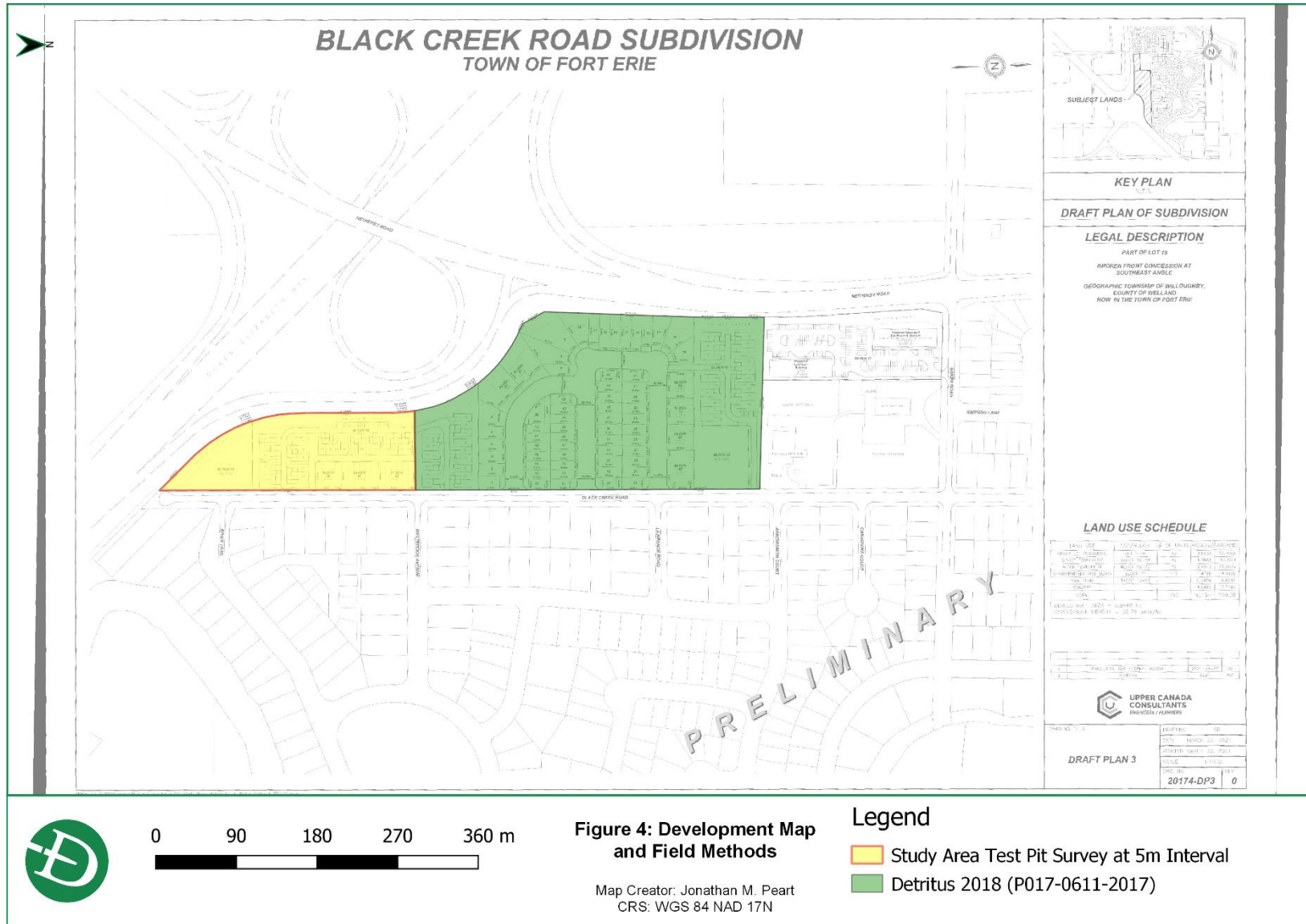
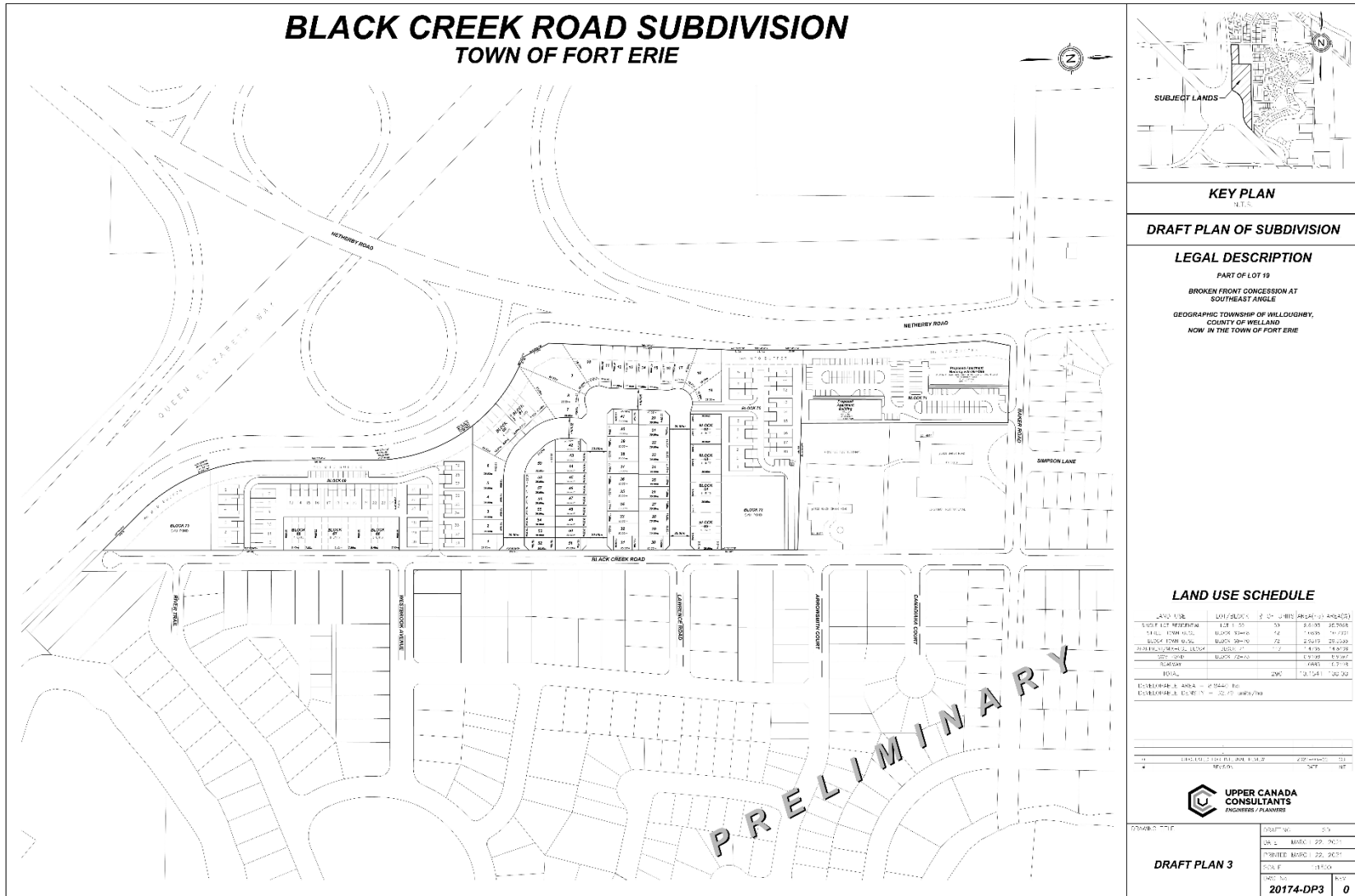


Figure 5: Development Map



9.0 Photos

9.1 Field Photos

Photo 1: Test Pit Survey at 5m Intervals, looking north



Photo 2: Test Pit Survey at 5m Intervals, looking south



Photo 3: Test Pit Survey at 5m Intervals, looking northwest



Photo 4: Test Pit Survey at 5m Intervals, looking north



Photo 5: Test Pit Survey at 5m Intervals, looking north



Photo 6: Test Pit Survey at 5m Intervals, looking south



Stage 1-2 Assessment, Black Creek Capital South Addition

Photo 7: Test Pit Survey at 5m Intervals, looking south



Photo 8: Study Area Overview, looking south



Photo 9: Study Area Overview, looking south



Photo 10: Test Pit Intensification Around Find Spot



Photo 11: Test Unit (1-x-1-m) Excavation



Photo 12: Typical Test Pit



Photo 13: Typical Test Pit



Photo 14: Disturbed Test Pit, southern end of Study Area



Photo 15: Ground Surface, note stumps and wood chips



Photo 16: Ground Surface, note stumps and wood chips



9.2 Artifact Photos

Plate 1: Site P1 Lithic Debitage; FS1 top left, FS2 top right, FS3 bottom row



Plate 2: Site P2 Lithic Debitage; FS4 top left, FS5 top right, Test Unit (over FS5) bottom row

