



1.0 PROJECT REPORT COVER PAGE

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P058

PROJECT INFORMATION:

Corporate Project Number:

19862

MHSTCI Project Number:

P058-1792-2019

Investigation Type:

Stage 1-2 Archaeological Property Assessment

Project Name:

Dorsay Property

Project Location:

1448 Lockhart Road,
Lot 20, Concession 11, (Geographic Township of
Innisfil, County of Simcoe), City of Barrie, County of
Simcoe

Project Designation Number:

Not Currently Available

MHSTCI FILING INFORMATION:

Site Record/Update Form(s):

J. Crispin I (BcGv-54), J. Crispin II (BcGv-55),
McDonald II (BcGv-56)

Date of Report Filing:

30 June 2020

Type of Report:

ORIGINAL

2.0 EXECUTIVE SUMMARY

This report describes the results of the 2019 Stage 1-2 Archaeological Assessment of 1448 Lockhart Road, Lot 20, Concession 11, (Geographic Township of Innisfil, County of Simcoe) City of Barrie, conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P058 issued to Michael Henry by the Minister of Heritage, Sport, Tourism and Culture Industries for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990) and the Provincial Policy Statement (2020) in order to support a Draft Plan of Subdivision and companion Zoning By-law Amendment application as part of the pre-submission process. Within the land use planning and development context, Ontario Regulation 544/06 under the Planning Act (1990b) requires an evaluation of archaeological potential and, where applicable, an archaeological assessment report completed by an archaeologist licensed by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI). Policy 2.6 of the Provincial Policy Statement (PPS 2020) addresses archaeological resources. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment high intensity test pit methodology at five-metre intervals, and by high intensity pedestrian survey at an interval of five metres between individual transects, an intensified test pit survey at two-and-a-half (2.5) metre intervals, and an intensified pedestrian survey at one-metre intervals on 24 September, October 7-10, 14-18, 21-22, 29 2019 and May 19 2020. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) on behalf of the government and citizens of Ontario.

All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) on behalf of the government and citizens of Ontario.

STAGE 2 RECOMMENDATIONS:

As a result of the property Assessment of the study area, two scatters of historic artifacts, the J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site were found. A small scatter of First Nations artifacts were also found at the McDonald II (BcGv-56) Site. Based on the characteristics of these sites and the analysis of artifacts, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site, have not been completely documented. There is potential for further CHVI at these locations. The McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site require Stage 3 Site-specific Assessment to gather further data to determine if Stage 4 Mitigation of Development Impacts will be required.*
2. *A Stage 3 Site-specific assessment of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site must be completed for these sites in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). The Stage 3 Site-specific assessment at each location will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner, with a 20% infill based on high counts of artifacts or presence of features. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6-millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) on behalf of the government and citizens of Ontario.*
3. *The Stage 3 Site-specific Assessment of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*
4. *A CSP and intensified pedestrian survey have been completed at the J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site as part of the Stage 2 Property Assessment and are not required as part of the Stage 3 Site-specific Assessment of the J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site as these components of the Stage 3 requirements are already satisfied. An intensified test pit survey has been completed at the McDonald II (BcGv-56) Site as part of the Stage 2 Property Assessment and is not required as part of the Stage 3 Site-specific Assessment of the McDonald II (BcGv-56) Site as these components of the Stage 3 requirements are already satisfied.*
5. *No soil disturbances or removal of vegetation shall take place within the archaeological sites identified as McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site within this Stage 1-2 Archaeological Assessment report, or within the area enclosed within a 20 metre buffer surrounding the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site prior to the acceptance of the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) of a report recommending that all archaeological concerns for the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site have been addressed and that there is no further cultural heritage value or interest for these sites.*
6. *Prior to pre-grading, servicing or registration, the owner shall erect and maintain a temporary high visibility construction fence to be maintained through the course of all construction activities at a 20 metre buffer around the archaeological site identified as the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J.*

- Crispin II (BcGv-55) Site within this Stage 1-2 Archaeological Assessment report to ensure that construction activities do not impinge upon the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site unless under the direct supervision of a consulting archaeologist licensed in Ontario by the Minister of Heritage, Sport, Tourism and Culture Industries and as a part of the ongoing archaeological investigations of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site.*
- 7. The high visibility fence will be installed at the outer limit of the 20 metre wide Protective Buffer surrounding the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site as illustrated in the accompanying mapping within the Supplementary Report Package of this report filed with MHSTCI prior to the commencement of any development activity anywhere within the proposed development.*
 - 8. A Fifty (50) metre wide Monitoring Buffer shall be observed surrounding the above-noted 20 metre wide Protective Buffer. Within the 50 metre Monitoring Buffer no ground altering works (including removal of vegetation or demolition of existing features) may be conducted unless under the direct supervision of a licensed archaeologist.*
 - 9. The licenced archaeologist supervising any work conducted within the 50 metre wide Monitoring Buffer has the authority to order a halt to any activity which in his or her view may result in adverse impacts to archaeological resources.*
 - 10. The 50 metre wide Monitoring Buffer will remain in effect until such time that the Stage 3 Site-specific Assessment report for the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site identified within this Stage 1-2 Archaeological Assessment report is accepted into the Provincial Registry of Archaeological Reports by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries.*
 - 11. Written instructions will be provided to all persons permitted to enter the property to stay out of the area of the 20 metre wide Protective Buffer unless permitted to enter the area accompanied by a licenced archaeologist.*
 - 12. Written instructions will be provided to all persons permitted to enter the property for the purposes of undertaking work associated with the development that no work is permitted to occur within the 50 metre wide Monitoring Buffer unless under direct supervision of a licenced archaeologist.*
 - 13. Written instructions will be provided to all persons permitted to conduct work within the 50 metre wide Monitoring Buffers that the licenced archaeologist has the authority to order a halt to any work that he or she feels may adversely impact archaeological resources.*
 - 14. The proponent must provide a letter on letterhead to MHSTCI itemizing all of the above conditions and committing to ensure that all of these recommendations are implemented. This letter must be submitted together with this report at the time of filing with MHSTCI.*
 - 15. It is recommended that the balance of the study area outside of the site areas and surrounding Protective Buffer be cleared of archaeological concern.*

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4.0 PROJECT PERSONNEL

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5.0 PROJECT CONTEXT

5.1 DEVELOPMENT CONTEXT

This report describes the results of the 2019 Stage 1-2 Archaeological Assessment of 1448 Lockhart Road, Lot 20, Concession 11, (Geographic Township of Innisfil, County of Simcoe) City of Barrie, conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P058 issued to Michael Henry by the Minister of Heritage, Sport, Tourism and Culture Industries for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990) and the Provincial Policy Statement (2020) in order to support a Draft Plan of Subdivision and companion Zoning By-law Amendment application as part of the pre-submission process. Within the land use planning and development context, Ontario Regulation 544/06 under the Planning Act (1990b) requires an evaluation of archaeological potential and, where applicable, an archaeological assessment report completed by an archaeologist licensed by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI). Policy 2.6 of the Provincial Policy Statement (PPS 2020) addresses archaeological resources. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment high intensity test pit methodology at five-metre intervals, and by high intensity pedestrian survey at an interval of five metres between individual transects, an intensified test pit survey at two-and-a-half (2.5) metre intervals, and an intensified pedestrian survey at one-metre intervals on 24 September, October 7-10, 14-18, 21-22, 29 2019 and May 19 2020. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) on behalf of the government and citizens of Ontario.

The proposed development of the study area includes a low-density residential area, park, storm water ponds and pumping station, medium density blocks, open space areas, and a natural heritage system. A preliminary plan of the proposed development has been submitted together with this report to MHSTCI for review and reproduced within this report as Map 3.

5.2 HISTORICAL CONTEXT

5.2.1 PRE-CONTACT LAND-USE OUTLINE

What follows is an outline of Aboriginal occupation in the area during the Pre-Contact Era from the earliest known period, about 9000 B.C. up to approximately 1650 AD. A larger regional synthesis of archaeological data that would include much of Simcoe County has not been undertaken at the time this report was completed (Ellis and Deller, 1990).

5.2.1.1 PALAEO-INDIAN PERIOD (APPROXIMATELY 9000-7500 B.C.)

North of Lake Ontario, evidence suggests that early occupation began around 9000 B.C. People probably began to move into this area as the glaciers retreated and glacial lake levels began to recede. The early occupation of the area probably occurred in conjunction with environmental conditions that would be comparable to modern Sub-Arctic conditions. Due to the great antiquity of these sites, and the relatively small populations likely involved, evidence of these early inhabitants is sparse and generally limited to tools produced from stone or to by-products of the manufacture of these implements. Some sites of this earliest period of First Nations occupation of Simcoe County have been documented to the south and to the west of Kempenfelt Bay.

5.2.1.2 ARCHAIC PERIOD (APPROXIMATELY 8000-1000 B.C.)

By about 8000 B.C. the gradual transition from a postglacial tundra-like environment to an essentially modern environment was largely complete. Prior to European clearance of the landscape for timber and cultivation, the area was characterized by forest. The Archaic Period is the longest and the most apparently stable of the cultural periods identified through archaeology. The Archaic Period is divided into the Early, Middle and Late Sub-Periods, each represented by specific styles in projectile point manufacture. Many more sites of this period are found throughout Ontario, than of the Palaeo-Indian Period. This is probably a reflection of two factors: the longer period of time reflected in these sites, and a greater population density. The greater population was likely the result of a more diversified subsistence strategy carried out in an environment offering a greater variety of abundant resources. (Smith 2002:58-59)

Current interpretations suggest that the Archaic Period populations followed a seasonal cycle of resource exploitation. Although similar in concept to the practices speculated for the big game hunters of the Palaeo-Indian Period, the Archaic populations utilized a much broader range of resources, particularly with respect to plants. It is suggested that in the spring and early summer, bands would gather at the mouths of rivers and at rapids to take advantage of fish spawning runs. Later in the summer and into the fall season, smaller groups would move to areas of wetlands to harvest nuts and wild rice. During the winter, they would break into yet smaller groups probably based on the nuclear family and perhaps some additional relatives to move into the interior for hunting. The result of such practices would be to create a distribution of sites across much of the landscape. (Smith 2002: 59-60).

The material culture of this period is much more extensive than that of the Palaeo-Indians. Stylistic changes between Sub-Periods and cultural groups are apparent, although the overall

quality in production of chipped lithic tools seems to decline. This period sees the introduction of ground stone technology in the form of celts (axes and adzes), manos and metates for grinding nuts and fibres, and decorative items like gorgets, pendants, birdstones, and bannerstones. Bone tools are also evident from this time period. Their presence may be a result of better preservation from these more recent sites rather than a lack of such items in earlier occupations. In addition, copper and exotic chert types appear during the period and are indicative of extensive trading (Smith 2002: 58-59).

Three First Nations trails known as the Rouge Trail, the Don Trail, and the Humber Trail began on the north shore of Lake Ontario in the Toronto area and terminated on the two branches of the Holland River (Myers 1977: 2). These trails form part of a long established trade and communications network that linked the upper and lower Great Lakes. The route followed the Holland River into the southern end of Lake Simcoe. Also, the route followed the western shore of Lake Simcoe northward to Kempenfelt Bay, and then westward to the end of the bay. A portage was then undertaken to the Nottawasaga River and this river was followed into Nottawasaga Bay at the present location of the Town of Wasaga Beach. This network of trade and communication had been long established by the time Europeans began to operate in the area. The presence of artifacts dating to the Early Archaic Period in close proximity to the upper and lower landings on the Holland River east branch suggests that the use of this system most likely dates back to at least that period.

5.2.1.3 WOODLAND PERIOD (APPROXIMATELY 1000 B.C.-1650 A.D.)

The primary difference in archaeological assemblages that differentiates the beginning of the Woodland Period from the Archaic Period is the introduction of ceramics to Ontario populations. This division is probably not a reflection of any substantive cultural changes, as the earliest sites of this period seem to be in all other respects a continuation of the Archaic mode of life with ceramics added as a novel technology. The seasonally based system of resource exploitation and associated population mobility persists for at least 1500 years into the Woodland Period. (Smith 2002: 61-62)

The Early Woodland Sub-Period dates from about 1000-400 B.C. Many of the artifacts from this time are similar to the late Archaic and suggest a direct cultural continuity between these two temporal divisions. The introduction of pottery represents an entirely new technology that was probably acquired through contact with more southerly populations from which it likely originates. (Smith 2002:62)

The Middle Woodland Sub-Period dates from about 400 B.C.-800 A.D. Within the region including the study area, a complex emerged at this time termed "Point Peninsula". Point Peninsula pottery reflects a greater sophistication in pottery manufacture compared with the earlier industry. The paste and temper of the new pottery is finer and new decorative techniques such as dentate and pseudo-scallop stamping appear. There is a noted Hopewellian influence in southern Ontario populations at this time. Hopewell influences from south of the Great Lakes include a widespread trade in exotic materials and the presence of distinct Hopewell style artifacts such as platform pipes, copper or silver panpipe covers and shark's teeth. The populations of the Middle Woodland participated in a trade network that extended well beyond the Great Lakes Region.

The Late Woodland Sub-Period dates from about 500-1650 A.D. The Late Woodland includes four separate phases: Princess Point, Early Ontario Iroquoian, Middle Ontario Iroquoian and Late Ontario Iroquoian.

The Princess Point phase dates to approximately 500-1000 A.D. Pottery of this phase is distinguished from earlier technology in that it is produced by the paddle method instead of coil and the decoration is characterized by the cord wrapped stick technique. Ceramic smoking pipes appear at this time in noticeable quantities. Princess Point sites cluster along major stream valleys and wetland areas. Maize cultivation is introduced by these people to Ontario. These people were not fully committed to horticulture and seemed to be experimenting with maize production. They generally adhere to the seasonal pattern of occupation practiced by earlier occupations, perhaps staying at certain locales repeatedly and for a larger portion of each year (Smith 2002: 65-66)

The Early Ontario Iroquoian stage dates to approximately 950-1050 A.D. This stage marks the beginning of a cultural development that led to the historically documented Ontario Iroquoian groups that were first contacted by Europeans during the early 1600s (Petun, Neutral, and Huron). At this stage formal semi-sedentary villages emerge. The Early stage of this cultural development is divided into two cultural groups in southern Ontario. The areas occupied by each being roughly divided by the Niagara Escarpment. To the west were located the Glen Meyer populations, and to the east were situated the Pickering people (Smith 2002: 67).

The Middle Ontario Iroquoian stage dates to approximately 1300-1400 A.D. This stage is divided into two sub-stages. The first is the Uren sub-stage lasting from approximately 1300-1350 A.D. The second of the two sub-stages is known as the Middleport sub-stage lasting from roughly 1350-1400 A.D. Villages tend to be larger throughout this stage than formerly (Smith 2002: 67).

The Late Ontario Iroquoian stage dates to approximately 1400-1650 A.D. During this time the cultural divisions identified by early European explorers are under development and the geographic distribution of these groups within southern Ontario begins to be defined. During this period the Huron and Petun become established in their respective homelands familiar to early explorers, traders and missionaries.

In the seventeenth century Simcoe County was home to the Huron. With the arrival of French priests and Jesuits, missions were established near Nottawasaga Bay. After the destruction of the missions by the Iroquois and the British, Algonquin speaking peoples occupied the area. After the war of 1812, the government began to invest in the military defences of Upper Canada, through the extension of Simcoe's Yonge Street from Lake Simcoe to Penetanguishene on Nottawasaga Bay (Garbutt 2010).

5.2.2 GENERAL HISTORICAL OUTLINE

The township of Innisfil originally included Allendale, Tollendal, Painswick, Minets Point and Holly. The township was incorporated in 1850. The first settlers were the Hewson Family who settled on what was called Hewson's Point and was later renamed Big Bay Point in March of 1820. George McMullan of Tollendal built the first sawmill in 1823. In 1825 due

to the steadily increasing number of settlers, it became important to have accessible roadways; this led to the clearing of brush between Barrie and Churchville. This became an overland route known as the Penetanguishene Road, which later became Hwy 11, and is now known as Yonge Street (Lemon 1951).

The development of Innisfil Township relied heavily upon settlers clearing purchased land and establishing self-sustaining farms. As the population increased, so did the amount of services (post office, schools and church) available to settlers. The township even had its own form of local government; commissioners were appointed by the provincial legislature who would oversee the political issues of the community. By 1835, there was a strong need for a gristmill, which was a direct result of the progress of the agricultural community. In 1853, the Allandale train station began operating which fuelled the continuing growth of the community. By the late 1800's the township began to lose land to the more rapidly growing urban area nearby. In 1891 500 acres were annexed to the Village of Allandale, which was soon swallowed up by the growth of Barrie. The City of Barrie annexed an additional 500 acres from Innisfil in 1897 (Lemon 1951).

In Smith's Canadian Gazetteer (1846), it is said of Barrie that it was first settled in 1832 and had 28 families resident there by 1837. In 1843, the District of Simcoe was created and Barrie named as the seat of the District government. By 1846, the population of Barrie was estimated to be approximately 500 persons of predominantly English, Irish and Scotch origins. Barrie had three churches by 1846: two Methodist and one Episcopal. In addition, an excellent private school had been established, as had a mechanics' institute and a cricket club. The professions of Barrie included one physician, one lawyer, six stores, three tanneries, one surveyor, three taverns, four blacksmiths, one wagon maker, one baker, one saddler, one cabinet maker, one watchmaker, six shoemakers, three tailors, two butchers, and one Bank of Upper Canada branch (Smith 1846: 9).

Map 2 is a facsimile segment from *Illustrated Atlas of the Dominion of Canada* (H. Belden 1881). Map 2 illustrates the location of the study area and environs as of 1881. The study area is shown to belong to J. Crispin; one structure is shown to be within the study area. This demonstrates that the original property of which the study area is a part was settled by the time that the atlas data was compiled. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-Contact settlement within the study area. In addition, this map illustrates an unnamed stream channel flowing through the northern section of the property and settlement roads are depicted as adjacent to the study area to the north, south, and east. These roads are the current Maplevue Drive (north), Lockhart Road (south), and 20th Sideroad (east).

It must be borne in mind that inclusion of names of property owners and depictions of structures and other features within properties on these maps were sold by subscription. Property owners paid to include information or details about their properties. While information included within these maps may provide information about the occupation of a property at a specific moment in time when the information was collected, the absence of such information does not necessarily indicate that the property was not occupied.

5.2.3 CURRENT CONDITIONS

The present use of the study area is actively farmed agricultural land. The study area is roughly 80.38 hectares in area. The study area includes within it mostly ploughable lands (approximately 60% of the study area), wood lot (approximately 20% of the study area), and overgrown lawn (5% of the study area), and meadow (approximately 15%). There are two streams that flow through the property one is located in the north end of the study area from west to east and it wraps around to the centre of the property, and the second is located centrally in the study area that flows from west to east. A woodlot is located in the centre of the property. The study area is bounded on the north by Maplevue Drive, on the east by the 20th Sideroad, on the west by farmland and on the south by Lockhart Road. The study area is directly between Lockhart Road and Maplevue Drive, both intersect with the 20th Sideroad. A plan of the study area is included within this report as Map 3. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Maps 4 & 5.

5.2.4 SUMMARY OF HISTORICAL CONTEXT

The brief overview of readily available documentary evidence indicates that the study area is situated within an area that was close to historic transportation routes and in an area well populated during the nineteenth century and therefore has potential for sites relating to early Post-Contact settlement in the region. Background research indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of potable water and previously documented sites.

5.3 ARCHAEOLOGICAL CONTEXT

The Archaeological Sites Database administered by the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) indicates that there are seven (7) previously documented sites within 1 kilometre of the study area. However, it must be noted that this is based on the assumption of the accuracy of information compiled from numerous researchers using different methodologies over many years. AMICK Consultants Limited assumes no responsibility for the accuracy of site descriptions, interpretations such as cultural affiliation, or location information derived from the Archaeological Sites Database administered by MHSTCI. In addition, it must also be noted that a lack of formerly documented sites does not indicate that there are no sites present as the documentation of any archaeological site is contingent upon prior research having been conducted within the study area.

Background research shows that three (3) previous studies have taken place within 50m of the study area. For further information see:

AMICK Consultants Limited. (2016). *Stage 3 Site-specific Assessment of the McDonald Site (BcGv-11), Part of Lot 20, Concession 12 (Geographic Township of Innisfil, County of Simcoe), City of Barrie, Simcoe County*. Archaeological License Report on File With the Ministry of Heritage, Sport, Tourism and Culture Industries, Toronto, Ontario.

Data contained in previous archaeological reports in close proximity to the study area that is relevant to Stage 1 Background Study is defined within the Standards and Guidelines for Consultant Archaeologists in Section 7.5.8 Standard 4 as follows:

“Provide descriptions of previous archaeological fieldwork carried out within the limits of, or immediately adjacent to the project area, as documented by all available reports that include archaeological fieldwork carried out on the lands to be impacted by this project, or where reports document archaeological sites immediately adjacent (i.e., within 50 m) to those lands.”

(MTCS 2011: 126 Emphasis Added)

In accordance with data supplied by MHSTCI for the purposes of completing this study, there are no previous reports detailing, “archaeological fieldwork carried out on the lands to be impacted by this project”, however there are two (2) previous reports documenting known archaeological sites within 50 metres of the study area. These sites include BcGv-42, BcGv-41, and BcGv-11.

The Standards and Guidelines for Consultant Archaeologists stipulates that the necessity to summarize the results of previous archaeological assessment reports, or to cite MHSTCI File Numbers in references to other archaeological reports, is reserved for reports that are directly relevant to the fieldwork and recommendations for the study area (S & Gs 7.5.7, Standard 2, MTC 2011: 125). This is further refined and elaborated upon in Section 7.5.8, Standards 4 & 5, MTC 2011:

“4. Provide descriptions of previous archaeological fieldwork carried out within the limits of, or immediately adjacent to the project area, as documented by all available reports that include archaeological fieldwork carried out on the lands to be impacted by this project, or where reports document archaeological sites immediately adjacent (i.e., within 50m) to those lands.”

“5. If previous findings and recommendations are relevant to the current stage of work, provide the following:

- a. *a brief summary of previous findings and recommendations*
- b. *documentation of any differences in the current work from the previously recommended work*
- c. *rationale for the differences from the previously recommended work”*
(Emphasis Added)

The above-noted reports do have relevance to the lands to be potentially impacted by the proposed undertaking and do document sites within 50 metres of the study area. Therefore, there is a requirement to include any summary data for the previous reports.

The study area is situated in area for which there is a recently developed archaeological master plan. The *County of Simcoe Archaeological Management Plan* final draft was submitted to the County of Simcoe Planning Department in October 2019. A facsimile segment of the composite potential map (First Nations and Historical Potential combined) produced as a part of that study has been reproduced within this report as Map 6 and illustrated the study area on this plan. This map indicates that the study area is in a zone of potential for historic and First Nations sites based on proximity to a secondary water source, historic transportation routes, and previously documented Archaeological Sites (The County of Simcoe 2019). Although not evident on the Archaeological Potential Map, there are two

unnamed streams that flow west to east throughout the property. One is located in the north and the other centrally. Maps 4 & 5 show the locations of these features.

It must be further noted that there are no relevant plaques associated with the study area, which would suggest an activity or occupation within, or in close proximity to, the study area that may indicate potential for associated archaeological resources of significant CHVI.

In addition, archaeological sites data is also used to determine if any archaeological resources had been formerly documented within or in close proximity to the study area and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to establish the relative significance of any resources that might be encountered during the conduct of the present study. For example, the relative rarity of a site can be used to assign an elevated level of significance to a site that is atypical for the immediate vicinity. The requisite archaeological sites data of previously registered archaeological sites was collected from the MHSTCI and the corporate research library of AMICK Consultants Limited. The Stage 1 Background Research methodology also includes a review of the most detailed available topographic maps, historical settlement maps, archaeological management plans (where applicable) and commemorative plaques or monuments. When previous archaeological research documents lands to be impacted by the proposed undertaking or archaeological sites within 50 metres of the study area, the reports documenting this earlier work are reviewed for pertinent information. AMICK Consultants Limited will often modify this basic methodology based on professional judgment to include additional research (such as, local historical works or documents and knowledgeable informants).

5.3.1 PRE-CONTACT REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result it was determined that two (2) archaeological sites relating directly to Pre-Contact habitation/activity had been formally registered within the immediate vicinity of the study area. However, the lack of formally documented archaeological sites does not mean that Pre-Contact people did not use the area; it more likely reflects a lack of systematic archaeological research in the immediate vicinity. Even in cases where one or more assessments may have been conducted in close proximity to a proposed landscape alteration, an extensive area of physical archaeological assessment coverage is required throughout the region to produce a representative sample of all potentially available archaeological data in order to provide any meaningful evidence to construct a pattern of land use and settlement in the past. All previously registered Pre-Contact sites are briefly described below in Table 1:

TABLE 1 PRE-CONTACT SITES WITHIN 1KM

Site Name	Borden #	Site Type	Cultural Affiliation
Webb	BcGv-8	Village	Woodland
McDonald	BcGv-11	Village	Woodland

One of the above noted archaeological sites (BcGv-11) is situated within 300 metres of the study area. Therefore, it demonstrates archaeological potential for further archaeological

resources related to Pre-Contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

The study area contains two unnamed streams that flow west to east through the study area. The distance to water criteria used to establish potential for archaeological sites suggests potential for Pre-Contact occupation and land use in the area in the past.

Table 2 illustrates the chronological development of cultures within southern Ontario prior to the arrival of European cultures to the area at the beginning of the 17th century. This general cultural outline is based on archaeological data and represents a synthesis and summary of research over a long period of time. It is necessarily generalizing and is not necessarily representative of the point of view of all researchers or stakeholders. It is offered here as a rough guideline and as a very broad outline to illustrate the relationships of broad cultural groups and time periods.

TABLE 2 PRE-CONTACT CULTURAL CHRONOLOGY FOR SOUTHERN ONTARIO

Years ago	Period	Southern Ontario
250	Terminal Woodland	Ontario and St. Lawrence Iroquois Cultures
1000 2000	Initial Woodland	Princess Point, Saugeen, Point Peninsula, and Meadowood Cultures
3000 4000 5000 6000	Archaic	Laurentian Culture
7000 8000 9000 10000 11000	Palaeo-Indian	Plano and Clovis Cultures
		(Wright 1972)

5.3.2 POST-CONTACT REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MHSTCI. As a result it was determined that are five (5) archaeological sites relating directly to Post-Contact habitation/activity had been formally registered within the immediate vicinity of the study area. All previously registered Post-Contact sites are briefly described below in Table 3:

TABLE 3 POST-CONTACT SITES WITHIN 1KM

Site Name	Borden #	Site Type	Cultural Affiliation
J. Pratt	BcGv-51	Farmstead	Euro-Canadian
N/A	BcGv-43	Farmstead	Post-Contact
Bulut South P059-0683-2015	BcGv-42	Midden	Post-Contact
Bulut North	BcGv-41	Midden	Post-Contact
Innis-Shore 1	BcGv-29	Homestead	Euro-Canadian

Three of the above noted archaeological sites (BcGv-43, BcGv-42 and BcGv-41) are situated within 300 metres of the study area. Therefore, they demonstrate archaeological potential for further archaeological resources related to Post-Contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

5.3.3 PREVIOUS INVESTIGATIONS

AMICK Consultants Ltd. in 2016 completed a Stage 3 Site-specific Assessment on lands within 50 metres of the study area. During this assessment, the McDonald Site (BcGv-11) was excavated and Stage 4 Mitigation through excavation, avoidance and protection, or a combination of both was recommended. Below is the executive summary of the assessment and the resulting recommendations:

This report describes the results of the 2016 Stage 3 Site-specific Assessment of the McDonald Site (BcGv-11) within Part of Lot 20, Concession 12 (Geographic Township of Innisfil, County of Simcoe) City of Barrie, Simcoe County, conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P1024 issued to Sarah MacKinnon by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken in accordance with Conditions of Consent under the Planning Act (RSO 1990b) as approved by the Ontario Municipal Board on 24 August 2007 in Decision No. 2389. The work was completed as a requirement under the Planning Act (RSO 1990b) and the Provincial Policy Statement (2014) in order to support a revised draft plan and zoning application as part of the planning approval process. Within the land use planning and development context, Ontario Regulation 544/06 under the Planning Act (1990b) requires an evaluation of archaeological potential and, where applicable, an archaeological assessment report completed by an archaeologist licensed by the Ministry of Tourism, Culture and Sport (MTCS). Policy 2.6 of the Provincial Policy Statement (PPS 2014) addresses archaeological resources. All work was conducted in conformity with Ontario Ministry of Tourism and Culture (MTC) Standards and Guidelines for Consultant Archaeologists (MTC 2011), the Ontario Heritage Act (RSO 1990a).

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 3 Site-specific assessment (P1024-0128-2016) at the McDonald Site (BcGv-11) and was granted permission to carry out archaeological work, remove artifacts and collect data relevant to the completion of the study on 30 July 2015. The Stage 3 Site-specific Assessment of the McDonald Site (BcGv-11) was carried out on 19, 25-28 April, 2-6, 9-13, 16-19, 24-27, 30-31 May, 1-2, 6-9, 13-16, 20-23, 28-29 June, 4-8, 11, 25 July, and 4 August 2016. The Stage 3 Site-specific Assessment of the McDonald Site (BcGv-11) consisted of the excavation of five hundred and thirty-eight (538) one-metre test excavation units and forty-two trenches measuring approximately one metre wide by roughly 20 metres in length. The Stage 3 investigations indicate that the McDonald Site (BcGv-11) site is a pre-contact First Nations site dating to the Late Woodland Period.

The Stage 3 Site-specific Assessment of the McDonald Site (BcGv-11) has determined that the site is significant and will therefore require Stage 4 Mitigation through excavation, avoidance and protection, or a combination of both. It is understood by the proponent that preservation and protection of significant archaeological deposits is always the preferred option. Although preservation and protection is the preferred outcome and all participants in this process agree with the desirability of this outcome, it is not feasible within the context of the proposed undertaking. A detailed list of constraints to preservation and protection of the site area are presented within Section 8.0 Analysis and Conclusions.

As part of this study, the relevant First Nations including the Huron-Wendat First Nation and the Williams Treaty First Nations, as historically and culturally affiliated peoples, were contacted to provide input into the ongoing site management strategy for the McDonald Site (BcGv-11). In addition to cultural historical connections to the former occupants of the site under consideration, the Williams Treaty First Nations are also the Treaty Holding First Nations for the wider geographic area in which the site is situated. The recommendations included within this report represent a collaborative effort on the part of all parties to ensure an appropriate strategy is devised to address any remaining concerns for this significant archaeological resource.

The following recommendations are the result of input from the proponent, the technical requirements stipulated within Section 4 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011), and input from a process of Aboriginal Engagement with representatives of the Williams Treaty and Huron-Wendat First Nations and in accordance with Section 4 of the Standard and Guidelines for Consulting Archaeologists (2011).

- 1. No soil disturbances or removal of trees shall take place within any part of the archaeological site identified as the McDonald Site (BcGv-11), or within the site area enclosed within a 20 metre buffer surrounding the McDonald Site (BcGv-11) prior to the acceptance of the Ministry of Tourism, Culture and Sport (MTCS) of a report detailing the conduct and findings of Stage 4 Mitigation of Development Impacts through Excavation;*
- 2. Prior to pre-grading, servicing or registration, the owner shall erect and maintain a temporary high visibility construction fence to be maintained through the course of all construction activities at a 20 metre buffer around the archaeological site identified as the McDonald Site (BcGv-11) within this report to ensure that construction activities do not impinge upon the McDonald Site (BcGv-11)*
- 3. Under no circumstances is any heavy equipment permitted to enter within the 20 metre protective boundary unless under the direct supervision of an archaeologist licensed in Ontario by the Minister of Tourism, Culture and Sport and as a part of the ongoing archaeological investigations of that site.*

4. *Written instructions will be provided to all persons permitted to enter the property to stay out of the area of the 20 metre wide Protective Buffer unless permitted to enter the area accompanied by a licenced archaeologist.*
5. *The proponent must provide a letter on letterhead to MTCS itemizing all of the above conditions and committing to ensure that all of these recommendations are implemented. This letter must be submitted together with this report at the time of filing with MTCS.*
6. *It is recommended that the balance of the study area subject to Stage 2 Property Assessment outside of the site area of the McDonald Site (BcGv-11) and the surrounding 20 metre Protective Buffer be cleared of archaeological concern and that development activity be permitted to proceed, subject to the above provisions.*

(AMICK Consultants Ltd. 2016: 1-3)

This Land Archaeology Inc. in 2015 completed a Stage 2 Archaeological Assessment on lands within 50 metres of the study area. During this assessment, Bulut North (BcGv-41) and Bulut South (BcGv-42) were discovered and no further work was recommended due to lack of CHVI. Below is the executive summary of the assessment and the resulting recommendations:

This Land Archaeology Inc. (TLA) was contracted by 1091369 Ontario Inc. to undertake the Stage 2 Archaeological Assessment on their property, part of Lot 18, Concession 11, City of Barrie, County of Simcoe, Ontario.

The Stage 1 study was previously carried out in 2011 by The Central Archaeology Group Inc. The Stage 1 assessment provided background information on the property's geography, history, previous archaeological fieldwork, and current land conditions. This background information indicated high Aboriginal and Euro-Canadian archaeological potential. As such, a Stage 2 Archaeological Assessment of the property was required. The Stage 1 report is filed with the Ministry of Tourism, Culture and Sport under PIF No. P272-191-2011.

The Stage 2 assessment comprised 39.8 hectares of property as recommended at the conclusion of the Stage 1 report (P272-191-2011). The assessment involved a visual survey of 36.6 hectares of land and the test pit assessment of 3.1 hectares of land that could not be ploughed and visually surveyed. Areas of the property that were assessed as holding no potential totaled 0.1 hectares or 0.2% of the property including driveways (0.03 hectares; 0.1% of the property); and demolished farm and out buildings (0.05 hectares; 0.1% of the property).

The Stage 2 visual assessment in the south eastern portion of the study area resulted in the discovery of two sites. The first, Bulut North Site (BcGv-41) produced a total of 382 Euro-Canadian artifacts; the second, Bulut South Site (BcGv-42) produced 599 Euro-Canadian artifacts. Both sites were interpreted to be late 19th to early 20th century one-time garbage disposal areas due to the lack of architectural artifacts found and the high numbers of machine-made bottle glass.

The Bulut North Site (BcGv-41) and the Bulut South Site (BcGv-42) have been sufficiently documented through the Stage 2 archaeological assessment. As such, no further work is recommended and there are no further archaeological concerns associated with the study area.

It is recommended that this report be entered into the Ontario Public Register of Archaeological Reports and a letter of confirmation be issued by the Ministry of Tourism, Culture and Sport supporting these recommendations using an expedited review to meet the development schedule.

(This Land Archaeology Inc. 2015: iii)

5.3.4 LOCATION AND CURRENT CONDITIONS

The study area is described as 1448 Lockhart Road, Lot 20, Concession 11, (Geographic Township of Innisfil, County of Simcoe) City of Barrie, County of Simcoe. The study area was subject to this assessment as a requirement under the Planning Act (RSO 1990) and the Provincial Policy Statement (2020) in order to support a Draft Plan of Subdivision and companion Zoning By-law Amendment application as part of the pre-submission process.

The present use of the study area is actively farmed agricultural land. The study area is roughly 80.38 hectares in area. The study area includes within it mostly ploughable lands (approximately 60% of the study area), wood lot (approximately 20% of the study area), and overgrown lawn (5% of the study area), and meadow (approximately 15%). There are two streams that flow through the property one is located in the north end of the study area from west to east and it wraps around to the centre of the property, and the second is located centrally in the study area that flows from west to east. A woodlot is located in the centre of the property. The study area is bounded on the north by Maplevue Drive, on the east by the 20th Sideroad, on the west by farmland and on the south by Lockhart Road. The study area is directly between Lockhart Road and Maplevue Drive, both intersect with the 20th Sideroad. A plan of the study area is included within this report as Map 3. Current conditions encountered during the Stage 1-2 Property Assessment are illustrated in Maps 4 & 5.

5.3.5 PHYSIOGRAPHIC REGION

The study area is situated within the Peterborough Drumlin Field physiographic region. The Peterborough Drumlin Field is a rolling till plain with an area of roughly 1,750 square miles, containing approximately 3,000 full drumlins amongst other lesser ones. The rock underlying this region is mostly limestone, which is highly fossiliferous and tends to disintegrate easily. Drumlins in this area are of typical shape with many swampy areas intervening. Valleys across the entire drumlin field break the continuity of the physiographic region, and are deep enough to provide excellent drainage to the adjacent uplands (Chapman and Putnam 1984: 169-172).

5.3.6 SURFACE WATER

Sources of potable water, access to waterborne transportation routes, and resources associated with watersheds are each considered, both individually and collectively to be the highest criteria for determination of the potential of any location to support extended human activity, land use, or occupation. Accordingly, proximity to water is regarded as the primary indicator of archaeological resource potential. The Standards and Guidelines for Consultant Archaeologists stipulates that undisturbed lands within 300 metres of a water source are considered to have archaeological potential (MTC 2011: 21).

Two streams are located within the study area, flowing west to east, and one is located centrally while the other is in the northern part of the study area. The streams are designated as part of Sandy Cove Creek on the Illustrated Atlas of the Dominion of Canada (H. Belden 1881), however they are not designated to a name on modern maps.

5.3.7 CURRENT PROPERTY CONDITIONS CONTEXT

Current characteristics encountered within an archaeological research study area determine if property Assessment of specific portions of the study area will be necessary and in what manner a Stage 2 Property Assessment should be conducted, if necessary. Conventional assessment methodologies include pedestrian survey on ploughable lands and test pit methodology within areas that cannot be ploughed. For the purpose of determining where property Assessment is necessary and feasible, general categories of current landscape conditions have been established as archaeological conventions. These include:

5.3.7.1 BUILDINGS AND STRUCTURAL FOOTPRINTS

A building, for the purposes of this particular study, is a structure that exists currently or has existed in the past in a given location. The footprint of a building is the area of the building formed by the perimeter of the foundation. Although the interior area of building foundations would often be subject to property Assessment when the foundation may represent a potentially significant historic archaeological site, the footprints of existing structures are not typically assessed. Existing structures commonly encountered during archaeological assessments are often residential-associated buildings (houses, garages, sheds), and/or component buildings of farm complexes (barns, silos, greenhouses). In many cases, even though the disturbance to the land may be relatively shallow and archaeological resources may be situated below the disturbed layer (e.g. a concrete garage pad), there is no practical means of assessing the area beneath the disturbed layer. However, if there were evidence to suggest that there are likely archaeological resources situated beneath the disturbance, alternative methodologies may be recommended to study such areas.

The study area currently contains no buildings or structural footprints. Based on the historical map and Google Map imagery there was a building located in the southern portion of the study area, however it has since been demolished and no foundation was discovered through test pit survey.

5.3.7.2 DISTURBANCE

Areas that have been subjected to extensive and deep land alteration that has severely damaged the integrity of archaeological resources are known as land disturbances. Examples

of land disturbances are areas of past quarrying, major landscaping, and sewage and infrastructure development (MTC 2011: 18), as well as driveways made of gravel or asphalt or concrete, in-ground pools, and wells or cisterns. Surfaces paved with interlocking brick, concrete, asphalt, gravel and other surfaces meant to support heavy loads or to be long wearing hard surfaces in high traffic areas, must be prepared by the excavation and removal of topsoil, grading, and the addition of aggregate material to ensure appropriate engineering values for the supporting matrix and also to ensure that the installations shed water to avoid flooding or moisture damage. All hard surfaced areas are prepared in this fashion and therefore have no or low archaeological potential. Major utility lines are conduits that provide services such as water, natural gas, hydro, communications, sewage, and others. These major installations should not be confused with minor below ground service installations not considered to represent significant disturbances removing archaeological potential, such as services leading to individual structures which tend to be comparatively very shallow and vary narrow corridors. Areas containing substantial and deeply buried services or clusters of below ground utilities are considered areas of disturbance, and may be excluded from Stage 2 Property Assessment. Disturbed areas are excluded from Stage 2 Property Assessment due to no or low archaeological potential and often because they are also not viable to assess using conventional methodology.

*“Earthwork is one of the major works involved in road construction. This process includes excavation, material removal, filling, compaction, and construction. Moisture content is controlled, and compaction is done according to standard design procedures. Normally, rock explosion at the road bed is not encouraged. While filling a depression to reach the road level, **the original bed is flattened after the removal of the topsoil.** The fill layer is distributed and compacted to the designed specifications. This procedure is repeated until the compaction desired is reached. **The fill material should not contain organic elements,** and possess a low index of plasticity. Fill material can include gravel and decomposed rocks of a particular size, but should not consist of huge clay lumps. Sand clay can be used. The area is considered to be adequately compacted when the roller movement does not create a noticeable deformation. **The road surface finish is reliant on the economic aspects, and the estimated usage.**” [Emphasis Added]*

(Goel 2013)

The supporting matrix of a hard paved surface cannot contain organic material which is subject to significant compression, decay and moisture retention. Topsoil has no engineering value and must be removed in any construction application where the surface finish at grade requires underlying support.

Installation of sewer lines and other below ground services associated with infrastructure development often involves deep excavation that can remove archaeological potential. This consideration does not apply to relatively minor below ground services that connect structures and facilities to services that support their operation and use. Major servicing corridors will be situated within adjacent road allowances with only minor, narrow and relatively shallow underground services entering into the study area to connect existing structures to servicing mainlines. The relatively minor, narrow and shallow services buried within a residential property do not require such extensive ground disturbance to remove or minimize archaeological potential within affected areas.

The study area does not contain previous disturbances.

5.3.7.3 LOW-LYING AND WET AREAS

Landscape features that are covered by permanently wet areas, such as marshes, swamps, or bodies of water like streams or lakes, are known as low-lying and wet areas. Low-lying and wet areas are excluded from Stage 2 Property Assessment due to inaccessibility.

The stream channels create a low-lying wet area however it is too narrow to affect a systematic survey at a standard five-metre interval. Maps 4 & 5 of this report illustrate the locations of these features.

5.3.7.4 STEEP SLOPE

Landscape which slopes at a greater than ($>$) 20 degree change in elevation, is known as steep slope. Areas of steep slope are considered uninhabitable, and are excluded from Stage 2 Property Assessment.

Generally, steep slopes are not assessed because steep slopes are interpreted to have low potential, not due to viability to assess, except in cases where the slope is severe enough to become a safety concern for archaeological field crews. In such cases, the Occupational Health and Safety Act takes precedence as indicated in the introduction to the Standards and Guidelines. AMICK Consultant Limited policy is to assess all slope areas whenever it is safe to do so. Assessment of slopes, except where safety concerns arise, eliminates the invariably subjective interpretation of what might constitute a steep slope in the field. This is done to minimize delays due to conflicts in such interpretations and to increase the efficiency of review.

The study area does contain a steep slope on either side of the northern stream. This area was narrow enough to have a negligible effect on the 5-metre grid, perhaps only one or two test pits within the grid were compromised.

5.3.7.5 WOODED AREAS

Areas of the property that cannot be ploughed, such as natural forest or woodlot, are known as wooded areas. These wooded areas qualify for Stage 2 Property Assessment, and are required to be assessed using test pit survey methodology.

A mix of deciduous and coniferous trees is located centrally within the study area. There is also mixed vegetation between the agricultural fields in the northern section of the study area. Approximately 20% of the study area is wooded. Maps 4 & 5 of this report illustrate the locations of these features.

5.3.7.6 PLOUGHABLE AGRICULTURAL LANDS

Areas of current or former agricultural lands that have been ploughed in the past are considered ploughable agricultural lands. Ploughing these lands regularly turns the soil, which in turn brings previously buried artifacts to the surface, which are then easily

identified during visual inspection. Furthermore, by allowing the ploughed area to weather sufficiently through rainfall, soil is washed off of exposed artifacts at the surface and the visibility of artifacts at the surface of recently worked field areas is enhanced markedly. Pedestrian survey of ploughed agricultural lands is the preferred method of physical assessment because of the greater potential for finding evidence of archaeological resources if present.

The study area contains five agricultural fields, which were worked and allowed to weather for the purposes of the completion of the Stage 2 Property Assessment. The agricultural fields cover approximately 60% of the study area. Maps 4 & 5 of this report illustrate the locations of these features.

5.3.7.7 LAWN, PASTURE, MEADOW

Landscape features consisting of former agricultural land covered in low growth, such as lawns, pastures, meadows, shrubbery, and immature trees. These are areas that may be considered too small to warrant ploughing, (i.e. less than one hectare in area), such as yard areas surrounding existing structures, and land-locked open areas that are technically workable by a plough but inaccessible to agricultural machinery. These areas may also include open area within urban contexts that do not allow agricultural tillage within municipal or city limits or the use of urban roadways by agricultural machinery. These areas are required to be assessed using test pit survey methodology.

The study area contains areas of overgrown lawn and meadow. The overgrown lawn is located in the southern portion of the study area where the house used to be located. The meadow is mixed in between the agricultural fields in the northern section of the study area. These features account for approximately 20% of the study area. Maps 4 & 5 of this report illustrate the locations of these features.

5.3.8 SUMMARY

Background research indicates the vicinity of the study area has potential for archaeological resources of Native origins based on proximity to previously registered archaeological sites of Pre-Contact origins and proximity to a source of potable water. Background research also suggests potential for archaeological resources of Post-Contact origins based on proximity to previously registered archaeological sites of Post-Contact origins and proximity to a historic roadway.

The entirety of the study area does exhibit archaeological potential and therefore a Stage 2 Property Assessment is required.

Archaeological potential does not indicate that there are necessarily sites present, but that environmental and historical factors suggest that there may be as yet undocumented archaeological sites within lands that have not been subject to systematic archaeological research in the past.

6.0 FIELD WORK METHODS AND WEATHER CONDITIONS

This report confirms that the study area was subject to Stage 2 Property Assessment high intensity test pit methodology at five-metre intervals and intensified test pit methodology at one-metre intervals from positive test pits, and by high intensity pedestrian survey at an interval of five metres between individual transects and intensified pedestrian survey at one-metre intervals on 24 September, October 7-10, 14-18, 21-22, 29 2019 and May 19 2020.

The fieldwork undertaken as a component of this study was conducted according to the archaeological fieldwork standards and guidelines (including weather and lighting conditions). Weather conditions were appropriate for the necessary fieldwork required to complete the Stage 2 Property Assessment and to create the documentation appropriate to this study. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Maps 4 & 5 of this report. Upon completion of the property inspection of the study area, it was determined that select areas would require Stage 2 Property Assessment.

It must be noted that AMICK Consultants Limited has been retained to assess lands as specified by the proponent. As such, AMICK Consultants Limited is constrained by the terms of the contract in place at the time of the Archaeological Assessment and can only enter into lands for which AMICK Consultants Limited has received consent from the owner or their agent(s). The proponent has been advised that the entire area within the planning application must be subject to archaeological assessment and that portions of the planning application may only be excluded if they are of low potential, are not viable to assess, or are subject to planning provisions that would restrict any such areas from any form of ground altering activities.

6.1 PROPERTY INSPECTION

A detailed examination and photo documentation was carried out on the study area in order to document the existing conditions of the study area to facilitate the Stage 2 Property Assessment. All areas of the study area were visually inspected and select features were photographed as a representative sample of each area defined within Maps 4 & 5. Observations made of conditions within the study area at the time of the inspection were used to inform the requirement for Stage 2 Property Assessment for portions of the study area as well as to aid in the determination of appropriate Stage 2 Property Assessment strategies. The locations from which photographs were taken and the directions toward which the camera was aimed for each photograph are illustrated in Maps 4 & 5 of this report.

6.2 PEDESTRIAN SURVEY

In accordance with the Standards and Guidelines for Consultant Archaeologists, pedestrian survey is required for all portions of the study area that are ploughable or can be subject to cultivation. This is the preferred method to utilize while conducting an assessment. This report confirms that the conduct of pedestrian survey within the study area conformed to the following standards:

- 1. Actively or recently cultivated agricultural land must be subject to pedestrian survey.*

[All actively or recently cultivated agricultural land was subject to pedestrian survey.]

2. *Land to be surveyed must be recently ploughed. Use of chisel ploughs is not acceptable. In heavy clay soils ensure furrows are disked after ploughing to break them up further.*

[All land was recently ploughed.]

3. *Land to be surveyed must be weathered by one heavy rainfall or several light rains to improve visibility of archaeological resources.*

[All land was weathered by rainfall.]

4. *Provide direction to the contractor undertaking the ploughing to plough deep enough to provide total topsoil exposure, but not deeper than previous ploughing.*

[Direction was given to the contractor undertaking the ploughing to plough deep enough to provide total topsoil exposure, but not deeper than previous ploughing]

5. *At least 80 % of the ploughed ground surface must be visible. If surface visibility is below 80% (e.g. due to crop stubble, weeds, young crop growth), ensure the land is re-ploughed before surveying.*

[Roughly 99% of the ploughed field surface was exposed and visible.]

6. *Space survey transects at maximum intervals of 5m (20 survey transects per hectare)*

[All transects were conducted at an interval of 5m between individual transects.]

7. *When archaeological resources are found, decrease survey transects to 1m intervals over a minimum of a 20m radius around the find to determine whether it is an isolated find or part of a larger scatter. Continue working outward at this interval until full extent of the surface scatter has been defined.*

[Survey transects were reduced to 1m intervals over a minimum of 20m radius around finds]

8. *Collect all formal artifact types and diagnostic categories. For 19th century archaeological sites, collect all refined ceramic sherds (or, for larger sites collect a sufficient sample to form the basis for dating).*

[All formal artifact types and diagnostic categories were collected.]

9. *Based on professional judgment, strike a balance between gathering enough artifacts to document the archaeological site and leaving enough in place to relocate the site if it is necessary to conduct further assessment.*

[All of the artifacts, both diagnostic and non-diagnostic, were collected and GPS points were taken so the site could be properly documented and relocated.]

(MTC 2011: 30-31)

6.3 CONTROLLED SURFACE PICK-UP (CSP)

In all cases where artifacts were found pedestrian survey intervals were reduced to one metre between individual transects and all artifacts found on the surface were marked with numbered flags. The artifacts were collected and bagged according to the numbered location where each was found. Every find location was individually recorded using GPS with an accuracy of 5 metres or less. All artifacts were collected. As a result of the completion of CSPs on all archaeological locations, this component of Stage 3 Site-specific Assessment has been completed and is not required for subsequent investigations of these sites. A detailed description of the location of the CSP can be found in the supplementary documentation of this report filed under separate cover with the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI).

All formal artifact types and diagnostic categories were collected as well as a representative sample of non-diagnostic artifacts collected.

6.4 TEST PIT SURVEY

In accordance with the Standards and Guidelines for Consultant Archaeologists, test pit survey is required to be undertaken for those portions of the study area where deep prior disturbance had not occurred prior to assessment or which were accessible to survey. Test pit survey is only used in areas that cannot be subject to ploughing or cultivation. This report confirms that the conduct of test pit survey within the study area conformed to the following standards:

1. Test pit survey only on terrain where ploughing is not possible or viable, as in the following examples:

a. wooded areas

[All wooded areas were test pit surveyed at an interval of 5 m between individual test pits]

b. pasture with high rock content

[Not Applicable - The study area does not contain any pastures with high rock content]

c. abandoned farmland with heavy brush and weed growth

[Not Applicable - The study area does not contain any abandoned farmland with heavy brush and weed growth]

d. orchards and vineyards that cannot be strip ploughed (planted in rows 5 m apart or less), gardens, parkland or lawns, any of which will remain in use for several years after the survey

[Not Applicable - The study area does not contain any of the above-mentioned circumstances]

e. properties where existing landscaping or infrastructure would be damaged. The presence of such obstacles must be documented in sufficient detail to demonstrate that ploughing or cultivation is not viable.

[Not Applicable - The study area does not contain the above-mentioned circumstances]

f. narrow (10 m or less) linear survey corridors (e.g., water or gas pipelines, road widening). This includes situations where there are planned impacts 10 m or less beyond the previously impacted limits on both sides of an existing linear corridor (e.g., two linear survey corridors on either side of an existing roadway). Where at the time of fieldwork the lands within the linear corridor meet the standards as stated under the above section on pedestrian survey land preparation, pedestrian survey must be carried out. Space test pits at maximum intervals of 5 m (400 test pits per hectare) in areas less than 300 m from any feature of archaeological potential.

[Not Applicable – The study area does not contain any linear corridors]

2. *Space test pits at maximum intervals of 5 m (400 test pits per hectare) in areas less than 300 m from any feature of archaeological potential.*

[All test pits were spaced at an interval of 5m between individual test pits]

3. *Space test pits at maximum intervals of 10 m (100 test pits per hectare) in areas more than 300 m from any feature of archaeological potential.*

[The entirety of the test pitted areas of the study area were assessed using high intensity test pit methodology at an interval of 5 metres between individual test pits. When artifacts were encountered, the test pit interval was intensified (See Section 6.5)]

4. *Test pit to within 1 m of built structures (both intact and ruins), or until test pits show evidence of recent ground disturbance.*

[Not Applicable]

5. *Ensure that test pits are at least 30 cm in diameter.*

[All test pits were at least 30 cm in diameter]

6. *Excavate each test pit, by hand, into the first 5 cm of subsoil and examine the pit for stratigraphy, cultural features, or evidence of fill.*

[Regardless of the interval between individual test pits, all test pits were excavated by hand into the first 5 cm of subsoil where possible and examined for stratigraphy, cultural features, or evidence of fill.]

7. *Screen soil through mesh no greater than 6 mm.*

[All soil was screened through mesh no greater than 6 mm]

8. *Collect all artifacts according to their associated test pit.*

[All artifacts were collected according to their associated test pit]

9. *Backfill all test pits unless instructed not to by the landowner.*

[All test pits were backfilled]

(MTC 2011: 31-32)

6.5 INTENSIFIED TEST PIT SURVEY

According to the Standards and Guidelines for Consultant Archaeologists the initial finds of archaeological resources through test pitting may be insufficient to make it clear that a Stage 3 archaeological assessment is necessary, and it may therefore be desirable to carry out further work within Stage 2 rather than proceeding to Stage 3. If that is the case, the following requirements must be met in determining whether a Stage 3 should be carried out. This section of the report confirms that the following standards were met:

1. *Continue test pit excavation on the survey grid to determine whether there are further positive test pits. This may produce sufficient archaeological resources to meet the criteria for making a recommendation to carry out a Stage 3 assessment, in which case further Stage 2 fieldwork is not necessary.*

[All remaining test pits were excavated, and more archaeological resources were encountered. This produced sufficient archaeological resources to meet the criteria for making a recommendation to carry out a Stage 3 Assessment on the J. Crispin I (BcGv-54). An intensified survey at 2.5 metre intervals was undertaken when First Nations artifacts were encountered within the McDonald II (BcGv-56) site.]

2. *When insufficient archaeological resources are found through continued survey on the grid to meet the criteria for continuing to Stage 3, intensify survey coverage around the positive test pit to determine whether a recommendation for a Stage 3 assessment can be supported.*
 - a. *Excavate a maximum of eight additional test pits within this intensified area, and*
 - b. *one or more 1 m test units, placing at least one unit over the positive test pit*

[Sufficient archaeological resources encountered through the 5 metre grid survey, so additional test pits were not necessary for the J. Crispin I (BcGv-54) Site. An intensified survey at 2.5 metre intervals was undertaken when First Nations artifacts were encountered within the McDonald II (BcGv-56) site. Diagnostic First Nation pottery was encountered, along with chipping detritus, within the intensified 2.5 metre test pit interval which satisfied the requirements for a Stage 3 assessment of the McDonald II (BcGv-56) Site (S&G 2011: 2.2.1b.)]

A detailed description of the location of the areas of intensified test pit survey can be found in the supplementary documentation of this report filed under separate cover with the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI).

Approximately 60% of the study area consisted of ploughable area that was pedestrian surveyed at an interval of 5 metres between individual transects and then intensified at 1 metre intervals where artifacts were encountered for a minimum of a 20 metre radius. Approximately 20% of the study area is wood lot, 5% of the study area is overgrown lawn, and 15% of the study area is meadow.

7.0 RECORD OF FINDS

Section 7.8.2 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 137-138) outlines the requirements of the Record of Finds component of a Stage 2 report:

1. *For all archaeological resources and sites that are identified in Stage 2, provide the following:*
 - a. *a general description of the types of artifacts and features that were identified*
 - b. *a general description of the area within which artifacts and features were identified, including the spatial extent of the area and any relative variations in density*
 - c. *a catalogue and description of all artifacts retained*
 - d. *a description of the artifacts and features left in the field (nature of material, frequency, other notable traits).*
2. *Provide an inventory of the documentary record generated in the field (e.g. photographs, maps, field notes).*
3. *Submit information detailing exact site locations on the property separately from the project report, as specified in section 7.6. Information on exact site locations includes the following:*
 - a. *table of GPS readings for locations of all archaeological sites*
 - b. *maps showing detailed site location information.*

7.1 ARCHAEOLOGICAL RESOURCES

As a result of the property Assessment of the study area, one Pre-Contact site named McDonald II (BcGv-56) and two Post-Contact sites, J. Crispin I (BcGv-54) and J. Crispin II (BcGv-55) were encountered. The number and types of artifacts collected from the McDonald II (BcGv-56) Site, and the J. Crispin I (BcGv-54) and J. Crispin II (BcGv-55) Sites are listed below in Table 4, Table 5, and Table 6 respectively. Descriptions of the artifact types collected from the McDonald II (BcGv-56) Site can be found below in section 7.1.1. and the catalogue is appended to this report in Appendix A. Descriptions of the artifact types collected from the J. Crispin I (BcGv-54) Site can be found below in section 7.1.2. and the catalogue is appended to this report in Appendix B. Descriptions of the artifact types collected from the J. Crispin II (BcGv-55) Site can be found below in section 7.1.3. and the catalogue is appended to this report in Appendix C. A detailed description of datable historic artifact types are appended to this report in Appendix D and a detailed description of pre-contact diagnostic artifacts are appended to this report in Appendix E. Detailed description of the location of these sites can be found in the supplementary information package of this report filed under separate cover with the Ministry of Heritage, Sport, Tourism and Culture Industries.

7.1.1 McDONALD II (BCGV-56) SITE

The McDonald II (BcGv-56) Site consists of 28 artifacts covering an area approximately 50 metres west to east, and 3 metres north to south. The artifacts found at McDonald II (BcGv-56) consist entirely of pottery fragments and sherds. The number and types of artifacts collected from the McDonald II (BcGv-56) Site are listed below in Table 4. Descriptions of these artifact types can be found appended to this report in Appendix A.

TABLE 4 McDONALD (BcGv-56) ARTIFACT COUNTS AND TYPES

DESCRIPTION	FREQUENCY	PERCENTAGE
Rimsherd	1	3.5%
Fragment	26	93%
Neck Sherd	1	3.5%

7.1.2 J. CRISPIN I (BcGv-54) SITE

The J. Crispin I (BcGv-54) Site consists of 814 artifacts covering an area approximately 90 metres west to east and 100 metres north to south. The artifacts found at J. Crispin I (BcGv-54) consist entirely of Post-Contact artifacts that range from mid to late 19th century. The number and types of artifacts collected from the J. Crispin I (BcGv-54) Site are listed below in Table 5. Descriptions of these artifact types can be found appended to this report in Appendix B.

TABLE 5 J. CRISPIN I (BcGv-54) ARTIFACT COUNTS AND TYPES

DESCRIPTION	FREQUENCY	PERCENTAGE
Ceramic	537	66%
Faunal	4	0.48%
Glass	232	28.5%
Lime/Gypsum	6	0.74%
Metal	31	3.8%
Plastic	2	0.24%
Rock (chalk)	2	0.24%

7.1.3 J. CRISPIN II (BcGv-55) SITE

The J. Crispin II

(BcGv-55) Site consists of 402 artifacts covering an area approximately 55 metres west to east and 95 metres north to south. The artifacts found at J. Crispin II (BcGv-55) consist entirely of Post-Contact artifacts that range from mid to late 19th century. The number and types of artifacts collected from the J. Crispin II (BcGv-55) Site are listed below in Table 6. Descriptions of these artifact types can be found appended to this report in Appendix C.

TABLE 6 J. CRISPIN II (BcGv-55) ARTIFACT COUNTS AND TYPES

DESCRIPTION	FREQUENCY	PERCENTAGE
Ceramic	309	77%
Faunal	3	0.75%
Glass	86	21%
Metal	3	0.75%
Plastic	1	0.25%

The collection of artifacts from this assessment is packaged in a single banker's box and housed at the Lakelands District corporate office of AMICK Consultants Limited until such time as an appropriate permanent location, as approved by MHSTCI, is located and appropriate arrangements for the transfer of the collection and associated responsibilities for the material is made.

7.2 ARCHAEOLOGICAL FIELDWORK DOCUMENTATION

The documentation produced during the field investigation conducted in support of this report includes: one sketch map, three pages of photo log, seven pages of field notes, and 136 digital photographs.

8.0 ANALYSIS AND CONCLUSIONS

AMICK Consultants Limited was engaged by the proponent to undertake a Stage 1-2 Archaeological Assessment of lands potentially affected by the proposed undertaking and was granted permission to carry out archaeological fieldwork. The entirety of the study area was subject to property inspection and photographic documentation concurrently with the Stage 2 Property Assessment 24 September, October 7-10, 14-18, 21-22, 29 2019 and May 19 2020, by high intensity test pit methodology at five-metre intervals, and by high intensity pedestrian survey at an interval of five metres between individual transects and intensified pedestrian survey at one-metre intervals. All records, documentation, field notes, photographs and artifacts (as applicable) related to the conduct and findings of these investigations are held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) on behalf of the government and citizens of Ontario.

8.1 STAGE 1 ANALYSIS AND CONCLUSIONS

As part of the present study, background research was conducted in order to determine the archaeological potential of the proposed project area.

“A Stage 1 background study provides the consulting archaeologist and Ministry report reviewer with information about the known and potential cultural heritage resources within a particular study area, prior to the start of the field assessment.” (OMCzCR 1993)

The evaluation of potential is further elaborated Section 1.3 of the Standards and Guidelines for Consultant Archaeologist (2011) prepared by the Ontario Ministry of Tourism and Culture:

“ The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property’s archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment.” (MTC 2011: 17)

Features or characteristics that indicate archaeological potential when documented within the study area, or within close proximity to the study area (as applicable), include:

- “ - *previously identified archaeological sites*
- *water sources (It is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees.):*
 - *primary water sources (lakes, rivers, streams, creeks)*
 - *secondary water sources (intermittent streams and creeks, springs, marshes, swamps)*

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

(MTC 2011: 17-18)

The evaluation of potential does not indicate that sites are present within areas affected by proposed development. Evaluation of potential considers the possibility for as yet undocumented sites to be found in areas that have not been subject to systematic archaeological investigation in the past. Potential for archaeological resources is used to determine if property assessment of a study area or portions of a study area is required.

“Archaeological resources not previously documented may also be present in the affected area. If the alternative areas being considered, or the preferred alternative selected, exhibit either high or medium potential for the discovery of archaeological remains an archaeological assessment will be required.”

(MCC & MOE 1992: 6-7)

“The Stage 1 background study (and, where undertaken, property inspection) leads to an evaluation of the property’s archaeological potential. If the evaluation indicates that there is archaeological potential anywhere on the property, the next step is a Stage 2 assessment.”

(MTC 2011: 17)

In addition, archaeological sites data is also used to determine if any archaeological resources had been formerly documented within or in close proximity to the study area and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to establish the relative cultural heritage value or interest of any resources that might be encountered during the conduct of the present study. For example, the relative rarity of a site can be used to assign an elevated level of cultural heritage value or interest to a site that is atypical for the immediate vicinity. The requisite archaeological sites data of previously registered archaeological sites was collected from the Programs and Services Branch, Culture Programs Unit, MHSTCI and the corporate research library of AMICK Consultants Limited. The Stage 1 Background Research methodology also includes a review of the most detailed available topographic maps, historical settlement maps, archaeological management plans (where applicable) and commemorative plaques or monuments. When previous archaeological research documents lands to be impacted by the proposed undertaking or archaeological sites within 50 metres of the study area, the reports documenting this earlier work are reviewed for pertinent information. AMICK Consultants Limited will often modify this basic methodology based on professional judgment to include additional research (such as, local historical works or documents and knowledgeable informants).

Section 7.7.3 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 132) outlines the requirements of the Analysis and Conclusions component of a Stage 1 Background Study.

- 1) *“Identify and describe areas of archaeological potential within the project area.*
- 2) *Identify and describe areas that have been subject to extensive and deep land alterations. Describe the nature of alterations (e.g., development or other activity) that have severely damaged the integrity of archaeological resources and have removed archaeological potential.”*

CHARACTERISTICS INDICATING ARCHAEOLOGICAL POTENTIAL

Section 1.3.1 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics that indicate archaeological potential (MTC 2011: 17-18). Factors that indicate archaeological potential are features of the local landscape and environment that may have attracted people to either occupy the land or to conduct activities within the study area. One or more of these characteristics found to apply to a study area would necessitate a Stage 2 Property Assessment to determine if archaeological resources are present. These characteristics are listed below together with considerations derived from the conduct of this study.

- 1) *Previously Identified Archaeological Sites*
Previously registered archaeological sites have been documented within 300 metres of the study area.
- 2) *Water Sources*
Primary water sources are described as including lakes, rivers streams and creeks. Close proximity to primary water sources (300 metres) indicates that people had

access to readily available sources of potable water and routes of waterborne trade and communication should the study area have been used or occupied in the past.

There are no identified primary water sources within 300 metres of the study area.

Secondary water sources are described as including intermittent streams and creeks, springs, marshes, and swamps. Close proximity (300 metres) to secondary water sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne trade and communication should the study area have been used or occupied in the past.

There are two identified secondary water sources within the study area.

3) *Features Indicating Past Water Sources*

Features indicating past water resources are described as including glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, and cobble beaches. Close proximity (300 metres) to features indicating past water sources indicates that people had access to readily available sources of potable water, at least on a seasonal basis, and in some cases seasonal access to routes of waterborne trade and communication should the study area have been used or occupied in the past.

There are no identified features indicating past water sources within 300 metres of the study area.

4) *Accessible or Inaccessible Shoreline*

This form of landscape feature would include high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.

There are no shorelines within 300 metres of the study area.

5) *Elevated Topography*

Features of elevated topography that indicate archaeological potential include eskers, drumlins, large knolls, and plateaux.

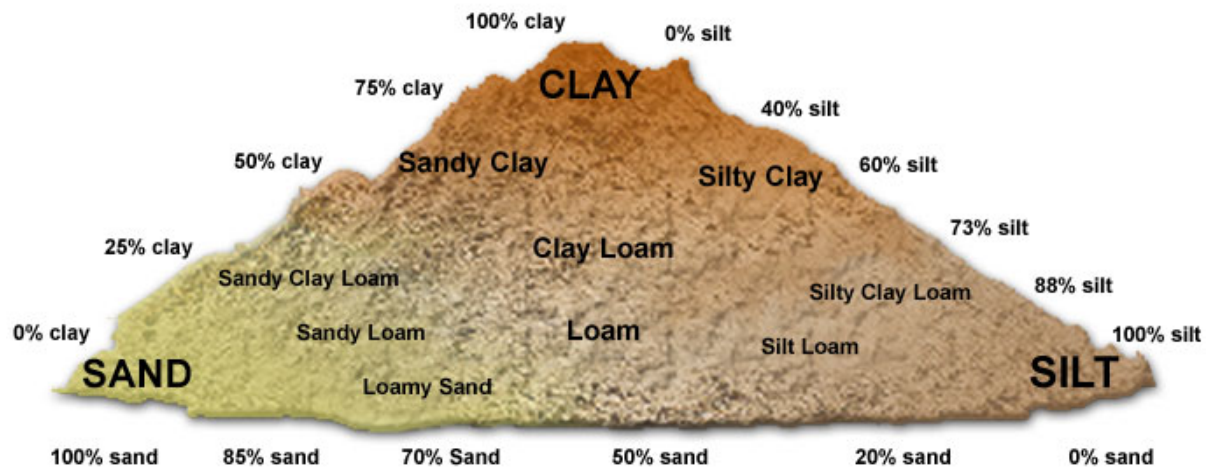
There are no identified features of elevated topography within the study area.

6) *Pockets of Well-drained Sandy Soil*

Pockets of sandy soil are considered to be especially important near areas of heavy soil or rocky ground.

The soil throughout the study area is medium brown sand, which is consistent with the wider area surrounding the property. Therefore, the presence of this soil has no impact on potential within the study area, as the wider area is not known for clay soils or exposed bedrock.

The image below (Kuhlmann, Stacy 2017) shows the consistencies of soil types and how they compare to one another. The soil found within the study area was sand, which has no clay content.



(Kuhlmann, Stacy 2017)

7) Distinctive Land Formations

These are landscape features that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.

There are no identified distinctive land formations within the study area.

8) Resource Areas

Resource areas that indicate archaeological potential include food or medicinal plants (e.g., migratory routes, spawning areas, and prairie), scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert) and resources of importance to early Post-contact industry (e.g., logging, prospecting, and mining).

There are no identified resource areas within the study area.

9) Areas of Early Post-Contact Settlement

These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, and farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.

The study area contains a historic house identified on the Illustrated Atlas of the Dominion of Canada (H. Belden 1881).

10) Early Historical Transportation Routes

This includes evidence of trails, passes, roads, railways, portage routes.

The study area is situated adjacent to three historic settlement roads that appear on the Historic Atlas Map of 1877. These historic roads correspond to the roads presently known as Mapleview Drive, Lockhart Road, and 20th Sideroad, which are adjacent to the study area.

11) Heritage Property

Property listed on a municipal register or designated under the *Ontario Heritage Act* or is a federal, provincial or municipal historic landmark or site.

There are no listed or designated heritage buildings or properties that form a part of the study area. There are no listed or designated heritage buildings or properties that are adjacent to the study area.

12) Documented Historical or Archaeological Sites

This includes property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations. These are properties which have not necessarily been formally recognized or for which there is additional evidence identifying possible archaeological resources associated with historic properties in addition to the rationale for formal recognition.

There are no known heritage features, or known historic sites, or known archaeological sites within the study area in addition to those formally documented with the appropriate agencies or previously noted under a different criterion.

CHARACTERISTICS INDICATING REMOVAL OF ARCHAEOLOGICAL POTENTIAL

Section 1.3.2 of the Standards and Guidelines for Consultant Archaeologists specifies the property characteristics which indicate no archaeological potential or for which archaeological potential has been removed (MTC 2011: 18-19). These characteristics are listed below together with considerations derived from the conduct of this study.

The introduction of Section 1.3.2 (MTC 2011: 18) notes that “*Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to extensive and deep land alterations that have severely damaged the integrity of any archaeological resources. This is commonly referred to as ‘disturbed’ or ‘disturbance’, and may include:*”

1) Quarrying

There is no evidence to suggest that quarrying operations were ever carried out within the study area.

2) Major Landscaping Involving Grading Below Topsoil

Unless there is evidence to suggest the presence of buried archaeological deposits, such deeply disturbed areas are considered to have lost their archaeological potential. Properties that do not have a long history of Post-Contact occupation can have archaeological potential removed through extensive landscape alterations that penetrate below the topsoil layer. This is because most archaeological sites originate at grade with relatively shallow associated excavations into the soil. Pre-Contact sites and early historic sites are vulnerable to extensive damage and complete removal due

to landscape modification activities. In urban contexts where a lengthy history of occupation has occurred, properties may have deeply buried archaeological deposits covered over and sealed through redevelopment activities that do not include the deep excavation of the entire property for subsequent uses. Buildings are often erected directly over older foundations preserving archaeological deposits associated with the earlier occupation.

There is no evidence to suggest that major landscaping operations involving grading below topsoil were ever carried out within the study area.

3) *Building Footprints*

Typically, the construction of buildings involves the deep excavation of foundations, footings and cellars that often obliterate archaeological deposits situated close to the surface.

There are no buildings within the study area.

4) *Sewage and Infrastructure Development*

Installation of sewer lines and other below ground services associated with infrastructure development often involves deep excavation that can remove archaeological potential.

There is no evidence to suggest that substantial below ground services of any kind have resulted in significant impacts to any significant portion of the study area. Major utility lines are conduits that provide services such as water, natural gas, hydro, communications, sewage, and others. These major installations should not be confused with minor below ground service installations not considered to represent significant disturbances removing archaeological potential, such as services leading to individual structures which tend to be comparatively very shallow and vary narrow corridors. Areas containing substantial and deeply buried services or clusters of below ground utilities are considered areas of disturbance, and may be excluded from Stage 2 Property Assessment.

“Activities such as agricultural cultivation, gardening, minor grading and landscaping do not necessarily affect archaeological potential.”

(MTC 2011: 18)

“Archaeological potential is not removed where there is documented potential for deeply buried intact archaeological resources beneath land alterations, or where it cannot be clearly demonstrated through background research and property inspection that there has been complete and intensive disturbance of an area. Where complete disturbance cannot be demonstrated in Stage 1, it will be necessary to undertake Stage 2 assessment.”

(MTC 2011: 18)

SUMMARY

Table 7 below summarizes the evaluation criteria of the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) together with the results of the Stage 1 Background Study

for the proposed undertaking. Based on the criteria, the property is deemed to have archaeological potential on the basis of proximity to water, proximity to historic settlement structures, and the location of early historic settlement roads adjacent to the study area.

TABLE 7 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

FEATURE OF ARCHAEOLOGICAL POTENTIAL		YES	NO	N/A	COMMENT
1	Known archaeological sites within 300m	Y			If Yes, potential determined
PHYSICAL FEATURES					
2	Is there water on or near the property?	Y			If Yes, what kind of water?
2a	Primary water source within 300 m. (lakeshore, river, large creek, etc.)		N		If Yes, potential determined
2b	Secondary water source within 300 m. (stream, spring, marsh, swamp, etc.)	Y			If Yes, potential determined
2c	Past water source within 300 m. (beach ridge, river bed, relic creek, etc.)		N		If Yes, potential determined
2d	Accessible or Inaccessible shoreline within 300 m. (high bluffs, marsh, swamp, sand bar, etc.)		N		If Yes, potential determined
3	Elevated topography (knolls, drumlins, eskers, plateaus, etc.)		N		If Yes, and Yes for any of 4-9, potential determined
4	Pockets of sandy soil in a clay or rocky area		N		If Yes and Yes for any of 3, 5-9, potential determined
5	Distinctive land formations (mounds, caverns, waterfalls, peninsulas, etc.)		N		If Yes and Yes for any of 3-4, 6-9, potential determined
HISTORIC/PREHISTORIC USE FEATURES					
6	Associated with food or scarce resource harvest areas (traditional fishing locations, agricultural/berry extraction areas, etc.)		N		If Yes, and Yes for any of 3-5, 7-9, potential determined.
7	Early Post-Contact settlement area within 300 m.	Y			If Yes, and Yes for any of 3-6, 8-9, potential determined
8	Historic Transportation route within 100 m. (historic road, trail, portage, rail corridors, etc.)	Y			If Yes, and Yes for any 3-7 or 9, potential determined
9	Contains property designated and/or listed under the Ontario Heritage Act (municipal heritage committee, municipal register, etc.)		N		If Yes and, Yes to any of 3-8, potential determined
APPLICATION-SPECIFIC INFORMATION					
10	Local knowledge (local heritage organizations, Pre-Contact, etc.)		N		If Yes, potential determined
11	Recent disturbance not including agricultural cultivation (post-1960-confirmed extensive and intensive including industrial sites, aggregate areas, etc.)		N		If Yes, no potential or low potential in affected part (s) of the study area.

If **YES** to any of 1, 2a-c, or 10 Archaeological Potential is **confirmed**

If **YES** to 2 or more of 3-9, Archaeological Potential is **confirmed**

If **YES** to 11 or No to 1-10 Low Archaeological Potential is **confirmed** for at least a portion of the study area.

8.2 STAGE 2 ANALYSIS AND CONCLUSIONS

Section 7.8.3 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 138-139) outlines the requirements of the Analysis and Conclusions component of a Stage 2 Property Assessment.

1. *Summarize all finding from the Stage 2 survey, or state that no archaeological sites were identified.*
2. *For each archaeological site, provide the following analysis and conclusions:*
 - a. *A preliminary determination, to the degree possible, of the age and cultural affiliation of any archaeological sites identified.*
 - b. *A comparison against the criteria in 2 Stage 2: Property Assessment to determine whether further assessment is required*
 - c. *A preliminary determination regarding whether any archaeological sites identified in Stage 2 show evidence of a high level cultural heritage value or interest and will thus require Stage 4 mitigation.*

A total of thirty-one positive test pits and 294 CSP's were encountered during the Stage 2 Property Assessment. Seven of the positive test pits contained First Nations pottery; this site is named the McDonald II (BcGv-56) Site. The other twenty-four positive test pits as well as 183 CSP's contained mid-to-late 19th century artifacts and belong to the J. Crispin I (BcGv-54) Site. The 111 CSP's found containing mid-to-late 19th century artifacts belong to the J. Crispin II (BcGv-55) Site.

Based on the definition of an artifact and an archaeological site as defined in the Standards and Guidelines for Consultant Archaeologists (MTC 2011) (see below), the material recovered during the Stage 2 Property Assessment do constitute as artifacts and therefore, do represent an archaeological site.

Artifact: Defined in Ontario regulation as “any object, material or substance that is made, modified, used, deposited or affected by human action and **is of cultural heritage value or interest**”. [Emphasis added.]

Archaeological Site: Defined in Ontario regulations as “any property that contains an artifact or any other physical evidence of past human use or activity that **is of cultural value or interest**”. [Emphasis added.]

Cultural Heritage Value or Interest: For the purposes of the Ontario Heritage Act and its regulations, archaeological resources that possess cultural heritage value or interest are protected as archaeological sites under Section 48 of the act. Where analysis of documented artifacts and physical features at a given location meets the criteria stated in the Standards and Guidelines, that location is protected as an archaeological site and further archaeological assessment may be required.

(MTCS 2011: 163-165)

O. Reg. 9/06: Criteria for Determining Cultural Heritage Value or Interest states that a property may have cultural heritage value or interest if it meets one or more of the following criteria:

- “1. The property has design value or physical value because it,*
- i. is a rare, unique, representative or early example of a style, type, expression, material or construction method,*
 - ii. displays a high degree of craftsmanship or artistic merit, or*
 - iii. demonstrates a high degree of technical or scientific achievement.*
- 2. The property has historical value or associative value because it,*
- i. has direct associations with a theme, event, belief, person, activity, organization or institution that is significant to a community,*
 - ii. yields, or has the potential to yield, information that contributes to an understanding of a community or culture, or*
 - iii. demonstrates or reflects the work or ideas of an architect, artist, builder, designer or theorist who is significant to a community.*
- 3. The property has contextual value because it,*
- i. is important in defining, maintaining or supporting the character of an area,*
 - ii. is physically, functionally, visually or historically linked to its surroundings, or*
 - iii. is a landmark. O. Reg. 9/06, s. 1 (2).”*

Therefore, in accordance with the definitions contained within the Standards and Guidelines for Consultant Archaeologists (MTC 2011), it has been concluded that three (3) archaeological sites were found during the Stage 2 survey of the study area.

9.0 RECOMMENDATIONS

9.1 STAGE 2 RECOMMENDATIONS

Under Section 7.8.4 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 139) the recommendations to be made as a result of a Stage 2 Property Assessment are described.

- 1) For each archaeological site, provide a statement of the following:*
 - a. Borden number or other identifying number*
 - b. Whether or not it is of further cultural heritage value or interest*
 - c. Where it is of further cultural heritage value or interest, appropriate Stage 3 assessment strategies*
- 2) Make recommendations only regarding archaeological matters. Recommendations regarding built heritage or cultural heritage landscapes should not be included.*
- 3) If the Stage 2 survey did not identify any archaeological sites requiring further assessment or mitigation of impacts, recommend that no further archaeological assessment of the property be required.*

As a result of the property Assessment of the study area, two scatters of historic artifacts, the J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site were found. A small scatter of First Nations artifacts were also found at the McDonald II (BcGv-56) Site. Based on the characteristics of these sites and the analysis of artifacts, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site, have not been completely documented. There is potential for further CHVI at these locations. The McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site require Stage 3 Site-specific Assessment to gather further data to determine if Stage 4 Mitigation of Development Impacts will be required.*
2. *A Stage 3 Site-specific assessment of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site must be completed for these sites in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). The Stage 3 Site-specific assessment at each location will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner, with a 20% infill based on high counts of artifacts or presence of features. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6-millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) on behalf of the government and citizens of Ontario.*
3. *The Stage 3 Site-specific Assessment of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*
4. *A CSP and intensified test pit survey have been completed at the J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site as part of the Stage 2 Property Assessment and are not required as part of the Stage 3 Site-specific Assessment of the J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site as these components of the Stage 3 requirements are already satisfied. An intensified test pit survey has been completed at the McDonald II (BcGv-56) Site as part of the Stage 2 Property Assessment and is not required as part of the Stage 3 Site-specific Assessment of the McDonald II (BcGv-56) Site as these components of the Stage 3 requirements are already satisfied.*
5. *No soil disturbances or removal of vegetation shall take place within the archaeological sites identified as McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site within this Stage 1-2 Archaeological Assessment report, or within the area enclosed within a 20 metre buffer surrounding the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site prior to the acceptance of the Ministry of Heritage, Sport, Tourism and Culture Industries (MHSTCI) of a report recommending that all archaeological*

- concerns for the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site have been addressed and that there is no further cultural heritage value or interest for these sites.
6. Prior to pre-grading, servicing or registration, the owner shall erect and maintain a temporary high visibility construction fence to be maintained through the course of all construction activities at a 20 metre buffer around the archaeological site identified as the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site within this Stage 1-2 Archaeological Assessment report to ensure that construction activities do not impinge upon the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site unless under the direct supervision of a consulting archaeologist licensed in Ontario by the Minister of Heritage, Sport, Tourism and Culture Industries and as a part of the ongoing archaeological investigations of the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site.
 7. The high visibility fence will be installed at the outer limit of the 20 metre wide Protective Buffer surrounding the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site as illustrated in the accompanying mapping within the Supplementary Report Package of this report filed with MHSTCI prior to the commencement of any development activity anywhere within the proposed development.
 8. A Fifty (50) metre wide Monitoring Buffer shall be observed surrounding the above-noted 20 metre wide Protective Buffer. Within the 50 metre Monitoring Buffer no ground altering works (including removal of vegetation or demolition of existing features) may be conducted unless under the direct supervision of a licensed archaeologist.
 9. The licenced archaeologist supervising any work conducted within the 50 metre wide Monitoring Buffer has the authority to order a halt to any activity which in his or her view may result in adverse impacts to archaeological resources.
 10. The 50 metre wide Monitoring Buffer will remain in effect until such time that the Stage 3 Site-specific Assessment report for the McDonald II (BcGv-56) Site, J. Crispin I (BcGv-54) Site and the J. Crispin II (BcGv-55) Site identified within this Stage 1-2 Archaeological Assessment report is accepted into the Provincial Registry of Archaeological Reports by the Ontario Ministry of Heritage, Sport, Tourism and Culture Industries.
 11. Written instructions will be provided to all persons permitted to enter the property to stay out of the area of the 20 metre wide Protective Buffer unless permitted to enter the area accompanied by a licenced archaeologist.
 12. Written instructions will be provided to all persons permitted to enter the property for the purposes of undertaking work associated with the development that no work is permitted to occur within the 50 metre wide Monitoring Buffer unless under direct supervision of a licenced archaeologist.
 13. Written instructions will be provided to all persons permitted to conduct work within the 50 metre wide Monitoring Buffers that the licenced archaeologist has the authority to order a halt to any work that he or she feels may adversely impact archaeological resources.
 14. The proponent must provide a letter on letterhead to MHSTCI itemizing all of the above conditions and committing to ensure that all of these recommendations are

implemented. This letter must be submitted together with this report at the time of filing with MHSTCI.

- 15. It is recommended that the balance of the study area outside of the site areas and surrounding Protective Buffer be cleared of archaeological concern.*

10.0 ADVICE ON COMPLIANCE WITH LEGISLATION

While not part of the archaeological record, this report must include the following standard advisory statements for the benefit of the proponent and the approval authority in the land use planning and development process:

- a. *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 issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.*
- b. *It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has 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 Archaeological Reports referred to in Section 65.1 of the Ontario Heritage Act.*
- c. *Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed archaeologist to carry out archaeological fieldwork, in compliance with sec. 48 (1) of the Ontario Heritage Act.*
- d. *The Cemeteries Act, R.S.O. 1990, c. C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.*
- e. *Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.*

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