1.0 PROJECT REPORT COVER PAGE

LICENSEE INFORMATION:

Contact Information:	Michael B. Henry CD BA FRAI FRSA Marilyn E. Cornies BA CAHP Southwestern District Office 553 Dufferin Avenue London, ON N6B 2A5 Phone: (419) 432-4435 Email: mhenry@amick.ca/mcornies@amick.ca www.amick.ca
Licensee:	Marilyn E. Cornies BA CAHP
Ontario Archaeology Licence:	P038

PROJECT INFORMATION:

Corporate Project Number:	17300
MTCS Project Number:	P038-0895-2017
Investigation Type:	Stage 1-2 Archaeological Property Assessment
Project Name:	Camperdown.
Project Location:	Part of Lot 26 Concession 6 (Geographic Township of Collingwood) Town of the Blue Mountains, County of Grey
Project Designation Number:	Not Currently Available

MTCS FILING INFORMATION:

Site Record/Update Form(s):	N/A
Date of Report Filing:	TBD
Type of Report:	**ORIGINAL**

2.0 EXECUTIVE SUMMARY

This report describes the results of the 2017 Stage 1-2 Archaeological Assessment of Part of Lot 26 Concession 6 (Geographic Township of Collingwood) Town of the Blue Mountains, County of Grey, conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P038 issued to Marilyn Cornies by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) and the Provincial Policy Statement (2014) in order to support a Draft Plan of Subdivision application 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 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 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 consisting of high intensity test pit methodology at a five-metre interval between individual test pits, and by intensified test pit survey at an interval of two and a half metres on 19-20 September 2017, 19, 23-26 and 30 October 2017. 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 Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

As a result of the Stage 2 Property Assessment of the study area, 131 artifacts over 41 positive test pits were encountered. All positive test pits seemed to be within the extent of the previously identified Camperdown II (BdHc-27) Site. The Camperdown I Site (BdHc-26) was not relocated despite numerous attempts to determine the original location. Based on the characteristics of these sites, previous research, and the analysis of artifacts, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the Camperdown II (BdHc-27) Site has not been completely documented. There is potential for further CHVI for this location. The Camperdown II (BdHc-27) Site requires 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 Camperdown II (BdHc-27) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011).*
3. *The Stage 3 Site-specific Assessment of the Camperdown II (BdHc-27) 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. *Intensified test pit survey has been completed as part of the Stage 2 Property Assessment and are not required as part of the Stage 3 Site-specific Assessment of the Camperdown II (BdHc-27) Site.*
5. *No soil disturbances or removal of vegetation shall take place within the archaeological site identified as the Camperdown II (BdHc-27) Site within this Stage 1-2 Archaeological Assessment report, or within the area enclosed within a 20 metre buffer surrounding the Camperdown II (BdHc-27) Site prior to the acceptance of the Ministry of Tourism, Culture and Sport (MTCS) of a report recommending that all archaeological concerns for the Camperdown II (BdHc-27) Site have been addressed and that there is no further cultural heritage value or interest for this site.*
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 Camperdown II within this Stage 1-2 Archaeological Assessment report to ensure that construction activities do not impinge upon the Camperdown II (BdHc-27) Site unless under the direct supervision of a consulting archaeologist licensed in Ontario by the Minister of Tourism, Culture and Sport and as a part of the ongoing archaeological investigations of the Camperdown II (BdHc-27) Site.*
7. *The high visibility fence will be installed at the outer limit of the 20 metre wide Protective Buffer surrounding the Camperdown II (BdHc-27) Site as illustrated in the accompanying mapping within the Supplementary Report Package of this report filed with MTCS 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 Camperdown II (BdHc-27) Site identified within this Stage 1-2 Archaeological Assessment report is accepted into the Provincial Registry of Archaeological Reports by the Ontario Ministry of Tourism, Culture and Sport.*

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. *It is anticipated that the fieldwork and reporting of the Stage 4 Mitigation of Development Impacts (if required) will be completed in the spring of 2018 and it is not anticipated that any development activity will be necessary within the 50 metre wide Monitoring Buffers prior to the fall of 2018.*
15. *The Camperdown 1 Site (BdHc-26) was not relocated despite return visits to the property. The mapped location of the site, the described location of the site, and the GPS coordinates provided do not correspond to the same location. All of these locations were subjected to intensified test pit survey. A historic site as described in the previous Stage 2 Property Assessment when the site was found should be easy to relocate by test pit methodology. It is suspected that this site is not located within the study area and may be situated just outside of the study area. No further work is recommended with respect to this site within the study area.*
16. *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.*
17. *It is recommended that the balance of the study area outside of the site areas and surrounding Protective Buffer be cleared of archaeological concern and that development activity be permitted to proceed, subject to the above provisions.*

3.0 TABLE OF CONTENTS

4.0 PROJECT PERSONNEL

AMICK CONSULTANTS LIMITED PARTNERS
Michael Henry (MTCS Professional Archaeologist Licence #P058)
Marilyn Cornies (MTCS Professional Archaeologist Licence #P038)

AMICK CONSULTANTS LIMITED BUSINESS MANAGER
Melissa Maclean BBA email mmaclean@amick.ca

PROJECT COORDINATOR
Melissa Maclean

PROJECT LICENSEE ARCHAEOLOGIST
Marilyn Cornies (MTCS Professional Archaeologist Licence #P038)

PROJECT FIELD DIRECTORS
Dylan Morningstar (MTCS Applied Research Archaeologist License #R1166)

PROJECT FIELD ASSISTANTS
Kalanie Deason Brenden Di Vittori Katrina Mason

PROJECT REPORT PREPARATION
Nick Kaluzny

PROJECT HISTORIC ARTIFACT ANALYSES
Michael Henry (MTCS Professional Archaeologist Licence #P058)

PROJECT GRAPHICS
Nick Kaluzny

PROJECT PHOTOGRAPHY
Dylan Morningstar (MTCS Applied Research Archaeologist License #R1166)

5.0 PROJECT CONTEXT

5.1 DEVELOPMENT CONTEXT

This report describes the results of the 2017 Stage 1-2 Archaeological Assessment of Part of Lot 26 Concession 6 (Geographic Township of Collingwood) Town of the Blue Mountains, County of Grey, conducted by AMICK Consultants Limited. This study was conducted under Professional Archaeologist License #P038 issued to Marilyn Cornies by the Minister of Tourism, Culture and Sport for the Province of Ontario. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) and the Provincial Policy Statement (2014) in order to support a Draft Plan of Subdivision application 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 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 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 consisting of high intensity test pit methodology at a five-metre interval between individual test pits, and by intensified test pit survey at an interval of two and a half metres on 19-20 September 2017, 19, 23-26 and 30 October 2017. 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 Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.

The proposed development of the study area includes 34 single detached homes and an associated lane, green space and a storm water management pond. A preliminary plan of the proposed development has been submitted together with this report to MTCS for review and reproduced within this report as Map 3.

5.2 HISTORICAL CONTEXT

5.2.1 GENERAL HISTORICAL OUTLINE

The Huron, Petun and various Algonkian First Nations resided in this area for an extended period of time prior to any European visitors to the area. The County of Grey was first established in 1852. Before the county was organized, the British referred to the entire area

as "The Queen's Bush". Until 1852 this area was known for its dangerous travelling conditions for Euro-Canadians. The first townships within Grey County were originally called "Alta" and "Zero" which were quickly renamed Collingwood and St. Vincent respectively. During the colonization of the County, a quickly established network of trails and roads, in an addition to several natural harbours, provided easy access for settlers. However, due to the great distances involved and dangerous traveling conditions, the early settlers of this area relied heavily on First Nations to advise on settlement area selection, crop planting, medicine and survival. From the start of colonization, it was easy to use the numerous natural resources easily available in the area as a means to generate income. Typically, fish, furs, minerals, and forestation were the initial main industries. By 1865 Grey County consisted of 16 Townships, 4 towns and 44 villages or post offices (Grey County 2010).

The Township of Collingwood was the first Township to be surveyed within Grey County. The Township was named after Admiral Collingwood of the British Royal Navy. Land within the Township was given to United Empire Loyalists, military veterans or to settlers. Although many grants were given out, very few grantees actual settled in the area. Charles Rankin L.P.S was sent out in 1833 to survey and lay out townships in what was often referred to as the 'wild land' which was just beyond the border of Simcoe County. While surveying the area Rankin picked a sheltered bay west of what is now known as Thornbury for himself to settle and became the first known settler in Grey County. This bay is still known as Rankin's Landing. Following the Rankins, were the McGuires. Settlement of this area was slow due to the difficult living conditions and lack of readily available commercial goods and services (Our Roots 2010). With the construction of the railway line completed in 1880, settlement in the area rapidly increased (Town of Blue Mountains 2010).

Map 2 is a facsimile segment of the Township of Toronto map reproduced from the "Grey County Supplement", Illustrated Atlas of the Dominion of Canada (H. Belden & Co. 1878). Map 2 illustrates the location of the study area and environs as of 1878. The study area is not shown to belong to anyone and there are no structures within its boundaries. However, a settlement structure is depicted to the west of the study area. In addition, there is a settlement road adjacent to the northern boundary of the study area and one near to the western boundary of the study area. These roads are the current Old Lakeshore Road and Camperdown Road respectively. There is also a historic railway near to the north of the study area. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-contact settlement within the study area. In addition, the coast of Georgian Bay is just to the north of the study area, which would have been a source of potable water and used for waterborne trade and communication.

It must be borne in mind that inclusion of names of property owners and depictions of structures within properties on these maps were sold by subscription. While information included within these maps may provide information about occupation of the property at a specific point in time, the absence of such information does not indicate that the property was not occupied.

5.2.2 CURRENT CONDITIONS

The present use of the study area is as mainly woodlot. The study area is roughly 6.61 hectares in area. The study area includes within it mostly woodlot. In the northwest corner of the study area is a disturbed area. A steep slope runs along the entire southern boundary of the study area. There is a small low-lying and wet area just to the north of the steep slope, located roughly centrally in the study area. The remainder of the study area is woodlot. The study area is bounded on the north by Old Lakeshore Road, on the east and west by woodlot, and on the south by residential property and woodlot. The study area is approximately 150 metres to the northeast of the intersection of Camperdown Court and Camperdown Road. 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.

5.2.3 SUMMARY OF HISTORICAL CONTEXT

The brief overview of documentary evidence readily available indicates that the study area is situated within an area that was close to the historic transportation routes, historic railways and historic settlements, and as such has potential for sites relating to early Post-contact settlement in the region. Background research also indicates the property has potential for significant archaeological resources of Native origins based on proximity to a natural source of potable water in the past which would have also been used for waterborne trade and communication.

5.3 ARCHAEOLOGICAL CONTEXT

The Archaeological Sites Database administered by the Ministry of Tourism, Culture and Sport (MTCS) indicates that there are two (2) 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 MTCS. 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 two (2) previous studies have taken place within 50m of the study area. For further information see:

Archaeological Assessments Ltd. (2012). *The Stage 2 Archaeological Assessment of the Camperdown East 1 Limited Subdivision Development, Town of Blue Mountains, County of Grey*. Oakville, Ontario. Archaeological License Report on File With the Ministry of Tourism, Culture and Sport, Toronto, Ontario. PIF# P013-547-2010.

(2009). *The Stage 1 Archaeological Assessment Of The Camperdown East 1 Limited Subdivision Development, Town Of Blue Mountains, County Of Grey.* Oakville, Ontario. Report on file, Ministry of Tourism and Culture, Toronto. PIF# P013-474-2009.

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 MTCS for the purposes of completing this study, there are two previous report detailing, *"archaeological fieldwork carried out on the lands to be impacted by this project"*, and these reports document known archaeological sites within the study area.

The Standards and Guidelines for Consultant Archaeologists stipulates that the necessity to summarize the results of previous archaeological assessment reports, or to cite MTCS 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 have relevance to the lands to be potentially impacted by the proposed undertaking, it includes fieldwork or recommendations relevant to the study area,

and it documents archaeological sites within the study area. Therefore, there is a requirement to include the summary data for the previous reports.

The Archaeological Assessments Ltd. (AAL) Stage 1 report details background research on the study area, which has the same limits as the current report, as well as a property inspection completed 2 April, 2009 (AAL 2009: 1). Despite low potential within the study area for areas of steep slope, poor drainage, or previous disturbance, the report concludes that:

> "…some sections of the subject lands have a moderate to high potential for archaeological resources. These areas have a moderate to high archaeological potential because they consist of well drained undisturbed lands associated with several small watercourses. The subject property is also located within the area inhabited by the Petun, an Iroquoian tribal group who occupied this region in the 16th and 17th centuries. Finally, there is some potential for mid to late 19th century Euro-Canadian homesteads within the subject lands. Other sections of the subject lands have a low potential for archaeological resources due to areas of severe slope or disturbance caused by previous development."
>
> (AAL 2009: 7)

As a result of these findings, AAL recommended a Stage 2 archaeological assessment for the study area.

The Stage 2 assessment was carried out in June 2010 and resulted in the discovery of two sites during test pit survey on a 5 metre grid: Camperdown I (BdHc-26) and Camperdown II (BdHc-27) (AAL 2012: 5). The following is an excerpt of the Stage 2 results in regard to the sites encountered:

> *The Camperdown I site (BdHc-26) likely represents the location of a mid to late 19th Century Euro-Canadian homestead. The site is located along the north edge of the subject property between Lots #15 and #16 of the proposed development (Figure 4). The site is situated in open scrub vegetation on low, flat ground at the bottom of a north facing slope immediately adjacent to Old Lakeshore Road. The site consists of 8 positive test pits spread over an area measuring 25 metres east-west by 10 metres north-south. The topsoil in this area is a imperfectly drained clay with depths of approximately 30cm. A GPS reading was taken in the centre of the positive test pits and the Latitude and Longitude coordinates are N 44° 32' 05.3" and W 80° 23' 32.8" (UTM 17T).*
>
> *A total of 32 historic artifacts were collected from the 8 positive test pits and include 9 ceramics, 7 pieces of window glass, 6 brick fragments, 4 bottle glass, 3 cut nails, one pipe stem, one fragmented nail and one brass horse harness bell. The ceramic assemblage included 5 red earthenware, one ironstone, one whiteware, one banded ware, and one unidentified fragmented ceramic. The pipe stem was labeled "Montreal-Bannerman" indicating that it was manufactured sometime between 1857*

> *and 1907. The small artifact assemblage from the site suggests that it represents the location of a homestead that was occupied sometime between the 1840's and the 1880's.*
>
> *The Camperdown II site (BdHc-27) also likely represents the location of a mid to late 19th Century Euro-Canadian homestead. The site is located up a slight hill on a higher elevation than the Camperdown I site (BdHc-26), in the eastern section of the subject property. The site is situated in the "Condo Road A" corridor near Lots #17 and #18 of the proposed development (Figure 4). The site is located in a open scrubland to partly forested area on high, relatively level ground. The site consists of 7 positive test pits spread over an area measuring 20 metres east-west by 25 metres north-south. The topsoil in this area was a clay loam with a depth of approximately 25cm. A GPS reading was taken in the centre of the positive test pits and the Latitude and Longitude coordinates are N 44° 32' 03.4" and W 80° 23' 31.8" (UTM 17T).*
>
> *A total of 21 historic artifacts were collected from the 7 positive test pits and includes 13 ceramics, 4 cut nails, 2 brick fragments, one plain pipe bowl fragment and one piece of bottle glass. The ceramic assemblage included 7 whiteware, 2 transfer printed, one red earthenware, one edge ware, one painted ware and one unidentified fragmented ceramic. The transfer printed ceramics included one blue pattern and one possible piece of flow blue. The edge ware was a blue pattern but was too small and fragmented to determine its shape or type. The painted ware appeared to be a late palette polychrome pattern. The small artifact assemblage from the site suggests that it may represent the location of another homestead that was occupied sometime between the 1840's and the 1880's.*
>
> (AAL 2012: 5-6)

The report concludes that both sites exhibit potential CHVI and must proceed to Stage 3 in order to gain a more in-depth understanding of the occupational time line of each site (AAL 2012: 6). In preparation for the Stage 3, archival research will be in order to reconstruct the land use history of the study area (AAL 2012: 6). The Stage 3 assessment should consist of 1 metre square test units on a 5 metre grid at each site, as well as additional units amounting to 20% of the initial grid total in "areas of interest within the sites" (MTC 2011:28) (AAL 2012: 6).

The study area is situated in area for which there is no archaeological master plan.

It must be further noted that there are no relevant plaques associated with the study area.

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 MTCS. As a result it was determined that there are no (0) 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.

The study area lies approximately 300 metres south of Georgian Bay, which is a source of potable water and a navigable water way. 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 1 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 outline to illustrate the relationships of broad cultural groups and time periods.

TABLE 1 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 MTCS. As a result it was determined that two (2) 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 2:

TABLE 2 POST-CONTACT SITES WITHIN 1KM

Site Name	Borden #	Site Type	Cultural Affiliation
Camperdown I	BdHc-26	Homestead	Euro-Canadian
Camperdown II	BdHc-27	Homestead	Euro-Canadian

Both of the above noted archaeological sites are situated within 300 metres of the study area and are documented as situated within 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 LOCATION AND CURRENT CONDITIONS

The study area is described as Part of Lot 26 Concession 6 (Geographic Township of Collingwood) Town of the Blue Mountains, County of Grey. This assessment was undertaken as a requirement under the Planning Act (RSO 1990b) in order to support a Draft Plan of Subdivision application and companion Zoning By-law Amendment application as part of the pre-submission process.

The present use of the study area is as mainly woodlot. The study area is roughly 6.61 hectares in area. The study area includes within it mostly woodlot. In the northwest corner of the study area is a disturbed area. A steep slope runs along the entire southern boundary of the study area. There is a small low-lying and wet area just to the north of the steep slope, located roughly centrally in the study area. The remainder of the study area is woodlot. The study area is bounded on the north by Old Lakeshore Road, on the east and west by woodlot, and on the south by residential property and woodlot. The study area is approximately 150 metres to the northeast of the intersection of Camperdown Court and Camperdown Road. 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.

5.3.4 PHYSIOGRAPHIC REGION

The bulk of the study area is in the Beaver Valley Physiographic region a small but well-defined region of 77 square miles, occupying a sharply cut indentation in the Niagara cuesta, opening upon Georgian Bay. The greater part of the valley's erosional history occurred in preglacial times when the forerunner of the Beaver River was a tributary to the stream which carved the deep valley of Georgian Bay. The advance of the glacier up the valley, possibly several times, served to smooth off all the protruding spurs which must have resulted from river erosion, thus leaving it an open, steep-sided, broad-bottomed feature almost comparable to the U-shaped valleys resulting from alpine glaciations (Chapman and Putnam 1984: 122-124).

A small portion of the eastern part of the study area is situated within the Simcoe Lowlands physiographic region. For the most part, at one time, this restricted basin was part of the floor of glacial Lake Algonquin, and its surface beds are deposits of deltaic and lacustrine

origin, and not glacial outwash. As a small basin shut in by the Edenvale Moraine, the Minesing flats represent an annex of the glacial Lake Nipissing plains. (Chapman and Putnam 1984: 177-182).

5.3.5 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 site 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).

The study area is approximately 300 metres south from the shore of Georgian Bay, which is a source of potable water and a means of waterborne trade and communication.

5.3.6 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:

5.3.6.1 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 contains no buildings or structural footprints.

5.3.6.2 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 contain an area of disturbed ground in the northwest corner of the study area. Maps 4 & 5 of this report illustrate the location of this feature.

5.3.6.3 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.

There is a small low-lying and wet area just to the north of the steep slope, located roughly centrally in the study area. Maps 4 and 5 of this report illustrate the location of this feature.

5.3.6.4 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.

There is an area of steep slope along the entire southern boundary of the study area. Maps 4 & 5 of this report illustrate the location of this feature.

5.3.6.5 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.

The study area does contain wooded areas through the majority of the study area. Maps 4 & 5 of this report illustrate the location of this feature.

5.3.6.6 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 does not contain any ploughable lands.

5.3.6.7 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 does not contain any areas of lawn, pasture or meadow.

5.3.7 SUMMARY

Background research indicates the vicinity of the study area has potential for archaeological resources of Native origins based on proximity to a source of potable water that was also used as a means of waterborne trade and communication. Background research also suggests potential for archaeological resources of Post-contact origins based on proximity to previously registered archaeological sites of Post-contact origins, proximity to a historic roadway, proximity to a historic railway corridor and proximity to areas of documented historic settlement.

Current conditions within the study area indicate that some areas of the property may have no or low archaeological potential and do not require Stage 2 Property Assessment or should be excluded from Stage 2 Property Assessment. These areas would include the presence of disturbed patches of land, and areas that are not accessible due to the presence of a steep

slope or a low-lying and wet area. A significant proportion 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 by high intensity test pit methodology at a five-metre interval between individual test pits, and by intensified test pit survey at an interval of two and a half metres on 19-20 September 2017, 19, 23-26 and 30 October 2017.

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 photographed. 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 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, except those areas around positive test pits that underwent intensified test pit survey at an interval of 2.5 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, except those areas around positive test pits that underwent intensified test pit survey at an interval of 2.5 m 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, except those areas around positive test pits that underwent intensified test pit survey at an interval of 2.5 m between individual test pits.]

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. In areas where topsoil was not present, test pits were excavated to a minimum of 30cm in depth to ensure that suspected subsoils, if present, were not layers of fill or waterborne materials overlying buried topsoil. If these areas consisted of fill soils, test pits were also excavated a minimum of 30 cm below grade in order to ensure disturbance extended below even deep topsoil layers such as those encountered in agricultural fields to ensure that the depth of disturbance was sufficient to remove archaeological potential in most contexts. Where other evidence indicates locations of potentially significant archaeological sites that may include cultural deposits below fill soils, alternative strategies to explore beneath the fill layers found in some areas may be necessary to complete the Stage 2 Property Assessment. In such cases, further Stage 2 Property Assessment may be recommended following completion of the property survey under conventional methodologies.]

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)

Approximately 70% of the study area consisted of woodlot that was test pit surveyed at an interval of 5 metres between individual test pits. Approximately 2 % of the study area was woodlot that was test pit surveyed at an interval of 2.5 metres between individual test pits. Approximately 28% of the study area was not assessable due to the presence of disturbed land and areas of steep slope.

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

Two archaeological sites were documented as part of a previous Stage 2 Property Assessment undertaken in 2012.

> *Two archaeological sites were found as a result of the assessment. Both sites consist of mid to late 19th century Euro-Canadian homesteads and have been registered as the Camperdown I site (BdHc- 26) and the Camperdown II site (BdHc-27).*
>
> *Both of these sites are potentially significant archaeological resources and will require a Stage 3 assessment in order to determine their cultural heritage*

> *significance. No soil disturbance or development activity can take place until after both sites have been subjected to further assessment.*
>
> (Archaeological Assessments Ltd. 2102: iii)

7.1.1 CAMPERDOWN I (BDHC-26)

As a result of the 2017 property Assessment of the study area, no evidence was encountered that allowed for this site to be relocated. After the initial assessment of the study area was completed, the property was revisited and the survey intensified to a 2.5 metre interval test pit survey in the area depicted on the map included within the 2012 Stage 2 Property Assessment report and at the location of the latitude and longitude coordinates provided. A historic site should be relatively easy to relocate by test pit survey as they are generally very rich in artifacts. It is suspected that the site may not be within the study area.

7.1.2 CAMPERDOWN II (BDHC-27)

As a result of the 2017 property Assessment of the study area, 131 artifacts of a Post-Contact origin were encountered over 41 positive test pits. All of the positive test pits were located within the boundaries of the previously registered Camperdown II (BdHc-27) Site. 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 Tourism culture and Sport.

The Camperdown II (BdHc-27) Site consists of 131 artifacts covering an area approximately 35 metres from north to south and 30 metres from west to east. The number and types of artifacts collected from the Camperdown II (BdHc-27) Site are listed below in Table 3. 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 Tourism culture and Sport.

A detailed description of each historic artifact category is appended to this report as Appendix A. The artifact catalogue is located in the supplementary documentation submitted in conjunction with this report to the MTCS.

TABLE 3 CAMPERDOWN II (BDHC-27) ARTIFACT COUNTS AND TYPES

DESCRIPTION	FREQUENCY	PERCENTAGE
Brick Fragment	15	11.45
Coarse Red Earthenware	11	8.40
Plain Refined White Earthenware (RWE)	17	12.98
Shell Edge Refined White Earthenware	8	6.11
Slip Decorated RWE	3	2.29
Hand Painted RWE	7	5.34
Cobalt Blue Transfer Printed RWE	10	7.63
Coloured Transfer Printed RWE	7	5.34
Plain Ironstone	10	7.63
Transfer Printed Ironstone	1	0.76
Relief Moulded Ironstone	3	2.29
Undiagnostic Green Bottle Glass	3	2.29
Undiagnostic Olive Green Glass	6	4.58
Undiagnostic Clear Bottle Glass	3	2.29
Cut Nail	23	17.56
Unidentified Iron Object	4	3.05
TOTAL	131	100

The collection of artifacts from this assessment is packaged in a single banker's box and housed at the Lakelands District office of AMICK Consultants Limited in Port McNicoll until such time as an appropriate permanent location, as approved by MTCS, 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, one page of photo log, one page of field notes, and 51 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 consisting of high intensity test pit methodology at a five-metre interval between individual test pits, and by intensified test pit survey at an interval of two and a half metres on 19-20 September 2017, 19, 23-26 and 30 October 2017. 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 Tourism, Culture and Sport (MTCS) 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 Actor that is a federal, provincial or municipal historic landmark or site*
- *property that local histories or informants have identified with possible archaeological sties, 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, MTCS 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 identified primary water sources within 300 metres of the study area. The study area is approximately 300 metres south from the shore of Georgian Bay, which is a source of potable water and a means of waterborne trade and communication.

   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 no identified secondary water sources within 300 metres of 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 identified features indicating past water sources within 300 metres of the study area. The study area is situated within an area once under glacial Lake Algonquin. The study area is now located between the old Lake Algonquin shoreline and the current shoreline of Georgian Bay. During the transition from the glacial Lake Algonquin to the present Georgian Bay the shoreline would have receded through the study area. As the receding process is gradual the study area would have been within close proximity to a shoreline providing access to an abundance of natural resources as well as waterborne trade and communication.

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 shorelines within 300 metres of the study area. The shore of Georgian Bay is approximately 300 metres to the north of the study area. Furthermore, the study area is situated within an area once under glacial Lake Algonquin. The study area is now located between the old Lake Algonquin shoreline and the current shoreline of Georgian Bay. During the transition from the glacial Lake Algonquin to the present Georgian Bay the shoreline would have receded through the study area. As the receding process is gradual the study area would have been within close proximity to a shoreline providing access to an abundance of natural resources as well as waterborne trade and communication.

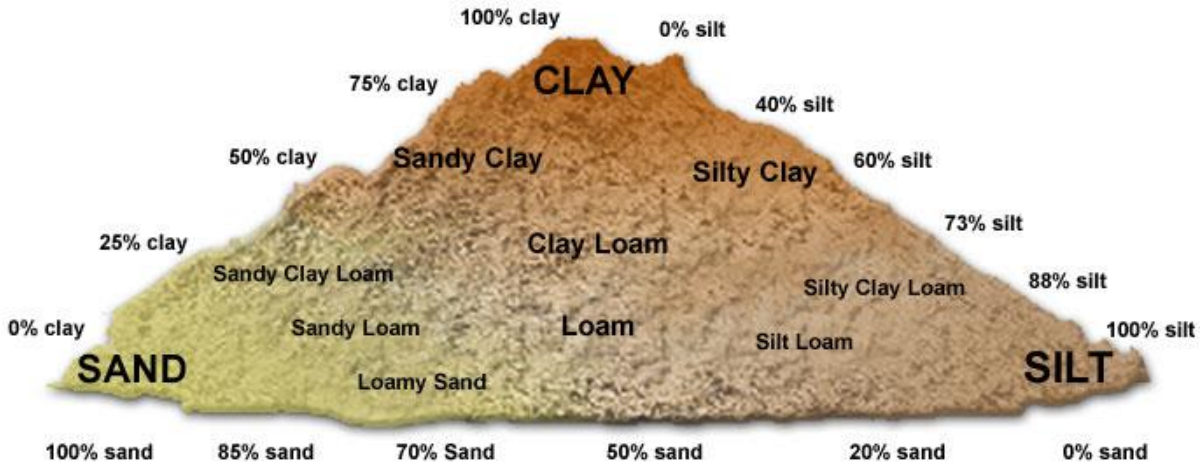
5) *Elevated Topography*
Features of elevated topography that indicate archaeological potential include eskers, drumlins, large knolls, and plateaux.

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 dark brown clay loam, which is consistent with the wider area surrounding the property.

The image below (Kuhlmann, Stacy 2017) shows the consistencies of soil types and how they compare to one another. The lower percentage of clay allows the soil to break up from the action of ploughing alone when not compacted or bound by extensive root masses.



(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 is situated in close proximity to a historic house identified on the historic atlas map.

10) *Early Historical Transportation Routes*
This includes evidence of trails, passes, roads, railways, portage routes.

The study area is situated within 100 metres of two early settlement roads that appears on the Historic Atlas Map of 1881. These historic roads correspond to the current Old Lakeshore Road and Camperdown Road. The study area is also situated within 100 metres of a railway line indicated on the historic atlas map. The property is also situated within 300 metres of a body of water that was used for waterborne trade and communication. In this case, the study area is to the south of the shore of Georgian Bay.

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. 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. 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.

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 4 below summarizes the evaluation criteria of the Ministry of Tourism and Culture 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 previously registered archaeological sites, proximity to historic settlement structures, and the location of early historic settlement roads adjacent to the study area.

TABLE 4 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.)	**Y**			If Yes, potential determined
2b	Secondary water source within 300 m. (stream, spring, marsh, swamp, etc.)		**N**		If Yes, potential determined
2c	Past water source within 300 m. (beach ridge, river bed, relic creek, etc.)	**Y**			If Yes, potential determined
2d	Accessible or Inaccessible shoreline within 300 m. (high bluffs, marsh, swamp, sand bar, etc.)	**Y**			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.*

As a result of the property Assessment of the study area, 131 artifacts of a Post-Contact origin were encountered over 41 positive test pits. All of the positive test pits were located within the boundaries of the previously registered Camperdown II (BdHc-27) Site. 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 Tourism culture and Sport.

Because of the amount of findings, and the fact that all findings were within a previously registered archaeological site, it has been determined that the Camperdown II (BdHc-27) Site still retains Cultural Heritage Value or Interest, and will require a Stage 3 Site-Specific Assessment in order to determine the extent of the site and to determine if Stage 4 Mitigation will be required.

9.0 RECOMMENDATIONS

9.1 STAGE 1 RECOMMENDATIONS

Under Section 7.7.4 of the Standards and Guidelines for Consultant Archaeologists (MTC 2011: 133) the recommendations to be made as a result of a Stage 1 Background Study are described.

> *1) Make recommendations regarding the potential for the property, as follows:*
> *a. if some or all of the property has archaeological potential, identify areas recommended for further assessment (Stage 2) and areas not recommended for further assessment. Any exemptions from further*

assessment must be consistent with the archaeological fieldwork standards and guidelines.
b. if no part of the property has archaeological potential, recommend that the property does not require further archaeological assessment.

2) Recommend appropriate Stage 2 assessment strategies.

9.2 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 o f 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 Stage 2 Property Assessment of the study area, 131 artifacts over 41 positive test pits were encountered. All positive test pits seemed to be within the extent of the previously identified Camperdown II (BdHc-27) Site. The Camperdown I Site (BdHc-26) was not relocated despite numerous attempts to determine the original location. Based on the characteristics of these sites, previous research, and the analysis of artifacts, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the Camperdown II (BdHc-27) Site has not been completely documented. There is potential for further CHVI for this location. The Camperdown II (BdHc-27) Site requires 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 Camperdown II (BdHc-27) Site must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011).*
3. *The Stage 3 Site-specific Assessment of the Camperdown II (BdHc-27) 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. *Intensified test pit survey has been completed as part of the Stage 2 Property Assessment and are not required as part of the Stage 3 Site-specific Assessment of the Camperdown II (BdHc-27) Site.*
5. *No soil disturbances or removal of vegetation shall take place within the archaeological site identified as the Camperdown II (BdHc-27) Site within this Stage 1-2 Archaeological Assessment report, or within the area enclosed within a 20 metre buffer surrounding the Camperdown II (BdHc-27) Site prior to the acceptance of the Ministry of Tourism, Culture and Sport (MTCS) of a report recommending that all archaeological concerns for the Camperdown II (BdHc-27) Site have been addressed and that there is no further cultural heritage value or interest for this site.*
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 Camperdown II within this Stage 1-2 Archaeological Assessment report to ensure that construction activities do not impinge upon the Camperdown II (BdHc-27) Site unless under the direct supervision of a consulting archaeologist licensed in Ontario by the Minister of Tourism, Culture and Sport and as a part of the ongoing archaeological investigations of the Camperdown II (BdHc-27) Site.*
7. *The high visibility fence will be installed at the outer limit of the 20 metre wide Protective Buffer surrounding the Camperdown II (BdHc-27) Site as illustrated in the accompanying mapping within the Supplementary Report Package of this report filed with MTCS 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 Camperdown II (BdHc-27) Site identified within this Stage 1-2 Archaeological Assessment report is accepted into the Provincial Registry of Archaeological Reports by the Ontario Ministry of Tourism, Culture and Sport.*
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. *It is anticipated that the fieldwork and reporting of the Stage 4 Mitigation of Development Impacts (if required) will be completed in the spring of 2018 and it is not anticipated that any development activity will be necessary within the 50 metre wide Monitoring Buffers prior to the fall of 2018.*
15. *The Camperdown 1 Site (BdHc-26) was not relocated despite return visits to the property. The mapped location of the site, the described location of the site, and the GPS coordinates provided do not correspond to the same location. All of these locations were subjected to intensified test pit survey. A historic site as described in the previous Stage 2 Property Assessment when the site was found should be easy to relocate by test pit methodology. It is suspected that this site is not located within the study area and may be situated just outside of the study area. No further work is recommended with respect to this site within the study area.*
16. *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.*
17. *It is recommended that the balance of the study area outside of the site areas and surrounding Protective Buffer be cleared of archaeological concern and that development activity be permitted to proceed, subject to the above provisions.*

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 Tourism and Culture 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.*

11.0 BIBLIOGRAPHY AND SOURCES

Archaeological Assessments Ltd. (2012). *The Stage 2 Archaeological Assessment of the Camperdown East 1 Limited Subdivision Development, Town of Blue Mountains, County of Grey*. Archaeological Assessments Ltd., Oakville. Archaeological License Report on File With the Ministry of Tourism, Culture and Sport, Toronto, Ontario. PIF# P013-547-2010.

(2009). *The Stage 1 Archaeological Assessment Of The Camperdown East 1 Limited Subdivision Development, Town Of Blue Mountains, County Of Grey*. Archaeological Assessments Ltd., Oakville. Archaeological License Report on File With the Ministry of Tourism, Culture and Sport, Toronto, Ontario. PIF# P013-474-2009.

Chapman, L.J. & D.F. Putnam. (1984). *The Physiography of Southern Ontario (Third Edition).* Ontario Geological Survey, Special Report #2. Ontario Ministry of Natural Resources, Toronto.

Goel, Tarun (2013). Road Construction: History and Procedure. Bright Hub Engineering. Retrieved 24 May 2015 from URL: http://www.brighthubengineering.com/structural-engineering/59665-road-construction-history-and-procedure/

Google Earth (Version 6.0.3.2197) [Software]. (2009). Available from http://www.google.com/earth/index.html.

Google Maps. (2012). Available from: http://maps.google.ca/?utm_campaign =en&utm_source=en-ha-na-ca-bk-gm&utm_medium=ha&utm_term =google%20maps.

Grey County (2010). *History of Grey County*. Retrieved 22 September, 2010 from URL: http://www.grey.ca/government-administration/about-grey/history-of-grey-county/. Owen Sound, Ontario.

H. Belden & Co. (1881) *"Grey County Supplement". Illustrated Atlas of the Dominion of Canada.* H. Belden & Co., Toronto.

Innovative Planning Solutions. (2018). *Draft Plan of Subdivision, Part of Lot 26 Concession 6, (Formerly Township of Collingwood) in the Town of the Blue Mountains, County of Grey.* Innovative Planning Solutions, Barrie.

Kuhlmann, Stacy. (2017). *Types of Soil.* Diagram of Soil Types available from http://www.tes.com/lessons/AKChU3fbfZKo9g/types-of-soil.

Ontario Heritage Act, RSO 1990a, Government of Ontario. (Queen's Printer, Toronto).

Ontario Heritage Amendment Act, SO 2005, Government of Ontario. (Queen's Printer, Toronto).

Ontario Ministry of Citizenship, Culture and Recreation (OMCzCR). (1993). *Archaeological Assessment Technical Guidelines, Stages 1-3 and Reporting Format.* (Queen's Printer for Ontario 1993)

Ontario Ministry of Culture (MCL). (2005). *Conserving a Future for Our Past: Archaeology, Land Use Planning & Development in Ontario (An Educational Primer and Comprehensive Guide for Non-Specialists).* (Heritage & Libraries Branch, Heritage Operations Unit: Toronto).

Ontario Ministry of Culture and Communications (MCC) & Ministry of Environment (MOE). (1992). *Guideline for Preparing the Cultural Heritage Resource Component of Environmental Assessments.* (Cultural Programs Branch, Archaeology and Heritage Planning: Toronto).

Ontario Ministry of Tourism and Culture (MTC). (2011). *Standards and Guidelines for Consultant Archaeologist.* (Programs and Services Branch: Culture Programs Unit, Toronto).

Ontario Planning Act, RSO 1990b, Government of Ontario. (Queen's Printer, Toronto).

Our Roots 2010 History of the County of Grey., URL: http://www.ourroots.ca/e/page.aspx?id=2529344, as of Sept. 22, 2010. University of Calgary, Calgary.

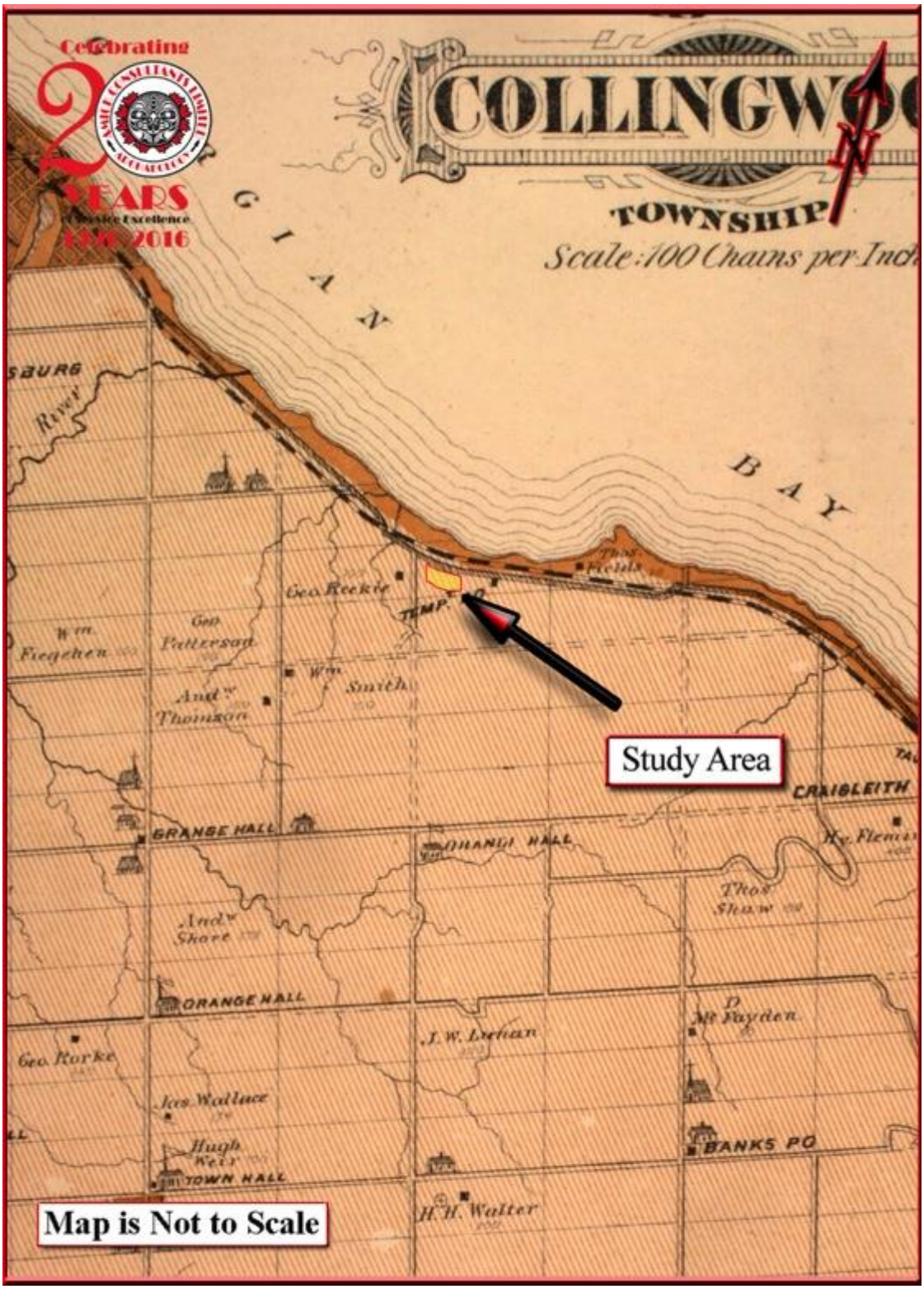
Provincial Policy Statement (2014). Government of Ontario. (Queen's Printer, Toronto).

Town of the Blue Mountains 2010 History of The Depot., URL: http://www.thebluemountains.ca/craigleith-depot-history.cfm, as of Sept. 22, 2010. Town of the Blue Mountains.

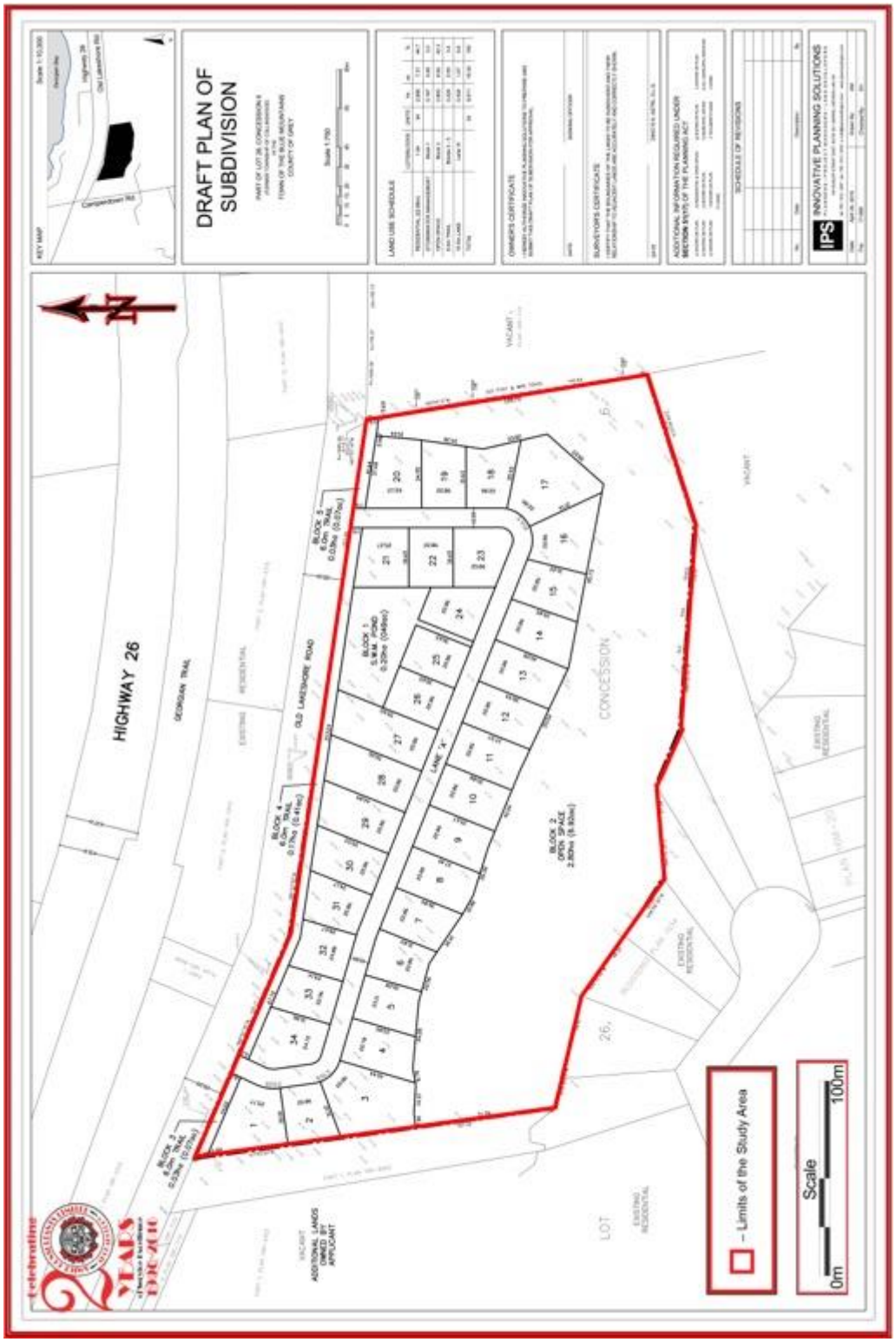
Wright, J.V. (1972). *Ontario Prehistory: an Eleven-thousand-year Archaeological Outline*. Archaeological Survey of Canada. National Museum of Man, Ottawa.

12.0 MAPS

MAP 1 LOCATION OF THE STUDY AREA (GOOGLE MAPS 2012)



MAP 2 FACSIMILE SEGMENT OF THE HISTORIC ATLAS MAP OF THE TOWNSHIP OF COLLINGWOOD (H. BELDEN & CO. 1881)



MAP 3 PLAN OF SURVEY (INNOVATIVE PLANNING SOLUTIONS 2018)

MAP 4 AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2011)

MAP 5 DETAILED PLAN OF THE STUDY AREA

13.0 IMAGES

IMAGE 1 DISTURBED PATCH

IMAGE 2 LOW-LYING AND WET AREA

IMAGE 3 STEEP SLOPE

IMAGE 4 TEST PIT SURVEY CONDITIONS

IMAGE 5 TEST PIT SURVEY CONDITIONS

IMAGE 6 CREW AT WORK

IMAGE 7 TEST PIT SURVEY CONDITIONS APPROACHING BDHC-27 FROM W

IMAGE 8 TEST PIT SURVEY CONDITIONS ADJACENT TO BDHC-27

IMAGE 9 REPRESENTATIVE ARTIFACTS OF THE CAMPERDOWN II SITE (BDHC-27)

APPENDIX A
DATABLE HISTORIC ARTIFACT TYPE DESCRIPTIONS

The descriptions offered below are confined to datable historic artifacts typically recovered during field investigations. Although other materials are often found, they do not necessarily lend themselves to dating archaeological assemblages and are therefore not included in the following discussion. Additionally, the following represents a comprehensive reference guide for datable objects and is not limited to finds specific to a particular project or site assemblage.

Creamware

Cream coloured earthenware was developed during the early 18th Century in England. It's development is attributed to Thomas Astbury of Shelton England during the reign of George I (Hughes n.d.: 104). George I reigned from 1714-1727 (Neumann 1967: 360). In the early period the lead glaze of this ware was applied in powdered form known as smithum or galena. Creamware achieved widespread production and general popularity as tableware by about 1750 as a result of Thomas Frye's development of a new process of applying the glaze in liquid form. This allowed for consistent and even application of decorative finishes and was quickly copied by other potters (Hughes n.d.: 105). Almost universal popularity was achieved by this ware when Josiah Wedgwood (founder of the renowned Wedgwood potteries) presented a creamware caudle and breakfast set of 73 pieces to Queen Charlotte as a gift to celebrate the birth of the Prince of Wales in 1762. It is said that the Queen was so impressed b this ware that she ordered a table service of the same ware but modified the design to her own taste. The resulting pattern became known as "Queen's Ware". When this set was delivered, George III saw it and likewise placed an order for an additional set altered to suit his own tastes. This further modification became known as the "Royal Pattern". As a result of these regal commissions, creamware achieved immense popularity (Hughes n.d.: 108).

By the late 1790s Creamware became the cheapest tableware in production. This was due to a number of factors, but it was mainly due to the introduction of pearlware which was whiter and more closely resembled oriental porcelain. This new ware quickly displaced Creamware as the most popular of the tableware produced during the late 18th and early 19th Centuries. By 1830 truly white (refined white earthenware) tableware was available. Creamware, known from about 1790 as "CC Ware", had changed as well. Officially "CC Ware" remained in production throughout the 19th Century but it became indistinguishable from refined white earthenware by about 1830.

Plain Creamware

Plain creamware was in production throughout the production history of the ware; however it is uncommon prior to 1790.

Pearlware

Pearlware was the next stage after creamware in the quest for a white ceramic body. For many years the development of pearlware was attributed to Josiah Wedgwood, who, after many experiments introduced a ceramic which he termed "pearl white" in 1779 (Hume 1982: 128; Sussman 1977: 105). Recently, a reconsideration of the evidence seems to suggest that pearlware, termed "china glaze", may have been in production sometime in the 1760s and certainly by 1775 (for a detailed discussion see Miller 1987).

Pearlware is essentially a variation of creamware. The body of the ware is essentially the same with slightly higher flint content, but the real difference is in the glaze. Cobalt was added to the glaze of this ceramic as a bluing agent to make the off-white colour of the glaze appear whiter. This ceramic was called "pearl white and "china glaze" amongst other things, but is now more commonly identified as pearlware.

Plain Pearlware

Plain undecorated pearlware fragments can be dated within the general production range of the ware itself, 1770 – 1830.

Polychrome Hand Painted Pearlware

Polychrome painted pearlware is simply pearlware which has been hand painted with more than one colour. There has been some attempt to differentiate polychrome painted wares based upon visibly identifiable distinctions in the particular hues employed. It has been suggested that from 1795 – 1815 colours were done in soft pastel hues, and from thence onward colours were of bright blues, greens, and pinkish reds (Humes 1982: 129). Others have suggested that underglaze pinks and reds were not seen on datable pieces prior to 1820 and that this is also true of certain shades of purple and green (Sussman and Moyle 1988: 1). While this is generally the case and can aid in the further refinement of dates applied to collections of hand painted wares, the unfamiliar should remain leery. These distinctions result from the use of chromium oxide as a constituent element of pigments beginning sometime around 1820. One must bear in mind that the particular colouring oxides used are only one of several factors which can have great effect on the final appearance of any ceramic product.

Many factors can affect the final colouration of the ware such as: the specific proportion of each of the elements used in both the underglaze pigment and the glaze itself; the constituent elements of, and colour of the vessel body; and the internal conditions of the kiln during the firing process (the purity of the atmosphere and the temperature being chief among these). With respect to the use of chromium oxide in particular, the specific ingredients of a glaze recipe and variations in the temperature used in firing will yield dramatically different results. Chromium oxide will produce the colours of red, pink, yellow, brown, green and blue-green (Rhodes 1983: 209). Each of these colours can also be produced using other oxides which have a longer history of use in ceramic production. The

essential difference is in the specific hues which chromium oxide produces in each of these colours which cannot be precisely duplicated by other means.

Relief Moulded Pearlware

This decorative technique is most commonly identified with ironstone. Raised designs on the vessels were incorporated into the moulding of the objects themselves. Many of the early patterns produced in this medium persist to the present day. Many ceramics manufactured prior to the introduction of ironstone, such as pearlware, incorporated the use of embossed designs, but this form of decoration had never been so closely identified with a particular ceramic as it became with ironstone.

Slip Decorated Pearlware

This type of decoration is made by applying slip in patterns to the exterior surface of vessels. This type of decoration was used on ceramics both before and after the production of pearlware and is therefore not useful in refining a date from that of general pearlware production.

Transfer Printed Pearlware

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18th Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable during the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118).

Shell Edge Decorated Pearlware

Shell edge came into production on creamware during the 1770s. It remained a status item of the middle and upper classes until the close of the century. Following the War of 1812, transfer printed wares began to rise very quickly in popularity and edged wares quickly became the cheapest of the decorated wares in the 19th Century. Edged wares remained in production on refined white earthenware long after pearlware ceased to be produced as a table ware around 1830 (Miller 1990: 115).

Refined White Earthenware

The various forms of refined white earthenware which came into production during the 1820s remained in production for an extended period of time and do not lend themselves well to dating unless one has the advantage of makers' marks. In the case of this site there is

not one example of refined white earthenware which has a maker's mark. This is not surprising since the ceramics from this ware category recovered from this site represent the cheapest types produced. The cheapest goods were often not marked since it was not considered worth the time and material.

Plain Refined White Earthenware

Lacking any definitive attributes, these sherds have been assigned a date of post 1825.

Polychrome Hand Painted Refined White Earthenware

Polychrome painted refined white earthenware is simply refined white earthenware which has been hand painted with more than one colour. There have been some attempts to differentiate polychrome painted wares based upon visibly identifiable distinctions in the particular hues employed. It has been suggested that from 1795 – 1815 colours were done in soft pastel hues, and from thence onward colours were of bright blues, greens, and pinkish reds (Humes 1982: 129). Others have suggested that underglaze pinks and reds were not seen on datable pieces prior to 1820 and that this is also true of certain shades of purple and green (Sussman and Moyle 1988: 1). While this is generally the case and can aid in the further refinement of dates applied to collections of hand painted wares, the unfamiliar should remain leery. These distinctions result from the use of chromium oxide as a constituent element of pigments beginning sometime around 1820. One must bear in mind that the particular colouring oxides used are only one of several factors which can have great effect on the final appearance of any ceramic product.

Many factors can affect the final colouration of the ware such as: the specific proportion of each of the elements used in both the underglaze pigment and the glaze itself; the constituent elements of, and colour of the vessel body; and the internal conditions of the kiln during the firing process (the purity of the atmosphere and the temperature being chief among these). With respect to the use of chromium oxide in particular, the specific ingredients of a glaze recipe and variations in the temperature used in firing will yield dramatically different results. Chromium oxide will produce the colours of red, pink, yellow, brown, green and blue-green (Rhodes 1983: 209). Each of these colours can also be produced using other oxides which have a longer history of use in ceramic production. The essential difference is in the specific hues which chromium oxide produces in each of these colours which cannot be precisely duplicated by other means.

Slip Decorated Refined White Earthenware

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

Sponge Decorated Refined White Earthenware

This decorative style is produced by applying pigment to the surface of vessels using sponges. This type of decoration enjoyed tremendous popularity during the middle of the 19th Century. Blue was the first colour used for this purpose and was most prevalent during the 1840s. Sponged wares were shipped to North America in quantity as cheap decorative kitchen and toiletry articles by mainly Scottish potteries until about 1890 (Collard 1984: 144-145).

Transfer Printed Refined White Earthenware

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18th Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable during the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118).

Ironstone

Ironstone is partially vitrified white earthenware. Plain ironstone was first produced in the 1840s and featured no decorative elements apart from ribs, scrolls, or panels which were an intrinsic part of the vessel design. Various designs in relief moulded decoration were patterned from 1848 onward. One pattern, known generally as the "wheat" Pattern has remained in production in various styles from 1848 up to the present day (Sussman 1985: 7). Ironstone is first mentioned on Ontario store records in 1847 (Kenyon 1988: 25). This ware gained popularity throughout the second half of the nineteenth century until by the 1880s it far outsold other ceramic types (Kenyon 1988: 20).

Ironstone was manufactured specifically for the North American market. In general, those potteries which produced this ceramic did so to the exclusion of all others (Sussman 1985: 8). During its early history, throughout the 1850s and early 1860s, ironstone was evidently as expensive as the costly transfer printed wares (Sussman 1985: 9). This ware was being advertised in London (Ontario) newspapers by the early 1860s and by the 1870s was one of the most popular ceramics available on the market (Kenyon n.d.: 11). By 1897 it was the cheapest ceramic sold by the T. Eaton Company. Prices charged for either plain or relief decorated ironstone were the same (Sussman 1985: 9).

Plain Ironstone

These pieces are not precisely datable and were most likely produced some time after 1840. Ironstone and a number of related vitrified and semi-vitrified wares were produced in great quantities during the second half of the 19th Century and into the 20th Century. These

ceramics were a continuation of the development techniques and styles employed in the production of other earlier contemporary wares.

Relief Moulded Ironstone

The most common decorative technique identified with ironstone is relief moulding. Raised designs on the vessels were incorporated into the moulding of the objects themselves. Many of the early patterns produced in this medium persist to the present day. Many ceramics manufactured prior to the introduction of ironstone incorporated the use of embossed designs, but this form of decoration had never been so closely identified with a particular ceramic as it became with ironstone.

Slip Decorated Ironstone

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

Sponge Decorated Ironstone

This decorative style is produces by applying pigment to the surface of vessels using sponges. This type of decoration enjoyed tremendous popularity during the middle of the 19th Century. Blue was the first colour used for this purpose and was most prevalent during the 1840s. Sponged wares were shipped to North America in quantity as cheap decorative kitchen and toiletry articles by mainly Scottish potteries until about 1890 (Collard 1984: 144-145).

Transfer Printed Ironstone

Transfer printing was a method for transferring pictures to the surface of ceramic vessels which was developed during the late 18th Century. The use of colours other than cobalt blue for transfer printing was not attempted on any large scale until after 1828. The reason for this was that cobalt blue oxide was the only colouring agent which remained stable during the firing when used in conjunction with the transfer printing process. In 1828 a process was patented which allowed for the use of other colours. Immediately after this development colours such as red, brown, green, black and light blue were used on a popular level. Coloured transfers were popular in England by 1830 and had achieved similar appeal in North America by the early 1830s (Collard 1984: 117-118). The decorative technique of transfer printing on ironstone has no affect on the general date range of this type of ware as it was applied to ironstone throughout the history of the production of this ceramic type.

Soft Paste Porcelain

Porcelain was first produced in Europe at Meissen by the firm "Royal Saxon Porcelain Manufacture" in 1710, although it had been developed by Johann Friedrich Bottger two years previously in 1708 (Savage 1954:125). This development reflects the high regard

Europeans had held for porcelain imported from China and Japan. Loved for their beauty and durability, European ceramic producers lost considerable revenue to this import and were determined to discover a means of duplicating the ware. In England the discovery of a formula for porcelain production was not achieved until probably 1743 when the "Chelsea" works went into production. A patent for soft paste porcelain was made the following year in the joint names of Edward Heylyn and Thomas Frye (Savage 1954: 210). Throughout the early period of European production these wares tended to be heavily ornamented with thick overglaze polychrome enamels and as processes were refined the decorative techniques of underglaze painting and transfer patterns were used extensively. These decoration techniques predominated well into the 19th Century. It was not until the late 19th Century, and particularly, the 20th Century that porcelain became accessible as a standard household ware. By this time its decorative characteristics were substantially debased, with plain porcelain becoming increasingly common.

Soft paste porcelain is the lowest grade of this ware, and is different from the more costly hard paste porcelain in a number of ways. First, soft paste porcelain generally exhibits a greyish cast, whereas hard paste porcelain or true porcelain is white. When broken soft paste porcelain has a granular paste in appearance and a glassy glaze which is visibly distinct from the body. Hard paste is entirely glassy in cross section and it is very difficult to assess where the body ends and the glaze begins. High firing in this case ensures a more complete fusion of body and glaze which accounts for the difference in appearance of these two wares.

Plain Soft Paste Porcelain

Lacking any other diagnostic datable attributes, plain sherds of this ware cannot be more precisely dated beyond the general date range of this type of ceramic.

Stoneware

Stoneware is a class of ceramic that belongs under the larger heading of vitrified wares. Stoneware is manufactured from different clays that that used to make earthenware. This is because the objects in this medium are fired at much higher temperatures such that the clay is brought nearly to its melting point thereby causing the body to fuse together. It renders the body of the finished product much harder and therefore more durable. It has the added effect of rendering the paste of the fired ware wholly or partially water impermeable. Stoneware has been used to produce a wide variety of goods from the most elaborate and expensive to the most robust and utilitarian of the potter's craft.

Salt Glazed Stoneware

Salt glazed stoneware was first made in England during the latter years of the 16th Century. This particular variety of stoneware is relatively cheap and easy to produce as it requires only one firing to harden the vessel and to apply the glaze. The name "salt glaze" derives from the process by which this product is manufactured. At the appropriate time during the firing of the vessels, salt is shovelled into the kiln. The heat of the kiln causes the salt to separate into its constituent elements of sodium and chloride. The chloride gas

escapes through the vent holes of the kiln and the sodium bonds with the silica present in the clay of the vessels to form a glass over the surface of the vessel. The manufacture of utilitarian wares of this type has been popular from the time of its development until well into the 20th Century. Salt glazed vessels rose to prominence as larger more efficient potteries were established in North America which could produce these high firing durable products at low cost. The industrial production of utilitarian stoneware goods displaced the localized red earthenware industry in the closing decades of the 19th Century.

Yellow Ware

Yellow ware was generally used for kitchen crockery and utility bowls. Yellow ware which is decorated with coloured horizontal bands is often referred to as "banded ware". This is the most readily recognizable of the yellow ware products which became popular after 1840. Undecorated plain yellow ware is termed "common yellow" and dates from about 1830 onward. Yellow ware did not pass out of common usage in Canada until the 1930s (Lueger 1981: 141).

Coarse Red Earthenware

Coarse red earthenware refers to a class of ceramic which was used largely for general purpose utilitarian kitchen and household wares. It is very difficult to date with precision as this form of vessel manufacture was pursued in the main by small cottage industries supplying what was normally a local market. As a result, they appear in highly variant forms based upon the clays, glazes, and techniques of each potter. They are common on historic sites from the beginning of settlement in North America until 1900. Two of the earliest potteries to be established in Ontario both began production in 1849. Many other potteries were soon established which provided domestic and utilitarian wares to primarily local consumers.

Slip Lined Coarse Red Earthenware

This type of ceramic is decorated by applying slip in patterns to the exterior surface of the vessels.

Bottle Glass

Machine Made Bottle Glass

In the late 19th Century a trend started toward the manufacture of bottles with semi-automatic and fully automatic machines. Machine made bottles are hollowware containers shaped using air pressure supplied by a machine, both automatic and semi-automatic machines produce bottle with similar characteristics. The first workable semi-automatic machines were patented in 1881 in the United States and in 1886 in England, in the next few decades machine made containers become increasingly popular as they are cheaper to

produce with continually refined techniques; by the early 20th Century hand blown bottle are becoming uncommon.

Undiagnostic Bottle Glass

These pieces are likely from two-piece moulded vessels or from vessels produced using two-or-more vertical body moulds with separate bases. However these pieces were too small or did not have any diagnostic traits needed to identify the technology used in there manufacture.

Contact Moulded Bottle Glass

Contact moulding is a process by which full-sized objects or portions of objects are formed in a mould using air pressure from a mouth or machine. Hot glass is introduced into a mould, that may or may not have had a design, and expanded by air pressure until it fills the mould, at which point the object or partial object is removed. This technique was used during Roman times extensively for containers. It was reintroduced in the 17th Century but did not come into wide use in containers until the 18th Century (Jones and Sullivan 1989: 23-24).

Pressed Glass Tableware

During the press moulding manufacturing process hot glass is dripped into a mould which might consist of any number of pieces. The only limitation to the process is that the plunger must be able to enter and exit the mould without the necessity of it being opened. For decorated pieces, a design is embossed on the on the interior surface of the mould. The glass takes the form of the mould on its outer surface while the plunger shapes the inner surface. Once the object is removed from the mould it may be fire polished to restore the brilliance of the glass which has been lost due to contact with the mould (Jones and Sullivan 1989: 33)

Press moulding has been used on a small scale in England since the late 17th Century. At this time it was employed in the production of small solid objects such as imitation precious stones, glass seals, watch faces, etc. By the 1780s decanter stoppers and feet for vessels were being made using this technique. During the 1820s the technique was further developed in the United States and applied to the manufacture of complete vessels. By the early 1830s mass production of pressed table wares was underway in the New England states. Early pressed glass was manufactured primarily out of lead glass. William Leighton developed a lime glass in 1864 which resembled lead glass, but was one third cheaper. Non-lead glass becomes common on Canadian sites from about 1870 onward (Jones and Sullivan 1989: 34-35)

Nails

Cut Nails

Around 1800, machines for cutting nails began to be used. At first these were simple machines resembling a table with a guillotine-like knife at one end. Strips of metal which were as broad as the resulting nails were to be long were fed against the blade. The strip of metal was shifted from side-to-side following each cut. This produced the tapered shank of the nail. Nails made by this method remained square in cross section and still required heads to be fashioned by hand. Around 1820 improved machines were developed for the manufacture of cut nails which included mechanical headers (Rempel 1980: 369). In general terms, cut nails dominated the construction industry from roughly 1825 to 1890 when they were displaced by wire nails.

Forged Nails

Towards the end of the 18th Century all nails were made by the blacksmith out of nail stock. Nail stock was typically produced by a special mill on location at the iron works. Wrought iron strips were fed into the mill which cut it into sections which were square in cross-section. The resulting nail stock was cut into the required length by the smith, then heated, tapered and headed. These nails were not displaced by cut nails until around 1825 in developed areas. In more remote areas forged nails remained in use quite longer. This was especially the case with larger spikes which were often required to meet very particular specifications and not required in quantity (Rempel 1980: 367). Blacksmiths continued to fill the void between accessibility to commercial products and the needs of their clients into the first three decades of the twentieth century. Forged nails most likely date to the first half of the 19th Century although it is possible that they were produced at a later date.

14.0 PROJECT REPORT SUPPLEMENTARY PACKAGE

LICENSEE INFORMATION:

Contact Information:	Michael B. Henry CD BA FRAI FRSA Marilyn E. Cornies BA CAHP Southwestern District Office 553 Dufferin Avenue London, ON N6B 2A5 Phone: (419) 432-4435 Email: mhenry@amick.ca/mcornies@amick.ca www.amick.ca
Licensee:	Marilyn E. Cornies BA CAHP
Ontario Archaeology Licence:	P038

PROJECT INFORMATION:

Corporate Project Number:	17300
MTCS Project Number:	P038-0895-2017
Investigation Type:	Stage 1-2 Archaeological Assessment
Project Name:	Camperdown.
Project Location:	Part of Lot 26, Concession 6 (Geographic Township of Collingwood) Town of the Blue Mountains, County of Grey

APPROVAL AUTHORITY INFORMATION:

File Designation Number:	Not Currently Available

REPORTING INFORMATION:

Site Record/Update Forms:	N/A
Date of Report Filing:	TBD
Type of Report:	**ORIGINAL**

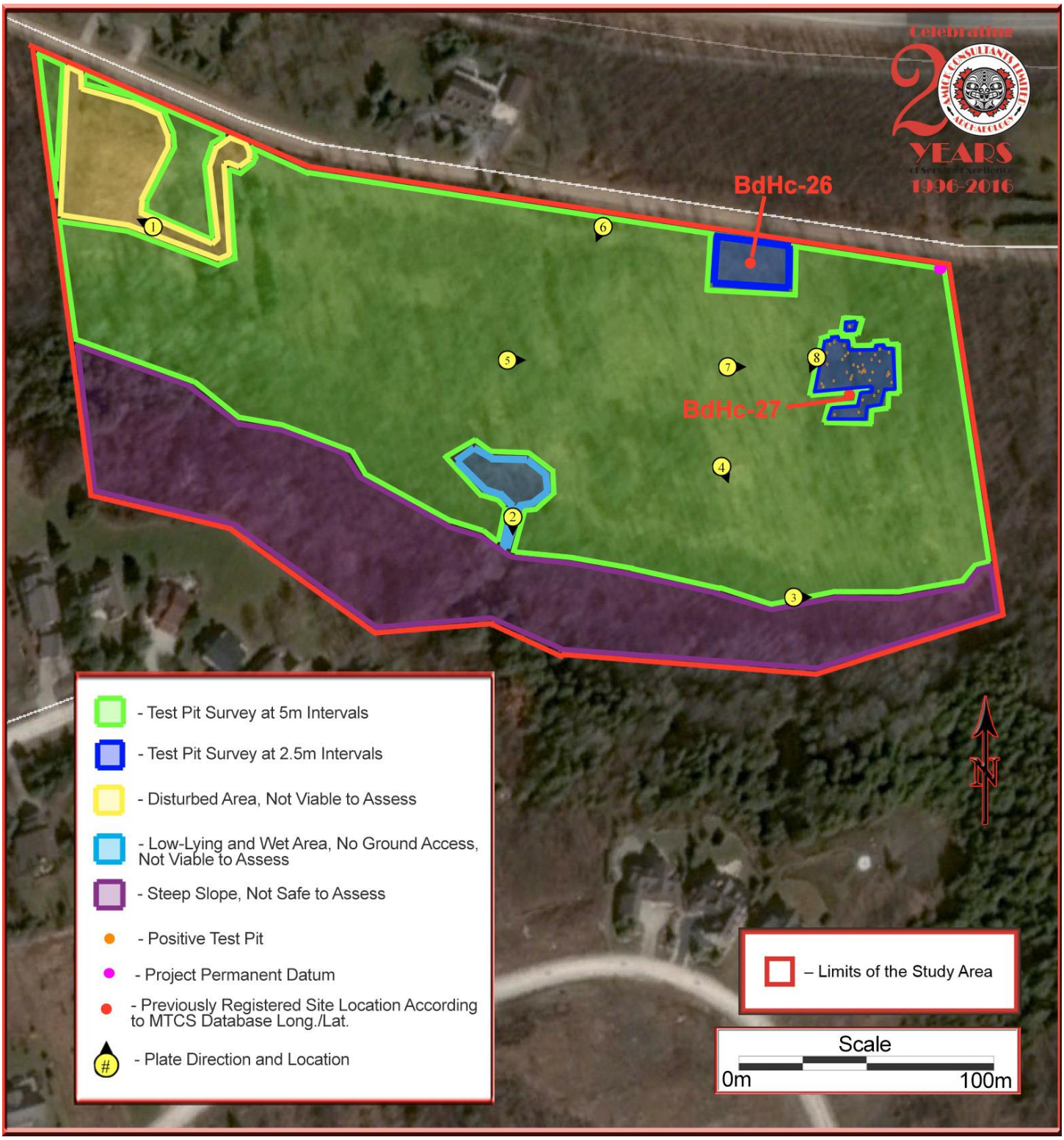


FIGURE 6 AERIAL PHOTO OF THE STUDY AREA (GOOGLE EARTH 2011)

FIGURE 7 PLAN OF THE STUDY AREA AND THE STAGE 2 PROPERTY ASSESSMENT

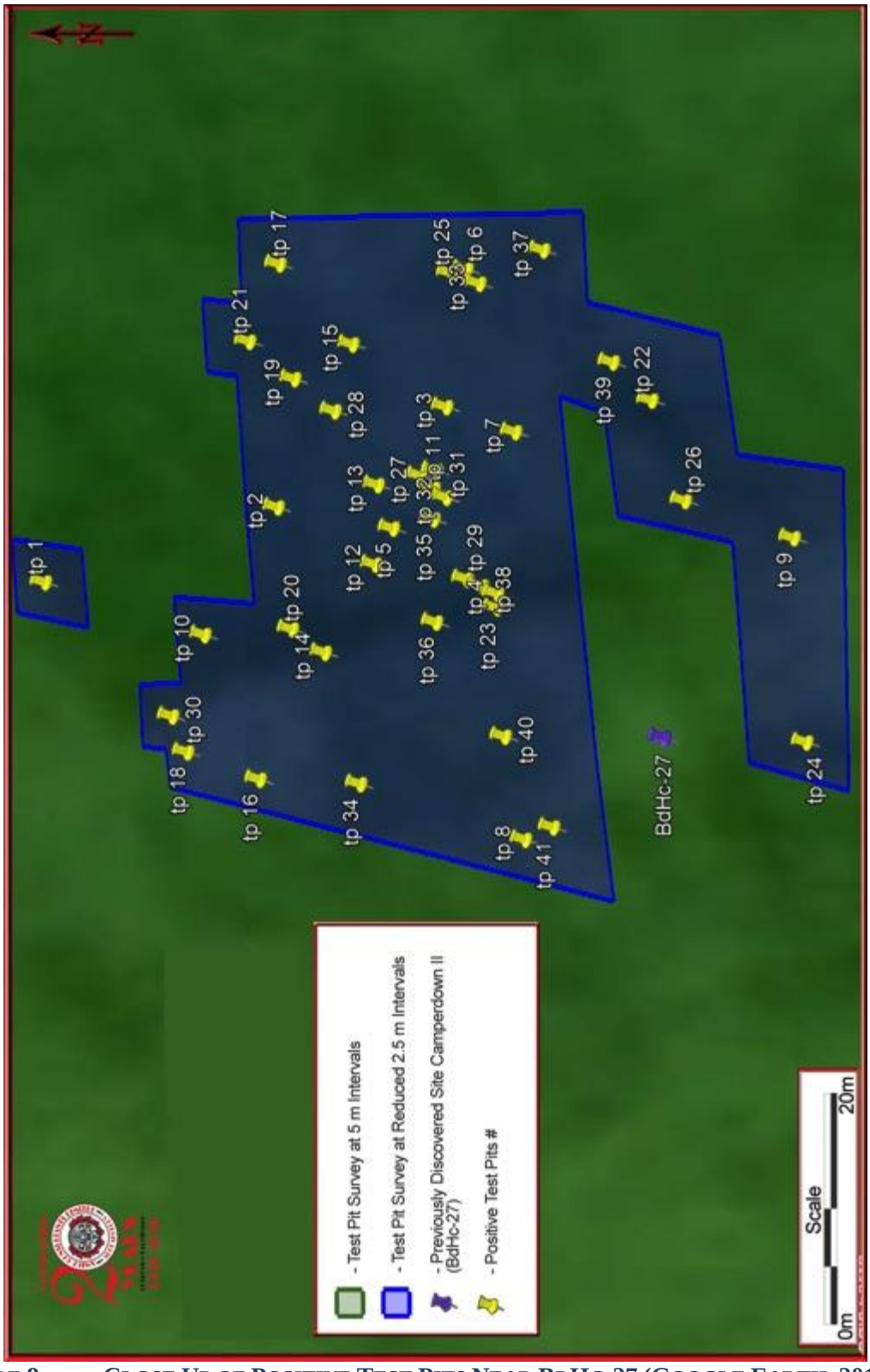


FIGURE 8 CLOSE UP OF POSITIVE TEST PITS NEAR BDHC-27 (GOOGLE EARTH, 2017)

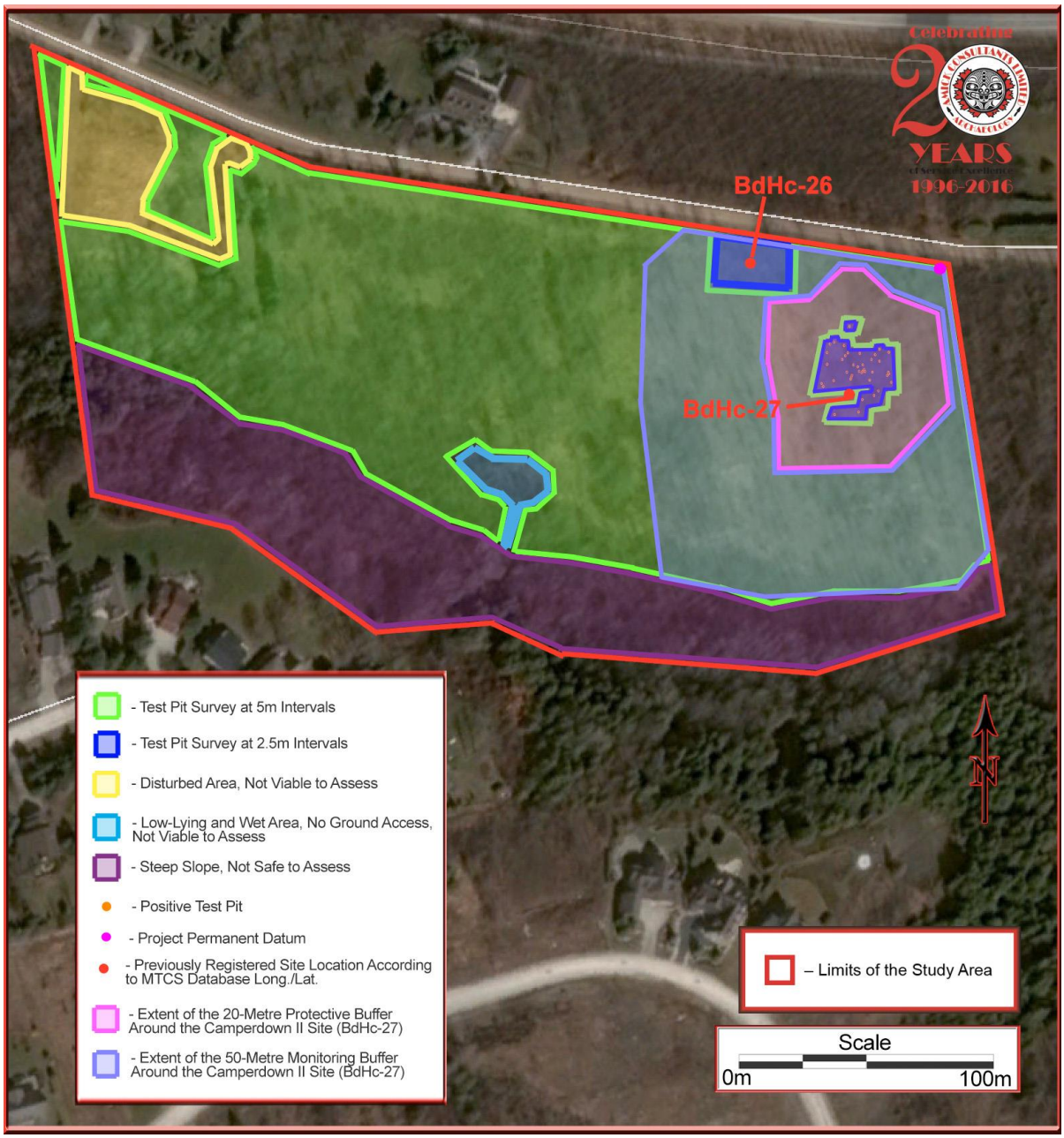


FIGURE 9 DETAILED AERIAL OF THE STAGE 2 ARCHAEOLOGICAL ASSESSMENT WITH THE CAMPERDOWN II SITE (BDHC-27) AND BUFFERS

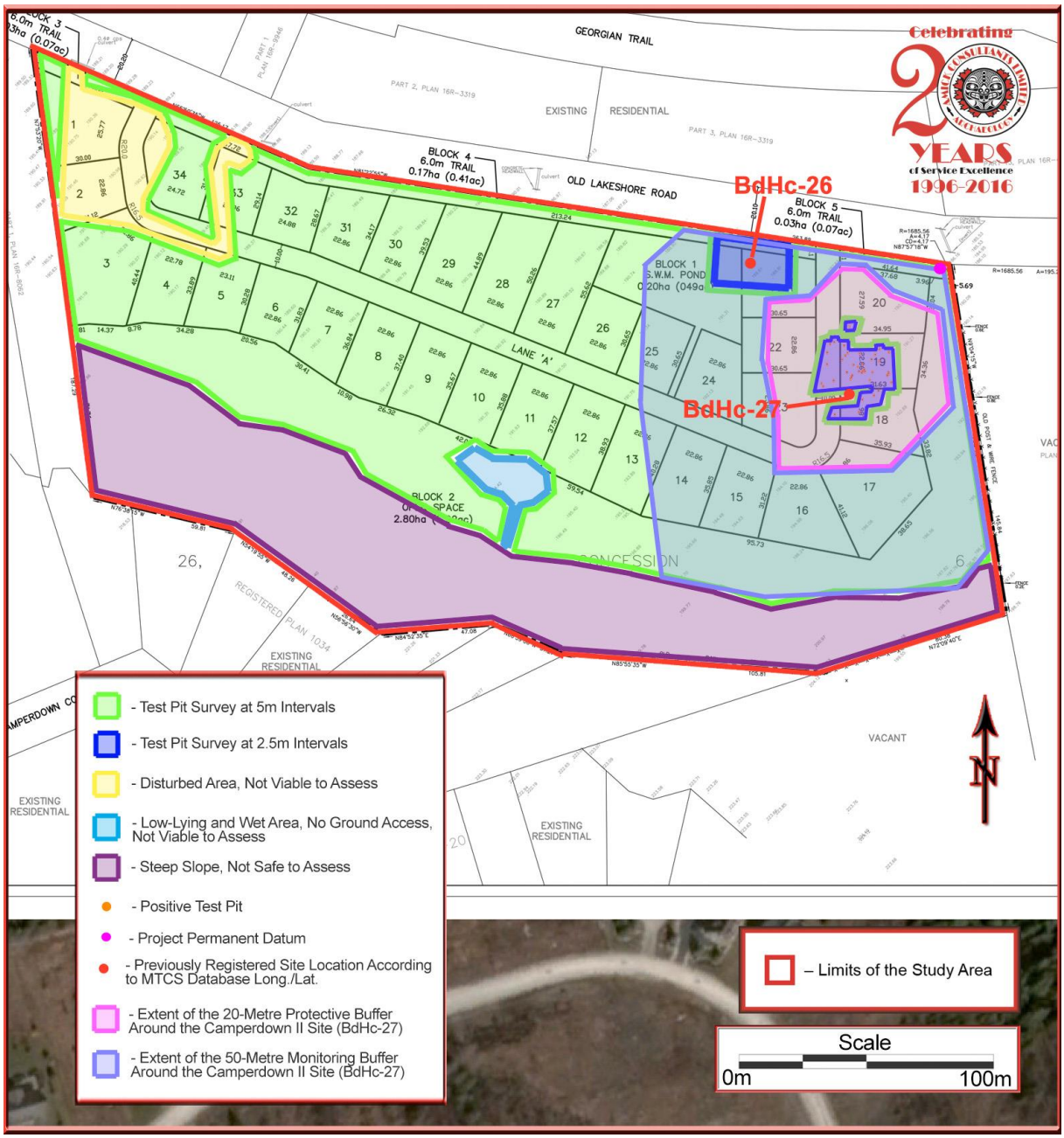


FIGURE 10 DETAILED PLAN OF THE STAGE 2 ARCHAEOLOGICAL ASSESSMENT WITH THE CAMPERDOWN II SITE (BDHC-27) AND BUFFERS

GPS Coordinate Data for New Positive Test Pits in the Camperdown II (BdHc-27) Site

GPS Receiver:

Specifications Juniper Archer Longbow	
Form-factor	Ultra-rugged remote positioning GPS handheld
CPU Speed	Intel PXA270/520 MHz
OS	Windows Mobile 6.1
RAM/ROM	128MB RAM/512MB Flash
Card slots	SD/SDHC Card with SDIO support
Interface	RS232 9-pin serial
GPS	2-5 meter (S/A off); 2 meters (WAAS)
Wireless	Archer: Bluetooth Class II; optional WiFi and wireless modems via cards Longbow/ikeGPS adds: 3 or 5 megapixel camera, DGPS, eCompass, laser rangefinder

Project Permanent Datum:
Near the northeast corner of the study area is a hydro pole – this was used as the project datum.

Latitude/Longitude
44°32'05.21" North, 80°23'29.73" West
UTM Grid reference
17T NJ 548338 Easting 4931452 Northing
NAD 83

Camperdown II (BdHc-27) Location

Centroid
Latitude/Longitude
44°32'03.1451" North, -080°23'30.3853" West
UTM Grid reference
17T NK 548324.36 Easting, 4931388.71 Northing
NAD 83

North Edge
Latitude/Longitude
44°32'03.9004" North, -080°23'30.4843" West
UTM Grid reference
17T NK 548322.00 Easting, 4931412.0 Northing
NAD 83

East Edge
Latitude/Longitude
44°32'03.1176" North, -080°23'29.5410" West
UTM Grid reference
17T NK 548343.00 Easting, 4931388.0 Northing
NAD 83

South Edge
Latitude/Longitude
44°32'02.4097" North, -080°23'30.4999" West
UTM Grid reference
17T NK 548322.00 Easting, 4931366.00 Northing
NAD 83

West Edge
Latitude/Longitude
44°32'03.1272" North, -080°23'31.3533" West
UTM Grid reference
17T NK 548303.00 Easting, 4931388.00 Northing
NAD 83

Positive Test Pits

Test Pit #	Latitude (°N)	Longitude (°W)
1	44.5345295	80.3920812
2	44.53443567	80.3920393
3	44.534369	80.391984
4	44.534349	80.392087
5	44.53439	80.392051
6	44.534361	80.391908
7	44.534342	80.391998
8	44.534338	80.392223
9	44.5342341	80.3920564
10	44.534465	80.3921104
11	44.534374	80.392029
12	44.534397	80.392071
13	44.534396	80.392027
14	44.534417	80.392122
15	44.534406	80.391949
16	44.534443	80.392191
17	44.534435	80.391904
18	44.534472	80.392176
19	44.534429	80.391968
20	44.53443	80.392107
21	44.534447	80.391947
22	44.534289	80.391981
23	44.534439	80.392095
24	44.534229	80.392168
25	44.534367	80.39191
26	44.534276	80.392036
27	44.534379	80.392022
28	44.534413	80.391986
29	44.534361	80.392079

30	44.534478	80.392156
31	44.534373	80.392019
32	44.534369	80.392034
33	44.534356	80.391916
34	44.534403	80.392193
35	44.534374	80.392046
36	44.534373	80.392103
37	44.534331	80.391898
38	44.534355	80.392083
39	44.534304	80.39196
40	44.534346	80.392166
41	44.534327	80.392216