



1.0 PROJECT REPORT COVER PAGE

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P058

PROJECT INFORMATION:

Corporate Project Number:

19851

MTCS Project Number:

P058-1779-2019

Investigation Type:

Stage 1-2 Archaeological Property Assessment

Project Name:

Alfred Street.

Project Location:

61 Alfred Street West,
Plan of Survey of all of Lots 1, 2 and 3, Registered Plan
No. 105, Townplot of Thornbury, Part of Lot 33,
Concession 10 (Geographic Township of Collingwood),
Town of the Blue Mountains, County of Grey

Project Designation Number:

Not Currently Available

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BdHc-28 (Thornbury Site)

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TBD

Type of Report:

ORIGINAL

2.0 EXECUTIVE SUMMARY

This report describes the results of the 2019 Stage 1-2 Archaeological Assessment of 61 Alfred Street West, Plan of Survey of all of Lots 1, 2 and 3, Registered Plan No. 105, Townplot of Thornbury, Part of Lot 33, Concession 10 (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 #P058 issued to Michael Henry 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 1990) and the Provincial Policy Statement (2014) in order to support a Site Plan 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 by high intensity test pit methodology at a five-metre interval between individual test pits, by high intensity pedestrian survey at an interval of five metres between individual transects and by intensified pedestrian survey at an interval of one metre between individual transects on 21 August and 16 September 2019. 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 property Assessment of the study area, a scatter of historic artifacts, the Thornbury Site (BdHc-28), was identified. A total of 182 artifacts spread across an area 45 metres north to south by 48 metres east to west were collected. Based on the characteristics of these sites and the analysis of artifacts, the following recommendations are made:

- 1. The Cultural Heritage Value or Interest (CHVI) of the Thornbury Site (BdHc-28) has not been completely documented. There is potential for further CHVI for this location. The Thornbury Site (BdHc-28) 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 Thornbury Site (BdHc-28) must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). The Stage 3 Site-specific assessment will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6 millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.
3. The Stage 3 Site-specific Assessment of the Thornbury Site (BdHc-28) must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.
4. A CSP and intensified test pit survey have been completed as part of the Stage 2 Property Assessment and are not required as part of the Stage 3 Site-specific Assessment of the Thornbury Site (BdHc-28), as these components of the Stage 3 requirements are already satisfied.
5. No soil disturbances or removal of vegetation shall take place within the archaeological site identified as the Thornbury Site (BdHc-28) within this Stage 1-2 Archaeological Assessment report, or within the area enclosed within a 20 metre buffer surrounding the Thornbury Site (BdHc-28) prior to the acceptance of the Ministry of Tourism, Culture and Sport (MTCS) of a report recommending that all archaeological concerns for the Thornbury Site (BdHc-28) 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 the outer limit of a 20 metre buffer around the archaeological site identified within this Stage 1-2 Archaeological Assessment report to ensure that construction activities do not impinge upon the Thornbury Site (BdHc-28) 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 Thornbury Site (BdHc-28).
7. 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.
8. 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.

- 9. The 50 metre wide Monitoring Buffer will remain in effect until such time that the Stage 3 Site-specific Assessment report for the Thornbury Site (BdHc-28) 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.*
- 10. 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.*
- 11. 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.*
- 12. 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.*
- 13. 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.*
- 14. It is recommended that the balance of the study area outside of the site areas and surrounding Protective Buffer and Monitoring Buffer be cleared of archaeological concern and that development activity be permitted to proceed, subject to the above provisions.*

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4.0 PROJECT PERSONNEL

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5.0 PROJECT CONTEXT

5.1 DEVELOPMENT CONTEXT

This report describes the results of the 2019 Stage 1-2 Archaeological Assessment of 61 Alfred Street West, Plan of Survey of all of Lots 1, 2 and 3, Registered Plan No. 105, Townplot of Thornbury, Part of Lot 33, Concession 10 (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 #P058 issued to Michael Henry 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 1990) and the Provincial Policy Statement (2014) in order to support a Site Plan 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 by high intensity test pit methodology at a five-metre interval between individual test pits, by high intensity pedestrian survey at an interval of five metres between individual transects and by intensified pedestrian survey at an interval of one metre between individual transects on 21 August and 16 September 2019. 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.

At the time of preparing this report a development plan has not been made available to AMICK Consultants Limited. Instead, a plan of survey was provided that showed the limits of the study area. This plan of survey 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 boarder 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 Collingwood map reproduced from The Grey County Supplement – Illustrated Atlas of the Dominion of Canada (Belden, H. & Co. 1881). Map 2 illustrates the location of the study area and environs as of 1881. The study area is no shown to belong to anyone but it is within the settled part of the Town of Thornbury. This demonstrates that the original property of which the study area is a part was settled by the time that the atlas data was compiled. Accordingly, it has been determined that there is potential for archaeological deposits related to early Post-Contact settlement within the study area. In addition, two settlement roads are depicted as adjacent to the study area to the northeast and northwest. These roads are the current Alfred Street West and Victoria Street South, respectively.

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

5.2.2 CURRENT CONDITIONS

The present use of the study area is as a residential property with a large open field. The study area is roughly 1.33 hectares in area. The study area includes within it mostly ploughable lands. A residential structure with the address of 61 Alfred Street West is in the eastern part of the study area. There is also a separate garage to the east of the residence. There is a paved driveway that connects Alfred Street West to the garage in the eastern part of the study area. There are also two stone pathways to the northeast and southeast of the residence. There is an impenetrable cedar hedge to the north of the residence. There is a soil mound and a rock pile in the western part of the study area. There is a large ploughable field across the whole of the northwestern part of the study area. The remainder of the study area around the structures and ploughed field is open meadow. The study area is bounded on the northeast by Alfred Street West, on the northwest by Victoria Street South, and on the southwest and southeast by residential properties. The study area is adjacent and to the south of the intersection of Alfred Street West and Victoria Street South. 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 readily available documentary evidence indicates that the study area is situated within an area that was close to historic transportation routes and in an area well populated during the nineteenth century and therefore has potential for sites relating to early Post-Contact settlement in the region.

5.3 ARCHAEOLOGICAL CONTEXT

The Archaeological Sites Database administered by the Ministry of Tourism, Culture and Sport (MTCS) indicates that there is one (1) previously documented site 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 one (1) previous study has taken place within 50m of the study area. For further information see:

AMICK Consultants Limited. (2014). *Stage 1-2 Archaeological Assessment of Plan 16R-7921, Part of Park Lots 9 and 10, Southwest of Alfred Street and Part of Victoria Street, Townplot of Thornbury, (Geographic Town of Thornbury) (Geographic Township of Collingwood), Town of the Blue Mountains, County of Grey*. Port McNicoll, Ontario. Archaeological License Report on File With the Ministry of Tourism, Culture and Sport, Toronto, Ontario. Filed under PIF# P038-0812-2014).

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 no previous reports detailing, “archaeological fieldwork carried out on the lands to be impacted by this project”, nor do any previous reports document known archaeological sites within 50 metres of 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 do not have any relevance to the lands to be potentially impacted by the proposed undertaking, do not include fieldwork or recommendations relevant to the study area, and do not document any sites within 50 metres of the study area. Therefore, there is no requirement to include any summary data for the previous reports.

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, which would suggest an activity or occupation within, or in close proximity to, the study area that may indicate potential for associated archaeological resources of significant CHVI.

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

TABLE 1 PRE-CONTACT SITES WITHIN 1KM

Site Name	Borden #	Site Type	Cultural Affiliation
Ferguson	BdHc-6	Not Determined	Indeterminate Pre-Contact

None of the above noted archaeological sites are situated within 300 metres of the study area. Therefore, they have no impact on determinations of archaeological potential for further archaeological resources related to Pre-Contact activity and occupation with respect to the archaeological assessment of the proposed undertaking.

The study area lies approximately 295 metres to the east of Little Beaver Creek, which is a source of potable water and flows into Georgian Bay. The distance to water criteria used to

establish potential for archaeological sites suggests potential for Pre-Contact occupation and land use in the area in the past.

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

TABLE 2 PRE-CONTACT CULTURAL CHRONOLOGY FOR SOUTHERN ONTARIO

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

5.3.2 POST-CONTACT REGISTERED SITES

A summary of registered and/or known archaeological sites within a 1-kilometre radius of the study area was gathered from the Archaeological Sites Database, administered by MTCS. As a result it was determined that there are no (0) archaeological sites relating directly to Post-Contact habitation/activity formally registered within the immediate vicinity of the study area.

5.3.3 LOCATION AND CURRENT CONDITIONS

The study area is described as 61 Alfred Street West, Plan of Survey of all of Lots 1, 2 and 3, Registered Plan No. 105, Townplot of Thornbury, Part of Lot 33, Concession 10 (Geographic Township of Collingwood), Town of the Blue Mountains, County of Grey, conducted by AMICK Consultants Limited. This assessment was undertaken as a requirement under the Planning Act (RSO 1990) and the Provincial Policy Statement (2014) in order to support a Site Plan and companion Zoning By-law Amendment application as part of the pre-submission process.

The present use of the study area is as a residential property with a large open field. The study area is roughly 1.33 hectares in area. The study area includes within it mostly ploughable lands. A residential structure with the address of 61 Alfred Street West is in the eastern part of the study area. There is also a separate garage to the east of the residence. There is a paved driveway that connects Alfred Street West to the garage in the eastern part of the study area. There are also two stone pathways to the northeast and southeast of the residence. There is an impenetrable cedar hedge to the north of the residence. There is a soil mound and a rock pile in the western part of the study area. There is a large ploughable field across the whole of the northwestern part of the study area. The remainder of the study area around the structures and ploughed field is open meadow. The study area is bounded on the northeast by Alfred Street West, on the northwest by Victoria Street South, and on the southwest and southeast by residential properties. The study area is adjacent and to the south of the intersection of Alfred Street West and Victoria Street South. 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 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).

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 resource potential. The Standards and Guidelines for Consultant Archaeologists stipulates that undisturbed lands within 300 metres of a water source are considered to have archaeological potential (MTC 2011: 21).

The Little Beaver Creek lies approximately 295 metres to the west of the study area. This stream flows into Georgian Bay and is a source of potable water.

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.

A residential structure with the address of 61 Alfred Street West is in the eastern part of the study area. There is also a separate garage to the east of the residence. Maps 4 & 5 of this report illustrate the locations of these features.

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.

There is a paved driveway that connects Alfred Street West to the garage in the eastern part of the study area. There are also two stone pathways to the northeast and southeast of the residence. Maps 4 & 5 of this report illustrate the locations of these features.

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.

The study area does not contain low-lying and wet areas.

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.

The study area does not contain areas of steep slope.

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 not contain any wooded areas.

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.

There is a large ploughable field across the whole of the northwestern part of the study area. Maps 4 & 5 of this report illustrate the location of this feature.

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 area along the southeastern boundary and between the ploughed field and the northwestern boundary is open grass field. Maps 4 & 5 of this report illustrate the locations of these features.

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. Background research also suggests potential for archaeological resources of Post-Contact origins based on proximity to a historic roadway, 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 footprint of existing structures, areas under pavement and stone pathways, and areas that are not accessible due to impenetrable cedar hedges, rock piles and soil mounds. 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, by high intensity pedestrian survey at an interval of five metres between individual transects and by intensified pedestrian survey at an interval of one metre between individual transects on 21 August and 16 September 2019.

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

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

6.1 PROPERTY INSPECTION

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

6.2 PEDESTRIAN SURVEY

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

- 1. Actively or recently cultivated agricultural land must be subject to pedestrian survey.*
[All actively or recently cultivated agricultural land was subject to pedestrian survey.]

2. *Land to be surveyed must be recently ploughed. Use of chisel ploughs is not acceptable. In heavy clay soils ensure furrows are disked after ploughing to break them up further.*
[All land was recently ploughed.]
3. *Land to be surveyed must be weathered by one heavy rainfall or several light rains to improve visibility of archaeological resources.*
[All land was weathered by rainfall.]
4. *Provide direction to the contractor undertaking the ploughing to plough deep enough to provide total topsoil exposure, but not deeper than previous ploughing.*
[Direction was given to the contractor undertaking the ploughing to plough deep enough to provide total topsoil exposure, but not deeper than previous ploughing]
5. *At least 80 % of the ploughed ground surface must be visible. If surface visibility is below 80% (e.g. due to crop stubble, weeds, young crop growth), ensure the land is re-ploughed before surveying.*
[Roughly 95% of the ploughed field surface was exposed and visible.]
6. *Space survey transects at maximum intervals of 5m (20 survey transects per hectare)*
[All transects were conducted at an interval of 5m between individual transects.]
7. *When archaeological resources are found, decrease survey transects to 1m intervals over a minimum of a 20m radius around the find to determine whether it is an isolated find or part of a larger scatter. Continue working outward at this interval until full extent of the surface scatter has been defined.*
[Survey transects were reduced to 1m intervals over a minimum of 20m radius around finds]
8. *Collect all formal artifact types and diagnostic categories. For 19th century archaeological sites, collect all refined ceramic sherds (or, for larger sites collect a sufficient sample to form the basis for dating).*
[All artifacts were collected as part of the Controlled Surface Pickup.]
9. *Based on professional judgment, strike a balance between gathering enough artifacts to document the archaeological site and leaving enough in place to relocate the site if it is necessary to conduct further assessment.*
[All artifacts were collected as part of the Controlled Surface Pickup]
(MTC 2011: 30-31)

6.3 CONTROLLED SURFACE PICK-UP (CSP)

In all cases where artifacts were found pedestrian survey intervals were reduced to one metre between individual transects and all artifacts found on the surface were marked with numbered flags. The artifacts were collected and bagged according to the numbered location where each was found. Every find location was individually recorded using GPS with an accuracy of 5 metres or less. All artifacts were collected. As a result of the completion of CSPs on all archaeological locations, this component of Stage 3 Site-specific Assessment has been completed and is not required for subsequent investigations of these sites.

6.4 TEST PIT SURVEY

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

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

a. wooded areas

[Not Applicable – The study area does not contain any wooded areas]

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.

[The study area is to be maintained as a residence with landscape features including grass lawns, which are to be maintained; therefore ploughing, would damage or destroy these features. All areas where existing landscaping or

infrastructure would be damaged were test pit surveyed at an interval of 5 metres between individual test pits]

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

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

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

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

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

[The entirety of the test pitted areas of the study area were assessed using high intensity test pit methodology at an interval of 5 metres between individual test pits]

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

[Test pits were placed within 1m of all built structures]

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.*
[Not Applicable - No archaeological resources were encountered]
9. *Backfill all test pits unless instructed not to by the landowner.*
[All test pits were backfilled]

(MTC 2011: 31-32)

Approximately 43% of the study area consisted of lawn area that was test pit surveyed at an interval of 5 metres between individual test pits. Approximately 21% of the study area was ploughed field that underwent pedestrian survey at an interval of five metres between individual transects. Approximately 31% of the study area was ploughed field that underwent pedestrian survey at an interval of one metre between individual transects. Approximately 5% of the study area was not assessable due to the presence of existing structures, paved driveway, stone paths, impenetrable cedar hedges, rock piles and a soil mound.

7.0 RECORD OF FINDS

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

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

b. maps showing detailed site location information.

7.1 ARCHAEOLOGICAL RESOURCES

As a result of the property Assessment of the study area, 1 historic site, named the Thornbury Site (BdHc-28), was encountered. The number and types of artifacts collected from the Thornbury Site (BdHc-28) is listed below in Table 3. The complete artifact catalogue of the historic finds from the Thornbury Site (BdHc-28) is appended to this report in Appendix A. Descriptions of the artifact types collected from the Thornbury Site (BdHc-28) can be found appended to this report in Appendix B. A photograph OF representative sample of artifacts is included with the images in this report. A detailed description of the location of this site can be found in the supplementary documentation of this report filed under separate cover with the Ministry of Tourism culture and Sport.

7.1.1 THORNBURY SITE (BdHc-28)

The Thornbury Site (BdHc-28) consists of 182 historic artifacts covering an area approximately 45 metres from north to south and 48 metres from west to east. The Thornbury Site (BdHc-28) is a historic site, with the assemblage mainly consisting of Euro-Canadian ceramics, glass and metal fragments, with some faunal remains and a pewter harness bell. The number and types of artifacts collected from the Thornbury Site (BdHc-28) are listed below in Table 3. The catalogue of historic artifacts from the Thornbury Site (BdHc-28) is appended to this report in Appendix A. Descriptions of these artifact types can be found appended to this report in Appendix B. A photograph of a representative sample of the artifacts collected from this site is included in this report as Image 9.

TABLE 3 THORNBURY SITE (BdHc-28) ARTIFACT COUNTS AND TYPES

DESCRIPTION	FREQUENCY	PERCENTAGE
Ceramic – Coarse Red Earthenware	42	23.08%
Ceramic - Ironstone	26	14.29%
Ceramic – Porcelain	8	4.40%
Ceramic – Refined White Earthenware	47	25.82%
Ceramic - Yellowware	1	0.55%
Faunal Remains - Mammalian	7	3.85%
Glass – Commercial Container	23	12.64%
Glass - Indeterminate	1	0.55%
Glass - Pressed	2	1.10%
Glass - Sheet	17	9.34%
Iron – Cut Nail	4	2.20%
Iron – Wire Drawn Staple	1	0.55%
Iron - Sheet	2	1.10%
Metal - Pewter	1	0.55%
Total	182	100.00%

The collection of artifacts from this assessment is packaged in a single banker's box and housed at the Port McNicoll office of AMICK Consultants Limited 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.

The collection of artifacts from this site includes a very limited number of decorated ceramics including one piece of cobalt blue transfer printed refined white earthenware, one piece of green transfer printed refined white earthenware, one piece of purple stamp decorated refined white earthenware and one piece of flown cobalt blue transfer printed refined white earthenware. In addition there are a few examples of relief moulded ironstone in the collection. However, these ceramics collection consists almost entirely of undecorated examples of refined white earthenware and ironstone. The ceramics collected from the site represent household tablewares that are typical from the middle of the nineteenth century and into the twentieth century. However, the large number of sherds of coarse red earthenware dating from the second half of the nineteenth century demonstrate clearly that the site is predominantly of the period 1850-1890. Towards the end of the nineteenth century from about 1870 onward, utilitarian coarse red earthenware vessels were displaced by stoneware and glass. There are very limited numbers of late nineteenth century glassware and no stoneware utilitarian vessels. There are also no drawn wire nails in the assemblage. These facts suggest that the site occupation is unlikely to have extended beyond 1890.

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, two pages of field notes, and 46 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 on 21 August and 16 September 2019, consisting of high-intensity test pit survey at an interval of five metres between individual test pits, high intensity pedestrian survey at an interval of five metres between individual transects and intensified pedestrian survey at an interval of one metre between individual transects. 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 Act that is a federal, provincial or municipal historic landmark or site
- property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations”

(MTC 2011: 17-18)

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

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

(MCC & MOE 1992: 6-7)

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

(MTC 2011: 17)

In addition, archaeological sites data is also used to determine if any archaeological resources had been formerly documented within or in close proximity to the study area and if these same resources might be subject to impacts from the proposed undertaking. This data was also collected in order to establish the relative cultural heritage value or interest of any resources that might be encountered during the conduct of the present study. For example, the relative rarity of a site can be used to assign an elevated level of cultural heritage value or interest to a site that is atypical for the immediate vicinity. The requisite archaeological sites data of previously registered archaeological sites was collected from the Programs and Services Branch, Culture Programs Unit, 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 not 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 Little Beaver Creek lies approximately 295 metres to the west of the study area. This stream flows into Georgian Bay and is a source of potable water.

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

4) *Accessible or Inaccessible Shoreline*

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

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

5) *Elevated Topography*

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

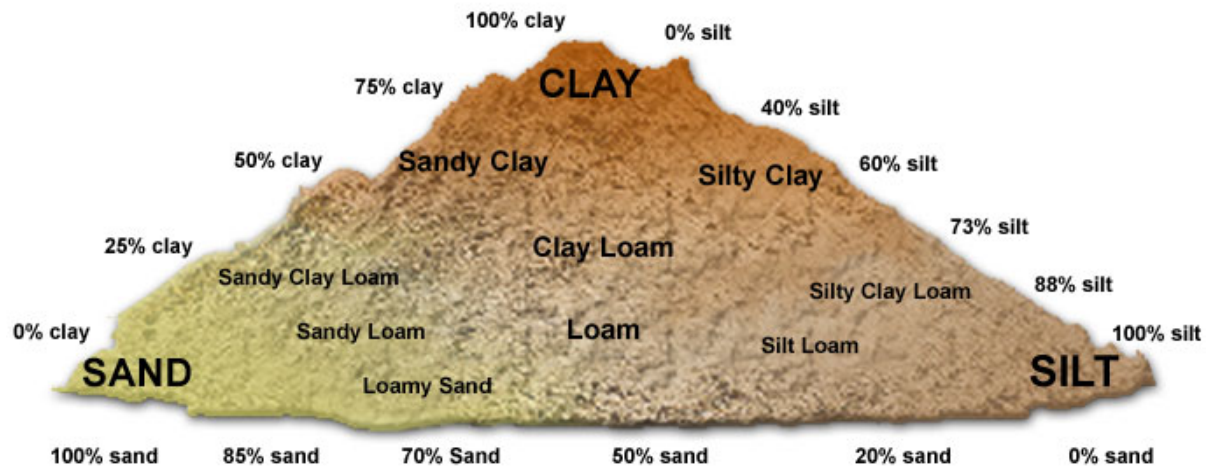
There are no identified features of elevated topography within the study area.

6) *Pockets of Well-drained Sandy Soil*

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

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

The image below (Kuhlmann, Stacy 2017) shows the consistencies of soil types and how they compare to one another. The 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 community, the Town of Thornbury, 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 appear on the Historic Atlas Map of 1881. These historic roads correspond to the roads presently known as Alfred Street West and Victoria Street South, which are adjacent to the study area.

11) Heritage Property

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

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

12) Documented Historical or Archaeological Sites

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

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

CHARACTERISTICS INDICATING REMOVAL OF ARCHAEOLOGICAL POTENTIAL

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

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

1) Quarrying

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

2) Major Landscaping Involving Grading Below Topsoil

Unless there is evidence to suggest the presence of buried archaeological deposits, such deeply disturbed areas are considered to have lost their archaeological potential. Properties that do not have a long history of Post-Contact occupation can have archaeological potential removed through extensive landscape alterations that penetrate below the topsoil layer. This is because most archaeological sites originate at grade with relatively shallow associated excavations into the soil. Pre-Contact sites and early historic sites are vulnerable to extensive damage and complete removal due to landscape modification activities. In urban contexts where a lengthy history of occupation has occurred, properties may have deeply buried archaeological deposits covered over and sealed through redevelopment activities that do not include the deep excavation of the entire property for subsequent uses. Buildings are often erected directly over older foundations preserving archaeological deposits associated with the earlier occupation.

There is 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.

There is a paved driveway that connects Alfred Street West to the garage in the eastern part of the study area. There are also two stone pathways to the northeast and southeast of the residence.

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 two buildings within the study area; a residential structure and separate garage at the eastern end of 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, Culture and Sport (MTCS) 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 a historic community, and the location of early historic settlement roads adjacent to the study area.

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(AMICK File #19851/MTCS File #P058-1779-2019)**

TABLE 4 EVALUATION OF ARCHAEOLOGICAL POTENTIAL

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

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

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

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

8.2 STAGE 2 ANALYSIS AND CONCLUSIONS

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

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

As a result of the Stage 1-2 Archaeological Assessment of the study area, a total of 182 artifacts were recovered from 100 surface finds. The Thornbury Site (BdHc-28) is a historic site containing a mix of Euro-Canadian ceramic fragments, glass fragments from window panes and moulded bottles, metal fragments (mainly nails), faunal bone fragments and some personal items, including a pewter harness bell. All of these artifacts are consistent with that component of the site having a Euro-Canadian origin.

The ceramics collected from the site represent household tablewares that are typical from the middle of the nineteenth century and into the twentieth century. However, the large number of sherds of coarse red earthenware dating from the second half of the nineteenth century demonstrate clearly that the site is predominantly of the period 1850-1890. Towards the end of the nineteenth century from about 1870 onward, utilitarian coarse red earthenware vessels were displaced by stoneware and glass. There are very limited numbers of late nineteenth century glassware and no stoneware utilitarian vessels. There are also no drawn wire nails in the assemblage. These facts suggest that the site occupation is unlikely to have extended beyond 1890.

This site could represent a historic home or property, due to the artifacts being mostly fragmented household ceramic along with architectural elements such as glass pane fragments and construction nails, but no substantial structural elements such as timbers were encountered. The site is within an area that was settled as a town as early as 1859, so that site could have been inhabited with a residential structure around that time and continued into the 20th century before the structure was demolished and removed. Due to the size of the site, the number of artifacts collected and the fact that the majority of the artifacts date to before 1900 CE, the Thornbury Site (BdHc-28) does have potential for further Cultural Heritage Value or Interest (CHVI). Therefore, it will require Stage 3 Site-Specific Assessment. At this time, it is unknown if the Thornbury Site (BdHc-28) holds enough Cultural Heritage Value or

Interest (CHVI) to require further Stage 4 Mitigation. That determination will be made based on the results of the Stage 3 Site Specific Assessment of this site.

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 of a Stage 2 Property Assessment are described.

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

As a result of the property Assessment of the study area, a scatter of historic artifacts, the Thornbury Site (BdHc-28), was identified. A total of 182 artifacts spread across an area 45 metres north to south by 48 metres east to west were collected. Based on the characteristics of these sites and the analysis of artifacts, the following recommendations are made:

1. *The Cultural Heritage Value or Interest (CHVI) of the Thornbury Site (BdHc-28) has not been completely documented. There is potential for further CHVI for this location. The Thornbury Site (BdHc-28) 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 Thornbury Site (BdHc-28) must be completed for this site in accordance with the Standards and Guidelines for Consultant Archaeologists (MTC 2011). The Stage 3 Site-specific assessment will consist of the excavation of 1 by 1 metre square test units on a 5 by 5 metre square grid; the grid squares will be referred to by the intersection coordinates of their southwest corner. Each test unit will be excavated stratigraphically by hand into the first 5 centimetres of subsoil. Each unit will be examined for stratigraphy, cultural features, or evidence of fill, and all soil was screened through wire mesh of 6 millimetre width. All artifacts will be retained and recorded by the corresponding grid unit designation and will be held at the Lakelands District corporate offices of AMICK Consultants Limited until such time that they can be transferred to an agency or institution approved by the Ontario Ministry of Tourism, Culture and Sport (MTCS) on behalf of the government and citizens of Ontario.*
3. *The Stage 3 Site-specific Assessment of the Thornbury Site (BdHc-28) must include further archival research in order to establish the details of the occupation and land use history of the rural township lot of which the study area was a part.*
4. *A CSP and intensified test pit survey have been completed as part of the Stage 2 Property Assessment and are not required as part of the Stage 3 Site-specific Assessment of the Thornbury Site (BdHc-28), as these components of the Stage 3 requirements are already satisfied.*
5. *No soil disturbances or removal of vegetation shall take place within the archaeological site identified as the Thornbury Site (BdHc-28) within this Stage 1-2 Archaeological Assessment report, or within the area enclosed within a 20 metre buffer surrounding the Thornbury Site (BdHc-28) prior to the acceptance of the Ministry of Tourism, Culture and Sport (MTCS) of a report recommending that all archaeological concerns for the Thornbury Site (BdHc-28) 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 the outer limit of a 20 metre buffer around the archaeological site identified within this Stage 1-2 Archaeological Assessment report to ensure that construction activities do not impinge upon the Thornbury Site (BdHc-28) 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 Thornbury Site (BdHc-28).*
7. *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.
8. 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.
 9. The 50 metre wide Monitoring Buffer will remain in effect until such time that the Stage 3 Site-specific Assessment report for the Thornbury Site (BdHc-28) 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.
 10. 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.
 11. 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.
 12. 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.
 13. 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.
 14. It is recommended that the balance of the study area outside of the site areas and surrounding Protective Buffer and Monitoring 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.*

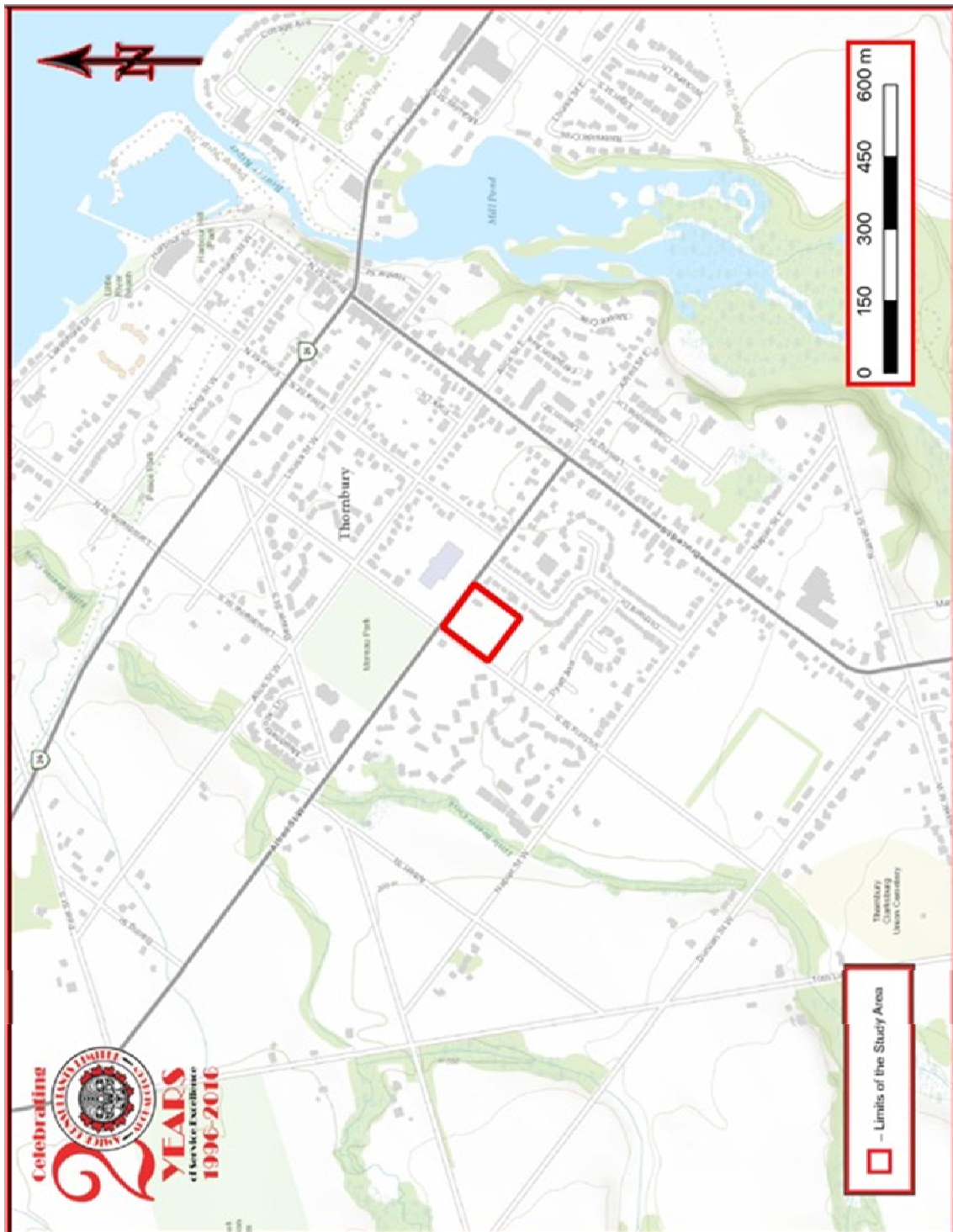
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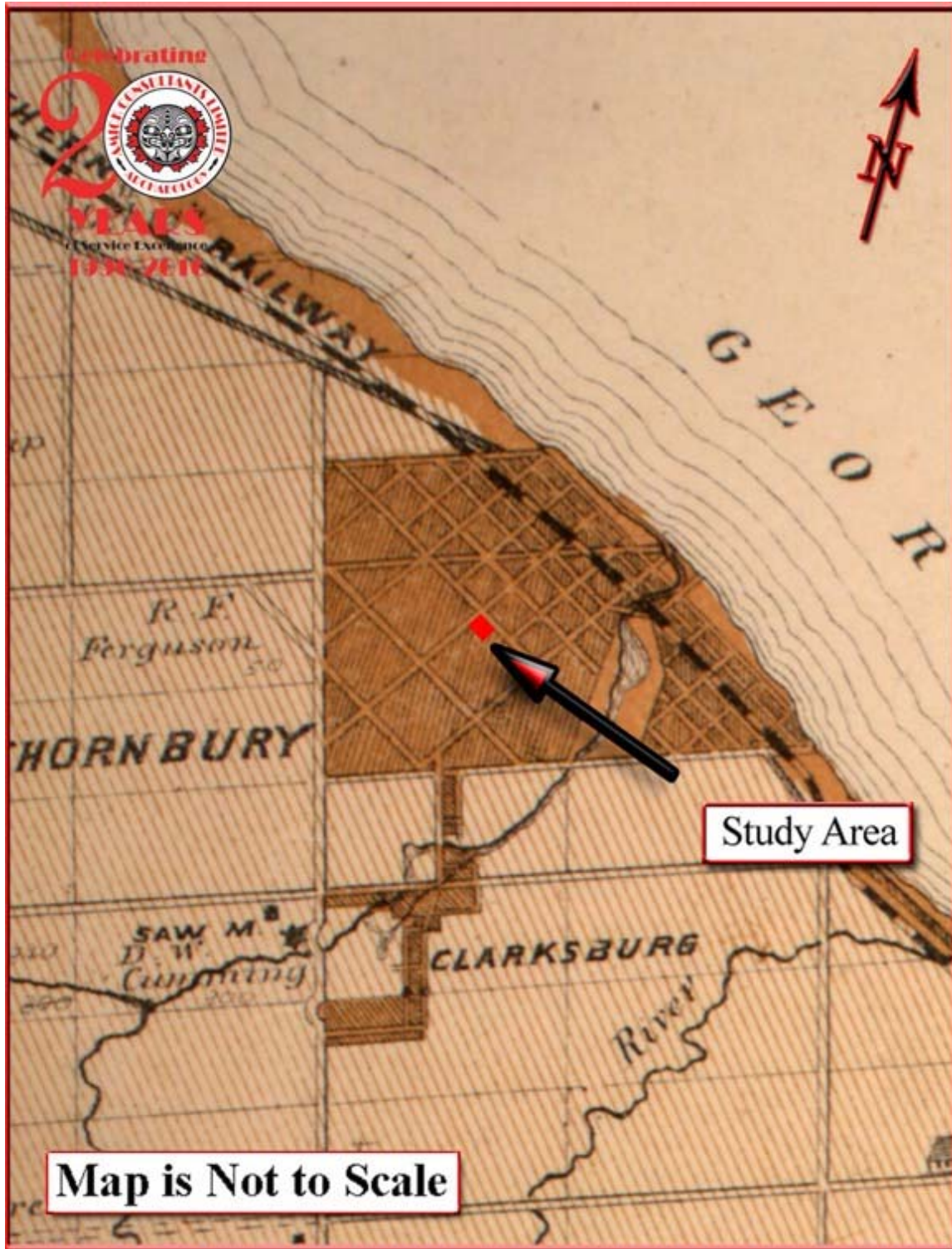
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12.0 MAPS



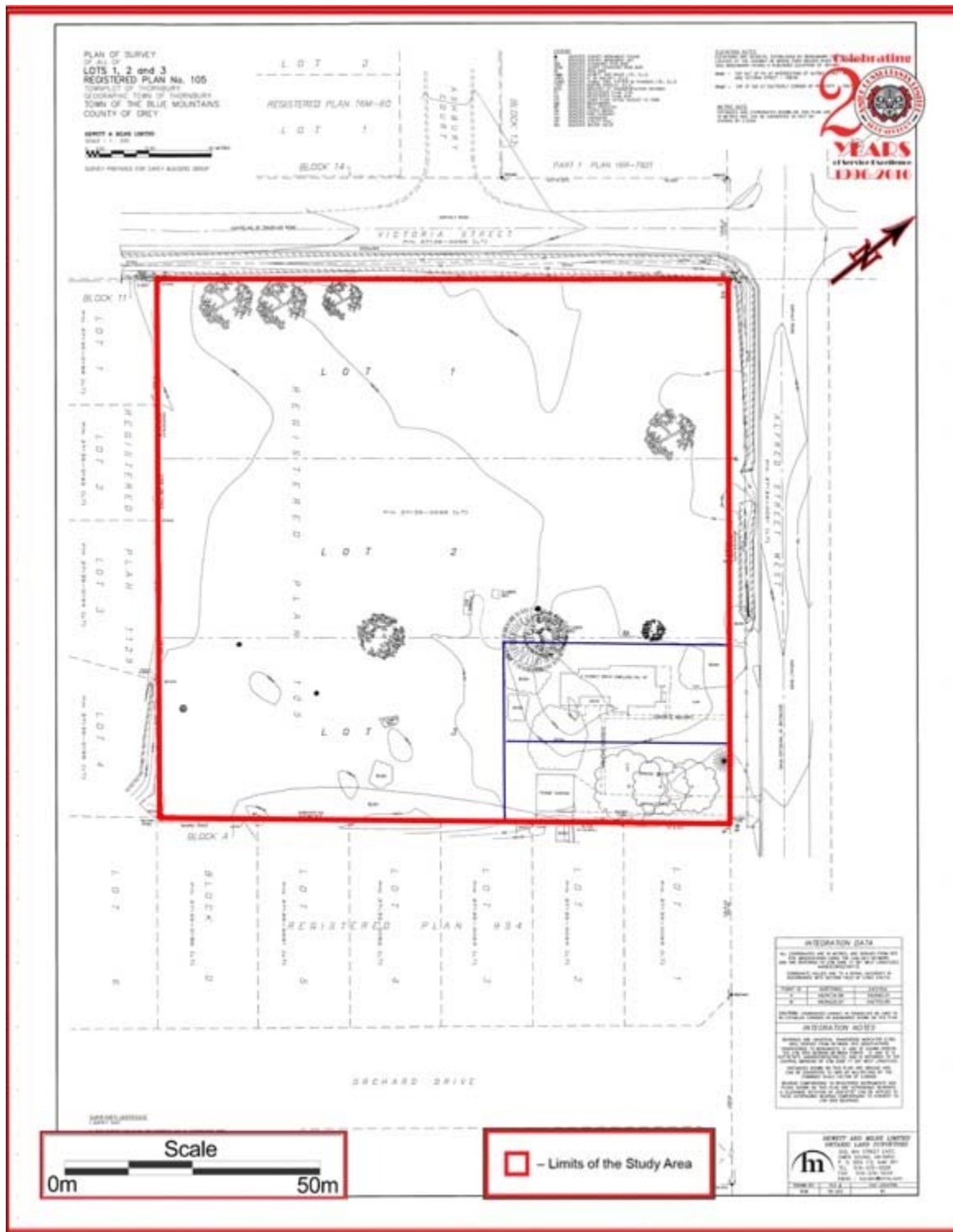
MAP 1 LOCATION OF THE STUDY AREA (ESRI 2018)

*ORIGINAL 2019 Stage 1-2 Archaeological Assessment of 61 Alfred Street West, Plan of Survey of all of Lots 1, 2 and 3, Registered Plan No. 105, Townplot of Thornbury, Part of Lot 33, Concession 10 (Geographic Township of Collingwood), Town of the Blue Mountains, County of Grey
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MAP 2 FACSIMILE SEGMENT OF THE HISTORIC ATLAS MAP OF THE TOWNSHIP OF COLLINGWOOD (BELDEN, H. & Co. 1881)

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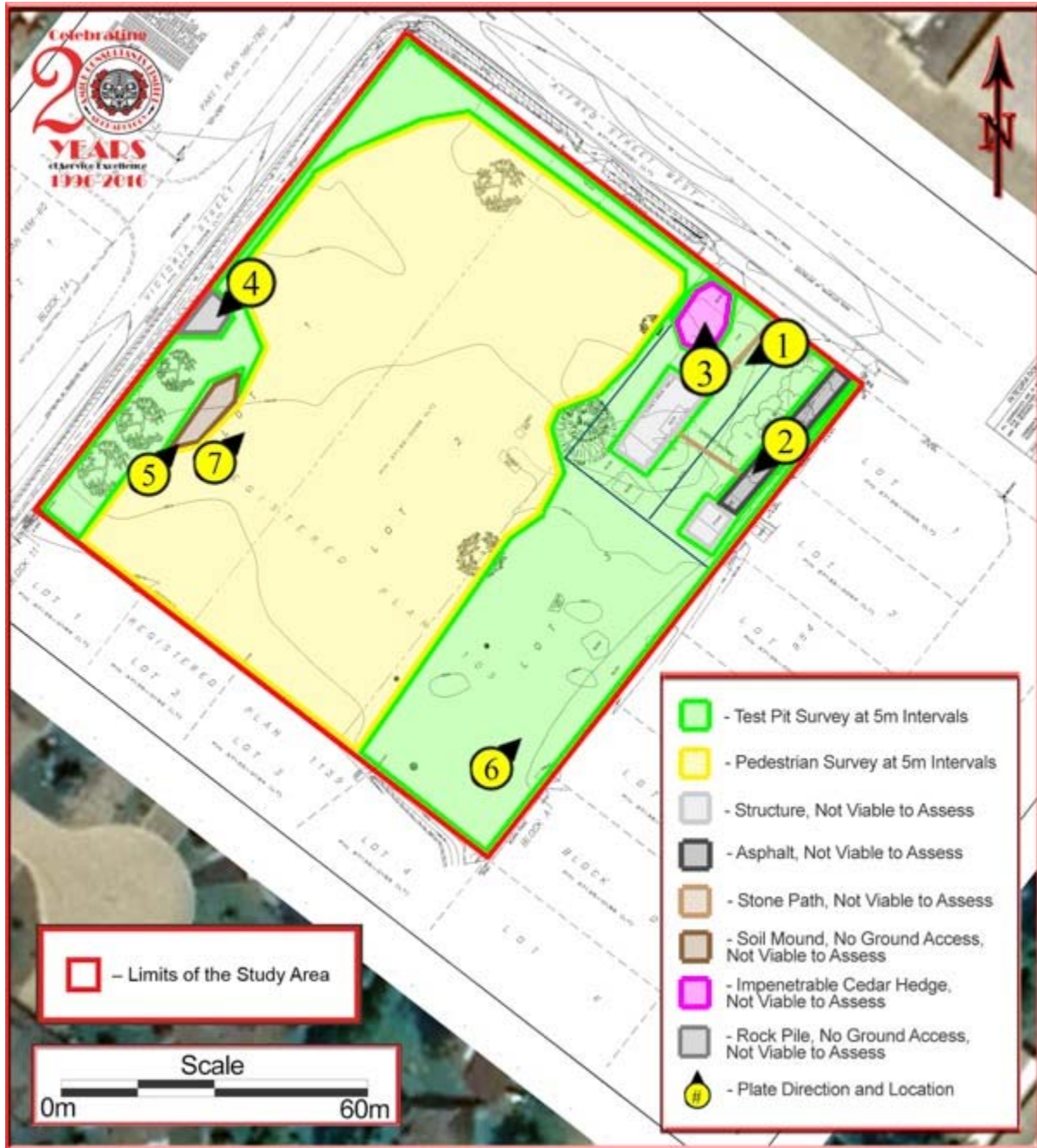
MAP 3 PLAN OF SURVEY (HEWETT AND MILNE LIMITED ONTARIO LAND SURVEYORS 2018)

ORIGINAL 2019 Stage 1-2 Archaeological Assessment of 61 Alfred Street West, Plan of Survey of all of Lots 1, 2 and 3, Registered Plan No. 105, Townplot of Thornbury, Part of Lot 33, Concession 10 (Geographic Township of Collingwood), Town of the Blue Mountains, County of Grey (AMICK File #19851/MTCS File #P058-1779-2019)



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

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MAP 5 DETAILED PLAN OF THE STUDY AREA

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13.0 IMAGES

	
IMAGE 1 FRONT OF 61 ALFRED STREET WEST	IMAGE 2 SEPARATE GARAGE, PAVED DRIVEWAY AND STONE PATH
	
IMAGE 3 IMPENETRABLE CEDAR HEDGE	IMAGE 4 ROCK PILE
	
IMAGE 5 SOIL MOUND	IMAGE 6 TEST PIT SURVEY CONDITIONS AND CREW AT WORK
	
IMAGE 7 PEDESTRIAN SURVEY CONDITIONS	IMAGE 8 CSP IN PROGRESS AT SITE BDHC-28 (SEE MAPS 6 & 7 IN SUPPLEMENTARY DOCUMENTATION)



IMAGE 9 REPRESENTATIVE ARTIFACTS FROM BDHC-28

1. Pewter Harness Bell; 2. Cut Nail; 3. Drawn Wire Fence Staple; 4. Undecorated Refined White Earthenware Covered Dish Lid; 5. Cobalt Blue Transfer Printed Refined White Earthenware; 6. Green Transfer Printed Refined White Earthenware; 7. Black Transfer Printed Refined White Earthenware; 8. Purple Stamp Decorated Refined White Earthenware; 9. Flown Cobalt Blue Transfer Printed Refined White Earthenware; 10. Undecorated Ironstone Dinner Plate; 11. Relief Moulded Dish Foot with Rope Motif; 12. Relief Moulded Ironstone Dinner Plate with Indeterminate Pattern; 13. Undecorated Coarse Red Earthenware Utility Vessel; 14. Coarse Red Earthenware Brick Fragment; 15. Bisque (Unglazed) Porcelain; 16. Undecorated Clear Glazed Porcelain; 17. Olive Green Bottle Glass; 18. Cobalt Blue Bottle Glass; 19. Pressed Clarified Glass Vessel with Embossed Knight Motif; 20. Two or More Piece Moulded Clarified Glass Bottle; 21. Milk Glass Jar with Embossed Inscription on the Base, "Mentholum Reg. Trade Mark"; 22. Medicine Vial Base; 23. Patent Bottle Finish; 24. Two or More Piece Panel Medicine Bottle with the partial Label, "Syru.."

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APPENDIX A: ARTIFACT CATALOGUE FOR THE THORNBURY SITE (BdHc-28)

Cat.	CSP	Material	Class	Type	Attribute	Form	Function	Qty	Date Range
1	80	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
2	80	Metal	Iron	Sheet	Corroded	Indeterminate	Indeterminate	1	Indeterminate
3	80	Faunal	Mammal	Indeterminate	Fragment	Indeterminate	Indeterminate	1	Indeterminate
4	79	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
5	77	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
6	77	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
7	77	Ceramic	Porcelain	Undecorated	Clear Glazed	Bread Plate	Tableware	2	1890-Present
8	84	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	1	1850-Present
9	84	Glass	Commercial Container	Two or More Piece Mould	Paneled	Bottle	Medicine	1	1850-1870
10	83	Glass	Commercial Container	Machine Made	Amethyst Solarized	Bottle	Indeterminate	1	1870-1890
11	83	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
12	78	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
13	85	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Dish Lid	Tableware	1	1825-Present
14	85	Ceramic	Refined White Earthenware	Transfer Printed	Cobalt Blue	Indeterminate	Tableware	1	1825-Present
15	85	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
16	85	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
17	86	Glass	Commercial Container	Two or More Piece Mould	Paneled	Bottle	Medicine	1	1850-1870
18	86	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
19	86	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
20	81	Glass	Commercial Container	Cylindrical	Olive Green	Bottle	Liquors	1	1785-Present
21	81	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
22	82	Glass	Commercial Container	Cylindrical	Olive Green	Bottle	Liquors	1	1785-Present
23	82	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	1	1850-Present
24	1	Metal	Iron	Drawn Wire	Corroded	Fence Staple	Agricultural	1	1870-Present
25	1	Ceramic	Refined White Earthenware	Transfer Printed	Black	Dinner Plate	Tableware	1	1830-Present
26	2	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
27	3	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
28	5	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
29	4	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
30	6	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
31	7	Ceramic	Porcelain	Undecorated	Unglazed	Indeterminate	Indeterminate	1	1890-Present

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32	7	Ceramic	Refined White Earthenware	Transfer Printed	Green	Indeterminate	Tableware	1	1830-Present
33	7	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
34	8	Faunal	Mammal	Indeterminate	Calcined	Indeterminate	Indeterminate	1	Indeterminate
35	9	Ceramic	Ironstone	Undecorated	Clear Glazed	Tea Cup	Tableware	1	1850-Present
36	10	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	3	1785-Present
37	11	Glass	Commercial Container	Milk Glass	"Mentholatum"	Jar	Medicine	1	1889-Present
38	11	Glass	Commercial Container	Cylindrical	Amethyst Solarized	Bottle	Indeterminate	1	1870-1890
39	12	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
40	13	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
41	14	Ceramic	Porcelain	Undecorated	Clear Glazed	Tea Cup	Tableware	1	1890-Present
42	15	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
43	16	Ceramic	Porcelain	Undecorated	Clear Glazed	Saucer	Tableware	1	1890-Present
44	17	Ceramic	Porcelain	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1890-Present
45	18	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present
46	19	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	2	1825-Present
47	20	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	2	1825-Present
48	21	Glass	Commercial Container	Unmarked	Molten	Bottle	Indeterminate	1	1850-1870
49	22	Metal	Iron	Cut	Corroded	Nail	Architecture	1	1825-1890
50	22	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
51	23	Glass	Commercial Container	Unmarked	Patent Finnish	Bottle	Indeterminate	1	1850-1890
52	23	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
53	24	Faunal	Mammal	Indeterminate	Fragment	Indeterminate	Indeterminate	3	Indeterminate
54	25	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	2	1870-Present
55	25	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
56	26	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
57	43	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
58	43	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present
59	49	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
60	49	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
61	48	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-Present
62	48	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
63	47	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
64	30	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Bowl	Kitchen/Utility	1	1850-1890
65	30	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present
66	29	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
67	28	Glass	Commercial	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present

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			Container						
68	31	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
69	31	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
70	32	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	2	1825-Present
71	33	Ceramic	Ironstone	Relief Moulded	Indeterminate Pattern	Dinner Plate	Tableware	1	1850-Present
72	33	Glass	Commercial Container	Cylindrical	Milk Glass	Jar	Indeterminate	1	1870-Present
73	27	Faunal	Mammal	Indeterminate	Calcined	Indeterminate	Indeterminate	1	Indeterminate
74	34	Ceramic	Ironstone	Undecorated	Clear Glazed	Dinner Plate	Tableware	1	1850-Present
75	35	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
76	36	Ceramic	Pocelain	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1890-Present
77	37	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
78	38	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present
79	39	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
80	40	Faunal	Mammal	Indeterminate	Calcined	Indeterminate	Indeterminate	1	Indeterminate
81	41	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
82	42	Ceramic	Ironstone	Undecorated	Clear Glazed	Tea Cup	Tableware	2	1850-Present
83	43	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
84	44	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	1	1850-Present
85	44	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
86	45	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present
87	46	Ceramic	Ironstone	Relief Moulded	Indeterminate Pattern	Indeterminate	Tableware	1	1850-Present
88	50	Glass	Pressed	Relief Moulded	Milk Glass	Indeterminate	Tableware	1	1870-Present
89	50	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
90	50	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
91	74	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	1	1850-Present
92	73	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
93	70	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
94	67	Ceramic	Ironstone	Relief Moulded	Rope Motif	Vessel Base	Tableware	1	1850-Present
95	67	Metal	Iron	Sheet	Corroded	Indeterminate	Indeterminate	1	1785-Present
96	71	Ceramic	Yellowware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1830-1930
97	71	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
98	62	Ceramic	Porcelain	Undecorated	Clear Glazed	Tea Cup	Tableware	1	1890-Present
99	62	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
100	62	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
101	52	Ceramic	Ironstone	Relief Moulded	Indeterminate Pattern	Dinner Plate	Tableware	1	1850-Present
102	52	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
103	52	Ceramic	Refined White Earthenware	Transfer Printed	Cobalt Blue	Indeterminate	Tableware	1	1825-Present

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104	51	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	2	1870-Present
105	53	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
106	59	Ceramic	Ironstone	Undecorated	Clear Glazed	Dinner Plate	Tableware	1	1850-Present
107	54	Glass	Commercial Container	Cylindrical	Two or More Piece Moulded	Vial	Medicine	1	1850-Present
108	54	Ceramic	Refined White Earthenware	Transfer Printed	Flown Cobalt Blue	Indeterminate	Tableware	1	1870-1930
109	54	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	2	1850-1890
110	60	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
111	64	Metal	Pewter	Unmarked	One Inch	Harness Bell	Transportation	1	1785-1930
112	64	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
113	99	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	2	1850-Present
114	66	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
115	66	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
116	65	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
117	65	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Saucer	Tableware	1	1850-Present
118	95	Glass	Commercial Container	Cylindrical	Olive Green	Bottle	Liquors	1	1785-Present
119	95	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Dinner Plate	Tableware	2	1825-Present
120	87	Glass	Indeterminate	Indeterminate	Molten	Indeterminate	Indeterminate	1	1785-Present
121	87	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
122	68	Ceramic	Refined White Earthenware	Stamp Decorated	Purple	Indeterminate	Tableware	1	1840-1930
123	68	Metal	Iron	Cut	Corroded	Nail	Architecture	1	1825-1895
124	68	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
125	72	Metal	Iron	Cut	Corroded	Nail	Architecture	1	1825-1895
126	72	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
127	76	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Dinner Plate	Tableware	1	1825-Present
128	76	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present
129	98	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
130	89	Ceramic	Ironstone	Undecorated	Clear Glazed	Saucer	Tableware	1	1850-Present
131	89	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
132	93	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/u=Utility	1	1850-1890
133	93	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Dinner Plate	Tableware	1	1825-Present
134	92	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	2	1870-Present
135	69	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	2	1785-Present
136	69	Ceramic	Refined White	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present

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			Earthenware						
137	94	Ceramic	Ironstone	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1850-Present
138	94	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
139	91	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
140	91	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
141	75	Glass	Pressed	Embossed	Clarified	Indeterminate	Tableware	1	1870-Present
142	75	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
143	55	Metal	Iron	Cut	Corroded	Nail	Architecture	1	1825-1895
144	55	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
145	61	Ceramic	Ironstone	Undecorated	Clear Glazed	Dinner Plate	Tableware	1	1850-Present
146	57	Glass	Commercial Container	Cylindrical	Clarified	Bottle	Indeterminate	1	1870-Present
147	57	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
148	58	Ceramic	Ironstone	Undecorated	Clear Glazed	Dinner Plate	Tableware	1	1850-Present
149	58	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	1	1870-Present
150	88	Glass	Commercial Container	Cylindrical	Cobalt Blue	Indeterminate	Indeterminate	1	1870-Present
151	88	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	3	1850-1890
152	88	Ceramic	Coarse Red Earthenware	Unmarked	Fragment	Brick	Architecture	1	1785-Present
153	63	Ceramic	Coarse Red Earthenware	Undecorated	Unglazed	Flower Pot	Horticulture	1	1850-Present
154	56	Glass	Sheet	Rolled	Clarified	Window Pane	Architecture	2	1870-Present
155	56	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
156	90	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	2	1825-Present
157	96	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
158	96	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
159	100	Ceramic	Coarse Red Earthenware	Undecorated	Clear Glazed	Indeterminate	Kitchen/Utility	1	1850-1890
160	100	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	1	1825-Present
161	97	Ceramic	Refined White Earthenware	Undecorated	Clear Glazed	Indeterminate	Tableware	2	1825-Present

APPENDIX B: DATABLE HISTORIC ARTIFACT DESCRIPTIONS

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.

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.

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.

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.

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 their 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 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.