Appendix E: Archaeological Study
Stage 1 and 2 Archaeological Assessments
Mathers Drive Stream & Valley Wall Erosion
Municipal Class Environmental Assessment
City of Hamilton
Part of Lot 17, Concession 3
Geographic Township of Saltfleet
Former Wentworth County, Ontario

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The Ministry of Tourism, Culture and Sport

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MTCS Licence #P007
PIF #P007-0765-2016
ARA File #2016-0260

07/11/2016

Original Report
EXECUTIVE SUMMARY

Under a contract awarded in August 2016, Archaeological Research Associates Ltd. carried out Stage 1 and Stage 2 archaeological assessments of lands with the potential to be impacted by the proposed Mathers Drive Stream & Valley Wall Erosion project in the City of Hamilton, Ontario. The assessment was completed as a component of a Schedule B Municipal Class Environment Assessment, which has been initiated to determine the preferred alternative to protect homes in the community from erosion and valley slope failure as a result of deteriorated erosion control structures. This report documents the background research and fieldwork involved in the assessments, and presents conclusions and recommendations pertaining to archaeological concerns within the project lands.

The Stage 1 and 2 assessments were conducted concurrently in August 2016 under PIF #P007-0765-2016. The assessments encompassed the entirety of the project lands. Legal permission to enter and conduct all necessary fieldwork activities within the assessed lands was granted by the property owner. At the time of assessment, the study area comprised part of Mathers Drive Stream and its valley, parts of several residential parcels along Maple Drive and a grassed access easement along Mathers Drive.

The Stage 1 assessment determined that the study area comprised a mixture of areas of archaeological potential and areas of no archaeological potential. The Stage 2 assessment of the identified areas of archaeological potential did not result in the identification of any archaeological materials. Archaeological Research Associates Ltd. recommends that no further assessment be required within the project lands. It is requested that this report be entered into the Ontario Public Register of Archaeological Reports, as provided for in Section 65.1 of the Ontario Heritage Act.
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GLOSSARY OF ABBREVIATIONS

ARA – Archaeological Research Associates Ltd.
MTC – (Former) Ministry of Tourism and Culture
MTCS – Ministry of Tourism, Culture and Sport
PIF – Project Information Form
S&Gs – Standards and Guidelines for Consultant Archaeologists
PERSONNEL

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1.0 PROJECT CONTEXT

1.1 Development Context

Under a contract awarded in August 2016, ARA carried out Stage 1 and Stage 2 archaeological assessments of lands with the potential to be impacted by the proposed Mathers Drive Stream & Valley Wall Erosion project in the City of Hamilton, Ontario. The assessment was completed as a component of a Schedule B Municipal Class Environment Assessment, which has been initiated to determine the preferred alternative to protect homes in the community from erosion and valley slope failure as a result of deteriorated erosion control structures. This report documents the background research and fieldwork involved in the assessments, and presents conclusions and recommendations pertaining to archaeological concerns within the project lands.

The subject study area consists of an irregularly-shaped 0.29 ha parcel of land located in the northeastern part of the City of Hamilton (see Map 1). This parcel is generally bounded by the continuation of the Mathers Drive Stream valley to the north, residential parcels along Mathers Drive to the west, Maple Drive to the south and residential parcels along Maple Drive to the east. The assessments encompassed the entirety of the project lands. In legal terms, the study area falls on part of Lot 17, Concession 3 in the Geographic Township of Saltfleet (former Wentworth County).

The Stage 1 and 2 assessments were conducted concurrently in August 2016 under PIF #P007-0765-2016. Legal permission to enter and conduct all necessary fieldwork activities within the assessed lands was granted by the property owner. In compliance with the objectives set out in Section 1.0 and Section 2.0 of the S&Gs (MTC 2011:13–41), these investigations were carried out in order to:

- Provide information concerning the geography, history and current land condition of the study area;
- Determine the presence of known archaeological sites in the study area;
- Evaluate in detail the archaeological potential of the study area;
- Empirically document all archaeological resources within the study area;
- Determine whether the study area contains archaeological resources requiring further assessment; and
- Recommend appropriate Stage 3 assessment strategies, if any archaeological resources requiring further assessment are identified.

The MTCS is asked to review the results and recommendations presented in this report and express their satisfaction with the fieldwork and reporting through a Letter of Review and Entry into the Ontario Public Register of Archaeological Reports.
1.2 Historical Context

After a century of archaeological work in southern Ontario, scholarly understanding of the historic usage of the area has become very well-developed. With occupation beginning in the Palaeo-Indian period approximately 11,000 years ago, the greater vicinity of the study area comprises a complex chronology of Pre-Contact and Euro-Canadian histories. Section 1.2.1 provides an overview of the region’s settlement history, and Section 1.2.2 summarizes the past and present land use of the study area. No other archaeological reports containing relevant background information (influencing the choice of fieldwork strategy or recommendations) were identified during the research component of the study.

1.2.1 Settlement History

1.2.1.1 Pre-Contact

The Pre-Contact history of the region is lengthy and rich, and a variety of Aboriginal groups inhabited the landscape. Archaeologists generally divide this vibrant history into three main periods: Palaeo-Indian, Archaic and Woodland. Each of these periods comprises a range of discrete sub-periods characterized by identifiable trends in material culture and settlement patterns, which are used to interpret indigenous lifeways. The principal characteristics of these sub-periods are summarized in Table 1.

Table 1: Pre-Contact Settlement History
(Wright 1972; Ellis and Ferris 1990; Warrick 2000; Munson and Jamieson 2013)

<table>
<thead>
<tr>
<th>Sub-Period</th>
<th>Timeframe</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Palaeo-Indian</td>
<td>900–8400 BC</td>
<td>Gainey, Barnes and Crowfield traditions; Small bands; Mobile hunters and gatherers; Utilization of seasonal resources and large territories; Fluted projectiles</td>
</tr>
<tr>
<td>Late Palaeo-Indian</td>
<td>8400–7500 BC</td>
<td>Holcombe, Hi-Lo and Lanceolate biface traditions; Continuing mobility; Campsite/Way-Station sites; Smaller territories are utilized; Non-fluted projectiles</td>
</tr>
<tr>
<td>Early Archaic</td>
<td>7500–6000 BC</td>
<td>Side-notched, Corner-notched (Nettling, Thebes) and Birfurcate Base traditions; Growing diversity of stone tool types; Heavy woodworking tools appear (e.g., ground stone axes and chisels)</td>
</tr>
<tr>
<td>Middle Archaic</td>
<td>6000–2500 BC</td>
<td>Stemmed (Kirk, Stanly/Neville), Brewerton side- and corner-notched traditions; Reliance on local resources; Populations increasing; More ritual activities; Fully ground and polished tools; Net-sinkers common; Earliest copper tools</td>
</tr>
<tr>
<td>Late Archaic</td>
<td>2500–900 BC</td>
<td>Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; Less mobility; Use of fish-weirs; True cemeteries appear; Stone pipes emerge; Long-distance trade (marine shells and galena)</td>
</tr>
<tr>
<td>Early Woodland</td>
<td>900–400 BC</td>
<td>Meadowood tradition; Crude cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; Bands of up to 35 people</td>
</tr>
<tr>
<td>Middle Woodland</td>
<td>400 BC–AD 600</td>
<td>Local Saugeen-like tradition; Others argue for Point Peninsula tradition; Ceramics continue but many are undecorated; Seasonal settlements and resource utilization; Each watershed may have had a unique tradition; Regional patterns poorly understood at this time</td>
</tr>
</tbody>
</table>
1.2.1.2 Post-Contact

The arrival of the European explorers and traders at the beginning of the 17th century triggered widespread shifts in Aboriginal lifeways and set the stage for the ensuing Euro-Canadian settlement process. Documentation for this period is abundant, ranging from the first sketches of Upper Canada and the written accounts of early explorers to detailed township maps and lengthy histories. The Post-Contact period can be effectively discussed in terms of major historical events, and the principal characteristics associated with these events are summarized in Table 2.

### Table 2: Post-Contact Settlement History

(Smith 1846; Coyne 1895; Lajeunesse 1960; DVSA 1971; Ellis and Ferris 1990; Surtees 1994; AO 2015)

<table>
<thead>
<tr>
<th>Historical Event</th>
<th>Timeframe</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Contact</td>
<td>Early 17th century</td>
<td>Brûlé explores the area in 1610; Champlain visits in 1613 and 1615/1616; Iroquoian-speakers (Huron, Petun and Neutral) and Algonkian-speakers (Anishinabeg) encountered; European goods begin to replace traditional tools</td>
</tr>
<tr>
<td>Five Nations Invasion</td>
<td>Mid-17th century</td>
<td>Haundenosaunee (Five Nations) invade ca. 1650; Neutral, Huron and Petun Nations are defeated/removed; vast Iroquoian hunting territory established in the second half of the 17th century; Explorers continue to document the area</td>
</tr>
<tr>
<td>Anishnabeg Influx</td>
<td>Late 17th and early 18th century</td>
<td>Ojibway, Odawa and Potawatomi expand into Haundenosaunee lands in the late 17th century; Nanfan Treaty between Haundenosaunee and British in 1701; Anishnabeg occupy the area and trade directly with the French and English</td>
</tr>
<tr>
<td>Fur Trade Development</td>
<td>Early and mid-18th century</td>
<td>Growth and spread of the fur trade; Peace between the French and English with the Treaty of Utrecht in 1713; Ethnogenesis of the Métis; Hostilities between French and British lead to the Seven Years’ War in 1754; French surrender in 1760</td>
</tr>
<tr>
<td>British Control</td>
<td>Mid-18th century</td>
<td>Royal Proclamation of 1763 recognizes the title of the First Nations to the land; Numerous treaties arranged by the Crown; First acquisition is the Seneca surrender of the west side of the Niagara River in August 1764</td>
</tr>
<tr>
<td>Loyalist Influx</td>
<td>Late 18th century</td>
<td>United Empire Loyalist influx after the American Revolutionary War (1775–1783); British develop interior communication routes and acquire additional lands; Constitutional Act of 1791 creates Upper and Lower Canada</td>
</tr>
<tr>
<td>Historical Event</td>
<td>Timeframe</td>
<td>Characteristics</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>County Development</td>
<td>Late 18th and early 19th century</td>
<td>Became part of Lincoln County’s ‘First Riding’ in July 1792; Lands acquired in the second ‘Between the Lakes Purchase’ in December 1792; Became part of Wentworth County (Gore District) in 1816; Extent of Wentworth County redefined after the abolition of the district system in 1849</td>
</tr>
<tr>
<td>Township Formation</td>
<td>Late 18th and early 19th century</td>
<td>Saltfleet (originally Township #7) first settled in 1786; Majority surveyed by Augustus Jones in 1788; Settlement facilitated by immigration of Europeans and United Empire Loyalists in late 18th and early 19th centuries; Several saltworks established at excellent salt springs; Battle of Stoney Creek in June 1813; 102 householders in 1815</td>
</tr>
<tr>
<td>Township Development</td>
<td>Mid-19th and early 20th century</td>
<td>9,605 ha taken up by 1846, with 4,497 ha under cultivation; One grist mill and six saw mills in operation at that time; Traversed by the Great Western Railway (1853) and the Toronto, Hamilton &amp; Buffalo Railway (1895); Farming and stock raising were preferred occupations initially, but fruit farming became a focus in the late 19th century; Communities at Stoney Creek, Mt. Albion, Elfrida, Tapleytown, Winona, Fruitland, Tweedside and Vinemount</td>
</tr>
</tbody>
</table>

### 1.2.2 Past and Present Land Use

During Pre-Contact and Early Contact times, the vicinity of the study area would have comprised a mixture of coniferous trees, deciduous trees and open areas. It seems clear that the First Nations managed the landscape to some degree, but the extent of such management is unknown. During the late 18th and early 19th centuries, Euro-Canadian settlers arrived in the area and began to clear the forests for agricultural and settlement purposes. The vicinity of the study area was relatively well-settled for the remainder of the Euro-Canadian period.

In an attempt to reconstruct the historic land use of the study area, ARA examined one patent plan, two historical maps documenting past residents, structures (e.g., homes, businesses and public buildings) and features during the 19th century, and one aerial image from the 20th century. Specifically, the following resources were consulted:

- The *Saltfleet Township* Patent Plan (Date Unknown) at a scale of 40 chains to 1 inch (AO 2015);
- H. Gregory’s *Map of the County of Wentworth, Canada West* (1859) at a scale of 50 chains to 1 inch (OHCMP 2016);
- *Saltfleet Township* from Page & Smith’s *Illustrated Historical Atlas of the County of Wentworth, Ont.* (1875) at a scale of 2 inches to 1 mile (McGill University 2001); and
- An aerial image from 1950 (McMaster University 2016).

The limits of the study area are shown on georeferenced versions of the consulted historical resources in Map 2–Map 5. These resources indicate that the surrounding lands were well-settled by the mid-19th century. A variety of properties, structures and features are visible, and numerous landowners are identified (see Table 3).
The current land use can be classified as infrastructural (i.e., drainage related), although residential land uses exist along the periphery of the project lands.

1.3 Archaeological Context

The Stage 1 and 2 assessments were conducted concurrently on August 29, 2016 under PIF #P007-0765-2016. ARA utilized a Garmin eTrex 20 high-sensitivity WAAS-enabled GPS receiver with an accuracy of +/- 5 m (UTM17/NAD83) during the investigation. The limits of the study area were confirmed using project-specific GIS data translated into GPS points for reference in the field, in combination with georeferenced aerial imagery showing natural formations in relation to the project lands.

The archaeological context of a given study area must be informed by the general condition of the property (Section 1.3.1), summaries of any previous archaeological work conducted within 50 m (Section 1.3.2) and whether there are any registered or known archaeological sites within 1 km (Section 1.3.3).

1.3.1 Condition of the Property

The study area lies within the deciduous forest, which is the southernmost forest region in Ontario and is dominated by agricultural and urban areas. This region generally has the greatest diversity of tree and vegetation species, while at the same time having the lowest proportion of forest. It has most of the tree and shrubs species found in the Great Lakes–St. Lawrence forest (e.g., white pine, red pine, hemlock, white cedar, yellow birch, sugar and red maples, basswood and red oak), and also contains black walnut, butternut, tulip, magnolia, black gum, many types of oaks, hickories, sassafras and red bud (MNRF 2015).

Physiographically, the study area lies within the region known as the Iroquois Plain, which extends around the western and northern parts of Lake Ontario and consists of the shoreline and lake bed of Lake Iroquois. The old shorelines, including cliffs, bars, beaches and boulder pavements are clearly visible in this area, and the undulating till plains above stand in marked contrast to the smoothed lake bottom (Chapman and Putnam 1984:190–192). The soils within the study area consist of Oneida loam (Ol) in the north and Chinguacousy loam (Cl) in the south. Oneida loam is a Grey-Brown Podzolic made up of clay loam till that is well-drained, whereas Chinguacousy loam is a Grey-Brown Podzolic made up of clay loam till that is imperfectly drained (Presant et al. 1965:Soil Map).
In terms of local watersheds, the subject lands fall within the Stoney Creek Numbered Watercourses drainage basin, which comprises part of the Hamilton Conservation Authority (HCA 2016). Specifically, the study area is traversed by Mathers Drive Stream and is located 1.3 km northeast of Stoney Creek, 1.8 km northwest of the Vinemount Provincial Swamp and 2.9 km south of Lake Ontario. It is unclear whether Mathers Drive Stream is a historic waterway or a more recent artificial drainage channel.

At the time of assessment, the study area comprised part of Mathers Drive Stream and its valley, parts of several residential parcels along Maple Drive and a grassed access easement along Mathers Drive. Field conditions were ideal during the assessments, with dry soils for screening and high ground surface visibility. Two physical features were encountered that affected fieldwork strategy decisions. These included 1) a shed in the rear portion of a residential parcel along Mathers Drive and 2) another shed in the rear portion of a residential parcel along Maple Drive. Standard survey intervals could not be maintained here, and the adjacent lands were test pitted as close to the constraints as possible to ensure optimal survey coverage. No other features were recognized that affected fieldwork strategy decisions or the identification of archaeological remains.

1.3.2 Previous Archaeological Work

The Ontario Archaeological Sites Database and the Ontario Public Register of Archaeological Reports were consulted to determine whether any archaeological assessments had been previously conducted within the limits of, or immediately adjacent to the study area. Specifically, reports documenting 1) assessments previously conducted within the project lands and 2) assessments that resulted in the discovery of archaeological sites that could extend onto the project lands were sought. As a result of this investigation, it was determined that there are no reports on record documenting relevant archaeological fieldwork within a 50 m radius.

1.3.3 Registered or Known Archaeological Sites

The Ontario Archaeological Sites Database and the Ontario Public Register of Archaeological Reports were also consulted to determine whether any registered or known archaeological resources occur in the greater vicinity of the study area. As a result of this investigation, it was determined that there is one previously identified archaeological site located within a 1 km radius. The characteristics of this site are summarized in Table 4.

<table>
<thead>
<tr>
<th>Borden No.</th>
<th>Site Name (Identifier)</th>
<th>Time Period</th>
<th>Site Type</th>
<th>Assessment History</th>
<th>Assessment Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>AhGw-241</td>
<td>Philander Barnes</td>
<td>Post-Contact</td>
<td>Unknown</td>
<td>2006</td>
<td>Stage 1–3: 10 positive test pits in a woodlot, unknown number of artifacts observed, CHVI unknown</td>
</tr>
</tbody>
</table>
AhGw-241 is not located within or immediately adjacent to the project lands; accordingly, it has no potential to traverse the study area. Regardless, the presence of one previously identified site in the vicinity of the study area demonstrates the desirability of this locality for early settlement.
2.0 STAGE 1 BACKGROUND STUDY

2.1 Background

The Stage 1 assessment involved background research to document the geography, history, previous archaeological fieldwork and current land condition of the study area. This desktop examination included research from both archival sources as well as current academic/archaeological publications. It also included the analysis of modern topographic maps, aerial photographs, satellite imagery, and historical maps/atlasues of the most detailed scale available. The results of the research conducted for the background study are summarized below.

With occupation beginning approximately 11,000 years ago, the greater vicinity of the study area comprises a complex chronology of Pre-Contact and Post-Contact histories (see Section 1.2). Artifacts associated with Palaeo-Indian, Archaic, Woodland and Early Contact traditions are well-attested in the City of Hamilton, and Euro-Canadian archaeological sites dating to pre-1900 and post-1900 contexts are likewise common. The presence of one registered archaeological site in the vicinity of the study area demonstrates the desirability of this locality for early settlement (see Section 1.3.3).

The natural environment of the study area would have been attractive to both Pre-Contact and Euro-Canadian populations as a result of proximity to a variety of water sources. The relatively well-drained soils would have been ideal for agriculture, and the diverse local vegetation would also have encouraged settlement throughout Ontario’s lengthy history. Euro-Canadian populations would have been particularly drawn to Dewitt Road and Ridge Road, both of which were historically-surveyed throughfares, as well as the Toronto, Hamilton & Buffalo Railway.

In summary, the Stage 1 assessment included an up-to-date listing of sites from the MTCS’s Ontario Archaeological Sites Database (within at least a 1 km radius), the consideration of previous local archaeological fieldwork (within at least a 50 m radius), the analysis of topographic and historic maps (at the most detailed scale available), and the study of aerial photographs/satellite imagery. In this manner, the standards for background research set out in Section 1.1 of the S&Gs (MTC 2011:14–15) were met.

2.2 Field Methods (Property Inspection)

Since the Stage 1 and 2 archaeological assessments were carried out concurrently, a separate property inspection was not completed as part of the Stage 1 background study. Instead, the visual inspection was conducted over the course of the Stage 2 property survey, in keeping with the concepts set out in Section 2.1 Standards 2a–b of the S&Gs (MTC 2011:28). The specific field methods utilized during the visual inspection and the weather and lighting conditions at the time of assessment are summarized in Section 3.1 (Stage 2).
2.3 Analysis and Conclusions

In addition to relevant historical sources and the results of past archaeological assessments, the archaeological potential of a property can be assessed using its soils, hydrology and landforms as considerations. Section 1.3.1 of the S&Gs (MTC 2011:17–18) recognizes the following features or characteristics as indicators of archaeological potential: previously identified sites, water sources (past and present), elevated topography, pockets of well-drained sandy soil, distinctive land formations, resource areas, areas of Euro-Canadian settlement, early transportation routes, listed or designated properties, historic landmarks or sites, and areas that local histories or informants have identified with possible sites, events, activities or occupations.

The Stage 1 assessment resulted in the identification of numerous features of archaeological potential in the vicinity of the study area (see Map 6). The closest and most relevant indicators of archaeological potential (i.e., those that would directly affect survey interval requirements) include one potential primary water source (Mathers Drive Stream), two physiographic features (a shore bluff or scarp and the Niagara Escarpment), two historic roadways (Dewitt Road and Ridge Road), one historic railway (the Toronto, Hamilton & Buffalo Railway) and one historic structure locality visible in Saltfleet Township from Page & Smith’s Illustrated Historical Atlas of the County of Wentworth, Ont. (1875). As stated above, it is unclear whether Mathers Drive Stream is a historic waterway or a more recent artificial drainage channel; accordingly, it was treated as a potential primary water source.

Hamilton’s Archaeology Management Plan (City of Hamilton 2016:Appendix A-1) also indicates that the entire study area has archaeological potential (see Map 7). However, it should be noted that this modelling was not the result of a property-specific assessment and therefore does not fully account for land-use history and current conditions.

Although proximity to a feature of archaeological potential is a significant factor in the potential modelling process, current land conditions must also be considered. Section 1.3.2 of the S&Gs (MTC 2011:18) emphasizes that 1) quarrying, 2) major landscaping involving grading below topsoil, 3) building footprints and 4) sewage/infrastructure development can result in the removal of archeological potential, and Section 2.1 of the S&Gs (MTC 2011:28) states that 1) permanently wet areas, 2) exposed bedrock and 3) steep slopes (> 20°) can also be considered as having no archaeological potential.

ARA’s visual inspection, coupled with the analysis of aerial photographs, satellite imagery, topographic mapping and digital environmental data, resulted in the identification of several areas of no archaeological potential within the assessed lands. Since all of the areas of no archaeological potential were identified over the course of the Stage 2 property survey, they are fully discussed in Section 3.1. The remainder of the assessed area either had potential for Pre-Contact and Euro-Canadian archaeological materials or required test pit survey to confirm the presence/extent of any subsurface disturbances. Background research did not identify any features indicating that the study area had potential for deeply buried archaeological materials.
The Stage 1 assessment determined that the assessed area comprised a mixture of areas of archaeological potential and areas of no archaeological potential. A Stage 2 assessment was therefore required.
3.0 STAGE 2 PROPERTY ASSESSMENT

3.1 Field Methods

The Stage 2 assessment involved 1) visual inspection to evaluate archaeological potential and 2) test pit survey in all identified areas of archaeological potential. Environmental conditions were ideal during the investigation, with sunny skies, a high of 27 °C and very good lighting. ARA therefore confirms that fieldwork was carried out under weather and lighting conditions that met the requirements set out in Section 1.2 Standard 2 and Section 2.1 Standard 3 of the S&Gs (MTC 2011:16, 29).

The study area was subjected to a systematic visual inspection (at an interval of ≤ 5 m) in accordance with the requirements set out in Section 1.2 of the S&Gs (MTC 2011:15–17). The visually inspected areas were examined under ideal weather and lighting conditions with high ground surface visibility. The inspection confirmed that all surficial features of archaeological potential (e.g., historically-surveyed roadways, etc.) were present where they were previously identified, and did not result in the identification of any additional features of archaeological potential not visible on mapping (e.g., relic water channels, patches of well-drained soils, etc.). Several natural areas of no archaeological potential were identified within the study area, including permanently wet lands along Mathers Drive Stream and lands sloped > 20° to either side (see Image 1–Image 4). No other features (e.g., overgrown vegetation, heavier soils than expected, etc.) or significant built features (e.g., heritage structures, landscapes, plaques, monuments, cemeteries, etc.) that would affect assessment strategies were identified.

The test pit survey method was utilized to complete the assessment within the grassed areas because ploughing was not possible (i.e., the areas were not plough-accessible). Using this method, ARA crewmembers hand-excavated small regular test pits with a minimum diameter of 30 cm at prescribed intervals. In accordance with Section 2.1.2 of the S&Gs (MTC 2011:31–32), all lands within 300 m of any feature of archaeological potential were assessed at an interval of 5 m (see Image 5–Image 10). Given the proximity of the study area to multiple features of archaeological potential, test pit survey at an interval of ≤ 10 m was not conducted. As mentioned in Section 1.3.1, two sheds were encountered in the southern part of the study area. Standard survey intervals could not be maintained here, and the adjacent lands were test pitted as close to the constraints as possible to ensure optimal survey coverage.

In general, the soils within the residential properties were found to be disturbed, with greyish clay subsoil at the base of the test pits. The subsurface environment within the grassed access corridor was also clearly disturbed, with mixed soils and numerous sprinkler caps sunk into the ground (a cable was also observed in one of the test pits). A combination of visual inspection and test pit survey was utilized to confirm the extents of this disturbed area in accordance with Section 2.1.8 of the S&Gs (MTC 2011:38). Given that the area had already been subjected to visual inspection, test pits were excavated throughout the area according to professional judgement to confirm that it had been completely disturbed (see Image 9–Image 10).
Each test pit was excavated into at least the first 5 cm into subsoil, and the resultant pits were examined for stratigraphy, potential features and/or evidence of fill. The soils from each test pit were screened through mesh with an aperture of no greater than 6 mm and examined for archaeological materials. No artifacts or potential features were encountered during the test pit survey. All test pits were backfilled upon completion.

The combined results of the Stage 1 and 2 assessments are presented in Map 8. The extent of the project lands ('study area') is depicted as a layer in this map, and the project mapping is included in the submission package. A breakdown of the survey methods appears in Table 5.

### Table 5: Survey Methods

<table>
<thead>
<tr>
<th>Category</th>
<th>Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Property assessed by pedestrian survey at an interval of ≤ 5 m</td>
<td>0.00% (0.00 ha)</td>
</tr>
<tr>
<td>Property assessed by test pit survey at an interval of ≤ 5 m</td>
<td>14.16% (0.04 ha)</td>
</tr>
<tr>
<td>Property assessed by combination of visual inspection and test pit survey to confirm disturbance</td>
<td>4.31% (0.01 ha)</td>
</tr>
<tr>
<td>Property assessed with a modified survey interval due to a physical or cultural constraint</td>
<td>0.00% (0.00 ha)</td>
</tr>
<tr>
<td>Property not assessed due to physical constraint</td>
<td>1.66% (&lt;0.01 ha)</td>
</tr>
<tr>
<td>Property not assessed because of permanently wet areas</td>
<td>9.14% (0.03 ha)</td>
</tr>
<tr>
<td>Property not assessed because of exposed bedrock</td>
<td>0.00% (0.00 ha)</td>
</tr>
<tr>
<td>Property not assessed because of sloped areas</td>
<td>70.73% (0.21 ha)</td>
</tr>
<tr>
<td>Property not assessed because of disturbed areas</td>
<td>0.00% (0.00 ha)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100% (0.29 ha)</strong></td>
</tr>
</tbody>
</table>

As required by Section 2.1 Standard 4 of the S&Gs (MTC 2011:29), GPS coordinates were recorded for at least one local fixed reference landmark (e.g., a Land Surveyor benchmark, Hydro pole, standard iron bar, etc.). The GPS co-ordinates for the documented landmarks appear in Table 6, and the fixed reference landmark locations are shown in Map 8.

### Table 6: Fixed Reference Landmarks

<table>
<thead>
<tr>
<th>Fixed Reference Landmark ID</th>
<th>Landmark Type</th>
<th>UTM Zone</th>
<th>Easting (m)</th>
<th>Northing (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FRL 1</td>
<td>Street Light</td>
<td>17</td>
<td>603,937</td>
<td>4,784,931</td>
</tr>
<tr>
<td>FRL 2</td>
<td>Street Light</td>
<td>17</td>
<td>604,051</td>
<td>4,784,874</td>
</tr>
</tbody>
</table>

### 3.2 Record of Finds

The assessment did not result in the discovery of any archaeological materials. The inventory of the documentary record, which includes a quantitative summary of the field notes, photographs and mapping materials associated with the project, appears in Table 7.
Table 7: Documentary Record

<table>
<thead>
<tr>
<th>Field Documents</th>
<th>Total</th>
<th>Nature</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photographs</td>
<td>25</td>
<td>Digital</td>
<td>On server at 219-900 Guelph Street, Kitchener</td>
</tr>
<tr>
<td>Field Notes</td>
<td>2</td>
<td>Digital and Hard Copy</td>
<td>Filed and on server at 219-900 Guelph Street, Kitchener</td>
</tr>
<tr>
<td>Field Maps</td>
<td>6</td>
<td>Digital and Hard Copy</td>
<td>Filed and on server at 219-900 Guelph Street, Kitchener</td>
</tr>
</tbody>
</table>

3.3  Analysis and Conclusions

No archaeological sites were identified within the assessed lands.
4.0 RECOMMENDATIONS

The Stage 1 assessment determined that the study area currently comprises a mixture of areas of archaeological potential and areas of no archaeological potential. The Stage 2 assessment of the identified areas of archaeological potential did not result in the identification of any archaeological materials. ARA recommends that no further assessment be required within the project lands. It is requested that this report be entered into the Ontario Public Register of Archaeological Reports, as provided for in Section 65.1 of the Ontario Heritage Act.
5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

Section 7.5.9 of the S&Gs requires that the following information be provided for the benefit of the proponent and approval authority in the land use planning and development process (MTC 2011:126–127):

- This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c.0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the MTCS, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

- It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the Ontario Heritage Act.

- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act.

- The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.
6.0 IMAGES

Image 1: Permanently Wet Lands
(August 29, 2016; Facing South)

Image 2: Permanently Wet Lands
(August 29, 2016; Facing Northeast)

Image 3: Sloped Lands
(August 29, 2016; Facing Southeast)

Image 4: Sloped Lands
(August 29, 2016; Facing Northwest)
Image 5: Test Pit Survey at an Interval of ≤ 5 m (August 29, 2016; Facing North)

Image 6: Test Pit Survey at an Interval of ≤ 5 m (August 29, 2016; Facing North)

Image 7: Test Pit Survey at an Interval of ≤ 5 m (August 29, 2016; Facing Southwest)

Image 8: Test Pit Survey at an Interval of ≤ 5 m (August 29, 2016; Facing North)

Image 9: Combination Survey to Confirm Disturbance (August 29, 2016; Facing Northeast)

Image 10: Combination Survey to Confirm Disturbance (August 29, 2016; Facing North)
7.0 MAPS

Map 1: Location of the Study Area
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri)
Map 2: Detail from the Saltfleet Township Patent Plan, Showing the Study Area
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri; AO 2015)
Map 3: Detail from H. Gregory’s *Map of the County of Wentworth, Canada West* (1859), Showing the Study Area
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri; OHCMP 2016)
Map 4: Detail of the Map of Township of Ancaster from Page & Smith’s Illustrated Historical Atlas of the County of Wentworth, Ont. (1875), Showing the Study Area
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri; McGill University 2001)
Map 5: Historic Aerial Image (1950), Showing the Study Area
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri; McMaster University 2016)
Map 6: Features of Potential
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri)
Map 7: Detail from Hamilton’s *Archaeology Management Plan (2016)*, Showing the Study Area
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri;
City of Hamilton 2016:Appendix A-1)
Map 8: Field Methods and Images
(Produced by ARA under licence using ArcGIS® software by Esri, © Esri)
8.0 BIBLIOGRAPHY AND SOURCES

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