ORIGINAL REPORT

September 12, 2017
UPDATED October 2, 2019

STAGE 1 ARCHAEOLOGICAL ASSESSMENT

Coleraine Drive Grade Separation
Part of Lots 7, 8, and 9, Concession 5, and Lots 7, 8, and 9, Concession 6
Former Geographic Township of Albion, Now Town of Caledon,
Regional Municipality of Peel, Ontario

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Golder Associates

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Executive Summary

A Stage 1 archaeological assessment was conducted on behalf of CIMA+ by Golder Associates Ltd. ("Golder") for road/rail grade separation on Coleraine Drive, south of Old Ellwood Drive, encompassed within a Study Corridor situated along Coleraine Drive from approximately 250 metres northwest of King Street West to approximately 100 metres southeast of Holland Drive, in Caledon, Ontario. Legally, the Study Corridor is located on part of Lots 7, 8, and 9, Concession 5, and Lots 7, 8, and 9, Concession 6, in the former geographic Township of Albion, now Town of Caledon, Regional Municipality of Peel, Ontario. The Study Corridor is a rectangular corridor encompassing approximately 42.6 hectares (Map 1). This Stage 1 assessment was conducted to meet the standard requirements of the *Planning Act,* R.S.O 1990, c.P.14 (Government of Ontario 1990) as required by the Town of Caledon prior to land disturbance.

The objectives of a Stage 1 assessment, as outlined by the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), are to evaluate the study area's archaeological potential through an examination of its geography, history, previous archaeological fieldwork and current land conditions, and to recommend appropriate strategies for Stage 2 assessment for all or parts of the property, if required.

In conjunction with a property inspection, Golder applied criteria commonly used by the Ministry of Tourism, Culture and Sport (MTCS) to determine the presence of archaeological potential within the study area. Through this process it was determined that the study area did have archaeological potential for both pre-contact Aboriginal and historical Euro-Canadian sites, but that this potential has been removed for most parts of the study area due to deep and extensive disturbances resulting from urban and industrial development. However, several sections of manicured lawn, overgrown fields, and bushlot within the Study Corridor still retain archaeological potential (Maps 7 and 8).

Given the results of the Stage 1 archaeological assessment, and following the *Standards and Guidelines for Consultant Archaeologists* (Section 2.2, Guideline 4; Government of Ontario 2011), the following recommendations have been made:

- Stage 2 property survey is recommended for the area identified in Map 7. Stage 2 property survey is to be completed through test pit survey at five metre intervals;
- The Shore-Wakely House property, discussed in Section 1.3.2 and illustrated in Map 8 is designated and retains cultural heritage value or interest. Additionally, it is recommended for further archaeological assessment as per reports referenced in this document, as follows:
  - *Prior to allowing construction in the area, no-go instructions must be issued by the Canadian Tire Corporation (CTC) to all personnel so that the area of avoidance is not accidentally impacted. The area to be avoided will be shown on all contract drawings, when applicable. If accidental impacts to the archaeological site are observed at any time during construction a licensed archaeologist will be notified immediately. After completion of grading and other soil disturbing activities a licensed archaeologist will be contracted to inspect and report to the MTCS on the effectiveness of the strategy in ensuring that the areas to be avoided remain intact. If CTC determines at a later date that grading impacts will be extended into the remainder of the archaeological site, a licensed archaeologist will be contracted to carry out the Stage 4 mitigation by excavation of the remainder of the site.*

- *It is recommended that when soil disturbance and grading activities are occurring within 20 metres of the area to be avoided a licensed archaeologist be contracted to monitor the activities and prevent impacts to the remainder of the archaeological site. Should an undisturbed part of the site be impacted the archaeologist is empowered to stop construction in the area until further Stage 4 mitigation by excavation is concluded. The results of the construction monitoring will be reported on to the MTCS.*
- *Once all subsequent development has been completed the temporary fence will be removed and replaced by a permanent barrier that will permanently delineate the area of the Shore Site (AlGw-163) that will be avoided and protected. The permanent fence should be placed two metres in from the temporary fence, to ensure it is installed in a part of the site that has already been excavated. CTC will ensure that the lands containing the protected areas remain passive and will prohibit soil disturbance with the exception of traditional farming and minor property maintenance.*

- The remainder of the study area outside of the identified areas has been subject to deep disturbance, and as such no further archaeological assessment is recommended for this portion of the study area (Map 7).

The MTCS is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licencing.

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1.0 PROJECT CONTEXT

1.1 Development Context

Golder Associates Ltd. ("Golder Associates") was retained by CIMA+ to carry out a limited Phase I Environmental Site Assessment ("Phase I ESA") of a portion of Coleraine Drive between Holland Drive and Harvest Moon Drive in Caledon, Ontario. It is Golder Associates' understanding that the Phase I ESA is required as part of the Schedule "C" Municipal Class Environmental Assessment ('EA') for the proposed grade separation of Coleraine Drive south of Old Ellwood Drive. For the purpose of the Phase I ESA, the study area includes the existing Coleraine Drive Right-of-Way ("ROW") from Holland Drive to Harvest Moon Drive, and the adjacent properties within 250 metres from the both sides of the ROW. The approximate total length of the section of Coleraine Drive included in this study is one kilometre.

As part of this Phase I ESA, a Stage 1 archaeological assessment was conducted on behalf of CIMA+ by Golder Associates Ltd. ("Golder") for road/rail grade separation on Coleraine Drive, south of Old Ellwood Drive. Legally, the Study Corridor is located on part of Lots 7, 8, and 9, Concession 5, and Lots 7, 8, and 9, Concession 6, in the former geographic Township of Albion, now Town of Caledon, Regional Municipality of Peel, Ontario. The Study Corridor is a rectangular corridor encompassing approximately 45.5 hectares (Map 1).

This Stage 1 was conducted to meet the standard requirements of a Municipal Class EA Study, as per Section II.2 of the *Environmental Assessment Act, R.S.O. 1990, C. E.18* (Government of Ontario 1990a).

1.1.1 Objectives

The goal of the Stage 1 Archaeological Overview/Background Study was to compile all available information about the known and potential cultural heritage resources within the Project Area, and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the provincial standards and guidelines set out in the Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), the objectives of the Stage 1 Archaeological Overview/Background Study were as follows:

- To provide information about the Study Corridor's geography, history, previous archaeological fieldwork and current land conditions;
- To evaluate in detail the Study Corridor's archaeological potential; and
- To recommend appropriate strategies for Stage 2 assessment for all or parts of the property, if required.

To meet these objectives Golder archaeologists employed the following research strategies:

- A review of the archaeological, historic and environmental literature pertaining to the Study Corridor;
- An examination of the Ontario Archaeological Sites Database (OASD) to determine the presence of known archaeological sites in and around the Study Corridor;
- A review of the land use history, including pertinent historic maps; and
- A property inspection.

In addition to the consultation of records kept by the MTCS, the background study was conducted online and in Golder's corporate library.

The Stage 1 Archaeological Assessment was conducted under professional archaeological licence P243, issued to Carla Parslow of Golder by the MTCS (PIF# P243-0349-2017). Permission to access the Study Corridor was not required because all of the land is publically accessible.

1.2 Historical Context

The Study Corridor is situated in an area of Ontario that exhibits evidence of an extended period of human settlement dating back at least 11,000 years. To provide context to the following sections of this report, the nature of this settlement is summarized below beginning with the pre-contact Aboriginal period as it relates to the Peel County area in general. This is followed by a summary of the historical Euro-Canadian period for Albion Township in general and the Study Corridor specifically.

1.2.1 Pre-contact Aboriginal Documentation

Previous archaeological assessments and research surveys have demonstrated that the Caledon area was intensively occupied by pre-contact Aboriginal people. The cultural chronology of the Caledon area is briefly summarized in Table 1. The following subsections outline the cultural or temporal periods recognized for southern Ontario more generally.

Table 1: Cultural Chronology for the Caledon Area, based on chapters in Ellis and Ferris (eds.) (1990)

Period	Characteristics	Time Period	Comments
Early Paleo-Indian	Fluted Projectiles	9000 - 8400 B.C.	spruce parkland/caribou hunters
Late Paleo-Indian	Hi-Lo Projectiles	8400 - 8000 B.C.	smaller but more numerous sites
Early Archaic	Kirk and Bifurcate Base Points	8000 - 6000 B.C.	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 B.C.	environment similar to present
Late Archaic	Lamoka (Narrow Points)	2000 - 1800 B.C.	increasing site size
	Broad Points	1800 - 1500 B.C.	large chipped lithic tools
	Small Points	1500 - 950 B.C.	introduction of bow hunting, emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 B.C.	introduction of pottery
Middle Woodland	Dentate Stamp and Pseudo-Scallop Shell Impressed pottery	400 B.C. - A.D. 500/800	increased sedentism
Late Woodland	Princess Point Complex	A.D. 500 - 1050	introduction of corn
	Early Ontario Iroquoian	A.D. 900/1000 – 1300	emergence of agricultural villages
	Middle Ontario Iroquoian	A.D. 1300 - 1400	long longhouses (100m +)
	Late Ontario Iroquoian	A.D. 1400 - 1650	tribal warfare and displacement
Contact Aboriginal	Seneca, Mississaugas, Six Nations	A.D. 1650 - present	early written records and treaties
Late Historic	Euro-Canadian	A.D. 1785 - present	European settlement

1.2.1.1 Paleo Period

The first human occupation of southern Ontario began just after the end of the Wisconsin Glacial period. Although there was a complex series of ice retreats and advances which played a large role in shaping the local topography, southwestern Ontario was finally ice free by 12,500 years ago.

The first human settlement can be traced back 11,000 years, when this area was settled by Native groups that had been living south of the Great Lakes. These early Native inhabitants have been called "Paleo-Indians", which literally means old or ancient Indians (Ellis and Deller 1990:37).

Our current understanding of Early Paleo period settlement patterns suggest that small bands, consisting of probably no more than 25-35 individuals, followed a pattern of seasonal mobility extending over large territories (Ellis and Deller 1990:54). One of the most thoroughly studied of these groups followed a seasonal round that extended from as far south as Chatham to the Horseshoe Valley north of Barrie. Early Paleo sites tend to be located in elevated locations on well-drained loamy soils.

Many of the known sites were located on former beach ridges associated with Lake Algonquin, the post-glacial lake occupying the Lake Huron/Georgian Bay basin. There are a few extremely large Early Paleo sites, such as one located close to Parkhill, Ontario, which covered as much as six hectares (Ellis and Deller 1990:51).

It appears that these sites were formed when the same general locations were occupied for short periods of time over the course of many years. Given their placement in locations conducive to the interception of migratory mammals such as caribou, it has been suggested that they may represent communal hunting camps (Ellis and Deller 1990:51). There are also smaller Early Paleo camps scattered throughout the interior of southwestern Ontario, usually situated adjacent to wetlands. The most recent research suggests that population densities were very low during the Early Paleo period (Ellis and Deller 1990:54). Because this is the case, Early Paleo sites are exceedingly rare.

While the Late Paleo period (8400-8000 B.C.) is more recent, it has been less well researched, and is consequently more poorly understood. By this time the environment of southwestern Ontario was coming to be dominated by closed coniferous forests with some minor deciduous trees (Ellis and Deller 1990:60). It seems that many of the large game species that had been hunted in the early part of the Paleo period had either moved further north, or as in the case of the mastodons and mammoths, become extinct (Ellis and Deller 1990).

As in the early Paleo period, late Paleo period peoples covered large territories as they moved about in response to seasonal resource fluctuations. On a province wide basis Late Paleo-Indian projectile points are far more common than Early Paleo materials, suggesting a relative increase in population (Ellis and Deller 1990:62).

The end of the Paleo period was heralded by numerous technological and cultural innovations which may be best explained in relation to the dynamic nature of the post-glacial environment and region-wide population increases.

1.2.1.2 Archaic Period

During the Early Archaic period (8000-6000 B.C.), the jack and red pine forests that characterized the Late Paleo-Indian environment were replaced by forests dominated by white pine with some associated deciduous trees (Ellis et al. 1990:68-69). One of the more notable changes in the Early Archaic period is the appearance of side and corner-notched projectile points.

Other significant innovations include the introduction of ground stone tools such as celts and axes, suggesting the beginnings of a simple woodworking industry (Ellis and Deller 1990:65). The presence of these often large and not easily portable tools suggests there may have been some reduction in the degree of seasonal movement, although it is still suspected that population densities were quite low, and band territories large.

During the Middle Archaic period (6000-2500 B.C.) the trend to more diverse toolkits continued, as the presence of netsinkers suggest that fishing was becoming an important aspect of the subsistence economy. It was also at this time that "bannerstones" were first manufactured (Ellis et al. 1990:65). Bannerstones are carefully crafted ground stone devices that served as a counterbalance for "atlatls" or spear-throwers. Another characteristic of the Middle Archaic is an increased reliance on local, often poor quality chert resources for the manufacturing of projectile points. It seems that during earlier periods, when groups occupied large territories, it was possible for them to visit a primary outcrop of high quality chert at least once during their seasonal round. However, during the Middle Archaic, groups inhabited smaller territories that often did not encompass a source of high quality raw material. In these instances lower quality materials which had been deposited by the glaciers in the local till and river gravels were utilized.

This reduction in territory size was probably the result of gradual region-wide population growth which led to the infilling of the landscape (Ellis et al. 1990:67). This process resulted in a reorganization of Native subsistence practices, as more people had to be supported from the resources of a smaller area.

During the latter part of Middle Archaic, technological innovations such as fish weirs have been documented as well as stone tools especially designed for the preparation of wild plant foods. It is also during the latter part of the Middle Archaic period that long distance trade routes began to develop, spanning the northeastern part of the continent. In particular, native copper tools manufactured from a source located northwest of Lake Superior were being widely traded (Ellis et al. 1990:66). By 3500 B.C. the local environment had stabilized in a near modern form (Ellis et al. 1990:69).

During the Late Archaic (2500-900 B.C.) the trend towards decreased territory size and a broadening subsistence base continued. Late Archaic sites are far more numerous than either Early or Middle Archaic sites, and it seems that the local population had definitely expanded. It is during the Late Archaic that the first true cemeteries appear (Ellis et al. 1990:66). Before this time individuals were interred close to the location where they died. During the Late Archaic, if an individual died while his or her group happened to be at some distance from their group cemetery, the bones would be kept until they could be placed in the cemetery. Consequently, it is not unusual to find disarticulated skeletons, or even skeletons lacking minor elements such as fingers, toes or ribs, in Late Archaic burial pits.

The appearance of cemeteries during the Late Archaic has been interpreted as a response to increased population densities and competition between local groups for access to resources. It is argued that cemeteries would have provided strong symbolic claims over a local territory and its resources. These cemeteries are often located on heights of well-drained sandy/gravel soils adjacent to major watercourses (Ellis et al. 1990:66-67, 106, 117).

This suggestion of increased territoriality is also consistent with the regionalized variation present in Late Archaic projectile point styles. It was during the Late Archaic that distinct local styles of projectile points appear. Also during the Late Archaic the trade networks which had been established during the Middle Archaic continued to flourish. Native copper from northern Ontario and marine shell artifacts from as far away as the Mid-Atlantic coast are frequently encountered as grave goods (Ellis et al. 1990:117; Ellis et al. 2009:824-825). Other artifacts such as

polished stone pipes and banded slate gorgets also appear on Late Archaic sites. One of the more unusual and interesting of the Late Archaic artifacts is the "birdstone" (Ellis et al. 1990:111). Birdstones are small, bird-like effigies usually manufactured from green banded slate.

1.2.1.3 Woodland Period

The Early Woodland period (950 - 400 B.C.) is distinguished from the Late Archaic period primarily by the addition of ceramic technology. While the introduction of pottery provides a useful demarcation point for archaeologists, it may have made less difference in the lives of the Early Woodland peoples. The first pots were very crudely constructed, thick walled and friable. It has been suggested that they were used in the processing of nut oils by boiling crushed nut fragments in water and skimming off the oil (Spence et al. 1990:137). These vessels were not easily portable, and individual pots must not have enjoyed a long use life. There have also been numerous Early Woodland sites located at which no pottery was found, suggesting that these poorly constructed, undecorated vessels had yet to assume a central position in the day-to-day lives of Early Woodland peoples.

Other than the introduction of this rather limited ceramic technology, the life-ways of Early Woodland peoples show a great deal of continuity with the preceding Late Archaic period. For instance, birdstones continue to be manufactured, although the Early Woodland varieties have "pop-eyes" which protrude from the sides of their heads (Spence et al. 1990:129).

Likewise, the thin, well-made projectile points which were produced during the terminal part of the Archaic period continue in use. However, the Early Woodland variants were side-notched rather than corner-notched, giving them a slightly altered and distinctive appearance.

The trade networks which were established in the Middle and Late Archaic also continued to function, although there does not appear to have been as much traffic in marine shell during the Early Woodland period (Spence et al. 1990:129). During the last 200 years of the Early Woodland period, projectile points manufactured from high quality raw materials from the American Midwest begin to appear in southern Ontario (Spence et al. 1990:138).

In terms of settlement and subsistence patterns, the Middle Woodland (400 B.C. - A.D. 500/800) provides a major point of departure from the Archaic and Early Woodland periods. While Middle Woodland peoples still relied on hunting and gathering to meet their subsistence requirements, fish were becoming an even more important part of the diet (Spence et al. 1990:151). Some Middle Woodland sites have produced literally thousands of bones from spring spawning species such as walleye and sucker. Nuts such as acorns were also being collected and consumed (Spence et al. 1990:134). In addition, Middle Woodland peoples relied much more extensively on ceramic technology. Middle Woodland vessels are often decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. Consequently, even very small fragments of Middle Woodland vessels are easily identifiable.

It is also at the beginning of the Middle Woodland period that rich, densely occupied sites appear on the valley floor of major rivers. Middle Woodland sites are significantly different in that the same location was occupied off and on for as long as several hundred years. Because this is the case, rich deposits of artifacts often accumulated.

Unlike earlier seasonally utilized locations, these Middle Woodland sites appear to have functioned as base camps, occupied off and on over the course of the year.

There are also numerous small upland Middle Woodland sites, many of which can be interpreted as special purpose camps from which localized resource patches were exploited. This shift towards a greater degree of

sedentism continues the trend witnessed from at least Middle Archaic times, and provides a prelude to the developments that follow during the Late Woodland period.

The Late Woodland period began with a shift in settlement and subsistence patterns involving an increasing reliance on corn horticulture (Fox 1990:185; Smith 1990; Williamson 1990:312). Corn may have been introduced into southwestern Ontario from the American Midwest as early as 600 A.D. (Fox 1990:174; Williamson 1990:312). However, it did not become a dietary staple until at least three to four hundred years later.

The first agricultural villages in southwestern Ontario date to the 10th century A.D. (Williamson 1990:291). Unlike the riverine base camps of the Middle Woodland period, these sites are located in the uplands, on well-drained sandy soils.

Categorized as "Early Ontario Iroquoian" (900-1300 A.D.), many archaeologists believe that it is possible to trace a direct line from the Iroquoian groups which inhabited southwestern Ontario at the time of first European contact, to these early villagers.

Village sites dating between 900 and 1300 A.D., share many attributes with the historically reported Iroquoian sites, including the presence of longhouses and sometimes palisades. However, these early longhouses were actually not all that large, averaging only 12.4 m in length (Dodd et al. 1990:349; Williamson 1990:304-305). It is also quite common to find the outlines of overlapping house structures, suggesting that these villages were occupied long enough to necessitate re-building. The Jesuits reported that the Huron moved their villages once every 10-15 years, when the nearby soils had been depleted by farming and conveniently collected firewood grew scarce (Pearce 2010). It seems likely that Early Ontario Iroquoians occupied their villages for considerably longer, as they relied less heavily on corn than did later groups, and their villages were much smaller, placing less demand on nearby resources.

Judging by the presence of carbonized corn kernels and cob fragments recovered from sub-floor storage pits, agriculture was becoming a vital part of the Early Ontario Iroquoian economy. However, it had not reached the level of importance it would in the Middle and Late Ontario Iroquoian periods. There is ample evidence to suggest that more traditional resources continued to be exploited, and comprised a large part of the subsistence economy. Seasonally occupied special purpose sites relating to deer procurement, nut collection, and fishing activities, have all been identified (Williamson 1990:317). While beans are known to have been cultivated later in the Late Woodland period, they have yet to be identified on Early Ontario Iroquoian sites (Williamson 1990:291).

The Middle Ontario Iroquoian period (1300-1400 A.D.) witnessed several interesting developments in terms of settlement patterns and artifact assemblages. Changes in ceramic styles have been carefully documented, allowing the placement of sites in the first or second half of this 100-year period. Moreover, villages, which averaged approximately 0.6 hectares in extent during the Early Ontario Iroquoian period, now consistently range between one and two hectares.

House lengths also change dramatically, more than doubling to an average of 30 m, while houses of up to 45 m have been documented. This radical increase in longhouse length has been variously interpreted. The simplest possibility is that increased house length is the result of a gradual, natural increase in population (Dodd et al. 1990:323, 350, 357; Smith 1990). However, this does not account for the sudden shift in longhouse lengths around 1300 A.D. Other possible explanations involve changes in economic and socio-political organization (Dodd et al. 1990:357). One suggestion is that during the Middle Ontario Iroquoian period small villages were amalgamating

to form larger communities for mutual defence (Dodd et al. 1990:357). If this was the case, the more successful military leaders may have been able to absorb some of the smaller family groups into their households, thereby requiring longer structures.

This hypothesis draws support from the fact that some sites had up to seven rows of palisades, indicating at least an occasional need for strong defensive measures. There are, however, other Middle Ontario Iroquoian villages which had no palisades present (Dodd et al. 1990:358). More research is required to evaluate these competing interpretations.

The lay-out of houses within villages also changes dramatically by 1300 A.D. During the Early Ontario Iroquoian period villages were haphazardly planned at best, with houses oriented in various directions. During the Middle Ontario Iroquoian period villages are organized into two or more discrete groups of tightly spaced, parallel aligned, longhouses.

It has been suggested that this change in village organization may indicate the initial development of the clans which were a characteristic of the historically known Iroquoian peoples (Dodd et al. 1990:358).

Initially at least, the Late Ontario Iroquoian period (1400-1650 A.D.) continues many of the trends which have been documented for the proceeding century. For instance, between 1400 and 1450 A.D. house lengths continue to grow, reaching an average length of 62 m.

One longhouse excavated on a site southwest of Kitchener stretched an incredible 123 m (Lennox and Fitzgerald 1990:444-445). After 1450 A.D., house lengths begin to decrease, with houses dating between 1500-1580 A.D. averaging only 30 m in length. Why house lengths decrease after 1450 A.D. is poorly understood, although it is believed that the even shorter houses witnessed on historic period sites can be at least partially attributed to the population reductions associated with the introduction of European diseases such as smallpox (Lennox and Fitzgerald 1990:405, 410).

Village size also continues to expand throughout the Late Ontario Iroquoian period, with many of the larger villages showing signs of periodic expansions. The Late Middle Ontario Iroquoian period and the first century of the Late Ontario Iroquoian period was a time of village amalgamation.

One large village situated in London expanded one-fifth of its size (Anderson 2009) and one village north of Toronto have been shown to have expanded on no fewer than five occasions (Ramsden 1990:374-375). These large villages were often heavily defended with numerous rows of wooden palisades, suggesting that defence may have been one of the rationales for smaller groups banding together.

After 1525 A.D. communities of pre-contact Aboriginals of the Late Ontario Iroquoian period who had formerly lived throughout southwestern Ontario as far west as the Chatham area moved further east to the Hamilton area. During the late 1600s and early 1700s, the French explorers and missionaries reported a large population of Iroquoian peoples clustered around the western end of Lake Ontario. They called these people the "Neutral", because they were not involved in the on-going wars between the Huron and the League Iroquois located in upper New York State. It has been satisfactorily demonstrated that the Late Ontario Iroquoian communities which were located in southwestern Ontario as far west as the Chatham area were ancestral to at least some of the Neutral Nation groups (Lennox and Fitzgerald 1990; Smith 1990:283). For this reason the Late Ontario Iroquoian groups which occupied southwestern Ontario prior to the arrival of the French are often identified as "Prehistoric Neutral".

They occupied a large area extending along the Grand River and throughout the Niagara Peninsula as far east as Fort Erie and Niagara Falls (Lennox and Fitzgerald 1990:448).

1.2.2 Post-Contact Aboriginal Period

The post-contact Aboriginal occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking peoples by the New York State Iroquois and the subsequent arrival of Algonkian-speaking groups from northern Ontario at the end of the 17th century and beginning of the 18th century (Schmalz 1991).

The nature of their settlement size, population distribution, and material culture shifted as European settlers encroached upon their territory. However, despite this shift, "written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought" (Ferris 2009:114). As a result, First Nations peoples of southern Ontario have left behind archaeologically significant resources throughout southern Ontario which show continuity with past peoples, even if they have not been recorded in historical Euro-Canadian documentation.

1.2.3 Historical Euro-Canadian Period

The study area is situated within the former Geographical Township of Albion, now Town of Caledon, Regional Municipality of Peel, Ontario. The area first enters the Euro-Canadian historical record as part of Treaty Number 13A made between the Mississaugas and the Crown on August 2, 1805. Treaty 13 and 13A was many years in the making, with the original treaty being drafted in 1787, however:

> *it has been ascertained that the Instrument was defective and imperfect, and nothing was done about carrying it out until the first day of August, 1805, an Indenture was made, at the River Credit at Lake Ontario, between William Claus, Esquire, Deputy Superintendent General and Deputy Inspector General of Indians and of their Affairs, for and in behalf of Our Sovereign Lord the King and the Principal Chiefs, Warriors and people of the Mississa[uga] Nation of Indians. This purchase ..., is known as the Toronto Purchase and described as follows: "Commencing at the east bank of the south outlet of the River Etobicoke; thence up the same following the several windings and turnings of the said river to a maple tree, blazed on 4 sides at a distance of three quarters in a straight line from the mouth of the said river; thence north twenty-two degrees west twenty-four miles and one quarter; thence north sixty-eight degrees east fourteen miles; thence south twenty-two degrees east twenty-eight miles more or less to Lake Ontario; then westerly along the water's edge of Lake Ontario, to the eastern bank of the south outlet of the River Etobicoke, being the place of beginning, together with all the woods and waters thereon." This last described parcel is only a small portion of the parcel, supposed to have been conveyed by the Indians, September 23rd, 1787, and the consideration demanded by the Indians was only ten shillings.*
>
> Morris 1943: 21-22

Iroquoian-speaking and Algonkian-speaking peoples occupied parts of southern Ontario around the Lower Great Lakes, including the lands recognized as Waterloo Region. These groups interacted with one another and Euro-Canadian settlers from the 18th through to the 20th Centuries.

Albion Township

Following the Toronto Purchase of 1787, today's southern Ontario was within the old Province of Quebec and divided into four political districts: Lunenburg, Mechlenburg, Nassau, and Hesse. These became part of the Province of Upper Canada in 1791, and renamed the Eastern, Midland, Home, and Western Districts, respectively. The Study Corridor is within the former Nassau District, then later the Home District, which originally included all lands between an arbitrary line on the west running north from Long Point on Lake Erie to Georgian Bay, and a line on the east running north from Presqu'ile Point on Lake Ontario to the Ottawa River. Each district was further subdivided into counties and townships, with the Study Corridor originally falling within west riding of York County and Albion Township, one of three 'new' sections (the other two being Chinguacousy and Caledon) ceded by the Mississauga people through treaty on October 28, 1818. York County was reorganized in 1851, with the west riding forming the County of Peel.

Albion Township derives its name from the ancient name for England (Armstrong 1930:4). The Crown survey of the township was undertaken between 1818 and 1819 by surveyor James G. Chewett. Mr. Chewett decided to employ the double-front survey system, a survey that established concession numbers running west to east and lot numbers running south to north. In the double-front system only the concession roads were surveyed and their width specified at 66 feet (20 m) wide. Between these and side roads were five lots of 200 acres (80 ha.), each 30 chains wide and 66.7 chains deep. These lots were then divided in half to provide land grants of 100 acres, all of which had road access (Schott 1981; Gentilcore 1969).

Settlers began arriving in Albion Township shortly after the survey was complete. The first individuals to take up land in the township included William Downey, Joseph Hudson, William Roadhouse Sr., and William Roadhouse Jr. (Walker & Miles 1877). The population of the township in 1821 numbered only 110, but in twenty years this number had increased to 2,154 and included concentrations of settlement in the village of Bolton and the post office communities of Columbia, Tullamore, Sand Hill, and Caledon East (Smith 1846; Walker & Miles 1877). By 1846 it was reported that 41,829 acres had been taken up in the township, of which 10,000 had been cleared and was under cultivation (Walker & Miles 1877). The township could also boast four grist mills, two saw mills, and two distilleries. At mid-century, all the lands in Albion Township had been settled and the population had grown to 3,567. A decade later, the population had grown again, reaching 5,078 in 1861. During the late 19th century, a general shift away from agricultural production toward industrial and commercial enterprises in urban centres, such as the Village of Bolton, caused the growth of Albion Township to plateau, with populations declining to 3,172 by 1880 (Ontario Agricultural Commission 1881).

At the opening of the 20th century economic development of Albion Township, like that of adjacent counties and townships, relied on the prosperity of nearby Toronto and exports to the United States and Britain. Following World War II, the widespread use of motor vehicles brought changes to urban and rural development. As vehicular traffic increased, the network of roadways throughout the region improved, providing Albion Township and its communities with better connections to the growing metropolis of Toronto.

Significant new growth and development has occurred in the past four decades. In 1974, Albion Township was amalgamated with the Township of Caledon, the northern half of the Township of Chinguacousy, and the Villages of Bolton and Caledon East to form the Town of Caledon in the new Regional Municipality of Peel. In 2006, the population of the Town of Caledon numbered 57,050, while in 2011 it had grown to 59,460 (Statistics Canada 2006, 2011).

Toronto Grey and Bruce Railway (now Canadian Pacific Railway)

The Study Corridor for the present project crosses over the tracks of the former Toronto Grey and Bruce Railway, now Canadian Pacific Railway. Incorporated in 1868, the Toronto Grey and Bruce Railway constructed a rail line from Toronto to Owen Sound via Orangeville between 1869 and 1873, adding a branch line from present-day Fraxa to Teeswater roughly a year later (Kennedy 2013). In order to save money on building costs, the rail line was originally constructed as a narrow-gauge track with the rails placed only 3'6" apart. As the volume of rail traffic increased throughout Peel, Grey, and Bruce Counties in the years that followed, the narrow-gauge track eventually became obsolete and had to be replaced by a standard-gauge line between 1881 and 1883. In 1883, the line was leased to the Ontario and Quebec Railway, and was ultimately absorbed by the Canadian Pacific Railway the following year.

Study Corridor Specific Historical Context

Prior to its amalgamation into the Town of Caledon in 1974, the Study Corridor for the present project fell along the early historical transportation route of Concession Road 5 in the Township of Albion, bordering Lots 7 to 9 of Concessions 5 and 6. Chewett's 1819 survey map of Albion Township indicates that all of the lots bordering the Study Corridor had yet to be settled. Tremaine's *Map of the County of Peel* indicates that by 1859 all six lots bordering the Study Corridor had been purchased, though no structures are depicted in the immediate area (Map 2). Walker & Miles' 1877 *Illustrated Historical Atlas of Peel County* indicates an increase in the residential and agricultural development of the lots in the area, with at least six houses depicted in close proximity to the Study Corridor. The structures located on the east-central edge of Lot 7, Concession 5, and the west-central edge of Lot 7, Concession 6 appear to be located in the same approximate position as the houses that presently stand at 13304 Coleraine Drive, and 13303 Coleraine Drive, respectively (Map 3).

The house located at 13304 Coleraine Drive, also known as the Shore-Wakely Stone House, is a one and half storey field stone structure built circa 1848 that is designated under Part IV of the *Ontario Heritage Act* (Town of Caledon By-Law 94-55) for its architectural and historical value. John Shore is known to have purchased the property on which the stone house stands from Edmund Boyle in 1835 (Zelinka Priamo Ltd. 2012:4-5). John Shore was born in Kilkenny, Ireland in 1794. He married Catherine Boyle circa 1810 and the couple had at least five children together, including: Edmund, Jane, Rebecca, Eliza, and John Boyle. Both the 1851 and 1861 Censuses for Albion Township list the Shore family as residing in a stone house on Lot 7, Concession 5, indicating that it had been built prior to 1851. The house was believed to have been constructed by William Curliss, a stone mason and later proprietor of the Masonic Arms Hotel in Bolton. It is believed that John Shore did not have enough money to pay for the construction of his house, so he offered Curliss his daughter Jane's hand in marriage. The couple were married in the St. James Anglican Cathedral in Toronto in 1848; therefore, it is believed that the house must have been completed prior to the marriage. John Shore died in 1870 and left the east half of Lot 7, Concession 5, in addition to the west half of Lot 7, Concession 6 to his son, Edmund, who subsequently leased the property to John Gray in 1876 for $700 per year. Edmund eventually sold the property to James Goodfellow in 1879 for $5,800. Seven years later, the property was purchased by Jabez Wakely for $7,000. Ownership of the property remained with members of the Wakely family up to at least 1993.

The house located at 13303 Coleraine Drive is a High Victorian Gothic red and buff brick farmhouse, built between 1875 and 1899. It is listed on Caledon's Built Heritage Resources Inventory (BHRI) of pre-1946 structures, but is not designated under the *Ontario Heritage Act*. According to the information presented above for 13304 Coleraine Drive, the western half of Lot 7, Concession 6 was originally owned by John Shore until his death in 1870, at which

point it was left to his son, Edmund. The 1877 map of Albion Township contained in the *Illustrated Historical Atlas of Peel County* indicates that Edmund was a non-resident owner of the lot at this time. The house depicted on the property is set back from the concession road in the same approximate position as the extant house, suggesting that it was likely built prior to 1877, and may or may not be associated with the Shore family. It is unclear who would have owned the property beyond the late 19th century.

By the early 20th century, a topographical map of the area (Department of Militia & Defence 1919) begins to support a general shift away from agricultural production, with only two houses (13304 and 13303 Coleraine Drive) depicted within the limits of the Study Corridor and an increase in size beyond the historical limits observable in the nearby Village of Bolton. The 1919 topographical map also depicts a tributary of the Humber River flowing through the northern half of the Study Corridor, just south of King Street West/Harvest Moon Drive (Map 4). The Humber River was designated to the Canadian Heritage River System in 1999 due to its outstanding cultural and recreational values. As part of the Humber River System the tributary may contribute to the heritage value of the Study Corridor.

At least one additional structure is visible on a second topographical map of the area from 1929 (Department of Militia & Defence 1929), located in close proximity to the northern boundary of the Study Corridor (Map 5). This structure is most likely the Edwardian farmhouse presently located at 49 Wakely Boulevard, which has been identified as a property of interest by the Town of Caledon's Heritage Officer, Sally Drummond. The property is reportedly associated with the Wakely family and was recently incorporated into the surrounding subdivision.

The Village of Bolton continued to grow throughout the 20th century, with aerial photography from the present day showing the construction of residential subdivisions and industrial developments along either side of the Study Corridor.

1.3 Archaeological Context

1.3.1 The Natural Environment

The Study Corridor is situated within the South Slope physiographic region, which;

> *… is the southern slope of the Oak Ridges Moraine but … includes the strip south of the Peel plain. … [I]t rises 300 to 400 feet in an average width of 6 or 7 miles. Extending from the Niagara Escarpment to the Trent River it covers approximately 940 square miles. The central portion is drumlinized… . The streams flow directly down the slope; being rapid they have cut sharp valleys in the till. …Bare grey slopes, where soil is actively eroding are common in this area.*
>
> Chapman and Putnam 1984

Soil texture can be an important determinant of past settlement, usually in combination with other factors, such as topography. Soils within the Study Corridor are comprised of King clay loam, Monaghan clay loam, and Peel clay, which provide good to imperfect drainage (Hoffman and Richards 1953). These soils would have been well suited to growing common field crops, as well as forage crops and pasture.

The bedrock deposits in the vicinity date to the Upper Ordovician Period and consist of the Georgian Bay Formation (Hewitt 1972).

The Study Corridor lies within the Mixed-wood Plains ecozone of Ontario (The Canadian Atlas Online 2015). Although largely altered by recent human activity, this ecozone once supported a wide variety of deciduous trees,

such as various species of ash, birch, chestnut, hickory, oak, and walnut, as well as a variety of birds and small to large land mammals, such as raccoon, red fox, white tailed deer, and black bear.

The Study Corridor is located within the Humber River watershed, which itself is part of the Lake Ontario watershed. Ultimately, the Humber River watershed drains into Lake Ontario to the south. The watershed covers an area of approximately 911 km^2 (TRCA 2013). An unnamed tributary of the Humber River used to run through the northwestern portion of the Study Corridor, however it has been turned into a storm water management pond (Map 1).

1.3.2 Previous Archaeological Research

A search of the OASD (MTCS 2017) indicated that there are 26 archaeological sites located within one kilometre of the Study Corridor, and that there are six sites within 300 m; three pre-contact Aboriginal sites, and three historical Euro-Canadian sites. Table 2 provides a summary of these sites.

Table 2: Archaeological Sites within 1 km of the Study Corridor

Borden Number	Site Name	Affiliation
AlGw-4	Goodfellow	Archaic
AlGw-5	French	Archaic
AlGw-6		Archaic, Late, Woodland, Early
AlGw-12	Grogan	Archaic, Late
AlGw-39		Pre-Contact
AlGw-42		Post-Contact
AlGw-45	Fleming Shaw	Post-Contact, Pre-Contact
AlGw-46	Disanto	Pre-Contact
AlGw-47	French	Archaic, Late
AlGw-48	Humberview	Pre-Contact
AlGw-51	Samuel Walford House	Post-Contact
AlGw-56	Jetron	Archaic, Middle
AlGw-59		Pre-Contact
AlGw-60	Moore	Post-Contact
AlGw-62		Pre-Contact
AlGw-63		Post-Contact
AlGw-67	-	Archaic, Late
AlGw-123	Albion Presbyterian cemetery	Post-Contact
AlGw-143		Pre-Contact
AlGw-144		Pre-Contact
AlGw-145		Pre-Contact
AlGw-146		Pre-Contact
AlGw-147		Pre-Contact
AlGw-163	Shore Site	Post-Contact

Borden Number	Site Name	Affiliation
AlGw-171	GoodFELLOW Site	Post-Contact
AlGw-180		Post-Contact

Of the sites located within 300 m of the Study Corridor, three are pre-contact Aboriginal sites; AlGw-56, AlGw-62, and AlGw-67. AlGw-56 also known as the Jetron Site, was a findspot for a Middle Archaic side-notched projectile point fragment determined to be of the Laurentian tradition. It was located during pedestrian survey in 1996. AlGw-62 was discovered in 1998; surface materials were collected, however no diagnostic material was recovered. Finally, AiGw-67 was an isolated Late Archaic projectile point discovered during pedestrian survey in 2000.

The other three sites located within 300 m of the Study Corridor are historical Euro-Canadian sites; AlGw-42, AlGw-63, and AlGw-163. AlGw-42 was discovered during Stage 2 archaeological assessment in 1989 and consisted of a scatter of 42 historical Euro-Canadian artifacts over a 60 x 40 metre area. The artifact assemblage included 35 pieces of ceramic tableware, including 35 vitrified white earthenware sherds, coarse earthenware, bottle glass, one nail, and one ceramic insulator. AlGw-63 was discovered in 1998 during a Stage 1-2 and was subject to a Stage 3 including a CSP and excavation of five 1 x 1 metre square test units over a 50 x 50 metre area. Two hundred sixty artifacts were recovered, while the ceramics found at the site dated from 1840 to 1870.

Finally, AlGw-163, also known as the Shore Site, was discovered during Stage 2 archaeological assessment which took place in 2010 and 2011 conducted by Golder Associates Ltd. A portion of the property surveyed during this assessment overlaps with the current Study Corridor at the south corner of Coleraine Drive and Holland Drive. This Stage 1-2 assessment also located two other locations; one scatter of nineteenth Century material and one isolated non-diagnostic pre-contact Aboriginal artifact. Neither one of these locations was recommended for further work (Golder 2013). None of three locations are located within the current Study Corridor.

Golder undertook the Stage 3 of the AlGw-163 (the Shore Site) in 2012, which determined the site to be from the early- to mid-nineteenth Century and recommended Stage 4 (PIF 243-217-2011). Golder also undertook the Stage 4 in 2013, which consisted of block excavation, mechanical topsoil stripping, and avoidance and protection for the portion of the site located beyond the grading limits located within the Heritage Designation Area surrounding the Shore-Wakely House as stipulated by the Town of Caledon. Block excavation consisted of the hand excavation of 50 one-metre square units, while mechanical topsoil removal extended a minimum of 10 m beyond all cultural features. Nine features and six postmoulds were discovered. A total of 10,437 artifacts were recovered from the Stage 4 partial excavation of AlGw-163 (the Shore Site) dating from the early to the late nineteenth Century. The site was interpreted as representing part of the domestic homestead of the Shore family after purchasing a portion of the lot in 1835. This homestead would have been demolished or abandoned with the completion of the stone house, now known as the Shore-Wakely House, though the area likely continued to be used for refuse deposit or burning through the late nineteenth Century. In the twentieth Century, the eastern portion of the site was used as an agricultural field. Recommendations from this report were as follows (Golder 2013):

> *Prior to allowing construction in the area, no-go instructions must be issued by the Canadian Tire Corporation (CTC) to all personnel so that the area of avoidance is not accidentally impacted. The area to be avoided will be shown on all contract drawings, when applicable. If accidental impacts to the archaeological site are observed at any time during construction a licensed archaeologist will be notified immediately. After completion of grading and other soil*

disturbing activities a licensed archaeologist will be contracted to inspect and report to the MTCS on the effectiveness of the strategy in ensuring that the areas to be avoided remain intact. If CTC determines at a later date that grading impacts will be extended into the remainder of the archaeological site, a licensed archaeologist will be contracted to carry out the Stage 4 mitigation by excavation of the remainder of the site.

It is recommended that when soil disturbance and grading activities are occurring within 20 metres of the area to be avoided a licensed archaeologist be contracted to monitor the activities and prevent impacts to the remainder of the archaeological site. Should an undisturbed part of the site be impacted the archaeologist is empowered to stop construction in the area until further Stage 4 mitigation by excavation is concluded. The results of the construction monitoring will be reported on to the MTCS.

Once all subsequent development has been completed the temporary fence will be removed and replaced by a permanent barrier that will permanently delineate the area of the Shore Site (AlGw-163) that will be avoided and protected. The permanent fence should be placed two metres in from the temporary fence, to ensure it is installed in a part of the site that has already been excavated. CTC will ensure that the lands containing the protected areas remain passive and will prohibit soil disturbance with the exception of traditional farming and minor property maintenance.

Because the exact limits of Shore Site (AlGw-163) are not known, the entire property surrounding the Shore-Wakely House retains cultural heritage value or interest.

To the best of our knowledge, no additional archaeological assessments have been conducted within 50 m of the current study area.

Information concerning specific site locations is protected by provincial policy, and is not fully subject to the Freedom of Information Act. The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. For this reason maps and data that provide information on archaeological site locations are provided as supplementary documentation and do not form part of this public report.

The Ministry of Tourism, Culture and Sport will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

2.0 FIELD METHODS

2.1 Stage 1 Property Inspection

The Stage 1 property inspection of the Study Corridor was conducted on March 29, 2017 under Professional Archaeological Licence Number P243, issued to Carla Parslow. Sarah News (R485) of Golder acted as the licensed archaeologist for the inspection and she had the duly delegated responsibility as per Section 12 of the

MTCS 2013 *Terms and Conditions for Archaeological Licences*, issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act*.

The inspection was undertaken to gain first-hand knowledge of the Study Corridor, determine if there were any areas of disturbance that would affect archaeological potential, and to determine what survey strategies would be appropriate for a Stage 2 assessment, should it be required.

The entire Study Corridor and its periphery were systematically inspected to confirm if features of archaeological potential were present and if there were any areas of deep and extensive disturbance which would have removed archaeological potential. As stated in Section 1.4.2 of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011:22), a property may only be exempt from Stage 2 assessment once deep and extensive ground disturbance has been confirmed through a property inspection.

The weather on the day of the inspection was cool, approximately 4° Celsius with sun and clouds, permitting good visibility of land features and contributing to no reduction in the chance of observing features of archaeological potential. Field notes and photographs of the Study Corridor were taken during the inspection. The photograph locations and directions can be seen on Map 6.

Table 3 provides an inventory of the documentary record generated in the field.

Table 3: Inventory of Documentary Record

Document Type	Current Location of Document	Additional Comments
Field Notes	Golder Office in Mississauga	Total of 4 pages from original field book. Hard copies stored in project folder and digitally in project file.
Hand Drawn Maps	Golder Office in Mississauga	Two in total from original field book. Hard copy stored in project folder and digitally in project file.
Maps provided by Client	Golder Office in Mississauga	One map in total stored in project folder and stored digitally in project file.
Digital Photographs	Golder Office in Mississauga	A total of 129 photos stored in project folder and stored digitally in project file.

3.0 ANALYSIS AND CONCLUSIONS

3.1 Archaeological Potential

3.1.1 Pre-Contact Aboriginal Archaeological Resources

Archaeological potential is established by determining the likelihood that archaeological resources may be present within a Study Corridor. Archaeological potential can be affected by several variables, including: distance to various types of water sources, soil texture and drainage, glacial geomorphology, and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential.

In archaeological potential modeling, a distance to water criterion of 300 m is generally employed for all primary and secondary water courses including lakeshores, rivers, large creeks, swamps and small creeks. As indicated above, the closest water sources is an unnamed tributary of the Humber River in the northwestern portion of the Study Corridor, immediately south of King Street West. This tributary appears on historical mapping, however it has subsequently been turned into a storm water management pond (Map 1).

Soil texture can be an important determinant of past settlement, usually in combination with other factors, such as topography. Soils within the Study Corridor are comprised of King clay loam, Monaghan clay loam, and Peel clay, which provide good to imperfect drainage (Hoffman and Richards 1953). These soils would have been well suited to growing common field crops, as well as forage crops and pasture. These soils would have been acceptable for pre-contact Aboriginal agricultural practices.

The Ministry of Tourism, Culture and Sport also views the presence of previously identified archaeological sites as an indicator of archaeological potential; as indicated above, there are 18 previously identified pre-contact Aboriginal sites located within one kilometre of the Study Corridor, including three located within 300 m.

Given the archaeological potential criteria noted above, the Study Corridor is determined to have archaeological potential for pre-contact Aboriginal sites.

3.1.2 Historical Euro-Canadian Resources

The criteria used by the Ontario Ministry of Tourism, Culture and Sport to determine potential for historical Euro-Canadian archaeological sites includes the presence of: particular, resource-specific features that would have attracted past subsistence or extractive uses; areas of initial, non-Aboriginal settlement; early historical transportation routes; and properties designated under the *Ontario Heritage Act*.

Research of the historical context of the study corridor (see Section 1.2.3) indicated that the Study Corridor fell along the early historical transportation route of Concession 5 in the Township of Albion and that by 1859, all lots encompassed in the Study Corridor had been purchased. By the publication of the 1877 *Historical Atlas of Peel County*, there had been a noticeable increase in residential and agricultural development in the lots in and surrounding the Study Corridor. In addition, the Study Corridor contains several heritage properties (see Section 1.2.3) and lies near the historical Village of Bolton, which has been a growing community in Albion Township since the mid-nineteenth Century.

The Ministry of Tourism, Culture and Sport also views the presence of previously identified archaeological sites as an indicator of archaeological potential. Specifically, there are nine previously identified sites with a historical Euro-Canadian component located within one kilometre of the Study Corridor; including three within 300 m of the Study Corridor.

Given the archaeological potential criteria noted above, the Study Corridor is determined to have archaeological potential for historical Euro-Canadian sites.

3.1.3 Archaeological Integrity

A negative indicator of archaeological potential is extensive land disturbance. This includes widespread earth movement activities that would have eradicated or relocated any cultural material to such a degree that the information potential and cultural heritage value or interest has been lost.

Section 1.3.2 of the MTCS's 2011 *Standards and Guidelines for Consultant Archaeologists* states 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.*
>
> Government of Ontario 2011:18

The types of disturbance referred to above includes, but is not restricted to, quarrying, sewage and infrastructure development, building footprints and major landscaping involving grading below topsoil.

3.2 Conclusions

The Stage 1 archaeological assessment determined that there was potential for pre-contact Aboriginal archaeological resources, given the proximity of the study area to an unnamed tributary of the Humber River, and a combination of agriculturally suitable physiography and soils. Similarly, historical Euro-Canadian archaeological potential was deemed to be present, given the time depth of occupation of the study area and the location of the study area along the historical transportation route of Concession 5, the presence of several heritage properties within the Study Corridor, and its location near the historical Village of Bolton. The Stage 1 property inspection confirmed that the study area is a long-settled urban and industrial area of which a significant portion has been previously disturbed by paved roads, sidewalks, landscaping, and buildings and their respective utilities, or sloped areas (Image 1: to Image 15). As this disturbance is not immediately apparent in some places from the ground today, several areas must be discussed.

The first is the open lot at the west corner of Coleraine Drive and Harvest Moon Drive. Today, this lot sits empty as an overgrown open field (Image 2), however Google Earth aerial imagery from 2004 shows that a house used to occupy this lot, along with its associated driveway. In addition, construction disturbance from the construction connecting Harvest Moon Drive to Coleraine Drive is evident. The house is no longer present in 2005 imagery, indicating that it was demolished between 2004 and 2005.

Another area of interest is the north corner of Coleraine Drive and King Street West, which is currently an overgrown grassy lot (Image 3). Aerial imagery from Google Earth shows that King Street West used to curve and merge onto Coleraine Drive heading north and that a house used to stand south of this curve, where the north corner of Coleraine Drive and King Street West is today. Between 2009 and 2013, King Street West was re-

aligned, forming four-way intersection with Coleraine Drive and Harvest Moon Drive. The old curve of the road is still visible in aerial imagery today.

A third area sits on the south side of Wakely Boulevard, across from the Ellwood Drive West intersection. This area appears as an open field today, however Google Earth aerial imagery from 2004 shows that this whole area was subject to disturbance during the construction of Aida Court.

The final area was not able to be accessed due to controlled access from Coleraine Drive. This open grassy area lies between industrial lots on the north side of Coleraine Drive between Holland Drive and the railroad crossing. Along Coleraine Drive, this area shows signs of disturbance in the form of several large berms (Image11). Aerial imagery from Google Earth shows that this area has been heavily disturbed from industrial construction as far back as at least 2004.

Several portions of the study area consisting of manicured lawn and overgrown fields appear to be relatively undisturbed and still retain archaeological potential (Image 16; Maps 7 and 8). The northern portion of the property upon which the Shore-Wakely House (see Section 1.2.3) sits lies within the current Study Corridor. The Shore Site (AlGw-163) was discovered to the southeast of the Shore-Wakely House in 2011 and subject to Stage 3 and partial Stage 4 excavation in 2012 (see Section 1.3.2). The Shore Site extends onto the property of the Shore-Wakely House, which is a designated heritage property under Part IV of the *Ontario Heritage Act* (Town of Caledon By-Law 94-55) and is protected from development and was thus subject to Stage 4 avoidance and protection in 2012. Because the exact limits of the Shore Site (AlGw-163) are not known, the entire Shore-Wakely House property retains cultural heritage value or interest and is still subject to the recommendations laid out in the Stage 4 report (see Section 1.3.2; Golder 2013).

In conjunction with a property inspection, Golder applied criteria commonly used by the MTCS to determine the presence of archaeological potential within the study area. Through this process it was determined that the study area did have archaeological potential for both pre-contact Aboriginal and historical Euro-Canadian sites, but that this potential has been removed for most parts of the study area due to deep and extensive disturbances resulting from urban and industrial development, or sloped areas. However, several sections of manicured lawn and overgrown fields within the Study Corridor still retain archaeological potential (Maps 7 and 8).

4.0 RECOMMENDATIONS

Given the results of the Stage 1 archaeological assessment, and following the *Standards and Guidelines for Consultant Archaeologists* (Section 2.2, Guideline 4; Government of Ontario 2011),the following recommendations have been made:

- Stage 2 property survey is recommended for the area identified in Map 7. Stage 2 property survey is to be completed through test pit survey at five metre intervals;
- The Shore-Wakely House property, discussed in Section 1.3.2 and illustrated in Map 8 is designated and retains cultural heritage value or interest. Additionally, it is recommended for further archaeological assessment as per reports referenced in this document, as follows:
  - *Prior to allowing construction in the area, no-go instructions must be issued by CTC to all personnel so that the area of avoidance is not accidentally impacted. The area to be avoided will be shown on all contract drawings, when applicable. If accidental impacts to the archaeological site are observed at any time during construction a licensed archaeologist will be notified immediately. After completion of grading and other soil disturbing activities a licensed archaeologist will be contracted to inspect and report to the MTCS on the effectiveness of the strategy in ensuring that the areas to be avoided remain intact. If CTC determines at a later date that grading impacts will be extended into the remainder of the archaeological site, a licensed archaeologist will be contracted to carry out the Stage 4 mitigation by excavation of the remainder of the site.*
  - *It is recommended that when soil disturbance and grading activities are occurring within 20 metres of the area to be avoided a licensed archaeologist be contracted to monitor the activities and prevent impacts to the remainder of the archaeological site. Should an undisturbed part of the site be impacted the archaeologist is empowered to stop construction in the area until further Stage 4 mitigation by excavation is concluded. The results of the construction monitoring will be reported on to the MTCS.*
  - *Once all subsequent development has been completed the temporary fence will be removed and replaced by a permanent barrier that will permanently delineate the area of the Shore Site (AlGw-163) that will be avoided and protected. The permanent fence should be placed two metres in from the temporary fence, to ensure it is installed in a part of the site that has already been excavated. CTC will ensure that the lands containing the protected areas remain passive and will prohibit soil disturbance with the exception of traditional farming and minor property maintenance.*
- The remainder of the study area outside of the identified areas has been subject to deep disturbance, and as such no further archaeological assessment is recommended for this portion of the study area (Map 7).

The MTCS is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licencing.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

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 (Government of Ontario 1990b). 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 area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regards to alterations to archaeological sites by the proposed development.

It is an offence under Section 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alterations 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* (Government of Ontario 1990b).

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* (Government of Ontario 1990b).

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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 (Government of Ontario 1990b).

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7.0 IMAGES

Image 1: Study Corridor; Frank Johnston Road; Representative example of urban disturbance facing northwest, taken March 30, 2017

Image 2: Study Corridor; West corner of Coleraine Drive and Harvest Moon Drive; facing north, taken March 30, 2017

Image 3: Study Corridor; North corner of Coleraine Drive and King Street West, as is today after King Street West realignment; facing northwest, taken March 30, 2017

Image 4: Study Corridor; Unnamed tributary of the Humber River showing sloped areas and disturbance from road construction; facing southeast, taken March 30, 2017

Image 5: Study Corridor; Grapevine Road; Representative example of urban disturbance; facing west, taken March 30, 2017

Image 6: Study Corridor; Coleraine Drive; Representative example of urban disturbance facing northwest, taken March 30, 2017

Image 7: Study Corridor; Aida Court; Representative example of urban disturbance; facing east, taken March 30, 2017

Image 8: Study Corridor; Coleraine Drive; Representative example of urban disturbance facing southeast, taken March 30, 2017

Image 9: Study Corridor; Coleraine Drive; Representative example of industrial disturbance facing east, taken March 30, 2017

Image 10: Study Corridor; Coleraine Drive; Representative example of industrial disturbance facing northwest, taken March 30, 2017

Image11: Study Corridor; Coleraine Drive; Representative example of industrial disturbance facing southeast, taken March 30, 2017

Image 12: Study Corridor; Coleraine Drive; Representative example of industrial disturbance facing southeast, taken March 30, 2017

Image 13: Study Corridor; Coleraine Drive; Representative example of industrial disturbance facing north, taken March 30, 2017

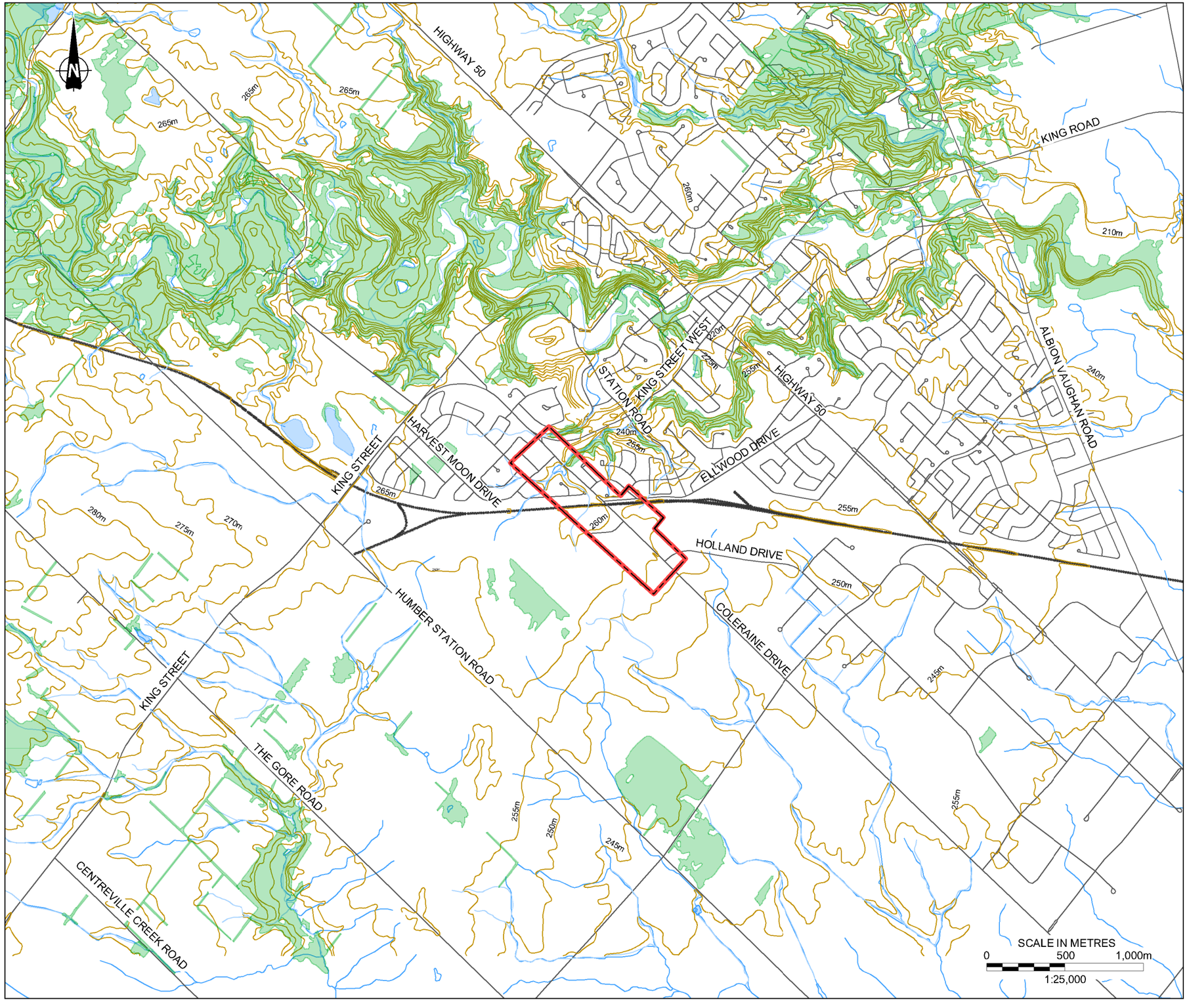
Image 14: Study Corridor; Coleraine Drive; Representative example of industrial disturbance facing southwest, taken March 30, 2017

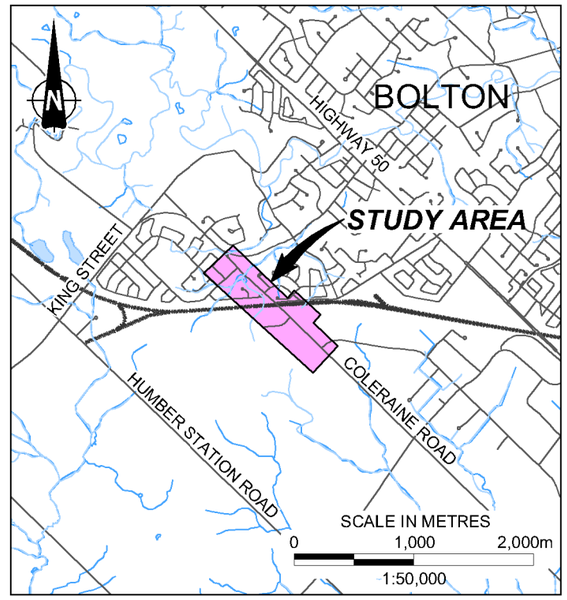
Image 15: Study Corridor; Coleraine Drive; Representative example of industrial disturbance facing west, taken March 30, 2017

Image 16: Study Corridor; Holland Drive; Area retaining archaeological potential; facing south, taken March 30, 2017

8.0 MAPS

All maps follow on the succeeding pages.





REGIONAL MAP

LEGEND

APPROXIMATE LOCATION OF STUDY AREA

REFERENCE

DRAWING BASED ON MNR LIO, OBTAINED 2017
PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2012;
AND CANMAP STREETFILES V2008.4.

NOTES

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPERATION
TOWN OF CALEDON, ONTARIO

TITLE

LOCATION OF STUDY AREA

Golder Associates

PROJECT No.			1665649	FILE No. 1665649-4000-R01001
				SCALE AS SHOWN REV.
CADD	ZJB/DCH	Sept 12/17		
CHECK				MAP 1

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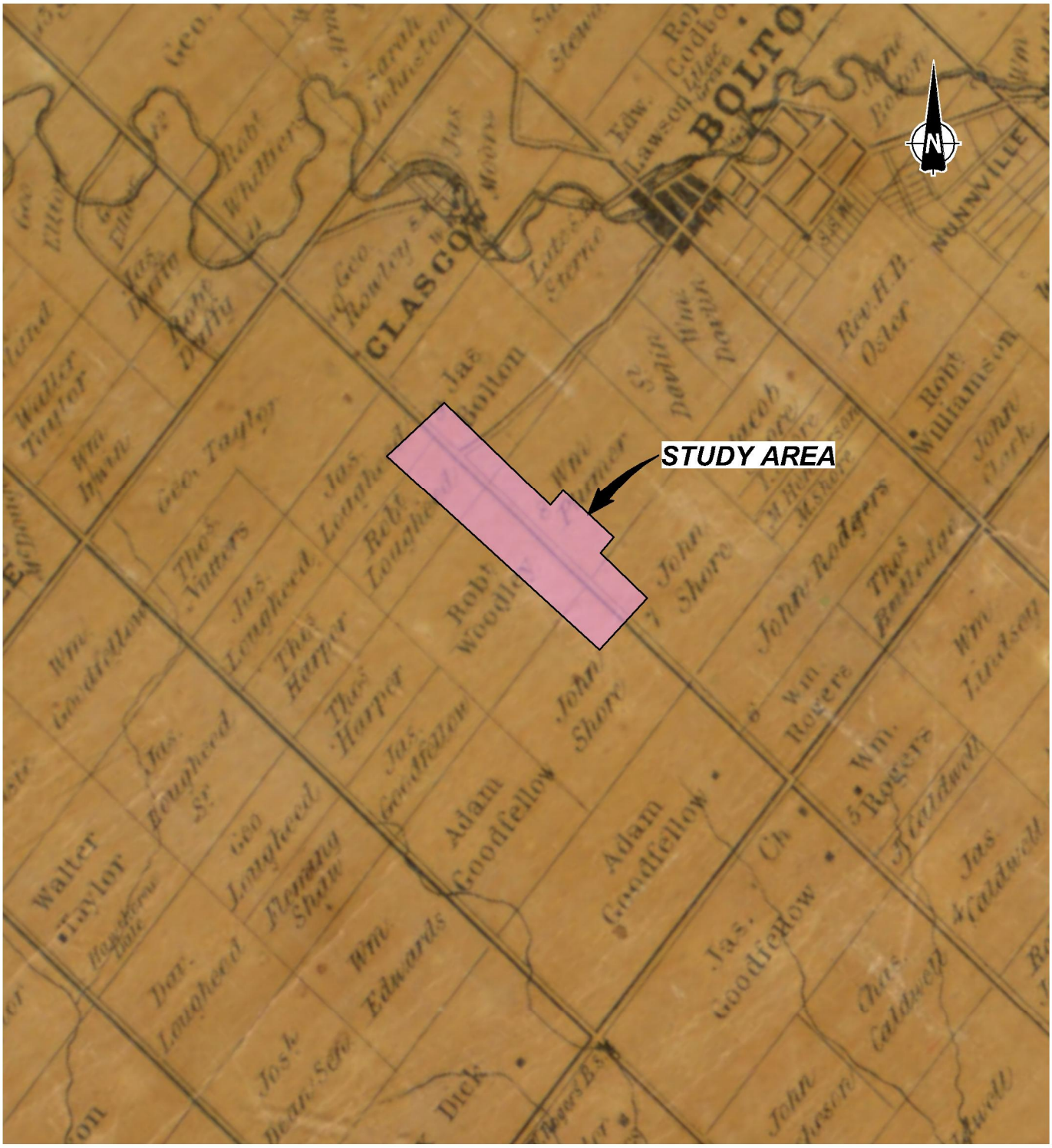

LEGEND

APPROXIMATE LOCATION OF STUDY AREA

REFERENCE

TREMAINE GEORGE, 1858, MAP OF THE COUNTY OF PEEL.

NOTES

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ALL LOCATIONS ARE APPROXIMATE ONLY.

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPARATION
TOWN OF CALEDON, ONTARIO

TITLE

A PORTION OF TREMAINE'S 1858 MAP OF THE COUNTY OF PEEL

Golder Associates

PROJECT No.		1665649	FILE No. 1665649-4000-R01002	
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CADD	ZJB	Apr 4/17	MAP 2	
CHECK				

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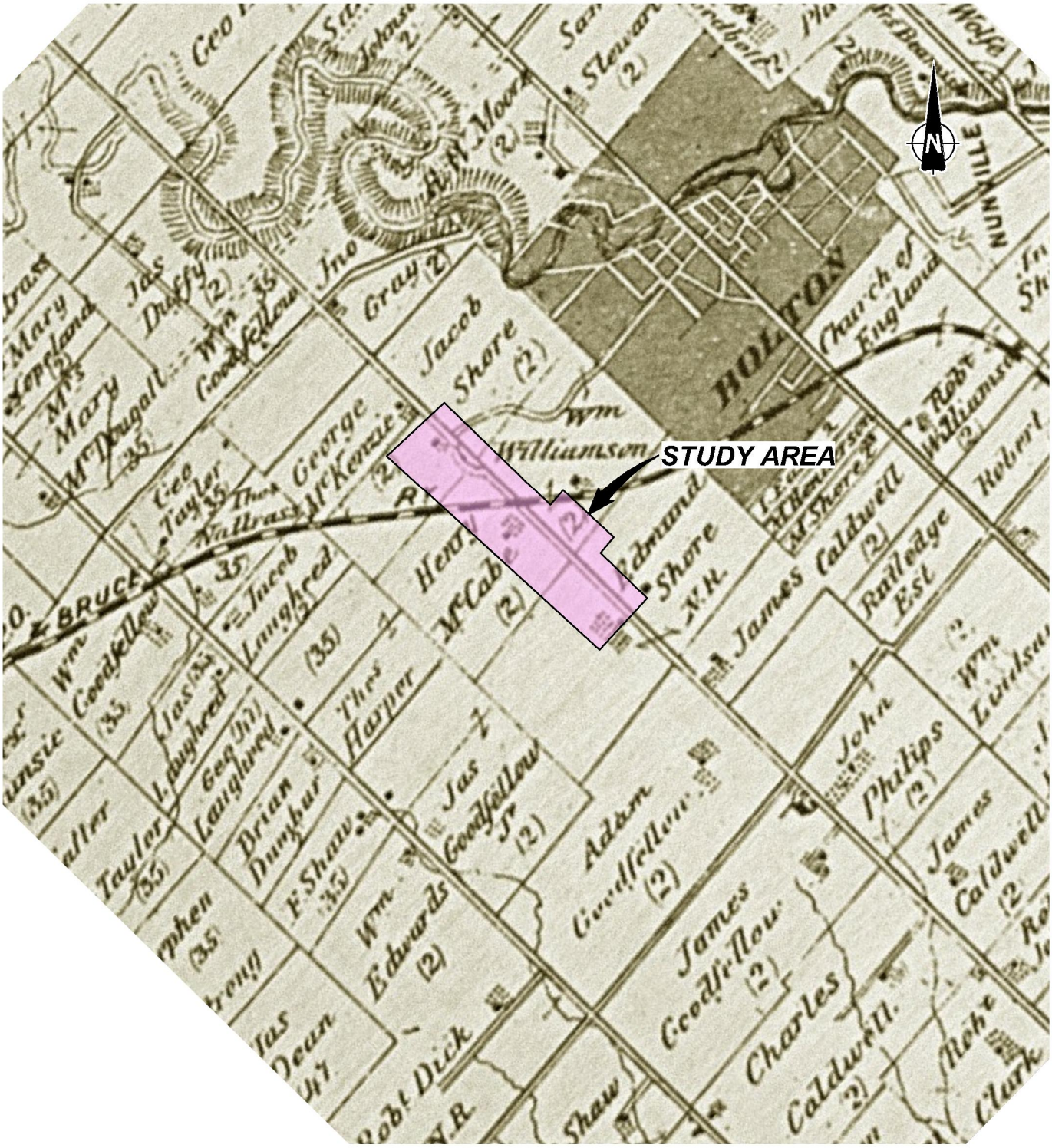

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APPROXIMATE LOCATION OF STUDY AREA

REFERENCE

WALKER AND MILES, 1877, ILLUSTRATED HISTORICAL ATLAS OF THE COUNTY OF PEEL, ONTARIO. ED. ROSS CUMMINGS. 1872 REPRINT.

NOTES

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPARATION
TOWN OF CALEDON, ONTARIO

TITLE

A PORTION OF THE 1877 HISTORICAL ATLAS OF PEEL COUNTY

Golder Associates

PROJECT No.		1665649	FILE No. 1665649-4000-R01002	
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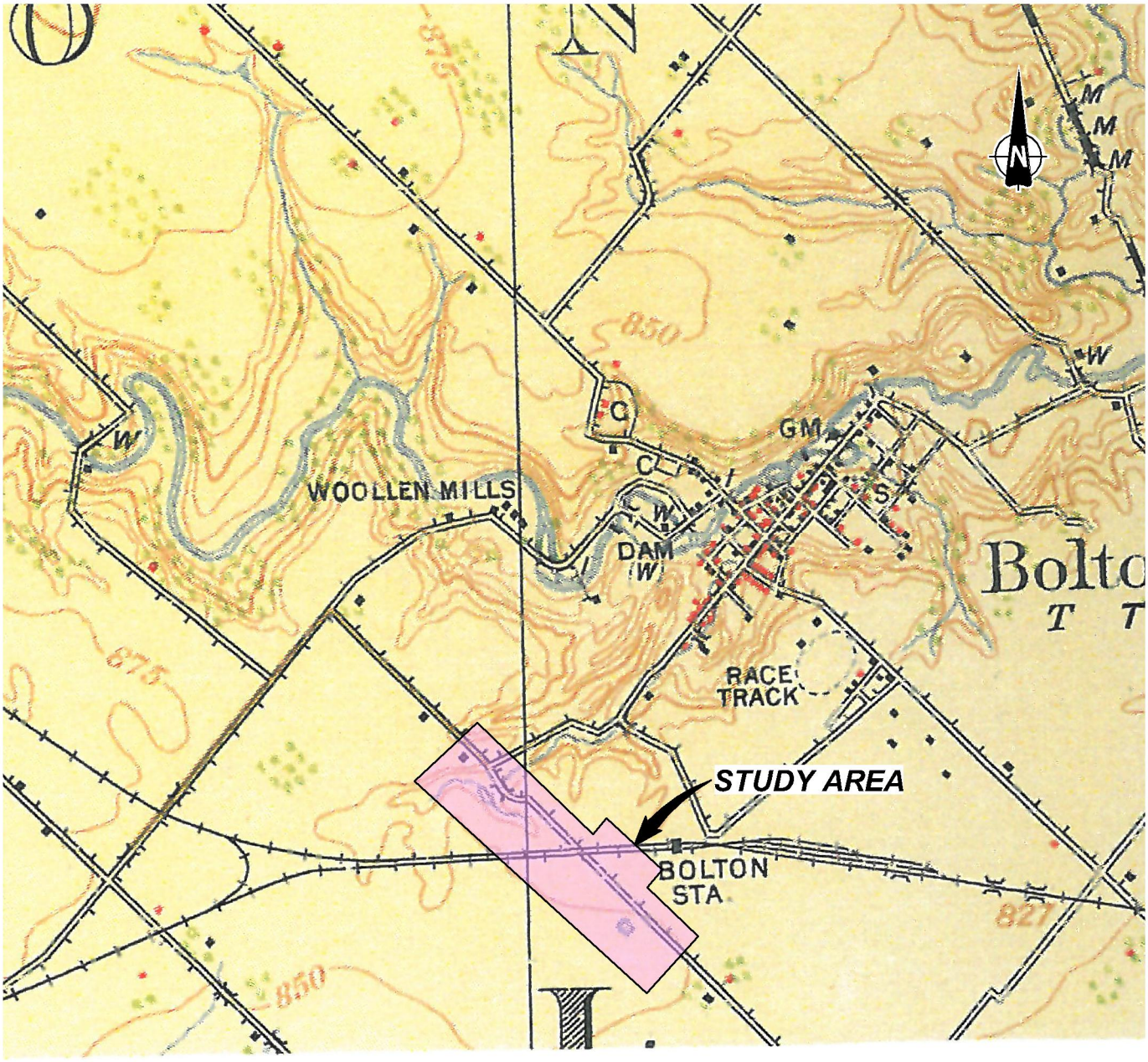

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APPROXIMATE LOCATION OF STUDY AREA

REFERENCE

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPARATION
TOWN OF CALEDON, ONTARIO

TITLE

A PORTION OF THE 1919 TOPOGRAPHICAL MAP OF ALBION TOWNSHIP

Golder Associates

PROJECT No.		1665649	FILE No. 1665649-4000-R01002	
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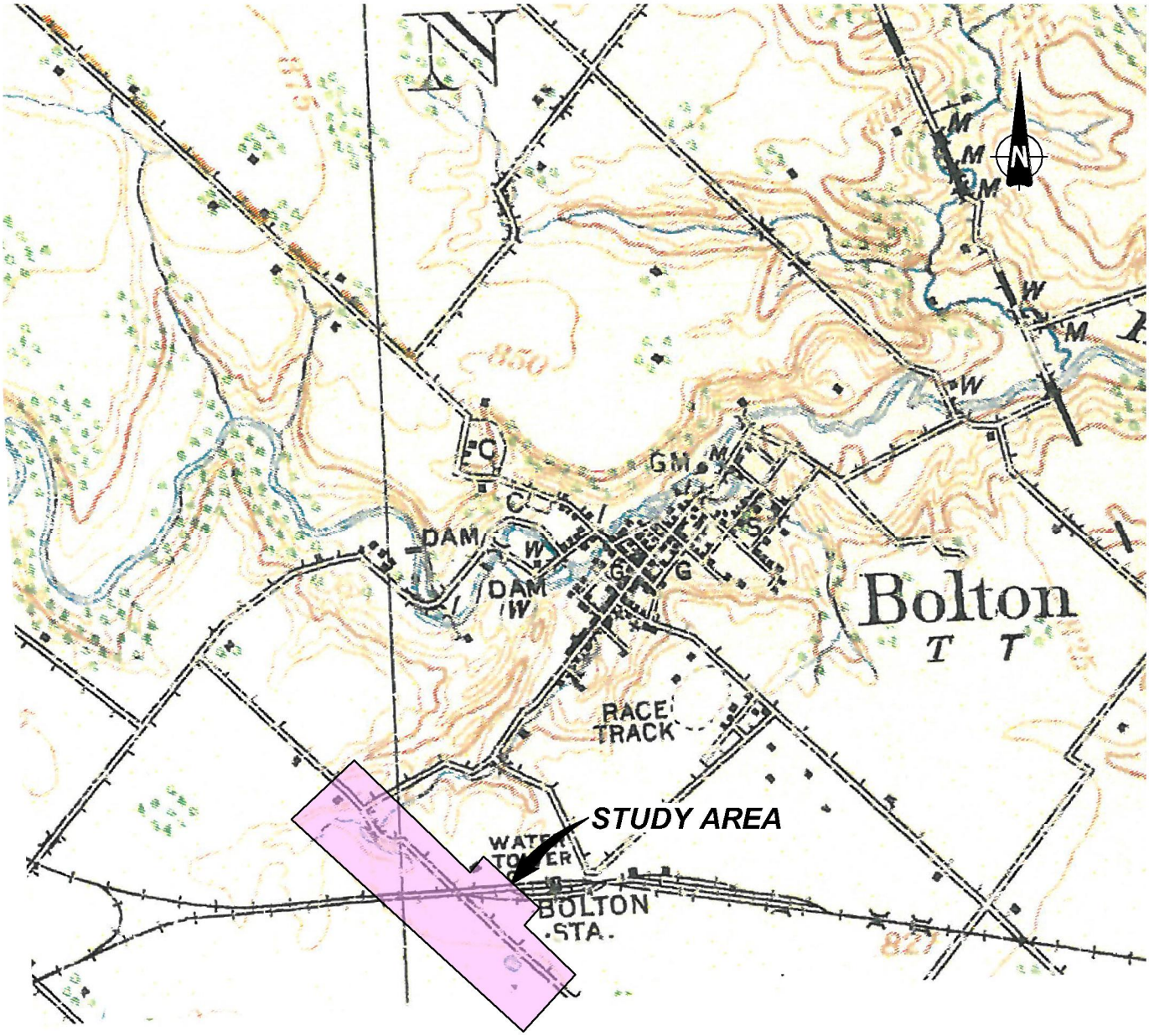

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APPROXIMATE LOCATION OF STUDY AREA

REFERENCE

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPARATION
TOWN OF CALEDON, ONTARIO

TITLE

A PORTION OF THE 1929 TOPOGRAPHICAL MAP OF ALBION TOWNSHIP

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- (1) PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER

REFERENCE

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPERATION
TOWN OF CALEDON, ONTARIO

TITLE

STAGE 1 METHODS

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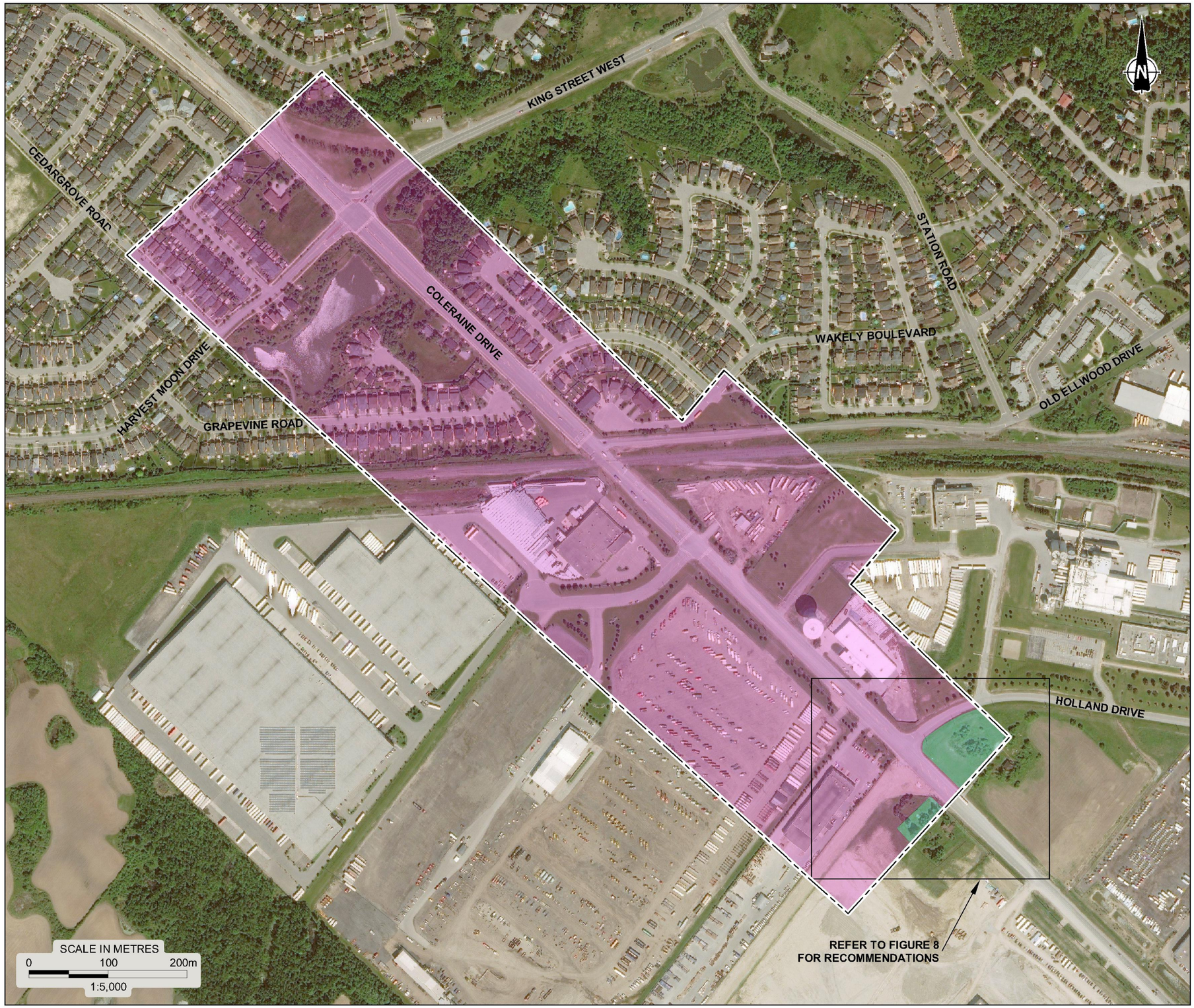
PROJECT No.			1665649	FILE No. 1665649-4000-R01006
			SCALE AS SHOWN	REV.
CADD	ZJB	Apr 4/17		
CHECK				

MAP 6

Drawing file: 1665649-4000-R01006.dwg Apr 04, 2017 - 10:05am



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- AREA RECOMMENDED FOR FURTHER ARCHAEOLOGICAL ASSESSMENT
- NO FURTHER ARCHAEOLOGICAL ASSESSMENT REQUIRED

REFERENCE

DRAWING BASED ON BING IMAGERY AS OF MARCH 31, 2017 (IMAGE DATE UNKNOWN); AND CANMAP STREETFILES V2008.4.

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPERATION
TOWN OF CALEDON, ONTARIO

TITLE

STAGE 1 RESULTS

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MAP 7

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- STAGE 2 TEST PIT AT 5m INTERVAL
- DESIGNATED HERITAGE SITE; FURTHER CULTURAL HERITAGE VALUE OR INTEREST

REFERENCE

DRAWING BASED ON BING IMAGERY AS OF MARCH 31, 2017 (IMAGE DATE UNKNOWN); AND CANMAP STREETFILES V2008.4.

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PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
COLERAINE DRIVE GRADE SEPERATION
TOWN OF CALEDON, ONTARIO

TITLE

STAGE 1 RECOMMENDATIONS

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PROJECT No.			1665649	FILE No. 1665649-4000-R01006
			SCALE AS SHOWN	REV.
CADD	ZJB	Apr 4/17		
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MAP 8

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9.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

Golder has prepared this report in a manner consistent with the level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made.

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Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the Ministry of Tourism and Culture's *Standards and Guidelines for Consultants Archaeologists* (Government of Ontario 2011).

10.0 CLOSURE

We trust that this report meets your current needs. If you have any questions, or if we may be of further assistance, please contact the undersigned.

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Staff Archaeologist

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Associate, Senior Archaeologist

LCM/CP/ll/MT/ly

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