GOLDER
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ORIGINAL REPORT

Stage 1 Archaeological Assessment

Proposed Residential Redevelopment, Fergus Golf Club, 8282 and 8243 Wellington Road 19, Part of Lots 9, 10 and 11, Concession 3, Geographic Township of Garafaxa, now Township of Centre Wellington, County of Wellington, Ontario

Submitted to:

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Distribution List

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Executive Summary

The Executive Summary highlights key points from the report only, for complete information and findings as well as limitations, the reader should examine the complete report.

Golder Associates Ltd. (Golder) was retained by 883890 Ontario Limited c/o Fergus Development Inc. to undertake a Stage 1 Archaeological Assessment in support of mixed-use residential redevelopment of a portion of the Fergus Golf Club. The Study Area is located on Part of Lots 9, 10, and 11, Concession 3, Geographic Township of Garafaxa, now Township of Centre-Wellington, County of Wellington, Ontario (Map 1). The Study Area is approximately 83.66 hectares (ha) in size. This includes 39.39 ha southeast of County Road 19 (the "SE Site"), and 44.27 ha northwest of County Road 19 (the "NW Site"). The Stage 1 Archaeological Assessment was conducted in accordance with the *Planning Act*; a copy of the development plan is provided in Appendix A.

Background research determined the Study Area has archaeological potential for the recovery of both Indigenous and historical Euro-Canadian archaeological resources. This determination was based on the proximity of a previously registered archaeological site, in addition to the proximity of historical settlements and historical transportation routes. The registered archaeological site seems to represent a collection of Indigenous tools and implements from local agricultural fields.

The current use of the Study Area as a golf course indicates the property has been subjected to some level of subsurface disturbance, but it is not possible through visual assessment to determine to what extent the development of the golf course impacted subsurface cultural remains that may be present in the Study Area. Given the results and conclusions of this Stage 1 Archaeological Assessment, the following recommendations are provided:

1) Portions of the Study Area that exhibit disturbed conditions, slope or poorly drained areas, as observed during the Stage 1 property inspection, are recommended to be exempt from further Archaeological Assessment (Map 7).

2) Portions of the Study Area that exhibit relatively undisturbed conditions, as observed during the Stage 1 property inspection, are documented on Map 7. Prior to any impacts, it is recommended these areas be subject to Stage 2 Archaeological Assessment by means of shovel test pit survey at 5 m intervals in accordance with Section 2.1.2 of the Ministry of Heritage, Sport, Tourism and Culture Industries' (MHSTCI) *Standards and Guidelines for Consultant Archaeologists* (2011).

3) Portions of the Study Area were identified during the Stage 1 property inspection as likely disturbed due to the construction of the golf courses, but the level of disturbance was not able to be visually confirmed; these areas are documented on Map 7. Prior to any impacts, it is recommended these areas be subject to Stage 2 Archaeological Assessment by means of shovel test pit survey at 10 m intervals to confirm the extent of ground disturbance. Should intact topsoil layers be identified, survey intervals should be reduced to 5 m in accordance with Section 2.1.2 of the MHSTCI *Standards and Guidelines for Consultant Archaeologists* (2011). The MHSTCI has provided concurrence with this strategy (Personal communication, Wai Hadlari, 20 April 2021).

The MHSTCI is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

Study Limitations

Golder has prepared this report in a manner consistent with that 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.

This report has been prepared for the specific site, design objective, developments, and purpose described to Golder by Fergus Development Inc. (the Client). The factual data, interpretations, and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

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, if any, comply with those identified in the MHSTCI's 2011 *Standards and Guidelines for Consultant Archaeologists*.

Personnel

Project Director	Chris Kellestine, A.Sc.T.
Project Manager	Matthew Kelly, P.Eng.
Project Coordinator	Susan Vodden
Archaeology Task Manager	Jamie Lemon, MA, Senior Archaeologist (P1056)
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Acknowledgements

Proponent	Farrah Ward, Fergus Development Inc. Theyonas Manoharan, Fergus Development Inc. Jennifer Ormiston, Fergus Development Inc.

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1.0 PROJECT CONTEXT

1.1 Development Context

Golder Associates Ltd. (Golder) was retained by 883890 Ontario Limited c/o Fergus Development Inc. to undertake a Stage 1 Archaeological Assessment in support of mixed-use residential redevelopment of a portion of the Fergus Golf Club. The Study Area is located on Part of Lots 9, 10, and 11, Concession 3, Geographic Township of Garafaxa, now Township of Centre-Wellington, County of Wellington, Ontario (Maps 1 and 2). The Study Area is approximately 83.66 hectares (ha) in size. This includes 39.39 ha southeast of County Road 19 (the "SE Site"), and 44.27 ha north west of County Road 19 (the "NW Site"). The Stage 1 Archaeological Assessment was conducted in accordance with the *Planning Act*. A copy of the development plan is provided in Appendix A.

This Stage 1 Archaeological Assessment was conducted under PIF P1056-0138-2021 issued to professional archaeological consultant licensee Jamie Lemon (P1056) of Golder. Due to extenuating personal circumstances, the PIF for the Fergus Golf Club was transferred in February 2022 from Jamie Lemon to Michael Teal (P364), also of Golder, who will take on the responsibility of reporting (PIF P364-0194-2022). Permission to enter the Study Area for the purposes of the Stage 1 Archaeological Assessment was provided by Farrah Ward of Fergus Development Inc.

1.2 Objectives

The objectives of a Stage 1 Archaeological Assessment, as outlined by the 2011 *Standards and Guidelines for Consultant Archaeologists* published by the *Ministry of Heritage, Sport, Tourism and Culture Industries* (MHSTCI) (2011), are as follows:

- to provide information about the Study Area's geography, history, previous archaeological fieldwork and current land condition
- to evaluate in detail the Study Area's archaeological potential, which will support recommendations for Stage 2 survey for all or parts of the property
- to recommend appropriate strategies for Stage 2 archaeological survey

2.0 HISTORICAL CONTEXT

To establish the historical context of the Study Area, a review of Indigenous and Euro-Canadian settlement history was undertaken. This information is presented below in chronological order.

2.1 Pre-contact Indigenous Period

The general culture history of the Indigenous pre-contact period of southern Ontario, based on Ellis and Ferris (1990), is summarised in Table 1.

Table 1: Overview of Pre-contact Cultural Chronology of Southern Ontario

Period		Time Range Before Present Date (BP)*	Characteristics
Paleo	Early	10,950 – 10,350 BP	Gainey, Barnes and Crowfield traditions; small bands; mobile hunters and gatherers; utilization of seasonal resources and large territories; fluted projectiles
	Late	10,350 – 9950 BP	Holcombe, Hi-Lo and Lanceolate biface traditions; continuing mobility; campsite/way-station sites; smaller territories are utilized; non-fluted projectiles
Archaic	Early	9950 – 7950 BP	Side-notched, Corner-notched (Nettling, Thebes) and Bifurcate Base traditions; growing diversity of stone tool types; heavy woodworking tools appear (e.g., ground stone axes and chisels)
	Middle	7950 – 4450 BP	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
	Late	4450 – 2900 BP	Narrow Point (Lamoka), Broad Point (Genesee) and Small Point (Crawford Knoll) traditions; less mobility; use of fish-weirs; formal cemeteries appear; stone pipes emerge; long-distance trade (marine shells and galena)

Period		Time Range Before Present Date (BP)*	Characteristics
Woodland	Early	2900 – 2350 BP	Meadowood tradition; cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; bands of up to 35 people
	Middle	2350 – 1400 BP	Saugeen tradition; stamped ceramics appear; Saugeen projectile points; cobble spall scrapers; Seasonal settlements and resource utilization; post holes, hearths, middens, cemeteries and rectangular structures identified
	Transitional	1400 – 1050 BP	Princess Point tradition; cord roughening, impressed lines, and punctate designs on pottery; adoption of maize horticulture at the western end of Lake Ontario; oval houses and 'incipient' longhouses; first palisades; villages with up to 75 people
	Late (Early Iroquoian)**	1050 – 650 BP	Glen Meyer tradition; settled village-life based on agriculture; small villages (0.4 ha) with 75–200 people and 4–5 longhouses; semi-permanent settlements
	Late (Middle Iroquoian)**	650 – 550 BP	Uren and Middleport traditions; classic longhouses emerge; larger villages (1.2 ha) with up to 600 people; more permanent settlements (30 years)
	Late (Late Iroquoian)**	550 – 350 BP	Larger villages (1.7 ha); examples up to 5 ha with 2,500 people; extensive croplands; Also hamlets, cabins, camps and cemeteries; potential tribal units; fur trade begins ca. 1580 CE (Common Era); European trade goods appear

** (BP) Before Present Era dates are calculated using the year 1950 as the recognized start date of the present era.*

*** Ontario Iroquoian was historically used as a temporal period marker and is not meant to imply assumptions regarding ethnicity.*

(Sawden, 1952; Heidenreich, 1978; Dodd el al., 1990; Ellis and Deller, 1990; Fox, 1990; Lennox and Fitzgerald, 1990; Ramsden, 1990; Spence et al., 1990; Williamson, 1990; Wright, 1994; Ferris and Spence, 1995; Warrick, 2000; Brown, 2009; Ellis, 2013; Williamson, 2013; Garrad, 2014).

2.1.1 Paleo Period

Occupation of southern Ontario became possible just after the end of the Wisconsin Glacial Period. Although there were a complex series of ice retreats and advances which played a large role in shaping the local topography, this portion of 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 Indigenous groups that had been living south of the Great Lakes. The period of these early Indigenous inhabitants is known as the Paleo Period (Ellis and Deller 1990). The Paleo period marks the beginning of human settlement in southern Ontario. It is characterized by small bands of nomadic hunter-gatherers who largely depended on the communal hunting of big game such as caribou, and possible mammoth and/or mastodon. This early period of occupation is divided into early and late phases, which span from ca. 10,950 – 9,950 BP (Ellis and Deller 1990) and from ca. 10,350 -9,950 BP (Jackson 2004), respectively.

Our current understanding of settlement patterns of Early Paleo peoples suggests 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). 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 glacial lakes. There are a few extremely large Early Paleo sites, such as one located close to Parkhill, Ontario, which covered as much as six hectares. 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. There are also smaller Early Paleo camps scattered throughout the interior of southwestern and south-central 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). Archaeological examples of Early Paleo sites are rare.

The Late Paleo Period (10,350 – 9,950 BP / 8,400 – 8000 BC) has been less researched and is consequently more poorly understood. By this time the environment of south-central Ontario was coming to be dominated by closed coniferous forests with some minor deciduous elements. 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.

Like the Early Paleo peoples, Late Paleo peoples covered large territories as they moved about in response to seasonal resource fluctuations. On a province-wide basis, Late Paleo projectile points are far more common than Early Paleo materials, suggesting a relative increase in population.

The end of the Late Paleo Period was heralded by numerous technological and cultural innovations that appeared throughout the Archaic Period. These innovations may be best explained in relation to the dynamic nature of the post-glacial environment and region-wide population increases.

2.1.2 Archaic Period

During the Early Archaic Period (9, 950 – 7,950 BP / 8000 – 6000 BC), the jack and red pine forests that characterized the Late Paleo 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. 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 (7,950 – 4,450 BP / 6000 – 2500 BC), the trend to more diverse toolkits continued, as the presence of net-sinkers suggest that fishing was becoming an important aspect of the subsistence economy. It was also at this time that “bannerstones” were first manufactured.

Bannerstones are carefully crafted ground stone devices that served as a counterbalance for *atlatls* or spear-throwers. Another characteristic of the Middle Archaic Period is an increased reliance on local, often poorer quality, chert resources for the manufacturing of projectile points and other stone tools. 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 Period, 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. This process forced a reorganization of Indigenous subsistence practices, as more people had to be supported from the resources of a smaller area. During the latter part of the Middle Archaic Period, 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, indigenous copper tools manufactured from a source located northwest of Lake Superior were being widely traded (Ellis et al. 1990:66). By 5,450 BP (3500 BC) the local environment had stabilized and began to reflect the more modern landscape (Ellis et al. 1990:69).

During the Late Archaic Period (4,450 – 2,900 BP / 2500 – 950 BC), the trend towards decreased territory size and a broadening subsistence strategy continued. Late Archaic sites are far more numerous than either Early or Middle Archaic sites, and it seems that the local population had expanded. It is also during the Late Archaic Period that the more formal cemeteries appear. The appearance of more formal cemeteries during the Late Archaic Period 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.

This suggestion of increased territoriality is also consistent with the regionalized variation present in Late Archaic Period projectile point styles. It was during the Late Archaic Period that distinct local styles of projectile points appear. Also, it was during the Late Archaic Period that trade networks which had been established during the Middle Archaic Period continued to flourish. Indigenous copper from northern Ontario and marine shell artifacts from as far away as the Mid-Atlantic coast are frequently encountered as grave goods at Southern Ontario sites. Other artifacts such as polished stone pipes and banded slate gorgets also appear on Late Archaic sites in Southern Ontario. One of the more unusual and interesting of the Late Archaic Period artifacts is the birdstone, which are small, bird-like effigies usually manufactured from green banded slate.

2.1.3 Woodland Period

The Early Woodland Period dates between 2,900 – 2,350 BP (950 – 400 BC), 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 thick walled and often friable when recovered from the archaeological record. 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. These vessels were not easily portable, and individual pots likely did not have a long use life. There have also been numerous Early Woodland sites located at which no pottery was found, suggesting that pottery vessels had yet to assume a central position in the day-to-day lives of Early Woodland peoples.

Other than the introduction of this limited ceramic technology, the lifeways 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.

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 Period 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 Periods also continued to function, although there does not appear to have been as much trade in marine shell during the Early Woodland Period. 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 on sites in southwestern Ontario.

In terms of settlement and subsistence patterns, the Middle Woodland Period between 2,350 – 1,400 BP (400 B.C. – 500 CE 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.

In addition, Middle Woodland peoples relied much more extensively on ceramic technology. Middle Woodland vessels are often heavily 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 along the margins of major rivers and lakes. While these areas had been utilized by earlier peoples, Middle Woodland sites are significantly different in that the same location was occupied off and on for as long as several hundred years and large 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 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 1,300 BP (600 CE) or a few centuries before. Corn

did not become a dietary staple, however, until at least three to four hundred years later, when the cultivation of corn gradually spread into south-central and southeastern Ontario.

During the early Late Woodland Period, particularly within the Princess Point Complex circa 1,450 -900 BP (500-1050 CE), a number of archaeological material changes have been noted including the appearance of triangular projectile point styles, first seen during this period beginning with the Levanna form; cord-wrapped stick decorated ceramics using the paddle and anvil forming technique evolving from the mainly coil-manufactured and dentate stamped and pseudo-scallop shell impressed ceramics; and if not appearance, increasing use of maize (*Zea mays*) as a food source (e.g., Bursey 1995; Crawford et al. 1997; Ferris and Spence 1995:103; Martin 2004 [2007]; Ritchie 1971:31-32; Spence et al. 1990; Williamson 1990:299).

The Late Woodland Period is widely accepted as the beginning of 7euter7tureal life ways in southern Ontario. Researchers have suggested that a warming trend during this time may have encouraged the spread of maize into southern Ontario, providing a greater number of frost-free days (Stothers and Yarnell 1977). Further, shifts in the location of sites have also been identified with an emphasis on riverine, lacustrine and wetland occupations set against a more diffuse use of the landscape during the Middle Woodland (Dieterman 2001).

One such site, located on the Grand River near Cayuga, Ontario is the Grand Banks site (AfGx-3). As of 1997, 40 maize kernels and 29 cupules had been recovered at this site (Crawford et al. 1997). The earliest AMS radiocarbon assay run on maize from paleosol II produced a date of approximately 1,450 BP (500 CE) (Crawford et al. 1997:116). This site is interpreted as a long-term basecamp that may have been used year-round or nearly year-round (Crawford and Smith 1996:785). This growing sedentism is seen as a departure from Middle Woodland hunting and gathering and may reflect growing investment in the care of garden plots of maize (Smith 1997:15). The riverine location of Grand Banks (AfGx-3) may have also provided light, nutrient-rich soil for agriculture (Crawford et al. 1997). While Levanna projectile points are formal tools, Princess Point Complex toolkits are predominantly characterized by informal or expedient flake tools and ground stone and bone artifacts are rare (Ferris and Spence 1995:103; Shen 2000). At Grand Banks, experimental archaeology suggests that chert flakes were put to a variety of useful tasks, from butchering to bone-working to wood-working to plant-working. Formal bifaces and projectile points had less evidence of use-wear (Shen 2000). Local cherts appear to have been used, although Onondaga, albeit also a local resource, was preferred at Grand Banks (AfGx-3) (Shen 1997).

The first agricultural villages in southern Ontario date to the 10th century CE. 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” (**see Table 1) (1,050 – 650 BP / 900 – 1300 CE), many archaeologists believe that it is possible to trace a direct line from the Iroquoian groups which later inhabited southern Ontario at the time of first European contact, back to these early villagers.

Village sites dating between 1,050 – 650 BP (900 and 1300 CE), 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 metres 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. 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.

The Middle Ontario Iroquoian Period has a date range of 650 – 550 BP (1300 – 1400 CE) and 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 ha in extent during the Early Ontario Iroquoian Period, now consistently range between one and two hectares in size.

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 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 650 BP (1300 CE). 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). More research is required to evaluate these competing interpretations.

The lay-out of houses within villages also changes dramatically by 650 years ago. During the Early Ontario Iroquoian Period villages were haphazardly planned, 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 (550 – 350 BP / 1400-1650 CE) continues many of the trends which have been documented for the proceeding century. For instance, between 550 and 500 years ago (1400 and 1450 CE) house lengths continue to grow, reaching an average length of 62 m. One longhouse excavated on a site southwest of Kitchener was an incredible 123 m (Lennox and Fitzgerald 1990:444-445). After this time house lengths begin to decrease, with houses dating between 450 – 370 BP (1500 and 1580 CE) averaging 30 m in length.

Why house lengths started to decrease roughly 450 years ago is poorly understood, although it is believed that the even shorter houses witnessed on Historical 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 just north of Toronto has been shown to have expanded on no fewer than five occasions. 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. Late Ontario Iroquoian village expansion has been clearly documented at several sites throughout southwestern and south-central Ontario. The excavations at the Lawson site, a large Late Iroquoian village located in southwestern Ontario, has shown that the original village was expanded by at least twenty percent to accommodate the construction of nine additional longhouses (Anderson 2009).

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. The area which was later to become Halton Region was known to have been occupied by ancestors of two different Late Ontario Iroquoian groups who evolved to become the historically known Neutral and Huron. For this reason the Late Ontario Iroquoian groups which occupied parts of southern Ontario prior to the arrival of the French are often identified as ”Prehistoric Neutral” and “Prehistoric Huron” (Lennox and Fitzgerald 1990; Smith 1990:283).

2.2 Contact Period (1600 to 1650)

The historical Indigenous 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).

Following the introduction of Europeans to North America, the nature of Indigenous settlement size, population distribution, and material culture shifted as settlers began to colonize the land. Despite this shift in life ways, “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, Indigenous peoples throughout southern Ontario have left behind archaeologically significant resources which show continuity with past peoples. Many of these archaeological sites are not recorded in historical Euro-Canadian documentation.

The Huron-Wendat and Haudenosaunee called those within southwestern and south-central Ontario the ‘Attiewandaron’ (also spelled Attiwondaronks and Atiquandaronk) (Brown 2009, p.26). According to Samuel de Champlain, who first referred to the Attiewandaron as *la Nation 9euter,* the Attiewandaron inhabited forty villages and could field 4,000 warriors (Jury 1974, p.4; White 1978, p.410; Warrick 2008, p.80). It is speculated that prior to the great epidemics of the 1630s, the Attiewandaron Confederacy numbered approximately 35,000 to 40,000 individuals (White 1978, p.409; Warrick 2008, p.86).

Their territory at the western end of Lake Ontario and along the north shore of Lake Erie was favourably located for easy trade with the Erie, Haudenosaunee, Tionnontaté, and Huron-Wendat (Trigger 1994, p.47). The interior lands occupied by the Attiewandaron contained rapidly running streams, large rivers, and portage routes. A significant trail beginning at Lake Simcoe, following the Nottawasaga River to the Pine River to the source of the

Irvine River and into the Grand River and banks of Lake Erie, formed an Indigenous portage route favoured for travel and trade between Huron-Wendat and Attiewandaron territorial lands (Bricker 1934, p.58).

There are limited records documenting European contact with the Attiewandaron. In 1626, Reverend Father Joseph de la Roche D'aillon, a Récollet (or Recollect) missionary, journeyed from the Huron-Wendat to the Attiewandaron under the pretense of trade, and spent months studying the Attiewandaron language in an attempt to instruct them in the principals of Christian religion (Jury 1974, p.3; White 1978, p.409; Gingras 2000). However, the Huron-Wendat guarded their trade advantage and travelled from village to village, warning the Attiewandaron of "misfortune and ruin if they received the French in their midst" (Jury 1974, p.20). This action caused the dismissal of Father D'aillon from the Attiewandaron and no direct trade relationship was ever formed between the French and Attiewandaron (White 1978, p.407). In the winter of 1640-41, Jesuit Missionaries stayed in ten Attiewandaron villages and produced a map of the Attiewandaron territory, but it has not survived (Jury 1974, p.4; White 1978, p.407; Brown 2009, p.27). Famine also affected the Attiewandaron. Famine had become so severe by 1639 that many Attiewandaron sold their children for corn and others fled to neighbouring tribes pale and disfigured (Jury 1974, p.4; White 1978, p.407; Brown, 2009, p.27).

By 1645, having grown dependent on European goods and with their territory no longer yielding enough animal pelts, the Haudenosaunee became increasingly aggressive towards the Huron-Wendat Confederacy (Trigger 1994, p.53). Armed with Dutch guns and ammunition, the Haudenosaunee engaged in warfare with the Huron-Wendat Confederacy and attacked and destroyed several Huron-Wendat villages throughout Southern Ontario (Trigger 1994, p.53). After the massacres of 1649-50, the small groups that remained of the Huron-Wendat Confederacy became widely dispersed throughout the Great Lakes region, ultimately resettling in Quebec (Schmalz 1991, p.17). Many Huron-Wendat groups sought refuge and protection within the Attiewandaron, until the Haudenosaunee attacked in the 1650s (Trigger 1994, p.56; Warrick 2008 p.208). Many were captured and incorporated into the Haudenosaunee or sought refuge within other tribes (Lennox and Fitzgerald, 1990, p.410; Trigger 1994, 57). The last mention of the Attiewandaron in French writing was in 1671 (Noble, 2012). After the massacres of 1649-50, and "for the next forty years, the Haudenosaunee used present-day Ontario to secure furs with the Dutch, then with the English" (Coyne 1895, p.20; Schmalz 1991, p.17; Smith 2013, p.19).

2.3 Post-Contact Period (1650 to 1800 CE)

Although their homeland was located south of the lower Great Lakes, the Haudenosaunee controlled most of southern Ontario after the 1660s, occupying at "least half a dozen villages along the north shore of Lake Ontario and into the interior" (Schmalz 1991, p.17; Williamson 2013, p.60). The Haudenosaunee established "settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario. Their settlements were on canoe-and-portage routes that linked Lake Ontario to Georgian Bay and the upper Great Lakes" (Williamson 2013, p.60). The Haudenosaunee had established a village at the Rouge River, the Humber River, and at the Niagara River (Robinson 1965, pp.15-16; Schmalz 1991, p.29).

At this time, several Algonquin-speaking linguistic and cultural groups within the Anishinaabeg (or Anishinaabe) began to challenge the Haudenosaunee in the region (Johnston 2004, pp.9-10; Gibson 2006, p.36). The Anishinaabeg were originally located primarily in northern Ontario. Before contact with the Europeans, the Ojibwa territorial homeland was situated inland from the north shore of Lake Huron (MNCFN [date unknown], p.3). The English referred to those Algonquin-speaking linguistic and cultural groups that settled in the area bounded by Lakes Ontario, Erie, and Huron as Chippewas or Ojibwas (Smith 2002, p.107). In 1640, the Jesuit fathers had recorded the name "*oumisagai*, or Mississaugas, as the name of an Algonquin group near the Mississagi River on the northwestern shore of Lake Huron. The French, and later English, applied this same designation to all

Algonquian [-speaking groups] settling on the north shore of Lake Ontario" (Smith 2002, p. 107; Smith 2013, pp.19-20). "The term 'Mississauga' perplexed the Algonquins, or Ojibwas, on the north shore of Lake Ontario, who knew themselves as the Anishinaabeg" (Smith 2013, p.20).

Following a major smallpox epidemic, combined with the capture of New Netherland by the English, access to guns and powder became increasingly restricted for the Haudenosaunee. After a series of successful attacks against the Haudenosaunee by groups within the Anishinaabeg, the Haudenosaunee dominance in the region began to fail. By the 1690s, Haudenosaunee settlements along the northern shores of Lake Ontario were abandoned, and in 1701, the Haudenosaunee were defeated. After these battles, the Anishinaabeg replaced the Haudenosaunee in Southern Ontario (Coyne 1895, p.28; Schmalz 1991, pp.20, 27, 29; Gibson 2006, p.37; Warrick 2008, p.242; Williamson 2013, p.60).

In 1701, representatives of several groups within the Anishinaabeg and the Haudenosaunee, collectively known as the First Nations, assembled in Montreal to participate in Great Peace negotiations, sponsored by the French (Johnston 2004, p.10; Trigger 2004, p.58). The Mississaugas were granted possession of the territory along and extending northward of Lake Ontario and Lake Erie (Hathaway 1930, p.433). From 1701 to the fall of New France in 1759, the Anishinaabeg experienced a "golden age" of trade, holding no conclusive alliance with either the British or the French while maintaining their middle-man position between Indigenous groups to the north and in southwestern Ontario (Schmalz 1991, p. 35). Mississauga subsistence patterns include a primary focus on hunting, fishing and gathering with little emphasis on agriculture (McMillian and Yellowhorn 2004, p.110). Temporary and moveable house structures were utilized which were easy to construct and disassemble, allowing swift travel throughout their territory (McMillian and Yellowhorn 2004, p.111). Consequently, little archaeological material was left behind.

During the American Revolution, the Haudenosaunee was divided in their support of the British and their support of the Americans. The Mohawk, Onondaga, Cayuga and Seneca supported the British and many fled from their territorial homelands south of Lake Ontario to the Niagara Peninsula and remained there until the Treaty of Paris was signed in 1784 (Tooker 1978, p.435). However, the Treaty made no provisions for the Indigenous, and "consequently, the [divided Iroquois] had to treat each government separately. This meant that as individuals the [Haudenosaunee] had to decide where they should go live and with which country they wished to enter into a treaty agreement with" (Tooker 1978, p.435). Fort Niagara remained in the control of the British, under the command of John Butler from 1777 to 1784. The Haudenosaunee who had sought refuge at Fort Niagara placed enormous strain on the fort's resources and these individuals were ultimately relocated to the Grand River Valley (Surtees 1994, pp.97-101). The Haldimand Treaty of 1784 granted to Six Nations and their descendants six miles on either side of the Grand River.

2.4 Euro-Canadian Settlement Period (1800 to 1900 CE)

The Study Area is located on the western edge of land that was ceded through the Ajetance Treaty, No. 19 (1818). According the Mississaugas of the Credit First Nation (2017):

> *In addition to their three small reserves located on the Lake Ontario shoreline, the Mississaugas of the Credit held 648,000 acres of land north of the Head of the Lake Purchase lands and extending to the unceded territory of the Chippewa of Lakes Huron and Simcoe. In mid-October, 1818, the Chippewa ceded their land to the Crown in the Lake Simcoe-Nottawasaga Treaty and, by the end of October, the Crown sought to purchase the adjacent lands of the Mississaugas of the Credit.*

> *The Deputy Superintendent of the Indian Department, william Claus, met with the Mississaugas from October 27-29, 1818, and proposed that the Mississaugas sell their 648,000 acres of land in exchange for an annual amount of goods. The continuous inflow of settlers into their lands and fisheries had weakened the Mississaugas' traditional economy and had left them in a state of impoverishment and a rapidly declining population. In their enfeebled state, Chief Ajetance, on behalf of the assembled people, readily agreed to the sale of their lands for £522.10 of goods paid annually.*

In 1838, the District of Wellington was formed and included the counties of Wellington, Waterloo, Grey and parts of Dufferin County. In 1854, Wellington became a separate county.

2.4.1 Study Area (1800 to 1900 CE)

Historically, the Study Area encompasses part of Lots 9, 10, and11, Concession 3 in the Township of Garafaxa, Wellington County. More specifically, the Study Area is located on the west half of Lot 9, the east and west halves of Lot 10, and the east half of Lot 11. The Study Area was historically bisected by the Credit Valley Railway (CVR). The CVR line to Orangeville and Elora began operations in 1879, however appears to have been re-routed outside the Study Area, likely due to the construction of the Shand Dam and creation of the Belwood Lake Reservoir.

The Crown Patent for the west half of Lot 9 (100 acres) was issued to rebecca Forrester; the date of the Patent is illegible, with only 8 March 18-5 visible, however it is reasonable to assume the Patent was issued around 1825, as the Patent for the west half of Lot 10 was issued 8 March 1825. An 1861 map of the County of Wellington identified William Mitchell as residing on the west half of Lot 9. The property remains in the Mitchell family, as evidenced by A. Mitchell being identified on an 1881 map (Map 3), until the 100 acres is sold to Robert Black in 1887. The west half of Lot 9 remains in the Black family until the 1970s.

The Crown Patent for the east half of Lot 10 (100 acres) was issued on 12 May 1840 to Hiram McCeany. An 1861 map of the County of Wellington identified James Black as residing on the east half of Lot 10; land registry records indicate James Black purchased the east half of Lot 10 in 1857. The east half of Lot 10 remains in the Black family until the 1970s.

The Crown Patent for the west half of Lot 10 (100 acres) was issued on 8 March 1825 to Rebecca Forrester. An 1861 map of the County of Wellington identified William Mitchell as the residing on the west half of Lot 10; it is unclear when the Mitchell family started residing on the land, but land registry records indicate they purchased the 100 acres from Agnes Thompson on 9 August 1882. It is unclear when the Robert Black obtains ownership of the property, but in in 1901 he grants a mortgage on the property. The west half of Lot 10 remains in the Black family until the 1970s.

The Crown Patent for Lot 11 (200 acres) was issued on 12 October 1841 to Canada Company. An 1861 map of the County of Wellington identified Harvey Cull as the residing on the east half of Lot 11; land registry records indicate Harvey Cull purchased the east half of Lot 11 (100 acres) in 1861. The property remains in the Cull family until 1901, when the property is sold to William Dix. The east half of Lot 11 remains in the Dix family until 1950.

A review of the 1881 map of the Township of Garafaxa illustrates two structures within the Study Area, one on the east half of Lot 11 (H. Cull), and one on the east half of Lot 10 (J. Black).

3.0 ARCHAEOLOGICAL CONTEXT

3.1 Existing Conditions

The Study Area includes the Fergus Golf Club. The Study Area is divided by County Road 19. Northwest of County Road 19, the Study Area includes a driving range and Fergus East and West, the NW Site, an 18-hole golf course constructed in 2000. Southeast of County Road 19 the Study Area includes Fergus South, the SE Site, a 9-hole golf course constructed in 1977. There are small wetlands in this area, as well as an engineered Municipal drain channel. The Study Area includes many aspects found on golf courses including fairways, putting greens, sand traps, graded hills, and water features. Wooded areas are also within the Study Area, particularly southeast of County Road 19.

Aerial imagery illustrates that in 1930 most of the Study Area consisted of agricultural fields, with a large bushlot located southeast of County Road 19 (Map 4). The Credit Valley Railway is visible in the 1930 aerial image. By 1980 the railway has been removed (Map 5). An aerial image from 1990 shows that some golf course infrastructure is visible southeast of Country Road 19, though northwest of County Road 19 the Study Area remains agricultural fields (Map 6).

3.2 Physiography

The Study Area is located within the Guelph Drumlin Field physiographic region of southern Ontario. The Guelph Drumlin Field contains drumlins that are spread out more than in other drumlin areas. The till of this region is stony, with large surface boulders. The sides of valleys have broad sand and gravel terraces, while the bottom of valleys contain swamps. There are also several eskers in this region that cross the area in the same general direction as the drumlins (Chapman and Putnam 1984).

The Study Area contains pockets of Listowel loam (imperfect natural drainage), Harriston loam (good natural drainage), Perth loam (imperfect natural drainage), and Parkhill loam (poor natural drainage) (Hoffman et al 1963). The topography of the Study Area varies from flat to undulating.

The closest primary water source to the Study Area is Irvine Creek, located approximately 380 m north-northwest. The Grand River flows east of the Study Area; prior to the creation of Lake Belwood the closest point of the Grand River was approximately 1.5 km east of the Study Area. Presently Belwood Lake is located approximately 140 m east of the Study Area, however Belwood Lake is a 12 km long reservoir that was created by the construction of Shand Dam in 1942.

3.3 Registered Archaeological Sites

To compile an inventory of archaeological resources, the registered archaeological site records maintained by the MHSTCI in the Ontario Archaeological Site Database (OASD) were consulted (accessed 24 March 2021).

Currently no archaeological sites are registered within 1 km of the Study Area. The closest registered archaeological site, AkHb-1, is located approximately 3.7 km east of the Study Area. The OASD notes that the site consists of a collection of artifacts reported in 1969. The artifacts include 53 projectile points, 28 implement fragments (assumed to be biface fragments), six chert knives, four ground stone axes, one quartzite knife, one iron axe, one gorget, and one hammerstone. The description from the site record form suggests the tools were informally collected from local fields and does not suggest they were recovered through controlled survey. No report is associated with this site in the OASD. Regardless, the presence of these artifacts in the local area speaks to its use by pre-contact Indigenous peoples. The iron axe in the collection could be indicative of Indigenous trade with Europeans, or it could be an isolated find associated with Euro-Canadian settlement.

3.4 Previous Archaeological Assessments

Per *Section 1.1., Standard 1* of the MHSTCI (2011), a review of previous archaeological assessments undertaken within the limits of the Study Area or within 50 m of the Study Area was completed. The review determined that no archaeological assessments have previously been undertaken within 50 m of the Study Area.

3.5 Cultural Heritage Resources

According to the Centre Wellington heritage register, no designated or listed properties are located within the Study Area or adjacent to its limits.

Per *Section 1.3* and *1.4* of the MHSTCI (2011), property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial or municipal historic landmark or site is indicative of archaeological potential.

3.6 Cemeteries

As per *Section 1.3.1* of the MHSTCI (2011), areas of early Euro-Canadian settlements, such as early cemeteries, are considered features of archaeological potential. A review of aerial imagery and a search of the Public Register of the Bereavement Authority of Ontario did not identify the location of any cemeteries adjacent to the Study Area.

4.0 FIELD METHODS

Table 2 provides an inventory of documentary records generated in the field.

Table 2: Inventory of Documentary Records

Document Type	Location of Document	Additional Comments
Field Notes	Golder office in Mississauga	3 pages in field notebook and stored digitally on Golder server
Hand Drawn Maps	Golder office in Mississauga	1 map stored digitally on Golder server
Maps Provided by Client	Golder office in Mississauga	1 map stored digitally on Golder server
Digital Photographs	Golder office in Mississauga	182 photographs stored digitally on Golder server

4.1 Stage 1 Property Inspection

A Stage 1 archaeological property inspection was conducted on 5 April 2021 under archaeological consulting licence P1056, issued to Jamie Lemon of Golder. Due to extenuating personal circumstances, the PIF for the Fergus Golf Club was transferred in February 2022 from Jamie Lemon to Michael Teal (P364), also of Golder, who will take on the responsibility of reporting (PIF P364-0194-2022). Rhiannon Fisher (P468) was delegated the responsibility of supervising the archaeological fieldwork as per Section 12 of the MHSTCI 2013 *Terms and Conditions for Archaeological Licences*, issued in accordance with clause 48(4)(d) of the *Ontario Heritage Act*. The weather on that day was cloudy and mild. The lighting and visibility conditions encountered were appropriate and did not inhibit the observation of features of archaeological potential.

Following the strategies outlined in the 2011 *Standards and Guidelines for Consultant Archaeologists*, the Study Area was subject to a property inspection and photo-documentation as illustrated in Images 1-32 and Map 7. Photographs were taken with a Samsung Galaxy S9 camera; GPS coordinates for photographs were recorded with the Handy GPS application on the S9, with an accuracy of 2 m.

On the SE Site, the Study Area was found to contain the Fergus South golf course, a residential home and an open field with undulating terrain. The golf course included fairways, putting greens, water features, and graded hills. For large portions of the golf course, particularly the fairways, the level of ground disturbance could not be determined visually; these areas are maintained as manicured lawn. Wooded and grassed areas, representing what appear to be undisturbed areas, were identified and mapped. An area of previous disturbance was identified where land was clear-cut and sand and gravel laid down, and where a paved laneway from County Road 19 was constructed. Areas of slope were identified adjacent to County Road 19; additionally a sloped area was identified in the south portion of the Study Area, adjacent to a ravine. There are small wetlands in this area, as well as an engineered Municipal drain channel.

On the NW Site, the Study Area was found to contain a driving range and the Fergus East and West golf course. Golf course characteristics, similar to those on Fergus South, were also identified here. Again, for portions of the golf course, particularly the fairways, the level of ground disturbance could not be determined visually; these areas are maintained as manicured lawn.

5.0 ANALYSIS AND CONCLUSION

Archaeological potential is established by determining whether features or characteristics indicating potential are located on or in the vicinity of a Study Area. Features and characteristics that indicate potential for archaeological resources are defined within Section 1.3.1 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011:17-18) and include:

- Previously identified archaeological sites.
- Water sources:
  - Primary water sources (e.g., lakes, rivers, streams, creeks).
  - Secondary water sources (e.g., intermittent streams and creeks; springs; marshes; swamps).
  - Features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels, shorelines of drained lakes or marshes, and cobble beaches).
  - Accessible or inaccessible shoreline (e.g., high bluffs, swamps or marsh fields by the edge of a lake, sandbars stretching into marsh).
- Elevated topography (eskers, drumlins, large knolls, plateaux).
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground.
- Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases.
- Resource areas including:
  - Food or medicinal plants.
  - Scarce raw minerals (e.g., quartz, copper, ochre or outcrops of chert).
  - Early Euro-Canadian industry (fur trade, logging, prospecting, mining).
- Areas of early Euro-Canadian settlement including:
  - Early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes).
  - Early wharf or dock complexes, pioneer churches and early cemeteries.
- Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes).
- Property listed on a municipal register or designated under the *Ontario Heritage Act* or that is a federal, provincial or municipal historic landmark or site.
- Property that local histories or informants have identified with possible archaeological sites, historical events, activities or occupations.

Many of the above features of archaeological potential have a buffer assigned to them, extending the zone of archaeological potential beyond the physical feature. The following buffers are commonly accepted by the MHSTCI and specifically indicated in Section 1.4 of the *Standards and Guidelines for Consultant Archaeologists* (MHSTCI 2011:20-21).

- 300 m buffer: previously identified archaeological site; water sources; areas of early Euro-Canadian settlement; or locations identified through local knowledge or informants.
- 100 m buffer: early historical transportation route.

In the event no buffer in inherently present, potential is restricted to the physical limits or the feature: elevated topography, pockets of well-drained sandy soil, distinctive land formations, resources areas, listed or designated properties and landmark properties.

5.1 Potential for Indigenous Archaeological Resources

Potential for Indigenous archaeological sites are established by determining the likelihood that archaeological resources may be present within an area. Criteria commonly used by the MHSTCI (2011) were applied to determine areas of archaeological potential within the Study Area. These variables include: distance to previously identified archaeological sites, distance to various types of water sources, drainage, soil type, glacial geomorphology, and the general topographic variability of the area.

Distance to modern or ancient water sources is an important determinant of past human settlement patterns and 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 modelling, a distance to water criterion of 300 m is generally employed for water sources, including lakeshores, rivers, creeks, and swamps. The closest primary water source in pre-contact periods would have been Irvine Creek, located approximately 380 m north-northwest of the Study Area. Grand River flows east of the Study Area; during pre-contact periods the closest point of Grand River would have been approximately 1.5 km east of the Study Area. Presently Belwood Lake is located approximately 140 m east of the Study Area, however Belwood Lake is a 12 km long reservoir that was created by the construction of Shand Dam in 1942.

Soil texture can be an important determinant of past settlement, usually in combination with other factors, such as topography. The soil within the Study Area includes pockets of Listowel loam (imperfect natural drainage), Harriston loam (good natural drainage), Perth loam (imperfect natural drainage), and Parkhill loam (poor natural drainage) (Hoffman et al 1963).). This soil type would have supported past human settlement. The topography of the Study Area varies from flat to undulating.

Furthermore, the MHSTCI stipulates that areas within 300 m of previously identified archaeological sites retain archaeological potential. Currently no archaeological sites are registered within 1 km of the Study Area. The closest registered archaeological site, AkHb-1, is located approximately 3.7 km east of the Study Area. The OASD notes that the site consists of a collection of artifacts reported in 1969. The artifacts include 53 projectile points, 28 implement fragments (assumed to be biface fragments), six chert knives, four ground stone axes, one quartzite knife, one iron axe, one gorget, and one hammerstone. The description from the site record form suggests the tools were informally collected from local fields and does not suggest they were recovered through controlled survey. No report is associated with this site in the OASD. Regardless, the presence of these artifacts in the local area speaks to its use by pre-contact Indigenous peoples. Additionally, the lack of registered archaeological sites

in the immediate area is possibly a result of limited archaeological assessment being undertaken in the area; no archaeological assessments have been undertaken on properties adjacent to the Study Area.

When the above criteria are taken into consideration, the Study Area exhibits potential for pre-contact archaeological resources. An important factor to consider in this determination is the registered archaeological site (AkHb-1) that was identified. Although the site is approximately 3.7 km east of the Study Area, it appears to be associated with a general collection of tools and fragments recovered from various agricultural fields in the area. The number of tools and implements recovered suggests the possibility of numerous archaeological sites in the local area, which would have been inhabited by people drawn to the natural resources of the area.

5.2 Potential for Euro-Canadian Archaeological Resources

The criteria used by the MHSTCI to determine potential for historical archaeological sites include the presence of: 1) particular, resource-specific features that would have attracted past subsistence or extractive uses; 2) areas of initial, non-Indigenous settlement; 3) early historical transportation routes; 4) previously identified archaeological sites; and 5) properties designated under the Ontario Heritage Act (MHSTCI 2011).

In addition to the Study Area being located in proximity to resource-specific features such as water sources and having a soil type conducive for past human settlement as stated above, it is bisected by early Euro-Canadian historical transportation routes, including County Road 19 and the former CVR line. As per *Section 1.3.1* of the MHSTCI (2011), areas of early Euro-Canadian settlements (e.g., pioneer homesteads, isolated cabins, farmstead complexes, early wharf or dock complexes, pioneer churches, and early cemeteries), early historical transportation routes (e.g., trails, passes, roads, railways, portage routes), and properties that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations, are considered features of archaeological potential.

The 1881 Map of the Township of Garafaxa (Map 3) illustrates two structures located within the Study Area, on Lot 10 west of County Road 19, and on Lot 11.

When the above criteria are taken into consideration, the Study Area exhibits potential for the identification of historical Euro-Canadian archaeological resources.

5.3 Archaeological Integrity

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

Activities that are recognized to cause sufficient disturbance to remove archaeological potential include: quarrying, major landscaping involving grading below topsoil, building footprints, and infrastructure development. Activities including agricultural cultivation, gardening, minor grading, and landscaping do not necessarily remove archaeological potential (MHSTCI 2011:18).

Areas identified as being previously disturbed have been identified in Map 7. Areas of disturbance such as cart pathways, small, graded hills, and sand bunkers are not mapped on Map 7 due to their small size.

The current use of the Study Area as a golf course indicates the property has been subjected to some level of subsurface disturbance, but it is not possible through visual assessment to determine to what extent the development of the golf course impacted subsurface cultural remains that may be present.

6.0 RECOMMENDATIONS

Given the results and conclusions of this Stage 1 Archaeological Assessment, the following recommendations are provided:

1) Portions of the Study Area that exhibit disturbed conditions, slope or poorly drained areas, as observed during the Stage 1 property inspection, are recommended to be exempt from further Archaeological Assessment (Map 7).

2) Portions of the Study Area that exhibit relatively undisturbed conditions, as observed during the Stage 1 property inspection, are documented on Map 7. Prior to any impacts, it is recommended these areas be subject to Stage 2 Archaeological Assessment by means of shovel test pit survey at 5 m intervals in accordance with Section 2.1.2 of the MHSTCI *Standards and Guidelines for Consultant Archaeologists* (2011).

3) Portions of the Study Area were identified during the Stage 1 property inspection as likely disturbed due to the construction of the golf courses, but the level of disturbance was not able to be visually confirmed; these areas are documented on Map 7. Prior to any impacts, it is recommended these areas be subject to Stage 2 Archaeological Assessment by means of shovel test pit survey at 10 m intervals to confirm the extent of ground disturbance. Should intact topsoil layers be identified, survey intervals should be reduced to 5 m in accordance with Section 2.1.2 of the MHSTCI *Standards and Guidelines for Consultant Archaeologists* (2011). The MHSTCI has provided concurrence with this strategy (Appendix A).

The MHSTCI is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

7.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Heritage, Sport, Tourism and Culture Industries (MHSTCI), 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 Ontario Ministry of Tourism, Culture and Sport, 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 or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ontario 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.

8.0 BIBLIOGRAPHY

Bricker PB. 1934. The First Settlement in Central Western Ontario. In Ontario Historical Society. Papers and Records, Vol. XXX. Toronto, Ontario: Ontario Historical Society, pp. 58-65.

Brown R. 2009. The Lake Erie Shore – Ontario's Forgotten South Coast. Toronto: Natural Heritage Books, A Member of the Dundurn Group.

Chapman LJ, Putnam DF. 1984. Physiography of Southern Ontario. 3rd ed. Ontario Geological Survey, Special Volume 2. Toronto: Ministry of Natural Resources.

Coyne JH. 1895. The Country of the Neutrals (as far as comprised in the County of Elgin) From Champlain to Talbot. [accessed 09 December 2020]. https://archive.org/stream/cihm_03619#page/n7/mode/2up.

Dodd CF, Poulton DR, Lennox PA, Smith DG, Warrick, GA. 1990. The Middle Ontario Iroquoian Stage. In Ellis, C.J. and N. Ferris (Eds.) The Archaeology of Southern Ontario to A.D. 1650. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 321-359.

Ellis CJ, and Deller DB. 1990. Paleo-Indians. In C.J. Ellis, and N. Ferris, (Eds.). The Archaeology of Southern Ontario to A.D. 1650. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 37-64.

Ellis CJ. 2013. Before Pottery: Paleoindian and Archaic Hunter-Gathers. In Munson, M.K. and Jamieson, S.M (Eds.) Before Ontario: The Archaeology of a Province. Montreal & Kingston, Ontario: McGill Queen's University Press.

Ferris N, Spence MW. 1995. The Woodland Traditions in Southern Ontario. Revista de Arqueologia Americana (9), 83-138.

Fox WA. 1990. The Middle Woodland to Late Woodland Transition. In C.J. Ellis, and N. Ferris, (Eds.). The Archaeology of Southern Ontario to A.D. 1650. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 171-188.

Garrad C. 2014. Petun to Wyandot: The Ontario Petun from the Sixteenth Century. Ottawa: Canadian Museum of History.

Gibson MM. 2006. In the Footsteps of the Mississaugas. Mississauga, Ontario: Mississauga Heritage Foundation.

Gingras F. 2000. La Roche Daillon, Joseph de. [09 December 2020]. http://www.biographi.ca/EN/EN/009004-119.01-e.php?id_nbr=394.

Hathaway E. 1930. The River Credit and the Mississaugas. In Ontario Historical Society Papers and Records Vol. xxvi. Toronto: Ontario Historical Society.

Heidenreich CE. 1978. Huron. In B.G. Trigger (Ed.). Volume 15: Northeast. Washington: Smithsonian Institution, pp.368-388.

Hoffman DW, Matthews BC, Wicklund RE. 1963. The Soil Survey of Wellington County, Report No. 35 of the Ontario Soil Survey. Guelph; Soil Research Institute.

Johnston D. 2004. Connecting People to Place: Great Lakes Aboriginal History in Cultural Context. [09 December 2020]. http://www.attorneygeneral.jus.gov.on.ca/inquiries/ipperwash/transcripts/pdf/P1_Tab_1.pdf.

Jury EM. 1974. The Neutral Indians of South-Western Ontario. London: Bulletin of the Museums no.13, The Museum of Indian Archaeology, The University of Western Ontario, London.

Lennox PA, Fitzgerald WR. 1990. The Culture History and Archaeology of the Neutral Iroquoians. In The Archaeology of Southern Ontario to AD 1650, edited by Chris Ellis and Neal Ferris, pp. 405-456. Occasional Publication Number 5. London Chapter, Ontario Archaeological Society, London.

McMillan AD, Yellowhorn E. 2004. First People in Canada. Vancouver BC: Douglas & McIntyre.

MCFN (Mississauga of the Credit First Nation). 2018. The Mississauga of the Credit First Nation: Historical Territory, Resource and Land Use. Ottawa, Ontario: Praxis Research Associates.

MNCFN (Mississauga of the New Credit First Nation). Date unknown. The History of the Mississauga of the New Credit First Nation. Ottawa, Ontario: Praxis Research Associates.

MHSTCI (Ministry of Tourism, Culture and Sport). 2011. Standards and Guidelines for Consultant Archaeologists. Toronto.

Murphy J. 1887. The History of the County of Welland, Ontario, its past and present containing a condensed history of Canada; a complete history of Welland county, its townships, towns, villages, schools, churches, societies, industries, statistics, etc.; portraits of some of its prominent men; description of its various historic and interesting localities; miscellaneous matter; biographies and histories of pioneer families, etc. [accessed *09 December 2020*]. http://openlibrary.org/books/OL23351934M/The_history_of_the_county_of_Welland_Ontario_its_past_and_present.

Noble WC. 2012. Neutral. [09 December 2020]. http://www.thecanadianencyclopedia.com/articles/neutral**.**

Parsell, H. 1972. Illustrated Historical Atlas of Waterloo & Wellington Counties Ontario 1881 & 1877. Owen Sound, Ontario: Walker and Miles.

Ramsden PG. 1990. The Hurons: Archaeology and Culture History. In Ellis, C.J. and N. Ferris (Eds.) The Archaeology of Southern Ontario to A.D. 1650. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 361-384.

Robinson PJ. 1965. Toronto during the French Regime: 1615-1793. Toronto: University of Toronto Press.

Sawden S. 1952. History of Dufferin County. [09 December 2020] http://www.ourroots.ca/e/toc.aspx?id=6098.

Schmalz PS. 1991. The Ojibwa of Southern Ontario. Toronto, Canada: University of Toronto Press.

Smith DG. 2002. Their Century and a Half on the Credit: The Mississaugas in Mississauga. In Mississauga: The First 10,000 Years. Toronto, Ontario: The Mississauga Heritage Foundation Inc., 123-138.

Smith DB. 2013. Sacred Feathers: The Reverend Peter Jones (Kahkewaquonaby) and the Mississauga Indians. Toronto: University of Toronto Press.

Spence MW, Pihl RH, Murphy CR. 1990. Cultural Complexes of the Early and Middle Woodland Periods. In Ellis, C.J. and N. Ferris (Eds.) The Archaeology of Southern Ontario to A.D. 1650. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 125-169.

Surtees RJ. 1994. Land Cessions, 1763-1830. In E.S. Rogers, (Ed.). Aboriginal Ontario: Historical Perspectives on the First Nations. Toronto, Ontario: Dundurn Press Limited, pp. 92-121.

Tooker E. 1978. The League of the Iroquois: Its History, Politics, and Ritual. In B.G. Trigger (Ed.). Volume 15: Northeast. Washington: Smithsonian Institution, pp.418-441.

Trigger BG. 1994. The Original Iroquoians: Huron, Petun and Neutral. In Edward S. Rogers (Eds.). Aboriginal Ontario: Historical Perspectives on the First Nations. Toronto, Ontario: Dundurn Press Limited, pp 41-63.

Warrick GA. 2000. The Precontact Iroquoian Occupation of Southern Ontario. In Journal of World Prehistory, Vol.14, No.4, pp. 415-466.

Warrick G. 2008. A Population History of the Huron-Petun, A.D. 500-1650. New York: Cambridge University Press.

White ME. 1978. Neutral and Wenro. In Sturtevant, W. C. (Ed.). Handbook of North American Indians -Volume 15: Northeast. Washington: Smithsonian Institution, pp.407-411.

Williamson RF. 1990. The Early Iroquoian Period of Southern Ontario. In Ellis, C.J. and N. Ferris (Eds.) The Archaeology of Southern Ontario to A.D. 1650. London, Ontario: Occasional Publication of the London Chapter, OAS, pp. 291-320.

Williamson RF. 2013. The Woodland Period, 900 BCE to 1700 CE. In Munson, M.K. and Jamieson, S.M (Eds.) Before Ontario: The Archaeology of a Province. Montreal & Kingston, Ontario: McGill Queen’s University Press.

Wright JV. 1994. Before European Contact. In Edward S. Rogers (Eds.). Aboriginal Ontario: Historical Perspectives on the First Nations. Toronto, Ontario: Dundurn Press Limited, pp 21-40.

9.0 IMAGES

Image 1: Area of unknown level of disturbance, driving range north of County Road 19, facing south.

Image 2: Area of previous disturbance, golf cart underpass east of County Road 19, facing west.

Image 3: Area of unknown level of disturbance, golf course southeast of County Road 19, facing east.

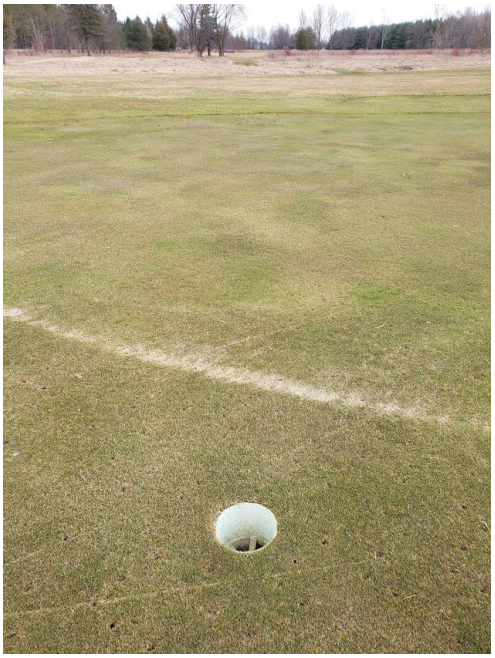


Image 4: Area of unknown level of disturbance, putting green southeast of County Road 19, facing southeast.

Image 5: Area of previous disturbance along Third Line ROW, facing southeast.

Image 6: Undisturbed area, facing south.

Image 7: Undisturbed area in foreground, area of unknown disturbance in background, facing south.

Image 8: Area of unknown level of disturbance, facing south.

Image 9: Area of unknown level of disturbance, facing northwest.

Image 10: Undisturbed area, facing north.

Image 11: Undisturbed areas on either side of area of unknown disturbance, facing southwest.

Image 12: Area of unknown level of disturbance, facing southwest.

Image 13: Undisturbed area on left, area of unknown level of disturbance on right, facing northwest.

Image 14: Poorly drained area, facing southwest.

Image 15: Area of unknown disturbance, facing south.

Image 16: Water feature, facing south.

Image 17: Area of unknown level of disturbance, facing southwest.

Image 18: Area of previous disturbance, facing south.

Image 19: Man-made Municipal drain channel through Study Area, facing south.

Image 20: Undisturbed area, facing west.

Image 21: Poorly drained area, facing north.

Image 22: Area of slope on left, undisturbed area on right, facing northeast.

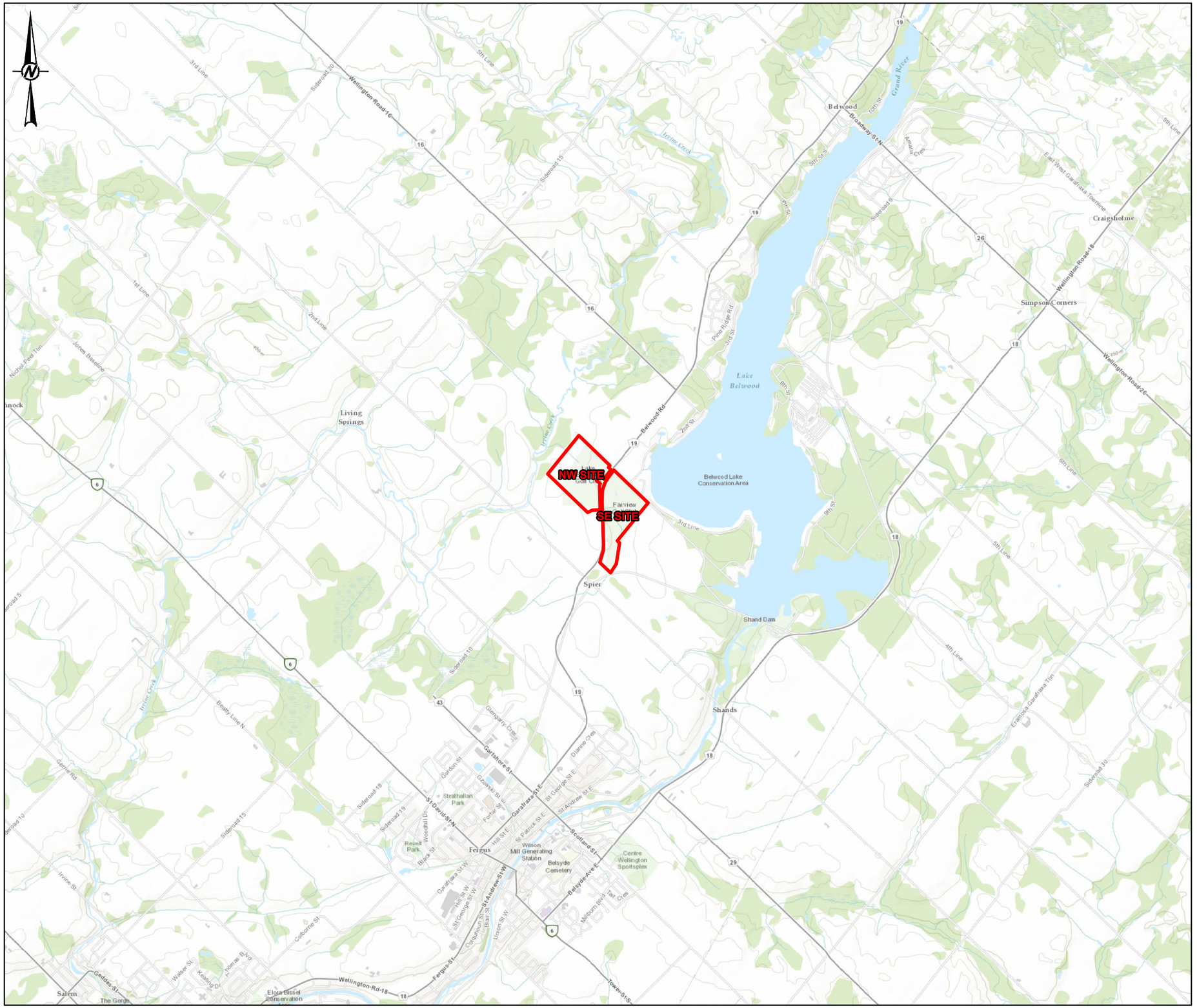
Image 23: Area of previous disturbance, facing east.

Image 24: Area of unknown level of disturbance, facing northeast.

	
Image 25: Area of unknown level of disturbance, facing northeast.	**Image 26: Golf course mound features, unknown areas of disturbance between mounds, facing north.**
	
Image 27: Area of unknown level of disturbance, facing northeast.	

10.0 MAPS

All maps follow on succeeding pages.



LEGEND

STUDY AREA

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1:50,000 METRES

NOTE(S)

REFERENCE(S)

1. BASE IMAGERY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
2. PROJECTION: TRANSVERSE MERCATOR NAD 1983 UTM ZONE 17

CLIENT

883890 ONTARIO LIMITED C/O FERGUS DEVELOPMENT INC.

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FERGUS GOLF CLUB

TITLE

LOCATION OF STUDY AREA

CONSULTANT

GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-15
DESIGNED	JL
PREPARED	JT
REVIEWED	JL
APPROVED	MT

PROJECT NO.	CONTROL	REV.	MAP
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LEGEND

- STUDY AREA
- WATER BODY
- PROVINCIALLY SIGNIFICANT WETLAND

0 250 500

1:7,500 METRES

NOTE(S)

REFERENCE(S)

1. BASE DATA - MNRF, 2019
2. BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
3. PROJECTION: TRANSVERSE MERCATOR NAD 1983 UTM ZONE 17

CLIENT
883890 ONTARIO LIMITED C/O FERGUS DEVELOPMENT INC.

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FERGUS GOLF CLUB

TITLE
STUDY AREA ON AERIAL IMAGE

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-15
DESIGNED	JL
PREPARED	JT
REVIEWED	JL
APPROVED	MT

PROJECT NO.	CONTROL	REV.	MAP
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STUDY AREA

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1:25,000 METRES

REFERENCE(S)

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CLIENT
883890 ONTARIO LIMITED C/O FERGUS DEVELOPMENT INC.

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FERGUS GOLF CLUB

TITLE
STUDY AREA ON 1881 MAP

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-15
DESIGNED	JL
PREPARED	JT
REVIEWED	JL
APPROVED	MT

PROJECT NO.	CONTROL	REV.	MAP
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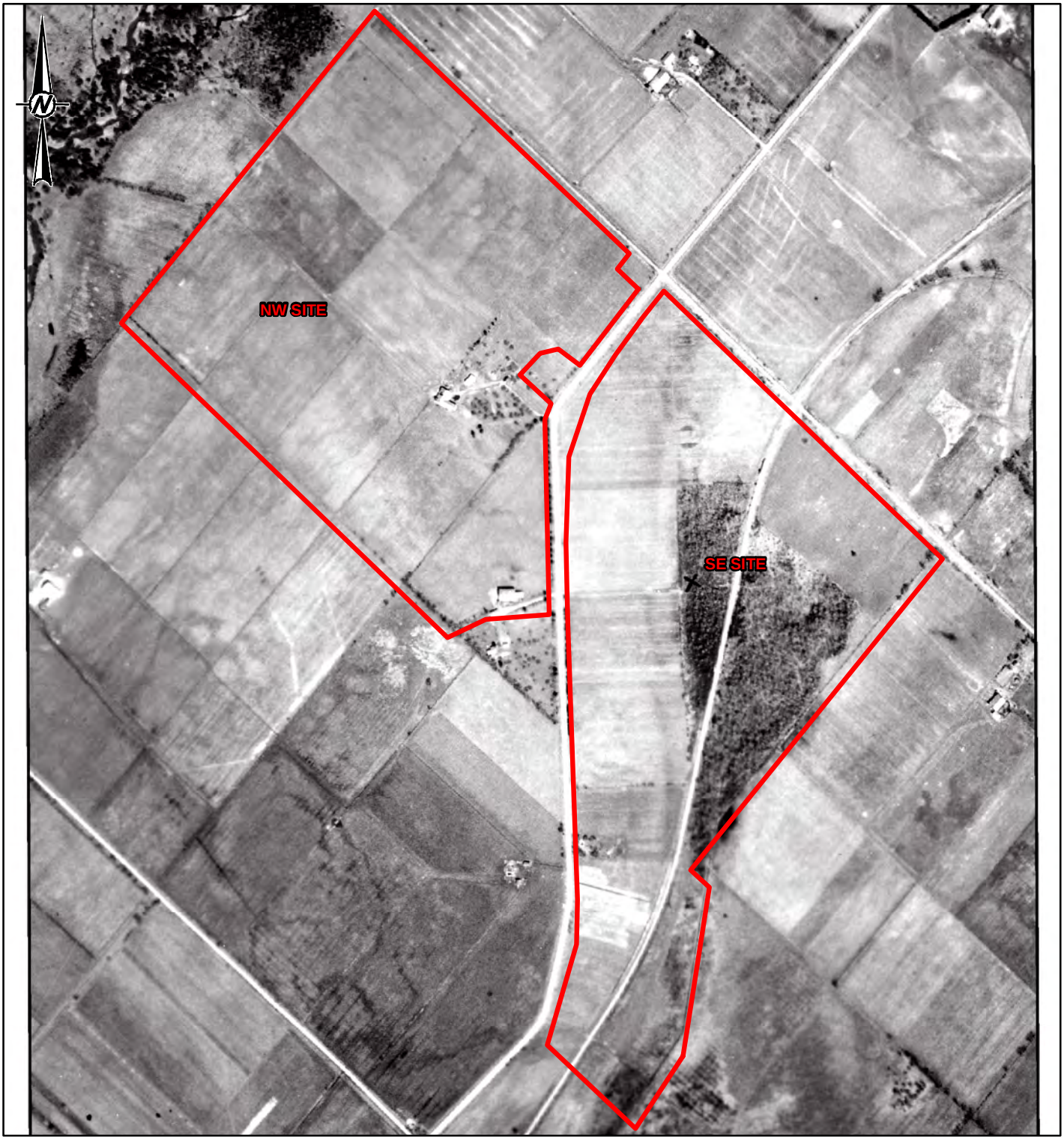

LEGEND

STUDY AREA

0 150 300

1:9,000 METRES

REFERENCE(S)

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2. PROJECTION: TRANSVERSE MERCATOR NAD 1983 UTM ZONE 17

CLIENT
883890 ONTARIO LIMITED C/O FERGUS DEVELOPMENT INC.

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FERGUS GOLF CLUB

TITLE
STUDY AREA ON 1930 AERIAL IMAGE

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-17
DESIGNED	JL
PREPARED	JT
REVIEWED	JL
APPROVED	MT

PROJECT NO.	CONTROL	REV.	MAP
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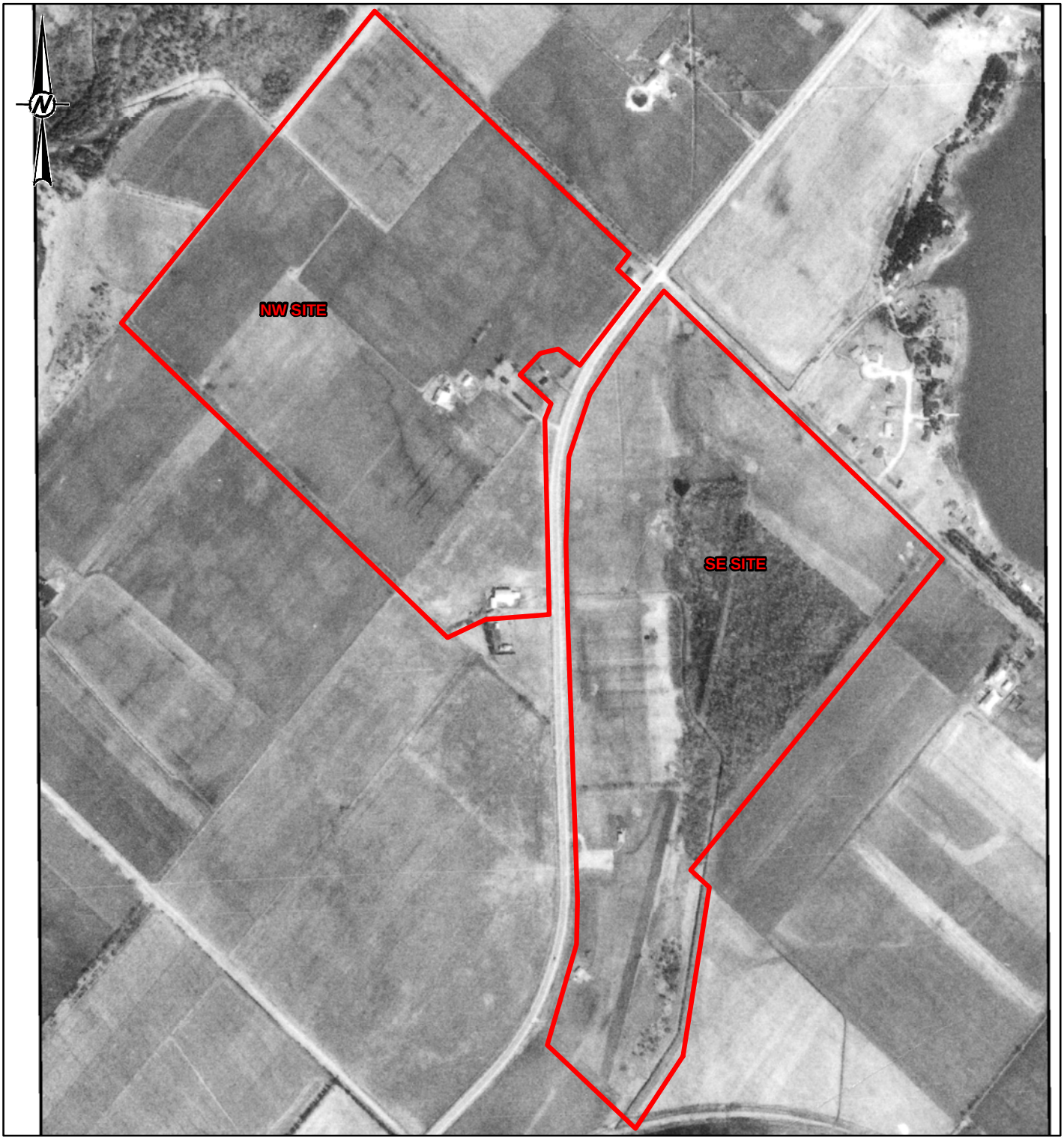

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STUDY AREA

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CLIENT

883890 ONTARIO LIMITED C/O FERGUS DEVELOPMENT INC.

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FERGUS GOLF CLUB

TITLE

STUDY AREA ON 1980 AERIAL IMAGE

CONSULTANT

GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-17
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PREPARED	JT
REVIEWED	JL
APPROVED	MT

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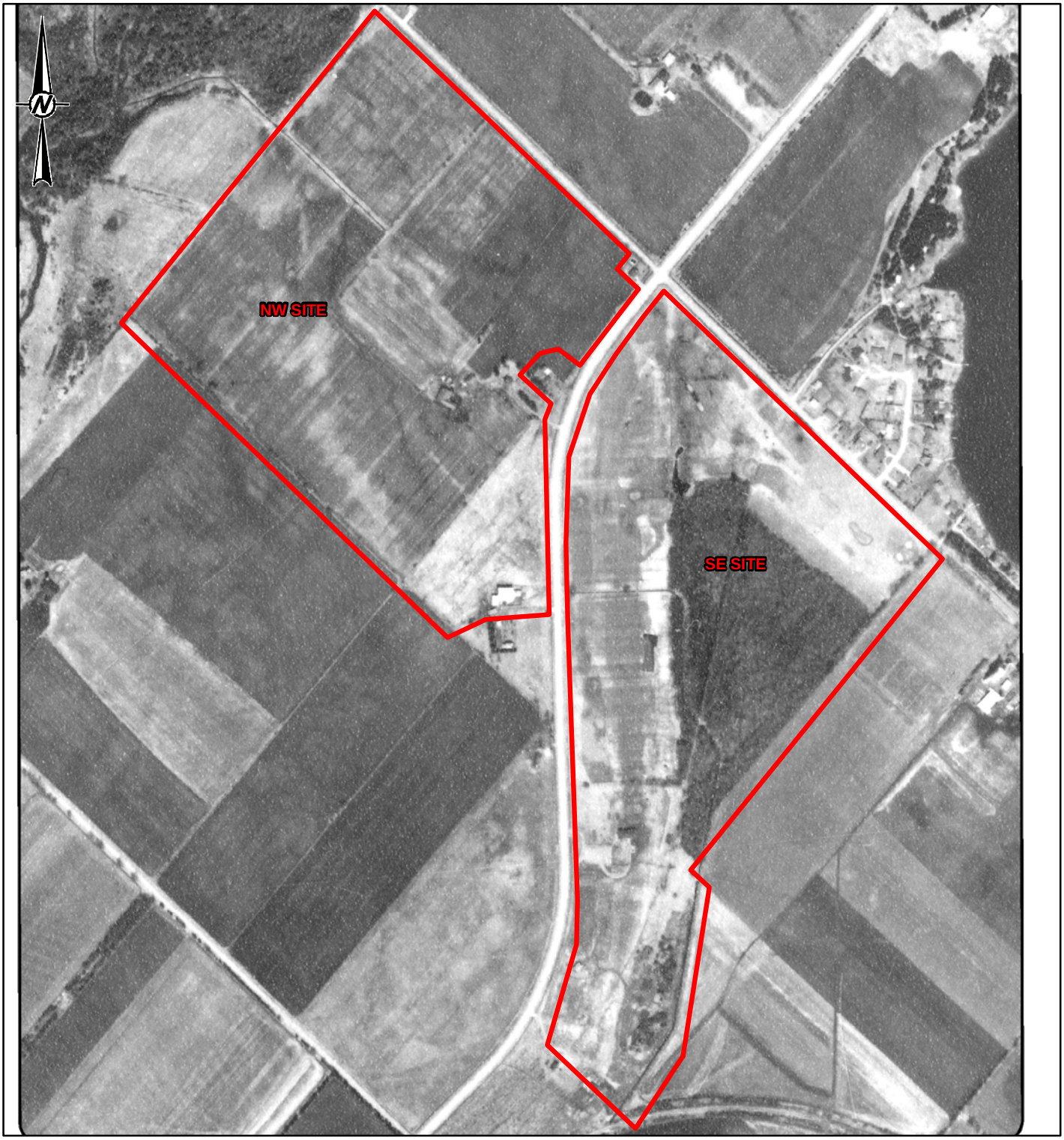

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STUDY AREA

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REFERENCE(S)

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CLIENT
883890 ONTARIO LIMITED C/O FERGUS DEVELOPMENT INC.

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FERGUS GOLF CLUB

TITLE
STUDY AREA ON 1990 AERIAL IMAGE

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-17
DESIGNED	JL
PREPARED	JT
REVIEWED	JL
APPROVED	MT

PROJECT NO.	CONTROL	REV.	MAP
21456909	0003	A	6

LEGEND

- PHOTO LOCATION AND DIRECTION
- STUDY AREA
- WATER BODY
- PROVINCIALLY SIGNIFICANT WETLAND
- POORLY DRAINED AREA - NO FURTHER ASSESSMENT
- PREVIOUSLY DISTURBED - NO FURTHER ASSESSMENT RECOMMENDED
- SLOPE - NO FURTHER ASSESSMENT RECOMMENDED
- UNDISTURBED AREA - STAGE 2 TEST PIT SURVEY AT 5 M INTERVAL
- UNKNOWN LEVEL OF DISTURBANCE - STAGE 2 TEST PIT SURVEY AT 10 M INTERVAL RECOMMENDED

0 250 500
1:7,500 METRES

NOTE(S)

REFERENCE(S)
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2. BASE IMAGERY SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
3. PROJECTION: TRANSVERSE MERCATOR NAD 1983 UTM ZONE 17

CLIENT
883890 ONTARIO LIMITED C/O FERGUS DEVELOPMENT INC.

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FERGUS GOLF CLUB

TITLE
STAGE 1 ASSESSMENT RESULTS AND PHOTOGRAPHIC KEY

CONSULTANT
GOLDER
MEMBER OF WSP

YYYY-MM-DD	2022-02-15
DESIGNED	JL
PREPARED	JT
REVIEWED	JL
APPROVED	MT

PROJECT NO.	CONTROL	REV.	MAP
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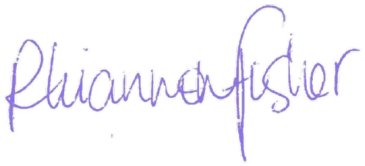
Signature Page

Yours truly,

Golder Associates Ltd.



Rhiannon Fisher, MSc, RPA
Archaeology Team Lead, GTA and Southwestern Ontario

Michael Teal, MA
Director, Archaeology and Heritage, Ontario

JLL/RH/MT/sv

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APPENDIX A

Development Plan

FERGUS GOLF COURSE DEVELOPMENT

Fergus Golf Club
Clubhouse
Fergus Golf Club
6m Landscape Strip
0.27ha.
Existing Underpass
New Golf Course Entrance
Cart Path
0.03ha.
Wellington Road 19
Street F
Street E
Street G
Street A
Wetland to be removed
Wetland to be removed
Second Line
6m Landscape Strip
0.33ha.
Street C
Street D
Open Space
5.31ha.
Wetland
Street G
Street B
Third Line
Rennie Blvd
Street H
SWM
1.27ha
Street B
Sanitary Pumping Stn (60m x 30m)
Open Space
1.04ha.
6m Landscape Strip
0.10ha.
Street A
Street B
Black Drain
Wetland to be removed
Black Drain / Trail
0.40ha.
Spier
Proposed Trail Connection
Storm Drainage / Walkway
0.04ha.
Elora Cataract Trailway
Dairy Farm
Lake Belwood
Google Earth
200 m

1/2 Acre Residential Lots
GRCA Wetland / OP Core Greenlands
10m Wetland Buffer
Potential Trails

Site Area: 39.85ha. (98.5ac.)
No. of Lots: 118
Area of wetlands to be removed: 7,076sq.m.

0 50 100 200 300 400 500
Metres

NOTE: This concept should be considered as a preliminary demonstration model that illustrates an 'order of magnitude' development scenario for the site. The number of lots are approximate and subject to more detailed design as well as municipal planning approvals.

Scale 1:7,500 | December 10, 2021 | Project No.: 21021 | Drawn By: SL

GSP group

golder.com