Appendix B1

Stage 2 Archaeological Assessment

ORIGINAL REPORT

Stage 2 Archaeological Assessment

Part of Lot 13, Concession 5, Township of Springwater (former Geographic Township of Vespra), Simcoe County, Ontario

Submitted to:

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PIF Number: P468-0032-2019

Licensee: Rhiannon Fisher (P468)

Submitted by:

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17 June 2019

Distribution List

1 PDF - Township of Springwater

1 PDF - Ainley Group

1 PDF - MTCS

1 PDF - Golder

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 contracted by the Corporation of the Township of Springwater to conduct a Stage 2 archaeological assessment for a property on Part Lot 13, Concession 5, Township of Springwater (formerly Vespra Township), Simcoe County, Ontario.

A Stage 1 archaeological assessment identified the Study Area exhibited archaeological potential (Golder 2018). Attributes identifying archaeological potential within the Study Area include the proximity to a small lake (less than 300 m), the proximity of historic transportation route (less than 100 m) and the proximity of previously registered archaeological sites. The density of occupation in the Simcoe region, especially towards the end of the Late Woodland period, as indicated by the large number of registered archaeological sites suggests the study area contains potential for Indigenous resources (Golder 2018). The Stage 1 assessment recommended the entire Study Area be archaeologically investigated with hand excavated test pits at 5 m intervals at least 5 cm into natural *in situ* subsoil.

The objectives of the Stage 2 assessment were:

- To conduct test pit survey at 5m intervals in all areas required as identified in the Stage 1 investigation to determine whether the Study Area contains archaeological resources requiring further assessment;
- To provide an overview of archaeological resources on the Study Area, and to determine whether any of the resources might be artifact and archaeological sites with cultural heritage value or interest; and,
- To provide specific direction for the protection, management, and/or recovery of these resources if discovered and recommend the appropriate Stage 3 assessment strategies if required.

All areas subject to test pitting were tested at 5 m intervals with test pits excavated 30 cm in diameter. The profile of the test pit was inspected; if there was no evidence of a cultural feature excavation continued 5 cm into subsoil. All soils were screened through 6 mm mesh screens to facilitate the recovery of artifacts. The Study Area is a combination of heavy, secondary mixed-forest growth and man-made tree planted-rows which have been previously logged many years ago,

The topsoil was an organic loamy sand with dark brown colouring, sometimes with a humic layer, averaging between 20-40 cm in depth. Subsoil was yellow to yellow-brown silty sand. The Stage 2 assessment did not result in the identification of any archaeological resources.

Based on the results of the Stage 2 archaeological assessment documented herein, the following recommendation is presented:

- It is recommended that the Study Area be considered free from further archaeological concerns. No further archaeological assessment if necessary.

This report is submitted to the Ministry of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c. 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological license, and that the

archaeological field work and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

The MTCS 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 sites, design objective, developments, and purpose described to Golder by the Township of Springwater (the Client). The factual data, interpretations, and recommendation pertain to a specific project as described in this report and are not applicable to any other project or site location

The information, recommendations, and opinions expressed in this report as for the sole benefit of the Client. No other party may us or rely on this report of any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the Client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawing and other documents as well as electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizing only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell or otherwise make available the report of any portion thereof to any other party without the express written permission of Golder. The Client acknowledges that electronic media is susceptible to unauthorized modification, deterioration, and incompatibility and therefore the Client cannot rely upon electronic media versions of Golder's report of other work products.

Unless otherwise stated, the suggestions, recommendation, 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 MTCS' 2011 *Standards and Guidelines for Consultant Archaeologists.*

Project Personnel

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1.0 PROJECT CONTEXT

1.1 Development Context

Golder Associates Ltd. (“Golder”) was contracted by the Corporation of the Township of Springwater, to conduct a Stage 2 archaeological survey of the property, measuring 95.69 acres (38.7 hectares) in size, on Part Lot 13, Concession 5, Township of Springwater (formerly Vespra Township), Simcoe County, Ontario (Map 1). The Stage 2 archaeological survey was conducted in support of a Ministry of Natural Resources and Forestry (MNRF) Class Environmental Assessment (EA) for the Hasty Tract in Springwater, Ontario.

A Stage 1 archaeological assessment identified the Study Area exhibited archaeological potential (Golder 2018). Attributes identifying archaeological potential within the Study Area include the proximity to a small lake (less than 300 m), the proximity of historic transportation route (less than 100 m) and the proximity of previously registered archaeological sites. The density of occupation in the Simcoe region, especially towards the end of the Late Woodland period, as indicated by the large number of registered archaeological sites suggests the study area contains potential for Indigenous resources (Golder 2018). The Stage 1 assessment recommended the entire Study Area be archaeologically investigated with hand excavated test pits at 5 m intervals at least 5 cm into natural *in situ* subsoil.

The objectives of the Stage 2 assessment were:

- To conduct test pit survey at 5m intervals in all areas required as identified in the Stage 1 investigation to determine whether the Study Area contains archaeological resources requiring further assessment;
- To provide an overview of archaeological resources on the Study Area, and to determine whether any of the resources might be artifact and archaeological sites with cultural heritage value or interest; and,
- To provide specific direction for the protection, management, and/or recovery of these resources if discovered and recommend the appropriate Stage 3 assessment strategies if required.

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

- A review of relevant archaeological, historic and environmental literature pertaining to the Study Area; and
- Stage 2 test pit survey at a 5 m interval within the Study Area, following Section 2.1.2 of the Standards and Guidelines for Consultant Archaeologists (MTCS 2011).

The Stage 2 assessment was conducted under professional archaeological licence P468, issued to Rhiannon Fisher of Golder Associates Ltd., by the MTCS (PIF #: P468-0032-2019). Permission for Golder staff to enter the property for the purposes of the Stage 2 field work was provided by the MNRF as the property is currently Crown Land and under their jurisdiction.

1.2 Historical Context

1.2.1 Pre-Contact Indigenous Period

Table 1 provides a general outline of the pre- and post-contact culture history for this part of southern Ontario, drawn from Ellis and Ferris (1990).

Table 1: Overview of Cultural Chronology of South-central Ontario

Period	Characteristics	Time	Comments
Early Paleo	Fluted Projectiles	9000 - 8400 BCE	spruce parkland/caribou hunters
Late Paleo	Hi-Lo Projectiles	8400 - 8000 BCE	smaller but more numerous sites
Early Archaic	Kirk & Bifurcate Base Points	8000 - 6000 BCE	slow population growth
Middle Archaic	Brewerton-like points	6000 - 2500 BCE	environment similar to present
Late Archaic	Narrow Points	2000 - 1800 BCE	increasing site size
	Broad Points	1800 - 1500 BCE	large chipped lithic tools
	Small Points	1500 – 1100 BCE	introduction of bow hunting
Terminal Archaic	Hind Points	1100 - 950 BCE	emergence of true cemeteries
Early Woodland	Meadowood Points	950 - 400 BCE	introduction of pottery
Middle Woodland	Dentate/Pseudo-Scallop Pottery	400 BCE – 500 CE	increased sedentism
	Princess Point	550 – 900 CE	introduction of corn
Late Woodland	Early Late Woodland	900 – 1300 CE	emergence of agricultural villages
	Middle Late Woodland	1300 – 1400 CE	long longhouses (100m +)
	Late Late Woodland	1400 – 1650 CE	tribal warfare and displacement
Contact Indigenous	Various Algonquian Groups	1700 – 1875 CE	early written records and treaties
Historical	Euro-Canadian	1796 - present	European settlement

1.2.1.1 Paleo-Indian Period

The first human occupation of south-central Ontario begins 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, south-central 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-Indian Period (Ellis and Deller 1990).

Our current understanding of settlement patterns of Early Paleo-Indian peoples suggests that small bands, consisting of probably no more than 25 to 35 individuals, followed a pattern of seasonal mobility extending over large territories. 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-Indian 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-Indian 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-Indian camps scattered throughout the interior of southwestern and southcentral Ontario, usually situated adjacent to wetlands.

The most recent research suggests that population densities were very low during the Early Paleo Period, with all southwestern Ontario being occupied by perhaps only 100 to 200 people (Ellis and Deller 1990:54).

While the Late Paleo Period (8400 to 8000 BCE) 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 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.

During the late Paleo Period people continued to cover 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 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.

1.2.1.2 Archaic Period

During the Early Archaic Period (8000 to 6000 BCE), 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). One of the more notable changes in the Early Archaic Period is the appearance of side and corner-notched projectile points. Their 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 (6000 to 2500 BCE) the trend towards 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 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. This process resulted in a reorganization of Indigenous subsistence practices, as more people had to rely on resources from smaller areas. During the latter part of the 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 north-eastern 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). By 3500 BCE the local environment had stabilized in a near modern form (Ellis et al. 1990).

During the Late Archaic (2500 to 950 BCE) 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 expanded. It is during the Late Archaic that the first true cemeteries appear. 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.

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. 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". Birdstones are small, bird-like effigies usually manufactured from green banded slate.

During the Early Archaic Period (8000 to 6000 BCE), 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). 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.

1.2.1.3 Woodland Period

The Early Woodland Period (940 to 400 BCE) 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. 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 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. 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. 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 southern Ontario.

In terms of settlement and subsistence patterns, the Middle Woodland (300 BCE to 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 Period began with a shift in settlement and subsistence patterns involving an increasing reliance on corn horticulture (Fox 1990; Smith 1990; Williamson 1990). Corn may have been introduced into southern Ontario from the American Midwest as early as 600 CE or a few centuries before. Corn did not become

a dietary staple, however, until at least three to four hundred years later, and then the cultivation of corn gradually spread into southcentral and southeastern Ontario.

During the early Late Woodland, particularly within the Princess Point Complex (circa 500 to 1050 CE), a number of archaeological material changes have been noted: the appearance of triangular projectile point styles, first seen during this period begin with the Levanna form; cord-wrapped stick decorated ceramics using the paddle and anvil forming technique replace 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:; Spence et al. 1990; Williamson 1990:299).

The Late Woodland Period is widely accepted as the beginning of agricultural life ways in southcentral 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).

The first agricultural villages in southern Ontario date to the 10th century. Unlike the riverine base camps of the Middle Woodland Period, these sites are located in the uplands, on well-drained sandy soils. Village sites dating between 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; Williamson 1990). 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 to 15 years, when the nearby soils had been depleted by farming and conveniently collected firewood grew scarce (Pearce 2018). It seems likely that Early Late Woodland peoples 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 Late Woodland economy. However, it had not reached the level of importance it would in the Middle and Late Late Woodland 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 Late Woodland sites.

The Middle Late Woodland Period (1300 to 1400 CE) 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 Late Woodland Period, now consistently range between one and two hectares.

House lengths also change dramatically, more than doubling to an average of 30 metres, while houses of up to 45 metres 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; Smith 1990). However, this does not account for the sudden shift in longhouse lengths around 1300 CE. Other possible explanations involve changes in economic and socio-political organization (Dodd et al. 1990). One suggestion is that during the Middle Late Woodland Period small villages were amalgamating to form larger communities for mutual defense (Dodd et al. 1990). 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 Late Woodland 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 1300 CE. During the Early Late Woodland Period villages were haphazardly planned, with houses oriented in various directions. During the Middle Late Woodland 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).

Initially at least, the Late Late Woodland Period (1400 to 1650 CE) continues many of the trends which have been documented for the proceeding century. For instance, between 1400 and 1450 house lengths continue to grow, reaching an average length of 62 metres. One longhouse excavated on a site southwest of Kitchener was an incredible 123 metres (Lennox and Fitzgerald 1990). After 1450 house lengths begin to decrease, with houses dating between 1500 and 1580 averaging 30 metres in length.

Why house lengths decrease after 1450 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).

Village size also continues to expand throughout the Late Late Woodland Period, with many of the larger villages showing signs of periodic expansions. The latter part of the Middle Late Woodland Period and the first century of the Late Late Woodland 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.

1.2.2 Post-Contact Period

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, ”written accounts of material life and livelihood, the correlation of historically recovered villages to their archaeological manifestions, 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). This is true of Indigenous Nations throughout Ontario. As a result, Indigenous peoples of Ontario have left behind archaeologically significant resources throughout southern Ontario which show continuity with past peoples, even if this connection has not been recorded in historical Euro-Canadian documentation.

The Métis, who are a distinct Indigenous people with a unique history, culture, and language, also have traditional territory in Ontario that includes the area surrounding the current Study Area. Métis settlements, which emerged

as an outgrowth of the fur trade, were established along the waterways and throughout the watersheds that surround the Great Lakes. Between 1815 and 1828, many Métis moved from the Drummond Island area of northern Ontario to areas around southern Georgian Bay and Lake Huron (Burley et al. 1991; Métis Nation of Ontario 2017).

1.2.3 Historical Euro-Canadian Period

European occupation began with French explorers and missionaries who travelled into what was known as Huronia in the seventeenth century. The French began establishing a relationship with the Wendat to take advantage of the powerful position of the latter as middlemen in the Great Lakes fur trade network. A central Jesuit mission headquarters named Sainte-Marie was established in 1634 and in 1639, under the guidance of Father Jerome Lalemant, Sainte-Marie was built as a central mission to the Wendat (Heidenreich 1990). This fenced community, situated on the eastern bank of the Wye River, consisted of barracks, a church, workshops, residences, and a sheltered area for Indigenous visitors. By 1648, 66 Frenchmen had come to reside at Sainte-Marie (SMATH 2018).

Initially, the missionaries from Sainte-Marie were assigned as parish priests to the major Wendat villages in the area, but as the Jesuits grew more numerous, non-Huron groups were similarly engaged (Heidenreich 1990). This French occupation was relatively short-lived, Sainte-Marie was abandoned and burned by the Jesuits in the spring of 1649 and Wendat dispersed by the Five Nations Iroquois in 1650.

In 1793, Sir John Graves Simcoe visited the Lake Simcoe area in order to discern the ideal location for a new naval harbour. He quickly settled on the site of Penetanguishene Bay, and subsequently began planning for a naval base that would secure British control over Georgian Bay and Lake Huron. The Chippewa (Ojibwa) First Nations agreed to relinquish the northern tip of the Penetanguishene Peninsula to the British who formally acquired the lands in May 1798. The British military established a naval and military barracks at Penetanguishene Harbour in 1799 (Belden 1881:4).

In 1811, Wilmot surveyed the Penetanguishene Road which would allow goods to be transported over land from Lake Huron to the Town of York (Hunter 1909:13).

After a delay caused by the War of 1812, the Chippewa (Ojibwa) First Nations entered into Lake Simcoe Treaty Number 16 on November 18th, 1815, for £4,000 on behalf of His Majesty King George III:

> *Commencing on the north shore of Kempenfelt Bay on Lake Simcoe where a stone boundary is to be fixed at the distance of twenty chains on a course north eighty-one degrees west or thereabouts, from the base of a point called Sand Point projecting itself about five chains and a half into the said bay; then from the said stone boundary north forty degrees west thirty-six miles and a quarter, more or less, to Lake Huron; then along the shore of the said lake and following the several turnings and windings of the same around sundry points of land and bays to the bottom of a bay called Nottawaysague Bay, being the north-western angle of the Penetanguishene purchase in the year one thousand seven hundred and ninety-eight; thence along the south-western boundary of the said purchase on a course south seventy degrees east seven miles and a half, more or less, to a small bay called Opetequoyawsing, and being that south-easterly angle of the said Penetanguishene purchase; thence northerly through a small strait and along the eastern shore thereof to Gloucester or Sturgeon Bay; from thence following the shore of said bay and also the shore of Matchedas Bay easterly, southerly and northerly according to the several windings thereof until it intersects a line at or near the mouth of a small lake, being the western boundary of a purchase said to have been made in the year one thousand seven hundred and eighty five; thence south along the western limits of the*

> *said purchase eleven miles, more or less, till it intersects a line produced north seventy-eight degrees west from the waters of Lake Simcoe near the carrying place hereinafter mentioned; then south seventy-eight degrees east along the southern boundary line of the said last mentioned purchase to the waters of Lake Simcoe near to a carrying place leading to a small lake distant about three miles westerly and then south-westerly along the north-western shore of Lake Simcoe and Kempenfelt Bay, following the several windings and turnings of the same to the place of beginning, contained about two hundred and fifty thousand acres of land, be the same more or less. (Morris 1943:22)*

By 1818, the government had established a formal military station and dockyard. There were few settlers in the county by the finish of the War of 1812 and over the next few decades only a small number of immigrants (largely ex-military officers and British loyalists) migrated into various townships in Simcoe County.

1.2.3.1 Vespra Township History

The earliest recorded settlement in Vespra Township was in 1819 along the former portage route and trail, later called the Penetanguishene or 'Military' Road (connecting Kempenfeldt Bay to Georgian Bay) and widened by the British during the War of 1812 (Belden 1881).

In 1820, James G. Chewett partially surveyed Vespra Township which was completed by John Goessman in 1835. Consequently, the survey of the township was inconsistent with some half lots receiving more acres while others fell short (Hunter 1909). Settlement within the interior was slow but communities were quickly established adjacent to Little Lake, Kempenfeldt Bay and Oliver's Mills (now Midhurst).

In 1825, a mill was built at Willow Creek in Midhurst for both a saw mill and a grist mill. This was the first mill to be built north of Lake Simcoe. Midhurst soon had additional mills, soap factory, a distillery as well as a town hall, a store and a number of mechanics shops. In general, settlement in the township in areas more remote from Midhurst and the Penetanguishene Road proceeded slowly until the 1830s (Belden 1881). Town lots for the future site of Barrie were surveyed in 1833 and the community grew thereafter. It was incorporated as a town in 1850.

In 1864, George Sneath, a settler from Midhurst, England suggested the community be renamed to Midhurst to honour himself and the original 16 settlers from Midhurst, England. The lumber industry thrived in the area and Midhurst grew to include four taverns, a blacksmith shop, post office, three churches, several schools and a general store.

In 1994, Vespra Township, along with the Township of Flos and the Village of Elmvale amalgamated into the Township of Springwater.

1.2.3.2 Property History

Land registry records and historic maps provide property specific information for the Study Area. The Crown granted the Lot 13 patent for 200 acres to Thomas Molloy in 1846. In 1848, William Baxter of Hamilton purchased Lot 13 (I-7584) and sold the property for £150 to Thomas Meredith of Toronto in 1855. Thomas Mulholland of Toronto purchased Lot 13 for £175 in 1857. In 1860, Robert Whiteacre purchased the eastern 100 acres and sold the eastern half to William Whiteacre of Toronto in 1861.

In 1870, William Whiteacre sold the eastern 100 acres for £800 to M Larsen(?). The 1871 Hogg's map and 1881 Belden map do not list an owner and no structures are shown on Lot 13, Concession 5 which possibly indicates an absentee landowner (Maps 3 & 4). The 1871 Hogg's map and 1881 Belden map show a historic road (presently Bayfield Street North) along the northeastern side of the lot.

1.3 Archaeological Context

1.3.1 Natural Environment

The Study Area is situated within the physiographic region known as the Simcoe Uplands:

> *The Simcoe Uplands are comprised of a series of broad curved ridges northwest of Lake Simcoe. The ridges are separated by a series of steep-sided, flat-floored valleys and were at one time, islands in glacial Lake Algonquin. The till is composed of mainly Precambrian rock, the texture of which is a gritty loam that becomes sandier toward the north; more calcareous till occurs near Lake Simcoe and near Midland. Although the dominant soil in the uplands is a sandy loam, smaller areas near the sandy ridges of the Oro Moraine and the Hendrie forest feature extremely pervious soil areas, sometimes with dry depressions many feet in depth. The loose sandy texture of the surface soil is conducive to wind erosion when vegetation has been removed.* (Chapman and Putnam 1984:307)

The soils within the Study Area consisted of Sargent gravelly sandy loam; it is a well drained gravely sandy loam that is stone free and is characterized by smooth gently sloping topography (Hoffman et al. 1962). Sargent gravelly sandy loam is a pale brown calcareous outwash gravel with a very dark brown ‘A’ horizon over a dark yellowish-brown ‘B’ horizon. The ‘B’ horizon shows little or no accumulation of clay and is underlain by pale brown calcareous gravel. Sargent soils are low in natural fertility and chiefly used for pasture, however, fair yields of spring grains can be obtained when the land is adequately fertilized (Hoffman et al. 1962).

The Study Area lies within the Huron-Ontario sub-region of the Great Lakes-St. Lawrence Forest Region (Rowe 1977). This forest extends along the St. Lawrence River across central Ontario to Lake Huron and west of Lake Superior along the border with Minnesota, and its southern portion extends into the more populated areas of Ontario. Trees common to this sub-region include sugar maple, beech, basswood, white and red ash, yellow birch, red maple, and red, white and bur oaks. Coniferous trees include eastern hemlock, eastern white pine and balsam fir. More uncommon species include large tooth aspen, butternut, bitternut hickory, black cherry, sycamore and black oak. Blue-beech, silver maple and slippery and rock elms and black ash and slippery elm are found in river bottoms and swamp sites (Rowe 1972). Only part of the original forest cover remains standing today, however, as early Euro-Canadian agriculturalists conducted large-scale clearing operations to prepare the land for cultivation. The Study Area currently consists of a woodlot.

The Study Area falls within the Willow Creek sub-watershed which has two main streams: Willow Creek and Matheson Creek that converge northwest of Midhurst and flow into Little Lake.

1.3.2 Known Archaeological Sites

In order for an inventory of archaeological resources to be compiled, the registered archaeological site records kept by the MTCS were consulted. In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database maintained by the MTCS. This database contains archaeological sites registered according to the Borden system. Under the Borden system, Canada is divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 kilometres east to west and approximately 18.5 kilometres north to south. Each Borden block is referenced by a four-letter designator and sites within a block are numbered sequentially as they are found. The study area is located within Borden block BcGw.

A query of the Ontario Archaeological Sites Database was undertaken on May 3, 2018 as part of the Stage 1 assessment, to determine whether any archaeological sites are registered within the vicinity of the Study Area

(MTCS 2018). According to the database, there are 4 archaeological sites registered within one kilometre of the study area (Table 2).

Table 2: Archaeological Sites Within One Kilometre of the Study Area

Borden #	Site Name	Site Type	Period
BcGw-9	Carson	longhouse, village	Late Woodland
BcGw-96		homestead	Euro-Canadian
BcGw-97	Frankcom I	camp/campsite	Late Woodland
BcGw-98	Frankcom II	camp/campsite	Late Woodland

1.3.3 Previous Archaeological Research

Although a large number of archaeological assessments have been completed within the former Township of Vespra, a request for information to the MTCS did not indicate any previous archaeological assessments completed within 50 m of the Study Area. AMICK (2016) conducted a Stage 1 and 2 assessment on Part Lots 13 and 14, Concession 4, which is located approximately 100 m east of the study area. No artifacts or sites were found during the Stage 2 investigation.

Other archaeological investigations in the Midhurst area include a Stage 1 and 2 assessment of the former Midhurst Wildlife Centre (ARA 2018), Stage 1 assessment for the proposed Craig Road extension (Archeoworks 2017) and Stage 1 and 2 assessment for the Midhurst Heights development (Archaeological Assessments 2016). AMICK has conducted several investigations in the Midhurst area including Stage 1 and 2 assessments for subdivision development (2006; 2014), Stage 3 assessment of Lowe 1 (BcGw-42) and Lowe 2 (BcGw-41) (2015), and Stage 1 and 2 assessment resulted in the documentation of site BcGw-94 (2017b).

A Stage 1 archaeological assessment identified the Study Area exhibited archaeological potential (Golder 2018). Attributes identifying archaeological potential within the Study Area include the proximity to a small lake (less than 300 m), the proximity of historic transportation route (less than 100 m) and the proximity of previously registered archaeological sites. The density of occupation in the Simcoe region, especially towards the end of the Late Woodland period, as indicated by the large number of registered archaeological sites suggests the study area contains potential for Indigenous resources (Golder 2018). The Stage 1 assessment recommended the entire Study Area be archaeologically investigated with hand excavated test pits at 5 m intervals at least 5 cm into natural *in situ* subsoil.

2.0 FIELD METHODS

2.1 Stage 2 Survey

2.1.1 Weather and Lighting Conditions

The weather on the days in which the Stage 2 archaeological survey was predominately partly cloudy, with temperatures between 10°C and 20°C. Table 3 summarizes the weather conditions for each day of the Stage 2 survey, as well as the supervisor on hand, and tasks completed each day. Lighting and weather conditions remained ideal over all field days; at no time were field conditions detrimental to the survey activities or the observation, identification or recovery of archaeological material.

Table 3: Weather Table, Supervisors, and Daily Tasks Conducted

Date	Supervisor	Weather	Task
6 May 2019	Sarah Kivisto	Partly cloudy, light wind, 20 °C	Conduct field condition survey, begin Stage 2 test pit survey
7 May 2019	Sarah Kivisto	Partly cloudy, light wind, 10 °C	Continue Stage 2 test pit survey
8 May 2019	Sarah Kivisto	Clear skies, no wind, 13 °C	Continue Stage 2 test pit survey
9 May 2019	Sarah Kivisto	Cloudy, chance of thunderstorms, 10 °C	Continue Stage 2 test pit survey
10 May 2019	Shawn Bayes	Cloudy, light wind, 13 °C	Continue Stage 2 test pit survey
14 May 2019	Sarah Kivisto	Cloudy, light wind, 12 °C	Continue Stage 2 test pit survey
15 May 2019	Sarah Kivisto	Cloudy, light rain in afternoon, 15 °C	Complete Stage 2 test pit survey

2.1.2 Field Methods

The Stage 2 archaeological investigation took place over a seven-day period between 6 May 2019 and 15 May 2019, under Professional Archaeological Licence Number P468 issued to Rhiannon Fisher of Golder. Sarah Kivisto (R1169) and Shawn Bayes (R356) of Golder acted as the licensed field supervisors and had the duty delegating responsibilities for the day-to-day supervision of the archaeological fieldwork on site, as per Section 12 of the MTCS' 2013 *Terms and Conditions for Archaeological Licences*, issed in accordance with caluse 48(4)(d) of the *Ontario Heritage Act*. Map 6 illustrates the Stage 2 survey methods; Map 7 provides a photographic key for images presented in this report.

All areas subject to test pitting were tested at 5 m intervals with test pits excavated 30 cm in diameter. The profile of the test pit was inspected; if there was no evidence of a cultural feature excavation continued 5 cm into subsoil. All soils were screened through 6 mm mesh screens to facilitate the recovery of artifacts. The Study Area is a combination of heavy, secondary mixed-forest growth and man-made tree planted-rows which have been previously logged many years ago,

The topsoil was an organic loamy sand with dark brown colouring, sometimes with a humic layer, averaging between 20-40 cm in depth. Subsoil was yellow to yellow-brown silty sand. Images 1-21 detail the Stage 2 survey.

3.0 RECORD OF FINDS

The Stage 2 archaeological assessment was conducted employing the methods described in Section 2.1.2 above. An inventory of the documentary record generated during the archaeological assessment is provided in Table 4.

Table 4: Inventory of Documentary Record

Document Type	Current Location of Document	Additional Comments	Quantity
Field Notes	Golder office in Mississauga	Hand written and uploaded inro electronic project folders	20 pages
Digital Drawn Maps	Golder office in Mississauga	Stored digitally in electronic project folders	2 maps showing photo and area locations
Maps Provided by Client	Golder office in Mississauga	Stored digitally in electronic project folders	2 Digital maps
Digital Photographs	Golder office in Mississauga	Stored digitally in electronic project folders	110 photos

The Stage 2 archaeological assessment of the Study Area did not result in the identification of any cultural remains.

4.0 ANALYSIS AND CONCLUSIONS

A Stage 1 archaeological assessment identified the Study Area exhibited archaeological potential (Golder 2018). Attributes identifying archaeological potential within the Study Area include the proximity to a small lake (less than 300 m), the proximity of historic transportation route (less than 100 m) and the proximity of previously registered archaeological sites. The density of occupation in the Simcoe region, especially towards the end of the Late Woodland period, as indicated by the large number of registered archaeological sites suggests the study area contains potential for Indigenous resources (Golder 2018). The Stage 1 assessment recommended the entire Study Area be archaeologically investigated with hand excavated test pits at 5 m intervals at least 5 cm into natural *in situ* subsoil.

Despite careful survey, the Stage 2 assessment did not result in the identification of any archaeological resources.

5.0 RECOMMENDATIONS

The Stage 2 assessment did not result in the identification of any archaeological resources. Based on the results of the Stage 2 archaeological assessment documented herein, the following recommendation is presented:

- It is recommended that the Study Area be considered free from further archaeological concerns. No further archaeological assessment if necessary.

This report is submitted to the Ministry of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c. 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological license, and that the archaeological field work and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

The MTCS 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.

6.0 ADVICE ON COMPIANCE WITH LEGISLATION

This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18 (Government of Ontario 1990). 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 Study Area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with 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 1990).

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 1990).

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 (Government of Ontario 2002). It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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8.0 IMAGES

Image 1: Eastern edge of Study Area along Bayfield Road, looking north, 6 May 2019

Image 2: Mixed-forest environment with secondary growth forest, dead-fall trees, and leaf ground litter. Stage 2 test pit survey at 5 m interval, looking east, 6 May 2019

Image 3: Test pit survey at 5 m interval, looking North, 8 May 2019

Image 4: Test pit example, looking down, topsoil is an organic dark brown loamy sand with a distinct subsoil boundary. Subsoil is a yellow to yellowish-brown silty sand, 8 May 2019

Image 5: Soil characteristics from test pit example, looking down, 6 May 2019

Image 6: Test pit example approximately 35 cm of topsoil with 5cm of subsoil, looking down, 7 May 2019.

Image 7: Testing pitting survey in progress, field crew at 5 m intervals, looking west, 8 May 2019

Image 8: Example of test pit, approximately 20 cm of topsoil and 5cm of subsoil, looking down, 8 May 2019.

Image 9: Example of test pit, approximately 20 cm of topsoil and 5cm of subsoil depth, looking down, 9 May 2019

Image 10: Study Area view, looking west, 9 May 2019

Image 11: Test pit survey in progress at 5 m intervals, looking west, 14 May 2019

Image 12: Test pit survey in close proximity to monitoring wells, looking west, 14 May 2019.

Image 13: Example of test pit, looking down, test pit is approximately 35cm in depth with 5cm of subsoil, 14 May 2019

Image 14: Test pit survey at 5 m intervals, conducted survey around refuse, looking west, 14 May 2019

Image 15: Example of test pit, looking down, test pit is approximately 35cm in depth with 5cm of subsoil, 14 May 2019

Image 16: Field conditions showing trees planted in rows, looking west, 15 May 2019

Image 17: Example of test pit, looking down, test pit is approximately 35cm in depth with 5cm of subsoil, 15 May 2019

Image 18: Western edge of Study Area, looking west, 15 May 2019

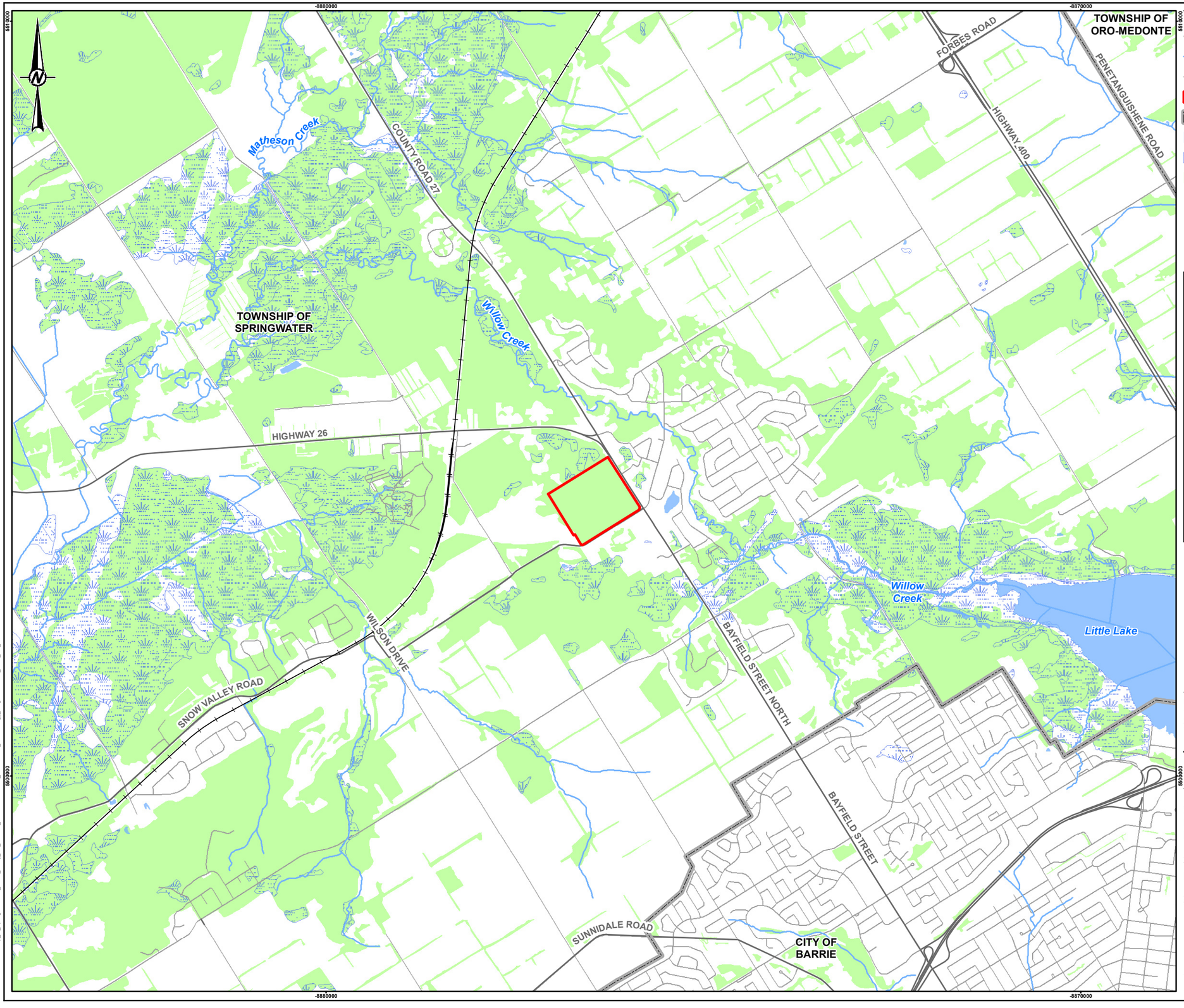
Image 19: Test pit survey at 5 m interval, looking west, 15 May 2019

Image 20: Test pit survey at 5 m interval, looking west, 6 May 2019

Image 21: Field conditions, looking east, 7 May 2019

9.0 MAPS

All maps will follow on succeeding pages.



LEGEND

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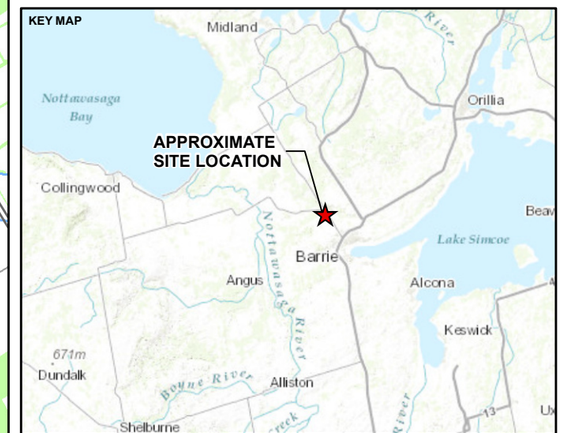
- Watercourse
- Railway
- Approximate Property Boundary
- Municipal Boundary
- Waterbody
- Wetland
- Wooded Area

KEY MAP



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CLIENT

THE CORPORATION OF THE TOWNSHIP OF SPRINGWATER

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT IN SUPPORT OF A MINISTRY OF NATURAL RESOURCES AND FORESTRY CLASS ENVIRONMENTAL ASSESSMENT FOR THE HASTY TRACT

TITLE

LOCATION OF STUDY AREA

CONSULTANT

GOLDER

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REVIEWED	-
APPROVED	-

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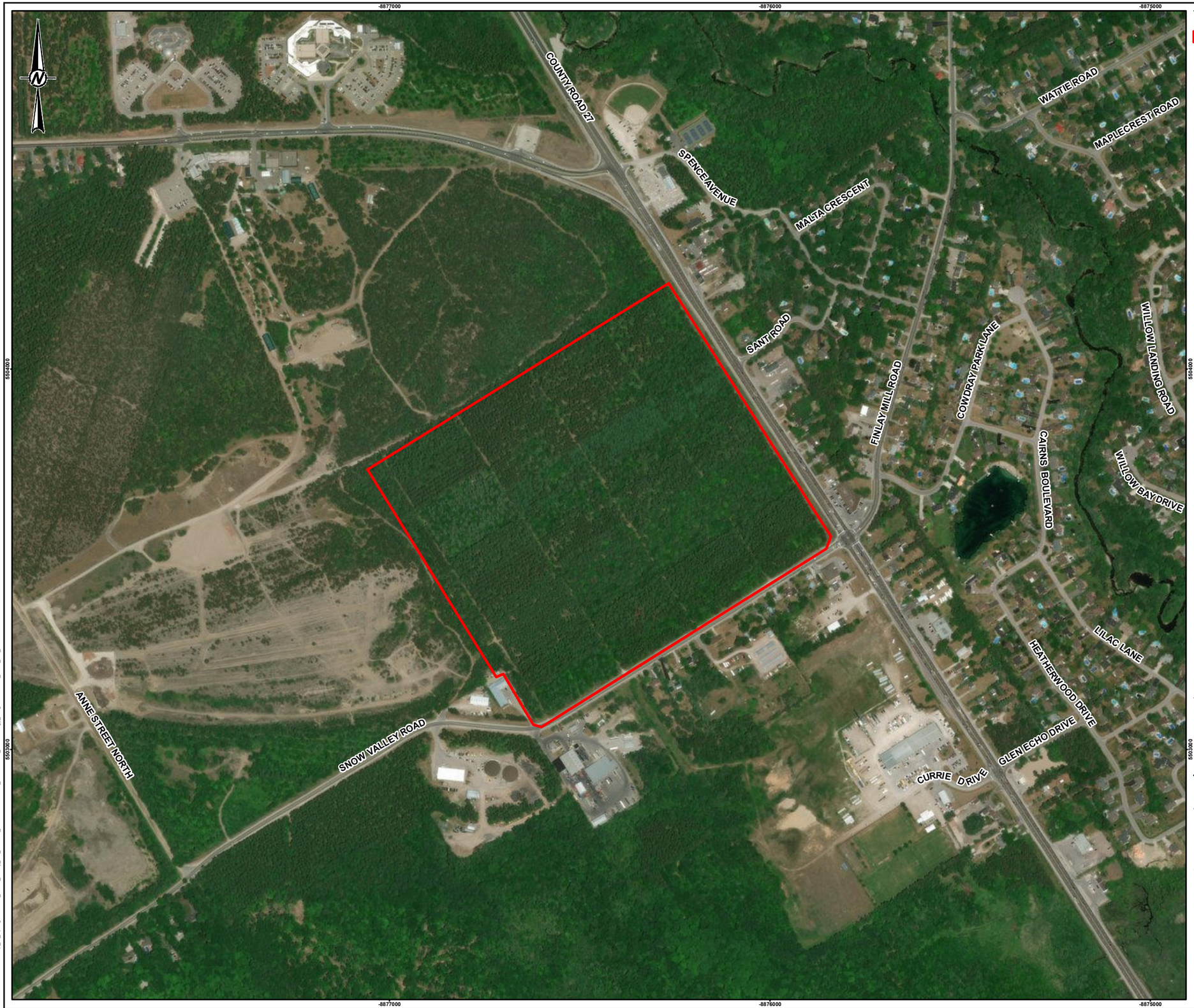

LEGEND

Approximate Property Boundary

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CLIENT

THE CORPORATION OF THE TOWNSHIP OF SPRINGWATER

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT IN SUPPORT OF A MINISTRY OF NATURAL RESOURCES AND FORESTRY CLASS ENVIRONMENTAL ASSESSMENT FOR THE HASTY TRACT

TITLE

LOCATION OF STUDY AREA

CONSULTANT

GOLDER

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-8880000

-8870000

5500000

5500000

LEGEND

Approximate Property Boundary

1:50,000 METRES

REFERENCE(S)

1.BASE DATA: HISTORIC MAP, DRUHAM REGION 1858
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT

THE CORPORATION OF THE TOWNSHIP OF SPRINGWATER

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT IN SUPPORT OF A MINISTRY OF NATURAL RESOURCES AND FORESTRY CLASS ENVIRONMENTAL ASSESSMENT FOR THE HASTY TRACT

TITLE

HISTORIC MAP- 1881 BELDEN MAP

CONSULTANT

GOLDER

YYYY-MM-DD	2019-06-07
DESIGNED	ST
PREPARED	ST
REVIEWED	-
APPROVED	-

PROJECT NO.	CONTROL	REV.	FIGURE
1898510	-	-	3

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

25mm

0

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LEGEND

Approximate Property Boundary

0 1,000 2,000

1:25,000 METRES

REFERENCE(S)

1.BASE DATA: HISTORIC MAP, DRUHAM REGION 1858
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 17N

CLIENT

THE CORPORATION OF THE TOWNSHIP OF SPRINGWATER

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT IN SUPPORT OF A MINISTRY OF NATURAL RESOURCES AND FORESTRY CLASS ENVIRONMENTAL ASSESSMENT FOR THE HASTY TRACT

TITLE

HISTORIC MAP- 1871 HOGG MAP

CONSULTANT

GOLDER

YYYY-MM-DD	2019-06-07
DESIGNED	ST
PREPARED	ST
REVIEWED	-
APPROVED	-

PROJECT NO.	CONTROL	REV.	FIGURE
1898510	-	-	4

5500000

5500000

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

25mm

0

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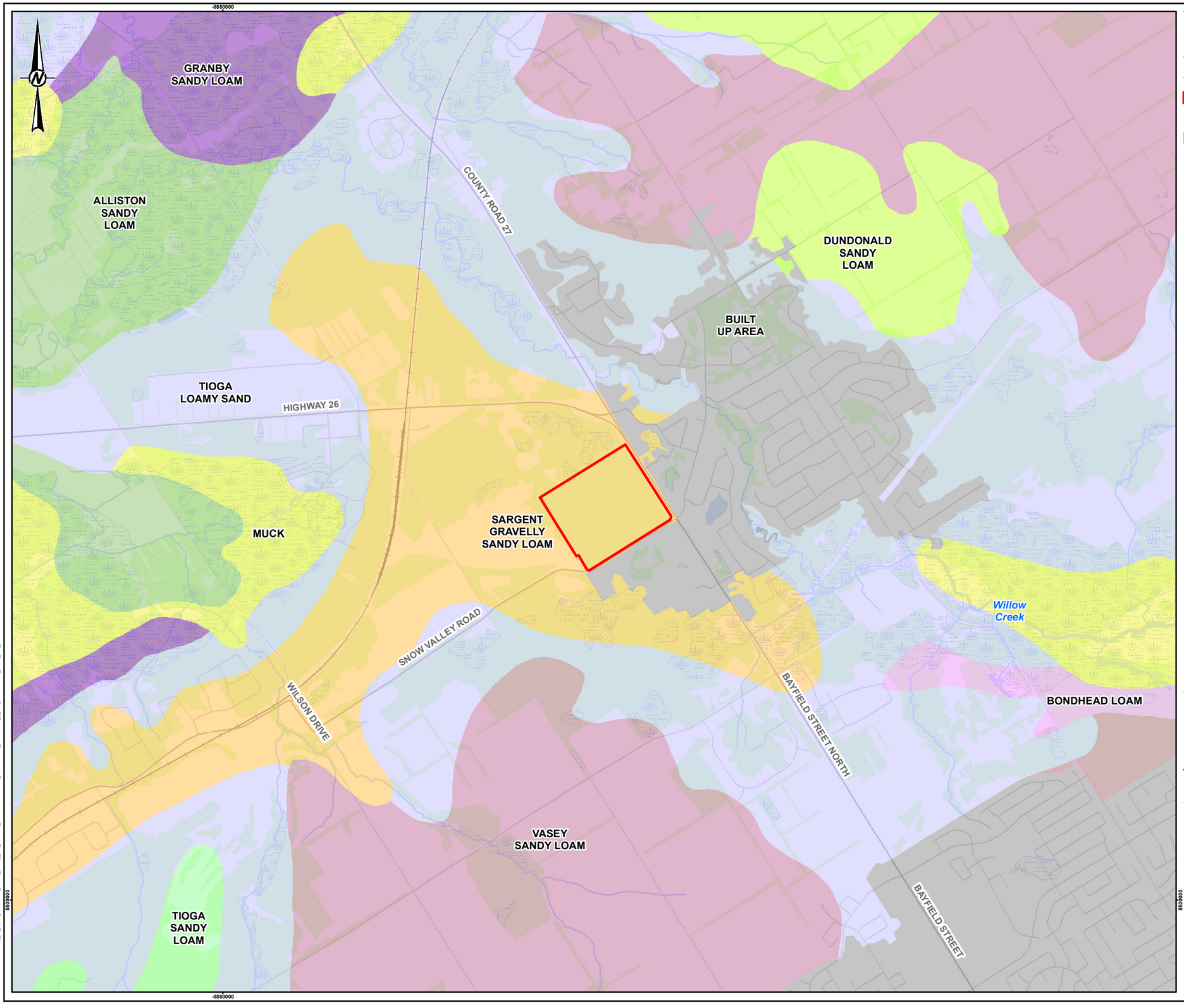

LEGEND

- Road
- Watercourse
- Railway
- Approximate Property Boundary
- Waterbody
- Wetland
- Wooded Area

Soil Type

- Alliston Sandy Loam
- Bondhead Loam
- Built Up Area
- Dundonald Sandy Loam
- Granby Sandy Loam
- Muck
- Sargent Gravelly Sandy Loam
- Tioga Loamy Sand
- Tioga Sandy Loam
- Vasey Sandy Loam

0 1,000 2,000

1:35,000 METRES

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
SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE

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THE CORPORATION OF THE TOWNSHIP OF SPRINGWATER

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT IN SUPPORT OF A MINISTRY OF NATURAL RESOURCES AND FORESTRY CLASS ENVIRONMENTAL ASSESSMENT FOR THE HASTY TRACT

TITLE

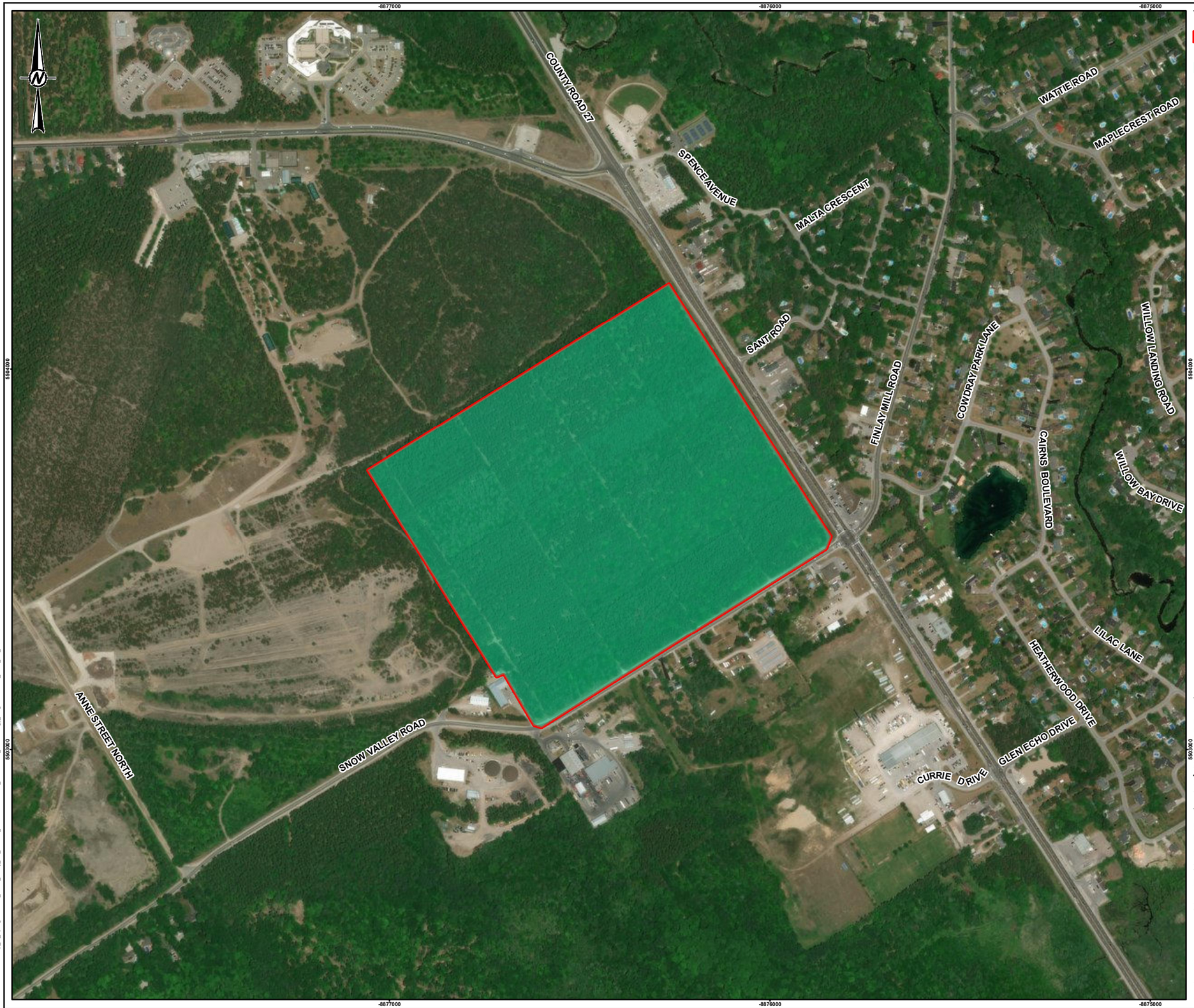
LOCATION OF STUDY AREA

CONSULTANT

GOLDER

YYYY-MM-DD	2019-06-07
DESIGNED	ST
PREPARED	ST
REVIEWED	-
APPROVED	-

PROJECT NO.	CONTROL	REV.	FIGURE
1898510	-	-	5



LEGEND

- Approximate Property Boundary
- Subject to Stage 2 test pitting, no further archaeological assessment needed

0 250 500

1:10,000 METRES

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
SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY
2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE

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THE CORPORATION OF THE TOWNSHIP OF SPRINGWATER

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT IN SUPPORT OF A MINISTRY OF NATURAL RESOURCES AND FORESTRY CLASS ENVIRONMENTAL ASSESSMENT FOR THE HASTY TRACT

TITLE

STAGE 2 ARCHAEOLOGICAL ASSESSMENT RESULT

CONSULTANT

GOLDER

YYYY-MM-DD	2019-06-07
DESIGNED	ST
PREPARED	ST
REVIEWED	-
APPROVED	-

PROJECT NO.	CONTROL	REV.	FIGURE
1898510	-	-	6

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

0 25mm

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LEGEND

- Photo Location
- Road
- Approximate Property Boundary

0 200 400

1:5,000 METRES

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
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2. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE

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THE CORPORATION OF THE TOWNSHIP OF SPRINGWATER

PROJECT

STAGE 2 ARCHAEOLOGICAL ASSESSMENT IN SUPPORT OF A MINISTRY OF NATURAL RESOURCES AND FORESTRY CLASS ENVIRONMENTAL ASSESSMENT FOR THE HASTY TRACT

TITLE

STAGE 2 ARCHAEOLOGICAL ASSESSMENT PHOTO MAP

CONSULTANT

GOLDER

YYYY-MM-DD	2019-06-07
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REVIEWED	-
APPROVED	-

PROJECT NO.	CONTROL	REV.	FIGURE
1898510	-	-	7

Signature Page

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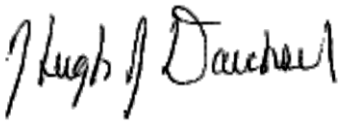

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Archaeologist

Hugh Daechsel, MA
Principal, Senior Archaeologist

SK/JL/ly

https://golderassociates.sharepoint.com/sites/1898510/deliverables/archaeology/stage 2 report/draft report/p468-0032-2019_re_(final)_17jun2019.docx

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