Stage 1-2 Archaeological Assessment, Brigil Mixed-Use Development

Part Lots 31 and 32, Concession 1, Geographic Township of Cumberland City of Ottawa, Ontario

Prepared for:
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PIF Number: P415-0030-2015

Project # 160940336

ORIGINAL REPORT

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Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by 3223701 Canada Inc. to complete a Stage 1 and 2 archaeological assessment of their property located on Lots 31 and 32, Concession 1, Geographic Township of Cumberland, City of Ottawa, Ontario (Figure 1). The proposed development is a mixed use subdivision of residential and commercial/office buildings (Figure 2). The proposed mixed-use development would be located within the limits of the currently agricultural portion of the property, and no development of the forested portion of the property is planned.

The objectives of the Stage 1 and 2 assessment were to compile available information about the known and potential archaeological heritage resources within the study area and to provide specific direction for the protection, management and/or recovery of these resources. The Stage 1 archaeological assessment of the study area determined that the study area still retained its archaeological potential and required a Stage 2 assessment. A Stage 2 assessment using both pedestrian and test pit excavation survey was undertaken. No archaeological resources were identified and therefore **no further archaeological assessment is required**.

The MTCS is asked to review the results presented and accept this report into the Ontario Public Register of Archaeological Reports.

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

1.0 Project Context

1.1 DEVELOPMENT CONTEXT

Stantec Consulting Ltd. (Stantec) was retained by 3223701 Canada Inc. to complete a Stage 1 and 2 archaeological assessment of their property located on Lots 31 and 32, Concession 1, Geographic Township of Cumberland, City of Ottawa, Ontario (Figure 1). The proposed development is a mixed use subdivision of residential and commercial/office buildings (Figure 2). The proposed mixed-use development would be located within the limits of the currently agricultural portion of the property, and no development of the forested portion of the property is planned. The project area is approximately 8.15 hectares and consists of 7.92 ha of recently and actively cultivated agricultural fields and 0.22 ha of treed woodlot along the west side of the project area.

This assessment was undertaken by Stantec on behalf of 3223701 Canada Inc. in anticipation of conditions for development requirements of the *Provincial Policy Statement* (PPS) (Government of Ontario 2014) related to the *Planning Act* (Government of Ontario 1990a). The Stage 1 and 2 archaeological assessment was completed in the planning phase of the proposed development project.

1.1.1 Objectives

The objectives of the Stage 1 and 2 assessment were to compile available information about the known and potential archaeological heritage resources within the study area and to provide specific direction for the protection, management and/or recovery of these resources. In compliance with the provincial standards and guidelines set out in the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), the objectives of the Stage 1 Archaeological Overview/Background Study are as follows:

- To provide information about the study area's geography, history, previous archaeological fieldwork and current land conditions;
- 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; and
- To recommend appropriate strategies for Stage 2 survey.

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

- A review of relevant archaeological, historic and environmental literature pertaining to the study area;
- A review of the land use history, including pertinent historic maps;

- An examination of the Ontario Archaeological Sites Database (ASDB) to determine the presence of known archaeological sites in and around the study area; and

- A site visit to document exiting ground conditions and confirm the presence or absence of features of archaeological interest.

The objectives of the Stage 2 assessment were to document archaeological resources present within the study area, to determine whether any of the resources might be artifacts or archaeological sites with cultural heritage value or interest requiring further assessment, and to provide specific Stage 3 direction for the protection, management and/or recovery of the identified archaeological resources (Government of Ontario 2011).

Permission for Stantec staff to enter the property to conduct archaeological field work was provided by Jean-Luc Rivard of Brigil Construction.

1.2 HISTORICAL CONTEXT

1.2.1 Historic Euro-Canadian Resources

The earliest record of Euro-Canadian travel along the Ottawa River-Georgian Bay route appears to have been by Etienne Brule, who travelled along the canoe route to spend the winter of 1610 with the Huron (de Volpi 1964). In 1615 both Father Joseph LeCaron, a Recollet missionary, and Samuel Champlain travelled the same route. The Ottawa River was used as a trading route and a trading post was erected on the north bank, opposite the present site of Cumberland Village (CTHS 2005). The area stayed relatively empty until English settlement began.

The Crawford Purchase took place on October 9, 1783 for a purchase of a large tract of land from the Mississaugas that would allow for the settlement of Loyalists leaving the United States at the end of the Revolutionary War. The purchase consisted of lands "…from Point Baudet on the north side of Lake St. Francis, up the mouth of the Gananoque River" (Morris 1943). The treaty includes the Counties of Leeds, Grenville, Dundas, Stormont and Glengarry, Russell, Prescott and parts of Carleton and Lanark (Morris 1943).

Cumberland Township was first surveyed in 1791 and again in 1798 (CTHS 2005). Settlement began in 1801 with the establishment of Cumberland Village, located on the south shore of the Ottawa River (Belden 1881). Due to its location on the river, Cumberland Village became a major seasonal forwarding centre for mail (CTHS 2005).

There are few maps which show details of the project area, and fewer still which give any indication of early buildings which may have been located on the property. One of the earliest available maps which shows the project area dates to 1840 and is from the Tax Assessment Rolls of Cumberland Township (LAC, 1840) (Figure 3). This map shows a structure on the east half of Lot 31, at the south end project area. Given the scale of the map and the size of the indicated structure it is likely that there is some inaccuracy as to the precise location of the structure. Nevertheless the map does indicate that Lot 31 was occupied by 1840. No structures are shown

in Lot 32. The tax roll map also shows a road along the south edge of the lots, the Old Montréal Road, roughly where Regional Road 174 is located, and also indicates the rise in slope that is still evident on the south side of Regional Road 174.

The 1862 Walling Map shows J. Walker as the owner of Lot 31 and Isaac Taylor as owner of Lot 32. Structures appear on the properties of both, but these are located in the south half of each lot, on the north side of Old Montréal Road, and thus outside the limits of the project area (Figure 4). Of note, there is a stream noted to the east of the project area that was extant until the construction of the Cité Collégiale immediately east of the project area. However, no similar stream is indicated on Isaac Taylor's property where Taylor's Creek is currently located. Also notable is how much further north the lots appear to extend than they do presently. At the north end of the lots the Walling map notes "Drowned Land" which suggests that the limits of the north end of those lots could be variable, depending on water levels.

Later 19th century maps give few details regarding the project property, or most of the area within the township (Figures 5 and 6). These later maps largely document the locations of public buildings (post offices, churches, school houses, town halls, lodges) and important commercial enterprises such as mills. The Belden atlas map shows the location of only a few houses and landowners (Figure 6). However, this is due to the fact that after 1880 these maps were produced as supplements to the Dominion Atlas. Those historical county atlases were produced after 1880 primarily to identify factories, offices, residences and landholdings of subscribers and only subscribers to the atlas were shown on the map. Associated structures were not necessarily depicted or placed accurately (Gentilcore and Head 1984).

1.3 ARCHAEOLOGICAL CONTEXT

1.3.1 The Natural Environment

The property is located in the Ottawa Valley Clay Plains physiographic region, which is characterised by clay plains interrupted by rock or sand ridges (Chapman and Putnam, 1984). The surficial geology of the project area is composed entirely of St. Rosalie Clay (Wicklund and Richardson, 1962). These soils are poorly drained, stone-free, light-grey clay soil with light grey non-calcareous clay parent material. The topography for these soils is largely level.

The major physiographic feature in the vicinity of the project area is the Ottawa River, which is approximately 75 m from the north edge of the proposed site. A number of small watercourses flow into the Ottawa River to the east and west of the property, including Taylor's Creek which is located at the west edge of the project property (Figure 2).

1.3.2 Pre-contact Aboriginal Resources

Overall, archaeological research in many parts of Eastern Ontario has been fairly limited, at least compared to adjoining areas in Southern Ontario and northern New York State, resulting in only a limited understanding of the cultural processes that occurred in this part of the province. The following summary of the prehistoric occupation of Eastern Ontario (see Table 1 for

chronological chart) is based on syntheses in Archaeologix (2008), Ellis and Ferris (1990), Jacques Whitford (2008), Pilon (1999), St-Pierre (2009) and Wright (1995).

Identifiable human occupation of Ontario begins just after the end of the Wisconsin Glacial period. The first human settlement can be traced back 11,000 years, when this area was settled by Native groups that had been living to the south of the emerging Great Lakes. This initial occupation is referred to as the "Palaeo-Indian" archaeological culture.

Table 1: Cultural Chronology of Eastern Ontario

Period	Time	Characteristics
Early Paleo-Indian	11,000–10,400 BP	caribou and extinct Pleistocene mammal hunters, small camps
Late Paleo-Indian	10,400–10,000 BP	smaller but more numerous sites
Early Archaic	10,000-8,000 BP	slow population growth, emergence of woodworking industry, development of specialised tools
Middle Archaic	8,000–4,500 BP	environment similar to present, fishing becomes important component of subsistence, wide trade networks for exotic goods
Late Archaic	4,500-3,100 BP	increasing site size, large chipped lithic tools, introduction of bow hunting
Terminal Archaic	3,100-2,950 BP	emergence of true cemeteries with inclusion of exotic trade goods
Early Woodland	2,950-2,400 BP	introduction of pottery, continuation of Terminal Archaic settlement and subsistence patterns
Middle Woodland	2,400-1,400 BP	increased sedentism, larger settlements in spring and summer, dispersed smaller settlement in fall and winter, some elaborate mortuary ceremonialism
Transitional Woodland	1,400-1,100 BP	incipient agriculture in some locations, seasonal hunting & gathering
Late Woodland (Early Iroquoian)	1,100-700 BP	limited agriculture, development of small village settlement, small communal longhouses
Late Woodland (Middle Iroquoian)	700-600 BP	shift to agriculture as major component of subsistence, larger villages with large longhouses, increasing political complexity
Late Woodland (Late Iroquoian)	600- 350 BP	very large villages with smaller houses, politically allied regional populations, increasing trading network

Early Palaeo-Indian (EPI) (11,000-10,400 before present BP) settlement patterns suggest that small groups, or “bands”, followed a pattern of seasonal mobility extending over large territories.

Many (although by no means all) of the EPI sites were located on former beach ridges associated with Lake Algonquin, the post-glacial lake occupying the Lake Huron/Georgian Bay basin, and research/evidence indicates that the vegetative cover of these areas would have consisted of open spruce parkland, given the cool climatic conditions. Sites tend to be located on well-drained loamy soils, and on elevations in the landscape, such as knolls. The fact that assemblages of artifacts recovered from EPI sites are composed exclusively of stone skews our understanding of the general patterns of resource extraction and use. However, the taking of large game, such as caribou, mastodon and mammoth, appears to be of central importance to the sustenance of these early inhabitants. Moreover, EPI site location often appears to be located in areas which would have intersected with migratory caribou herds. In the Ottawa Valley it appears that the palaeo-environment had not recovered sufficiently from the former glaciations to have allowed an EPI occupation. There is, however, some evidence of EPI incursion to the Rideau Lakes area.

The Late Palaeo-Indian (LPI) period (10,400-10,000 BP) is poorly understood compared to the EPI, the result of less research focus than the EPI. As the climate warmed the spruce parkland was gradually replaced and the vegetation of Southern Ontario began to be dominated by closed coniferous forests. As a result many of the large game species that had been hunted in the EPI period either moved north with the more open vegetation, or became locally extinct. Like the EPI, LPI peoples covered large territories as they moved around to exploit different resources. Environmental conditions in Eastern Ontario and the Ottawa Valley were sufficient to allow for a Late Palaeo-Indian occupation, although the evidence of such is still very limited. There is some evidence of LPI occupation on Thompson Island, in the St. Lawrence River near the junction of Ontario, Québec and New York State.

The transition from the Palaeo-Indian period to the Archaic archaeological culture of Ontario prehistory is evidenced in the archaeological record by the development of new tool technologies, the result of utilising an increasing number of resources as compared to peoples from earlier archaeological cultures, and developing a broader based series of tools to more intensively exploit those resources. During the Early Archaic period (10,000-8,000 BP), the jack and red pine forests that characterized the LPI environment were replaced by forests dominated by white pine with some associated deciduous elements. Early Archaic projectile points differ from Palaeo-Indian forms most notably by the presence of side and corner notching on their bases. A ground stone tool industry, including celts and axes, also emerges, indicating that woodworking was an important component of the technological development of Archaic peoples. Although there may have been some reduction in the degree of seasonal mobility, it is still likely that population density during the Early Archaic was low, and band territories large.

The development of more diversified tool technology continued into the Middle Archaic period (8,000-4,500 BP). The presence of grooved stone net-sinkers suggests an increase in the importance of fishing in subsistence activities. Another new tool, the bannerstone, also made its first appearance during this period. Bannerstones are ground stone weights that served as counterbalance for "atlatls" or spear-throwers, again indicating the emergence of a new technology. The increased reliance on local, often poor quality chert resources for chipped

stone tools suggests that in the Middle Archaic groups inhabited smaller territories lacking high quality raw materials. In these instances lower quality materials which had been glacially deposited in local tills and river gravels were used.

This reduction in territory size appears to have been the result of gradual region-wide population growth, which forced a reorganization of subsistence patterns, as a larger population had to be supported from the resources of a smaller area. Stone tools designed specifically for the preparation of wild plant foods suggest that subsistence catchment was being widened and new resources being more intensively exploited. A major development of the later part of the Middle Archaic period was the initiation of long distance trade. In particular, native copper tools manufactured from sources near Lake Superior were being widely traded.

During the later part of the Middle Archaic (5,500-4,500 BP) a distinctive occupation, or tradition, known as the Laurentian Archaic, appears in south-eastern Ontario, western Quebec, northern New York and Vermont. Laurentian Archaic sites are found only within the transitional zone between the deciduous forests to the south and coniferous forests to the north known as the Canadian Biotic Province and are identifiable through the association of certain diagnostic tool types, including ground slate semi-lunar knives (or "ulus"), plummets for use in fishing, ground slate points and knives, and ground stone gouges, adzes and grooved axes. It is thought that there was less reliance on plant foods and a greater reliance on hunting and fishing in this region than for Archaic peoples in southern and south-western Ontario. Laurentian Archaic sites have been found in the middle Ottawa River valley, along the Petawawa River and Trent River watersheds and at Brockville.

The trend towards decreased territory size and a broadening subsistence base continued during the Late Archaic (4,500-2,900 BP). Late Archaic sites are far more numerous than either Early or Middle Archaic sites. It appears that the increase in numbers of sites at least partly represents an increase in population. However, around 4,500 BP water levels in the Great Lakes began to rise, taking their modern form. It is likely that the relative paucity of earlier Archaic sites is due to their being inundated under the rising lake levels.

The appearance of the first true cemeteries occurs during the Late Archaic. Prior to this period, individuals were interred close to the location where they died. However, with the advent of the Late Archaic and local cemeteries individuals who died at a distance from the cemetery would be returned for final burial at the group cemetery often resulting in disarticulated skeletons, occasionally missing minor bone elements (e.g. finger bones). The emergence of local group cemeteries has been interpreted as being a response to both increased population densities and competition between local groups for access to resources, in that cemeteries would have provided symbolic claims over a local territory and its resources.

Increased territoriality and more limited movement are also consistent with the development of distinct local styles of projectile points. The trade networks which began in the Middle Archaic expand during this period, and begin to include marine shell artifacts (such as beads and gorgets) from as far away as the Mid-Atlantic coast. These marine shell artifacts and native

copper implements show up as grave goods, indicating the value of the items. Other artifacts such as polished stone pipes and slate gorgets also appear on Late Archaic sites. One of the more unusual of the Late Archaic artifacts is the "birdstone", small, bird-like effigies usually manufactured from green banded slate.

The Early Woodland period (2,900-2,200 BP) 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 rather limited ceramic technology, the life-ways of Early Woodland peoples show a great deal of continuity with the preceding Late Archaic period. For instance, birdstones continue to be manufactured, although the Early Woodland varieties have "pop-eyes" which protrude from the sides of their heads. 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. These trade items were included in increasingly sophisticated burial ceremonies, some of which involved construction of burial mounds.

In terms of settlement and subsistence patterns, the Middle Woodland (2,200 B.C.-1,100 BP) 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. 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. Because this is the case, rich deposits of artifacts often accumulated. Unlike earlier seasonally utilized locations, these Middle Woodland sites appear to have functioned as base camps, occupied off and on throughout 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 the Middle Archaic, and provides a prelude to the developments that follow during the Late Woodland period.

There are three complexes of Middle Woodland culture in Ontario. The complex specific to eastern Ontario is known as "Princess Point" most notably represented by ceramics decorated with a stamped zigzag pattern applied at various angles to the exterior of the vessel, known as "pseudo scallop shell". Another common decorative style is the dentate stamp, a comb-like tool creating square impressions.

The relatively brief period of the Transitional Woodland period is marked by the acquisition of cultivar plants species, such as maize and squash, from communities living south of the Great Lakes. The appearance of these plants began a transition to food production, which consequently led to a much reduced need to acquire naturally occurring food resources. Sites were thus occupied for longer periods and by larger populations. Transitional Woodland sites have not been discovered in eastern Ontario.

The Late Woodland period in southern Ontario is associated with societies referred to as the Ontario Iroquois Tradition. This period is often divided into three temporal components; Early, Middle and Late Iroquoian (see Table 3.1). In eastern Ontario, especially in the Ottawa River Valley, there is considerable overlap of people continuing to practice a hunting and gathering economy and those using limited horticulture as a supplement to gathered plants. For the most part, however, classic Late Woodland sites in eastern Ontario are limited to an area at the east end of Lake Ontario and along the St. Lawrence River valley. Early Iroquoian components have been identified near Pembroke on the Muskrat River; however, there is evidence for only limited use of cultivated plants. Middle Iroquoian sites have not been identified east of the Kingston area.

During the Late Iroquoian period a distinctive material culture emerges at the east end of Lake Ontario and along the St. Lawrence River up to Québec City, known as the St. Lawrence Iroquois (SLI). SLI sites are characterised by large semi-permanent villages and associated satellite settlements. The inhabitants of these villages and satellites practiced horticulture of staple crops which made up the bulk of their diet. Other food resources were hunted, fished and gathered. SLI village sites can be extensive, up to 10 acres or more in size and composed of a number of longhouse structures. Special purpose satellite settlements, such as hunting and fishing camps, are smaller in area and in the number and size of structures within the settlement.

While the early-contact period descendants of the Late Woodland SLI and Huron used the Ottawa River and its tributaries as transportation routes between the St. Lawrence River and the interior, Late Woodland village sites are have not been identified along this area.

1.3.3 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Stantec applied archaeological potential

criteria commonly used by the Ontario Ministry of Tourism, Culture and Sport (Government of Ontario 2011) to determine areas of archaeological potential within the region under study. These variables include proximity to previously identified archaeological sites, distance to various types of water sources, soil texture and drainage, glacial geomorphology, elevated topography and the general topographic variability of the area.

Distance to modern or ancient water sources is generally accepted as the most important determinant of past human settlement patterns and, considered alone, may result in a determination of archaeological potential. However, any combination of two or more other criteria, such as well-drained soils or topographic variability, may also indicate archaeological potential. Finally, extensive land disturbance can eradicate archaeological potential (Wilson and Horne, 1995).

Distance to water is an essential factor in archaeological potential modeling. When evaluating distance to water it is important to distinguish between water and shoreline, as well as natural and artificial water sources, as these features affect sites locations and types to varying degrees. The MTCS (Government of Ontario 2011) categorizes water sources in the following manner:

- Primary water sources: lakes, rivers, streams, creeks;
- Secondary water sources: intermittent streams and creeks, springs, marshes and swamps;
- Past water sources: glacial lake shorelines, relic river or stream channels, cobble beaches, shorelines of drained lakes or marshes; and
- Accessible or inaccessible shorelines: high bluffs, swamp or marshy lake edges, sandbars stretching into marsh.

The north edge of the project area is located approximately 75 m from the Ottawa River and the entirety of the property lies within 300 m of Taylor's Creek to the west.

Soil texture can be an important determinant of past settlement, usually in combination with other factors such as topography. The property is located in the Ottawa Valley Clay Plains physiographic region, which is characterised by clay plains interrupted by rock or sand ridges (Chapman and Putnam, 1984). The surficial geology of the project area is composed entirely of St. Rosalie Clay (Wicklund and Richardson, 1962). These soils are poorly drained, stone-free, light-grey clay soil with light grey non-calcareous clay parent material. The topography for these soils is largely level. While these soils are considered to be poorly drained there was no evidence of poor drainage within the limits of the project area during field visits in April, July and October of 2015.

For Euro-Canadian sites, archaeological potential can be extended to areas of early Euro-Canadian settlement, including places of military or pioneer settlements; early transportation routes; properties listed on the municipal register or designated under the *Ontario Heritage Act*; and properties that local histories or informants have identified with possible historical events, activities or occupations. The study area has been part of actively cultivated agricultural fields for over 100 years and beyond soil disturbances from agricultural activities there have been no intensive or extensive ground disturbances.

When the above listed criteria are applied to the study area, the archaeological potential for Aboriginal and historic Euro-Canadian sites is deemed to be moderate to high.

1.3.4 Previously Identified Archaeological Sites and Surveys

In order that an inventory of archaeological resources could be compiled, the registered archaeological site records kept by the MTCS were consulted. In Ontario, information concerning archaeological sites is stored in the ASDB 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 under review is within Borden Block BiFw.

Information concerning specific site locations is protected by provincial policy, and is not fully subject to the *Freedom of Information and Protection of Privacy Act*. The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. The MTCS will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

An examination of the ASDB has shown that there are at present no registered archaeological sites within a one kilometre radius of the study (personal communication, Robert von Bitter April 28, 2015; Government of Ontario n.d.).

In addition to the search of the ASDB archaeological potential modeling maps of the area were consulted. The City of Ottawa archaeological potential mapping identifies the entire study area as having archaeological potential (City of Ottawa 2015).

As per Section1.1, Standard 1 Stantec identified two archaeological assessments that have been completed that encompass, or are within 50 m of, the current project area One report documenting a Stage 1 and 2 archaeological assessment for the property immediately to the east of the current project area was completed in 2009 by Jacques Whitford (now Stantec) for the Cité Collégiale Technical Institution property Immediately east of the subject property (Jacques Whitford 2009). No archaeological resources were located during that assessment. Another report documenting a Stage 1 archaeological assessment was completed for a project regarding Regional Road 174, located immediately south of the project area (Golder 2013). This report examined the archaeological potential for an area that included the current project area and indicates that the project area retains archaeological potneial.

1.3.5 Existing Conditions

The Stage 1-2 assessment for the study area was conducted between April 17, 2015 and October 30, 2015 under PIF P415-0030-2015 issued to Patrick Hoskins, MA by the MTCS. The project property is composed of 9.9 ha of cleared agricultural field, wooded area, and ravine in parts of Lots 31 and 32, Concession 1 of the Geographic Township of Cumberland, now part of the City of Ottawa, of which the cleared agricultural land and woodlot of approximately 8.2 ha is proposed for the development (Figure 2). The property is an irregularly shaped parcel bordered by Jeanne d'Arc Boulevard North to the north, and Regional Road 174 to the south. The proposed project area is also approximately 400 m west of Trim Road (Figure 1).

2.0 Field Methods

The Stage 1 archaeological assessment compiled available information about the known and potential archaeological heritage resources within the study area, including a property inspection. This Stage 1 archaeological assessment was conducted under archaeological consulting license P415 issued to Patrick Hoskins, MA, of Stantec by the MTCS. The Stage 1 property inspection was conducted for the study area on April 17, 2015. During the property inspection the weather was sunny and warm and general visibility was excellent.

The project area is approximately 8.15 hectares and consists of 7.92 ha of recently and actively cultivated agricultural fields (Photos 3 and 4) and 0.22 ha of treed woodlot along the west side of the project area, immediately alongside the top of a ravine through which Taylor's Creek flows north into the Ottawa River (Photo 2). The Stage 1 site visit identified features of archaeological interest that would indicate archaeological potential, including the Ottawa River approximately 75 m to the north of the north edge of the project area (Photo 1) and Taylor's Creek to the west, and within 300 m of all parts of the project area (Photo 2). Other than the agricultural use of the land there was no evidence of extensive or intensive land disturbances that would have eliminated archaeological potential in any of the project area and Stage 2 archaeological assessment of the entire project area was recommended. To that end the ploughable portion of the project area was ploughed over two separate episodes (June 29 and 30, 2015 and July 7, 2015) to sufficiently break up and turn over the soil to allow for acceptable visibility of the surface.

During the Stage 2 survey, assessment conditions were excellent and at no time were the field, weather, or lighting conditions detrimental to the recovery of archaeological material. Photos 5 to 12 confirm that field conditions met the requirements for a Stage 2 archaeological assessment, as per the *Standards and Guidelines for Consultant Archaeologists* (Section 7.8.6 Standard 1a; Government of Ontario 2011). Figure 7 provides an illustration of the Stage 2 assessment methods, as well as photograph locations and directions.

Table 2: Weather and Field Conditions during the Stage 2 Survey

Date	Activity	Weather	Field Conditions
July 13, 2015	Stage 2 pedestrian survey	Sunny and warm	Soil visibility: 80-85%
October 30, 2015	Stage 2 test pit survey	Cool, overcast	Soils friable and dry

Approximately 97% of the study area consists of recently ploughed and well weathered fallow field. As such, it was determined that these portions would be assessed by pedestrian survey at a five-metre interval (Photos 5 to 7). The pedestrian survey was conducted in accordance with Section 2.1.1 of the MTCS's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011.

Approximately 3% of the study area consists of sparse woodlot that was inaccessible for ploughing. These areas were subject to test pit assessment at a five metre interval (Photos 8 and 12) in accordance with Section 2.1.2 of the MTCS's 2011 *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Each test pit was approximately 30 centimetres in diameter and excavated five centimetres into sterile subsoil. The soils were then examined for stratigraphy, cultural features, or evidence of fill. All soil was screened through six millimetre mesh hardware cloth to facilitate the recovery of small artifacts and then used to backfill the pit.

3.0 Record of Finds

The Stage 1 and 2 archaeological assessment was conducted employing the methods described in Section 2.0. An inventory of the documentary record generated by fieldwork is provided in Table 3 below.

Table 3: Documentary Records

Document Type	Current Location of Document Type	Additional Comments
6 Pages of Field Notes	Stantec office in Ottawa	In original field book and photocopied in project file
3 Hand Drawn Maps	Stantec office in Ottawa	In original field book and photocopied in project file
1 Map Provided by Client	Stantec office in Ottawa	Hard and digital copies in project file
40 Digital Photographs	Stantec office in Ottawa	Stored digitally in project file

No archaeological resources were identified during the Stage 2 assessment of the project area.

4.0 Analysis and Conclusions

Stantec Consulting Ltd. was retained by 3223701 Canada Inc. to conduct a Stage 1-2 archaeological assessment for the proposed Brigil Mixed-Use Development, located in Part Lots 31 and 32, Concession 1, Geographic Township of Cumberland City of Ottawa, Ontario. The Stage 1 archaeological assessment of the study area determined that the study area still retained its archaeological potential and required a Stage 2 assessment. A Stage 2 assessment using both pedestrian and test pit excavation survey was undertaken and no archaeological resources were identified.

5.0 Recommendations

The Stage 1-2 archaeological assessment of the proposed Brigil Mixed-Use Development did not identify any archaeological sites, and therefore **no further archaeological assessment is required**.

The Ministry of Tourism, Culture and Sport is asked to review and accept this report into the Ontario Public Register of Archaeological Reports.

6.0 Advice on Compliance with Legislation

This report is submitted to the Ontario Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18 (Government of Ontario 1990c). 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 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 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 *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ontario Ministry of Consumer Services.

7.0 Bibliography and Sources

Archaeologix. 2008. *Archaeological Assessment (Stage 1) Shell Proposed Refinery Project, St. Clair Township, Lambton County, Ontario.* Report prepared for Jacques Whitford Limited, Markham, Ontario

Belden and Co., 1881 *Prescott and Russell Supplement in Illustrated Atlas of the Dominion of Canada.* Toronto: H. Belden & Co.

Chapman, L.J. and D.F. Putnam. 1984. *The Physiography of Southern Ontario*. 3rd Edition. Ontario Geological Survey, Special Volume 2. Toronto: Ontario Ministry of Natural Resources.

City of Ottawa. 2015. GeoOttawa. Available online at http://maps.ottawa.ca/geoOttawa/ Last accessed August 26, 2015.

Cumberland Township Historical Society (CTHS), 2005. *History of Cumberland Township*. http://www.cths.ca/english/7/7-1.html.

DeVolpi, Charles P. 1964. *Ottawa: A pictorial Record 1807-1882*. Montreal: DEV-SCO Publications Ltd.

Ellis, Chris J., and Neal Ferris (eds.), 1990. *The Archaeology of Southern Ontario to A.D. 1650*. Occasional Publication of the London Chapter, Ontario Archaeological Society, Number 5.

Gentilcore, R. Louis and C. Grant Head. 1984. *Ontario's History in Maps*. Toronto: University of Toronto Press.

Golder Associates Ltd.. 2013. *Stage 1 Archaeological Assessment, Ottawa Road 174, Prescott-Russell County Road 174, Geographic Townships of Gloucester, Cumberland and Clarence, Carleton and Russell Counties.* Report on file with the Ministry of Tourism, Culture and Sport, Toronto, Ontario. PIF #P350-020-2012.

Government of Ontario. 2011. *Standards and Guidelines for Consultant Archaeologists*. Toronto: Ministry of Tourism, Culture and Sport.

Government of Ontario. n.d. *Archaeological Sites Database Files*. Toronto: Culture Services Unit, Ministry of Tourism, Culture and Sport.

Jacques Whitford. 2008. *Stage 1 Archaeological Impact Assessment - Interconnecting and Third Party Pipelines*. Report prepared for Shell Canada Products, Sarnia. PIF #P002-128-2007.

Jacques Whitford. 2009. *Stages 1 and 2 Archaeological Assessment, Proposed Cité Collégiale Technical Institution, Part Lots 30 and 31, Concession 1, Former Township of Cumberland, City of Ottawa, Ontario.* Report on file with the Ministry of Toursim, Culture and Sport, Toronto, Ontario. PIF# P002-149-2008.

LAC (Library and Archives Canada)

1840 Tax Assessment Rolls of Cumberland Township, Russell County, 1840. Microfilm M-7735.

Miles and Company,1879. *Map of the Counties of Russell and Prescott.* Toronto: Miles and Company.

Morris, J.L. 1943. *Indians of Ontario*. 1964 reprint. Toronto: Department of Lands and Forests, Government of Ontario.

Pilon, Jean-Luc (editor). 1999. *La préhistoire de l'Outaouis = Ottawa Valley Prehistory*. Hull: Institut d'histoire et de recherches sur l'Outaouis.

St-Pierre, Christian Gates. 2009. A Critical Revew of the Last Decade of Prehistoric Archaeology in Southern Quebec in *Painting the Past with a Broad Brush: Papers in Honour of James Valliere Wright*, D. L. Keenlyside and J-L Pilon (editors). Mercury Series, Archaeology Paper 170. Ottawa: Canadian Museum of Civilization.

Wicklund, R.E. and N,R, Richards, 1962. *Soil Survey of Russell and Prescott Counties.* Ontario Soil Survey No. 33. Ottawa : Research Branch, Canada Department of Agriculture.

Wilson, J.A. and M. Horne. 1995. *City of London Archaeological Master Plan*. London: City of London, Department of Planning and Development.

Wright, J.V. 1995. *A History of the Native People of Canada Volume 1: 10,000 – 1,000 BC*. Gatineau: Canadian Museum of Civilization.

8.0 Images

8.1 PHOTOGRAPHS

Photo 1: Looking northwest from north edge of property toward Ottawa River during Stage 1 site visit, Jeanne d'Arc Boulevard in mid-ground

Photo 2: Looking southwest into Taylor's Creek ravine from wooded (non-development) portion of property

Photo 3: Photo of development property during Stage 1 site visit, view east across agricultural land, Cité Collégiale buildings in background.

Photo 4: Looking north-west across agricultural field toward Taylor's Creek and Jeanne d'Arc Boulevard.

Photo 5: Crew conducting pedestrian survey of ploughed agricultural fields in south-east corner of project area

Photo 6: Stage 2 pedestrian survey field conditions, northwest quadrant of property

Images

Photo 7: Typical soil conditions during Stage 2 pedestrian survey

Photo 8: Test pit excavation survey along east end of treed area, facing west

Images

Photo 9: Showing slope down to Taylor's Creek ravine at edge of test pit survey area, west side of project area, looking northwest

Photo 10: Test pit showing typical sol stratigraphy, facing northwest

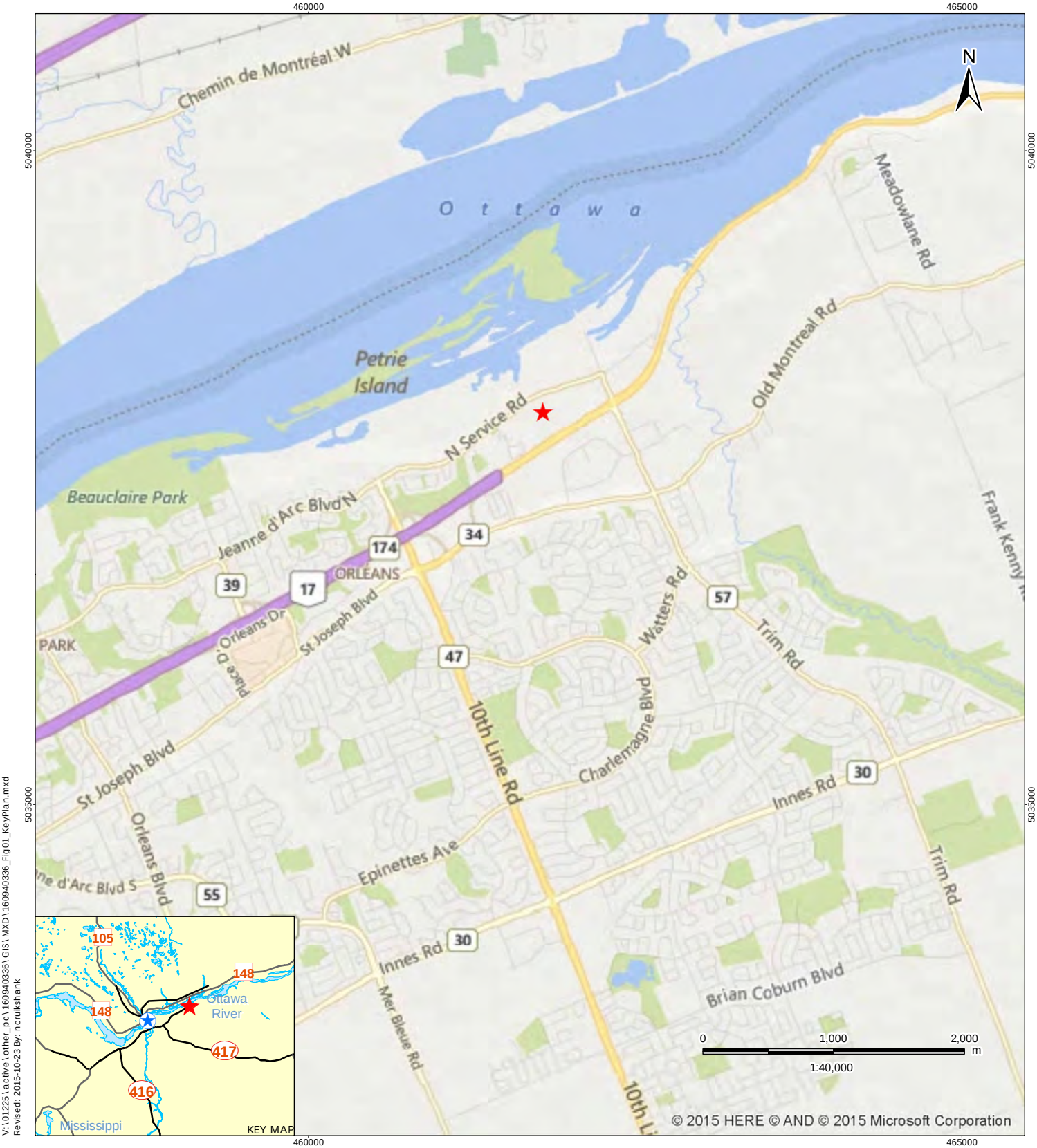
Images

Photo 11: Excavating test pits along west edge of project area, looking southeast; note slope down to Taylor's Creek ravine to right

Photo 12: Excavating test pits north end of wooded area, looking south, edge of Taylor's Creek ravine at right

9.0 Maps

All maps will follow on succeeding pages.



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Revised: 2015-10-23 By: ncrukshank

October 2015
Project No. 160940336

Legend

★ Site Location

Client/Project

3223701 Canada Inc.
Brigil Mixed Use Centre Development
Ottawa, Ontario

Figure No.

1

Title

Key Plan

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N
2. Base features produced under license with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2013.
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KEY MAP

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Revised: 2015-11-12 By: ncrukshank

November 2015
Project No. 160940336

Stantec

Legend

Project Area

Notes

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Client/Project

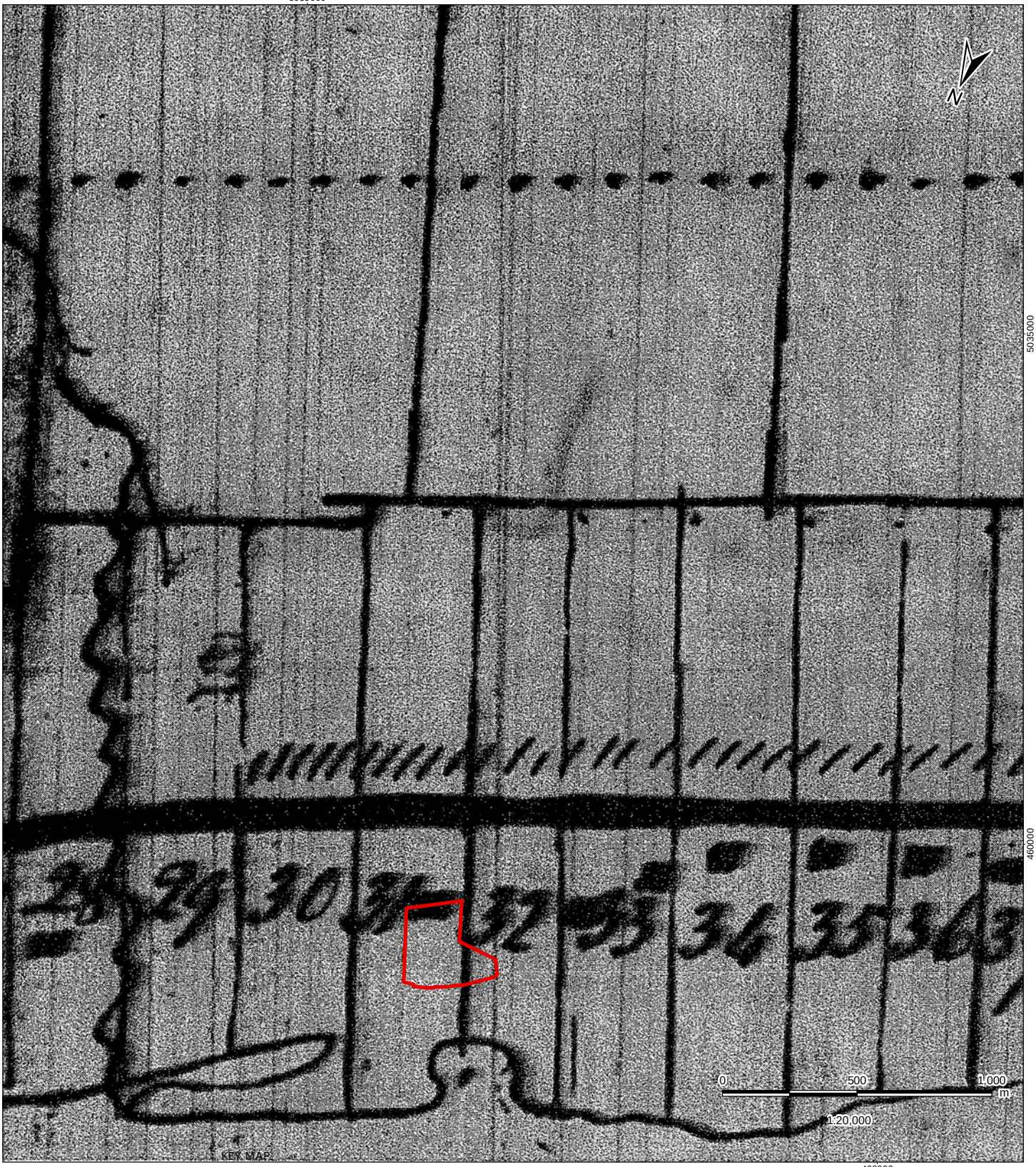
3223701 Canada Inc.
Brigil Mixed Use Centre Development
Ottawa, Ontario

Figure No.

2

Title

Site Plan



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Legend

Project Area

Notes

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Client/Project

3223701 Canada Inc.
Brigil Mixed Use Centre Development
Ottawa, Ontario

Figure No.

3

Title

Project Area Shown Over Detail of Tax Assessment Rolls Map 1840

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Revised: 2015-10-26 By: ncrukshank

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Project No. 160940336

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Legend

Project Area

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N

Client/Project

3223701 Canada Inc.
Brigil Mixed Use Centre Development
Ottawa, Ontario

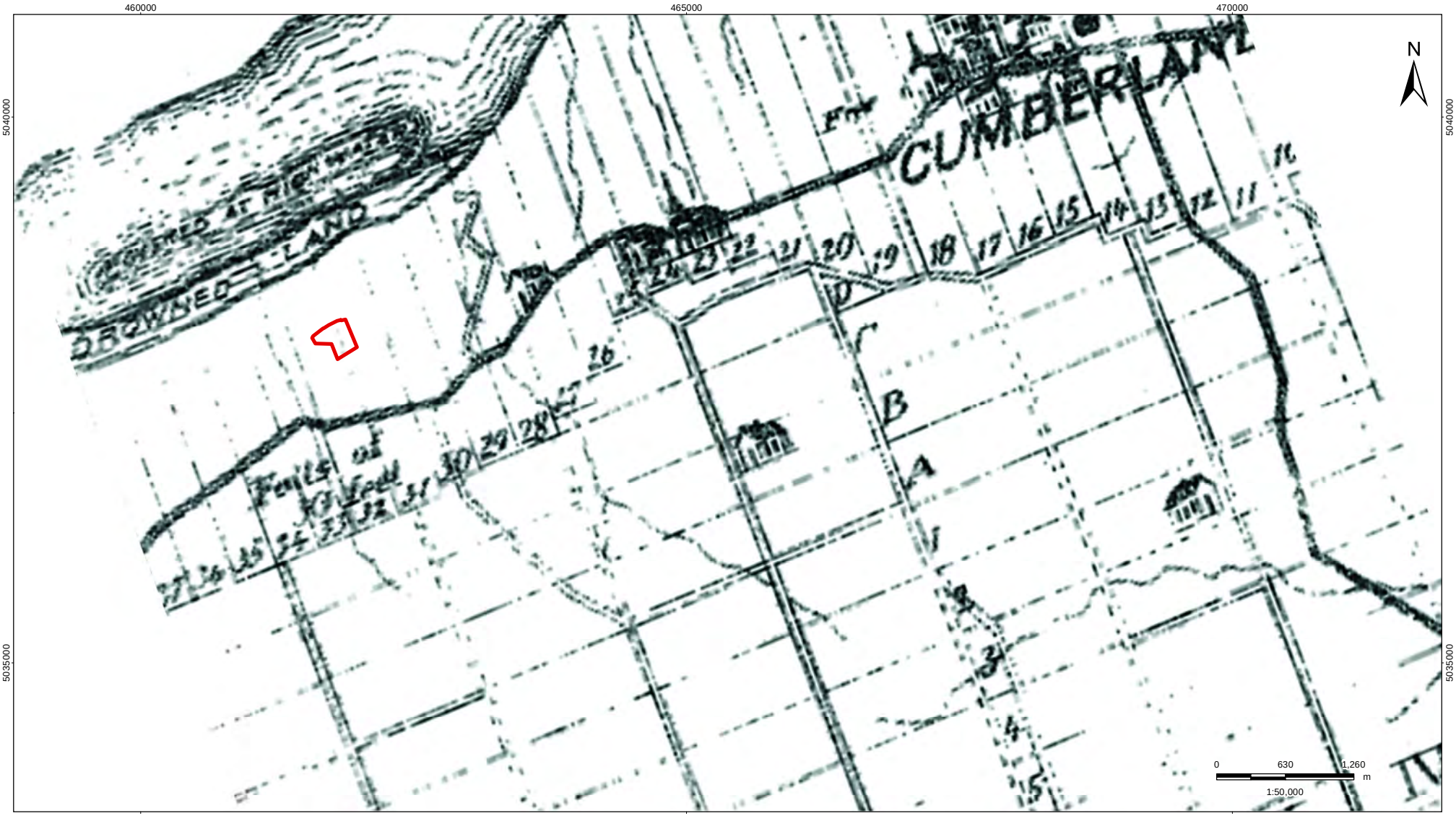
Figure No.

4

DRAFT

Title

Project Area Shown Over
1862 Walling Map



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Project No. 160940336

Stantec

Legend

Project Area

Client/Project

3223701 Canada Inc.
Brigil Mixed Use Centre Development
Ottawa, Ontario

Figure No.

5

DRAFT

Title

Project Area Shown Over
Detail from 1879 Miles Map

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N

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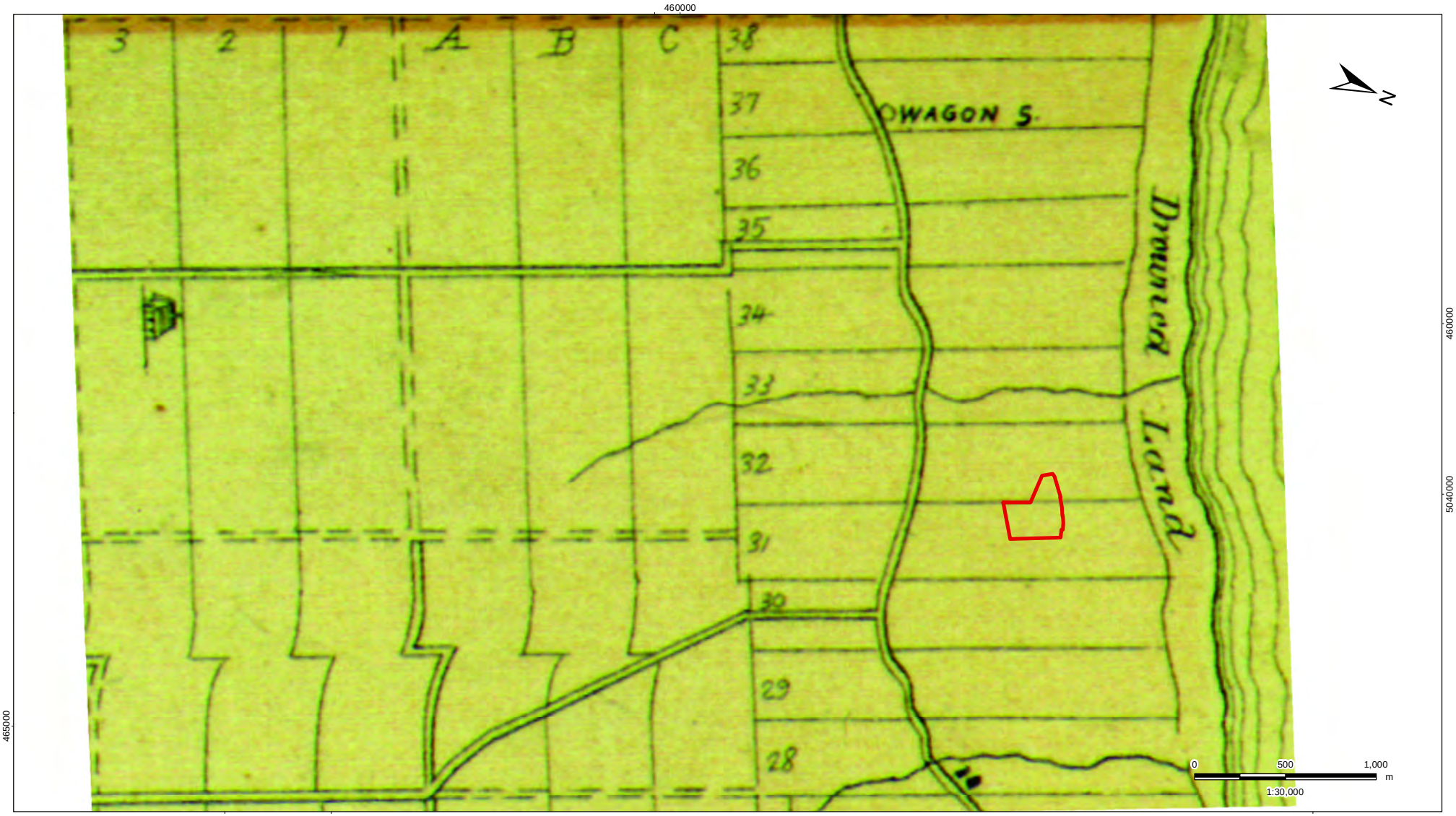

October 2015
Project No. 160940336

Legend

Project Area

Client/Project

3223701 Canada Inc.
Brigil Mixed Use Centre Development
Ottawa, Ontario

Figure No.
6

DRAFT

Title

Project Area Shown Over Belden 1881 Map

Notes

1. Coordinate System: NAD 1983 UTM Zone 18N

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Legend
- Photo Location and Direction
- 360° Photo Location
- Assessment Area

Survey Method
- Pedestrian Survey at 5m Intervals
- Test Pit Survey at 5m Intervals

Client/Project
3223701 Canada Inc.
Brigil Mixed Use Centre Development
Ottawa, Ontario

Figure No.
7

Title
Stage 2 Assessment Area and Survey Methodology

10.0 Closure

This report has been prepared for the sole benefit of 3223701 Canada Inc. and may not be used by any third party without the express written consent of Stantec Consulting Ltd. and 3223701 Canada Inc.. Any use which a third party makes of this report is the responsibility of such third party.

We trust this report meets your current requirements. Please do not hesitate to contact us should you require further information or have additional questions about any facet of this report.

Yours truly,

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