



Final Report

VP Land Development,
DCR Phoenix Development Corporation Limited
(Phoenix Homes)

Stage 1 Archaeological Assessment

*4816 Bank Street, and Portions of the Municipal ROW and 930 Miikana Road,
Part of Lots 20 and 21, Concession 4 from Rideau River and the Road Allowance
between Lots 20 and 21, former Township of Gloucester, Carleton County, now
City of Ottawa, Ontario*

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Licensee: Rebecca Meichenheimer (P1013)

PIF Number: P1013-0042-2025

Submitted to:

Michael Boucher, MCIP, RPP

VP Land Development,
DCR Phoenix Development Corporation Limited (Phoenix Homes)
18A Bentley Avenue,
Nepean, ON K2E 6T8

Submitted by:

WSP E&I Canada Limited

1931 Robertson Road, Ottawa, ON
K2H 5B7 Canada

(613) 592-9600

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Project Personnel

Project Director Peter Popkin, Ph.D., CAHP, MCIfA (P362)

Project Manager Rebecca Meicenheimer, M.A. (P1013)

Archaeological Licensee Rebecca Meicenheimer, M.A. (P1013)

Report Production Rebecca Meicenheimer (P1013)

GIS/Mapping Bojan Radojevic

Senior Review Peter Popkin, Ph.D., CAHP, MCIfA (P364)

Administrative Support Lekha Diwan

Acknowledgements

Proponent Contact Micheal Boucher, MCIP, RPP, VP Land Development

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WSP E&I Canada Limited acknowledge with respect the Anishinabe Algonquin on whose traditional territory the present Stage 1 archaeological assessment was conducted and whose historical relationships with the land continue to this day.

Executive Summary

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

WSP E&I Canada Limited (WSP) was contracted by Phoenix Homes to conduct a Stage 1 Archaeological Assessment (AA) desktop study for a proposed development site measuring 2.84 hectares (ha) that includes the 4816 Bank Street property, as well as portions of the municipal Right-of-Way (ROW) and 930 Miikana Road at its north end (Study Area) (Map 1 and Map 2). The Study Area is legally described as part of Lots 20 and 21, Concession 4 from Rideau River, in the former Township of Gloucester, Carleton County, now the City of Ottawa, Ontario. This Stage 1 AA was conducted to meet the standard requirements of the *Planning Act*, R.S.O 1990, c.P.14 (Government of Ontario 1990a), as required by the City of Ottawa prior to land disturbance. According to the *City of Ottawa Archaeological Management Plan*, the Study Area has archaeological potential, and as such must undergo an archaeological assessment by a licensed archaeologist according to established provincial standards (ASI 1999).

The Stage 1 AA desktop study included a review of historical maps, aerial photography, land registry documents, local histories, and previous archaeological assessment reports, which determined the Study Area to have general potential for pre- and post-contact archaeological resources based on several criteria. However, an analysis of aerial imagery has determined that the north portion of the Study Area, as well as two existing building footprints, (approximately 0.11 ha) have been subject to extensive and deep land alterations that would have severely damaged the integrity of any archaeological resources (Map 5 and Map 9). In the north portion of the Study Area, these land alterations included construction of Miikana Road and subsequent installation of curbs, sidewalks, and utilities between 2017 and 2018. Centrally within the Study Area, disturbance was caused by the construction of the two existing structures.

Most of the Study Area (approximately 2.73 ha) was determined to retain archaeological potential and require Stage 2 AA prior to development impacts (Map 9). The southeast portion of the Study Area was previously assessed in 2018, as part of an Environmental Assessment (EA) Stage 1 AA (LHC 2020; PIF# P376-0017-2018). The previous assessment also concluded that this portion of the current Study Area has archaeological potential and recommended Stage 2 AA (Map 7 and Map 9).

The results of the Stage 1 AA desktop study presented herein provide the basis for the following recommendations:

- 1) Portions of the Study Area determined to have archaeological potential, which includes the area of previous assessment, are recommended for Stage 2 AA prior to development impacts (Map 9).
 - a) The Stage 2 AA should be completed following the shovel test pit survey method at 5 m intervals as per Section 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011). Test pits should be dug by hand and be at least 30 cm in diameter and excavated 5 cm into subsoil. Soil should be screened through 6 mm hardware cloth to facilitate the recovery of cultural materials, and each test pit should be examined for stratigraphy, cultural features, and fill.
- 2) No further archaeological assessment is recommended for portions of the Study Area that were found to have been previously disturbed (Map 9).

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

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1 PROJECT CONTEXT

1.1 Development Context

WSP E&I Canada Limited (WSP) was contracted by Phoenix Homes to conduct a Stage 1 Archaeological Assessment (AA) desktop study for a proposed development site measuring 2.84 hectares (ha) that includes the 4816 Bank Street property, as well as portions of the municipal Right-of-Way (ROW) and 930 Miikana Road at its north end (Study Area) (Map 1 and Map 2). The Study Area is legally described as part of Lots 20 and 21, Concession 4 from Rideau River, in the former Township of Gloucester, Carleton County, now the City of Ottawa, Ontario. This Stage 1 AA was conducted to meet the standard requirements of the *Planning Act*, R.S.O 1990, c.P.14 (Government of Ontario 1990a), as required by the City of Ottawa prior to land disturbance. According to the *City of Ottawa Archaeological Management Plan*, the Study Area has archaeological potential, and as such must undergo an archaeological assessment by a licensed archaeologist according to established provincial standards (ASI 1999).

The Stage 1 AA was conducted under professional archaeological licence P1013, issued to Rebecca Meicenheimer of WSP by the MCM (PIF# P1013-0042-2025).

1.2 Objectives

The objectives of the Stage 1 AA are to:

- Provide information regarding the geography, history, previous archaeological fieldwork, and current land condition of the Study Area;
- Provide a detailed evaluation of the Study Areas' archaeological potential;
- Determine whether the Study Area contains archaeological potential requiring further assessment; and,
- Recommend appropriate Stage 2 assessment strategies, if required.

2 HISTORICAL CONTEXT

The following historical narrative is intended to provide a general overview of the interpreted land use during the “Pre-Contact Period” and “Early Contact Period” within the vicinity of the current Study Area. This historical overview is based on archaeological and historical interpretations inferred over the past 100 years, and generally reflect inferences and interpretations made by non-Indigenous representatives. The text below is not intended to provide a comprehensive historical overview of the occupation and landscape prior to and following the arrival of Europeans to the modern-day area of eastern Ontario, but rather provide a general overview context that can be referenced when determining the potential for archaeological resources within the current project Study Area.

The text and comments below, including the cited references, may reflect archaeological literature within general publications, but are not suggested to represent the opinions of those Indigenous communities whose history it is purported to reflect.

2.1 Regional Indigenous History

Paleo Period (11,000 BP to 10,000 BP)

The Ottawa Valley was covered by the Laurentide ice sheet until approximately 11,000 years before present (BP). Following the period of deglaciation, the Ottawa Valley was inundated by the Champlain Sea which is interpreted to have extended from the Rideau Lakes in the south, along the Ottawa Valley and St. Lawrence areas and terminating in the vicinity of Petawawa in the west. The exact western boundary is unconfirmed as current elevation levels reflect the isostatic adjustment of the land following the melting of the glaciers which has obscured definitive traces of the Champlain Sea shoreline at the time of its existence. The eastern portion of the sea extended into the Atlantic Ocean.

During the much of the Paleo Period (11,000 BP - ca. 10,000 BP), the Ottawa region would have remained inundated by the Champlain Sea, although as the Champlain Sea receded towards the end of this period it is possible that people migrated along the changing waterfront landscape eventually moving into the Ottawa Valley (Watson 1999a). The presence of Indigenous peoples during the recession of the Champlain Sea is suggested by Algonquin oral history which tells of the hero Wiskedjak hunting a giant beaver by draining Lake Superior and the beaver creating rapids as it fled east (Morrison 2005). As giant beavers existed in Ontario but went extinct along with many other North American megafauna between 12,000 to 10,000 years ago and the draining of Lake Superior reflects the drainage of glacial lakes following the end of the last glaciation, these stories suggest the presence of the Algonquin peoples in the Ottawa Valley before time immemorial.

The ridges and old shorelines of the Champlain Sea and early Ottawa River channels generally represent areas most likely to contain evidence of Paleo Period occupation in this region, however identifying the location and dates of these ancient shorelines has proved challenging. The boundaries of the Champlain Sea are not marked by a continuous identifiable shoreline, especially along the western shore where rocky conditions were not favourable to the formation of beaches (Chapman and Putnam 1973). Attempts to use deposits of marine mollusk shells as a source for radiocarbon dates to delineate the transgression of the shorelines have proved unreliable as shells absorb carbon at different rates according to their depth below the surface and geological location (Robinson 2012). Known as the marine reservoir effect, this results in radiocarbon samples using marine sources produce much older dates than samples from terrestrial sources even when of a comparable age (Beta Analytic 2021). Additionally, earlier interpretations showing discrete stages of regression (see Chapman 1937) have proven not to be supported by the geological record. Unlike the catastrophic flood events during the Younger Dryas climatic event that led to the rapid formation of the Champlain Sea, its regression was a slow process occurring as sea waters drained during isostatic rebound (Robinson 2012). The interpretation of the presence of

shorelines is further complicated by the fact that isostatic rebound may have raised the Ottawa region above its current elevation before it receded to its current level (Fulton and Richard 1987).

As a consequence, only the margins of the Champlain Sea at its maximum extent, a time when the Ottawa region would have been fully submerged, have been reliably mapped due to the rapid inundation creating pronounced shoreline features (Loring 1980). The identification of early archaeological sites in the Ottawa region is further complicated by flooding resulting from the overflow of glacial Lake Agassiz which continued to as late as 8,000 BP (Fulton et al. 1987; Swayze and McGhee 2011) which would have eroded and manipulated topographic landforms within the evolving landscape. Although recent studies using various dating techniques that do not rely upon deposits of mollusk shells have provided some favourable results (Tremblay 2008), considerable work remains in developing the chronology of the Champlain Sea's regression.

Early settlement in the Ottawa region would have occurred following the recession of the Champlain Sea when the vegetation and wildlife had the opportunity to develop within the area and enable the sustainability of humans (Watson 1999a). The ridges and old shorelines of the Champlain Sea and early Ottawa River channels reflect areas most likely to contain evidence of Paleo Period occupation in the region. Archaeological and geological investigations in the Ottawa Valley have suggested these early sites may be identified within the 550 foot (167.6 metre) or higher contour topography, although additional research may be required to confidently assess this correlation (Kennedy 1976).

The identification of Paleo Period sites in the Ottawa region has been hindered by the erosion of accessible locations during the environmental changes associated with the transition from the Late Paleo Period to the succeeding Archaic Period (10,000 - 2900 BP). The potential use of watercraft by Paleo Period peoples (Engelbrecht and Seyfert 1995; Jodry 2005) and evidence for the abundance of marine resources (Loring 1980; Robinson 2012) raises the possibility of occupation sites situated on accessible landforms such as those exposed as isolated islands above the 167-metre elevation contours. As the Ottawa River delta prograded eastward during the regression of the Champlain Sea (Fulton et al. 1987), these isolated exposed landscapes would have been impacted by periods of overflow from glacial Lake Agassiz. The inundation of flood waters from the glacial lake may have caused significant erosion, with another possibility being that the sediment transport facilitated by the moving water may have buried archaeological remains within these potential occupation areas.

Evidence of human occupation during this period has been documented by a variety of archaeological discoveries including two bi-facially fluted projectile points (laurel leaf shaped points with a channel flake scar extending from the base of the point) recorded in the Rideau Lakes area (Watson 1982; 1999b). In Ottawa, sites interpreted to have produced Paleo Period material have been recorded between the 90 and 120 m above sea level which was interpreted to correspond to the shoreline of the Champlain Sea (Swayze and McGhee 2011). These include sites near Greenbank Road (Swayze 2003), Albion Road and Rideau Road (Swayze 2004), suggests evidence of early occupation although the lack of diagnostic material represented at these sites and the inferred climatic environment suggests these sites may rather be reflective of Archaic Period occupation following the recession of the Champlain Sea. A search of the MCM's archaeological site database indicates there are no registered Paleo Period archaeological sites within Gloucester Township (MCM 2025).

Archaic Period (10,000 BP to 2,900 BP)

During the succeeding Archaic Period (ca. 10,000 to 2,800 BP), the environment of eastern Ontario began to approach modern conditions. The jack and red pine forests that characterized the Late Paleo Period landscape were eventually replaced by forests dominated by white pine with some associated deciduous trees (Ellis et al. 1990). Occupation within the Ottawa region developed as the environment became habitable, with an Early

Archaic Period Dovetail projectile point recovered in Ottawa South around 1918 or 1920 (Pilon and Fox 2015) potentially representing the earliest diagnostic evidence of human interaction within the local landscape.

An assemblage of lithic tools interpreted to date between approximately 11,000 and 9,000 BP was recovered from a cluster of sites southwest of Parliament Hill in March Township (Swayze and McGhee 2011), although the lack of diagnostic tools recovered from the site prevents the ability for uniform acceptance of the chronological and contextual aspects of the site and the associated materials (Butler 2011). It is anticipated future investigations of contemporary sites with similar artifact assemblages may provide further insight and evidence of human occupation in the Ottawa region dating to the Early Archaic Period.

Populations occupying Ontario and Quebec during the Early Archaic Period primarily used large base camps on islands, near river mouths, and on the shores of embayments where a variety of flora, fish, and wildfowl resources could be obtained during the spring, summer and fall seasons. Smaller hunting and specialized campsites were established in the uplands and along smaller watercourses. Access to these shoreline occupation areas, would have been facilitated by a variety of Indigenous watercrafts such as bark canoes, skin boats and dugout canoes (Monk 1999). In the Ottawa Valley, a stone fish weir likely dating to the Archaic Period found upstream from Morrison Island and Allumette Island demonstrates the increasingly sophisticated technology that was being employed during the period (Allen 2010).

The Indigenous peoples travelling along the Ottawa River are believed to have preferred a canoe that had high ends, similar to later European traders who adopted this construction technique. These canoes were easily paddled and designed to carry a heavy load with a narrow-flat bottom and flaring sides (Adney and Chapelle 2014).

Indigenous peoples utilized a variety of vessels to travel down navigable waterways such as the Ottawa, Gatineau and Rideau River systems to meet, trade and exchange information. Several portages were required along the Ottawa River, for example at the Chaudière Falls, Chats Falls and the Deschênes Rapids, with the primary portage routes traversing the northern shoreline of the Ottawa River to avoid the marshy bayous and limestone cliffs prominent on the south side of the river (ASI and GII 1999). Pre-contact period Indigenous artifacts recovered near the Deschênes Rapids on the north side of the Ottawa River may reflect evidence of a former encampment associated with this portage route (GRAO 2012; Pilon 2010) and another site interpreted to represent seasonal occupation during the Archaic, Woodland and post-contact periods may also be associated with the former portage route utilized to bypass the Chaudière Falls along the northern shoreline of the Ottawa River (Arkeos 1993).

These waterways represent the historical highways facilitating the movement of both people and goods through the general vicinity of the Study Area. Archaeological discoveries made in the area around the Ottawa region illustrate the existence of an extensive, continent-scale network of communication and trade with the discovery of a variety of raw materials used for stone tool production including Ramah Chert from the tip of Labrador, Mistassini Quartzite from the centre of Québec, Hudson's Bay Lowland Chert from the region bordering Hudson Bay, abundant Onondaga Chert obtained from the Onondaga Escarpment region south and west of Lake Ontario, as well as distinctive Mercer and Burlington Formation cherts from Ohio and Illinois respectively (Pilon and Boswell 2015).

The Ottawa region was also an important route for the movement of copper, either through direct trade between individual groups, or through trips to Lake Superior to exploit the native copper deposits located there. Copper artifacts similar to those documented on Allumette Island in the Ottawa River have been discovered in Wisconsin,

Michigan, New York State and Manitoba (Kennedy 1970). This commodity, as well as other tradable goods, was presumably transported by canoes and other vessels along the navigable waterways including the Ottawa River.

Sites with Archaic Period components that demonstrate this expanding trade network include in the Rideau Lakes area (Watson 1982) and Morrison Island and Allumette Island in the Outaouais region of the Ottawa River (Chapdelaine et al. 2001; Clermont 1999). The Gatineau River also represents a significant waterway transportation route during this period, with a complex of sites identified near this junction at Lake Leamy (Laliberté 1997) and the site registered as BiFw-172, located on the south shore of the Gatineau River near the confluence with the Ottawa River. The copper artifacts recovered from the BiFw-172 site may reflect contemporary trade occurring along the Gatineau and Ottawa waterways and the strategic importance of this site. Seven charcoal samples collected from the BiFw-172 site were radiocarbon dated indicating an occupation between 6320 (+/- 25) and 2660 (+/- 30) years BP. Although this occupation was likely seasonal, it suggests this site was visited and occupied over a period of almost 4,000 years, and likely longer (Archéotec 2015). Additional significant occupation sites producing Archaic Period artifacts along Ottawa Valley waterways include Jessup Falls near the intersection of the South Nation River and the Ottawa River and at Spencerville near the source of the South Nation River (Daechsel 1980).

The Ottawa region was also one of the primary corridors where early technological information and techniques were transmitted (Kennedy 1970). One of the more notable changes during the Early Archaic Period was the appearance of side and corner-notched projectile points.

During the Middle Archaic Period (8,000 BP - 4,000 BP) the trend towards more diverse toolkits continued, as the presence of net-sinkers and fish weirs suggest that fishing was becoming an important component of the subsistence strategy. It was also during this period that stone tools specifically designed for the preparation of wild plant foods were crafted and when “bannerstones” were first manufactured, which are carefully crafted ground stone devices that may have served as a counterbalance for *atlatls* or spear-throwers. An example of a bannerstone was recovered from Leamy Lake Park on the north side of the Ottawa River (Ian Badgley, pers. comm.).

The increased trade relationships may have also influenced the transition from nomadic lifestyles across large areas to more centralized occupation within smaller areas that provided the opportunity to facilitate interaction with those conducting trade, whether it was “down-the-line” or controlled by individuals interacting directly with different groups. This development of a less-nomadic lifestyle is also reflected in the adaptation of ground stone tools such as celts and axes, which suggest the beginning of a simple woodworking industry. The presence of these often large, and not easily portable, tools also imply there may have been some reduction in the degree of seasonal movement. Another noticeable attribute during the Middle Archaic Period was the increased reliance on local chert resources for manufacturing projectile points. While groups occupied larger territories during the Paleo and Early Archaic Periods and were able to visit primary outcrops of high-quality chert at least once during their seasonal round, during the Middle Archaic Period groups travelled within comparatively smaller territories that did not always possess a source of high-quality raw materials. In these instances, lower quality resources that had been previously deposited by the glaciers in the local till and river gravels were utilized.

This reduction in territory size may also be representative of a gradual region-wide population growth that led to infilling of the landscape. This process resulted in a reorganization of Indigenous subsistence strategies, as more people had to be supported from the resources extracted from a smaller area.

Representative burial and interment practices during the Archaic Period can also reflect patterns in land use and the importance of specific landscape attributes to the contemporary populations. The oldest known human burial in the general region has been documented at Coteau-du-Lac, located within the St. Lawrence River region less than 15 kilometres from the mouth of the Ottawa River. The diagnostic artifacts recovered within this burial deposit were consistent with a Vergennes Focus of the Laurentian Archaic cultural attribution (Pilon and Young 2009). Several burials dating to the Archaic Period have also been documented on the north side of the Ottawa River, just east of the Chaudière Falls. Many of these burials were observed during the mid-19th century, with upwards of twenty individuals documented along the northern shore of the Ottawa River between the Chaudière Falls and the Gatineau River. Many of these interments were associated with red ochre deposits, although there does not appear to be a consistent deposition positional pattern to those recorded (Pilon and Boswell 2015). Archaic Period burial deposits have also been recorded on Aylmer Island, in the vicinity of the Ottawa River. Edwin Sowter has provided an account of assisting with the exhumation of several skeletons on Aylmer Island (also known as Lighthouse Island) and describes the assortment of artifacts associated with these features (Sowter 1915; Sowter 1900). Upwards of 17 individuals (exact number cannot be confirmed) may have been found on Aylmer Island within the vicinity of the lighthouse, with many either found during the lighthouse construction in the early 19th century or discovered later eroding from the sand. The artifacts and grave context suggest this area was utilized as a burial ground during the Archaic Period and continued through to the post-contact period (Pilon and Young 2009). A single Late Archaic Period burial deposit was identified on the south side of the Ottawa River near the shoreline just east of Arnprior. This single feature was associated with a red ochre deposit, although the context was significantly disturbed when it was originally discovered during construction activities in the area (MCM 2025), and it cannot be confirmed if additional burials are located in the vicinity.

Significant burial deposits have also been documented on both Morrison Island and Allumette Island, which are situated within the Ottawa River near Pembroke. As many as 54 individuals are known from burial contexts dated to the Archaic Period on Allumette Island, although disturbances from 20th century ploughing activities have impacted the burial context and made it difficult to infer additional information (Pilon and Young 2009). Although there are some discrepancies in the field notes and documentation regarding the number of Archaic Period burials on Morrison Island, conservative accounts indicate upwards of twenty individuals from twenty-two burial features (Pilon and Young 2009). Twelve of the burials yielded copper objects, which are considerably rare (Clermont and Chapdelaine 2009) and may reflect the importance of trade relationships and the strategic location of Morrison Island within the Ottawa River.

All these Archaic Period burial sites are situated along waterways, and all are located either near the shoreline or on islands within the Ottawa River. Another common attribute is that many are situated within strategic locations or within proximity to waterfalls or rapids, which may represent the importance of these natural features within the Archaic Period maritime cultural landscape.

Similar to the spatial distribution of known burial sites, the majority of Archaic Period occupation sites have been documented along navigable waterways. Sites with Archaic Period resources documented along the Ottawa River include Allumette and Morrison Islands (Clermont and Chapdelaine 2009), the Sawdust Bay 2 site located near Arnprior (Daechsel 1981) and a site at Constance Bay which was observed to be “partially submerged” with material interpreted to be “possibly Late Archaic” (MCM 2025). In addition to the inferred burial locations on the north side of the Ottawa River on the grounds of the Canadian Museum of History, several sites investigated within Leamy Lake Park have yielded evidence of Late Archaic Period occupation. Archaeological sites with Late Archaic Period components have been recorded across the Ottawa River from Leamy Lake Park at Portage Bay

and Rockcliffe Park (Cardieux 2005; Pilon and Boswell 2015). Archaic sites have also been documented within the vicinity of the Rideau River, and evidence from archaeological investigations around Honey Gables, Albion Road and Rideau Road may contain Early Archaic Period material (Swayze 2004). Evidence of Archaic Period occupation has also been recovered from isolated find spots within the City of Ottawa (Jamieson 1989), although the context of many of these sites have been poorly documented. The MCM's archaeological site database contains four sites dating to the Archaic Period within a 5 km radius of the Study Area (MCM 2025). The nearest sites are BhFv-6 and BhFv-7, located approximately 4 km to the southwest of the assessment area. Both sites are early Archaic Period beach/camp sites that were identified by archaeologist Ken Swayze. Each site was recommended for Stage 3 archaeological assessment, as BhFv-6 consisted of approximately 74 stone artifacts and BhFv-7 consisted of 48 stone artifacts.

Woodland Period (2,900 BP to 400 BP)

The Woodland Period (*ca.* 2,800 to 450 BP) is distinguished from the Late Archaic Period primarily by the addition of ceramic technology. The first ceramic pots were thick walled, and friable and may have initially been utilized in the processing of nut oils by boiling crushed nut fragments in water and skimming off the oil (Spence et al. 1990). These vessels were not easily portable, and their fragile nature suggests they may have required regular replacement. One example of this type of ceramic pot was located along the Ottawa River at registered site CaGi-1 in Gatineau, Québec (Watson 1999b) and several Vinette sherds have also been recovered from a site in Leamy Lake Park (Ian Badgley, pers. comm.). Over time, pottery became more refined and began to incorporate elaborate decorative patterns and distinctive styles representative of specific regional populations as well as specific date ranges (Laliberté 1999). The thin, well-made projectile points that were produced during the terminal part of the Archaic Period continued in use, although the Early Woodland Period variants were side-notched rather than corner-notched, giving them a slightly altered and distinctive appearance. Early Woodland Period inhabitants continued to live as hunters, gatherers and fishers in much the same way as earlier populations had done. They also shared an elaborate burial ceremonialism influenced by the inclusion of non-local artifacts within grave deposits (Spence et al. 1990).

By the Middle Woodland Period (2,400 to 1,150 BP) regional cultural expressions or traditions have been distinguished by archaeologists. These traditions have been identified based on patterns of ceramic decorations, use of lithic materials, and are the primary basis to differentiate the Middle Period from the Early Woodland Period. A greater number of known sites from this period have been investigated allowing archaeologists to develop a better picture of the seasonal round followed in order to exploit a variety of resources within a home territory. Through the late fall and winter, small groups would occupy an inland "family" hunting area. In the spring, these dispersed families would congregate at specific lakeshore sites to fish, hunt in the surrounding forest, and socialize. This gathering would last through to the late summer when large quantities of food would be stored for the approaching winter. Middle Woodland Period inhabitants continued to rely on ceramic technology, with vessels dating to this period often decorated with impressed designs covering the entire exterior surface and upper portion of the vessel interior (Martin 2004; Crawford et al. 1997; Bursey 1995; Ferris and Spence 1995; Spence et al. 1990; Williamson 1990; Ritchie 1971). These stylistic variations provide the ability to easily identify Middle Woodland Period vessel fragments from those manufactured during other periods.

Another significant development of the Woodland Period was the introduction of agriculture and appearance of domesticated plants *ca.* 1,450 BP. Initially, only a minor addition to the diet, the cultivation of corn, beans, squash, sunflowers and tobacco gained economic importance during the Late Woodland Period (Pendergast 1984). Unlike in southern Ontario, where the shift in subsistence resulted in the development of semi-permanent and permanent villages, evidence suggests that the Ottawa Valley remained occupied by mobile hunter-gatherers. In part, this

was because the terrain was less than suitable for early agriculture. It was also a reflection of the increased pressure on hunting territories and conflict over trade routes at the end of the Woodland Period.

The increased population and semi-nomadic lifestyle prevalent within the Ottawa region during the Woodland Period are reflected in the distribution of sites documented during archaeological investigations. Within the general Ottawa Valley, Woodland Period sites have been recorded within the South Nation Drainage Basin (Daechsel 1980), near Casselman (Clark 1905) and within the City of Ottawa near Bank Street (Golder 2013b). The site near Bank Street (BhFw-25) is located within 300 m of the Study Area (MCM 2025), situated inland, and may represent a strategic subsistence or resource extraction site prevalent during this period.

The majority of known archaeological sites dating to the Woodland Period are situated along navigable waterways, with the Rideau and Ottawa Rivers representing two primary transportation corridors. At least six sites with Woodland Period components have been documented along the Rideau River between the Ottawa River and Manotick including BiFw-3 (Jamieson 1989), BiFw-101 (MCM 2024), BiFw-1 (MCM 2024), BhFw-6 (MCM 2024), BhFw-110 and BhFw-112 (Golder 2017).

The importance of the Ottawa River as a navigable transportation route, as well as an area of resource and subsistence extraction, through this period is reflected in the number of known archaeological sites documented on both sides of the river to the east and west.

Woodland Period sites on the north side of the Ottawa River include those recorded by Edwin Sowter near the former Gilmour Mill site and another just east of the Alexandra Bridge (Sowter 1915), a small seasonally occupied site dating to the Middle to Late Woodland Period in Jacques Cartier Park (Laliberté 2002), another registered as BiFw-23 in Jacques Cartier Park (GRAO 2013) and a complex of sites investigated at Leamy Lake Park, with many indicating a continued, likely seasonal, presence spanning the Late Archaic Period to the Late Woodland Period (Pilon 2006; Pilon 2005; Laliberté 1997). Sites with a Woodland Period component have also been located across from Leamy Lake Park on the south side of the Ottawa River at Rockcliffe Park (Pilon and Boswell 2015). Two small undiagnostic ceramic sherds dating to the Woodland Period were recovered during excavations on Parliament Hill (CARF 1992), as well as a red-ochre stained ceramic sherd, a shell bead and a piece of red ochre recovered from a previously disturbed context in the vicinity of Centre Block (Heritage Quest 1996). Furthermore, several sites have been documented along the north shore of the Ottawa river including one near Aylmer (Sowter 1915), another just west of the Champlain Bridge registered as BiFw-39 (Laliberté 1998a; Laliberté 1998b), at Indian Point in the Pembroke area (Pilon 2005) and near the convergence of the Schwan and Ottawa Rivers (Kennedy 1964).

Sites investigated along the south side of the Ottawa River provide additional insight into the settlement distribution and land use during the Woodland Period. Evidence of Woodland Period occupation near the southern Ottawa River shoreline includes discoveries across from Aylmer at Raymond Point (Sowter 1915; Sowter 1901; Sowter 1900), near Shirleys Bay and Rocky Point (Jamieson 1989), Constance Bay (Watson 1972; Savage 1972), Marshall's and Sawdust Bays (Daechsel 1981) and on Morrison Island (Pilon and Boswell 2015; Pilon and Young 2009; Kennedy 1966).

Post-Contact Period (c. 1600-present)

By the end of the Late Woodland Period, distinct regional populations occupied specific areas of Ontario separated by vast stretches of largely unoccupied land, including the Huron along the north shore of Lake Ontario, the Algonquins along the Ottawa River and the St. Lawrence Iroquois along the St. Lawrence River. Facing persistent hostilities with Iroquoian populations based in what is now New York State, the Huron moved from the

north shore of Lake Ontario to the Lake Simcoe and Georgian Bay region and the St. Lawrence Iroquois relocated sometime in the late 16th century with refugees possibly dispersing among the Algonquin populations in the Ottawa Valley region (Pendergast 1999).

The Algonquins, who occupied the lands north of the Huron, had historical hunting territories in the Ottawa Valley that may have extended as far east as the St. Maurice River in Quebec. They also occupied the lowlands south of the St. Lawrence River after the St. Lawrence Iroquois were no longer occupying the area in the late 16th century (Trigger and Day 1994). At the time of initial contact, the French documented several Algonquin groups residing in the general vicinity of the Study Area (Heidenreich and Wright 1987). These included the Kichesipirini of Morrison Island, the Matouweskari along the Madawaska River to the west, the Onontcharonon in the Gananoque River basin to the southwest, and the Weskarini situated in the Petite Nation River basin to the northeast.

Though it is often difficult to link archaeological sites to specific historical Indigenous groups, the Highland Lake site (BiGh-1), located west of Ottawa, may be an Algonquin site associated with the Matouweskari (von Gernet 1992). Ottawa Valley Algonquin sites typically consist of shallow deposits characteristic of seasonal occupation by small family groups within family or band territorial limits and are typically located on the headwaters of major tributaries (Pendergast 1999). Hunting territories were shared by the male members of the family with territories bounded by rivers, lakes, or other natural features (Speck 1915). Algonquin families remained within their band territory following a seasonal round. Winters were spent in the bush hunting large game such as moose and deer and trapping beaver (Morrison 2005). A few larger sites have been identified including at Morrison Island and Leamy Lake which represent summer camps where larger groups came together (Pilon and Boswell 2015).

The Algonquins' location along the same river networks used for transportation by early French traders positioned them to monopolize the early fur trade with the two communities becoming close allies following Champlain's expedition in 1603 where he first encountered Algonquin peoples at Tadoussac (Morrison 2005). Due to the Algonquin's control of major waterways, they had traditionally served as intermediaries during exchanges of furs and other goods between Europeans and other Indigenous groups (Holmes 1993).

Competition for furs increased existing tensions between the Algonquin communities and their neighbours including the Haudenosaunee Nations, such as the Mohawk, residing to the south in what is now southern Ontario and upper New York State. The 17th century saw a period of conflict known as the Beaver Wars between the Algonquin and the Haudenosaunee that resulted in the significant disruption of life. Mohawk raids against Algonquin villages in the Upper Ottawa and St. Lawrence Valleys resulted in the abandonment or destruction of many Algonquin settlements in these areas (Trigger and Day 1994). Some Algonquins found refuge in French settlements such as Trois-Rivières, Quebec City, Sillery, and Montreal while others may have retreated to interior locations along the Ottawa River's tributaries (Holmes 1993). At the end of the 17th century, the Haudenosaunee were driven out of much of southern Ontario by the Mississaugas though they continued to occupy parts of eastern Ontario on a seasonal basis.

The French brokered a peace treaty in 1701 at Montreal with the Algonquin and Haudenosaunee agreeing to peacefully share the lands around the Great Lakes (INAC 2011). In exchange for peace, the Algonquin gave the Haudenosaunee secure access to furs which the Haudenosaunee used to secure their alliance with the British. During the 18th century, population decline due to epidemics from European diseases and the extended conflict with the Haudenosaunee, as well as close contact with the French, brought on changes to Algonquin social organization (Morrison 2005). Many Algonquins began spending their summers at French missions. Between 1712 and 1716, Algonquins were noted as living along the Gatineau River with the Haudenosaunee occupation located south of the St. Lawrence River (Holmes 1993). By 1740, Algonquin communities were present in the

vicinity of Trois-Rivières, Rivière Lièvre and Mohawk community members were residing near Lake of Two Mountains (Holmes 1993). Contact with the French missions led to some Algonquin peoples becoming Christians with ties to the missions where they summered while retaining ties to their traditional bands (Morrison 2005). They continued sharing the same seasonal rounds with the non-Christian members of their bands.

Following the Seven Years' War (1756-1763), the defeat of the French, Algonquin, and their allies by the British and the Haudenosaunee resulted in the further loss of Algonquin hunting territories in southern Quebec and eastern Ontario as the British seized France's colonies. The extension of Quebec's boundaries in 1774 through the *Quebec Act* and the use of the Ottawa River as the boundary of Upper and Lower Canada following the 1791 *Constitution Act* separated the Algonquins between two government administrations (AOP n.d.).

Britain's colonial policy differed from the French in that the Crown was much more interested in securing land surrenders from the Indigenous populations for settlement by Europeans. The Royal Proclamation of 1763 issued by King George III enabled the Crown to monopolize the purchase of Indigenous lands west of Quebec. Although the Proclamation recognized Indigenous rights to their land and hunting grounds, it also provided a way through which these rights could be taken away (Surtees 1994). Land cession agreements between Indigenous groups and the Crown increased following the War of 1812 as a new wave of settlers arrived in Upper Canada primarily from Britain. The Crown implemented annuity systems in the purchase of lands from Indigenous peoples where the interest payments of settlers on the land would cover the cost of the annuity rather than pay a one-time lump sum. By the 1850s, Indigenous Nations and communities had become cautious of these agreements and began to demand the retention of reserved land and preservation of hunting and fishing rights (Surtees 1994).

Between 1783 and 1784, Captain William Redford Crawford negotiated on behalf of the Crown with the Mississauga chiefs living in the Bay of Quinte region. In the so-called "Crawford Purchase," Crawford negotiated for the lands located east of the Bay of Quinte to the Trent River. This agreement was intended to provide land to the United Empire Loyalists and Indigenous allies following the American Revolution (Government of Ontario 2020). The lands covered by the Crawford Purchase now include the communities of Kingston and Brockville. The Crown again negotiated with the Mississauga of the Bay of Quinte and Kingston areas during the Rideau Purchase (1819/1822) which included a portion of Algonquin territory in the Ottawa Valley (Surtees 1994). The Algonquin and Nipissing, who were left out of the talks, protested the purchase, but were largely ignored (Holmes 1993).

The Algonquins continued to occupy the Ottawa Valley throughout the 19th century despite an influx of European immigrants. While the Crown initially did not issue patents or warrants of survey for lands still in Indigenous possession, this began to change as Euro-Canadian settlement and lumbering increased. Algonquin complaints about encroachment on their hunting territories were largely ignored by the local government. Some Algonquin and Nipissings made arrangements with individual Euro-Canadian immigrants, collecting rents while allowing them to occupy Algonquin lands. In 1839, the Crown denied the Algonquins and Nipissings the right to lease portions of their land, including islands in the Ottawa River (Holmes 1993). Instead, granting the patent to the land to the Euro-Canadians who had been leasing the land. Furthermore, the Crown did little to prevent further additional encroachments by settlers on Indigenous lands.

The loss of lands to Euro-Canadian encroachment forced Indigenous peoples throughout Canada to turn to the wage-labour economy where they contributed to the development of industry (Fernandez and Silver 2017). In the 1820s the Hudson Bay Company hired Algonquin men to freight goods and furs to Moose Factory, replacing French and Iroquois workers who had previously worked freighting goods for the North West Company along the Ottawa River (Inksetter 2021). This had an impact on Algonquin settlement patterns with Algonquin men and their

families converging at trading posts at Abitibi and Timiskaming before the men set off for their journey to Moose Factory. The women and children remaining around the trading posts until the men returned a month later. While summer gatherings were a cultural practice before, these gatherings were much larger.

Another influence was the arrival of Catholic missions at trading posts to convert the gathered Algonquins to Catholicism. Missionaries built chapels and encouraged the establishment of cemeteries around the trading posts. The yearly summer missions led to the trading posts taking on ritual dimensions with Algonquin bands coming together in the summer to pray and feast together on a large scale. By the end of the 19th century, some families were spending as much as three months around the posts (Inksetter 2021). The arrival of the lumbering industry brought imported foodstuffs which the Algonquins traded for to support their stays at the trading posts. The development of a semi-sedentary lifestyle led to some Algonquin families growing crops such as potatoes while children attended schools.

A reserve was purchased for use by the Algonquins in Golden Lake in 1873 (Holmes 1993). The Golden Lake reserve, now known as the Algonquins of Pikwakanagan First Nation, has a registered population of around 2,000 people with over 400 living on the reserve (INAC 2013). Additional reserves and settlements for the Algonquins were established in Quebec during the mid-20th century.

The *Indian Act* of 1876 framed the relationship between the Canadian government and Canada's Indigenous peoples as a paternalistic one where the government served as their guardian until their cultures were able to integrate into Canadian society (INAC 2011). The Department of Indian Affairs was granted the authority to make policy decisions such as determine who was classified as Indigenous, manage their lands, resources and money, and promote "civilization". The consequence was the further erosion of Indigenous rights to autonomy and self-governance. The implementation of residential schools and adoption of Algonquin children by non-Indigenous families in the mid-20th century reflected further discrimination and the disregard of rights (AOP ND).

The Algonquins of Ontario today consist of ten communities: Antoine, Algonquins of Pikwakanagan First Nation, Bonnechere, Greater Golden Lake, Kijicho Manito Madaouskarini, Mattawa/North Bay, Ottawa, Shabot Obaadjiwan, Snimikobi, and Whitney and Area (AOO ND).

The Ottawa Valley is unceded Algonquin land and land claim negotiations with Canada and Ontario are in progress. The Algonquin and the Government of Canada signed an Agreement In Principle to transfer 117,500 acres of Crown lands in eastern Ontario to the Algonquin (INAC 2016; Tasker 2016). While this represents an important step in the negotiations, the talks are ongoing.

2.2 Post-Contact Euro-Canadian Regional History

Samuel de Champlain was the first European to document his explorations of the Ottawa Valley, initially in 1613 and again in 1615. He was preceded by two of his emissaries, Etienne Brule around 1610 and Nicholas de Vigneau in 1611. It is likely that all three travelled at least the lower reaches of the Rideau River. Champlain encountered the Algonquin regional groups living in the Madawaska, Muskrat Lake, Morrison Island and along the Ottawa River (AOO ND) who they allied with to secure the fur trade against European rivals in exchange for French support against the Haudenosaunee (Pendergast 1999). In the wake of Champlain's voyages, the Ottawa River became the principal route for explorers, missionaries and fur traders travelling from the St. Lawrence River to the interior, and throughout the 17th and 18th centuries this route remained an important link in the French fur trade.

Following his retirement from the French military, a Count and his wife are purported to have settled along the Ottawa River with the intention of establishing a post to promote the fur trade with the local Indigenous population. Accompanied by a man named Perault and three or four canoe men, they settled in an area known as Butternut Grove, probably near present-day Rockland. A settlement was established which included a contingent of Indigenous people along the bank of the Ottawa River. The relationship between the French settlers and the local population is suggested to have been productive and continued for an extended period of time (Serre 2005).

The Ottawa River continued to serve as a major transportation corridor following Champlain's voyage, with the waterway becoming a principal route for succeeding explorers, missionaries and traders travelling from the St. Lawrence River to the interior and towards Georgian Bay.

A French seigneurie was established at L'Orignal and became one of the three oldest villages on the Ottawa River and the only seigneurie granted in what later became Upper Canada (McCann 2005). This early French settlement may correlate to the one suggested to have been established in an area known as Butternut Grove where a French count, his wife, and three or four canoe men including one named Perault, settled in an area with the intention to promote trade with the local Indigenous population (Serre 2005). The seigneurie and associated property are reported to have been sold to François Provost in 1674 and later passed to the Soulange family, with Joseph de Longueuil gaining ownership in 1791. The travels of Alexander Henry along the Ottawa River soon after the British victory in 1763 suggests the small French trading post formerly established near L'Orignal or Rockland appeared to have been recently abandoned (Bond 1968), with the occupants likely dispersing following the loss of French influence in the area. It was later sold to American Nathaniel Treadwell in 1796, who divided it among his family and friends (McCann 2005).

Another French trading post was established at the convergence of the Coulonge and Ottawa Rivers around 1670 by the Ailleboust family. This settlement would later become known as the Fort Coulonge trading post (Lorrain 1978). The economic wealth stimulated by the French fur trade in the early 17th century promoted the rapid expansion northward, with the Ottawa River providing the opportunity to transport goods to the western trading posts on the lakes by canoe, which could not be accomplished by the larger sailing vessels operating on Lake Ontario (Adney and Chapelle 2014).

James Fox represents one of early British subjects who settled along the Ottawa River in the 18th century. Fox was a Revolutionary soldier originally from Ireland who arrived in the area known as Foxes Point, near present-day Clarence Point and Thurso, soon after marrying his wife in Quebec. After initially establishing a relationship with the local Indigenous community members through the fur trade, Fox later abandoned his commercial enterprise and lived a more sedentary lifestyle, with both he and his wife staying in the area until their deaths and are believed to be buried at Foxes Point (Serre 2005).

By the late 18th century, John Graves Simcoe, Lieutenant Governor of Upper Canada, had issued a proclamation aimed at attracting new settlers to the Ottawa Valley. To help facilitate the influx of expected immigration to the area individual lots were surveyed within each township boundary and many of these settlement lots were granted by the Crown to United Empire Loyalists and other prospective immigrants.

In the early 19th century, the Ottawa River represented the primary transportation corridor for vessels transporting people and goods to the rural area of Bytown (Ottawa) and Wrightstown (Hull), and also provided the ability to ship products to Montreal and Quebec City where they could be sold to American and European interests.

Settlement in the Ottawa region was not actively encouraged by the colonial government until the late 18th century. Within two years following the 1791 division of the Province of Quebec into Upper and Lower Canada,

John Stegmann, the Deputy Surveyor for the Province of Upper Canada, surveyed four townships (Nepean, North Gower, Osgoode and Gloucester) straddling the Rideau River near its junction with the Ottawa River. This survey was initiated under the ascendancy instituted by John Graves Simcoe, Lieutenant Governor of the Province of Upper Canada, and associated with his proclamation aimed at attracting new settlers to the region.

Philemon Wright, a native of Massachusetts, began making exploratory trips up the Ottawa River in 1796 looking for a suitable location for a settlement. In 1800, he led a party of thirty settlers, including their supplies, horses, and oxen, up the frozen Ottawa River ice in covered sleighs. Wright originally established his settlement near the Chaudière Falls and later moved to the present site of Hull. The party led by Wright is considered to be the earliest settlement of people of European descent in the Ottawa region (Bond 1984; Guillet 1969).

By 1815 there were only scattered pockets of settlement along the Ottawa River, or on its major tributary, the Rideau (Reid 1990). Many of these early settlers were required to travel by canoe to Montreal for supplies, which were required to maintain settlement within the contemporary rural landscape (Guillet 1969). More settlers slowly started to immigrate to the Ottawa area following the "Rideau Purchase" in 1819 (Surtees 1994), although the lack of roads significantly hindered settlement within the region. By July 1819, the settlers along the Ottawa River were given a regular postal service with the mail leaving Montreal every Tuesday morning and travelling to Hull along the Ottawa River and Richmond by way of St. Eustache, St. Andrews, and Grenville (Guillet 1969).

The Rideau River, which continued to serve as a seasonal hunting, fishing, and gathering area for Indigenous peoples living in the area, was used as a travel corridor that connected the Ottawa Valley to the St. Lawrence River (Watson 2018). The construction of the Rideau Canal (1826–1832) brought increased European settlement along the shores of the Rideau River.

While the Ottawa River represented a primary transportation route for people and goods travelling onboard vessels in the 19th century, it also served as a major passageway to facilitate the lucrative timber industry that developed in the Ottawa region. The Ottawa region contained a vast wealth of white pine that was sought by merchants across Canada, Britain and the United States due to its strong, yet flexible, composition. The white pine found within the Ottawa Valley was particularly large, with some measuring upwards of 180 feet in height and 16 feet diameter. Shipbuilders, particularly those of the British Royal Navy, relied on the white pine for use as masts and ship framing as it was easy to form and unlikely to warp (Lee 2006).

Philemon Wright is considered the first to realize the potential of timber resources available within the Ottawa region. Following disappointing agricultural production from the initial few annual harvests, and the necessity of developing economic stability for the fledging community, Wright shifted focus to capitalizing on the vast amount of timber accessible around the Ottawa River.

In 1806, Wright examined the rapids along the river in preparation for transporting his first shipment to market in Quebec City (Guillet 1969) and in June 1807 loaded a raft of 700 logs with over 9,000 boards and 6,000 oak staves (Bond 1984). The journey along the Ottawa River from Gatineau to Quebec lasted thirty-five days (Guillet 1969) and marked the beginning of the lucrative Ottawa Valley lumber industry that would continue for another hundred years (Walker and Walker 1975).

The economic potential of the timber trade attracted several new settlers to the Ottawa region such as Bradish Billings, who initially worked with Wright before developing his own timber commodities in the Bytown (Ottawa) area. In 1823, over 300 rafts of timber were sent from Bytown/Hull to the Quebec markets and by 1835 lumbermen had penetrated almost 400 miles up the Ottawa River to Lake Timiskaming to capitalize on the timber resources further north (Guillet 1969). An indication of the growing timber industry in the Ottawa region is provided

by the number of timber rafts transported down the Ottawa River, with 8,310 in 1840 and 14,131 by 1846. Each crib would hold at least 200 large timbers, with an average almost 2 million timbers being transported along the Ottawa River each year (Legget 1988). As timber commodities became depleted and access to inland resources were difficult, the timber industry began to decline in the early 20th century. Although there was still a demand for wood, metal provided an alternative construction material. By 1904, only about 16 percent of the total exports were associated with timber (Guillet 1969), which represented a significant decline compared to the 19th century in the Ottawa/Hull area.

Further development of the Ottawa and Rideau River shorelines during the 19th and 20th centuries resulted in diminished opportunities for Indigenous hunting and gathering in the area as Euro-Canadian settlement continued to increase.

2.3 Gloucester Township

Gloucester Township was established in 1772 as Township B. It was originally part of Russell County but became part of Carleton County in 1838 and was incorporated as Gloucester Township in 1850. Gloucester Township is bounded by the Rideau River to the west, the Ottawa River to the north, Osgoode on the south and Russell County on the east.

Land registry records indicate that patents for some of the lots in Gloucester Township were issued as early as 1802 but most of these were granted to United Empire Loyalists or their family members who never actually settled on the lots. The first documented permanent settler in the township was Braddish Billings who settled on Lot 17 in the Gore Junction in 1812. The earliest available assessment roll for Gloucester Township dates to 1823 and notes three families on lots immediately to the south of the Billings property: James Doxey on Lot 19, Junction Gore, Duncan McKenzie on Lot 20, Junction Gore, and Captain Andrew Wilson on Lot 2, Concession I, Rideau Front (Kemp 1991).

Although most of the early settlers travelled by water as much as possible, roads soon became a necessity both to reach inland lots and to travel economically between developing settlements. Perhaps the earliest road in the region ran through Nepean Township from the Ottawa River to the Rideau River shore opposite Captain Andrew Wilson's property in Gloucester Township. This may have been a trail established before the arrival of Europeans or possibly bushed out by Ira Honeywell in 1814 to bring supplies from Prescott to his new homestead in Nepean Township. As early as 1815, a rough road had been cut from the Hull settlement on the north shore of the Ottawa River across the Chaudière and then southeast through Nepean Township to cross into Gloucester Township near Dow's swamp. This road then followed the east bank of the Rideau River to Black Rapids where it crossed back into Nepean Township and continued south to Merrickville (Elliott 1991, p. 19). River Road follows part of this early alignment. Another early forced road was built along a ridge from the Rideau River crossing on Captain Wilson's property through Bowesville and southeast to Johnston's Corners. Although the exact date of construction for this road is unknown, John Cunningham appears to have been operating an inn along the road by 1825 and the Bytown & Prescott Stage was also using the road in the 1820s.

The construction of the Rideau Canal (1826-1832) accelerated settlement in the region with additional roads constructed to connect outlying communities. In 1828, Braddish Billings initiated the construction of a bridge across the Rideau River to facilitate travel along the old 1815 road from the Chaudière which, up until then, had required a ferry crossing. Subsequently, the Metcalfe Road (Bank Street) was built from this bridge through the Rideau Front lots of Gloucester Township to the village of Metcalfe and on to the St. Lawrence River. The Rideau River Road (River Road/Riverside Drive) was also extended north along the east bank of the Rideau River to the

Ottawa River. Other roads developed in a rough grid pattern along the lot and concession lines as settlement expanded through the township during the 19th century.

The transportation network of the region, initially focussed on the waterways (the Rideau Canal) and the early road system, changed again with the construction of the Bytown and Prescott Railway, which began operation in 1854; in 1867 it was renamed the St. Lawrence and Ottawa Railway (Ontario Railway Map Collection, n.d.). This line was later twinned with the Canadian National Railway (CNR) line in 1913.

2.4 Study Area History

2.4.1 Review of Historical Records

Most of the Study Area falls within the east side of Lot 21, Concession 4 from Rideau River, in the former geographic Township of Gloucester, Carleton County. A small portion, at the north end of the Study Area, falls within Lot 20, Concession 4 from Rideau River. The earliest data for the historic occupation of the Study Area is shown through Coffin's 1825 Plan of the Township of Gloucester, which indicates that David Bradshaw owned Lot 21 and William Bradshaw owned Lot 20 (Map 3). However, the Abstract Index Books digitized by Service Ontario's ONLand database of Gloucester Township (Land Registry Office I.D. # 04, *Ottawa-Carleton, Gloucester, Book 27*) appear to indicate that Lot 21 was first granted from the Crown in two parts: the north 2/3s (133.5 acres) to a George Byron Lyon in 1846 and the south 1/3 (66.66 acres) to a Robert Lee in 1849, while Lot 20 was granted from the Crown to James Findley in 1847. In 1856, Robert Lee purchased the remaining 2/3 of Lot 21 from Lyon, whereas, Lot 20 appears to have remained with the Findley family throughout the 19th century.

By 1863, an owner is not indicated for Lot 21 in Walling's *Historical County Map of Carleton* and no structures are depicted on the lot (Map 3). This could suggest the property was unoccupied at this time. Nonetheless, Bank Street, a historical transportation route, is shown within 100 m of the Study Area. Similarly, the 1863 map does not indicate an owner or occupation for Lot 20, Concession 4 from Rideau River.

Belden's 1879 *Illustrated Atlas of Carleton County* (Map 3) further confirms that Robert Lee acquired ownership of the entire 200 acres of Lot 21 by this time. A structure is depicted in the northeast corner of the lot, immediately adjacent to the west boundary of the Study Area. In 1875, the Lees appear to have moved their residence from Lot 22 to Lot 21, Concession 4 from Rideau River, as Robert Lee is previously listed as the owner of Lot 22 in Walling's 1863 map. The northeast structure on Lot 21 is presumed to be the Robert Lee homestead post-1875 and may correlate with a two-storey stone structure located on the 4816 Bank Street property, which was severely damaged by a fire in the 20th century and demolished by 1991 (Golder 2013a). The structural remnants and/or foundation of a stone building are located northwest of the other remaining structure at 4816 Bank Street, visible on 20th century aerial images of the property (Map 5A and Map 5B). Land registry records show no further sale of the property until 1910 when the Robinson family acquired Lot 21 from the Lees (OCLR Instrument GL22478).

The 1879 map indicates that Lot 20 has been sectioned, with ownership of the east half remaining unknown or unoccupied, and ownership of the west half bestowed to the M. Findley Estate.

2.4.2 Recent Land Use History

To chart recent land use in the Study Area, 20th century and early 21st century topographic maps and aerial imagery were reviewed. A summary of the topographic map and aerial photo analysis is provided in Table 1 and a representative selection of aerial images and topographic maps are reproduced in Map 4, Map 5A, and Map 5B.

Table 1: Review of 20th century and 21st century topographic maps and aerial photographs

Year & Type	Description
1908 topographic map	<ul style="list-style-type: none"> ▪ A structure is depicted within the Study Area, possibly related to Robert Lee occupation in late 19th century and/or historical two-storey stone structure demolished in 1991 ▪ Road is evident at north end of Study Area
1941 topographic map	<ul style="list-style-type: none"> ▪ A structure is depicted within the Study Area, possibly related to Robinson family occupation in first half of the 20th century and/or historical two-storey stone structure demolished in 1991 ▪ Road is evident at north end of Study Area
1976 aerial photograph	<ul style="list-style-type: none"> ▪ Structures depicted centrally within the west half of the Study Area ▪ Areas of property surrounding structures and the driveway appear to have been partially cleared of vegetation ▪ Most of the Study Area appears to be lawn, treed, or meadow areas ▪ Dirt or gravel road is evident at north end of Study Area
1991 Aerial Photograph	<ul style="list-style-type: none"> ▪ Outbuilding structures seen within the Study Area in the 1976 aerial photograph, north of the house structures, appear have been demolished ▪ Two structures remain depicted centrally within the west half of the Study Area. The west structure lacks a roof and is perhaps the two-storey stone structure that was damaged in a fire and demolished in 1991 ▪ Most of the Study Area appears to be lawn, treed, or meadow areas ▪ Dirt or gravel road remains evident at north end of Study Area
2015 Aerial Photograph	<ul style="list-style-type: none"> ▪ Two structures remain depicted centrally within the west half of the Study Area (one foundation and one intact) ▪ Garden areas are visible south of the structures ▪ Dirt or gravel road remains evident at north end of Study Area ▪ Vegetation has partially grown back in areas previously cleared around the structures ▪ Most of the Study Area appears to be lawn, treed, or meadow areas
2017 Aerial Photograph	<ul style="list-style-type: none"> ▪ Evidence for ground disturbance in north portion of Study Area where construction is underway for Miikana Road and the subdivision to the north ▪ Remainder of the Study Area appears the same as 2015 aerial photograph
2018 Aerial Photograph	<ul style="list-style-type: none"> ▪ Evidence for ground disturbance in north portion of Study Area where construction is on-going for Miikana Road, as well as the subsequent installation of curbs, sidewalks, and utilities ▪ Construction is also underway for the subdivision located immediately west of the Study Area ▪ Most of the Study Area remains undisturbed (lawn, treed, or meadow areas)
2022 Aerial Photograph	<ul style="list-style-type: none"> ▪ Study Area is now in its present-day configuration

As shown on Map 5A and Map 5B, the construction of Miikana Road, as well as the subsequent installation of curbs, sidewalks, and utilities, between 2017 and 2018 has resulted in deep and extensive ground disturbance at the northern extent of the Study Area.

3 ARCHAEOLOGICAL CONTEXT

3.1 Current Conditions

The Study Area primarily includes the residential lot, 4816 Bank Street, located at the intersection of Bank Street and Miikana Road in Ottawa, Ontario, as well as portions of municipal Right-of-Way (ROW) and 930 Miikana Road at its north end. The residential lot consists of existing structures and a driveway, portions of manicured lawn, and portions of treed or meadow areas. Whereas, the north end of the Study Area consists of portions of municipal ROW that are either meadow/treed areas or part of the Miikana Road infrastructure (i.e. road, embankment, sidewalk) that was constructed in 2017 (see Section 2.4.2 above and Map 5A/B).

3.2 Environment

The Study Area is located within the Russell and Prescott Sand Plains physiographic region. The physiographic region covers a continuous 65-mile belt from Ottawa to Hawkesbury with boundaries of abrupt bluffs or intermediate terraces. The topography in the region is typified as flat and few streams with sandy soil underlain by stratified red and grey clays (Chapman and Putnam 1984). The region was initially a continuous delta formed by the Ottawa River and its north-bank tributaries into the Champlain Sea, which later divided into parts as it elevated above sea level (Chapman and Putnam 1984).

The Study Areas' surficial geology illustrated in Map 6 indicates that the Study Area is located within a till deposit consisting of stone-poor sandy silt to silty sand textured till (Ontario Geological Survey 2010). The topography within the Study Area is generally flat and sits at an elevation of 95 to 97 m above sea level. No relic shorelines are identified within the Study Area by the surficial geology mapping.

The soil mapped in the Study Area is Grenville Loam, which is a silt loam that consists of variably brown and stony loam over greyish till. Grenville Loam soils tend to develop on undulating topography and are considered to have good drainage (Hills & Richards 1944).

The Study Areas are also within the Upper St. Lawrence sub-region of the Great Lakes-St. Lawrence Forest Region. Trees found in this region are a mix of coniferous and deciduous tree species and include sugar maple, beech, yellow birch, red maple, hemlock, white, red and jack pine. There are also smaller amounts of white spruce, balsam fir, aspen, white birch, red oak, and basswood. Rather common are hardwood and mixed wood swamps in which cedars, tamaracks, black spruce, black ash, red maple, and elm thrive. Much less common are butternut, burr oak, white ash and red cherry (Rowe 1977). Most of the Study Area was cleared of original forest cover during the 19th century through lumbering activities.

The closest water source is Findlay Creek, located approximately 320 m northeast of the Study Area. Findlay Creek is a headwater feature of the South Nation watershed, which flows into the Castor River to the south (City of Ottawa 2011).

3.3 Previous Archaeological Assessments

A search of the *Ontario Public Register of Archaeological Reports* and a review of previous archaeological reports indicates that one previous AA has been conducted within part of the current Study Area, and nine AAs have been conducted within 50 m of the Study Area (Table 2). Each of these previous assessments is shown on Map 7 and detailed below.

Table 2: Previous archaeological assessments on or within 50 m of the Study Area

PIF #	Publication Year	Title	Consultant	Recommendations
P051-116-2006	2007	Stage 1/2 Archaeological Assessment of Findlay Creek Subdivision Part Lot 20, Concession IV, Rideau Front.	McGovern Heritage Archaeological Associates	No further AA recommended.
P385-003-2013	2013	Stage 1 Archaeological Assessment Remer Lands Concession 4, Lot 21 and 22 Historic Township of Gloucester Carleton County, Ottawa, Ontario	Golder Associates Ltd. (Golder)	Recommendations for Stage 2 AA for areas that retain archaeological potential.
P386-0004-2013	2013	Stage 2 Archaeological Assessment Remer Lands, Concession 4, Lots 21 and 22 Historic Township of Gloucester Carleton County, Ottawa, Ontario.	Golder Associates Ltd.	Two sites recommended for Stage 3 AA.
P311-090-2012.	2015	Stage 1 Archaeological Assessment, Bank Street Widening EA from Leitrim Road to Rideau Road, Lots 16 through 25, Concession 4 & 5, Rideau Front, City of Ottawa, Former Township of Gloucester, Carleton County, Ontario.	Golder Associates Ltd.	Recommendations for Stage 2 AA for areas that retain archaeological potential.
P385-0005-2013.	2016	Stage 3 Archaeological Assessment, Applewood Site, BhFv-25 Lot 21, Concession 4 Geographic Township of Gloucester City of Ottawa.	Golder Associates Ltd.	No further AA recommended.
P386-0011-2014	2016	Stage 3 Archaeological Assessment McLaughlin Site, BhFv-26, Lot 21, Concession 4 Geographic Township of Gloucester City of Ottawa.	Golder Associates Ltd.	Recommended for Stage 4 AA.
P385-0023-2016.	2016	Stage 4 Archaeological Assessment McLaughlin Site, BhFv-26 Lot 21, Concession 4 Geographic Township of Gloucester City of Ottawa.	Golder Associates Ltd.	No further AA recommended as site was fully mitigated.
P378-0025-2017.	2018	Stage 1-2 Archaeological Assessment: Bank Street Widening Concession 4, Part Lots 15, 16, 17, 18, 19, 20, 21, 22 and Concession 5, Part Lots 15, 16, 17, 18, 19, 20, 21, 22 Geographic Township of Gloucester City of Ottawa, Ontario.	Paterson Group	No further AA recommended.
P376-0017-2018	2020	Stage 1 Archaeological Assessment Earl Armstrong Road Extension Environmental Assessment Study, Part Lots 22-25, Concession 3; Lots 22-25; Concession 4; Lots 21-25 Concession 5; Lots 21-26 Concession 6 Rideau River, Geographic Township of Gloucester, Carleton County; City of Ottawa, Ontario	Letourneau Heritage Consulting Inc. (LHC)	Recommendations for Stage 2 AA for areas that retain archaeological potential.

3.3.1 Previous Assessments within the Study Area

In 2018, Letourneau Heritage Consulting Inc. (LHC) conducted a Stage 1 AA for the proposed Earl Armstrong Road Extension Environmental Assessment (EA) in the City of Ottawa, Ontario (PIF# P376-0017-2018). The study area was comprised of approximately 983 ha of land, bounded by Albion Road to the west, Hawthorne Road to the east, Rideau Road to the south, and Blais Road to the north, and legally described as parts of Lots 21 to 25, Concessions 3 to 6 Rideau River, in the former Township of Gloucester, Carleton County. The Stage 1 AA

consisted of a background study and site inspection, which determined that most of the study area exhibits archaeological potential and requires Stage 2 AA prior to the commencement of construction or ground disturbance activities. Conversely, the few portions of the study area that were found to have been previously assessed or visually disturbed were considered to have no to low archaeological potential and did not require further assessment. Two cemetery locations were noted in the report and specific recommendations were outlined for the potential Stage 2 AA investigations and Stage 3 Cemetery Limit Investigations (LHC 2020). These cemeteries are located well beyond 300 m from the current Study Area and are not of concern for this report.

The southeast half of the current Study Area overlaps with the LHC EA Stage 1 study area. In the LHC report, this part of the Study Area was considered to have archaeological potential and Stage 2 AA was recommended (see Map 7 and Map 9). It should be noted that private properties were not accessed during the site inspection due to the geographical extent of the EA study area. As such, LHC anticipated that portions of the areas of archaeological potential identified within the report may be found to have low potential due to localized conditions (e.g. disturbance, slope) (LHC 2020).

3.3.2 Previous Assessments within 50 m of the Study Area

In 2006, McGovern Heritage Archaeological Associates (McGovern Heritage) completed a Stage 1 and 2 AA for the Findlay Creek Subdivision (PIF# P051-116-2006). The study area consisted of a 27.5 ha property on part of Lot 20, Concession 4 Rideau Front, in the former Township of Gloucester, Carleton County, now City of Ottawa, Ontario. Through a background study, the property was considered to exhibit moderate to high archaeological potential. As such, in the Fall of 2006, McGovern Heritage completed a Stage 2 test pit survey at 5 or 10 m intervals for most of the property, and judgemental test pitting for portions of the property located away from indicators of potential (e.g. Findlay Creek and Bank Street). No archaeological resources were identified during the Stage 2 assessment and, as such, the study area was not recommended for any further archaeological work (McGovern Heritage 2007).

In 2012, Golder Associates Ltd. (Golder) conducted a Stage 1 AA of the Bank Street Corridor between Leitrim Road and Rideau Road (PIF# P311-090-2012), legally described as part of Lots 16 to 25, Concessions 4 and 5 Rideau Front, in the former Township of Gloucester, Carleton County, now City of Ottawa, Ontario. Through a Stage 1 background study and property inspection, the assessment identified areas of moderate to high archaeological potential along both sides of the paved, two-lane road. Although, some portions of the study area were subject to previous assessment and/or previous ground disturbance and, as such, were recommended for no further assessment (Golder 2015). An updated Stage 1 and 2 AA was conducted for the study area in 2017 by Paterson Group (PIF# P378-0025-2017).

Paterson Group conducted a combined Stage 1 and 2 AA for the Bank Street Corridor between Leitrim Road to approximately 670 m south of Blais Road in 2017, legally described as part of Lots 15 to 22, Concessions 4 and 5, in the former Township of Gloucester, Carleton County, now City of Ottawa, Ontario (PIF# P378-0025-2017). The Stage 1 assessment proposed that the subject property had archaeological potential and would require Stage 2 AA. In the summer of 2017, Paterson Group completed a Stage 2 test pit survey at 5 m intervals for all areas exhibiting archaeological potential and documented areas of previous disturbance. No archaeological resources or features were encountered during this assessment. As such, the study area was not recommended for any further archaeological work (Paterson Group 2018).

In 2013, Golder completed a Stage 1 AA for the residential development of the Remer Lands, which comprised of part of Lots 21 and 22, Concession 4, in the former Township of Gloucester, Carleton County, now City of Ottawa, Ontario (PIF# P385-003-2013). Through a Stage 1 background study and property inspection, the report

recommended Stage 2 AA for portions of the property that exhibited archaeological potential, while portions of the property that were found to be habitually wet were considered to have low archaeological potential and did not require further assessment (Golder 2013a).

The Stage 2 AA of the Remer Lands study area was undertaken by Golder in 2013 as per the Stage 1 AA's recommendations (PIF# P385-003-2013). The Stage 2 test pit survey at 5 m intervals resulted in the identification of two archaeological sites and one findspot, Findspot 3. A Stage 3 AA was recommended for the Applewood Site (BhFv-25), a pre-contact Indigenous Middle Woodland, Saugeen projectile point find, as well as the McLaughlin Site (BhFv-26), a historical Euro-Canadian scatter that appeared to date to the early to mid-19th century. Findspot 3 was a small historical Euro-Canadian scatter that contained too few diagnostic artifacts to have further CHVI and, as such, no further work was recommended (Golder 2013b).

In October of 2013, Golder conducted the Stage 3 AA of the Applewood Site (BhFv-25) (PIF# P385-0005-2013). The site was identified on the basis of a single complete Saugeen-type projectile point found within a test pit. The Stage 3 excavations surrounded the positive test pit and involved the hand excavation of 11 1 m² units that yielded no further artifacts or cultural features. The Applewood Site (BhFv-25) was determined to be a single, isolated findspot and, as such, no further work was recommended for the site (Golder 2016a).

Golder conducted the Stage 3 AA of the McLaughlin Site (BhFv-26) between May and June of 2013 (PIF# P386-0011-2014). The site was identified by the presence of 189 historical artifacts recovered during the Stage 2 assessment. The Stage 3 excavations involved the hand excavation of 30 1 m² units that resulted in the recovery of 1,026 historical Euro-Canadian artifacts, most of which were 19th century ceramic sherds (87%). No cultural features were identified during the excavations. The McLaughlin Site (BhFv-26) was determined to have further CHVI as the site assemblage primarily dated to the early to mid 19th century. As such, the site was recommended for Stage 4 AA mitigation (Golder 2016b).

The Stage 4 AA excavations of the McLaughlin Site (BhFv-26) were conducted by Golder between August and September of 2016 (PIF# P385-0023-2016). The Stage 4 AA involved hand excavation of the core of the site (block excavation) until artifact counts dropped below 65 at site edges. The site was subject to mechanical topsoil removal (MTR) and examined for cultural features. A total of 40 Stage 4 units were hand excavated at the site and two cultural features were identified during the MTR investigations. The Stage 4 block excavations recovered a total of 3,095 19th century historical Euro-Canadian artifacts. Overall, the artifact assemblage and historical records indicated that the site was occupied by the McLaughlin family in the late 1830s to early 1840s. The McLaughlin Site (BhFv-26) was fully mitigated and no features of archaeological or CHVI remain for the site (Golder 2016c).

3.4 Registered Archaeological Sites

A search of the Ontario Archaeological Sites Database provided by the MCM on April 4, 2025, identified four registered archaeological sites within 1 km of the Study Area (MCM 2025) (Table 3). Two of the four sites are located within 300 m of the Study Area (presented in bold in Table 3).

Table 3: Registered Archaeological Sites within 1 km of the Study Area

Borden	Site Name	Time Period & Cultural Affinity	Site Type	Distance to Study Areas	Current Development Status
BhFv-1	Kelly	Post-contact Euro-Canadian	Agricultural, homestead	>300 m, <1 km	-

Borden	Site Name	Time Period & Cultural Affinity	Site Type	Distance to Study Areas	Current Development Status
BhFv-25	Applewood	Pre-contact Indigenous, Middle-Woodland	Findspot	<300 m	No Further CHVI
BhFv-26	McLaughlin Site	Post-contact Euro-Canadian	Agricultural, farmstead	<300 m	No Further CHVI
BhFv-29	Lee/Robinson Farmstead	Post-contact Euro-Canadian	Agricultural, farmstead	>300 m, <1 km	No Further CHVI

The Applewood Site (BhFv-25) and McLaughlin Site (BhFv-26) were identified during the archaeological assessments of the Remer Lands by Golder between 2013 and 2016, located immediately southwest of the current Study Area. The AAs associated with these two sites are discussed in detail in Section 3.3.2 above.

3.5 City of Ottawa Archaeological Management Plan

The *City of Ottawa Archaeological Management Plan*, developed by Archaeological Services Inc. in 1999, indicates that the central, southeast, and northeast portions of the Study Area have archaeological potential (ASI 1999; Map 8).

3.6 Archaeological Potential

Archaeological potential is defined in the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011:163) as the likelihood a Study Area contains archaeological resources. In land use planning, identifying archaeological potential is used to determine where sites may be found within a Study Area, and indicate whether time and resources will need to be allocated for archaeological survey and mitigation.

The features and characteristics indicating archaeological potential are listed in Section 1.3.1 of the *Standards and Guidelines for Consultant Archaeologists* (MCM 2011):

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

The *Standards and Guidelines for Consultant Archaeologists* (MCM 2011) also outline indicators for low or no archaeological potential. These can include areas that are permanently wet or have exposed bedrock or steep slopes, as well as where an area that has undergone extensive and deep land alterations that may have severely damaged the integrity of any archaeological resources (Section 1.3.2, MCM 2011:18, 28). These latter areas have often been “disturbed” through:

- quarrying;
- major landscaping involving grading below topsoil;
- building footprints; and
- sewage and infrastructure development.

However, activities such as agricultural cultivation, gardening, minor grading, and landscaping do not necessarily affect archaeological potential.

Table 4 summarizes the potential for archaeological resources in the Study Area based on the results of the background study and the criteria listed above.

Table 4: Summary of Archaeological Potential for the Study Area

Features of Archaeological Potential	Yes/No	Description
1. Are archaeological sites located within, or within 300 m, of the Study Area?	Yes	<ul style="list-style-type: none"> ■ Two archaeological sites were registered within 300 m of the Study Area (BhFv-25 and BhFv-26).
2. Is there an extant or formerly mapped primary or secondary water source within the Study Area or within 300 m of the Study Area?	No	<ul style="list-style-type: none"> ■ The closest water source, Findlay Creek, is located approximately 320 m northeast of the Study Area
3. Are there areas of elevated natural topography within the Study Area?	No	<ul style="list-style-type: none"> ■ There are no known areas of elevated natural topography in the Study Area
4. Are there pockets of well drained sandy soil in the Study Area?	Yes	<ul style="list-style-type: none"> ■ The Study Area may have pockets of well-drained sandy soil, as its located in a till deposit within the Russell and Prescott Sand Plains physiographic region
5. Are there distinctive land formations in the Study Area that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases?	No	<ul style="list-style-type: none"> ■ The Study Area is not known to be associated with any distinctive land formation that might have been a special or spiritual place.
6. Are there natural resource areas in the Study Area (e.g., food or medicinal plants, scarce raw materials, or post-contact industries)?	No	<ul style="list-style-type: none"> ■ There are no known natural resource areas in the Study Area.
7. Are there areas of early post-contact settlement in the Study Area or within 300 m of the Study Area?	Yes	<ul style="list-style-type: none"> ■ The Study Area is within 300 m of early post-contact settlement (numerous homesteads depicted in 1863 and 1879 historical maps).
8. Are there early historic transportation routes in the Study Area or within 100 m of the Study Area?	Yes	<ul style="list-style-type: none"> ■ An early historic transportation route (Bank Street) is within 100 m of the Study Area.
9. Is there municipally, provincially, or federally listed or designated heritage property or landmarks in the Study Area?	No	<ul style="list-style-type: none"> ■ No municipally, provincially, or federally listed or designated heritage property or landmarks are within the Study Area.
10. Is the Study Area identified in an Archaeological Management Plan as having general archaeological potential?	Yes	<ul style="list-style-type: none"> ■ The City's Archaeological Management Plan identifies portions of the Study Area to have archaeological potential.

Features of Archaeological Potential	Yes/No	Description
11. Are there areas within the Study Area that are permanently wet, have exposed bedrock, or steep slopes?	No	<ul style="list-style-type: none"> ▪ No areas within the Study Area appear to be permanently wet, have exposed bedrock, or naturally steep slopes.
12. Are there areas in the Study Area that have undergone extensive and deep land alterations that may have severely damaged the integrity of any archaeological resources?	Yes	<ul style="list-style-type: none"> ▪ Review of aerial imagery from 2017 and 2018 indicate that the north portion of the Study Area has undergone extensive and deep land alterations, during road construction activities, which would have severely damaged the integrity of any archaeological resources.
13. Has the Study Area, or portions of the Study Area, been previously assessed?	Yes	<ul style="list-style-type: none"> ▪ The southeast half of the Study Area was assessed in a Stage 1 AA EA for the City of Ottawa, which recommended Stage 2 AA prior to development impacts (LHC 2020; PIF# P376-0017-2018).
14. Has previous assessment of the Study Area fully mitigated archaeological resources within the Study Area?	N/A	<ul style="list-style-type: none"> ▪ Not applicable.
15. Does the Study Area require additional archaeological assessment?	Yes	<ul style="list-style-type: none"> ▪ Most of the Study Area has been determined to retain archaeological potential and require Stage 2 AA (see Sections 4 and 5).

4 ANALYSIS AND CONCLUSIONS

The Stage 1 AA desktop study determined that the Study Area has archaeological potential for the following reasons:

- Two archaeological sites were registered within 300 m of the Study Area (BhFv-25 and BhFv-26)
- There may be pockets of well-drained sandy soil in the Study Area
- The Study Area is within 300 m of early post-contact settlement (numerous homesteads depicted in 1863 and 1879 historical maps)
- An early historic transportation route, Bank Street, is within 100 m of the Study Area, and
- The City's Archaeological Management Plan identifies the central, southeast, and southwest portions of the Study Area to have archaeological potential

Despite this general archaeological potential, analysis of aerial imagery has determined that the north portion of the Study Area, as well as two existing building footprints, (approximately 0.11 ha) have been subject to extensive and deep land alterations that would have severely damaged the integrity of any archaeological resources (Map 5 and Map 9). In the north portion of the Study Area, these land alterations included construction of Miikana Road and subsequent installation of curbs, sidewalks, and utilities between 2017 and 2018. Centrally within the Study Area, disturbance was caused by the construction of the two existing structures.

Most of the Study Area (approximately 2.73 ha) was determined to retain archaeological potential and require Stage 2 AA prior to development impacts (Map 9). The southeast portion of the Study Area was previously assessed in 2018, as part of an EA Stage 1 AA (LHC 2020; PIF# P376-0017-2018). The previous assessment also concluded that this portion of the current Study Area has archaeological potential and recommended Stage 2 AA (Map 7 and Map 9).

5 RECOMMENDATIONS

The results of the Stage 1 AA desktop study presented herein provide the basis for the following recommendations:

- 1) Portions of the Study Area determined to have archaeological potential, which includes the area of previous assessment, are recommended for Stage 2 AA prior to development impacts (Map 9).
 - a) The Stage 2 AA should be completed following the shovel test pit survey method at 5 m intervals as per Section 2.1.2 of the Standards and Guidelines for Consultant Archaeologists (Government of Ontario 2011). Test pits should be dug by hand and be at least 30 cm in diameter and excavated 5 cm into subsoil. Soil should be screened through 6 mm hardware cloth to facilitate the recovery of cultural materials, and each test pit should be examined for stratigraphy, cultural features, and fill.
- 2) No further archaeological assessment is recommended for portions of the Study Area that were found to have been previously disturbed (Map 9).

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

6 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Minister of Citizenship and Multiculturalism as a condition of licensing in accordance with *Part VI of the Ontario Heritage Act*, R.S.O. 1990, c O.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Citizenship and Multiculturalism, 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* (Government of Ontario 1990b) for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of *the Ontario Heritage Act* (Government of Ontario 1990b).

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of *the Ontario Heritage Act* (Government of Ontario 1990b). The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of *the Ontario Heritage Act* (Government of Ontario 1990b).

The Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner, and the Registrar, *Funeral, Burial and Cremation Services Act* at the Ministry of Public and Business Service Delivery and Procurement.

7 IMPORTANT INFORMATION ON THE LIMITATIONS OF THIS REPORT

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

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

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without WSP'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, WSP 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 WSP. The report, all plans, data, drawings and other documents as well as all electronic media prepared by WSP are considered its professional work product and shall remain the copyright property of WSP, who authorizes 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 or any portion thereof to any other party without the express written permission of WSP. The Client acknowledges the electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of WSP's report or other work products.

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

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

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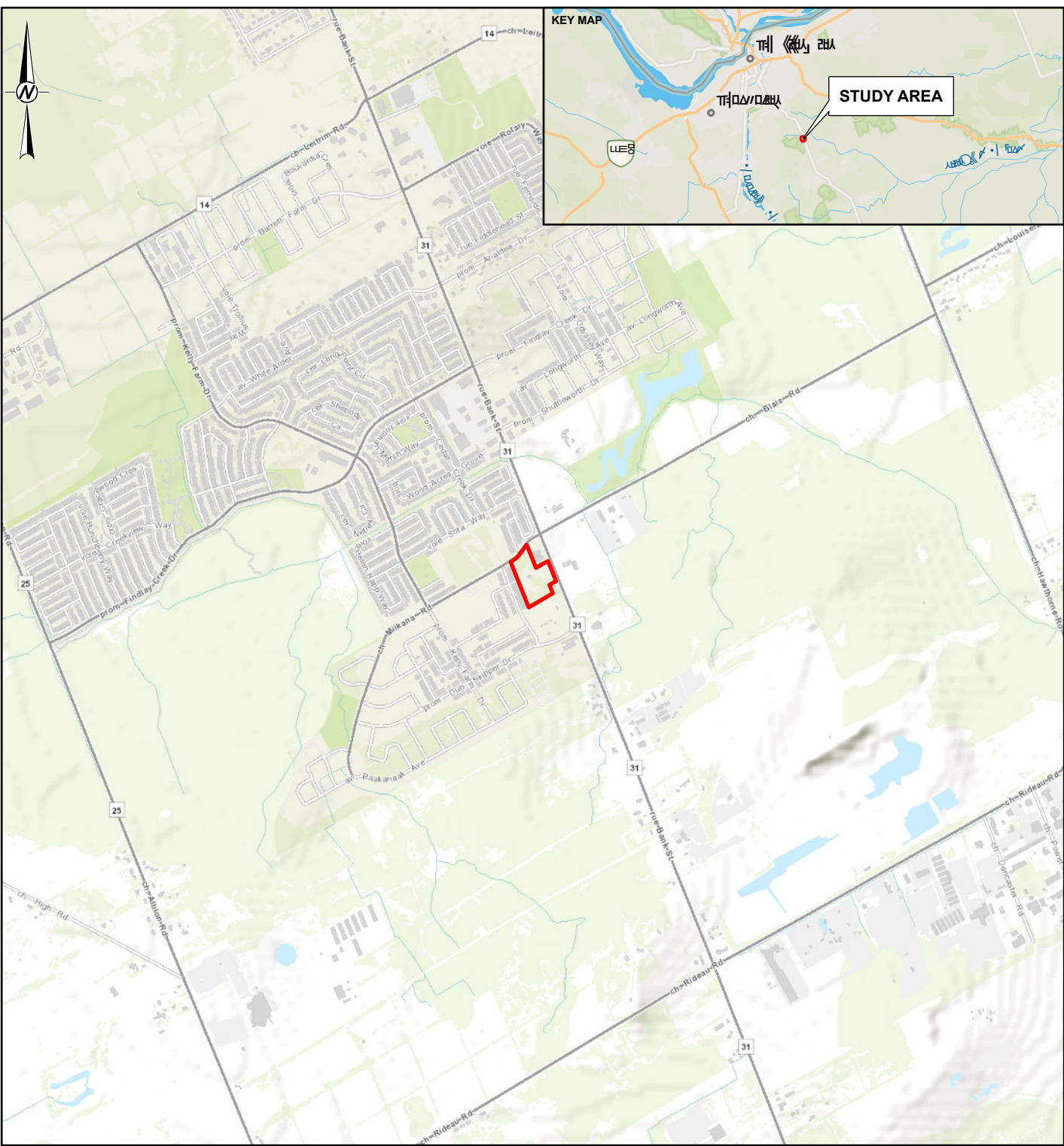
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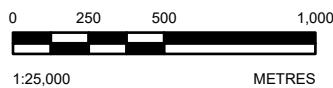
9 MAPS

All maps follow on the succeeding pages.



LEGEND

 STUDY AREA



NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

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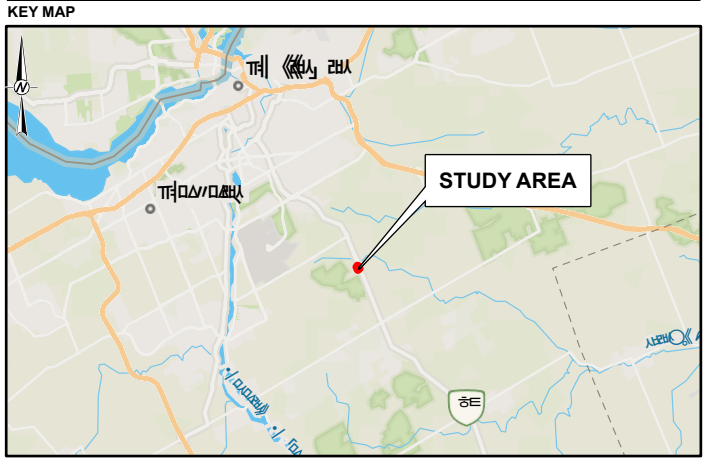
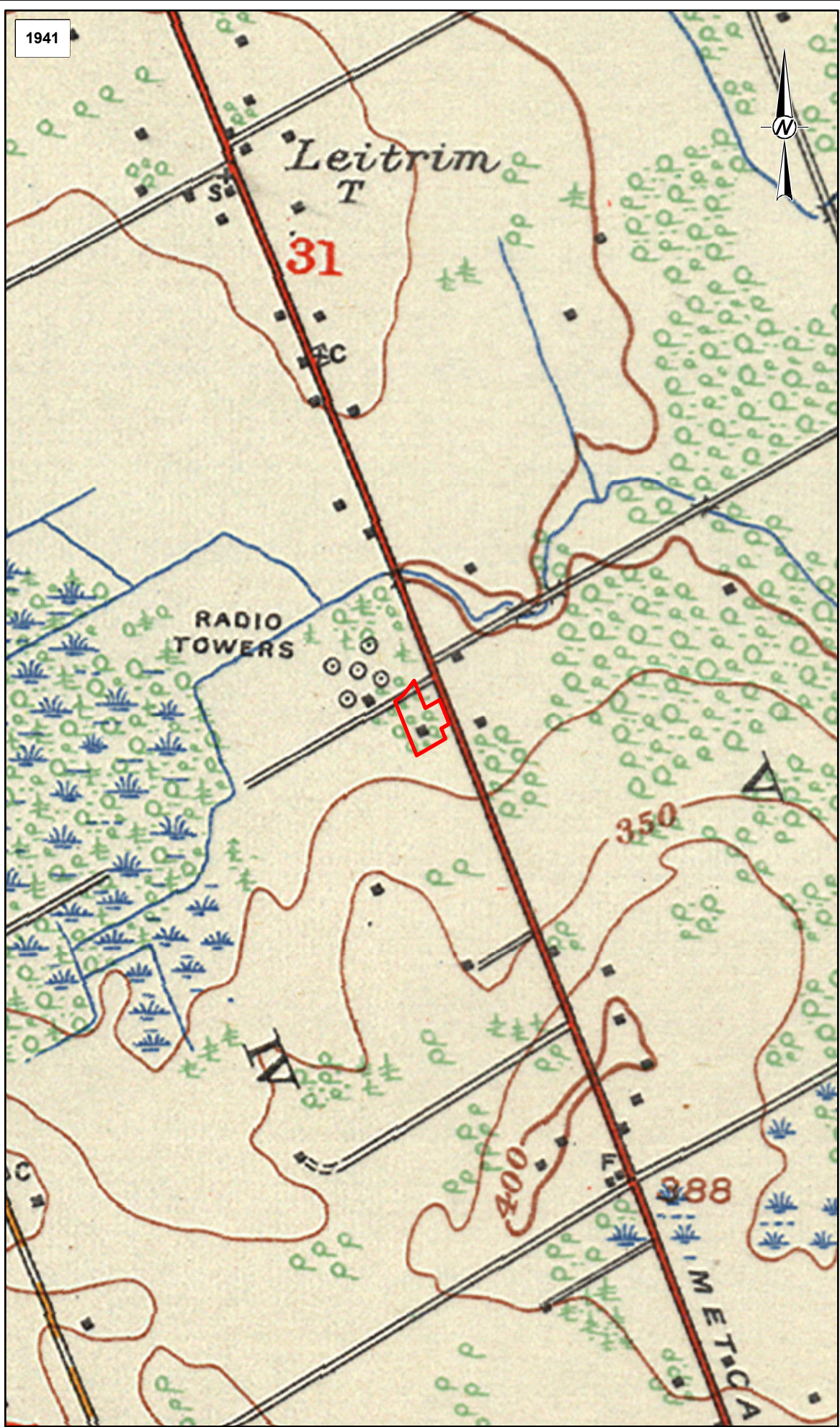
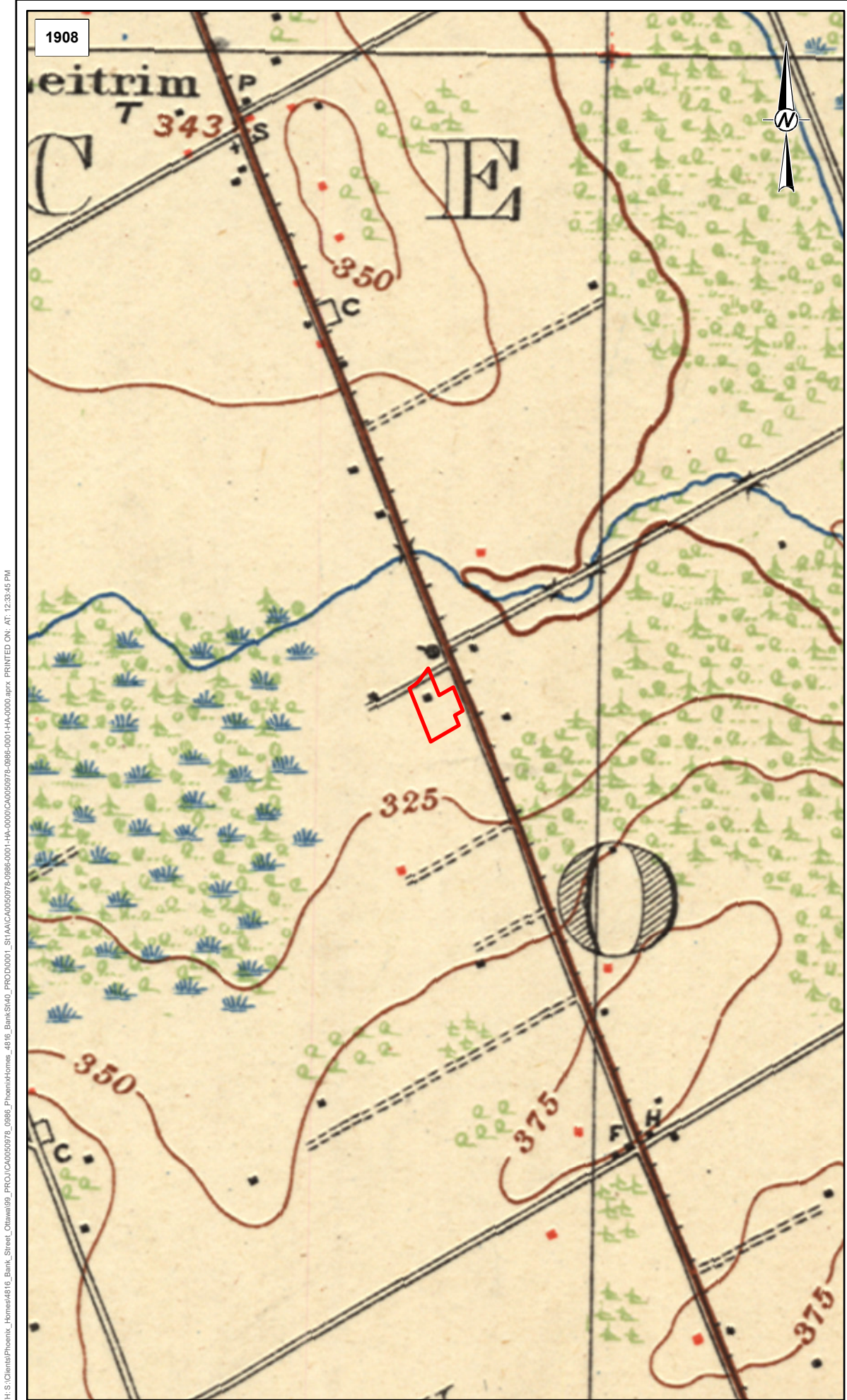
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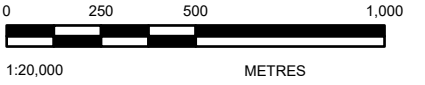
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 2. OTTAWA, ONTARIO. 1:63,360. MAP SHEET 031G05, [ED. 16], UNGRIDDED, 1941, GEOGRAPHICAL SECTION, GENERAL STAFF, DEPARTMENT OF NATIONAL DEFENCE
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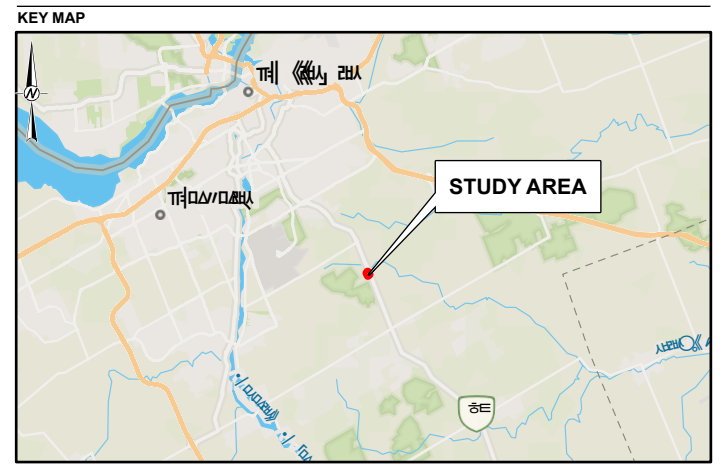


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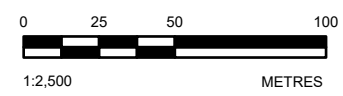
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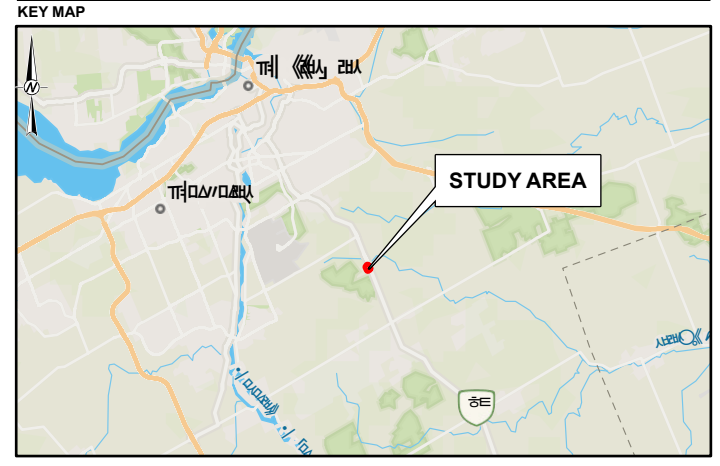
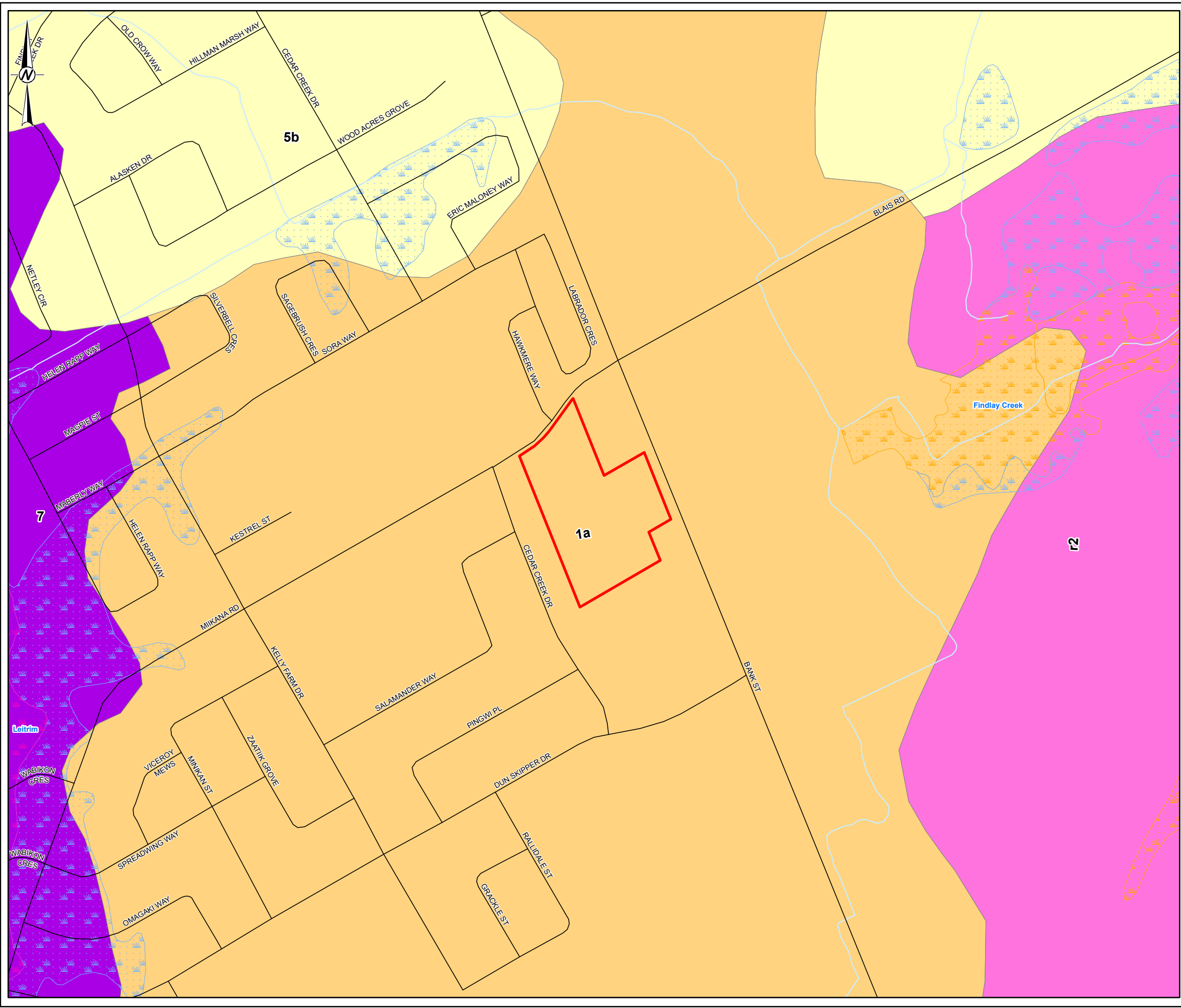
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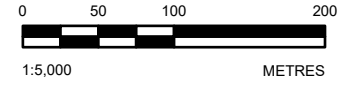


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- STUDY AREA
 - ROADWAY
 - WATERCOURSE
- WETLAND SIGNIFICANCE**
- UNEVALUATED WETLAND
 - EVALUATED WETLAND (NO SIGNIFICANCE)
 - PROVINCIALLY SIGNIFICANT WETLAND (PSW)
- GSC SURFICIAL GEOLOGY**
- 7. ORGANIC DEPOSITS: MUCK & PEAT
 - 5b: NEARSHORE SEDIMENTS: FINE TO MEDIUM GRAINED SAND
 - 1a. TILL, PLAIN WITH LOCAL RELIEF <5 m
 - r2. BEDROCK: LIMESTONE, DOLOMITE, SANDSTONE & LOCAL SHALE



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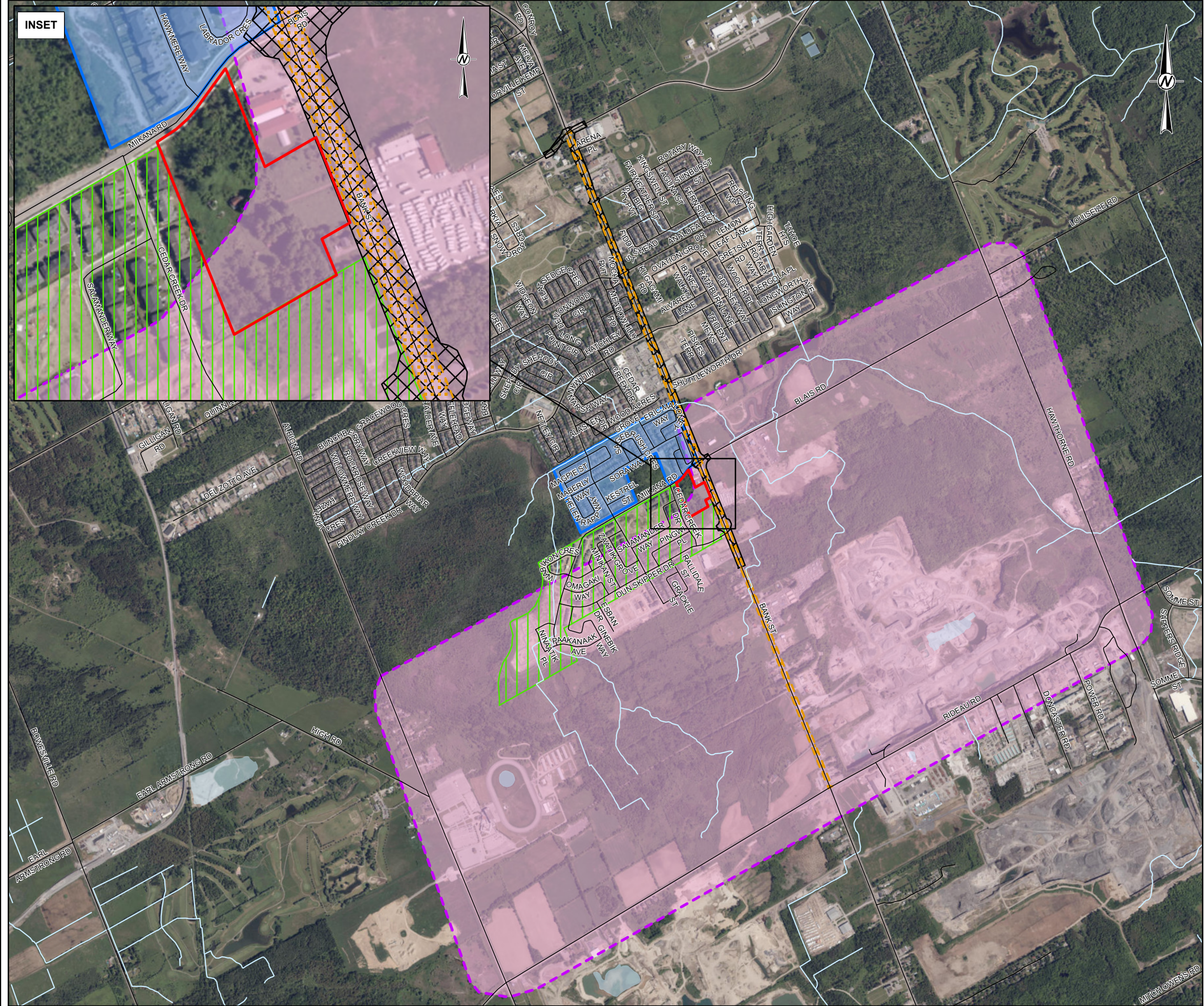
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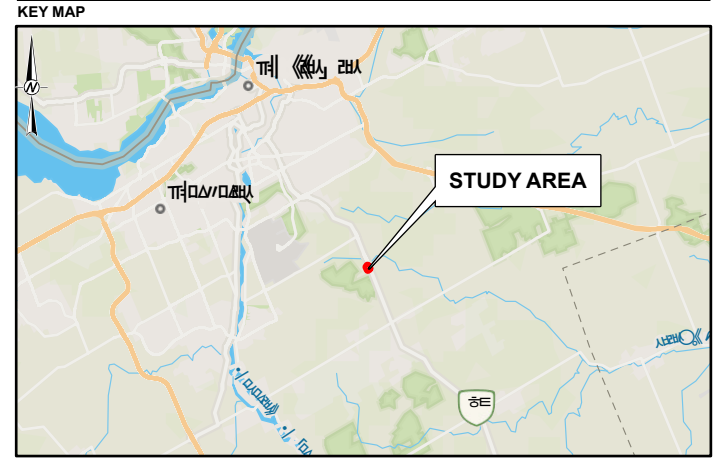
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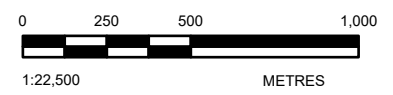


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 - P311-090-2012
 - P376-0017-2018
 - P378-0025-2017
 - P385-003-2013, P386-0004-2013, P385-0005-2013, P386-0011-2014, P385-0023-2016
 - STUDY AREA
 - ROADWAY
 - WATERCOURSE
 - WATERBODY



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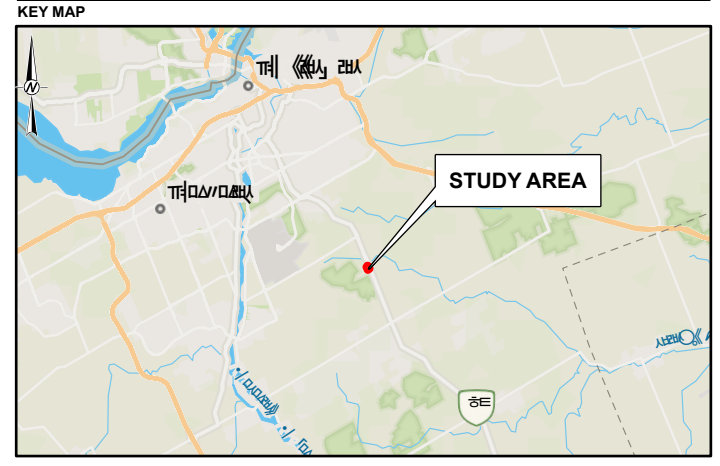
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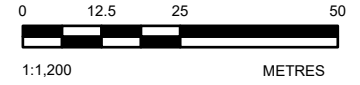
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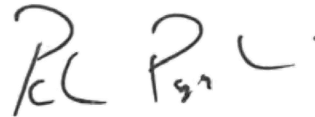
10 CLOSURE

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

WSP E&I Canada Limited



Helen Moore, Hons. B.A.
Senior Archaeologist, Material Culture Analyst, Project Manager



Peter Popkin, Ph.D., CAHP, MCIfA
Principal Archaeologist

HM/PP/ld/al

[https://wsponlinecan.sharepoint.com/sites/ca-ca0050978.0986/shared documents/06. deliverables/06.01 internal draft report/p1013-0042-2025_phoenix homes, 4816 bank st, ottawa, st. 1 aa_rev0_4july2025.docx](https://wsponlinecan.sharepoint.com/sites/ca-ca0050978.0986/shared%20documents/06.%20deliverables/06.01%20internal%20draft%20report/p1013-0042-2025_phoenix%20homes,%204816%20bank%20st,%20ottawa,%20st.%201%20aa_rev0_4july2025.docx)

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