ORIGINAL REPORT

Stage 1 Archaeological Assessment

Hintonburg Pumpstation Redevelopment, Part of Lot 37, Concession A on Ottawa River, Geographic Township of Nepean, now the City of Ottawa, Carleton County, Ontario

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Submitted to:

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Executive Summary

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

Golder Associates Ltd. (Golder), a member of WSP, was retained by the City of Ottawa to conduct a Stage 1 Archaeological Assessment in support of the Hintonburg Pumpstation redevelopment. The study area encompasses an approximately 0.6 hectare area located on the south shore of the Ottawa River in part of Lot 37, Concession A on Ottawa River, Geographic Township of Nepean, now the City of Ottawa, Carleton County, Ontario (Maps 1 and 2).

The objectives of the Stage 1 archaeological assessment are defined in the Ontario Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines for Consultant Archaeologists* (2011) and include background contextual research to evaluate archaeological potential and to provide appropriate recommendations and site specific strategies if additional assessment is required.

The Stage 1 archaeological assessment determined the study area has archaeological potential for Indigenous and historical Euro-Canadian archaeological resources due to its proximity to the Ottawa River and locations of early Euro-Canadian settlement. A visual inspection of the study area was conducted on September 8, 2022. Portions of the study area have been impacted by 20th century construction and infilling. As the infilled portions of the study area may cover the natural shoreline and the extent of ground disturbance underneath the fill layers is unknown, there is potential for deeply buried archaeological resources in these areas. Archaeological potential appears to remain intact in the vicinity of the pumpstation and a treed area located in the south.

This Stage 1 archaeological assessment has resulted in the following recommendations:

1) The portions of the study area identified as having archaeological potential as shown on Map 10 should undergo Stage 2 test pit survey at 5 m intervals prior to any development impacts. The Stage 2 test pit survey should follow the standards outlined in Section 2.1 and 2.1.3 of the MTCS's (2011) *Standards and Guidelines for Consultant Archaeologists.*

2) The portions of the study area identified as having archaeological potential for deeply buried archaeological resources on Map 10 should be judgementally test pitted to an appropriate depth to confirm fill extends beyond the depth of project ground disturbance. Should project ground disturbance be expected to extend beyond the depth determined to be fill, the standards outlined Section 2.17 for survey in deeply buried conditions should be followed to confirm there are no deeply buried archaeological resources (MTCS 2011).

3) Portions of the study area identified as disturbed have low archaeological potential and require no additional archaeological assessment.

4) Should project ground disturbance extend beyond the area outlined on Map 10, additional archaeological assessment may be required.

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

Project Personnel

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Abbreviations

BP	Before Present, taken to mean before 1950 and used as a secular alterative to BC/AD
CHVI	Cultural Heritage Value or Interest
Golder	Golder Associates Ltd., a member of WSP
km	Kilometre(s)
m	Metre(s)
MTCS	Ministry of Tourism, Culture and Sport
ND	No Date
PIF	Project Information Form

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1.0 PROJECT CONTEXT

1.1 Development Context

Golder Associates Ltd. (Golder), a member of WSP, was retained by the City of Ottawa to conduct a Stage 1 Archaeological Assessment in support of the Hintonburg Pumpstation redevelopment. The study area encompasses an approximately 0.6 hectare area located on the south shore of the Ottawa River in part of Lot 37, Concession A on Ottawa River, Geographic Township of Nepean, now the City of Ottawa, Carleton County, Ontario (Maps 1 and 2).

The Hintonburg Pumpstation was constructed in 1899 and was used as a pumping station until 1917 after the completion of the High Lift Pumpstation on Lemieux Island made it redundant. It was then converted to a residence. A fire damaged the structure in 1989 and the property has remained abandoned. The City of Ottawa plans to rehabilitate the structure and repurpose the study area for public use.

Permission to access the study area was provided by the client.

1.2 Objectives

The objectives of this Stage 1 archaeological assessment follow the MTCS's *Standards and Guidelines for Consultant Archaeologists* (2011, p. 13):

- To provide information about the study area's geography, history, previous archaeological fieldwork and current land conditions;
- To evaluate in detail the study area's archaeological potential, which will support recommendations for additional archaeological survey for all or parts of the property; and,
- To recommend appropriate strategies for Stage 2 survey, if applicable.

2.0 HISTORICAL CONTEXT

2.1 Regional Indigenous History

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 much of the Paleo Period (11,000–ca. 9,500 BP) Ottawa 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 ridges and old shorelines of the Champlain Sea and early Ottawa River channels generally represent areas most likely to contain evidence of Paleo 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 favorable 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). 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 Richards 1987). Flooding resulting from the overflow of glacial Lake Agassiz also eroded and manipulated topographic landforms within the evolving landscape (Fulton et al. 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). 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 Valley would have occurred during the recession of the Champlain Sea when the vegetation and wildlife began to develop within the area, which enabled 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 m) or higher contour topography, although additional research may be required to confidently assess this correlation (Kennedy 1976).

Evidence of human occupation within the Ottawa Valley during this period has been documented by a variety of archaeological discoveries including fluted 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 near Greenbank Road (Swayze 2003), Albion Road and Rideau Road (Swayze 2004), 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 MTCS's archaeological site database indicates there are no registered Paleo sites located within Nepean Township (MTCS 2022).

During the succeeding Archaic Period (ca. 9,500 BP to 2,800 BP), the environment of eastern Ontario approached modern conditions (Ellis et al. 1990). Occupation within the Ottawa Valley developed as the environment became habitable, with an Early Archaic Dovetail projectile point recovered in Ottawa South sometime around 1918-1920 (Pilon and Fox 2015) potentially representing the earliest diagnostic evidence of humans in the area.

Archaic Period inhabitants generally continued to employ a hunter-gatherer subsistence strategy focused on localized faunal and floral resources including deer, fish, berries and nuts. 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 Ottawa Valley was an important route for the movement of natural copper, either through direct trade between individual groups, or through trips to Lake Superior to exploit the surface 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.

Early evidence of human burials within the Ottawa Valley are interpreted to date to the Archaic Period (Pilon and Young 2009). Excavations at Allumette and Morrison Islands have found burial sites containing the remains of dozens of individuals within deposits that appear to have been used continuously for millennia (Kennedy 1966). The inclusion of grave offerings such as natural/native copper pieces in burials found at the site of Coteau-du-Lac provides evidence for Archaic Period burial practice (Pilon and Young 2009).

Other sites with Archaic Period components located along the Ottawa River region have been noted at Aylmer Island (Sowter 1915), Chaudière Falls (Pilon and Boswell 2015), the Rideau Lakes (Watson 1982), the Sawdust Bay 2 site near Arnprior (Daechsel 1981), and the BiFw-14 site on the north shore of the Ottawa River north of the study area (Arkeos 1993). The MTCS's archaeological site database indicates there is one registered archaeological site with an Archaic Period component within Nepean Township (MTCS 2022). This is the BiFw-101 site, an Indigenous campsite located along the Rideau River in Vincent Massey Park.

The Woodland Period (*ca*. 2,800 to 450 BP) is primarily distinguished from the Archaic Period by the introduction of ceramics (Wright 1972). The early pots 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 Hull, Québec (Watson 1999b). 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).

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 exotic artifacts within grave deposits (Spence et al. 1990, p. 129). No archaeological sites that are known to date to the Early Woodland Period have been registered within Nepean Township (MTCS 2022).

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.

Along the Ottawa River, Middle Woodland Period sites have been identified in the northwest end of Ottawa at Marshall’s and Sawdust Bays (Daechsel 1980; Daechsel 1981), Rockcliffe Park (Pilon 2008; Pilon and Boswell 2015), as well as at Leamy Lake (Laliberte 1995). Additional Middle Woodland Period sites have been found along the Rideau River (Golder 2017; Patterson 2016) and within the City of Ottawa west of Bank Street (Golder 2014). The Sawdust Bay 2 site (BiGb-6), located approximately 750 m west of where the Mississippi River drains into the Ottawa River, represents a camp site radiocarbon dated to 1560 BP (± 290 BP) and interpreted to reflect the Point Peninsula Tradition. The corresponding artifact assemblage shows that subsistence was focused on hunting fauna living in the adjacent lakes and swamps. The Leamy Lake and Rockcliffe Park sites, all located in the area around the mouth of the Gatineau River and the east shore of the Ottawa River, show evidence of seasonal warm weather settlement spanning a period from 4000 BP up to at least the Middle Woodland period (Pilon and Boswell 2015). The BiFw-101 site located along the Rideau River within Vincent Massey Park represents an Indigenous campsite containing Middle and Late Woodland Period components (MTCS 2022).

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. 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.

By the end of the Late Woodland Period, distinct regional populations occupied specific areas of southern Ontario separated by vast stretches of largely unoccupied land, including the Huron along the north shore of Lake Ontario, 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 their traditional lands on the north shore of Lake Ontario to the Lake Simcoe and Georgian Bay region. 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 claimed the lowlands south of the St. Lawrence River after the disappearance of the St. Lawrence Iroquois in the late 16th century (Trigger and Day 1994). At the time of initial contact, the French documented several Algonquin groups residing in the vicinity of the present location of the City of Ottawa (Heidenreich and Wright 1987). These included the Kichesipirini of Morrison Island, the Matouweskarini along the Madawaska River to the west, the Onontchataronon in the Gananoque River basin to the southwest, and the Weskarini, the largest of the three, situated in the Petite Nation River basin to the east.

Late Woodland Period sites have been recorded throughout the Ottawa Valley. Two small Late Woodland sites were identified on a property near the Village of Cumberland (Ferris 2002). A significant Woodland Period occupation has also been identified at the Leamy Lake site. The north shore of the Ottawa River between Chaudiére Falls and the Gatineau River, which is associated with burials dating back to the Archaic Period, was also the site of several Woodland Period burials (Pilon and Boswell 2015).

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 Matouweskarini (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). Exceptions include a number of summer camps identified at Morrison Island and Leamy Lake 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. 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 Ontario and New York State. The 17th century saw a long 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 Algonquin's found refuge in French settlements such as Trois Riviére, 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 where the Algonquin, the French, and the Haudenosaunee agreed 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. Between 1712-1716, 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-Rivieres, Riviere Lievre and Lake of Two Mountains and Mohawk community members were residing near Lake of Two Mountains (Holmes 1993).

Following the Seven Years' War in the mid-18th century, 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 ND).

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 groups had become cautious of these agreements and had begun 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 (Ontario 2020). The lands covered by the Crawford Purchase included 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 Rideau Canal was later built through the territory of the Rideau Purchase.

In 1839, the Crown denied the Algonquins and Nipissings the right to lease portions of their land, including islands in the Ottawa River, to settlers with whom they had previously been collecting rent payments (Holmes 1993). Furthermore, the Crown did little to prevent further additional encroachments by settlers on Indigenous lands.

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 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. 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.

A French seigneury was established at L’Orignal and became one of the three oldest villages on the Ottawa River and the only seigneury 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 seigneury 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. It was later sold to American Nathaniel Treadwell in 1796, who divided it among his family and friends (McCann 2005).

The travels of Alexander Henry along the Ottawa River soon after the British victory in 1763 indicates that the small French trading post suggested to have been established near L'Orignal or Rockland appeared to be recently abandoned (Bond 1968), with the occupants likely dispersing following the loss of French influence in the area.

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 settled 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 Indigenous community members through the fur trade, Fox later abandoned this commercial enterprise and lived a more sedimentary 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).

Another trading post was established on the Ottawa River downstream from Chats Falls, near modern Fitzroy Harbour, by Joseph Mondion around 1786 (Reid 1990). Mondion sold the post around 1800 to the North-West Company and a list of materials associated with the sale includes a timber house on a stone foundation, a barn and stables, as well as an "Indian cemetery" (Lorrain 1978).

Settlement in the Ottawa area 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 area (Bond 1984; Guillet 1969).

Euro-Canadian settlement was slower to develop across the river from Hull, partly due to the rocky cliffs which are characteristic of the district. One of the early Euro-Canadian settlers to this area was Jehiel Collins who established a small store and dock near the foot of the canoe portage on the south side of the Chaudière Falls in 1809. Collins later sold to Caleb T. Bellows who built a larger wharf in the area around Nepean Point which was known as Bellow's Landing until 1811 when the area was renamed Richmond Landing (Guillet 1969).

Another early resident along the south side of the Ottawa River in the vicinity of the study area was Ira Honeywell who settled on 1,000 acres around Concession 1, Lot 26, and built a log hut near the shoreline about three miles above the Chaudière Falls in 1810 (Bond 1984; Guillet 1969).

As late as 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 rural landscape (Guillet 1969).

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.

2.3 Nepean Township

Two years after the 1791 division of the Province of Quebec into Upper and Lower Canada, the initial survey of Township “D” was undertaken by John Stegman, Deputy Surveyor for the Province of Upper Canada. This survey was completed under the initiative instituted by John Graves Simcoe, Lieutenant Governor of the Province of Upper Canada, associated with his proclamation aimed at attracting new settlers to the region. Under a statute passed by the second Parliament of Upper Canada in 1798, Township “D” was officially re-named the Township of Nepean (Walker and Walker 1975).

A significant number of township lots were granted to military veterans, United Empire (U.E) Loyalists and their children prior to 1800 in an effort to distribute the land to British loyalist families, although few U.E. Loyalists chose to travel to Nepean and preferred to settle along the St. Lawrence River (Belden 1879).

John Stegman’s survey of Nepean Township was initiated in anticipation of 143 settlers arriving in the area led by George Hamilton, an Irish veteran of the Revolutionary War (Elliott 1991). Unfortunately though, this first wave of settlers never materialized and the government revoked Hamilton’s grant soon after. Those few who did eventually arrive to Nepean found the land to be without any roads and so remote from any settlement that they quickly left the area. By the early 1800s, the original Loyalist settler’s children were coming of age and began to claim their inherited property grants. Between 1800 and 1812, Loyalist heirs received 200 grants in Nepean and another portion of the township was set aside for crown and clergy reserves (Elliott 1991). The land grants did not immediately encourage settlement as many of the grant holders continued to reside along the St. Lawrence and Lake Ontario waterfronts holding their lands in Nepean as investment properties. As such, these properties were the object of speculation and many of the grants were consolidated into the hands a few families.

Despite the numerous land grants, Nepean remained largely an undeveloped wilderness until the end of the War of 1812. Following the war, a depression in Great Britain coupled with the lack of enthusiasm displayed during the war by the loyalists to take up arms to defend British North America from their neighbours to the south led the Colonial Office to disband some units of the army in the colony. The Richmond military settlement in Goulbourn Township was founded under this directive, with a road being cut through Nepean Township from the Ottawa River in the area now called LeBreton Flats to the new village site of Richmond on the Jock River soon afterwards (Elliott 1991). This transportation route, known today as Richmond Road, is the oldest thoroughfare in Ottawa and became Bytown’s first road into the hinterland (Taylor 1986). It was along Richmond Road that ten of Nepean’s forty early resident families operated taverns which catered to those traveling from rural farmsteads to sell their goods at the markets in Bytown (Elliott 1991).The construction of the Rideau Canal (1826 - 1832) accelerated settlement in Nepean Township and brought a large population of labourers to the area which necessitated infrastructure improvements as new roads were cut to facilitate construction activities. Bytown continued to develop at the junction of the Rideau Canal and the Ottawa River, with the influx of labourers increasing the population of the township from 580 in 1827 to 2,758 just a year later. Many of the new arrivals to Nepean Township were transient and left the area following the completion of the canal, although some stayed and established homesteads in the area. By 1832, the population of Nepean was sustained at 940, with many of these residents settling within the burgeoning Bytown settlement (Elliot 1991). Between 1851 and 1878, the population of Nepean Township expanded from 3,800 to 6,510 (Belden 1879), with a number of small communities developing including Jockvale, Britannia Heights, Westboro, Hintonburg, Rochesterville and Bell’s Corners (Walker and Walker 1975).

The majority of Carleton County, including Nepean Township, was devastated during the fire which occurred in August, 1870. As an aftermath of the Carleton County fire, plans were developed for the first waterworks system in the Capital. In 1875, the first tap water was delivered to Ottawa residents, as it had formerly been provided by door to door service by horse drawn puncheons taken directly from the Ottawa River (Walker and Walker 1975).

Beginning in 1889 and continuing through the mid-20th century, The City of Ottawa conveniently annexed portions of Nepean slicing 9,997.2 acres from the township territory by January 1, 1950, which left Nepean almost exclusively a rural municipality with a population of 2,500 residents. By 1967, Nepean had become the second fastest growing township with a population increase from 2,500 to 50,000 people (Walker and Walker 1975). In 2001, the city of Nepean officially amalgamated into the City of Ottawa.

2.4 Study Area History

Among the earliest known depictions of the study area are several 19th century illustrations of the Ottawa River. Although the study area is not the focus of these illustrations, they nonetheless provide some evidence of its conditions during the early to mid-19th century. Illustrations from 1838 (Image 1, p. 24) and 1855 (Image 2, p. 24) show the study area as a treed area upriver from the city. No evidence of development or occupation is visible.

An 1879 plan of Nepean Township (Map 3) shows a railway passing along the south end of Lot 37, Concession A. This is the Canada Central Railway which was completed in 1870 and ran from Chaudiere to Carleton Place (Churcher 2022). A plan of Lots 37 and 38, Concession A from 1879 (Map 4) shows the study area in the late 19th century. River Road (now Onigam Street) is shown running west of the study area, with a sawmill, additional roads and the Canada Central Railway shown to the south. The presence of River Road and the sawmill suggest the study area had likely been cleared of tree cover by this time.

In 1880, the Prince of Wales Bridge was constructed to the east of the study area which connected the railway from the south bank of the Ottawa River onto Lemieux Island north of the study area and onwards to Quebec. This was the first rail bridge to cross the Ottawa River.

In 1899, the Hintonburg Pumpstation was constructed on east side of River Road. An investigation of two severe typhoid epidemics in the early 20th century led to the identification of a need for a clean water supply as raw sewage was being dumped into Nepean Bay close to the source of drinking water for the city (Bond 1984; Taylor 1986). In 1912, the construction of a new pumping station on Lemieux Island to the north of the study area made the pumpstation redundant and it was no longer in use by 1917 (Ottawa Carleton 1998). Following the completion of the Lemieux Island water purification plant in 1932, the pumping station was re-purposed as the residence for the plant superintendent, Caradoc Clarke. Later it was occupied by Carden Heeney, the deputy commissioner of the waterworks (Ottawa Carleton 1998, p.9; Hintonburg Community Association, n.d.) until 1980. A photograph from 1940 shows the former Hintonburg Pumpstation while it was occupied by Carden Heeney (Image 3, p. 25). The pumpstation was destroyed by fire in 1989 (Allston 2017).

A fire insurance plan from 1902 (Map 5) shows the pumpstation during the period of its operation. The southern portion of the study area appears to be part of the lumber yard of the Shepard Morse Lumber Company. The sawmill shown in the 1879 and 1888 plans is still present, apparently under new ownership. A 1906 topographic map of the City of Ottawa (Map 6) shows one stone or brick structure within the study area and a second to the west. The easternmost structure is most likely the Hintonburg Pumpstation while the second structure may be the small outbuilding visible behind the pumpstation in photographs (Images 3 and 4, p. 25)

The Lemieux Island Bridge located in the north end of the study area was constructed in 1916 and included the accommodation of two 51-inch water lines. At the time of construction, the Lemieux Island Bridge may have been one of Canada's longest concrete arch bridges and a most unusual one considering its dual role of traffic and water transmission. It had four arches, two on either side of Bell Island, which was situated between Lemieux Island and the Ottawa River shoreline (Ottawa Carleton 1998). The C Line water pipes to the east of Lemieux Island Bridge saw construction beginning in 1936 (Ottawa Carleton 1998). These pipes pass under the centre of the study area and run to Lemieux Island on an above water bridge.

Aerial photographs show changes to the study area during the 20th century. Photographs from 1927 (Image 4, p. 25) and 1928 (Map 7) show the study area with the pumpstation and Lemieux Island Bridge in the north. Much of the study area appears to be devoid of vegetation and the area south of the pumpstation appears to still be in use for storage. Most significantly, the area west and north of the pumpstation appear lower than they are today indicating these areas were filled in. In 1965, the water pipes running between the study area and Lemieux Island are visible to the north. The area between the pumpstation and bridge more closely resembles its current topography indicating the infilling likely took place during the construction of the water pipes in the 1930s. The infilling was likely intended to bury the portion of the pipes that run above the original ground surface. By 1991, the area south of the pumpstation has been revegetated. More infilling is visible to the shoreline on the west side of Lemieux Island Bridge. The fire damaged Hintonburg Pumpstation is visible in the centre with portions of its roof collapsed (Map 7). The aerial photographs indicate that much of the study area north of the pumpstation has been subject to infilling. The pumpstation has further deteriorated since the 1990 fire due to neglect.

3.0 ARCHAEOLOGICAL CONTEXT

3.1 Study Area Environment

The study area is located along the Ottawa River and is within the Ottawa Valley Clay Plains physiographic region. The physiographic region covers the area from Pembroke to Hawkesbury and is interrupted by ridges of sand and rock (Chapman and Putnam 1984, pp. 205-208). Shells of prehistoric saltwater marine creatures have been identified within the region confirming this low-lying area was submerged under the Champlain Sea during and immediately after the recession of the glaciers.

The surficial geology is bedrock consisting of limestone, dolomite, sandstone and local shale (Map 8). Background research indicates the study area was cleared of trees during the 19th century. The strand of trees located along the southern portion of the study area dates to the late 20th century.

3.2 Previously Completed Archaeological Assessments

Past Portal's archaeological report database maintained by the MTCS and Golder's internal archaeological report database were consulted on September 6, 2022 for archaeological reports completed within the vicinity of the study area. The only known archaeological assessment to have been conducted within 50 m of the study area is ASI's (1999) archaeological resource mapping study for regional municipality of Ottawa-Carleton. ASI identified the entire study area as having archaeological potential (Map 9). A number of previous archaeological assessments have also been conducted within the general vicinity of the study area, mostly for Lemieux Island to the north and the southern portion of Lot 37, Concession A. These are summarized in Table 1.

Table 1: Archaeological Assessments in the Vicinity of the Study area

Date	Title	PIF#	Consultant	Recommendation
1989	An Archaeological Resource Assessment of Lemieux Island Regional Municipality of Ottawa-Carleton	89-130B	Archaeological Services Inc.	No Further Archaeology
2014	Stage 1 Archaeological Assessment Lemieux Island Water Purification Plant Intake Improvements North of Lot 37, Concession A, Geographic Township of Nepean, Carleton County, Ottawa, Ontario	P311-0299-2014	Bradley Drouin – Golder Associates Ltd.	Stage 2 recommended for portion of study area
2017	Stage 1 Archaeological Assessment 7 Bayview Road, City of Ottawa, Ontario	P415-0078-2015	Patrick Hoskins - Stantec	Stage 2 recommended for portion of study area
2019	Marine Archaeological Desktop Assessment Lemieux Island Water Purification Plant Intake Improvements, North of Lot 27, Concession A, Geographic Township of Nepean, Carleton County, Ottawa, Ontario.	2018-20	Aaron Mior – Golder Associates Ltd.	No Further Archaeology

3.3 Known Archaeological Sites

The primary source of information regarding known archaeological sites in the MTCS archaeological sites database. The database was consulted on September 6, 2022, which indicated there are 6 registered archaeological sites located within 1 km of the study area. These sites are summarized in Table 2 below. None of the sites are located within 300 m of the study area.

Table 2: Archaeological Sites Within 1 km of the Study Area

Borden Number	Site Name	Affinity	Site Type	Current Development Review Status	Distance from Study Area (m)
BiFw-55	Aubrey Row House	Euro-Canadian	Residential	No Further CHVI	1,000
BiFw-65	Inlet Bridge Site	Euro-Canadian	Waterworks	Unknown	800
BiFw-66	LeBreton Railyards	Euro-Canadian	Midden	No Further CHVI	1,000
BiFw-93		Unknown	Unknown	Unknown	1,000
BiFw-178	1883 CPR Roundhouse	Euro-Canadian	Railway, Transportation	No Further CHVI	750
BiFw-179	1871 St. Lawrence & Ottawa Railway Turntable	Euro-Canadian	Railway, Transportation	No Further CHVI	750

3.4 Assessing Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present within a specific study area. In accordance with the MTCS's 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites;
- Water sources:
  - Primary water sources (lakes, rivers, streams, creeks);
  - Secondary water sources (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 (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;
  - Scarce raw minerals (e.g. quartz, copper, ochre or outcrops of chert);
  - Early Euro-Canadian industry (fur trade, mining, logging);
- Areas of Euro-Canadian settlement; and,
- Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for a study area, the MTCS stipulates the following:

- No areas within 300 m of a previously identified archaeological site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge or informants can be recommended for exemption from further assessment;
- No areas within 100 m of early transportation routes can be recommended for exemption from further assessment; and,
- No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.

3.5 Features Indicating Archaeological Potential has been Removed

Archaeological potential can be determined not to be present when the area has been subject to extensive and deep land alterations that severely damaged the integrity to known or potential archaeological resources, including:

- Quarrying;
- Major landscaping involving grading below topsoil;
- Building footprints; and,
- Sewage and infrastructure development.

The placement of fill material over a known or potential archaeological site is not considered to be a land disturbance activity and does not negate the potential for archaeological resources unless there are known extensive and deep land alteration activities within the immediate location.

3.6 Site Inspection

A visual inspection of the study area was conducted by Randy Hahn, PhD (P1107) and Graham Lantz, MA of Golder on September 8, 2022, under PIF P311-0342-2022 issued to Bradley Drouin, MA. The weather was sunny with a temperature of 17 degrees Celsius at the time of the inspection. At no time were the weather or lighting conditions detrimental to the assessment of features representing archaeological potential. Permission to access the study area was provided by the client.

The east side of the study area slopes down from Onigam Street to the shoreline which contains the remains of the Hintonburg Pumpstation and a gravel parking lot (Images 5 and 6, p. 26). Background research indicates this slope is largely fill associated with the construction of the water pipes on the north end of the study area. The remains of the pumpstation are presently fenced off. Portions of the pumpstation's walls are intact, but the roof has collapsed (Images 7 and 8, p. 27). The shoreline within the vicinity of the pumpstation gently slopes down to the water (Image 9, p. 28).

East of the gravel parking lot is a treed area containing relatively flat topography (Image 10, p. 28). On the north side of the pumping station, there is a small flat area below a steep slope leading up toward Onigam Street (Image 11, p. 29). There is also a flat area between the slope and road (Image 12, p. 29), but background research indicates this is fill. The north end of the study area consists of the Lemieux Island Bridge and two water pipes built above the Ottawa River (Image 13, p. 30). The shoreline in the vicinity of the waterpipes is sloped steeply down to the water (Image 14, p.30). The portion of the study area located on the west side of Onigam Street consists of a small treed area with a slope leading down to the river (Images 15 and 16, p. 31).

3.7 Potential for Archaeological Resources

Map 10 shows the areas of archaeological potential within the study area. The study area has archaeological potential for Indigenous and historical Euro-Canadian archaeological resources due to its proximity to the Ottawa River. The study area is also located within 300 m of a 19th century sawmill and is thus an area of early Euro-Canadian industry. Background research indicates that portions of the study area appear to have been impacted by infilling during the mid-20th century associated with the construction of the Line C waterpipes that pass through the study area. As the infilling appears to have been done to cover portions of the pipes that were built aboveground, the extent of disturbance to the original ground surface is unknown and there may be areas of archaeological potential under the 20th century fill. Therefore, there is potential for deeply buried archaeological resources in portions of the study area as shown on Map 10.

Portions of the study area have been disturbed by the construction of Onigam Street, the pumpstation, and gravel parking lot located south of the pumpstation. These areas are unlikely to contain undisturbed archaeological resources. The portions of the study area around the house and the treed area in the south do not appear to have been subject to disturbance or infilling and retain archaeological potential.

4.0 ANALYSIS AND CONCLUSIONS

The study area has archaeological potential for both Indigenous and historical Euro-Canadian archaeological resources due to its location along the Ottawa River and proximity to early historical industry, more specifically the sawmill that was located less than 300 m to the south. Background research indicates the study area underwent infilling during the 20th century beginning with the construction of the C Line water pipes which were built to connect to Lemieux Island using an above water bridge. The infilling within the study area appears to have been done to cover the portions of the pipe passing through the study area. As the pipe may have been installed above the original ground surface to raise it to connect to the bridge, the extent of subsurface ground disturbance to the original shoreline is unknown and the fill may be covering intact shoreline that retains archaeological potential. As per Section 1.3.2, archaeological potential is not removed where there is documented potential for deeply buried intact archaeological resources beneath land alterations. Aerial photographs (Map 7) indicate additional infilling occurred during the later 20th century which extended the shoreline into the river.

Due to the potential for deeply buried archaeological resources over much of the study area (Map 10), the standards outlined in Section 2.1.7 of the MTCS's (2011) *Standards and Guidelines for Consultant Archaeologists* apply. Due to the presence of the active C Line water pipes passing through the study area which were likely built partially on top of the original ground surface, mechanical excavation down to the ground surface may not be viable unless ground disturbance associated with the current project is expected to extend down to the original surface. As such, the excavation of test pits according to professional judgement to an appropriate depth is recommended to confirm the extent of infilling. Should ground disturbance extend beyond the areas identified as consisting of 20th century fill, Standards 3 and 4 of Section 2.1.7 apply requiring mechanical excavation or on-site archaeological monitoring where construction extends to a depth warranting concern.

Portions of the study area are disturbed within the footprint of the Hintonburg Pumpstation, Onigam Street, bridge, C Line water pipes and parking area (Map 10). These areas are of low or no archaeological potential and require no further archaeological assessment. The portions of the study area in the vicinity of the Hintonburg Pumpstation and the treed area to the south do not appear to have been significantly impacted by infilling or ground disturbance and likely retain archaeological potential. These areas should be subject to test pit survey at 5 m intervals.

5.0 RECOMMENDATIONS

1) The portions of the study area identified as having archaeological potential as shown on Map 10 should undergo Stage 2 test pit survey at 5 m intervals prior to any development impacts. The Stage 2 test pit survey should follow the standards outlined in Section 2.1 and 2.1.3 of the MTCS's (2011) *Standards and Guidelines for Consultant Archaeologists.*

2) The portions of the study area identified as having archaeological potential for deeply buried archaeological resources on Map 10 should be judgementally test pitted to an appropriate depth to confirm fill extends beyond the depth of project ground disturbance. Should project ground disturbance be expected to extend beyond the depth determined to be fill, the standards outlined Section 2.17 for survey in deeply buried conditions should be followed to confirm there are no deeply buried archaeological resources (MTCS 2011).

3) Portions of the study area identified as disturbed have low archaeological potential and require no additional archaeological assessment.

4) Should project ground disturbance extend beyond the area outlined on Map 10, additional archaeological assessment may be required.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Ministry of Tourism, Culture and Sport, as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest , and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

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

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

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48(1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

7.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

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

This report has been prepared for the specific site, design objective, developments and purpose described to Golder by the City of Ottawa (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 Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, 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 Golder. 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 Golder'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 Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011).

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9.0 IMAGES

Image 1: 1838 illustration showing the study area and Lemieux Island in the background within the south side of the Ottawa River (Library and Archives Canada).

Image 2: 1855 Image of the Ottawa River showing Lemieux Island in the background (Canadiana 2016).

Image 3: The Hintonburg Pumpstation, 1940 (Ottawa Carleton 1998, p. 105)

Image 4: Photo of study area from 1927 (Allston 2017).

Image 5: View northwest from south end of study area showing the location of the pumphouse and gravel parking lot.

Image 6: View northwest showing sloping topography down to the pumphouse and gravel parking lot.

Image 7: The remains of the Hintonburg Pumpstation, view northwest.

Image 8: The interior of the Hintonburg Pumpstation showing current condition of the ruins, view southwest.

Image 9: View northeast of the shoreline by the pumpstation.

Image 10: Conditions within the treed area on the southeast portion of the study area, view southwest.

Image 11 Slope associated with infilling located north of the pumpstation, view northwest.

Image 12: Flat area on the east side of Onigam Street between the road and slope, view north. Background research indicates this area is 20th century fill.

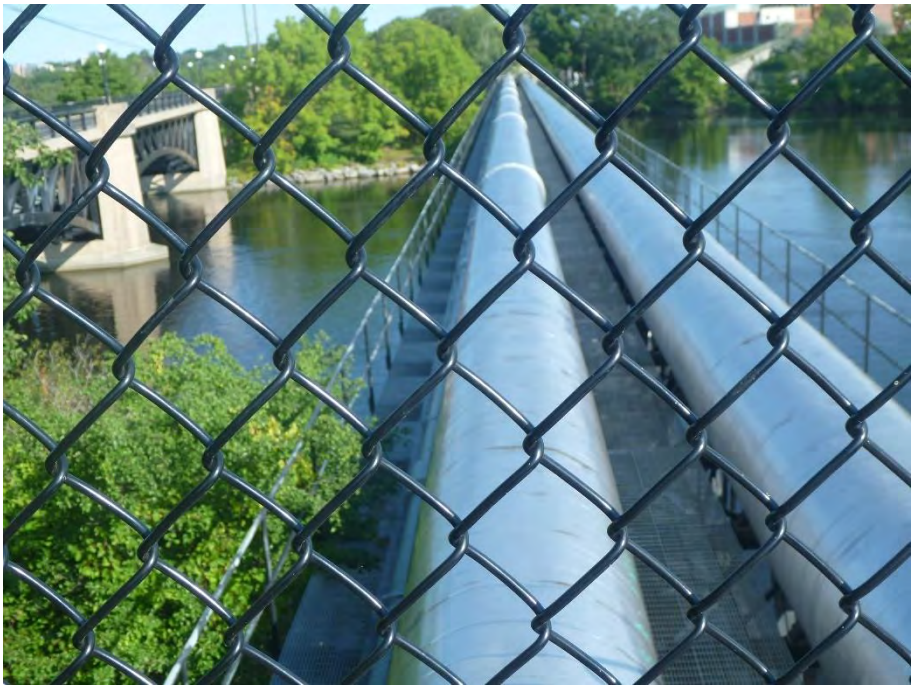


Image 13: Two large water pipes (C Line) on the north end of the study area that run to Lemieux Island, view north.

Image 14: Sloping shoreline in the vicinity of the two water pipes and the Lemieux Island bridge, view southeast.

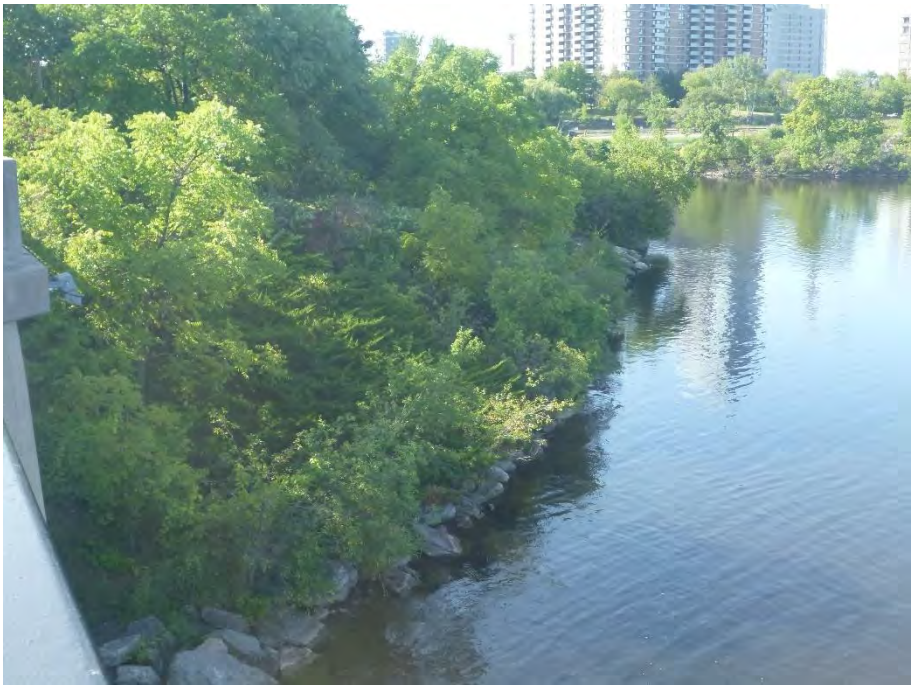
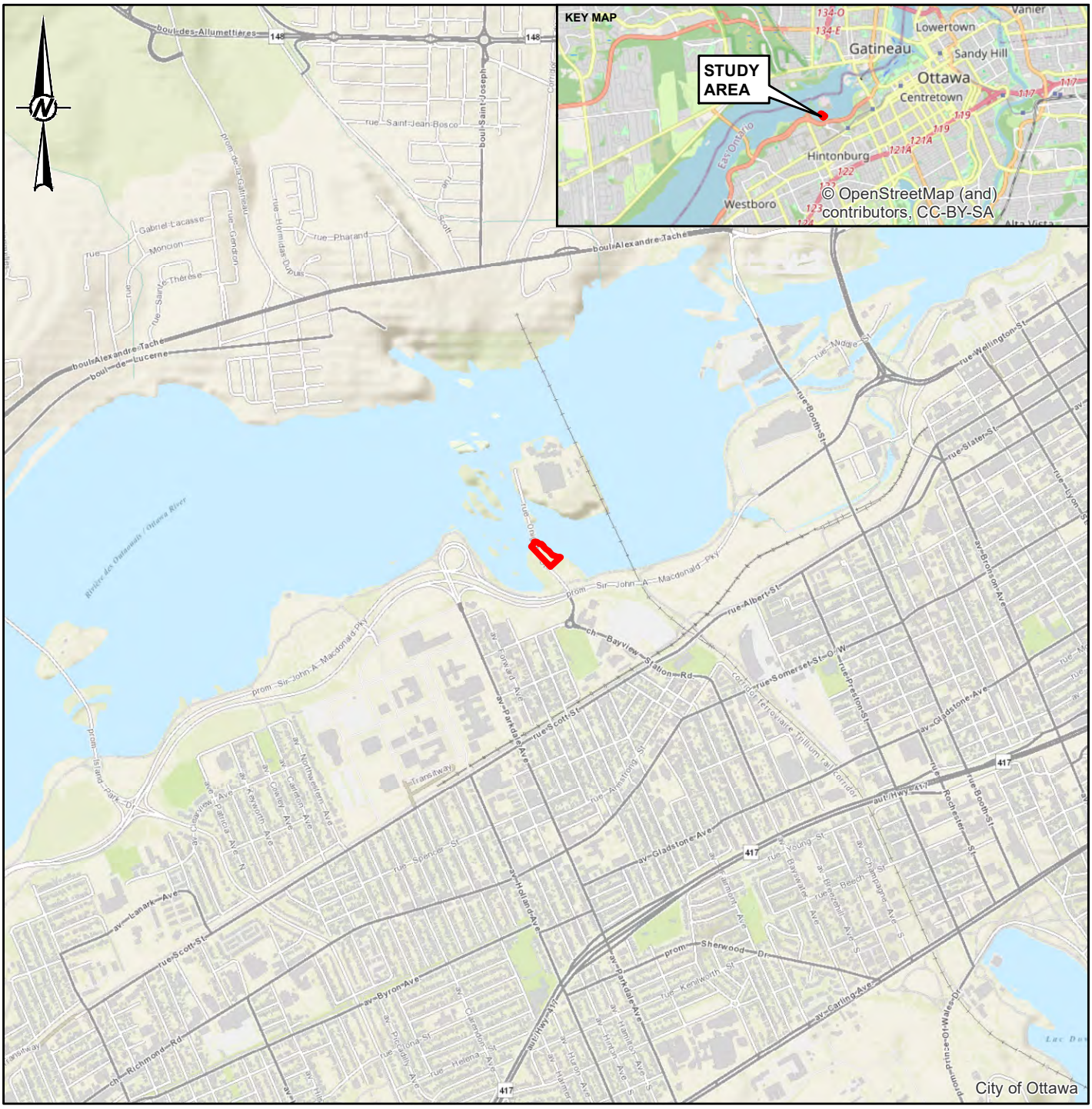


Image 15: View south of the shoreline west of the Lemieux Island Bridge showing the shoreline slopping steeply towards the water.

Image 16: View north of the study area on the west side of Onigam Street. The Lemieux Island Bridge is visible in the background.

10.0 MAPS



LEGEND

STUDY AREA

0 250 500 1,000

1:25,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

KEY PLAN

CONSULTANT

WSP GOLDER

YYYY-MM-DD	2023-01-12
DESIGNED	----
PREPARED	BR
REVIEWED	AM
APPROVED	BD

PROJECT NO.	CONTROL	REV.	MAP
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KEY MAP

SCALE 1:25,000

LEGEND

- STUDY AREA
- TOPOGRAPHIC CONTOUR, METRES
- WETLAND
- TOWNSHIP, CONCESSION AND LOT

0 15 30 60

1:1,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
2. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

SITE PLAN

CONSULTANT

wsp GOLDER

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PREPARED	BR
REVIEWED	BD
APPROVED	AM

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KEY MAP

SCALE 1:25,000

LEGEND

STUDY AREA

0 250 500 1,000

1:25,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. NEPEAN TOWNSHIP, CARLETON COUNTY 1879, PUBLISHER: H. BELDON & CO., PUBLISH DATE: 1879
2. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

1879 PLAN OF NEPEAN TOWNSHIP

CONSULTANT

wsp GOLDER

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APPROVED	BD

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KEY MAP

SCALE 1:25,000

LEGEND

STUDY AREA

0 50 100 200

1:5,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. 1879 PLAN OF LOTS 37 AND 38, CONCESSION A
2. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

1879 PLAN OF LOTS 37 AND 38, CONCESSION A

CONSULTANT

WSP GOLDER

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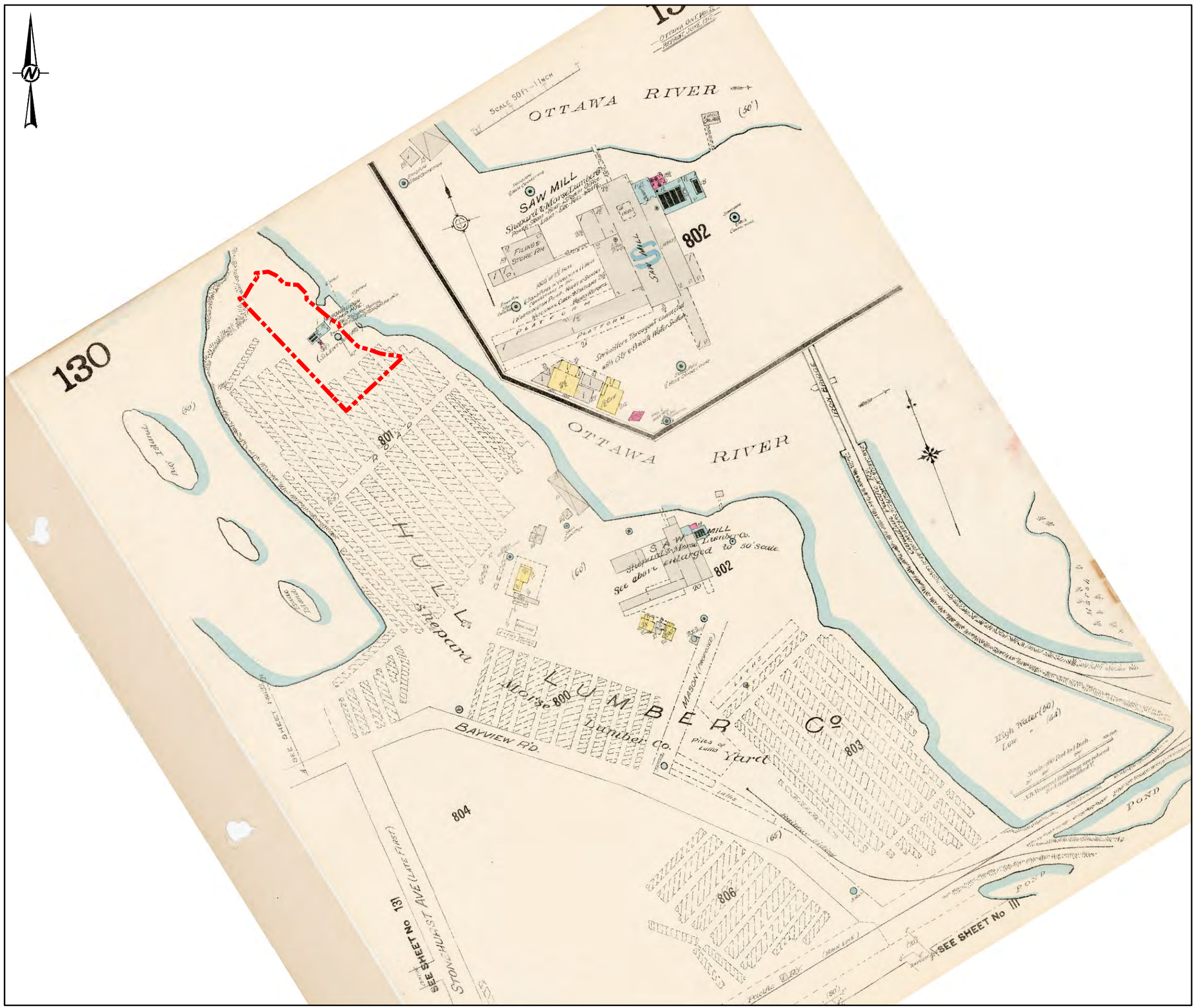

KEY MAP

SCALE 1:25,000

LEGEND

STUDY AREA

0 30 60 120

1:3,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. 1902 FIRE INSURANCE PLAN, CITY OF OTTAWA, 11902 FIP - 130
2. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

1902 FIRE INSURANCE PLAN

CONSULTANT

WSP GOLDER

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KEY MAP

SCALE 1:25,000

LEGEND

STUDY AREA

0 100 200 400

1:10,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. OTTAWA, ONTARIO. 1:63,360. MAP SHEET 031G05, [ED. 1], SURVEY DIVISION, DEPARTMENT OF MILITIA AND DEFENCE, 1906,
2. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

1906 TOPOGRAPHIC MAP

CONSULTANT

wsp GOLDER

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APPROVED	BD

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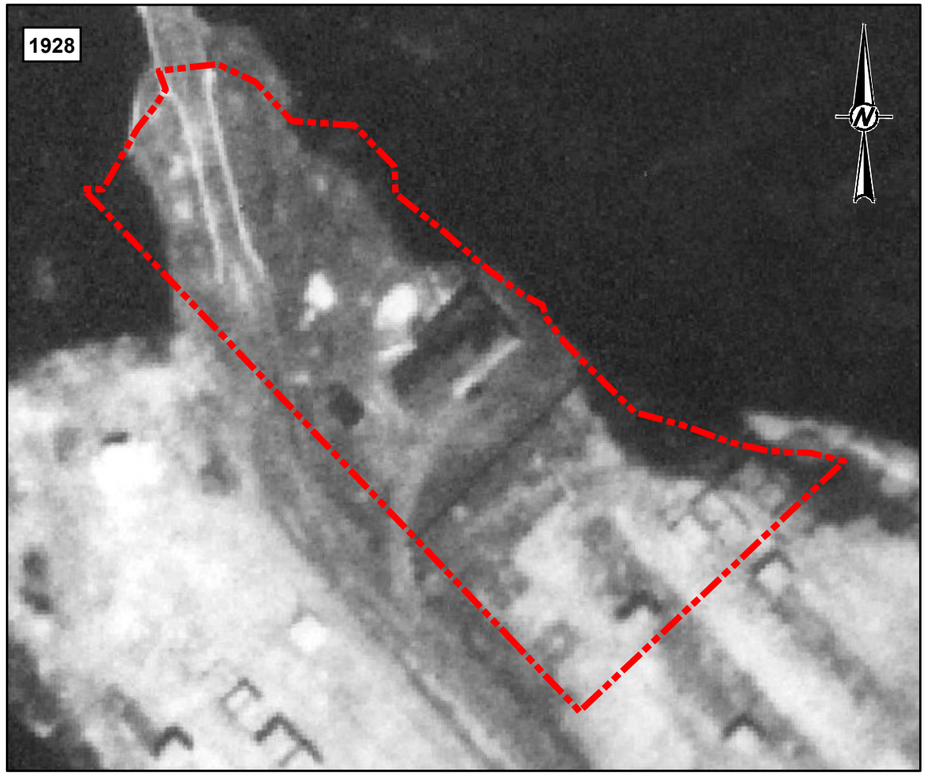

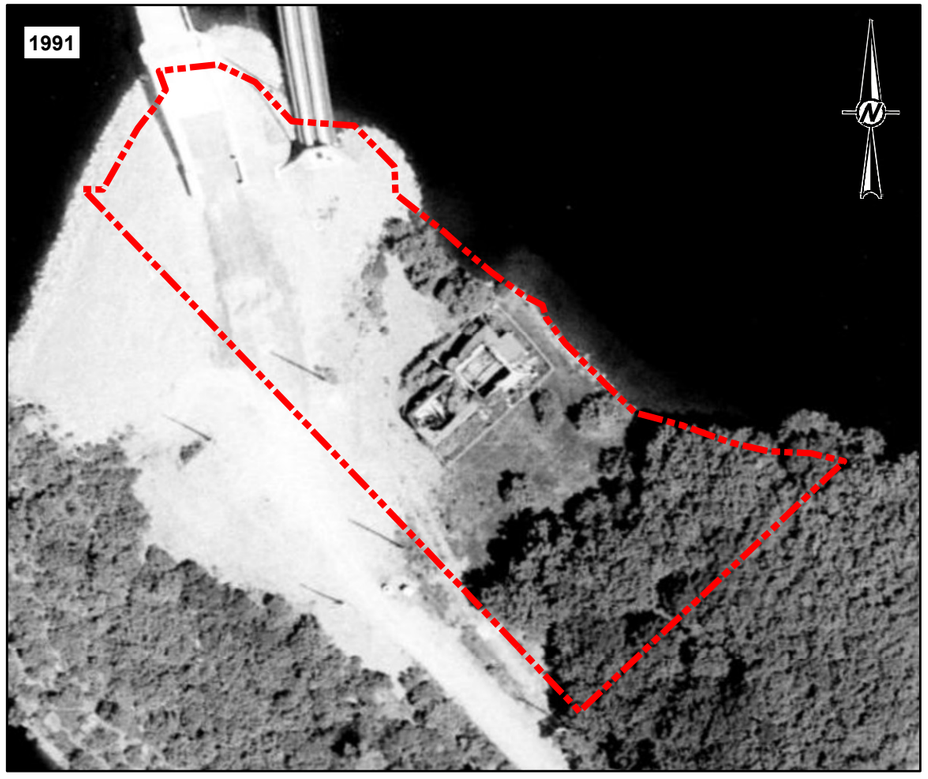

KEY MAP

SCALE 1:25,000

LEGEND

STUDY AREA

0 10 20 40

1:1,000 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. AERIAL IMAGERY 1928, 1965, 1991. CITY OF OTTAWA, GEOOTTAWA.
2. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

20TH CENTURY AERIAL PHOTOGRAPHS

CONSULTANT

WSP GOLDER

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PROJECT NO.	CONTROL	REV.	MAP
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KEY MAP

SCALE 1:25,000

LEGEND

- STUDY AREA
- ROADWAY
- TOPOGRAPHIC CONTOUR, METRES
- WETLAND
- TOWNSHIP, CONCESSION AND LOT

GSC SURFICIAL GEOLOGY

- r2. BEDROCK: LIMESTONE, DOLOMITE, SANDSTONE & LOCAL SHALE
- zz. WATERBODY

0 15 30 60

1:1,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. BÉLANGER, J. R. 2008 URBAN GEOLOGY OF THE NATIONAL CAPITAL AREA, GEOLOGICAL SURVEY OF CANADA, OPEN FILE 5311, 1 DVD.
2. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
3. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT
CITY OF OTTAWA

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE
SURFICIAL GEOLOGY

CONSULTANT
WSP GOLDER

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REVIEWED	AM
APPROVED	BD

PROJECT NO.	CONTROL	REV.	MAP
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KEY MAP

SCALE 1:25,000

LEGEND

- STUDY AREA
- ARCHAEOLOGICAL POTENTIAL (ASI 1999)
- ROADWAY
- TOPOGRAPHIC CONTOUR, METRES
- WETLAND
- TOWNSHIP, CONCESSION AND LOT

0 15 30 60

1:1,500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. BÉLANGER, J. R. 2008 URBAN GEOLOGY OF THE NATIONAL CAPITAL AREA, GEOLOGICAL SURVEY OF CANADA, OPEN FILE 5311, 1 DVD.
2. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
3. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT
CITY OF OTTAWA

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE
ARCHAEOLOGICAL ASSESSMENTS WITHIN 50 M

CONSULTANT
wsp GOLDER

YYYY-MM-DD	2023-01-12
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PROJECT NO.	CONTROL	REV.	MAP
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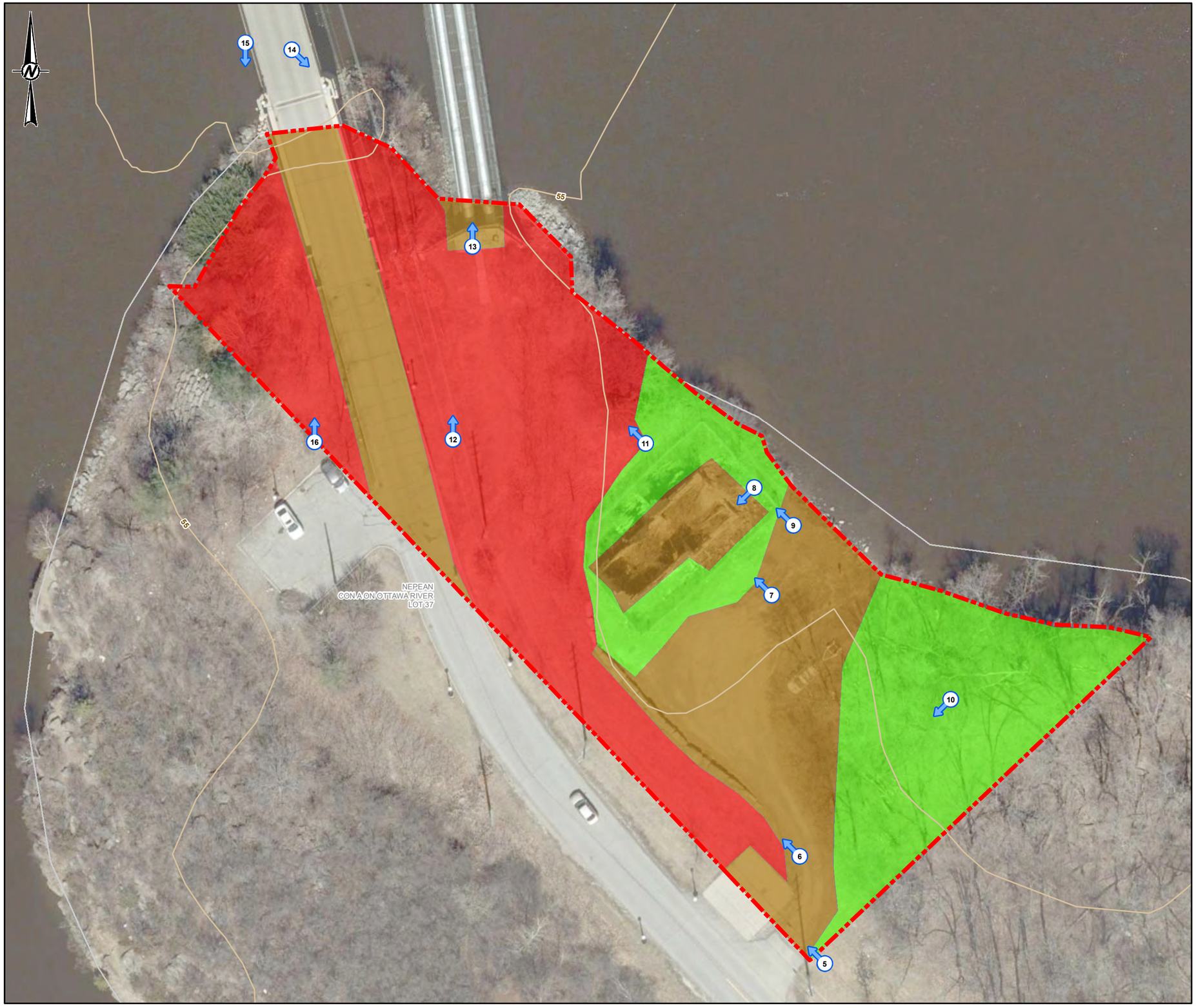

KEY MAP

SCALE 1:25,000

LEGEND

- PHOTO LOCATION AND DIRECTION
- ARCHAEOLOGICAL POTENTIAL - STAGE 2 TEST PIT SURVEY AT 5 M INTERVALS
- ARCHAEOLOGICAL POTENTIAL FOR DEEPLY BURIED RESOURCES – TESTPIT ACCORDING TO PROFESSIONAL JUDGEMENT TO CONFIRM FILL TO APPROPRIATE DEPTH
- DISTURBED - NO FURTHER ARCHAEOLOGY
- STUDY AREA
- TOPOGRAPHIC CONTOUR, METRES
- TOWNSHIP, CONCESSION AND LOT

0 5 10 20

1:500 METRES

NOTE(S)

1. ALL LOCATIONS ARE APPROXIMATE

REFERENCE(S)

1. BÉLANGER, J. R. 2008 URBAN GEOLOGY OF THE NATIONAL CAPITAL AREA, GEOLOGICAL SURVEY OF CANADA, OPEN FILE 5311, 1 DVD.
2. CONTAINS INFORMATION LICENSED UNDER THE OPEN GOVERNMENT LICENCE - ONTARIO
3. COORDINATE SYSTEM: NAD 1983 MTM 9, PROJECTION: TRANSVERSE MERCATOR, DATUM: NORTH AMERICAN 1983

CLIENT

CITY OF OTTAWA

PROJECT

STAGE 1 ARCHAEOLOGICAL ASSESSMENT HINTONBURG PUMPSTATION REDEVELOPMENT, PART OF LOT 37, CONCESSION A ON OTTAWA RIVER, GEOGRAPHIC TOWNSHIP OF NEPEAN, NOW THE CITY OF OTTAWA, CARLETON COUNTY, ONTARIO

TITLE

RECOMMENDATIONS AND PHOTO LOCATIONS

CONSULTANT

WSP GOLDER

YYYY-MM-DD	2023-01-12
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PREPARED	BR
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PROJECT NO.	CONTROL	REV.	MAP
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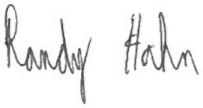
Signature Page

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.

Golder Associates Ltd.



Randy Hahn, PhD
Archaeologist

Aaron Mior, MMA
Senior Archaeologist

RH/AM/ca

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