

STAGE 1 AND 2
ARCHAEOLOGICAL ASSESSMENT
BAY ROAD AND ROTARY BEACH UPGRADES
GEOGRAPHIC TOWNSHIP OF LEEDS
TOWN OF GANANOQUE, ONTARIO



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EXECUTIVE SUMMARY

Past Recovery Archaeological Services Inc. was retained by G.D. Jewell Engineering Inc. to undertake a Stage 1 and 2 archaeological assessment of Bay Road and Rotary Beach in Gananoque as part of a Municipal Class Environmental Assessment. The Town of Gananoque is planning upgrades to the study area, which would include the widening and resurfacing of the existing roadway, and the installation of storm sewers, lighting and a boat launch. This assessment involved the examination of approximately 1.87 ha (4.62 acres) of land (Maps 1 and 2).

The purpose of the Stage 1 assessment was to assess the archaeological potential of the study area and present recommendations for the mitigation of any significant known or potential archaeological resources. To this end, historical and archaeological background research was conducted, a list of known cultural heritage resources within the study area was compiled, and an environmental profile of the study area was generated. In addition, a site inspection was undertaken on April 14th, 2016. Following this research, an evaluation of the archaeological potential of the study area was completed. The Stage 1 assessment resulted in the determination that parts of the property exhibited potential for archaeological resources associated with pre-Contact and historic settlement and/or land uses, and a Stage 2 assessment was recommended.

The purpose of the Stage 2 investigation was to determine whether or not there were archaeological resources within the study area and if so to evaluate whether or not they required additional assessment. No archaeological resources were found during the Stage 2 assessment of the property. The results of the Stage 1 and 2 archaeological assessment documented in this report, therefore, form the basis for the following recommendations:

- 1) No further archaeological assessment of the subject area as presently defined in Map 2 is required. As a result, clearance of the archaeological condition placed on the study area should be granted.

The reader is also referred to Section 5.0 below to ensure compliance with the *Ontario Heritage Act* as it may relate to this project.

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1.0 INTRODUCTION

Past Recovery Archaeological Services Inc. (Past Recovery) was retained by G.D. Jewell Engineering Inc. to undertake a Stage 1 and 2 archaeological assessment of Bay Road from the intersection at King Street West to (and including) Rotary Beach in Gananoque (Map 1). This involved the examination of approximately 1.87 ha (4.62 acres) of land within the Bay Road right-of-way (ROW) of Bay Road, as well as the beach and manicured lawns adjacent to the southern edge of the ROW and parking area (Map 2).

The objectives of the Stage 1 archaeological assessment were as follows:

- To provide information concerning the study area's geography, history, previous archaeological fieldwork, and current land condition;
- To evaluate the study area's archaeological potential; and,
- To recommend appropriate strategies for Stage 2 archaeological assessment in the event further assessment is warranted.

The objectives of the Stage 2 archaeological assessment were as follows:

- To document all archaeological resources on the property;
- To determine whether the property contains archaeological resources requiring further assessment; and,
- In the event that an archaeological site requiring further assessment is discovered, to recommend an appropriate Stage 3 assessment strategy.

2.0 PROJECT CONTEXT

This section of the report provides the context for the archaeological work undertaken, including a description of the study area, the related legislation or directives triggering the assessment, any additional development-related information, and an acknowledgement of permission to access the study area.

2.1 Property Description

The study area consists of a c. 1.87 ha (4.62 acre) parcel of land in the Town of Gananoque, which includes the ROW for Bay Road from the intersection at King Street West to the eastern end of Rotary Beach along the St. Lawrence River, as well as the beach property itself. The study area currently consists of a partially paved, packed gravel roadway, the lands on either side of the road making up the remainder of the ROW, a sandy beach area with a wood-framed, open-sided shelter, as well as a section of manicured lawn and parking spaces located to the east of the sand beach (see Map 2).

2.2 Development Context

The Town of Gananoque required the Stage 1 and 2 archaeological assessment as part of a Municipal Class Environmental Assessment being prepared in advance of proposed upgrades to the roadway and beach. The upgrades would see the widening and resurfacing of the existing roadway and the installation of storm sewers, lighting and a boat launch. A concept plan outlining the proposed developments within the study area was provided to Past Recovery by G.D. Jewell Engineering Inc., and has been reproduced as Map 3.

2.3 Access Permission

Permission to access the study area and complete all aspects of the Stage 1 and 2 assessments, including photography, excavation of test pits, and collection of any artifacts generated, was granted by the project proponent.

3.0 STAGE 1 ARCHAEOLOGICAL ASSESSMENT

3.1 Historical Context

This section of the report includes an overview of human settlement in the region with the intention of providing a context for the evaluation of known and potential archaeological sites, as well as a review of property-specific detailed archival research presenting a record of land use history.

3.1.1 Previous Historical Research

A number of historical studies have been conducted for Gananoque and the surrounding area. Among the studies, accounts of a general nature include the *History of Leeds and Grenville* by Thaddeus Leavitt (1879), *Leeds and Grenville: Their First Two Hundred Years* by Ruth McKenzie (1967), *Illustrated Historical Atlas of the Counties of Leeds and Grenville* (Mika Publishing 1973), *Historic Gananoque* by William Hawke (1974), *The Irish in Ontario: A Study in Rural History* by Donald Akenson (1987), *The Rear of Leeds and Lansdowne* by Glenn Lockwood (1996), and *Our Living History: An Historical Guide to the United Counties of Leeds and Grenville* by the Leeds and Grenville Community History Project (2000).

3.1.2 Regional Pre-Contact Cultural Overview

The earliest human occupation of southern Ontario began approximately 11,000 years ago with the arrival of small groups of hunter-gatherers referred to by archaeologists as Palaeo-Indians. These groups gradually moved northward as the glaciers and glacial lakes retreated. While very little is known about their lifestyle; it is likely that Palaeo-Indian groups travelled widely relying on the seasonal migration of caribou as well as small animals and wild plants for subsistence. They produced a variety of distinctive stone tools including fluted projectile points, scrapers, burins and graters.

Most archaeological evidence for the Palaeo-Indian period has been found in south-western and south-central Ontario at sites located on the former shorelines of glacial Lake Algonquin. First Nations settlement of eastern Ontario was late in comparison to these other parts of the province as a result of the high water levels of the St. Lawrence Marine Embayment of the post-glacial Champlain Sea (Hough 1958:204). Palaeo-Indian find spots in this region include fragments of a Plano (Late Palaeo-Indian) point from the 1000 Islands, two fluted points from the Rideau Lakes, two lanceolate points from Lanark County, two sites with Palaeo-Indian components near the Yarker Training Area along the Napanee River and a late Palaeo-Indian point found near Kingston Mills (Heritage Quest Inc. 2000a; Watson 1999a:35-38).

During the succeeding Archaic period (c. 7000 to 1000 B.C.), populations continued to follow a mobile hunter-gatherer subsistence strategy, although there appears to have been a greater reliance on fishing and gathered food (e.g. plants and nuts) and more diversity between regional groups. The tool kit also became increasingly diversified, reflecting an adaptation to environmental conditions similar to those of today. This included the presence of adzes, gouges and other ground stone tools believed to have been used for heavy woodworking activities such as the construction of dug-out canoes, grinding stones for processing nuts and seeds, specialized

fishing gear including net sinkers and plummets, and a general reduction in the size of projectile points. The middle and late portions of the Archaic period saw the development of trading networks spanning the Great Lakes, and by 6,000 years ago copper was being mined in the Upper Great Lakes and traded into southern Ontario. There is increasing evidence of ceremonialism and elaborate burial practices, and a wide variety of non-utilitarian items such as gorgets, pipes and ‘birdstones’ were being manufactured. By the end of this period populations had increased substantially over the preceding Palaeo-Indian occupation.

More extensive First Nations settlement of eastern Ontario began during this period, sometime between 5,500 and 4,500 B.C. (Ellis, Kenyon and Spence 1990:93; Kennedy 1970:61). Artifacts from Archaic sites in eastern Ontario suggest a close relationship to the Laurentian Archaic stage peoples of New York State. Laurentian peoples occupied the Canadian biotic province transition zone between the deciduous forests to the south and the boreal forests to the north. The Laurentian Archaic artifact complex contains large, broad bladed, chipped stone and ground slate projectile points, and heavy ground stone tools. This stage is also known for the extensive use of cold-hammered copper tools including “*bevelled spear points, bracelets, pendants, axes, fishhooks, and knives*” (Kennedy 1970:59). Sites from the Archaic period are more common in the eastern Ontario region. Archaic components have been identified on Brophy’s Point and in Button Bay (both on Wolfe Island), at Collins Bay, along the Napanee, Rideau, Gananoque, and Upper St. Lawrence Rivers, and within the Westbrook Subdivision (Heritage Quest Inc. 1994:14; Mount McGovern Co. Ltd. 1998; Watson 1999b).

The introduction of ceramics marks the beginning of the Woodland period (c. 1000 B.C. to A.D. 1550). These populations continued to participate in an extensive trade network that, at its zenith c. A.D. 200, spanned much of North America and included the movement of conch shell, fossilized shark teeth, mica, copper and silver. Social structure appears to have become increasingly complex, with some status differentiation evident in burials. It was in the Middle Woodland period (c. 300 B.C. to A.D. 900) that distinctive trends or ‘traditions’ evolved in different parts of Ontario for the first time, noted by archaeologists through variations in the artifacts left behind. The Middle Woodland tradition found in eastern and south-central Ontario has become known as ‘Point Peninsula’ (Spence, Pihl and Murphy 1990:157). A greater number of sites from this period has allowed 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 up for the approaching winter.

Towards the end of the Woodland period (c. A.D. 800) domesticated plants were introduced in areas to the south of the Canadian Shield. Initially only a minor addition to the diet, the cultivation of corn, beans, squash, sunflowers and tobacco gained economic importance for late Woodland peoples. Along with this shift in subsistence, settlements located adjacent to the corn fields began to take on greater permanency as sites with easily tillable farmland became more important. Eventually, semi-permanent and permanent villages were built, many of which were surrounded by palisades, evidence of growing hostilities between neighbouring groups.

The proliferation of sites suggests an increase in the population of eastern Ontario and it would appear that the Thousand Islands was an attractive location for Middle Woodland populations. A number of Middle Woodland sites, attributed to the Point Peninsula tradition, have been identified throughout the Thousand Islands and along the South Nation Drainage Basin. More specifically, Woodland period materials have been located in the Pike Farm collection, in the Brophey's Point collection from Wolfe Island, on Gordon Island, in the Prescott-Spencerville area, and in the interior reaches of the Gananoque River Basin. Burials reported from Tremont Island are also believed to date to this period. The Ault Park site near Cornwall is one of the most significant sites in eastern Ontario with other important sites from this period including the Long Sault Mounds and the Malcolm Site (Dailey and Wright 1955; Heritage Quest Inc. 1995:9; Fox 1990:183-186; Ritchie and Drago 1960). Two small Woodland campsites have also recently been identified within the Town of Gananoque, located on opposite sides of the Gananoque River (Past Recovery 2015a, 2014, in press).

Three pre-Contact stage tribal groups occupied eastern Ontario in the final decades prior to the arrival of Europeans. Agricultural villages, dating to A.D. 1400, of an Iroquoian people referred to as "proto-Huron" have been found in southern Hastings and Frontenac Counties (Pendergast 1972). By A.D. 1500, the easternmost settlements of the Huron were located between Balsam Lake and Lake Simcoe. St. Lawrence Iroquois occupied the upper St. Lawrence River valley. Finally, various Algonquin groups occupied the Ottawa Valley (Day and Trigger 1978:793).

The material culture and settlement patterns of the fourteenth and fifteenth century Iroquoian sites found in the Prescott area of Ontario are directly related to the Iroquoian-speaking groups that Jacques Cartier and his crew encountered in 1535 at Stadacona (Quebec City) and Hochelaga (Montreal Island) (Jamieson 1990:386). Following Cartier's initial voyages, subsequent journeys by Europeans found only abandoned settlements along the St. Lawrence River. At this time, there was a significant increase of St. Lawrence Iroquoian ceramic vessel types on Huron sites, and segments of the St. Lawrence Iroquois population may have relocated to the north and west either as captives or refugees (Sutton 1990:54; Wright 1966:70-71). The tumultuous events of the late sixteenth and early seventeenth centuries were certainly in part a result of the disruption of traditional trade and exchange patterns among all First Nation peoples brought about by the arrival of the French, Dutch and British along the Atlantic seaboard.

3.1.3 Regional Post-Contact Cultural Overview

In the early seventeenth century, French explorers such as Samuel de Champlain and Etienne Brule encountered groups of people speaking an Algonquian language along the Ottawa Valley. These were the Weskarini, Onontcharonon, Kichespirini, Matouweskari, and Otaguottouemin Algonquins (Trigger 1976:279). The loosely aligned bands subsisted by hunting, fishing and gathering, and undertook limited horticulture. Champlain, while searching for the Northwest Passage in 1613, entered Algonquin territory and explored the Ottawa Valley as far north as Morrison and Allumette Islands (Trigger 1976). The summer village of the Matouweskari was recorded at the mouth of the Madawaska River, but nothing more is known of this group other than their name and the general location of their hunting territory (Day and Trigger 1978:793; Hessel 1993:20). Since at least the late sixteenth century, all the Algonquin peoples were at war with the Mohawk Iroquois, the easternmost Five Nations Iroquois group. This warfare intensified over control of the St. Lawrence River trade.

The endemic warfare of the age and severe smallpox epidemics in 1623-24 and again between 1634 and 1640 brought about drastic population decline among all First Nation peoples (Hessel 1993:63-65). Between 1640 and 1650, French unwillingness to provide direct military support against their natural enemy, the Mohawk, led to the defeat and dispersal of the Algonquin and Huron by the Five Nations Iroquois of New York State (Trigger 1976:610, 637-638). Survivors of the various groups often coalesced as a single First Nation people to the north and west of the Ottawa Valley, and at the French posts of Montreal, Sillery and Trois Rivières.

Following the dispersal of the Ontario Iroquois and the Ottawa Valley Algonquin, the Five Nations of New York State (Mohawk, Oneida, Onondaga, Cayuga, and Seneca) eventually occupied a series of winter hunting bases and trading settlements near the mouths of the major rivers flowing into the north shore of Lake Ontario (Konrad 1981). The first recorded Five Nations settlements to relocate northward were two Cayuga villages established at the northeastern end of Lake Ontario. Two French Sulpician missionaries joined the Cayuga in 1668 at their settlement known as Kente, now Carrying Place, near the narrows separating the western end of Prince Edward County from the Hastings County mainland. A second Cayuga settlement, known as Ganneious, may have been near the mouth of the Napanee River, or further south on the Bay of Quinte (Edwards 1984:10). As a result of increased tensions between the Five Nations and the French, and declining population from disease and warfare, the Cayuga settlements were abandoned in 1680 (Edwards 1984:17).

The construction of the French outpost of Fort Frontenac near the mouth of the Cataraqui River in 1673 resulted in a sporadic European presence at the eastern end of Lake Ontario during the late seventeenth century and throughout the eighteenth century. The main function of the fort was to store supplies intended for the interior military and trading posts on the Niagara, Detroit, Illinois, and (American) Mississippi Rivers. This French military garrison readily abandoned the fort whenever disputes with the Iroquois seemed to escalate. While a Native village and a Recollet Mission were established outside the fort and some land was surveyed and settled by civilians, the French did not encourage the development of an extensive settlement in the Kingston area. In 1758 Fort Frontenac was surrendered to a British force during the Seven Years' War (Preston 1959).

At first, the end of the French regime in 1763 brought little change to eastern Ontario. Between 1763 and 1776 some British traders traveled to the Cataraqui area, but the British presence remained sporadic until 1783 when Fort Frontenac was officially re-occupied. The need for land on which to settle refugees of the American Revolution led the British government into hasty negotiations with their military allies, the Mississauga, who were assumed, erroneously, to be the only Native peoples inhabiting eastern Ontario.¹ Captain William Redford Crawford, who enjoyed the trust of the Mississauga chiefs living in the Bay of Quinte region, negotiated on behalf of the British government. In the so-called 'Crawford Purchase,' the Mississauga were cajoled into giving up Native title to most of eastern Ontario, including what would become the counties of Stormont, Dundas, Glengarry, Prescott, Russell, Leeds, Grenville and Prince Edward, as well as the front townships of Frontenac, Lennox, Addington and Hastings and much of what

¹ At this time, there was a significant Algonquin presence in eastern Ontario and Mohawk Reserves had been established at Tyendinaga near Desoronto and at St. Regis near Cornwall.

is now the City of Ottawa (Lockwood 1996:24). Settlement along the north bank of the St. Lawrence River and the eastern end of Lake Ontario began in earnest about his time.

Leeds Township was opened for settlement in 1788 when it was first surveyed (Mika Publishing 1973:8). The majority of the lots were granted to United Empire Loyalists, which resulted in little initial settlement of the area. Gananoque itself was a good example of these land grants with the 700 acres on the west bank of the Gananoque River abutting the St. Lawrence River being granted to Joel Stone and the 1,000 acres on the east bank being granted to Sir John Johnson in 1792, both of whom were United Empire Loyalists (Leavitt 1879:126).

Sir John Johnson never settled in the area as he was the first superintendent of Indian Affairs and held considerable land around Montreal. Stone had lost his holdings in the United States during the War of Independence and fought a lengthy court battle in London, England for compensation for his losses (Hawke 1974:11). With little direct compensation forthcoming from the British government he sailed for Quebec in 1785 and purchased land in Cornwall. He would continue to search for a considerable grant of land and petitioned the government for the Gananoque plot in 1787. Stone is generally considered the founder of Gananoque and from the time of his grant in 1792 to the War of 1812 he started numerous business projects which served to grow the area into the industrial town it would become. Notable early projects included the construction of the first general store, an inn, an orchard, the Gananoque River ferry and bridge, construction of a seventeen tonne schooner, numerous dams and canals on the Gananoque River and a Customs House (Hawke 1974:9, 13-14; Akenson 1987:71). Stone would also serve as Justice of the Peace and a Colonel of the 2nd Leeds Militia during this time (Hawke 1974:14; Akenson 1987:71-72).

While Stone was the undisputed founder of Gananoque, the McDonald family provided the rapid growth of industry in the town in the first half of the nineteenth century. Charles McDonald was the first McDonald, arriving in the area in 1810, having heard of Stone's need for a business partner after he lost his only son (Hawke 1974:15). Charles gained a controlling interest in the area by marrying Stone's daughter and purchasing much of Johnson's claim. He built a sawmill and grist mill at the mouth of the river and began shipping large quantities of lumber to Quebec and Kingston from the Gananoque watershed (Leavitt 1879:126).

By 1826, Charles and his recently arrived brothers had started the firm C. & J. McDonald & Brother and, among many business interests, had constructed the largest flouring mill in the province with a capacity of 250 barrels per day, supplying one quarter of all the flour received annually at the Port of Montreal at that time. On the strength of the mills powered by the Gananoque River, the population had grown to 768 by 1832 (Leavitt 1879:131).

Gananoque was deemed important enough in these early years to be the scene of one of the opening skirmishes of the War of 1812. The details of the skirmish are vague; however a force of roughly two hundred Americans traded volleys with some 110 British regulars and Leeds militia to the west of the village. Being largely outnumbered, the British force quickly retreated (Hawke 1974:18-20). The Americans destroyed the supply depot, the King Street bridge and Colonel Stone's residence before leaving the area. While the action was not significant, it resulted in the rapid construction of a blockhouse by Charles McDonald under the instruction of the government, which was completed in 1813.

Industrial development was responsible for the growth of the town through the nineteenth century, largely controlled by the McDonald family but with many other large factories being established through competing interests (Hawke 1974:33-39). The power of the Gananoque River appears to have been the impetus for this as it was of an ideal size and flow rate for the creation of mills.

Manufacturing remained a strong force in the community into the twentieth century; however, with other sources of power coming to the forefront in the Canadian economy, the rapid growth seen in Gananoque during the nineteenth century slowed significantly. The population of Gananoque at the end of the nineteenth century was 4,000, but by 1917 had dropped to 3,307 (LAC NMC 151438 and NMC 9452). In 1947 the population had increased to 4,294, not far below the current population of 5,194 (LAC NMC 9453 and Statistics Canada 2011).

3.1.4 Property History

The following discussion will focus on the main developments of the nineteenth and twentieth centuries, particularly as they relate to the archaeological potential of the study area. Documents reviewed in order to develop the property history include available nineteenth and twentieth century maps, aerial photographs, the Leeds County Land Registry Office Abstract Index records (LCLRO), and census returns.

The study area consists of Part of Lots 12 and 13, Concession 1, Front of Leeds Township. The histories of Gananoque and Leeds County indicate that the Crown patent for 1,100 acres of land along the western bank of the Gananoque River was granted to Joel Stone in 1792 (Leavitt 1879; Akenson 1987). By 1825 the study area was owned by John McDonald. A plan of Gananoque, dating to 1817, illustrates the lack of development in the study area at that time (Map 4). The nearest illustrated building was a school house to the north of the study area, although it is possible that additional extant structures may have been omitted from the plan.

Prior to 1837 when the first Wesleyan Methodist Church was erected on Pine Street, both the Methodist and the Presbyterian congregations made use of a chapel built on land donated by John MacDonald at the corner of Church and King Streets. This chapel, along with the town's original burial ground and a school house, can be seen on a plan of subdivision completed by Provincial Land Surveyor William H. Deane in 1858 on behalf of William MacDonald (Map 5). This plan appears to have been drawn up at a slightly earlier date than it was published, however, as the original Church of England, a chapel constructed c. 1833 (Kingston Chronicle and Gazette 1837:1), is indicated at the corner of King and Church Streets, while the new Church built in 1857/58 (now Christ Church), is not present (Akenson 1984:266). Thus it is suspected that this plan likely reflects a survey completed c. 1857, when the new church was still under construction, and the old church was still in use. The plan illustrates that additional roads had been staked out in the neighbourhood, branching off from King Street, although no names were yet given to them. The chapel, burial ground and school were all located on the height of land immediately north of the study area. The study area itself remained undeveloped, as did the waterfront. This plan is believed to illustrate the original limits of the shoreline, which has been gradually and artificially extended into the water over the last century or more. As the plan indicates, in the mid-nineteenth century much of the current study area was as yet under water.

As mentioned above, the new Christ Church held its inaugural service in 1858. A map of Gananoque dating to 1862 illustrates the church in its current location facing onto Church Street (Map 6). This map also indicates that George Beaumont, general merchant, had built his residence at the end of Church Street, and Isaac Briggs, nail manufacturer, had erected his home in the location of the old chapel at the corner of Church and King Streets. The census records for 1861 indicate that George Beaumont lived in a one-storey frame house with his wife and three children, while Isaac Briggs lived in a two-storey stone home with his wife and one child (LAC microfilm reel C-1045).

By 1871 neither Isaac Briggs, nor his family appeared in a search of the Canadian and American census records, so it is likely that he had died and his family relocated. Meanwhile, the Beaumont family had grown to eight members (LAC microfilm reel C-10001). By 1881, only four children remained at home, and George Beaumont had switched his profession to book-keeper (LAC microfilm reel C-13232).

In 1873 the grand red brick mansion at the corner of King Street and Bay Road was constructed for William Byers and his young family (Image 1). The high cost of building such a fine house were evidently enough that the young Byers family was forced to sell their home in 1879 to Samuel McCammon (LCLRO IV-783). In 1881 McCammon was listed as a manufacturer, and he lived with his wife, two grown children and one servant (LAC microfilm reel C-13232).

It is uncertain when the old burial ground was closed, although it may be presumed that this coincided with the opening of Willowbank Cemetery in 1889. The graves from the old burial ground were evidently reintered at Willowbank at around the same time, as the new cemetery contains several grave stones dating to as early as the 1830s, including that of Col. Joel Stone, founder of Gananoque.

By 1891, George Beaumont had died, leaving his wife Sarah, now 56, living with their son George in the two-storey, nine room, wood frame house at the end of Church Street (LAC microfilm reel T-6350). One of Sarah's daughters, Isabella, now married with six children, lived next door in a two-storey brick house with 10 rooms. Sarah Beaumont continued to live there a decade later, although now there were three generations living under her roof (LAC microfilm reel T-6479). The McCammon family continued to live in the red brick mansion, then called "Glenwood". Both the Beaumont and McCammon families remained in the vicinity of the study area into the twentieth century.

A series of twentieth century aerial photographs reveal the gradual expansion of the shoreline into the St. Lawrence River at the southern limits of the study area. The first photograph dates to 1920 and illustrates the presence of several boathouses or similar structures which appear to extend from the southern edge of Bay Road out into the water (Image 2). The next available aerial photograph was taken in 1948, and provides an overhead view of the study area at that time (Map 7). In this photograph, portions of the study area are still under water, and the boathouses are concentrated to the east of what is now Rotary Beach. At this time, Princess Street extended all the way to Bay Road along the water's edge.

The Rotary Club of Gananoque rented the shoreline section of the study area and proceeded to build a sand beach in 1949 or 1953 (sources disagree –Rotary International 1949:47; 1960:50).

This involved importing clean sand fill and extending the shoreline to the east of the adjacent creek mouth, as well as building a bathhouse. Unfortunately, an aerial photograph taken in 1955 is of low resolution, and the above details cannot be easily seen (Map 8). Reference was also found to indicate that rocks were imported for use in the beach, presumably to create the stone retaining walls which now contain a small garden just north of the swimming area (The Gananoque Reporter 2016:4). An aerial photograph dating to 1994 illustrates the study area now fully occupied by extended shoreline, with structures lining the waterfront everywhere but at the Rotary Beach (Map 9).

Presently all of the boathouses and other structures along the shoreline at the southern end of the study area have been removed (see Map 2). Bay Road remains a secondary road, only paved at the northern end near the King Street intersection and by the marina. A large portion of Bay Road is still a “dirt road”. Where Princess Street used to meet Bay Road has now become overgrown with grass. The shoreline has been landscaped as waterfront parkland.

3.2 Archaeological Context

This section describes the environmental and archaeological context of the study area which, combined with the historical context outlined above, provides the necessary information to assess the archaeological potential of the property.

3.2.1 Previous Archaeological Research

No previous assessments have been undertaken within or immediately adjacent to the study area. Lawrence Jackson performed a survey of St. Lawrence Islands National Park in 1993, wherein he reinvestigated the McDonald Island Site (BbGb-05) and identified four more sites on the island, ranging in date from the Middle Woodland Period to the twentieth century. In addition to the above survey, several cultural resource management assessments are known to have been completed within the Town of Gananoque in recent years. All known previous work performed in the general vicinity of the study area has been summarized below in Table 1.

3.2.2 Previously Recorded Archaeological Sites

The primary source for information regarding known archaeological sites is the *Archaeological Sites Database* maintained in Ontario by the Ministry of Tourism, Culture and Sport (MTCS). The database largely consists of archaeological sites discovered by professional archaeologists conducting archaeological assessments required by legislated processes under land use development planning (mostly since the late 1980s). A search of the database for all registered sites located within a one kilometre radius of the study area was made with the result that nine archaeological sites have been registered within this area. These sites have been summarized below in Table 2.

In addition to the above registered sites, a number of local “finds” were reported in the provincial Annual Archaeological Report series between 1898 and 1919, and these have been summarized in Appendix 1.

Table 1. Summary of Known Archaeological Assessments Performed in the Town of Gananoque.

Project Name	Stage(s) Completed	Site(s) Identified	Reference
129 South Street	1 - 4	BbGa-18	Past Recovery 2015b, 2016, in press
Island Harbour	1 - 4	BbGa-16 (Island Harbour)	Golder Associates Ltd. 2014; Past Recovery 2014a, 2015a
Riverstone Gananoque	1 - 2	BbGa-17	Past Recovery 2014b, 2015c
Glen House Resort/ Golf Course	1 - 3	BcGa-06 (Glen House Site 1) BcGa-07 (Glen House Site 2)	Mount McGovern Co. Ltd. 1999; Heritage Quest 2000b
An Archaeological Survey of St. Lawrence Islands National Park	1 - 2	BbGb-05 (McDonald Island), BbGb-16 (McDonald South-Central), BbGb-17 (McDonald Southeast Bay), BbGb-18 (McDonald Northeast Landing), BbGb-19 (McDonald North Dumps)	Jackson 1994

Table 2. Summary of Registered Archaeological Sites within a 1 km Radius of the Study Area.

Borden Number	Site Name	Time Period	Inferred Agency	Inferred Function
BbGa-05	Stone's Mill	Post-Contact	Euro-Canadian	Manufacturing, mill
BbGa-16	Island Harbour Site	Post-Contact, Woodland, Early, Woodland, Late, Woodland, Middle	Euro-Canadian, Unknown	Campsite, residential, seasonal
BbGa-17	Riverstone Gananoque Site	Post-Contact	Euro-Canadian	Residential
BbGa-18	Riviyra (pending)	Woodland	Aboriginal	Campsite
BbGb-05	McDonald Island	Woodland, Middle	Aboriginal	N/A
BbGb-16	McDonald South- Central	Woodland, Middle	Aboriginal	Campsite
BbGb-17	McDonald Southeast Bay	Post-Contact/ Early twentieth century	Euro-Canadian	Cabin and midden
BbGb-18	McDonald Northeast Landing	Woodland, Middle	Aboriginal	Campsite
BbGb-19	McDonald North Dumps	Post-Contact/Early to mid-twentieth century	Euro-Canadian	Surface midden

3.2.3 Identified Local Cultural Heritage Resources

The recognition or designation of cultural heritage resources (here referring only to built heritage features and cultural heritage landscapes) may provide valuable insight into aspects of local heritage, whether identified at a local, provincial, national, or international level. Some of these cultural heritage resources may be associated with significant archaeological features or deposits. Accordingly, the Stage 1 archaeological assessment included the compilation of a list of cultural heritage resources that have previously been identified within or immediately adjacent to the current study area. The following sources were consulted:

- Federal Heritage Buildings Review Office online Directory of Heritage Designations (<http://www.pc.gc.ca/eng/progs/beefp-fhbro/index.aspx>);
- Canada's Historic Places website (<http://www.historicplaces.ca/en/home-accueil.aspx>); and,
- Ministry of Tourism, Culture and Sport's List of Heritage Conservation Districts (http://www.mtc.gov.on.ca/en/heritage/heritage_conserving_list.shtml).

No previously designated cultural heritage resources were found to be located within or immediately adjacent to the present study area. The Byers family mansion (now the Victoria Rose Inn) is located adjacent to the study area, but this property is neither listed nor registered as a cultural heritage resource in any capacity.

3.2.4 Heritage Plaques and Monuments

A search of several listings of plaques and monuments was undertaken, given that these markers typically indicate some level of heritage recognition. No plaques or monuments were noted within or adjacent to the study area.

3.2.5 Cemeteries

The presence of historical cemeteries in proximity to a parcel undergoing archaeological assessment can pose archaeological concerns in two respects. First, cemeteries may be associated with related structures or activities that may have become part of the archaeological record, and thus may be considered features indicating archaeological potential. Second, the boundaries of historical cemeteries may have been altered over time, as all or portions may have fallen out of use and been forgotten, leaving potential for the presence of unmarked graves. For these reasons, the background research conducted for this assessment included a search of available sources of information regarding historical cemeteries. For this study, the following sources were consulted:

- A complete listing of all registered cemeteries in the province of Ontario maintained by the Consumer Protection Branch of the Ministry of Consumer Services;
- Field of Stones website (<http://freepages.history.rootsweb.ancestry.com/~clifford/>);
- Ontario Cemetery Locator website maintained by the Ontario Genealogical Society (<http://ogs.andornot.com/CemLocat.aspx>);
- Ontario Headstones Photo Project website (<http://canadianheadstones.com/on/cemeteries.php>); and,

- Available historical mapping and aerial photography.

No known nineteenth century cemeteries were located within the study area, although the original graveyard for the settlement of Gananoque was located c. 35 m north of the current study area where it faces the St. Lawrence River. Very little information has been found about this cemetery, although it appears on an 1858 plan of Gananoque (see Map 5). It is presumed that the closure of this cemetery occurred before the opening of Willowbank Cemetery in 1889, with some prior burials removed at that time, though it is likely others remain.

3.2.6 Local Environment

The study area is situated within the Leeds Knobs and Flats physiographic region, which consists of outcrops of Precambrian rock interrupted by flat to undulating areas with clay soils (Chapman & Putnam 1984:186-187 and 196). Geologic mapping at a scale of 1:250,000 shows the bedrock geology of the study area to be bordering on the Beekmantown group of dolostone and sandstone bedrock and late felsic plutonic bedrock comprised mostly of granite gneisses with migmatites and pegmatites (OGS 2003a), while the surficial geology for the study area falls within a bedrock-drift complex in Paleozoic terrain (OGS 2003b). Soil mapping of the area indicates that the project falls within the Napanee clay soils series which is characterized by low organic matter with poor drainage on nearly level terrain (Gillespie et al. 1968).

Gananoque lies within the Huron - Ontario Sub-region of the Great Lakes - St. Lawrence Forest Region. Deciduous trees common to this area include sugar and red maples, beech, basswood, white and red ashes, yellow birch, and red, white and burr oaks, while coniferous trees include eastern hemlock, eastern white pine and balsam fir (Rowe 1972:93). The study area would have been cleared of its original growth forest in the late eighteenth or early nineteenth century.

The study area is within the Upper St. Lawrence watershed and is located on the north shore of the St. Lawrence River, less than 500 meters west of its confluence with the Gananoque River. These rivers are important as a migratory stop-over and wintering areas for waterfowl (Johnson 1971). Lands adjacent to these bodies of water display Class 3 (slight limitations) capability for the production of waterfowl. As the subject property lies within an area of urban development, there is no data available for ungulate capability (Canada Land Inventory 1970). An unnamed creek is located adjacent to Bay Road from the King Street intersection to the St. Lawrence River.

3.2.7 Property Inspection

In addition to the above historical research, Past Recovery completed a site inspection of the corridor on April 14th, 2016. The weather was sunny with occasional clouds and a high of 13° C. This inspection was conducted according to the archaeological fieldwork standards outlined in *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), with field conditions and features influencing archaeological potential documented through digital photography. The property inspection was used to supplement the background information outlined above to help inform the archaeological potential model developed below, particularly with regard to factors indicating removal of archaeological potential.

The site visit confirmed the layout of Bay Road and Rotary Beach. Bay Road begins at the intersection of King Street in the northern end of the study area (Image 3), heads south for about 80 m (Image 4), then follows along the side of a steep hill in a south-easterly direction for approximately 280 m to Rotary Beach (Image 5). It then hugs the base of the hillside eastward for about 90 m (Image 6) before veering northeast towards the asphalt-paved marina parking lot (Image 7). The north end of the study area (at the King Street intersection) is approximately 90 m above sea level, but it slopes down considerably southward, reaching approximately 75 m above sea level at Rotary Beach.

The ROW along the western edge of the roadway beginning at King Street and continuing southward to Rotary Beach consists of a gravel embankment approximately 0.5 m and 1 m in width (Image 8), before sloping drastically down to the unnamed creek which flanks the roadway and empties into the St. Lawrence River (Image 9). At Rotary Beach, clean sand fill has been added near the creek mouth to create the swimming beach, where two separate stone retaining walls are also present (Image 10). The first retaining wall consists of cut limestone blocks and flanks the southern edge of Bay Road at the beach, while the second retaining wall consists of large rough cut boulders piled directly along the shoreline to retain the beach sand (Image 11). Further to the east, smaller cobbles have been used in the same way to retain the artificially extended shoreline (Image 12).

Along the northern edge of Bay Road, the ROW extends a distance of between 1 m and 2 m. Near the intersection at King Street, this part of the ROW contains a natural gas line for about 60 m in a southerly direction. A stone retaining wall associated with the Byers mansion acts as the study area boundary for approximately 70 m (see Image 5). Beyond this to the south is a permanently water-saturated zone associated with a culvert (Image 13). To the north of Rotary Beach the northern edge of the ROW is relatively flat and level before sloping dramatically upwards just beyond the study area limits (see Image 6).

Bay Road itself appears to have been constructed through a combination of scraping the hillside to create a level shelf, as well as importing gravel fill to build up and stabilize the road platform. It is suspected that there was no natural shore-side terrace in the area prior to Euro-Canadian development, and that the natural landscape instead followed the steep slope still visible immediately north of the roadway, plunging directly into the St. Lawrence River. This interpretation of the landscape would appear to be confirmed by the available nineteenth century maps, which place much of the waterfront portion of the study area under water (see Maps 5 and 6). Of course, the degree of accuracy to which historic maps may represent actual landscape/shoreline features is certainly questionable, and should in many cases be confirmed through field-testing methods.

For the most part, the roadway is composed of packed gravel and stone dust. Near the intersection at King Street it is paved asphalt for a distance of about 10 m. At the southeastern end of the study area the roadway becomes the marina parking lot, which is also paved asphalt (Image 14).

The results of the Stage 1 property inspection were documented with fieldnotes, field maps, and digital photographs. A catalogue of the material generated during the Stage 1 property

inspection is included below in Table 3. The complete Stage 1 and 2 photographic catalogue is included as part Appendix 2 and the locations and orientations of all photographs used in this report are shown in Map 10.

Table 3. Inventory of the Stage 1 Documentary Record.

Type of Document	Description	Number of Records	Location
Field notes	Notes on the Stage 1 property inspection	1 page	PRAS office – file PR16-08
Field maps	Printed high resolution maps	1 map	PRAS office – file PR16-08
Photographs	Digital photographs documenting the Stage 1 site inspection	122 photographs	PRAS computer network – file PR16-08

3.3 Analysis and Conclusions

This section of the report includes an evaluation of the archaeological potential within the study area, in which the results of the background research and property inspection described above are synthesized to determine the likelihood of the property to contain significant archaeological resources.

3.3.1 Determination of Archaeological Potential

A number of factors are used to determine archaeological site potential. For pre-Contact sites criteria are principally focused on topographical features such as the distance from the nearest source of water and the nature of that water body, areas of elevated topography including features such as ridges, knolls and eskers, and the types of soils found within the area being assessed. For historic sites, the assessment of archaeological site potential is more reliant on historical research (land registry records, census and assessment rolls, etc.), cartographic and aerial photographic evidence and the inspection of the study area for possible above ground remains or other evidence of a demolished historical structure. Also considered in determining archaeological potential are known archaeological sites within or in the vicinity of the study area.

Archaeological assessment standards established by MTCS (*Standards and Guidelines for Consultant Archaeologists*, 2011) set minimum distances to be tested from features indicating archaeological potential. Areas that are considered to have pre-Contact site potential and therefore require testing include lands within 300 metres of water sources, wetlands or elevated features in the landscape including former river scarps. Areas of historic archaeological site potential requiring testing include locations within 300 metres of sites of early Euro-Canadian settlement and 100 metres of historic transportation corridors. Further, areas within 300 metres of registered archaeological sites, designated heritage buildings or structures/locations of local historical significance are considered to have archaeological potential and require testing. These guidelines were refined and applied to the study area after the research described above, generating the Stage 1 recommendations presented below in Section 3.3.2.

In general, the study area exhibits characteristics that indicate potential for the presence of archaeological resources associated with pre- and post-Contact First Nations settlement and/or land uses. Specifically:

- All of the study area is located within 300 metres of an unnamed creek;
- Portions of the study area are located within 300 metres of the St. Lawrence River, a primary transportation corridor and source of food and water; and,
- Portions of the study area are located within 300 metres of a registered multi-component archaeological site, specifically the Island Harbour Site (Bbga-16).

The study area also exhibits characteristics that indicate potential for the presence of archaeological resources associated with Euro-Canadian settlement and/or land uses. Specifically:

- All of the study area is located within 300 metres of early Euro-Canadian settlement as indicated by nineteenth century mapping and surviving buildings;
- All of the study area is located within 300 metres of an unnamed creek;
- Portions of the study area are located within 300 metres of the St. Lawrence River, a primary transportation corridor and source of food and water; and,
- Portions of the study area are located within 300 metres of a registered multi-component archaeological site, specifically the Island Harbour Site (Bbga-16).

Given the number of features of archaeological potential identified within or in the immediate vicinity of the study area, the evaluation of potential began from the assumption that all portions of the study area contained archaeological potential. The site visit permitted the identification of areas which exhibit low to no archaeological potential as a result of deep and extensive disturbance or excessive slope (see Section 3.2.7). The Stage 1 archaeological potential evaluation resulted in the determination that c. 70% of the study area was either disturbed or excessively sloped, 25% was suspected to be an artificially extended shoreline, and 5% of the study area retained high archaeological potential. The archaeological potential of the study area has been illustrated on Map 11.

3.3.2 Stage 1 Recommendations

The results of the Stage 1 assessment formed the basis for the following recommendations:

- 1) All portions of the study area shown as retaining archaeological potential on Map 11 should be subjected to Stage 2 archaeological assessment.
- 2) Any future Stage 2 archaeological assessment should be undertaken by a licensed consultant archaeologist, in compliance with *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011), prior to any planned disturbance below the current grade. The preferred testing method would be the hand excavation of test pits placed at 5 m intervals along the sides of the roadway, where possible, and placed judgmentally along the current shoreline to confirm the absence of any natural soil deposits in that area.

Should natural stratigraphy be encountered to the south of the ROW along the water, that area should likewise be tested by the hand excavation of test pits placed at 5 m intervals.

4.0 STAGE 2 ARCHAEOLOGICAL ASSESSMENT

The purpose of the Stage 2 assessment was to determine whether archaeological resources, artifacts or sites with cultural heritage value or interest were present within the study area and to determine whether these resources required further assessment. More specifically, the aim was to address the recommendations of the Stage 1 archaeological assessment.

4.1 Fieldwork Methodology

The Stage 2 archaeological assessment was undertaken on June 6th, 2016. Fieldwork was conducted according to the archaeological fieldwork standards outlined in *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011) by a crew of five people, including two Aboriginal Monitors from the Mohawks of the Bay of Quinte and the Mohawk Council of Akwesasne. Further details about the aboriginal engagement undertaken can be found in the *Supplemental Documentation*. The weather was sunny with occasional clouds and a high of 22° C. Visibility was excellent, permitting the accurate identification and recording of any archaeological deposits.

The limits of the areas requiring Stage 2 testing were determined in the field using recent survey markers, as well as printed maps produced using recent high-resolution satellite imagery of the subject property, onto which the property boundaries had been overlain. These maps allowed the Past Recovery field crew to accurately determine the limits of the study area in relation to fixed reference landmarks, and facilitated the detailed recording of field conditions. The Stage 1 archaeological potential evaluation resulted in the determination that c. 70% of the study area was either disturbed or excessively sloped, 25% was suspected to be an artificially extended shoreline, and 5% retained high archaeological potential. As a result, 5% of the study area was tested by means of a test pit survey at 5 m intervals using shovels and trowels with back dirt screened through 6 mm mesh (Images 15 to 17). The 25% of the study area situated along the St. Lawrence River was test-pitted judgementally to confirm the artificial shoreline extension. The remaining 70% of the study area was not tested. Shovel test pits were at least 30 centimetres in diameter and excavation continued five centimetres into sterile subsoil, where possible. All pits were examined for stratigraphy, cultural features, and/or evidence of deep and intensive disturbance. A representative sample of test pits were recorded through field notes and digital photography. Once all required recording had been completed, all test pits were backfilled.

Field activities were recorded through field notes, digital photographs and a site plan. A catalogue of the material generated during the Stage 2 property survey is included below in Table 4. The complete photographic catalogue is included as part of Appendix 2, and the locations and orientations of all photographs used in the report are shown on Map 10.

Table 4. Inventory of the Stage 2 Documentary Record.

Type of Document	Description	Number of Records	Location
Field notes	Notes on the Stage 2 field work	1 pages	PRAS office – file PR16-08
Field maps	Printed high resolution maps	1 map	PRAS office – file PR16-08
Photographs	Digital photographs documenting the Stage 2 fieldwork	6 photographs	PRAS computer network – file PR16-08

4.2 Fieldwork Results

No evidence of natural stratigraphy was found to the south of Bay Road, but instead the presence of gravel, sand, and industrial waste fills were confirmed - typical deposits within reclaimed waterfront areas (Image 18). The level area to the north of the road at Rotary Beach was found to contain natural stratigraphy, consisting of a dark brown sandy loam topsoil (c. 15 cm in depth) directly atop the B horizon which consisted of compact, tan clay (Image 19). Test pits elsewhere along the roadway were similar, although some contained a layer of gravel between the topsoil and subsoil, which varied in thickness depending on proximity to the actual road. Several test pits immediately south of the stone retaining wall associated with the Byers mansion were found to fill up with groundwater as they were being excavated, indicating the main drainage route for the property (Image 20). In fact, deliberate gaps in the masonry were noted at regularly spaced intervals along the base of this wall for the purpose of draining the backyard (Image 21). No artifacts or features of cultural heritage value or interest were found during the course of the Stage 2 fieldwork.

4.3 Analysis and Conclusions

No artifacts, features, or other cultural deposits of archaeological concern were noted during the Stage 2 assessment.

4.4 Stage 2 Recommendations

This report forms the basis for the following recommendation:

- 1) No further archaeological assessment for the subject area as presently defined in Map 2 is required. As a result, clearance of the archaeological condition placed on the study area should be granted.

The reader is also referred to Section 5.0 below to ensure compliance with the *Ontario Heritage Act* as it may relate to this project.

5.0 ARCHAEOLOGICAL COMPLIANCE

In order to ensure compliance with the *Ontario Heritage Act*, the reader is advised of the following:

- 1) This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. 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.
- 2) 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 Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- 3) 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*.
- 4) The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.
- 5) 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.

6.0 LIMITATIONS AND CLOSURE

Past Recovery Archaeological Services Inc. 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.

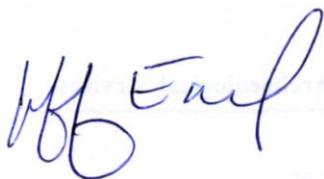
This report has been prepared for the specific site, design objective, developments and purpose prescribed in the client proposal and subsequent agreed upon changes to the contract. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

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

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

The documentation related to this archaeological assessment will be curated by Past Recovery Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to an approved and suitable repository can be made to the satisfaction of the project owner(s), the Ontario Ministry of Tourism, Culture and Sport and any other legitimate interest group.

We trust that this report meets your current needs. If you have any questions of if we may be of further assistance, please do not hesitate to contact the undersigned.



Jeff Earl, M.Soc.Sc.
Principal
Past Recovery Archaeological Services Inc.

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Library and Archives Canada (LAC):

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Microfilm Reels:

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C-10001 1871 Census for Gananoque

C-13232 1881 Census for Gananoque

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National Map Collection (NMC):

NMC 16104 Plan of Gananoqui., Surveyed in April 1817, by Lieut. E.S. Smith 70th. E.A. Smith

NMC 3101 700 Acres of Lands, the property of Joel Stone Esqr. [situated along the Gananoque River] surveyed in the Month of October, 1791, by (signed) J. Pennoyer, D.P.S

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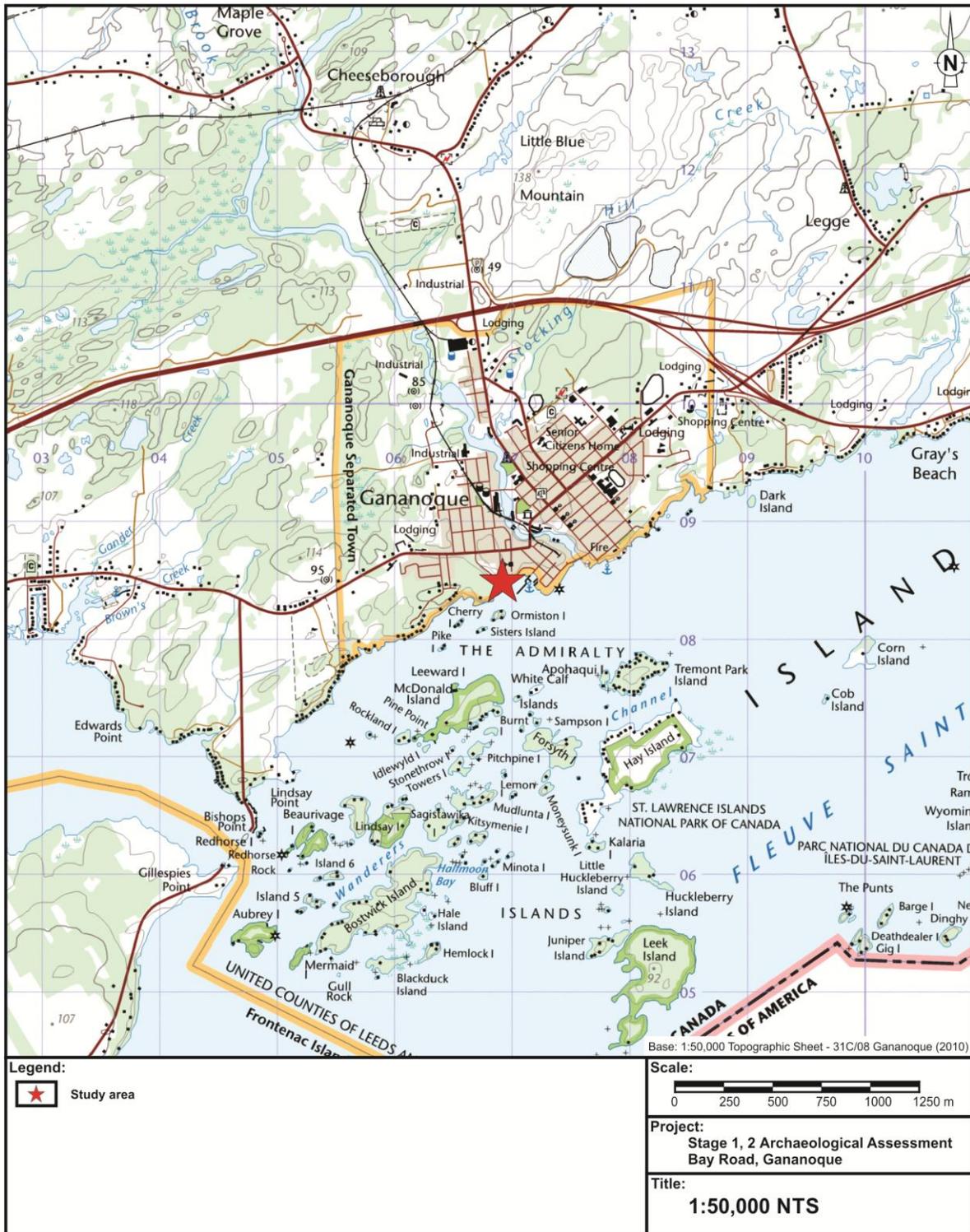
National Air Photo Library (NAPL):

A11463-051 1948, Town of Gananoque, 1:15,000 scale

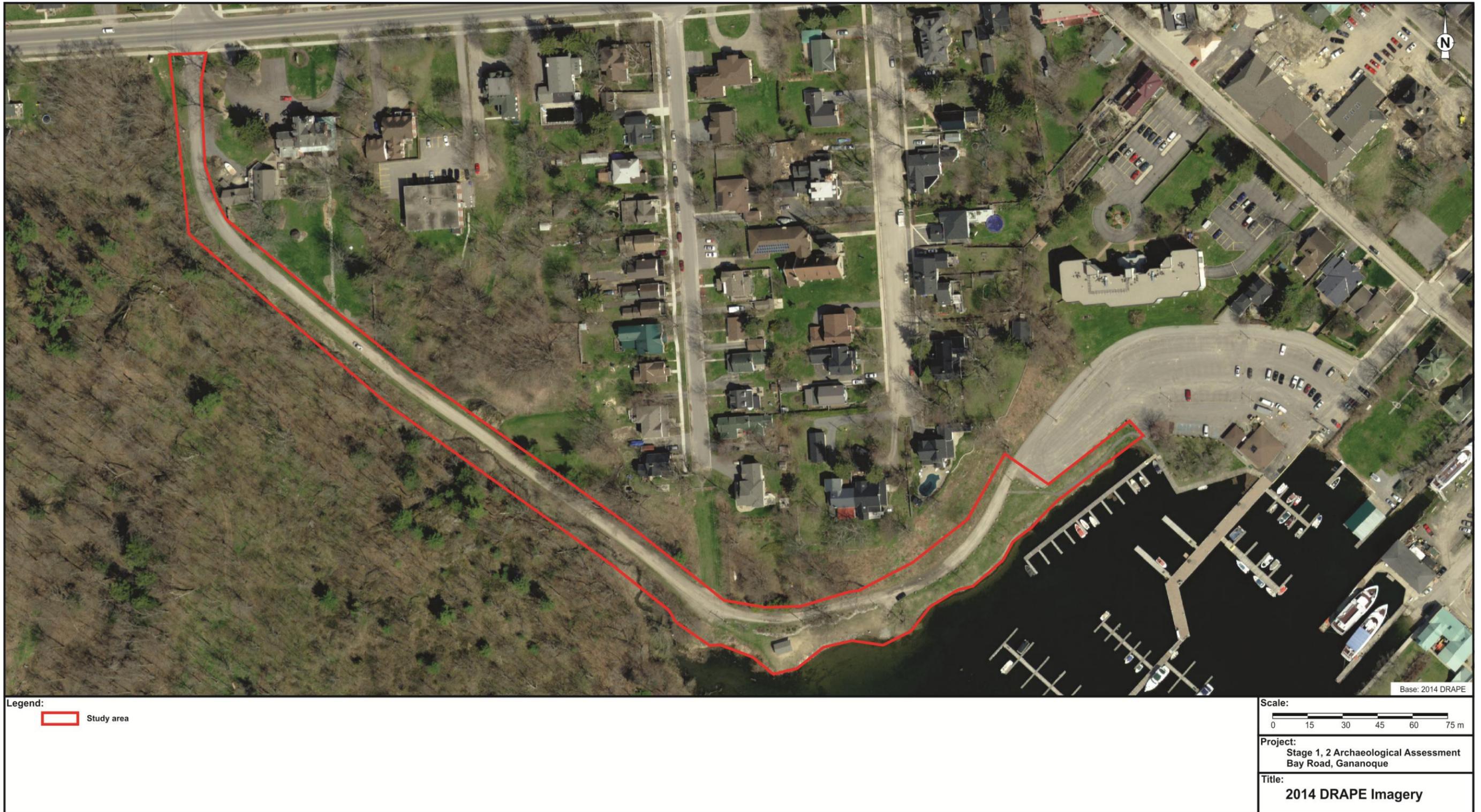
A15127-10 1955, Town of Gananoque, 1:10,000 scale

A28135-20 1994, Town of Gananoque, 1:20,000 scale

8.0 MAPS



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Map 2. Recent orthophotographic image of the study area.

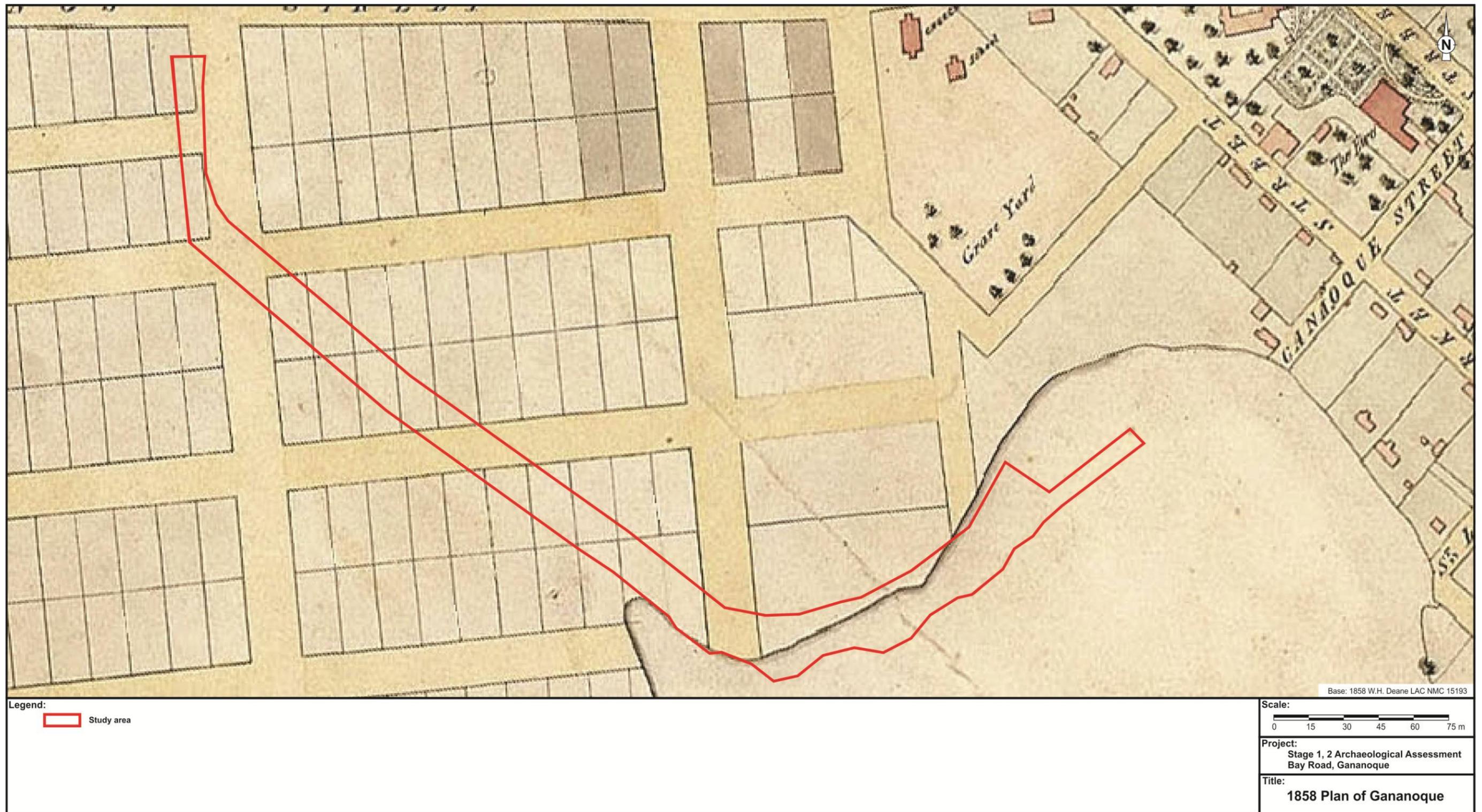


Map 3. Development plan.



Map 4. Plan of Gananoque, 1817. (LAC NMC 16104) Note, owing to the lack of reliable reference points, GIS could not be used to overlay the study area on this plan. Therefore, the approximate location of the study area has been highlighted in red.

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Map 5. Segment of a geo-referenced plan of Gananoque dating to 1858.



Map 6. Segment of a geo-referenced map of Gananoque dating to 1862.



Map 7. Segment of a geo-referenced aerial photograph dating to 1948.



Map 8. Segment of a geo-referenced aerial photograph dating to 1955.



Map 9. Segment of a geo-referenced aerial photograph dating to 1994.



Map 10. Recent orthophotographic image of the study area with image locations and orientations indicated.



Map 11. Recent orthophotographic image of the study area with colour overlay indicating the archaeological potential of the study area.



Map 12. Recent orthophotographic image of the study area with colour overlay indicating the methodology and results of the Stage 2 archaeological assessment.

9.0 IMAGES



Image 1. Sketch of the mansion built for the Byers family in 1873. (Leavitt 1879:176) This mansion is located just east of the end of the study area. Presumably, Bay Road is depicted winding around behind the property.



Image 2. Oblique aerial photograph of the waterfront in Gananoque, dating to 1920. (LAC a030654) The southern portion of the study area can be seen along the far shoreline. Note the boathouses which line the entire length of the shoreline.



Image 3. View of the northern end of the study area, facing southwest towards Bay Road from the intersection at King Street West. (PR16-08D003)



Image 4. View of a former carriage house or servants' residence associated with the Byers mansion, facing south-southeast, with Bay Road on the right. (PR16-08D013)



Image 5. View of the stone retaining wall running parallel to Bay Road, facing southeast.
(PR16-08D018)



Image 6. View of the slope along the north edge of Bay Road near the beach, facing east.
(PR16-08D108)



Image 7. View of the slope along the north edge of Bay Road near the marina parking lot, facing northeast, with the artificial waterfront terrace in the foreground. (PR16-08D116)



Image 8. View of the western shoulder of Bay Road, facing south-southeast near the former carriage house, with the unnamed creek visible to the right. (PR16-08D019)



Image 9. View of the unnamed creek from Bay Road, facing west-southwest. (PR16-08D081)



Image 10. View of the imported sand beach and pagoda from Bay Road, facing west-southwest. (PR16-08D105)



Image 11. View of the imported sand beach, facing east-northeast from the pagoda, with the shaped limestone block retaining wall visible on the left, and the large boulder retaining wall for the beach on the right. (PR16-08D103)



Image 12. View of the shoreline to the east of the sand beach, facing east-northeast, with Bay Road on the left. (PR16-08D111) Note: although obscured by vegetation, cobbles have been piled along the edge of the shoreline here to act as a retaining wall for the reclaimed shoreline.



Image 13. View of a permanently water-saturated area associated with a culvert passing below Bay Road, facing east-southeast. (PR16-08D046)



Image 14. View of the parking lot for the beach and wharf at the southeast end of the study area, facing northeast. (PR16-08D120)



Image 15. View of crew test-pitting near the water's edge to identify the limits of the original shoreline, facing west. (PR16-08D127)



Image 16. View of crew test-pitting near water's edge to identify the limits of the original shoreline, facing west-southwest. (PR16-08D129)



Image 17. View of crew test-pitting along the northern/eastern edge of Bay Road, facing northwest. (PR16-08D131)



Image 18. Typical test pit within the extended shoreline fill to the south of Bay Road, along the water's edge, facing north-northeast. (PR16-08D128)



Image 19. View of a test pit demonstrating the natural soil stratigraphy immediately north of Bay Road at Rotary Beach, facing north. (PR16-08D130)



Image 20. View of a waterlogged test pit near the base of the stone retaining wall which runs along much of the eastern edge of the ROW, facing east. (PR16-08D132)



Image 21. View of a drainage hole in the masonry wall which borders a portion of the study area, facing northeast. (PR16-08D026)

APPENDIX 1: Early Archaeological Finds in Leeds Township

Several archaeological finds have been reported as having been collected in Leeds Township around the turn of the twentieth century. Records of these finds appear in the earliest provincially-funded archaeological reports, published as appendices to reports to the Minister of Education. A description of the recorded finds is provided below, with Catalogue numbers assigned at the 'Provincial Museum', now the Royal Ontario Museum.

- Slate knife (17115) found on the 'Britton' farm, near Gananoque. Collected by M. Doray. Donated by Freeman Britton, of Gananoque. (AARO 1898:10)
- Stone axe (17116) found on the 'Britton' farm. Collected by M. Doray. Donated by Freeman Britton, of Gananoque. (AARO 1898:10)
- 'Almost perfect' clay vessel (17118) found on the 'Britton' farm. Collected by M. Doray. Donated by Freeman Britton, of Gananoque. (AARO 1898:10, 44)
- Large black chert spearhead (26862) found near Gananoque. Collected/donated by David Boyle, of Toronto. (AARO 1905:9)
- Slate chisel (37309) found on Lot 22, Concession 1, in the geographic Township of Leeds. Collected/donated by Frank Eames, of Gananoque. (AARO 1917:117)
- Stone pipe (37312) found on east half of Lot 6, Concession 1, in the geographic Township of Leeds. Collected/donated by Frank Eames, of Gananoque. (AARO 1917:117)
- Limestone gouge (37528) found on the east half of Lot 6, Concession 1, in the geographic Township of Leeds. Collected/donated by Frank Eames, of Gananoque. (AARO 1918:113)
- A collection of artifacts found in the southern portion of the geographic Township of Leeds. Collected/donated by Frank Eames, of Gananoque, including stone axes (37506-37504), fragments of stone axes (37525-37527), gorgets (37528-37530), a grooved axe (37531), gouges (37532-37536), large grooved hammer stones (37537-37538), a piece of clay pot (37539), stone implements (37540-37541), a large round stone (37542), small round stones (37543-37545), an iron tomahawk (37546), a stem of a clay pipe (37548), a fragment of pottery (37549), a horn powder flask (37550), 24 chippings (37551), 53 chert chippings (37552), 28 fragments of pottery (37553), spear heads from Lot 6, Concession 1 (37554-37556), large leaf-shaped arrow or spear heads (37557-37558), arrow-heads from Lot 6, Concession 1 (37559-37576), arrow-heads (37577-37578), a spear-head from Oak Street in Gananoque (37579), part of a stone axe (37580), a slate spear head (37581), part of a gorget (37582), a drill from Lot 6, Concession 1 (37583), a clay pipe stem (37584), pieces of a human skull (37585-37586), parts of a human jaw bone (37587-37588), a pipe stem bound with quills (37591), a piece of limestone (37594), and a chert implement (37594 ½) (AARO 1918:128)
- A clay pipe (38170) found on Hay Island, in the south part of the geographic Township of Leeds. Collected/donated by Frank Eames, of Gananoque (AARO 1919:119)

APPENDIX 2: Photographic Catalogue

Camera: Panasonic Lumix DMC-TS3

Catalogue No.	Description	Dir.
PR16-08D001	View of the northernmost point of the study area, facing west from the intersection of Bay Road and King St West	W
PR16-08D002	View of the northernmost point of the study area, facing west-south-west from the intersection of Bay Road and King St West (King St W on right)	WSW
PR16-08D003	View of the northernmost point of the study area, facing south-west towards Bay Road from the intersection at King St West	SW
PR16-08D004	View of the northernmost point of the study area, facing south from the intersection of Bay Road and King St West	S
PR16-08D005	View of the northernmost point of the study area, facing south-east towards historic residence from the intersection of Bay Road and King St West	SSE
PR16-08D006	View of the northernmost point of the study area, facing east-south-east from the intersection of Bay Road and King St West (King St on left)	ESE
PR16-08D007	View of a culvert that empties into a small ravine that runs parallel to Bay Road	WSW
PR16-08D008	View of the ravine (on right) and slope along the Bay Road ROW (on left)	S
PR16-08D009	View of the terracing within the study area, facing Bay Road, with an historic carriage house or servants' residence flanked by a modern residence in the background	SSE
PR16-08D010	View of the terracing within the study area, facing Bay Road, with an historic carriage house or servants' residence flanked by a modern residence in the background	SSE
PR16-08D011	View of a possible foundation stone peaking through the grass near the northern end of the study area	SSE
PR16-08D012	Deleted	
PR16-08D013	View of the former carriage house or servants' residence, and terracing for the ROW on the right	SSE
PR16-08D014	View of the slope of the ROW facing the intersection of Bay and King St. W from Bay Road	N
PR16-08D015	View of the slope and terracing within the ROW facing the intersection of Bay and King St. W from Bay Road	NNE
PR16-08D016	View of the slope and terracing within the ROW facing the historic residence at the north end of the study area	NE
PR16-08D017	View of the corner of the carriage house/servants' residence and stone retaining wall	ESE
PR16-08D018	View of the stone retaining wall running parallel to Bay Road	SE
PR16-08D019	View of the terracing within the study area, with the small ravine visible on the right	SSE
PR16-08D020	View across the ravine of the opposite, steeply sloped and rocky banks	SSW
PR16-08D021	View of a property stake immediately adjacent to the retaining wall	E
PR16-08D022	View of the same property stake as above, taken from the far side of Bay Road. The carriage house is visible in the top left corner	E
PR16-08D023	View of the stone retaining wall running parallel to Bay Road	SE
PR16-08D024	View of the stone retaining wall with drainage holes visible at the base	NE
PR16-08D025	View across the ravine of the opposite, steeply sloped and rocky banks	SSE
PR16-08D026	Close-up view of a drainage hole in the stone retaining wall	NE
PR16-08D027	View of the stone retaining wall and Bay Road, facing northwest towards the rear of the carriage house	NW
PR16-08D028	View of Bay Road and the opposite banks of the ravine (left)	NW
PR16-08D029	View of the opposite banks of the ravine, from Bay Road next to the stone retaining wall	W
PR16-08D030	View of the opposite banks of the ravine, from Bay Road next to the stone retaining wall	WSW
PR16-08D031	View of Bay Road and the opposite banks of the ravine, from Bay Road near the stone retaining wall	SW
PR16-08D032	View of Bay Road and the stone retaining wall (left)	SE

Catalogue No.	Description	Dir.
PR16-08D033	Deleted	
PR16-08D034	Deleted	
PR16-08D035	View of slope and terracing along Bay Road	SE
PR16-08D036	View of the southern end of the stone retaining wall	ESE
PR16-08D037	View of the ravine from Bay Road	SW
PR16-08D038	View of the southern end of the stone retaining wall	N
PR16-08D039	View of terracing near the end of the stone retaining wall	NNE
PR16-08D040	Deleted	
PR16-08D041	View of a drainage basin and culvert which runs underneath Bay Road	ESE
PR16-08D042	View of slope and terracing on Bay Road	SE
PR16-08D043	View of the ravine which runs parallel to Bay Road	SSE
PR16-08D044	Deleted	
PR16-08D045	View of a drainage basin and culvert which runs underneath Bay Road	E
PR16-08D046	View of a drainage basin and culvert which runs underneath Bay Road	ESE
PR16-08D047	View of a drainage basin and culvert which runs underneath Bay Road	SE
PR16-08D048	View of the above culvert where it empties into the ravine	SE
PR16-08D049	View of where the above culvert drains into the ravine	S
PR16-08D050	View of the above culvert where it empties into the ravine	ESE
PR16-08D051	View of the opposite banks of the ravine	SSE
PR16-08D052	View along Bay Road toward the St. Lawrence River	SSE
PR16-08D053	View along Bay Road toward the St. Lawrence River	SE
PR16-08D054	View of the slope above the ROW	NE
PR16-08D055	View of the slope above the ROW	ENE
PR16-08D056	View of the slope above the ROW	E
PR16-08D057	View of the slope above the ROW	ESE
PR16-08D058	View of the slope above the ROW	SE
PR16-08D059	Deleted	
PR16-08D060	Deleted	
PR16-08D061	View of the creek to the south and west of the study area with sloped, rocky banks in rear	S
PR16-08D062	View of the creek looking toward the St. Lawrence River	SE
PR16-08D063	View of the slope, terraced roadway and creek, facing the St. Lawrence River	ESE
PR16-08D064	View of the slope and terraced roadway	E
PR16-08D065	View of tree growth on the slope along the northeast edge of the ROW	ENE
PR16-08D066	View of rubbish and utilities within the R.O.W of the road	NNW
PR16-08D067	View of a covered watermain set into the slope above the R.O.W	NE
PR16-08D068	View of slope immediately northeast of the ROW	NNE
PR16-08D069	View of slope immediately northeast of the ROW	N
PR16-08D070	View of a covered watermain set into the slope above the R.O.W	N
PR16-08D071	View of the creek where the above mentioned watermain is emptied	NW
PR16-08D072	View of the creek where the above mentioned watermain is emptied	WNW
PR16-08D073	View of an iron property marker indicating the northeast edge of the ROW	NE
PR16-08D074	View of undeveloped land parcel located near the southernmost portion of the study area	NE

Catalogue No.	Description	Dir.
PR16-08D075	View of slope immediately north of the ROW	ENE
PR16-08D076	View of the roadway and terracing, facing the wharf	ESE
PR16-08D077	View of a beach and pagoda within the study area	SE
PR16-08D078	View of the St. Lawrence River from Bay Road	S
PR16-08D079	View of where the small creek empties into the St. Lawrence River	SSW
PR16-08D080	View of where the small creek empties into the St. Lawrence River	SW
PR16-08D081	View of where the small creek empties into the St. Lawrence River	WSW
PR16-08D082	View of an old cast iron pipe lying on the banks of the creek	NE
PR16-08D083	View of the creek bank from where it empties into the St. Lawrence River	E
PR16-08D084	View of the creek bank from where it empties into the St. Lawrence River	ESE
PR16-08D085	View of the creek bank from where it empties into the St. Lawrence River	SE
PR16-08D086	View of where the small creek empties into the St. Lawrence River	SSE
PR16-08D087	View of where the small creek empties into the St. Lawrence River	S
PR16-08D088	View of hydro pole and guy wire near the beach within the study area	NW
PR16-08D089	View of the slope from the beach	NNW
PR16-08D090	View of the slope from the beach	N
PR16-08D091	View of the slope from the beach	NNE
PR16-08D092	View of the artificial landscaping and slope from the beach	NE
PR16-08D093	View of the artificial landscaping and slope from the beach	ENE
PR16-08D094	View of the artificial landscaping and pagoda from the beach	E
PR16-08D095	View of the beach and pagoda	ESE
PR16-08D096	View of the beach and pagoda	SE
PR16-08D097	View of the St. Lawrence River from the beach	SSE
PR16-08D098	View of the artificial landscaping from the beach	NNW
PR16-08D099	View of the artificial landscaping from the beach	N
PR16-08D100	View of the artificial landscaping from the beach	NE
PR16-08D101	View of the artificial landscaping from the beach	ENE
PR16-08D102	View of the pagoda atop imported beach sand	ESE
PR16-08D103	View of imported beach sand fill	ENE
PR16-08D104	View of the artificial landscaping from the beach	NE
PR16-08D105	View of the beach and pagoda from Bay Road	WSW
PR16-08D106	View of Bay Road and pagoda	W
PR16-08D107	View of slope north of Bay Road	NE
PR16-08D108	View of slope north of Bay Road	E
PR16-08D109	View of Bay Road, facing the wharf	ESE
PR16-08D110	View of the beach and wharf from Bay Road	SE
PR16-08D111	View of the current shoreline	ENE
PR16-08D112	View of the current shoreline	WSW
PR16-08D113	View of the current shoreline	W
PR16-08D114	View of the slope north of the beach	N
PR16-08D115	View towards the parking lot for the wharf from the beach	ENE
PR16-08D116	View of imported boulders lining the south side of Bay Road northeast of the beach	NE

Catalogue No.	Description	Dir.
PR16-08D117	View of concrete steps set into the slope northeast of the beach	NNE
PR16-08D118	Deleted	
PR16-08D119	View of concrete steps set into the slope northeast of the beach	NW
PR16-08D120	View of the parking lot for the beach and wharf at the southeast end of the study area	NE
PR16-08D121	View of the slope at the southeast end of the study area	N
PR16-08D122	View of the slope at the southeast end of the study area	NW
PR16-08D123	View of Bay Road, with extended shoreline fill to the left (south) and slope to the right (north)	WSW
PR16-08D124	View of the paved parking area at the southeast end of the study area	WSW
PR16-08D125	View of drainage culvert exiting from extended shoreline fill	WSW
PR16-08D126	View of drainage culvert exiting from extended shoreline fill	WSW
PR16-08D127	View of crew test-pitting near water's edge to confirm the presence of fill	W
PR16-08D128	Typical test pit within extended shoreline fill to the south of Bay Road, along the water's edge	ENE
PR16-08D129	View of crew test-pitting near water's edge to confirm the presence of fill	WSW
PR16-08D130	View of a test pit demonstrating natural soil stratigraphy immediately north of Bay Road and Rotary Beach	N
PR16-08D131	View of crew test-pitting along the northern/eastern edge of the ROW of Bay Road	NW
PR16-08D132	View of a waterlogged test pit near the base of the stone retaining wall which runs along much of the eastern edge of the ROW	E

APPENDIX 3: Glossary of Archaeological Terms

Archaeology:

The study of human past by excavation of cultural material.

Archaeological Sites:

The physical remains of any building, structure, cultural feature, object, human event or activity which, because of the passage of time, are on or below the surface of the land or water.

Archaic:

A term used by archaeologists to designate a distinctive cultural period dating between 8000 and 1000 B.C. in eastern North America. The period is divided into Early (8000 to 6000 B.C.), Middle (6000 to 2500 B.C.) and Late (2500 to 1000 B.C.). It is characterized by hunting, gathering and fishing.

Artifact:

An object manufactured, modified or used by humans.

B.P.:

Before Present. Often used for archaeological dates instead of B.C. or A.D. Present is taken to be 1951, the date from which radiocarbon assays are calculated.

Backdirt:

The soil excavated from an archaeological site. It is usually removed by shovel or trowel and then screened to ensure maximum recovery of artifacts.

Chert:

A type of silica rich stone often used for making chipped stone tools. A number of chert sources are known from southern Ontario. These sources include outcrops and nodules.

Contact Period:

The period of initial contact between Native and European populations. In Ontario, this generally corresponds to the seventeenth and eighteen centuries depending on the specific area.

Cultural Resource / Heritage Resource:

Any resource (archaeological, historical, architectural, artifactual, archival) that pertains to the development of our cultural past.

Cultural Heritage Landscapes:

Cultural heritage landscapes are groups of features made by people. The arrangement of features illustrate noteworthy relationships between people and their surrounding environment. They can provide information necessary to preserve, interpret or reinforce the understanding of important historical settings and changes to past patterns of land use. Cultural landscapes include neighbourhoods, townscapes and farmscapes.

Diagnostic:

An artifact, decorative technique or feature that is distinctive of a particular culture or time period.

Disturbed:

In an archaeological context, this term is used when the cultural deposit of a certain time period has been intruded upon by a later occupation.

Excavation:

The uncovering or extraction of cultural remains by digging.

Feature:

This term is used to designate modifications to the physical environment by human activity. Archaeological features include the remains of buildings or walls, storage pits, hearths, post moulds and artifact concentrations.

Flake:

A thin piece of stone (usually chert, chalcedony, etc.) detached during the manufacture of a chipped stone tool. A flake can also be modified into another artifact form such as a scraper.

Fluted:

A lanceolate shaped projectile point with a central channel extending from the base approximately one third of the way up the blade. One of the most diagnostic Palaeo-Indian artifacts.

Lithic:

Stone. Lithic artifacts would include projectile points, scrapers, ground stone adzes, gun flints, etc.

Lot:

The smallest provenience designation used to locate an artifact or feature.

Midden:

An archaeological term for a garbage dump.

Mitigation:

To reduce the severity of development impact on an archaeological or other heritage resource through preservation or excavation. The process for minimizing the adverse impacts of an undertaking on identified cultural heritage resources within an affected area of a development project.

Multicomponent:

An archaeological site which has seen repeated occupation over a period of time. Ideally, each occupation layer is separated by a sterile soil deposit that accumulated during a period when the site was not occupied. In other cases, later occupations will be directly on top of earlier ones or will even intrude upon them.

Operation:

The primary division of an archaeological site serving as part of the provenience system. The operation usually represents a culturally or geographically significant unit within the site area.

Palaeo-Indian:

The earliest human occupation of Ontario designated by archaeologists. The period dates between 9000 and 8000 B.C. and is characterized by small mobile groups of hunter-gatherers.

Profile:

The profile is the soil stratigraphy that shows up in the cross-section of an archaeological excavation. Profiles are important in understanding the relationship between different occupations of a site.

Projectile Point:

A point used to tip a projectile such as an arrow, spear or harpoon. Projectile points may be made of stone (either chipped or ground), bone, ivory, antler or metal.

Provenience:

Place of origin. In archaeology this refers to the location where an artifact or feature was found. This may be a general location or a very specific horizontal and vertical point.

Salvage:

To rescue an archaeological site or heritage resource from development impact through excavation or recording.

Stratigraphy:

The sequence of layers in an archaeological site. The stratigraphy usually includes natural soil deposits and cultural deposits.

Sub-operation:

A division of an operation unit in the provenience system.

Survey:

To examine the extent and nature of a potential site area. Survey may include surface examination of ploughed or eroded areas and sub-surface testing.

Test Pit:

A small pit, usually excavated by hand, used to determine the stratigraphy and presence of cultural material. Test pits are often used to survey a property and are usually spaced on a grid system.

Woodland:

The most recent major division in the pre-Contact sequence of Ontario. The Woodland period dates from 1000 B.C. to A.D. 1550. The period is characterized by the introduction of ceramics and the beginning of agriculture in southern Ontario. The period is further divided into Early (1000 B.C. to A.D. 0), Middle (A.D. 0 to A.D. 900) and Late (A.D. 900 to A.D.1550).