

Stage 1 Archaeological Assessment
Kanata Lands Development Area
Part Lots 1 & 2, Concession 1
Geographic Township of Huntley
City of Ottawa

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EXECUTIVE SUMMARY

Stage 1

A Stage 1 archaeological assessment of a proposed development property in Kanata was conducted by Adams Heritage in July 2013. Specifically; historical research was undertaken, previous archaeological investigations in the area were evaluated, and the geography of the site considered, to determine whether significant historical or pre-Contact cultural resources might exist on the property and to determine whether further archaeological investigations are warranted.

The study area lies to the southeast of Highway 417, southwest of Huntmar Drive and south of Palladian Drive. The majority of the property occupies level, active and former farm land with little archaeological potential. However, because the property fronts on to Huntmar Drive - a historic settlement road - some archaeological potential is assumed. In addition, two zones with moderate archaeological potential are also identified based on soils and surficial geological information.

In accordance with the Ontario Ministry of Tourism, Culture and Sport's "*Standards and Guidelines for Consultant Archaeologists*" (2010)¹ (S & G's Section 1.3.1), since areas of archaeological potential have been identified, the Stage 1 recommendation is:

- Stage 2 archaeological investigations by a licenced archaeologist should be undertaken prior to any development work which results in soil disturbance.
- Those areas under active cultivation (corn) should be ploughed and disked once the corn has been harvested to ensure a minimum of 80% surface visibility, as required under S&G's (Section 2.1.1.5).
- The unploughable lands will have to be assessed using test pit survey. The areas identified as having moderate archaeological potential, should be tested using a 5 metre test pit interval (S&G's Section 2.1.2.2). The remainder of the property should be tested using a 10 metre test pit interval as rock and drainage conditions permit.

¹ Hereafter, "S & G"s.

Advice on compliance with legislation

1. Advice on compliance with legislation is not part of the archaeological record. However, for the benefit of the proponent and approval authority in the land use planning and development process, the report must include the following standard statements:

a. This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. 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 and Culture, 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.

b. 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.

c. 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.

d. 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.

2. Reports recommending further archaeological fieldwork or protection for one or more archaeological sites must include the following standard statement:

"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."

1.0 PROJECT PERSONNEL

Project Personnel

Project Archaeologist / Field Review:	Nick Adams
Historical Research:	Christine Adams
Report Authors and Preparation:	Nick Adams, Christine Adams

Date of Field Review

July 26th 2013

Weather Conditions

Fine, warm, dry

Permission for Access

Provided by Cavanagh Construction Ltd.

2.0 DEVELOPMENT CONTEXT

A Stage 1 archaeological assessment was carried out on lands scheduled to be developed as a subdivision within part of Lots 1 & 2, Concession 1, Geographic Township of Huntley (Figures 1-4). The archaeological assessment is part of the City of Ottawa requirements under the Planning Act.

As indicated in Section 1.0, access to the property for the purposes of the archaeological assessment was provided by the developers².

The study area lies southeast of Highway 417, southwest of Huntmar Drive and south of Palladian Drive. Approximately 30% of the property is under active cultivation. A standing corn crop was present in this area during the property inspection. The remainder of the property is forested with a few small clearings: the remnants of former pasture fields. Within the forested area bedrock is close to the surface and soils are generally shallow.

Access to the property was gained from Huntmar Drive. The rear of the property was accessed from an unadopted road (4 wheeler track) along the concession line between Concessions 1 & 2.

The maximum length of the property (between Huntmar Drive and the concession line between Concessions 1 & 2) is approximately 1360 metres. Its maximum width is approximately 600 metres. The frontage on to Huntmar Drive is 150 metres wide. The total study area is approximately 55 Hectares (136 acres). It lies at an elevation of approximately 104 metres A.S.L.

A comprehensive property inspection was completed on July 26th 2013. The whole property was examined using spot checks on a random basis (S & G's 1.2.1).

² Note: at this stage of the development process, no development or concept plans are available.

3.0 HISTORICAL CONTEXT

Archaeological evidence indicates that the Ottawa Valley was a major trade route throughout the pre-Contact period. Discoveries of quantities of Native Copper artifacts from sources in the Lake Superior area at the Morrison and Allumettes Island Archaic sites (Chapdelaine and Clermont 2006: 202) provides a vivid insight into the far reaching and extensive nature of these activities.

With the arrival of French, Dutch and English settlers on the North American continent, the pre-existing trade routes were adapted to include the European appetite for fur. Following Samuel de Champlain's initial forays up the Ottawa River, French traders increasingly sought trade with the Algonquin, despite the on-going tensions and sporadic warfare with Mohawk raiding parties in the lower Ottawa River area.

Contact between Algonquin people and French traders occurred as early as 1603 at Tadoussac (Morrison 2005: 23) although contacts between Algonquin hunters and traders in the St. Lawrence Valley may have been occurring with Basques and Breton fishermen for many generations before (Ibid). During the 17th century conflicts between the Five Nations Iroquois, the French, the Algonquin and other First Nations in the Ottawa River / St. Lawrence River area culminated in the 'Iroquois Wars' of the late 1640's and 1650's - a series of coordinated raids throughout the Great Lakes / St. Lawrence region that resulted in the decimation, dispersal and relocation of First Nations groups throughout the region and a disruption of trade. Mohawk raids during the 1640's had forced the Algonquin to abandon settlements in the lower Ottawa River (Sulzman nd.), consolidating with kinsmen further upstream in the vicinity of Pembroke.

The Ottawa area continued to be inhabited by Algonquins throughout the seventeenth, eighteenth and nineteenth centuries, living lives very similar to those of their ancestors, despite the gradual changes that were occurring in their homeland. From the limited information available it would appear that seasonal patterns of settlement and movement mirrored those known from the preceding pre-Contact period, with seasonal populations occurring during the warm season, for fishing and socializing, with dispersal into small, family based hunting groups to winter hunting grounds throughout the region.

Much of what is now the City of Ottawa was included in the Crawford Purchase of 1783. Captain W.R. Crawford negotiated with Mississauga Indians for a vast tract of eastern Ontario in exchange for,

*"clothing for families, powder and ball for winter hunting and as much coarse red cloth as will make about a dozen coats and as many laced hats"*³

³ Walker, Harry and Olive; Carleton Saga; Carleton County Council; 1968 p. 3

A second treaty made with “the Principal Men of the Mississauga Nation”, at Kingston in 1819, extended the original purchase to include what is now the western part of Carleton County. For this piece of real estate the,

“said Nation of Indians inhabiting the said Tract, yearly and every year forever”

received:

“the sum of six hundred and forty two pounds ten shillings, in goods at the Montreal price, which sum the Chiefs parties hereto acknowledge a full consideration for the lands hereby sold and conveyed to His Majesty, His Heirs and Successors”⁴

There is nothing to indicate that the lands in the Huntley township area were ever occupied by the Mississaugas, and all indications are that the indigenous populations at the time were Algonkins⁵.

The inhabitants of the middle Ottawa River are now collectively known as Algonquin or Algonkin with principal foci of settlement at Golden Lake (Pikwakanagan) in Ontario and a number of locations to the north of the Ottawa River in Quebec. The study area lies within the area defined by the Algonquins of Ontario as their traditional territory (http://www.tanakiwin.com/Algonquins_of_ON.pdf).

During the early phases of Euro-Canadian settlement in eastern Ontario, the Algonquin’s claim to the region were ignored or overlooked. As Lee Sulzman succinctly expressed it:

“To provide land for these newcomers, the British government in 1783 chose to ignore the Algonkin in the lower Ottawa Valley and purchased parts of eastern Ontario from Mynass, a Mississauga (Ojibwe) chief. Despite this, Algonkin warriors fought beside the British during the War of 1812 (1812-14) and helped defeat the Americans at the Battle of Chateauguay. Their reward for this service was the continued loss of their land to individual land sales and encroachment by American Loyalists and British immigrants moving into the valley. The worse blow occurred when the British in 1822 were able to induce the Mississauga near Kingston, Ontario to sell most of what remained of the Algonkin holdings in the Ottawa Valley. Because few, if any, Mississauga actually lived there, the price paid for them to sell another people's land was virtually nothing. And for a second time, no one bothered to consult the Algonkin who had never surrendered their claim to the area but still received nothing from its sale. Further losses occurred during the 1840s as lumber interests moved into the Upper Ottawa Valley. Treaties and purchases by the Canadian government eventually established ten reserves that permitted the Algonkin to remain in the area, but like most Native Americans in both Canada

⁴ Ibid; p.8

⁵ The Algonkin Tribe: The Algonkins of the Ottawa Valley, An Historical Outline, by Peter Hessel, Kichesippi Books, Arnprior, 1987: p. 69

and the United States, they were allowed to keep only a tiny portion of what once had been their original homeland.” (Sulzman nd.).

While European settlement becomes the focus of most histories of the nineteenth century, it is evident that First Nations people continued to inhabit the area. One indication of this is that during 1845, while James Eadie was having a stone house constructed on the Richmond Road, the progress of the ‘stone teepee’ was watched by an encampment of Algonquin Indians. An Illustration by W.H. Bartlett, “*The Squaws Grave, Ottawa River*”, from the mid nineteenth century shows one such encampment along the Ottawa River. Such presences continued to be common until well into the latter half of the nineteenth century.

The military depot at Richmond was the first substantial settlement in the region, and other early settlements, such as Stittsville were direct results of the military presence⁶. Another military settlement, the one at Perth, gave further impetus to the opening of the region. In 1820, the Crown reserves in Nepean were surveyed and added to the lands available for settlement by military families. In 1818, 18 settlers were allocated land in these former reserves, under the auspices of Captain Burke, followed the next year by 11 more, but by 1822, there were still only 35 families; 191 people in all of Nepean, while nearby Goulbourn had over 1000 inhabitants⁷. In contrast, by late in the year of 1825 Huntley Township contained a mere two Euro-Canadian families (those of John Manion and Thomas Mordy - followed by John Kennedy). Two more families moved into the township the following year but it was not until the 1830's that any significant population growth occurred as former Rideau Canal workers established settlements in the area⁸.

Lot 1, Concession 1, Huntley Twp.

The first known settler on the West Half of Lot 1, Concession 1, Huntley was John Burroughs. Burroughs was born in Leinster province, Ireland around 1782⁹. By his reckoning, at the time of the 1842 Census, he had been in Canada for 18 years¹⁰,

⁶ Ibid. p.8

⁷ Ibid, p. 13

⁸ Ibid, p. 42

⁹ Farmer, Peter “Histories: John Burroughs and Ester “Hattie Scharf” farmerfiles: collaboros.com/showmedia.php?mediaID=105&tngprint=1 (05 16 2013)

¹⁰ 1842 Census, Huntley Township, Carleton County, p.1. National Archives of Canada, microfilm

however, he appears, along with his wife and children on the 1822 Census for Huntley Township, suggesting that he had been in the area for at least two decades¹¹.

In this part of Huntley, there seems to have a considerable delay between settlement and the registration of deeds. Many lots were registered in 1828, and so it was with John Burroughs and Concession 1, Lot 8. However, family researchers indicate that he lived on his lands in Concession 1, Lot 1. He is reputed to have been a military officer, having commanded an Irish regiment, and that he came to Canada with sixteen pounds in gold¹². He was known to have had a library, which he left in his will to his children who could read. His first wife Esther Scharf died in 1832. He married again to Martha James, nee Rathwell, a widow, whose husband was killed in an agricultural accident in 1834¹³. John's son, George Burroughs lived on nearby Lot 3¹⁴.

According to the 1851 Census, the first dwelling on the property was log¹⁵. Unfortunately the agricultural census for 1851 has been lost, so it is not until a decade later that we are able to glimpse how the land was being used. By 1861, John Burroughs had retired from farming and the land was being worked by Joseph Ralph¹⁶, whose residence in 1879 was on Concession 1, Lot 2¹⁷. In 1861, 44 acres of the West Half of Lot 1 had been cleared; of this 15 acres were improved, and 25 acres were in pasture. Sixty acres of the parcel were still wooded¹⁸. John and Martha Burrows are not found on the census for Huntley in 1861. Family histories suggest that they moved across the road from the subject property¹⁹, ²⁰. In 1871, Martha, widowed, was enumerated in Goulbourn, living on her own, somewhere near Concession 12, Lot

¹¹ 1822 Census, Huntley Township, Carleton County: transcription online at Granny's Genealogy Garden #2
<http://freepages.genealogy.rootsweb.com/~granniesgardn/Granny2/huntle11822.html>

¹² Farmer, Peter; op.cit.

¹³ Ibid.

¹⁴ Belden, H, Illustrated historical atlas of the county of Carleton (including city of Ottawa), Ont. Toronto : H. Belden & Co., 1879.

¹⁵ 1851 Personal Census, Huntley Township, Carleton County: National Archives of Canada microfilm

¹⁶ 1861 Personal and Agricultural Census, Huntley Township, Carleton County: National Archives of Canada microfilm.

¹⁷ Belden; op.cit.

¹⁸ 1861 Agricultural Census, Huntley Township, Carleton County, National Archives of Canada microfilm.

¹⁹ Farmer, Peter, op.cit.

²⁰ I have been unable to find them on the census for Goulbourn in 1861.

25, near Stittsville²¹. John Burroughs died in 1867 and is buried in the Scharf Cemetery on Hazeldean Road²². Martha's date of death and place of burial are unknown.

In the same year, James Burroughs was enumerated on Concession 1, Lot 1²³, whereas in 1861 he had been farming Concession 1, Lot 2²⁴. In 1871, there were two dwelling houses associated with the west half of Concession 1, Lot 1²⁵, which suggests that the current stone house was built around this time, while the log structure was still standing. In 1872, James Burroughs sold the lot to James Boyd²⁶. By 1881, James Burroughs and his family were living in Elma Township, Perth County²⁷.

The next family with whom the farm was associated was that of James Boyd and Jane Bradley, who married in 1875²⁸. James was the son of Alexander Boyd of Concession 2, Lot 13, Huntley, and Jane was the daughter of Jacob Bradley, of Concession 11, Lot 28, Goulbourn²⁹. James purchased the property from the Burroughs in 1872³⁰. By 1881, there was only one dwelling associated with the family³¹. In 1891, the house is listed as being made of stone³². The house is still standing and lies outside the current study area.

²¹ 1871 Census, Goulbourn Township, Carleton County, National Archives of Canada microfilm.

²² Ontario Cemetery Finding Aid; <http://ocfa.islandnet.com/ocfa-search.php>

²³ 1871 Census, Huntley Township, Carleton County, Schedules 1 and 4; National Archives of Canada microfilm.

²⁴ Although he does not appear on the personal census

²⁵ 1871 Census, op.cit. Schedule 1

²⁶ OLR

²⁷ 1881 Census, Elma Township, Perth County, Ontario; facsimiles and transcriptions online @ www.ancestry.com.

²⁸ Ontario Canada Marriages, 1801-1928; facsimiles and transcriptions of original records online @ www.ancestry.com:
http://search.ancestry.com/iexec?htx=View&r=an&dbid=7921&iid=ONMS932_16-1306&fn=Jane&ln=Bradley&st=r&ssrc=&pid=1871861

²⁹ Belden, op.cit.

³⁰ OLR

³¹ 1881 Census, op.cit.

³² 1891 Census, Huntley Township, Carleton County; facsimiles and transcriptions online @ www.ancestry.com.

The Boyds lived on the lot until their deaths, Jane's in 1914, and James' in 1916, as attested by their death certificates³³. In 1915, James passed the land on to Alexander B. Boyd, for natural love and affection. The land remained in the possession of the Boyd family until 1970³⁴.

Lot 2 Concession 1, Huntley Twp.

This parcel of land was granted very late; unusually so for Huntley township. The patentee was Joseph Ralph, who received his land on 9 July, 1860. Walling's Map of 1863 shows a house at the northeast corner of the lot (outside the study area). The Historical Atlas of 1878 shows Joseph Ralph's house in the same position - probably now destroyed by Palladium Drive. We know that by 1861, Joseph Ralph was also farming the portion of Lot 1 which lies within the study area until it was purchased by James Boyd in 1872³⁵.

In 1861, the Ralph household was headed by Joseph Ralph, born in Ireland around 1795. Other members of the household were his wife, Eliza, their son, Joseph, his wife, Mary (Argue)³⁶, and an infant boy. The 1851 census shows that the family were living in March Township before coming to Huntley. By 1871, Joseph Ralph Sr. had died, but Elizabeth was still part of the family group. By 1891, the family had moved to Goulbourn.

In 1896, Thomas Gracey and his wife deeded the land to Armer Gracey³⁷. The land record offers no explanation as to how Thomas Gracey received the land. Often in such cases it is through inheritance, but in this case no documentary evidence has been found to support such an assumption. We do know that Armer Gracey was not the son of Thomas Gracey and that his wife's maiden name was Smith³⁸. In 1904 and 1908, Gracey, (who was living in Goulbourn in 1923)³⁹ sold his lands in Lot 2 to James Boyd who divided them between his sons, Alexander B Boyd and William J.O. Boyd. Both deeds speak of "premises", so it is possible that there may have been two

³³ Ontario, Canada, Deaths, 1869-1938 and Deaths Overseas, 1939-1947; facsimiles of original records and transcriptions online@www.ancestry.com.

³⁴ OLR

³⁵ 1861 Agricultural Census, Huntley Township, Carleton County; National Archives of Canada microfilm on file at Stauffer Library, Queen's University, Kingston, Ontario.

³⁶ Lewis, Al "Early Settlers in Goulbourn Township, Ontario, Canada, and area (mostly disbanded soldiers and folks from County Cavan and County Tipperary)"; <http://www.bytown.net/goulbour.htm>

³⁷ OLR

³⁸ Ontario Marriages 1801-1928
http://search.ancestry.com/iexec?htx=View&r=an&dbid=7921&iid=VRMCAN1923_102567-00854&fn=Thelma+Annetta&ln=Gracey&st=r&ssrc=&pid=3754965

³⁹ Ibid.

houses on the property by 1915, one of which may have been the Joseph Ralph house⁴⁰.

Both the 1863 “Walling” map (Figure 7) and the 1879 Historical Atlas (Figure 8) show the historic dwellings associated with Lots 1 & 2, Concession 1 Huntley Township, as lying outside the study area.

4.0 ARCHAEOLOGICAL CONTEXT

Topography and Environment

The study area is underlain by bedrock deposits of limestone, shale and sandstone of Ordovician age (GSC Map 1508A), which, in some areas, have been overlain by relatively recent deposits of glacial till, fluvio-glacial and lacustrine deposits. These either pre-date, or date to events associated with the Champlain Sea epoch, which occurred between about 11,500 - 8,500 B.P. (Schut and Wilson 1987).

The study area lies within the Ottawa Valley Clay Plains Physiographic region. This broad physiographic region extends from Pembroke to Hawkesbury along the Ottawa River Valley and encompasses a broad area of clay plain, broken by ridges of rock or sand (Chapman and Putnam 1984: 209).

The eastern half of the property lies on essentially level deep water marine clay, while the slightly higher, eastern side of the property is dominated by a portion of thinly glacial till-masked limestone bedrock plain.

The study area lies at an elevation between 100 and 105m. asl. A surficial geology map sheet of the area (Richard 1982 - 1506A) indicates the presence of Champlain Sea beach features to the west of the study area. No beach features are indicated within the study area itself, however it can be assumed that as the waters of the Champlain Sea / Lampsilis Lake receded, the low bedrock plain to the rear of the property would have been gradually exposed, shortly followed by the remainder of the lands.

The immediate vicinity of the study area would have been available for human occupation as isostatic rebound gradually lowered the water level of the Champlain Sea. Radio-carbon dates on shells found in Champlain Sea beach deposits indicate the beach just north of Stittsville was active at 130 metres a.s.l. at approximately 11,300±300 years ago (GSC-2248 - Richard 1982). A sample of whale bone discovered just north of the Ottawa International Airport at an elevation of 91 metres a.s.l. is dated to 10,420±50 (GSC-454 - Richard 1982). Four dates on organic materials have been acquired from Champlain Sea deposits located approximately 4 kilometres to the south of the study area. Of particular note, a sample of shells returned a date of 10,880±160 (GSC-588 - Richard 1982) from materials recovered at an elevation of 97 metres a.s.l.

Since the study area lands lie at or above an elevation of approximately 104 metres a.s.l. they would have been accessible for occupation or settlement as the waters of the Champlain Sea receded, approximately 11,000 years ago, although would probably not have been a particularly enticing environment for settlement.

Soils

The cultivated soils within the study area consist of North Gower Clay Loam (NG2) - soils derived from marine materials deposited in the Champlain Sea. Although these soils are generally poorly drained they are excellent crop land for corn, cereals and hay production (Schut and Wilson 1987: 58).

A small area of Ironside soils is also mapped. Ironside soils (I3):

“Ironside soils consist of a 40 to 100 cm thick veneer of coarse textured marine or fluvial material which is underlain by stony or shaly glacial till. The veneer may be present on the flanks of very gently to gently sloping till ridges or isolated knolls, or it may overlay them completely. It may also occur on level to gently sloping or undulating till plains.”

(Schut and Wilson 1987: 43)

It is this area of soil which is mapped as a zone of archaeological potential on the City of Ottawa's “archaeological potential” mapping layer.

The bulk of the forested portion of the property contains Farmington Loam soils - thin soils of undifferentiated drift materials overlying bedrock. These soils have poor agricultural capability and are generally associated with surficial geology areas mapped as (R)(rock).

Part of the western end of the property contains an area of Osgoode Soils (OS3). These soils are derived from marine or fluvial deposits, which, in this area are associated with the Carp River valley (Schut and Wilson 1987: 43). Although good crop land in some areas, level terrain and poor drainage can impede agricultural use. The portion of the study area which contains these soils has reverted to woodland and may have been too difficult to manage as agricultural land.

Drainage

There are no active watercourses within the study area. The Carp River lies more than 800 metres to the northeast at its closest point, while its tributary - Feedmill Creek - lies more than 400 metres to the north.

A tiny dendritic feeder of Feedmill Creek crosses the northwest corner of the property but this is not considered a trigger for archaeological potential and was not highlighted as part of the City of Ottawa's ‘archaeological potential’ mapping.

Climate

The soil climate of the Ottawa region is humic, mild and mesic (Schut and Wilson 1987) with mean annual soil temperatures of between 8 and 15 degrees and a relatively short growing season lasting 200 and 240 days. Rainfall is moderate

averaging 850 mm. per year. This climate, while adequate using modern farming techniques, was not particularly favourable for pre-Contact agriculture.

Vegetation

The rear of the study area is covered with thick forest consisting of cedar, poplar and maple trees. Cedar is the dominant species over much of the area, indicating its generally poor drainage characteristics.

Registered Archaeological Sites:

No registered archaeological sites exist within the study area. A spread of mid-nineteenth century artifacts associated with the Boyd House on the adjacent property to the southeast has recently been registered as BhFx-50 (Adams 2013).

The following registered sites are present within 8 kilometres of the study area⁴¹.

Table 1: Registered Sites

Borden Number	Name	Period	Type
BfHx-22		pre-contact	lithic scatter
BhGa-6	Cavanagh	Euro-Canadian	Homestead
BhGa-7	Fall's Hay Barn	Euro-Canadian	Barn!
BiGa-9		pre-contact	findspot

Studies of Adjacent Areas:

A number of studies have been completed to the northeast of the study area (Swayze 2000, 2001, 2002), resulting in the registration of archaeological sites on the basis of lithics (BhFx-22) and historic artifacts (BhGa-6, BhGa-7). These locations lie more than 3 kilometres from the current study area.

While a number of archaeological projects preceding development have been conducted in the vicinity, as indicated above, few have resulted in the registration of significant archaeological resources. The closest pertinent studies are surveys of the proposed Kanata West Business Park to the north of Highway 417 (Adams 2009, 2004) and studies in advance of the proposed West Transitway Connection - Terry Fox Drive to Fernbank Road (Past Recovery, in preparation) to the east of the current study area.

⁴¹

Information courtesy of Robert von Bitter, Ministry of Tourism, Culture and Sport.

Archaeological Summary

This overview is not intended to be a comprehensive thesis on the archaeology of Eastern Ontario. It is a thumbnail sketch of general trends, with the emphasis on the immediate vicinity of the study area.

Palaeo-Indian Period

Archaeologists have called Ontario's first people Palaeo-Indians (meaning 'old' or 'ancient' Indians). The Palaeo-Indian Period is estimated to have begun (in Ontario) about 11,000 years ago, and lasted for approximately 1,500 years (longer in northern Ontario). These people may have hunted migrating herds of caribou along the shores of vast glacial lakes, moving north into Ontario as the ice of the last glaciation receded. They have left little evidence of their passing, except for a few lance-shaped spear-points, and some campsites and places where they made their tools. Although the remains left by Palaeo-Indian people are quite sparse, through careful analysis of what has been found archaeologists are beginning to understand something about the way these ancient people lived. Palaeo-Indian people depended on hunting gathering and probably fishing for their subsistence. They did not raise crops. In order to gain a living from the sub-arctic environment in which they lived, Palaeo-Indian people had to exploit large territories. It is likely that they used toboggans, sleds and possibly watercraft in order to aid them move from one area to the next.

The Palaeo-Indian period has been divided into two subdivisions: the Early Palaeo-Indian period (11,000 - 10,400 B.P.) and the Late Palaeo-Indian period (10,400-9,500 B.P.) based on changes in tool technology. No Palaeo-Indian sites are known in the vicinity of the study area.

The Archaic Period

As the glacial ice continued to recede, the climate gradually became milder and more land became available for exploration and occupation. The Archaic Period spans the time between the end of the Palaeo-Indian Period and the beginning of the use of pottery in Ontario (about 2900 years ago). During the 6,500 years of the Archaic Period the exquisite stone tool workmanship of the Palaeo-Indian period was slowly abandoned. Archaic spear-points rarely reach the quality of workmanship of those of their forebears and are made from a greater variety of rocks. The Archaic period was one of long and gradual change. The long seasonal migratory movements of the Palaeo-Indians seem to have been abandoned as Archaic people focussed more closely on local food resources. They modified the equipment they made to cope with the transition from an open sub-arctic landscape to a more temperate, forested one. Archaic people began to make a wide variety axes, hammers and other tools by pecking and grinding rocks to the desired shape.

A small Archaic campsite was recently located during an archaeological assessment of lands along the Carp River, just to the north of Highway 417 (Adams 2004). Archaic materials have also been discovered in Leamy Lake Park, near the mouth of the Gatineau River (Watson 1999: 64). Significant evidence of Archaic occupation has been noted throughout the Ottawa Valley (Sowter 1909, Kennedy 1962, 1967), particularly in the vicinity of the City of Pembroke, at the Morrison's Island-6 and Allumette Island-1 sites (Chapdelaine and Clermont 2006, Ellis and Ferris 1990, Kennedy 1962).

Early Woodland Period

Some time around 1000 B.C. the idea of using fired clay to make pottery containers began to spread into Ontario. This technology probably had little impact on the people of this province, however it is of enormous importance to archaeologists because although pots readily break in use, the broken pieces tend to last extremely well in the ground.

All over the world potters have found the semi-hard clay surface of freshly shaped pots (ie. before firing) to be a canvas for decoration and art. Since fashions and design preferences gradually change through time and from one people to another, the patterns of pottery decoration, and even the shape of the pots themselves provide valuable and accurate clues to the age and culture of the people who made them.

The Early Woodland people of Ontario were the first to use pottery in this province. In many other respects, people of the Early Woodland Period (c. 900 B.C. - 300 B.C.) continued to live in much the same way as their predecessors of the Late Archaic. Like the Late Archaic people, they buried their dead with great ceremony, often including attractive and exotic artifacts in the graves. The Early Woodland people of Ontario appear to have been in contact with, or at least heavily influenced by their neighbours to the south - particularly the Adena people of the Ohio Valley. To date, no Early Woodland archaeological sites have been recorded in the immediate vicinity of the study area.

The Middle Woodland Period

The most distinctive way in which the Middle Woodland period (2300 B.P. - 1100 B.P.) differs from the Early Woodland is in the way the people of Ontario had broadened the methods they used to decorate their pots. Changes in the shapes and types of tools used, the raw materials chosen and the ways in which these were acquired and traded are also apparent. However, these subtle technological changes mask more fundamental differences. Evidence from numerous archaeological sites indicate that by the Middle Woodland Period the people of Ontario began to identify with specific regions of the province. The artifacts from Middle Woodland period sites in southwestern Ontario differ quite noticeably, for instance, from those of the people in eastern Ontario. For the first time it is possible to distinguish regional cultural traditions - sets of characteristics which are unique to a part of the province. Archaeologists have named these cultural traditions LAUREL (throughout northern Ontario), POINT PENINSULA (in eastern and south-central Ontario), SAUGEEN (in much of southwestern Ontario) and COUTURE (in extreme southwestern Ontario).

Archaeologists have developed a picture of the seasonal patterns these people used in order to exploit the wide variety of resources in their home territories. During the spring, summer and fall groups of people congregated at lakeshore sites to fish, collect shellfish (in the south) and hunt in the surrounding forests. As the seasons progressed the emphasis probably shifted away from fishing and more towards hunting, as the need to store up large quantities of food for the winter became more pressing. By late fall, or early winter, the community would split into small family

hunting groups and each would return to a 'family' hunting area inland to await the return of spring.

Some Middle Woodland people may have been influenced by a vigorous culture to the south - the Hopewell. These people buried some of their dead in specially prepared burial mounds, and accompanied the bodies with many and varied objects. Some Ontario people, especially those in the Rice Lake and Bay of Quinte areas adopted this practice, although they tailored it to suit their local needs. Some archaeologists have argued that since not all people were buried in the same way, these rich burials indicate that a hierarchy or class structure was beginning to develop as has been noted among the Hopewell. Such class distinctions do not seem to have lasted long, however, and were not part of Late Woodland life. Significant evidence of Middle Woodland occupation of the Ottawa region has been discovered at Leamy Lake Park at the mouth of the Gatineau River (Laliberté 1999: 78) and numerous Middle Woodland finds have been made in the vicinity of Constance Bay and more recently along the Rideau River (Jacquie Fisher, Pers Comm.). No Middle Woodland sites are known in the immediate vicinity of the study area.

The Late Woodland Period

The easiest way for archaeologists to distinguish Late Woodland period archaeological sites from earlier Middle Woodland sites is by looking at the pottery. During the Middle Woodland period the people made conical based pottery vessels by the coil method and decorated them with various forms of stamps. By the beginning of the Late Woodland (ie. by A.D. 900) period the coil method had been abandoned in favour of the paddle and anvil method, and the vessels were decorated with 'cord-wrapped stick' decoration. While these transitions are useful to archaeologists they provide only a hint to the more fundamental changes which were occurring at this time.

Sometime after A.D. 500, maize (corn) was introduced into southern Ontario from the south. Initially this cultivated plant had little effect on the lives of people living in Ontario, but as the centuries past, cultivation of corn, beans, squash, sunflowers and tobacco gained increasingly in importance. Not surprisingly, this transition from an economy based on the products of the lake and forest, to one in which the sowing, tending and harvesting of crops was important, also hastened cultural and technological changes.

Initially at least, the changes were small. People were naturally conservative, and the risks of crop failure must have been too high to allow for too much reliance on the products of the field. Some re-orientation of the seasonal movements of these people must have occurred at this time. Fishing and hunting sites continued to be used although the pattern of summer gathering along the shores of the major lakes of the region probably diminished as the small plots of cultigens needed to be tended and harvested during the summer.

In the Ottawa valley area, it is unlikely that the cultivation of crops made much impact on the lives of the areas inhabitants who continued to rely mainly on fishing and hunting for sustenance. The people of this area were the pre-Contact forebears of the people now collectively known as the Algonquin (or Algonkin) (Hessel 1987). They shared language and cultural traits and an subsistence based more on hunting and fishing than their culturally un-related Iroquoian neighbours to the south.

In the south, however, the settlements adjacent to the corn fields began to take on a greater permanency as cultigens became more of a staple food. The best quality, light, and easily tillable farmland was sought out for cultivation, with village sites located nearby, near a reliable source of water. As agricultural success increased, it became possible to store a supply of food for the winter. For the first time it was possible to stay in and around the village all year (in southern Ontario at least) instead of dispersing into family winter hunting camps. Villages became larger and more heavily populated. Hostilities erupted between neighbouring peoples, so that by A.D. 1000, some people found it necessary to defend their villages with stockades and ditch defences.

Late Woodland and Contact period occupations have been documented at the multi-component archaeological sites at the mouth of the Gatineau River in Leamy Lake Park (Saint-Germain 1999: 84) near to the Ottawa River shore in Cumberland Township (Neal Ferris, Pers Comm.), however no archaeological sites dating to the Late Woodland period have been recorded in the immediate vicinity of the study area.

Contact Period

In the early 1600's French explorers, traders and missionaries described the people they encountered in the vicinity of the Ottawa River, recognizing a number of small groups or bands (Kichespirini, Kinouchepirini, Iroquet, Matouweskari, Nibachis, Weskarini etc.) based on localized focal areas (Allumette Island, the Ottawa River below Allumette Island, the South Nation River, Madawaska River, Upper Ottawa River near Cobden, the north side of the Ottawa River along the Lievre and the Rouge Rivers in Quebec) respectively (Sultzman, Lee n.d., Hessel 1987).

These people are now collectively known as Algonquin or Algonkin with principal foci of settlement at Golden Lake (Pikwakanagan) in Ontario and a number of locations to the north of the Ottawa River in Quebec. The study area lies within the area defined by the Algonquins of Ontario as their traditional territory (http://www.tanakiwin.com/Algonquins_of_ON.pdf).

TABLE 2 Generalized Cultural Chronology of the Ottawa Valley Region

PERIOD	GROUP	TIME RANGE	COMMENT
PALAEO-INDIAN			
	Fluted Point Hi - Lo	11000 - 10400 B.P. 10400 - 9500 B.P.	big game hunters small nomadic groups
ARCHAIC			
Early	Side Notched Corner Notched Bifurcate Base	10000 - 9700 B.P. 9700 - 8900 B.P. 8900 - 8000 B.P.	nomadic hunters and gatherers
Middle	Early Middle Archaic Laurentian	8000 - 5500 B.P. 5500 - 4000 B.P.	transition to territorial settlements
Late	Narrow Point Broad Point Small Point Glacial Kame	4500 - 3000 B.P. 4000 - 3500 B.P. 3500 - 3000 B.P. ca. 3000 B.P.	polished / ground stone tools, river/lakeshore orientation burial ceremonialism
WOODLAND			
Early	Meadowood Middlesex	2900 - 2400 B.P. 2400 - 2000 B.P.	introduction of pottery elaborate burials
Middle	Point Peninsula Sandbanks/Princess Point	2300 B.P. - 1300 B.P. 1500 B.P. - 1200 B.P.	long distance trade burial mounds agriculture begins
Late	Pickering Middleport Huron / St. Lawrence Iroquois	1100 - 700 B.P. 670 - 600 B.P. 600 - 350 B.P.	transition to defended villages, horticulture, large village sites tribal organization, warfare / abandonment
HISTORIC			
Early	Algonquin	300 - present	
Late	Euro-Canadian / Algonquin	225 - present	European settlement

4.1 Archaeological Potential

The City of Ottawa's "Archaeological Potential" mapping indicates areas of archaeological potential within the study area (ASI and Geomatics 1999). On reviewing the topographical, soils and surficial geology maps of the area it appears that the basis for the areas of 'potential' indicated is the presence of areas of lighter soil in an area of generally heavy soils.

For the purposes of this study, in determining the archaeological potential, a number of characteristics have been considered. In general, these conform to the basic key archaeological site potential criteria identified by the Ontario Ministry of Tourism, Culture and Sport and described in their 'primer' document (MTC 1997) and re-emphasized in the recent "Standards and Guidelines for Consultant Archaeologists (MTC 2011)".

According to MTCS's 2011 "Standards and Guidelines" the following are characteristics that indicate archaeological potential:

- *Previously identified archaeological sites.*
- *Water sources. It is important to distinguish types of water and shoreline, and to distinguish natural from artificial water sources, as these features affect site locations and types to varying degrees:*
 - *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 sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches)*
 - *accessible or inaccessible shoreline (e.g., high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh).*
- *Elevated topography (e.g., eskers, drumlins, large knolls, plateaux)*
- *Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground*

-
- *Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases. There may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings.*
 - *Resource areas, including:*
 - food or medicinal plants (e.g., migratory routes, spawning areas, prairie), scarce raw materials (e.g., quartz, copper, ochre or outcrops of chert), early Euro Canadian industry (e.g., logging, prospecting, mining).*
 - *Areas of early Euro Canadian settlement. These include places of early military or pioneer settlement (e.g., pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries. There may be commemorative markers of their history, such as local, provincial, or federal monuments or heritage parks.*
 - *Early historical transportation routes (e.g., trails, passes, roads, railways, portage routes)*
 - *Property listed on a municipal register or designated under the Ontario Heritage Act or is a federal, provincial or municipal historic landmark or site Property that local histories or informants have identified with possible archaeological sites, historical events, activities, or occupations.*

*MTCS Standards and Guidelines for
Consultant Archaeologists (2011)*

Pre-Contact and Post-Contact Archaeological Sites

Based on these criteria, the archaeological potential for pre-Contact and post-Contact archaeological sites is generally moderate with large areas of low potential. The study area contains no significant water courses, no prominent topographical features, no relic shorelines or significant changes in elevation and no obvious landscape characteristics which might have attracted past First Nations settlement.

In common with many parts of the Ottawa region the study area would have become habitable as the waters of the Champlain Sea receded. It would have appeared as level ground gradually grading towards the Carp River valley. As the Champlain Sea receded these drier margins may have offered hunting and settlement opportunities, however in the absence of any other identifiable characteristics to attract human interest, they are unlikely to have been selected for more substantial use.

The City of Ottawa archaeological potential mapping indicates some small areas of potential which appear to be based on a) the characteristics of Ironside soils (lighter soils in an area of heavier soils) and b) the presence of a veneer of till overlying bedrock. In both these instances, realistically, the archaeological potential is minimal. The areas identified on the 'archaeological potential' map included in this report (Figure 10) are therefore based on the requirements of the ministry's 'Standards and Guidelines', and not on any 'real world' assessment of the likelihood of encountering significant archaeological resources.

Euro-Canadian Sites

Neither the 1860 'Walling' map or the 1879 Illustrated Atlas of Carleton County show any dwellings within the specific study area. Census and Land Registry information suggests that primary occupation of Lots 1 and 2, Concession 1, Huntley Township occurred outside the study area and that the main activity on the land was farming. No historically notable individuals or unusual trades or activities are associated with the property.

The Ontario Ministry of Tourism, Culture and Sport's "Standards and Guidelines for Archaeological Consultants (2011)" do not allow for the exclusion of any lands within 100 metres of 'early historic transportation routes' (S&G's 1.4.1d), regardless of the level of historical information available. Thus although the archaeological potential within this zone is likely to be low, Stage 2 testing (in this case through surface survey) is a requirement.

5.0 CONCLUSIONS

The archaeological potential of this property is generally moderate to low. Nevertheless, since areas of archaeological potential were identified on the City of Ottawa's 'archaeological potential' mapping layer, and the property fronts on to a historic settlement road, Stage 2 testing will be necessary to verify the presence or absence of archaeological sites.

The level terrain of the study area became available for settlement and use about 11,000 years ago and could have been occupied at any time since then.

In practice, the actual likelihood of encountering evidence of First Nations activity from pre-Contact or post-Contact periods is probably quite limited since far more auspicious locations are available along the Carp River valley corridor. The possibility of encountering Euro-Canadian settlement evidence is also negligible.

6.0 RECOMMENDATIONS

- 1 Stage 2 archaeological investigations by a licenced archaeologist should be undertaken prior to any development work which results in soil disturbance.
- 2 Those areas under active cultivation (corn) should be ploughed and disked once the corn has been harvested to ensure a minimum of 80% surface visibility, as required under S&G's (Section 2.1.1.5).
- 3 The unploughable lands will have to be assessed using test pit survey. The areas identified as having moderate archaeological potential, should be tested using a 5 metre test pit interval (S&G's Section 2.1.2.2). The remainder of the property should be tested using a 10 metre test pit interval as rock and drainage conditions permit.

7.0 REFERENCES / SOURCES

Maps

- 1863 Map of the County of Carleton, Canada West, from surveys under the direction of H.F. Walling. Published by D.P. Putnam, Prescott C.W. (NMC 0025747).
- 1879 Illustrated Historical Atlas of the County of Carleton, 1879, H. Belden & Co. (reprinted by Wilson's Publishing Company, 1997)

Texts (consulted, not necessarily referenced)

Adams Heritage

- 2013 Stage 1 & 2 Archaeological Assessment, 173 Huntmar Drive, Part Lot 1, Concession 1 Geographic Township of Huntley, City of Ottawa. Report prepared under archaeological licence / PIF: P003-369-2013.
- 2004 Stage 1& 2 Archaeological Assessment "Taggart - Loblaws" Part of the South Half, Lot 3, Concession 1, Geographic Township of March, City of Ottawa and Stage 3 Archaeological Assessments of the "Allen" Site (BhFx-26) and the "Corelview" Site (BhFx-27). Report prepared under CIF# P003-031, P003-037, P003-041

ASI and Geomatics International Inc.

- 1999 "The Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carleton" Planning Report submitted to the Regional Municipality of Ottawa-Carleton.

Anderson, T.W., Mathewes, R.W., and C.E. Schweger

- 1989 Holocene climatic trends in Canada with special reference to the Hypsithermal interval; in Chapter 7 of Quaternary Geology of Canada and Greenland. R.J. Fulton (ed.); Geological Survey of Canada, Geology of Canada, no. 1 (also Geological Society of America, The Geology of North America, v K-1).

Chapdelaine Claude and Norman Clermont

- 2006 Adaptation, Continuity and Change in the Middle Ottawa Valley: A view from the Morrison and Allumettes Island Late Archaic Sites. in The Archaic of the Far Northeast. (Daniel Sanger and M.A.P. Renouf (Eds.)). University of Maine press, Orono.

Chapman, L.J., and D.F. Putnam.

- 1984 The Physiography of Southern Ontario, Ontario Ministry of Natural Resources, Third edition, 1984.

Cheel, R.J.

- 1982 The Depositional History of an esker near Ottawa, Canada. Canadian Journal of Earth Science v. 19:1417-1427.

Day, G. M., and B. G. Trigger

- 1978 Algonquin. In *Handbook of North American Indians: Vol. 15, Northeast*, ed. B. Trigger, pp. 792-797. Smithsonian Institution, Washington, D. C.

Ellis, C.J. and Neal Ferris,

- 1990 The Archaeology of Southern Ontario to A.D. 1650. Occasional Publication of the London Chapter of the Ontario Archaeological Society. Number 5. London.

Gadd, N.R. (Ed.)

- 1988 The Late Quaternary Development of the Champlain Sea Basin. Geological Association of Canada, Special Paper 35, Ottawa.

Harris, R. Cole (ed.) and Geoffrey J. Matthews

- 1987 Historical Atlas of Canada Volume I: From the Beginning to 1800. University of Toronto Press. Toronto.

Hessel, Peter

- 1987 The Algonkin Tribe. The Algonkins of the Ottawa Valley: An historical outline. Kichesippi Books, Wab, Arnprior, Ontario.

Morrison, James

- 2005 Algonquin History in the Ottawa River Watershed in A Background Study for Nomination of the Ottawa River under the Canadian Heritage Rivers System. www.ottawariver.org

Laliberté, Marcel

- 1999 The Middle Woodland in the Ottawa Valley. in Ottawa Valley Prehistory. Outaouais No. 6. Outaouais Historical Society, Hull, Quebec.

Marshall, I.B., J. Dumanski, E.C. Huffman and P.G. Lajoie

- 1979 Soil Capability and Land Use in the Ottawa Urban Fringe. Land Resource Research Institute, Research Branch, Agriculture Canada and the Ontario Ministry of Agriculture and Food.

Mason, Ronald

- 1980 Great Lakes Archaeology. Academic Press

MTCS

2010 Standards and Guidelines for Consultant Archaeologists.
http://www.mtc.gov.on.ca/en/publications/SG_2011.pdf

1997 Conserving Ontario's Archaeological Heritage: An Educational Primer and Comprehensive Guide for Non-Specialists. Ministry of Citizenship, Culture and Recreation, Cultural Programs Branch, Archaeology & Heritage Planning Unit.

Richard, S H,

1982 Surficial geology, Ottawa, Ontario-Québec / Géologie de surface, Ottawa, Ontario-Québec. Geological Survey of Canada, , 1506A

Richard S.H., N.R. Gadd and J.S. Vincent

1974 Surficial Material and Terrain Features, Ottawa-Hull. Map 1525A. Geological Survey of Canada.

Saint-Germain, Claire

1999 The End of the Pre-Contact Period in the Ottawa Valley - A Look at the Zooarchaeology of the Leamy Lake Park Sites. *in* Ottawa Valley Prehistory. Outaouais No. 6. Outaouais Historical Society, Hull, Quebec.

Schut, L.W. and E.A. Wilson

1987 The Soils of the Regional Municipality of Ottawa-Carleton (excluding the Ottawa Urban Fringe). Vols. 1 & 2. Report No. 58 of the Ontario Institute of Pedology.

Sowter Edwin T. W.

1909 Algonkin and Huron Occupation of the Ottawa Valley, *The Ottawa Naturalist*, Vol. XXIII, No. 4: 61-68 & Vol. XXIII, No. 5:92-104.

Spence, Michael W, and Robert H. Pihl

1984 "The Early and Middle Woodland Occupations of Southern Ontario: Past, Present, and Future Research." in *Arch Notes*, March/ April, 1984.

Sultzman, Lee

n.d First Nations Histories: Algonkin. <http://www.tolatsga.org/alg.html> (accessed May 13th 2013).

Swayze, K.

2000 "A Stage 2 A.A. of a Proposed Aggregate Pit on the East Half of Lot 12, Con. 4, West Carleton (Huntley) Twp., RMOC. report prepared under Licence# 2000-019

-
- 2001 "A Stage 1, 2 & 3 Archaeological Assessment of Proposed Newill Place Subdivision, on Part of Lot 6, Conc. 2, Huntley Township (Geo), City of Ottawa". Report prepared under Licence#: 2001-046.
- 2002 "Stage 1 & 2 A.A. of a Proposed Subdiv. on Part of Lot 18, Con. 2, Huntley Twp. (Geo.), City of Ottawa" Report prepared under licence #2002-046-017

Trigger, Bruce (editor)

- 1978 Handbook of North American Indians, Vol 15, Northeast. Smithsonian Institution, Washington.

Trigger, Bruce G.,

- 1985 Natives and Newcomers: Canada's "Heroic" Age Reconsidered. McGill-Queens University Press. Kingston and Montreal.

Watson, Gordon

- 1999 The Palaeo-Indian Period in the Ottawa Valley. in Ottawa Valley Prehistory. Outaouais No. 6. Outaouais Historical Society, Hull, Quebec.

Other Sources

Specific historical references cited in the text as footnotes.

8.0 MAPS

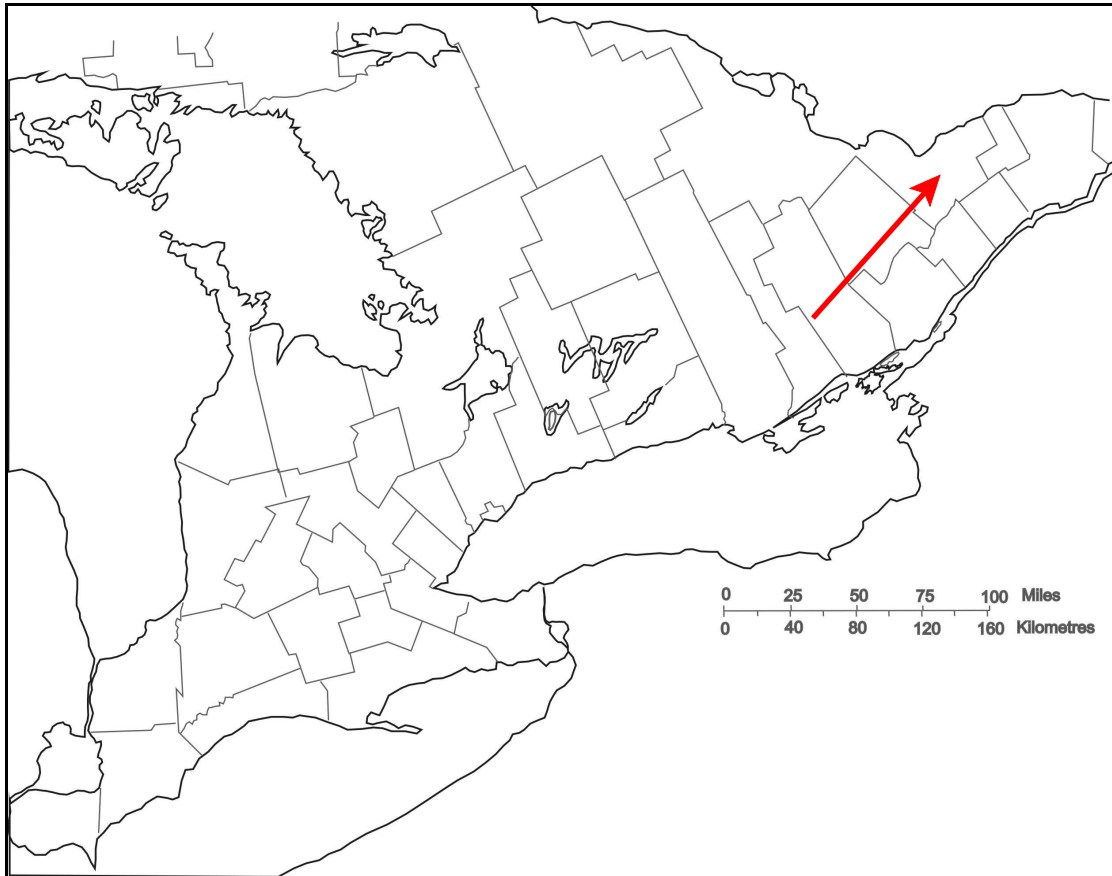


Figure 1: General location of the study area.

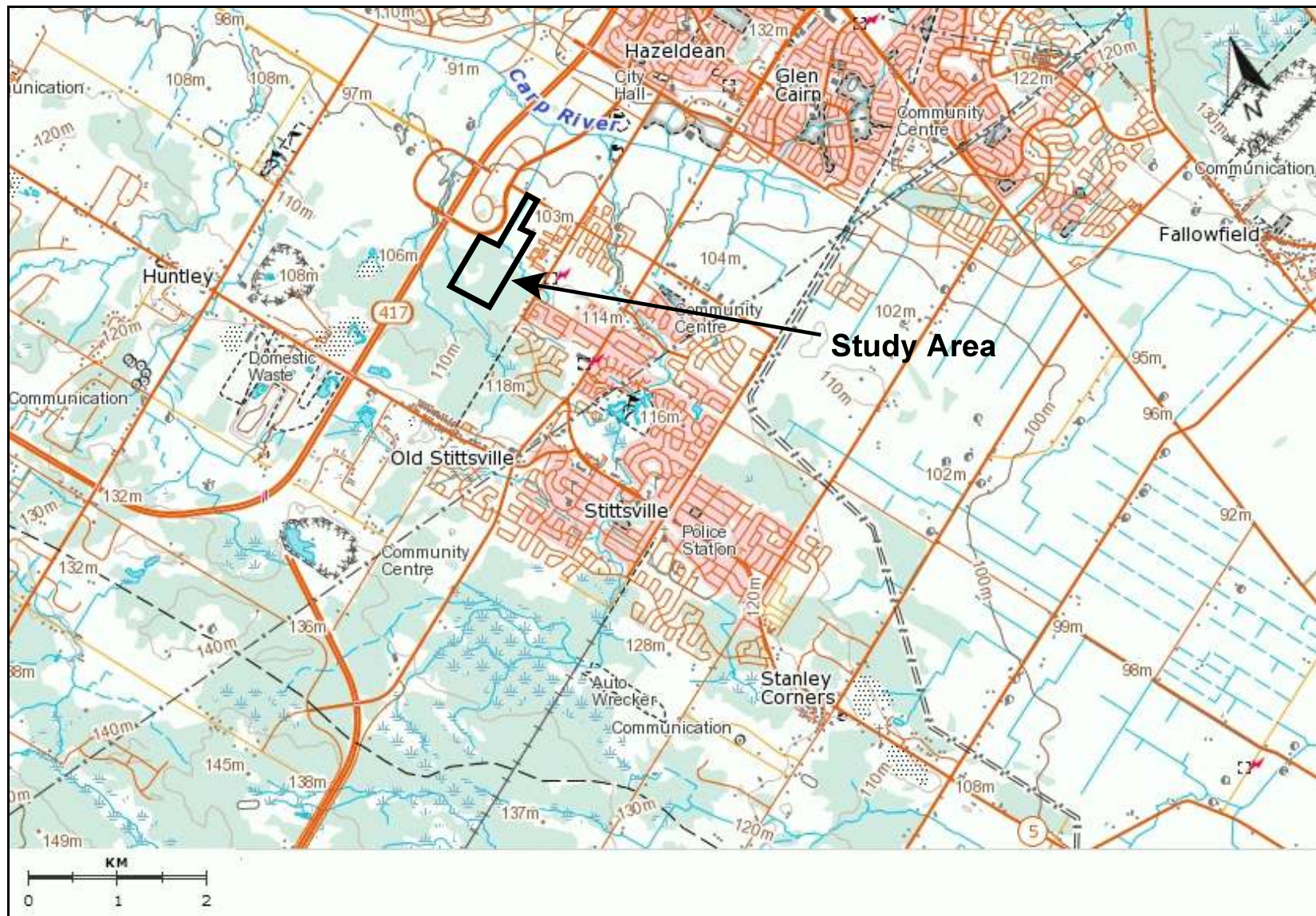


Figure 2: Location of the study area: 1:50,000 (source: Topographical sheet 31 F/08).

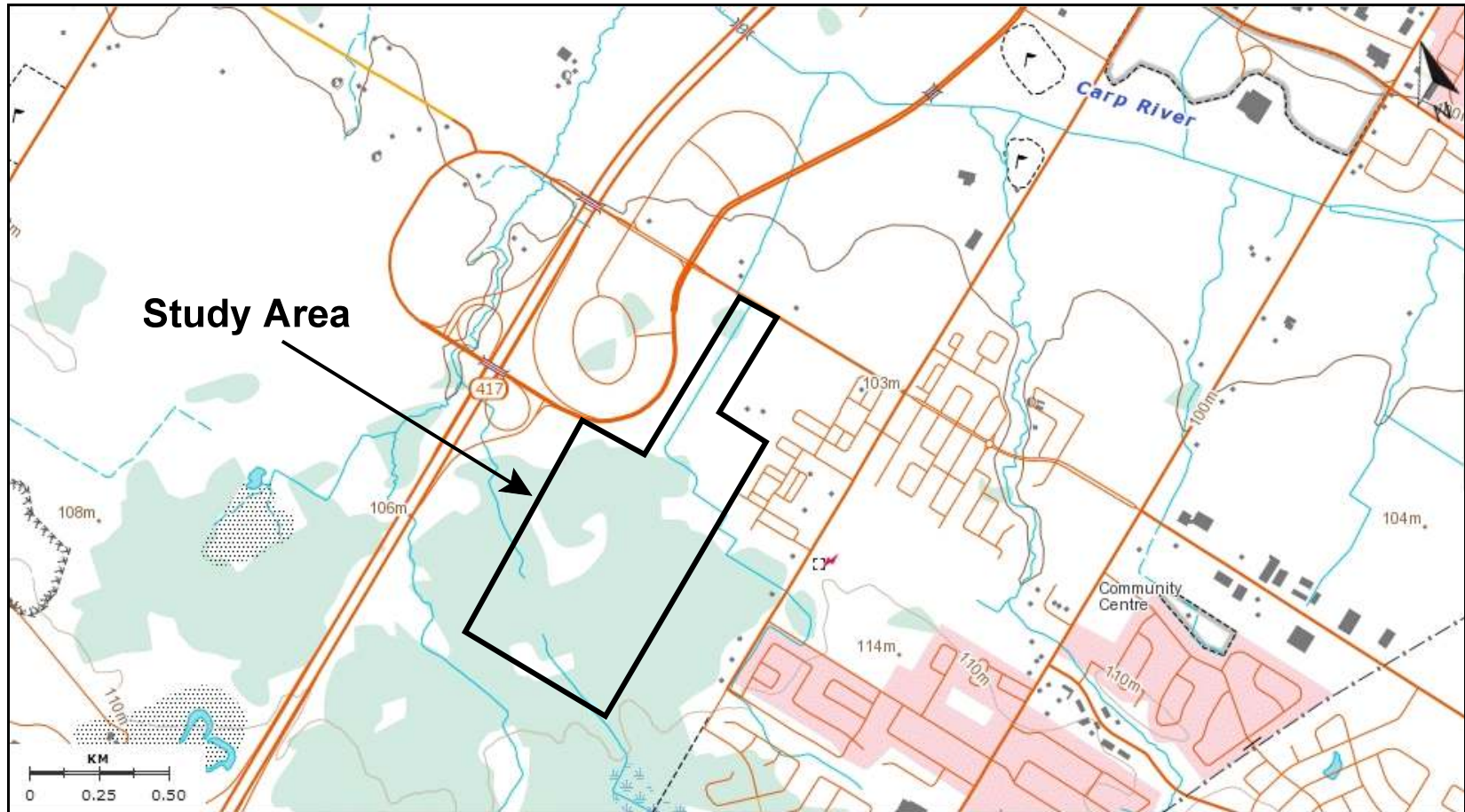


Figure 3: Location of the study area: 1:15,000 (source: Toporama).



Figure 4: Air photograph (GeoOttawa) showing the location of the study area.

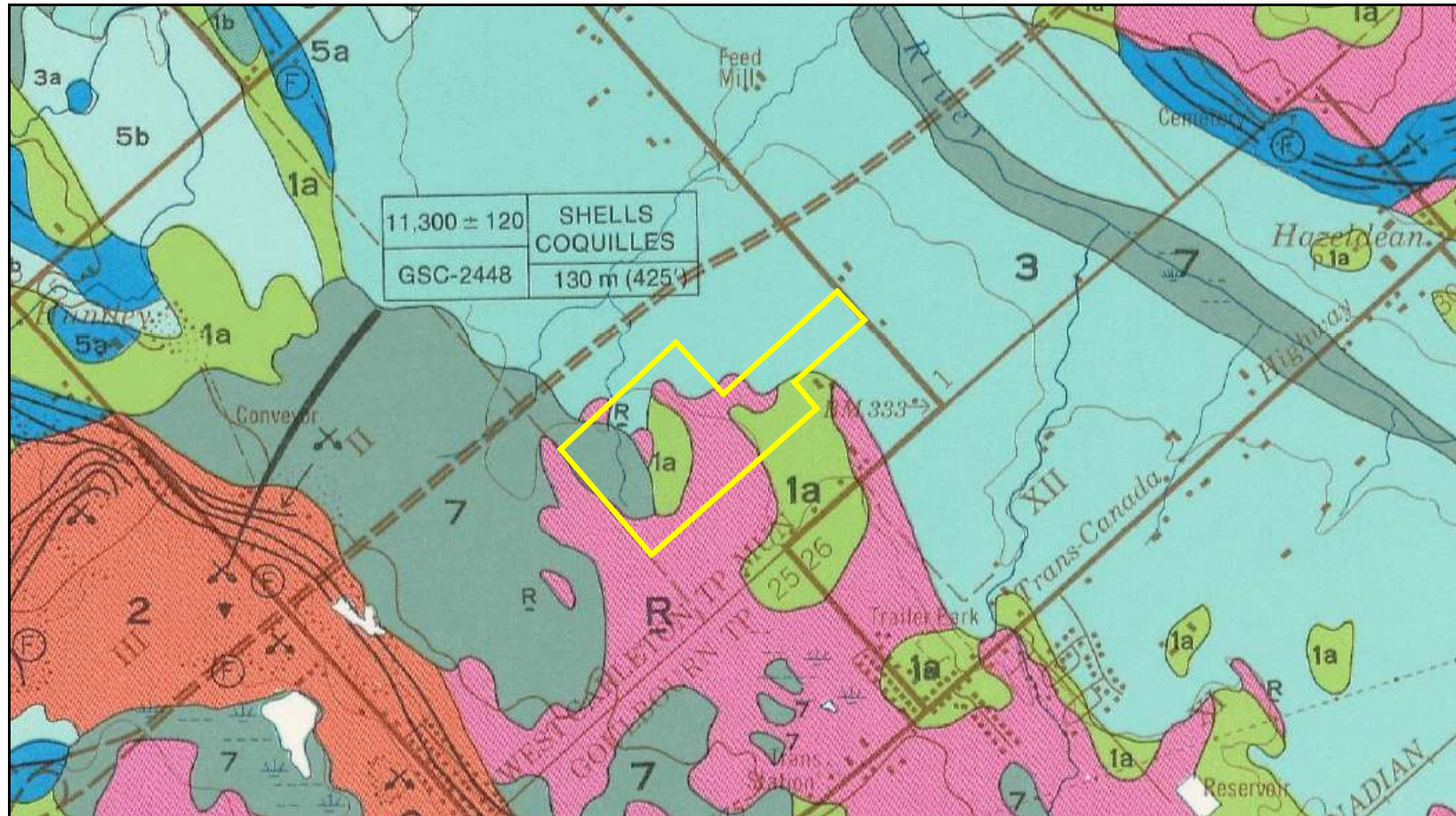


Figure 5: Surficial geology of the study area (segments of Surficial Geology Map 1506A 1982).





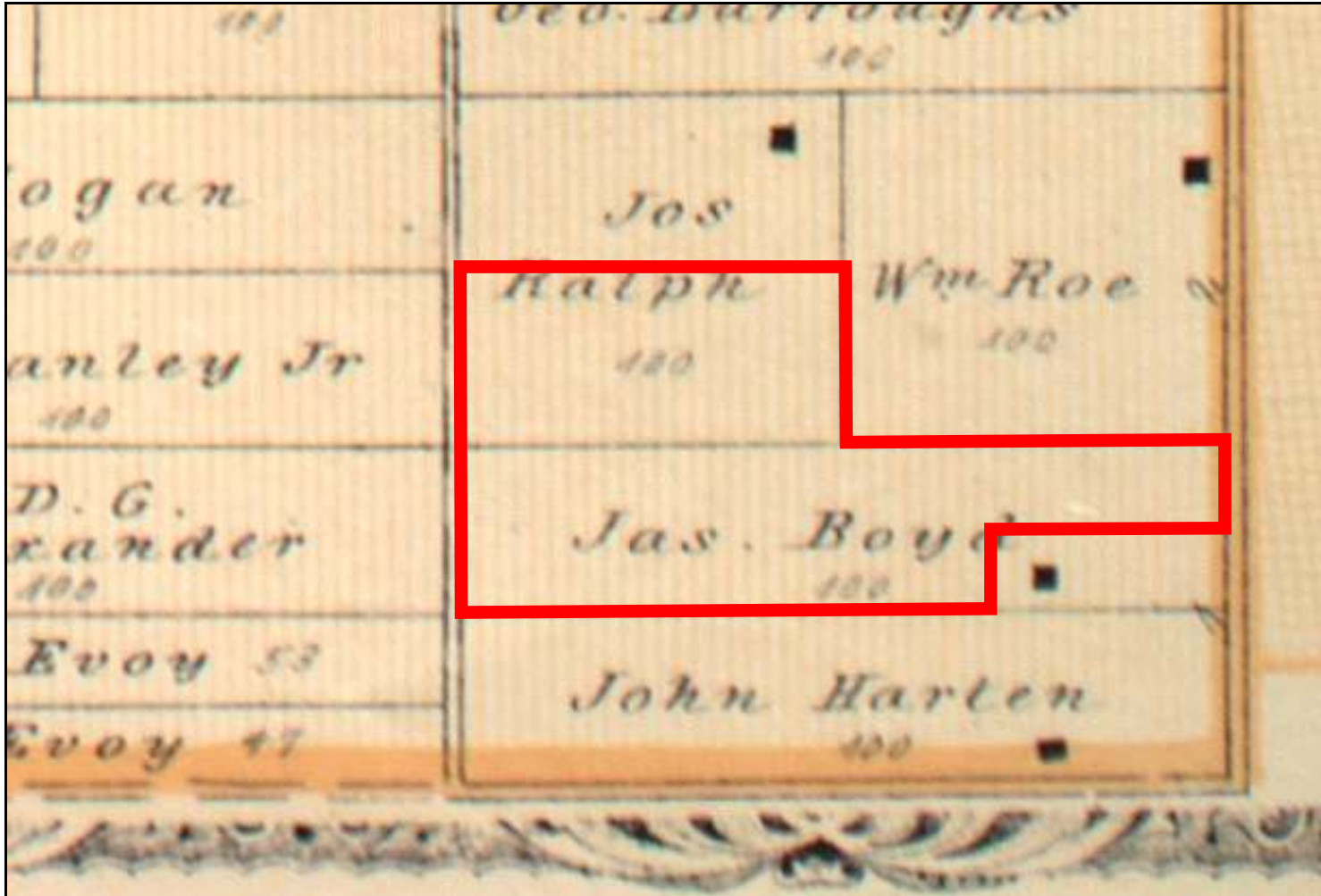


Figure 8: Portion of the 1879 Illustrated Historical Atlas of Carleton County showing the location of the study area.

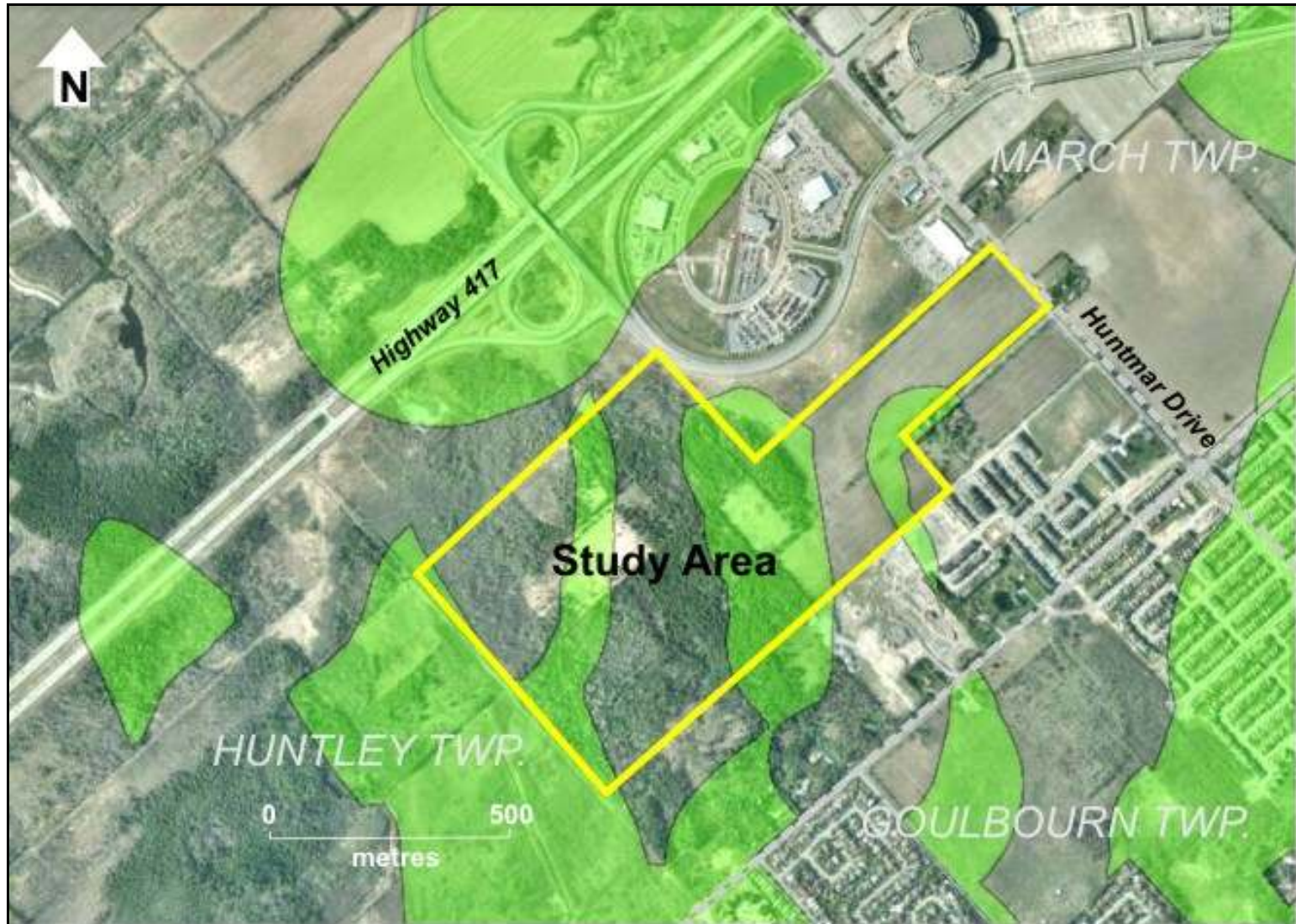


Figure 9: Archaeological potential (City of Ottawa - <http://maps.ottawa.ca/geoOttawa/>)



Figure 10: Archaeological potential based on field evaluation and examination of soils, topographical and surficial geology mapping.

9.0 IMAGES



Plate 1: The narrow frontage on to Huntmar Drive is actively cultivated agricultural land.



Plate 2: An old field boundary and shallow ditch separates the actively cultivated land from the forest.



Plate 3: View southwest along the edge of the property, looking towards the forest zone.



Plate 4: Pasture field surrounded by forest towards the centre of the property.



Plate 5: In the interior of the property, some of the former fields are heavily overgrown and reverting to forest.



Plate 6: Small clearings are present where abandoned fields are in the process of reverting to forest.



Plate 7: View of the northern edge of the study area from Palladium Drive.



Plate 8: Bedrock is close to the surface within parts of the forested area.



Figure 11: Location, orientation and direction of photographs included in this report. Numbers indicate plate numbers (above).