



ATTACHMENT TSD#1-F-1

Archaeological Assessment, North Russell Road Site



February 6, 2013

REPORT ON

**Archaeological Assessment
Capital Region Resource Recovery Centre
North Russell Road Site
Lots 18-19, Concessions 3 and 4
Geographic Township of Russell
Prescott and Russell County, Ontario**

PIF Number P366-025-2013

Submitted to:
Taggart Miller Environmental Services
P.O. Box 4080
Markham, Ontario

REPORT



Report Number: 12-1125-0045/4500/0160-1





Executive Summary

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

Golder Associates Ltd. (Golder) was contracted by Taggart Miller Environmental Services (Taggart Miller) to undertake a preliminary archaeological assessment of the properties located on Lots 18-19, Concessions 3 and Lot 18 Concession 4, in the Geographic Township of Russell. The overall study area is approximately 193 Ha of continuous lands. The archaeological assessment is one part of an overall assessment of the existing quarry site and adjoining lands located from North Russell Road on the west and extending east of Eadie Road. This study area, known as the North Russell Road Site (NRR), is being assessed as a possible location for the Capital Region Resource Recovery Centre (CRRRC). The objective of the archaeological investigation was to identify known archaeological sites within and in the vicinity of the study area and to assess its archaeological potential.

There is evidence of human occupation in Eastern Ontario dating at least 9,000 Before Present (B.P.) following the retreat of the Champlain Sea. Although open at this time, Russell Township would have been sparsely populated through the Palaeo-Indian period but would have had an increase in population during the Archaic and Woodland periods. The region of the study area would remain sparsely populated until European colonization during the early nineteenth century. The first Euro-Canadian settlement in the vicinity of the study area was the village of Russell.

The Crown patents granted for the three lots were: Lot 18 Concession 3 to William Hamilton in 1841, Lot 19 Concession 3 to Thomas Gillespie in 1840, and Lot 18 Concession 4 to William McDonell in 1834. It is likely that the area was first settled between 1840-1860.

There are no archaeological sites in the study area or within a three kilometre radius. Due to the presence of wetlands there is a moderate potential for pre-contact archaeological resources within the study area. Historical records and maps indicate that there was moderate to high potential for post contact archaeological resources based upon locations of early settlement.

This investigation has provided the basis for the following recommendations:

- 1) That further detailed archaeological assessment be undertaken of any areas of archaeological potential that are to be affected by future development within the study area. This further detailed assessment will be required over the majority of the lands that comprise the North Russell Road Site (Map 5).



Project Personnel

Client Contact	Jeff Parkes, Taggart Miller Environmental Services
Project Director	Paul Smolkin P.Eng.
Senior Report Review	Hugh Daechsel M.A. (P051)
Licensed Archaeologist	Erin Wilson M.A. (P366)
Project Manager	Trish Edmond P.Eng
Report Preparation	Dan Goss B.A., Tim Rangecroft M.Sc. (R383)
Spatial Imaging	Bojan Radojevic, Jamie McKenzie
Administrative Support	Candice Butler

Abbreviations

MTCS	Ministry of Tourism, Culture and Sport (Ontario)
ASDB	Archaeological Sites Database
CRRRC	Capital Region Resource Recovery Centre
NRR	North Russell Road
PIF	Project Information Form
B.P.	Before Present (Taken to be 1950)
C14	Carbon 14 dating technique



Table of Contents

EXECUTIVE SUMMARY i

PROJECT PERSONNEL ii

ABBREVIATIONS ii

1.0 PROJECT CONTEXT 1

 1.1 Objectives 1

 1.2 Development Context 1

 1.3 Historical Context 1

 1.4 Archaeological Context 10

2.0 FIELD METHODS 13

3.0 ANALYSIS AND CONCLUSIONS 14

4.0 RECOMMENDATIONS 16

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION 17

6.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT 18

7.0 BIBLIOGRAPHY AND SOURCES 19

8.0 IMAGES 23

9.0 MAPS 34

IMAGES

Image 1: Open agricultural land, facing east 23

Image 2: Scrub and bush, east of the fields in Image 1, facing east. 23

Image 3: Bush and scrub, facing east. 24

Image 4: Open agricultural land, facing east. 24

Image 5: Wet area and woodlot southeast of quarry, facing east 25

Image 6: Wet area located in southeast corner of study area, looking south east. 25

Image 7: Woodlot and wet area in the south east corner of the study area, looking south east 26

Image 8: View across existing quarry in centre study area, looking north. 26

Image 9: Scrubland in the vicinity of existing quarry, looking west. 27

Image 10: Open scrubland on western edge of study area, facing north west. 27

Image 11: Agricultural fields immediately west of existing quarry, facing west 28



ARCHAEOLOGICAL ASSESSMENT NORTH RUSSELL ROAD SITE

Image 12: View from northeast of quarry facing south. 28

Image 13: Existing pasture, western edge of study area, facing east. 29

Image 14: Woodlot and wet area associated with South Morrow Municipal Drain, looking east. 29

Image 15: Open fields between the woodlot and wet area associated with South Morrow Municipal Drain and existing quarry, looking north west. 30

Image 16: Scrub and marsh grass in vicinity of DD1 (arm of Fournier Municipal Drain), looking east. 30

Image 17: Marsh grass and seasonal wet area east of Eadie Road, looking east. 31

Image 18: Marsh grass and scrubland east of DD1, looking east. 31

Image 19: Scrubland east of DD1, looking south east. 32

Image 20: Woodlot at the eastern end of the study area, looking north east. 32

Image 21: Fournier Municipal Drain, eastern end of study area, looking north. 33

MAPS

Map 1: Key Plan..... 35

Map 2: Site Plan..... 36

Map 3: Historic Maps (Walling & Belden)..... 37

Map 4: Air Photos - 1945 & 1985 38

Map 5: Areas of Archaeological Potential..... 39

APPENDICES

APPENDIX A

Photographic Catalogue



1.0 PROJECT CONTEXT

1.1 Objectives

This archaeological assessment was completed to identify known archaeological resources in the study area as well as to determine if additional archaeological investigations are required. The objectives of the assessment are based on principles outlined in the *Ontario Heritage Act* (Consolidated 2007) and the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011). More specifically, studies were completed with the following objectives:

- To provide information about the property's geography, history, previous archaeological fieldwork and current land condition;
- To evaluate in detail the property's archaeological potential, which will support recommendations for further detailed surveys for all or parts of the property; and
- To recommend appropriate strategies for further detailed surveys, if required.

1.2 Development Context

Golder Associates Ltd. (Golder) was contracted by Taggart Miller Environmental Services (Taggart Miller) to undertake an archaeological assessment of the properties located on Lots 18-19, Concession 3 and Lot 18, Concession 4, in the Geographic Township of Russell. This study area, known as the North Russell Road Site (NRR) is being assessed as a possible location for the Capital Region Resource Recovery Centre (CRRRC). The archaeological assessment is one part of an overall assessment of the existing quarry site and adjoining lands located between North Russell Road on the west and extending east of Eadie Road. The study area is indicated by the boundaries on Map 1 & Map 2; these are the physical limits of any proposed development. A wider study area of 3km was used to investigate the Ministry of Tourism, Culture and Sports' (MTCS) *Archaeological Sites Database* (ASDB) in accordance with the *Standards and Guidelines for Consulting Archaeologists* (2011) and professional standards of due diligence.

This assessment was undertaken in advance of any pre-development permitting process, and for the purposes of the MTCS was triggered by the need to identify any potential impacts to archaeological resources as considered under the *Canadian Environmental Assessment Act*. The CRRRC project has an approved Terms of Reference and the provincial Environmental Assessment process activities have commenced.

Permission to access the study area for the purpose of archaeological assessment was provided by Taggart Miller in consultation with local landowners.

1.3 Historical Context

Our understanding of the local sequence of human activity in the study area following the recession of the last ice sheet and the Champlain Sea is incomplete. It is possible, however, to provide a general outline of prehistoric occupation in the Ottawa region based on the archaeological investigations conducted throughout eastern Ontario.



Pre-Contact Overview

Human occupation of southern Ontario dates back approximately 10,000 years B.P. These first peoples, known as Palaeo-Indians to archaeologists, moved into Ontario as the last of the glaciers retreated northward. The former shores of the vast glacial lakes such as Lake Algonquin in the area that is now southern Georgian Bay, and along the north shore of present day Lake Ontario, contain remnants of some of their sites. Isolated finds of the distinctive, parallel-flaked Palaeo-Indian spear points have been recorded in the Rideau Lakes and north of Kingston (Watson 1982). Although there is limited information on the lifestyle of the Palaeo-Indians, the little evidence that is available suggests that they were highly mobile hunters and gatherers relying on caribou, small game, fish and wild plants found in the sub-arctic environment.

The Ottawa Valley remained very much on the fringe of occupation at this time. The ridges and old shorelines of the Champlain Sea and early Ottawa River channels would be the areas most likely to contain evidence of Palaeo-Indian occupation in this region. What is believed by some to be late Palaeo-Indian material has been found in several locations within the City of Ottawa including a site in Honey Gables as well as in general proximity to the study area, near Albion Road and Rideau Road, Innes Road, and north of the Mer Bleue close to the intersection of Navan Road and Page Road (Swayze 2001, 2003 & 2004).

It was not until the succeeding Archaic Period (ca. 9,000 to 3,000 B.P.), that the environment of southern Ontario approached modern conditions. While more land became available for occupation as the glacial lakes drained, Archaic populations continued as hunter-gatherers, however they appear to have focused more on local food resources, abandoning the highly mobile lifestyle of their predecessors. Although Palaeo-Indian workmanship of stone tools was also lost, the archaic tool kit became more diversified, reflecting the change to a temperate forest environment. Ground stone tools such as adzes and gouges first appeared and may indicate the construction of the dug-out canoes or other heavy wood working activities. Extensive trade networks had developed by the middle to late Archaic Period. Items such as copper from the north shore of Lake Superior were exchanged during this time.

The first significant evidence for occupation in the Ottawa Valley appears at this time. Archaic sites have been identified on Allumettes and Morrison Islands on the Ottawa River near Pembroke, and within the boundaries of Leamy Lake Park within the City of Gatineau (Pilon 1999: 43-53, 64). Late Archaic sites have also been identified to the west in the Rideau Lakes, and the east at Jessup Falls and Pendleton along the South Nation River (Daechsel 1980). A few other poorly documented finds of Archaic artifacts have been made within the City limits (Jamieson 1989).

The Woodland Period (ca. 3,000 to 400 B.P.) is distinguished by the introduction of ceramics. Early Woodland groups continued to live as hunters, gatherers and fishers in much the same way as earlier populations had done. They also shared an elaborate burial ceremonialism evidenced by the inclusion of exotic artifacts within graves (Spence et. al. 1990: 129). Extensive trade networks continued through the early part of this period and Early Woodland populations in Ontario appear to have been heavily influenced by groups to the south, particularly the Adena people of the Ohio Valley. By 1,700 B.P., the trade networks had reached their peak and covered much of North America.



Through the Middle Woodland Period (ca. 2,400 to 1,100 B.P.) there was an increase in the decorative styles found on ceramics and changes in the shapes and types of tools used. For the first time, it is possible to identify regional cultural traditions within the province, with 'Point Peninsula' being the distinctive variant found in eastern and south-central Ontario. A greater number of known sites from this period have 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 for the approaching winter. The proliferation of sites suggests an increase in the population of Eastern Ontario, although the Ottawa area has yet to yield as many sites as other parts of south-eastern Ontario. Middle Woodland sites have been noted in the South Nation Drainage Basin and along the Ottawa River including the northwest end of Ottawa at Marshall's and Sawdust Bays (Daechsel 1980; Daechsel 1981).

Another significant development of the Woodland period was the appearance of domesticated plants ca. 1,450 B.P. 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. By the end of the Late Woodland Period, distinct regional populations occupied specific areas of southern Ontario separated by vast stretches of largely unoccupied land, including the Huron along the north shore of Lake Ontario, and the St. Lawrence Iroquois along the St. Lawrence River.

While there is clear evidence of these latter developments in much of southern Ontario, the Ottawa Valley remained a sparsely occupied region utilized by mobile hunter-gatherers. In part, this was because the terrain was less than suitable for early agriculture. It was also a reflection of the increased pressure on hunting territories and conflict over trade routes at the end of the Woodland Period. Facing persistent hostilities with Iroquoian populations based in what is now New York State, the Huron moved from their traditional lands on the north shore of Lake Ontario to the Lake Simcoe and Georgian Bay region. Algonquin groups, who had occupied the lands north of the Huron, also appear to have retreated further northward in order to place greater distance between themselves and the Iroquois.

Woodland sites have been recorded throughout the Ottawa Valley. Two small Late Woodland sites were recently located on a property near the Village of Cumberland to the east of the study area (Ferris, 2002). A significant Woodland occupation has also been identified at the Leamy Lake site (Pilon 1999: 76-80). Finally, an ossuary burial identified near the Chaudière Falls in the 1840s dates to this period. Although ossuaries are a burial practice normally associated with Iroquoian speaking populations, especially the Huron, this internment may have been Algonquin. Once again, a number of poorly documented Woodland find spots are known for the general study area (Jamieson 1989).



At the time of initial contact, the French documented three Algonquin groups residing in the vicinity of the study area (Heidenreich & Wright 1987: Plate 18). These included the Matouweskarini along the Madawaska River to the west, the Onontchataronon in the Gananoque River basin to the southwest, and the largest of the three, the Weskarini, situated in the Petite Nation River basin north of the study area. While prolonged occupation of the region may have been avoided as a result of hostilities with Iroquoian speaking populations to the south, at least the northern reaches of the South Nation River basin were undoubtedly used as hunting territories by the Algonquin at this time.

Post-Contact Overview

Étienne Brûlé is reported to be the first European in the region; having travelled up the Ottawa River in 1610, three years before Samuel de Champlain. For the next two centuries, the Ottawa River served as a major route for explorers, traders and missionaries from the St. Lawrence into the interior, and throughout the seventeenth and eighteenth centuries this route remained an important link in the French fur trade. A seigneurie was established at L'Original, east of the study area, in 1674 and granted to Nathaniel Hazard Treadwell but there was little permanent European settlement at this early date. The recovery of European trade goods (i.e., iron axes, copper kettle pieces and glass beads) from Native sites throughout the Ottawa River drainage basin has provided evidence of the extent of contact between Natives and the fur traders during this period. The English, upon assuming possession of New France, continued to use the Ottawa River as an important transportation corridor.

A French trading post was built near the mouth of Le Lievre River, near the present community of Buckingham, Quebec, sometime in the eighteenth century. This post had been abandoned by the time Alexander Henry travelled up the Ottawa River in 1761 (Voorhis 1930:62). Independent trading posts at Buckingham and in the Rockland area were reportedly operated by Gabriel Foubert in the late eighteenth century (Beaulieu n.d.). Gabriel was the father of Amable Foubert, one of the first recorded settlers in Cumberland Township.

Significant European settlement of the region did not occur until United Empire Loyalists and other immigrants began to move to lands along the Ottawa River in the late eighteenth and early nineteenth centuries. The need for land on which to settle the Loyalists led the British government into hasty negotiations with their indigenous military allies, the Mississauga, who were assumed, erroneously, to be the only Native peoples inhabiting eastern Ontario. 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 is now the City of Ottawa (including the Geographic Townships of Gloucester, Nepean, Osgoode, Marlborough and North Gower) (Lockwood 1996: 24). Two years after the 1791 division of the Province of Quebec into Upper and Lower Canada, John Stegmann, the Deputy Surveyor for the Province of Upper Canada, undertook an initial survey of four Townships (Nepean, Gloucester, North Gower and Osgoode) on both sides of the Rideau River near its junction with the Ottawa River.



Russell Township

The Township was first surveyed in 1821 to mark out lots for the settlers that would soon follow. The colonization of Russell Township began in the early nineteenth century as land was granted to United Empire Loyalists. The western half of the township was initially settled as the soils were more favourable for farming, while the eastern half would be settled later by people emigrating from Québec in the mid nineteenth century.

The United Empire Loyalists were people of different cultural backgrounds who remained loyal to the British during their conflicts with the United States. They were primarily of English, Scottish, or Irish descent but there were also people of Dutch, German and French backgrounds who fought for the British and as a result lost their properties in the United States. The British governors in Canada realized it would benefit them to grant lands to the Loyalists in Canada as it would provide foundation for a small but loyal militia who would fight for their lands should the Americans ever invade north of the border.

The western half of the township was made up of small farming communities and was sparsely populated. New immigrants would add to the local population later in the nineteenth century with people of British descent emigrating to the western half of the township while people of French and Irish descent emigrated to the eastern half of the township.

The town of Duncanville shows up as early as 1862 on the Walling map (Walling 1862). The largest town close to the study area was the village of Russell which was formed when the villages of Duncanville and Luxemburg were amalgamated around 1900.

Brick Works

There were three brick manufacturing companies in the township during the nineteenth century. The clay and shale in the area was used for making bricks. The Russell Brick and Tile Company started the pit on Lot 18 Concession 3 in 1907 in order to provide more construction material they expanded their operations by buying out two other brick factories in the region. The Russell Shale Bricks Ltd. Company was formed in 1911 and it bought the holdings of the Russell Brick and Tile Company. This company had one of the most modern factories at the time in the area and they brought in skilled workmen from Europe to run it. The pit on Lot 18, Concession 3 was expanded and a narrow gage railroad was built to move aggregate from the pit to the factory in the village of Russell. Most of the brick houses in the area were constructed with local brick from this factory. During World War One there was less demand for building material so the plant and shale pit were closed. The shale pit would later reopen in 1927 with new owners and remained a reliable local source for brick manufacturing material for the rest of the twentieth century (Stanley 1988).

Present Land Use

The study area is currently a mixture of agricultural fields, wetlands, woodlot and scrub. The centre of the study area is dominated by a flooded quarry and access road. A number of single residential buildings are located around the periphery of the study area within proximity to roadways.



Property History

Historic evidence including land registry documents and census records provide a history of the ownership and development of the study area. The Walling historical map from 1862 (Walling 1862) and the Belden historical map from 1881 (Belden 1881) also help to provide information on who was living on the properties, how the properties were divided and where the houses and farm buildings were located.

Lot 18 Concession 3 Russell Township

The land registry documents indicate that the patent for the 200 acre lot was granted to William Hamilton in 1841. Hamilton sold 100 acres to David Harrison in 1849 (Inst. 4760). Harrison sold part of the land to Susan Harrington in 1851 (Inst. 5016). John Harrington sold his property to Adam Baker in 1854 (Inst. 6421) who in turn sold the property back to William Hamilton in 1857 (Inst. 6812). David Harrison sold the rest of his property to Richard Wilson in 1876 (Inst. 1236). William Hamilton sold his land to his son Thomas in 1879 (Inst. 2094). The last property transfer on the lot during the 1800's occurred in 1882 when Richard Wilson sold his property his son Andrew (Inst. 2684).

The 1871 census returns (C-10012) provide information for two families living on the lot. David Harrison was listed as a 62 year old farmer of English descent. He lived with his wife Ann (age 59) and had four children still living at home: Matilda (age 25), Peter (age 17), William (age 15), and Margaret (age 13). Both David and Ann were born in England while all the children were born in Ontario. Peter listed his occupation as a farmer like his father while the two youngest children were listed as attending school. The family identified their religious faith as Church of England.

The family owned a total of 160 acres with 60 acres improved. They divided their property into 15 acres for pasture, one acre for garden/orchard, four acres for wheat, two acres for potatoes, and 16 acres for hay. The family owned one house on the property which shows up on the 1862 Walling map (Map 3) in the northwest corner of the lot (Walling 1862). The family also owned three barns/stables, two carriages/sleighs, one cart/wagon/sled, three ploughs/cultivators, one reaper/mower, one horse rake, one thrashing machine, and one fanning mill. The farm produced 40 bushels of spring wheat, six bushels of fall wheat, 35 bushels of barely, 300 bushels of oats, 10 bushels of peas, 12 bushels of corn, 200 bushels of potatoes, 15 tonnes of hay, 20 bushels of apples, 400 pounds of butter, 56 pounds of wool, and 25 cords of wood. The family also owned two horses and one colt/filly, four milk cows, three horned cattle, 12 sheep, three swine and one beehive. There were three sheep and three swine killed or sold that year.

The 1871 census returns (C-10012) also provide information on the Hamilton family. William Hamilton was listed as a 61 year old farmer of Irish descent. He was married to Jane (age 62) and they had two sons still living at home: Thomas (age 26) and George (age 22). William and Jane were born in Ireland while their sons were born in Ontario. Thomas listed his occupation as a farmer while his younger brother George was identified as a clerk. The family listed their religious faith as Methodist.

The family owned a total of 102 acres with 75 acres improved. They divided their land into 25 acres for pasture, one acre for garden/orchard, five acres for wheat, one acre for potatoes, and 15 acres for hay. They had one house on the property which was located in the centre of the western boundary of the lot according to the 1862 Walling map (Map 3). The family also owned three barns/stables, four carriages/sleighs, three carts/wagons/sleds, two ploughs/cultivators, one reaper/mower, and one fanning mill. The farm produced 85 bushels of spring wheat,



500 bushels of oats, 80 bushels of peas, 10 bushels of buckwheat, 12 bushels of corn, 250 bushels of potatoes, 16 tonnes of hay, 10 bushels of apples, 10 bushels of grapes, 450 pounds of butter, 30 pounds of honey, 20 pounds of wool, 32 yards of cloth, and 27 cords of firewood. The family owned four horses, six milk cows, six horned cattle, six sheep, four swine and three beehives. They had one cow and three swine killed or sold that year.

The 1881 census returns (C-13229) provide information on two families living on the lot. First, Thomas Hamilton had taken over the land from his father. He lived with his wife Matilda (age 25) and their two children William (age 2) and Robert (age 8 months). Unlike her husband and children who were Methodists, Matilda listed her religious faith as Presbyterian.

Richard Wilson is listed in the 1881 census as a 61 year old farmer of Irish descent. He purchased the property in 1876 from David Harrison. Richard lived with his wife Marian (age 51) and they had five children still living at home: Anne (age 25), Andrew (age 23), Harris (age 21), Marian (age 16) and Elizabeth (age 15). Andrew was identified as a farmer and the youngest two children were attending school. It should be mentioned that on the 1881 Belden historical map, only the Wilson family shows up on the property (Map 3). This is possibly a result of the mapping process relying upon financial subscription.

The 1891 census returns (T-6367) only lists the Hamilton family. The change was that the family lived in wooden two storey house with three rooms.

Lot 19 Concession 3 Russell Township

The land registry documents indicate that the patent for the 200 acres lot was given to Thomas Gillespie in 1840. He sold the lot to Henry Hitsman in 1844 for 200 pounds (Inst. 3829). Hitsman sold 50 acres of the property to John Shelp for 25 pounds in 1853 (Inst. 4258). Henry would later sell the rest of the property to his two sons: John in 1865 (Inst. 10428) and Thomas in 1873 (Inst. 726). The last property transaction on the lot in the 19th century took place in 1895 when John Shelp sold his property to his son Thomas (Inst. 5750).

The 1871 census returns (C-10012) listed Henry Hitsman as a 72 year old farmer of German descent. He lived with his wife Lilia (age 60) and had one son still living at home: Thomas (age 27). The family listed their religious faith as Methodist.

The family owned a total of 155 acres with 60 of the acres being improved. They divided their land into 12 acres for pasture, eight acres for wheat, two acres for potatoes, and 20 acres for hay. They owned one house that according to the 1862 Walling map (Map 3) was located in the southern corner of the western boundary of the Lot. The family also owned two barns/stables, a carriage/sleigh, a cart/wagon/sled, a plough/cultivator, a reaper/mower, a horse rake, a thrashing machine, and a fanning mill. The farm produced 30 bushels of spring wheat, 40 bushels of fall wheat, 40 bushels of barley, 10 bushels of oats, 200 bushels of rye, 40 bushels of peas, seven bushels of corn, 600 bushels of potatoes, 15 tonnes of hay, 400 pounds of butter, 200 pounds of honey, 80 pounds of wool, 25 cords of firewood, and had 15 pine logs. The family also owned four horses, one colt/filly, eight milk cows, six horned cattle, 24 sheep, three swine, and 13 beehives. The also had six swine killed or sold.

John Hitsman was listed in the 1871 census as a 35 year old farmer of German descent. He lived with his wife Jane (age 20) and they both identified their religious faith as Methodist.



They owned 50 acres of land with 20 of those acres improved. They divided their land into two acres for wheat, one acre for potatoes, and 15 acres for hay. They owned a house on the property as well as one barn/stable, and one plough/cultivator. Their farm produced 20 bushels of spring wheat, 20 bushels of fall wheat, 50 bushels of oats, 40 bushels of peas, 100 bushels of potatoes, eight tonnes of hay, 18 pounds of wool, 18 yards of cloth, and five cords of firewood. They also owned one horse, one milk cow, five sheep, two swine, and one beehive.

The 1881 census returns (C-13229) provided information on three families living on the lot. First, John Hitsman and his wife Jane had added five children to their family: Samuel (age 9), Emma (age 7), Aaron (age 5), Sarah (age 4) and George (age 7 months). Only Samuel was listed as attending school.

Thomas Hitsman took possession of his father's farm in 1873. He lived with his wife Anne (age 25) who was born in Wales. They had two children: Thomas (age 1) and Sarah (age 0). The family listed their religious faith as Methodist.

The third family that the 1881 census returns (C-13229) provided information for was for the Shelp family. John Shelp was a 61 year old farmer of German Descent. He was married to Rebecca (age 53). Their 26 year old widowed son Thomas lived with them as did their one month old grandson Alexander. Thomas also listed his occupation as a farmer and the family listed their religious faith as Methodist.

The 1891 census returns (T-6367) provided additional information on the Hitsman and Shelp families. First, John and Jane Hitsman had three new children: Ford (age 7), Jessica (age 5), and Annie (age 2). Their eldest son Samuel was listed as student for his occupation while the next oldest son Aaron was listed as a farmer. The family lived in a wooden two storey house with five rooms.

The 1891 census indicated that the Shelp family lived in a wooden two storey house with seven rooms.

Lot 18 Concession 4 Russell Township

The patent for the 200 acre lot was granted by the Crown to William McDonell in 1834. He sold the lot to Angus McDonell in 1844 (Inst. 3860) who in turn sold the lot to George Jarvis that same year (Inst. 3859). Jarvis sold the lot in 1853 to Charles Purney in 1853 (Inst. 6285). Purney sold the north 100 acres to William Hayes in 1862 (Inst. 7658) who sold his portion of the lot to Robert Armstrong four years later (Inst. 10540). Purney sold the south 100 acres to William Eadie in 1869 (Inst. 130). Armstrong sold the north half of the lot to William Hayes in 1879 for \$400 (Inst. 2191). The last land transaction on the lot during this century was when William Eadie sold the southern 100 acres to his son John for \$1,000 in 1881 (Inst. 2514).

The 1871 census only provided data for the Hays family. William Hays was a 43 year old farmer of Irish descent. He lived with his wife Rebecca (age 42) and had eight children living at home: William (age 19), Margaret (age 17), Mary Ellen (age 15), Elizabeth (age 13), Rebecca (age 11), Mary Ann (age 7), Matilda (age 4), and John (age 2). William and Rebecca were born in Ireland while all of their children were born in Ontario. Their eldest son listed his occupation as a farmer and Rebecca and Mary Ann are listed as going to school. The family listed their religious faith as Church of England.

The family was listed as tenant farmers. They initially owned the property and then had to sell it to Robert Armstrong in 1866, perhaps due to financial troubles. They have some property listed but it is unclear whether they owned it at this time or whether they were renting the farm buildings and house on the property. They would eventually re-buy the north half of the lot from Robert Armstrong in 1879. The Hays family operated



100 acres of land with 12 acres improved. They allotted one acre for potatoes and four acres for hay. They lived in a house on the property which was listed as the Purney house on the 1862 Walling map (Map 3) which was located in the southwest corner of the lot. They used one barn/stable, one cart/wagon/sled, and one plough/cultivator. The farm produced 20 bushels of oats, 100 bushels of potatoes, four tonnes of hay, 50 pounds of butter, 20 pounds of wool, 30 yards of cloth, and 15 cords of firewood. The family had two oxen, two milk cows, six sheep, one swine and had two sheep and one swine killed or sold.

The 1881 census returns (C-13229) provide information about both the Hays and Eadie families. First, there was no new information about the Hays family except that two of the children, Margaret and Matilda, are no longer living at home.

Regarding the Eadie family, William Eadie was a 64 year old farmer of Scottish descent. He lived with his wife Sarah (age 50) and their eight children: John (age 26), Sarah (age 21), Joseph (age 18), Mary (age 16), James (age 14), Archibald (age 12), Robert (age 10), and Maggie (age 8). William was born in Scotland while the rest were born in Ontario. The two eldest sons, John and Joseph, listed their occupation as farmer while the four youngest children are listed as going to school. The family listed their religious faith as being Presbyterian.

The 1891 census returns (T-6367) only provide information on the Eadie family. John took over the family farm in 1881. He lived with his wife Margaret (age 32) and their four children: Margaret (age 8), William (age 5), John (age 2), and Sarah (age 5 months). The family listed their faith as Presbyterian and they lived in a wooden two storey house with three rooms.

Historic Maps and Air Photos

A review of available historic maps was undertaken to identify the locations of any early historic structures within the study area. The earliest map available for this part of the township is the 1862 Walling map, this shows a total of four homesteads within the study area (Map 3). The map attributes the building at the northern border of the study area to be that of J. Shelp, while the three buildings on the western border belong to H. Hitsman, D Harrison and William Hamilton respectively. Schoolhouse No. 3, located in the southwestern corner of the Lot, is located just outside the study area. The concession roads appear to form the focus of the earliest settlement within the study area, however the presence of initial shantys and cabins associated with sources of water rather than infrastructure cannot be discounted.

The 1881 Belden map (Map 3) does not show any buildings within the study area, aside from a church located adjacent to the study area in concession 2. Buildings are clearly visible to the north, however only the name of Richard Wilson appears with the study area itself. It is possible that inclusion on the 1881 map was by subscription, therefore removing a large segment of the population that were unwilling to pay. Census records illustrate the continued settlement of the study area and the continued presence of families identified on the 1862 Walling Map.

A review of air photography for the study area was undertaken to determine how it has developed through the Twentieth Century. A 1945 air photo indicates that the J. Shelp farmstead had been abandoned, though its field boundaries remained to show its location. Similarly, the D. Harrison farmstead had disappeared from the landscape by this time. The farmsteads of H. Hitsman and W. Hamilton are still present. An area of resource extraction is visible in the vicinity of the present-day quarry. The majority of the study area is cleared for agricultural purposes, with a very small woodlot remaining at the eastern edge of the study area



1.4 Archaeological Context

Previous Environmental Conditions

The study area began to emerge from the Wisconsin Ice Cap during the onset of the Holocene, roughly 12,000 years B.P. Immediately adjacent to the retreating ice sheets, melt water lakes formed within the low lying Ottawa Valley; itself having been depressed by the great weight of the ice cap. Around 11,000 to 11,500 B.P. the ice had sufficiently melted to allow sea water from the Atlantic Ocean access to the glacially lowered lands of eastern Ontario via the St. Lawrence (Cronin et al 2008). This marine inundation formed the Champlain Sea, briefly extending as far west as parts of Renfrew County, and is represented within the sedimentary record by a change from laminated glaciolacustrine clays to marine deposited clays.

Isostatic rebound gradually raised the Ottawa Valley, resulting in the shrinkage of the Champlain Sea eastwards. Large amounts of meltwater from the retreating ice sheets to the northwest flowed down through the Ottawa Valley, resulting in the freshwater mixing with the saline Champlain Sea providing for a brackish environment, eventually producing the smaller freshwater Lake Lampsilis by around 9,800 B.P. By this period an extensive sand delta had formed over the region as the large amounts of sediment transported downstream entered into the less turbulent and slower waters of the Lake and subsequently dropped from suspension. This resulted in the draping of the existing deep water marine clays with a thick layer of fluvial sands and silts across the entire deltaic fan. Following the further draining of Lake Lampsilis, the Ottawa River remained as a drainage route to the Atlantic for larger glacial lakes and water bodies to the west, with occasional large release episodes.

“The most significant alterations to the landscape following the withdrawal of the Champlain Sea are related to the shifting channels of the Ottawa River. A series of terraces and abandoned channels in the vicinity of Ottawa indicates that the Ancestral Ottawa River was much larger than present. Isostatic adjustment and the erosion of a lower channel upstream from Ottawa gradually caused the river to abandon the southern channel and shift to the north, to occupy the pre-glacial valley and what is now the Ottawa River channel. Terraces at various levels in the clay mark successive periods of downcutting by the Pre-Ottawa River. The south channel east of Ottawa has several cross channels separated by elongated islands underlain by marine clay and covered by fluvial sands” (Marshall et al 1979:14).

The study area is located due south of the southern bank of this ancestral channel, with most of the channel at this location currently occupied by the Mer Bleue Bog. A carbon date obtained from the peat (GSC-681, 7650+- 120 years BP) indicates this bog to be at least 7,700 years old (ibid:15). The development of the bog indicates that the channel must have been abandoned by the Ottawa River by this time, and that potentially it existed earlier as an open lake before reverting to a peat forming marsh.

Pollen cores taken from the Mer Bleue, immediately north of the study area (Anderson 1988), and Ramsay Lake, 50 km to the northwest (Rocheleau et al 2008) provide a record of paleoflora at the time of the emergence of the study area from the Champlain Sea (9,800 B.P.). Pollen cores indicate the existence of a tundra that gave way to coniferous tree cover, likely spruce, pine and willow, later supplanted with oak and birch at the expense of the spruce. These forests increased in density and remained dominant between 10,600 and 7,500 B.P. A more mixed forest, characterised as Great Lakes Forest began to be established with the onset of a warmer and more humid environment between 7,500 and 4,700 B.P. with the predominance of pine giving way to hemlock. A cooling of the climate and the decimation of the hemlock by disease led to a massive increase in the birch



composition of the tree cover between 4,700 and 3,000 B.P. This birch, pine and hemlock tree cover remained established until 200 B.P. with lumbering and agriculture clearing the area (Ibid: 2008)

Study Area Characteristics

The study area is located in the Russell and Prescott Sand Plains (Chapman 1966). This area is characterized by large deposits of sand and fine sand with smaller deposits of shale till. The study area has a level to slightly undulating topography.

There were four soil types shown as located within the study area. The largest concentration of soil within the study area is Vars gravelly sand; it consists of slightly stony, gravelly loam soils with reddish gravel or shale parent material with good drainage (Image 11). The second soil type was Rubicon fine sand located in the northwest corner of the study area. It consists of light grey depressions and reddish brown hummocks of sandy soils with sorted sand parent material and had imperfect drainage. The other two soil types were only located in the eastern part of the study area. The first was Bearbrook clay, which consists of stone free dark grey clay soils with non-calcareous layered red and grey clay with poor drainage. The last soil type potentially found within the study area was Bainsville silt loam. It consists of stone free fine sandy loam soils with layered silt and fine sand with poor drainage (Wicklund 1962).

The study area is located within the Upper St. Lawrence Sub-region of the Great Lakes-St. Lawrence Forest Region (Rowe 1977). Forests in this sub-region include sugar maple, beech, red maple, yellow birch, white ash, basswood, largetooth aspen, and red and burr oaks. Most of the study area consists of open cultivated farm fields with occasional wood lots. Most of the old growth forest would have been cut down during the nineteenth century and the trees that can be found within the study area would be secondary or tertiary growth (Images 5, 14 and 20).

There are three large wet areas located within the study area. The first is located in the northwest corner (Image 14) while the second was located below the southeast corner of the quarry (Image 5). The third wet area was located in the southeast corner itself (Image 6). Drainage within the study area was provided by the larger Fournier Municipal Drain (Image 21), South Morrow Municipal Drain and York Municipal Drain, in addition to numerous smaller drainage ditches. The eastern arm of the study area was also notably more saturated due to the poor soil drainage (Image 17).

There were moderate limitations to agricultural production, moderate limitations to ungulate production (Brassard 1971), and severe limitations to waterfowl production (Arsenault 1970), for the area.

Property Inspection

A property inspection was conducted on November 24th 2009. Photographs were taken of the existing conditions and a field log maintained. Visibility was excellent and conformed to the stipulations laid out in the *Standards and Guidelines for Consulting Archaeologists (2011)*.

Registered Archaeological Sites

The primary source of information regarding known archaeological sites in the study area is the Ontario Ministry of Tourism, Culture and Sport's archaeological sites database. A current version of this database was consulted and, at present, there are no documented or registered archaeological sites either within the study area or a 3 kilometre radius (Von Bitter per comms, January 13, 2012).



Previous Research and Fieldwork

There are a number of publications regarding the history and development of Russell Township. *From Swamp to Shanty* (Wendell 1987) discusses the historic development of the western half of the township while *Histoire d'Embrun* (Bourgie 1980) describes early settlers' lives in the eastern half of the township. *The Illustrated Historical Atlas of Prescott and Russell* (Belden 1881) provides historical maps and specific information about people and places within Russell Township. Other historical accounts include *The History of the Ottawa Valley* (Gourlay 1896) and *Histoire de Comtes unis de Prescott et de Russell* (Brault 1965).

M. Emard (1974) and Donald Cartwright (1973) did statistical studies of settlement patterns in Eastern Ontario, including Russell Township according to linguistic groups.

There has been very little archaeological assessment work done in Russell Township. Some archaeological work that has been done in the area includes an overview of the archaeology and inventory of known archaeological sites as well as an assessment of archaeological potential of the Township was provided by Heritage Quest in 2004 (Daechsel & Bauer 2004). A Stage 1 archaeological assessment was undertaken for the expansion of Embrun and Russell Lagoons in 2006 (Daechsel 2007) and the Stage 2 assessment on the same properties was undertaken in 2007 and 2008 (Golder 2009; PIF P302-038-2008). More recently, Golder undertook assessments for lands located directly north of the study area and to the northwest (Golder 2011; PIF P311-049-2011 and P311-080-2011, respectively).



2.0 FIELD METHODS

A property inspection was conducted on the study area on November 24, 2009. This inspection was undertaken to determine if there were any areas of disturbance which would have affected the archaeological potential, and what assessment strategies would be appropriate for further detailed assessment should it be required.

The weather was overcast, 11 degrees with a strong NW wind.

Field notes and photographs of the property were taken during the inspection. The photograph locations and directions were noted and all photographs were catalogued (see Appendix A). All photograph locations and directions referenced in this report have been shown on Map 2. No archaeological remains were identified during the course of the property inspection. Areas of disturbance related to the quarry and residential areas were noted.

The following documents were generated in the field and will be kept with the licensee at Golder until an appropriate repository can be identified:

- Field notes (in 1 note book)
- Digital photographs
- GPS points
- Sketch maps



3.0 ANALYSIS AND CONCLUSIONS

There are no registered archaeological sites within a significant proximity to the study area. The area does however contain areas of archaeological potential that may indicate the presence of undiscovered archaeological resources.

Archaeological potential

There are a number of criteria employed in the assessment of archaeological site potential. For pre-contact or prehistoric sites, these criteria are principally focused on the topographical features of the landscape including ridges, knolls and eskers, and the type of soils found within the area being assessed. For post-contact or historic sites, documentary evidence such as maps and census records may indicate areas of settlement and activity. These criteria were formulated in close consultation with the *Ministry of Tourism, Culture and Sport's set guidelines* for archaeological resource potential mapping (2011).

The following assessment of archaeological potential has also been formulated in consultation with the Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carleton: Technical Report (Archaeological Services Inc. & Geomatics International Inc. 1999). Hereafter referred to as the Archaeological Master Plan, this report identifies areas of archaeological potential within the now amalgamated City of Ottawa and sets out guidelines for requiring testing. These guidelines also follow the *Checklist for Determining Archaeological Potential* developed by the Ontario Ministry of Tourism and Culture (1993) for archaeological assessments. The NRR Site falls just outside the City of Ottawa municipal boundaries and is therefore not actively mapped within the City of Ottawa Archaeological Master Plan; however, the criteria used for the generation of the Master Plan may be applied additional lands.

According to the Archaeological Master Plan modelling criteria, lands within 300 metres of 'two-line' rivers, watercourses with mapped floodplains and wetlands (as shown on 1:10 000 topographic maps) are considered to have pre-contact site potential, while lands with moderate or well drained soils within 200 metres of 'one-line' watercourses also have potential. Further, areas up to 300 metres from abandoned Ottawa and Rideau River terrace scarps have pre-contact site potential. In the case of drumlins and eskers, the entire feature has pre-contact potential. Areas near historical schools, churches, commercial buildings, industrial sites and early settlement roads are considered to have potential within 100 metres of the structure, known structure location or settlement road, the last with the object of locating early pioneer homes. Areas within 50 metres of historical railways are also considered to have site potential and, finally, any area within 100 metres of a registered or unregistered archaeological site.

There is moderate potential for pre-contact archaeological resources in the study area due to the high percentage of wet areas within the study area (Map 5). This would have formed an ideal hunting ground but not necessarily ideal for pre-contact habitation due to seasonal flooding.

There is moderate to high potential for post-contact archaeological resources within the study area. Historical records from the land registry office indicate that sections of the study area were first granted by the Crown as early as 1834. It is likely that settlement within the study area occurred between 1840 and 1860. The Walling historical map (Map 3) indicates that there was at least one house on each Lot by 1862 and in some cases there were multiple houses. 1871 census records (C10012) indicate that many of the property owners had several farm buildings and rapidly expanding families. A comparison of historical mapping and air photography indicates



ARCHAEOLOGICAL ASSESSMENT NORTH RUSSELL ROAD SITE

than a number of these early farmsteads had been abandoned prior to 1945. It is possible that foundations, garbage dumps, or artifact scatters relating to these sites remain within the study area.

Map 5 indicates all of the areas that have archaeological potential and are recommended for a further detailed archaeological assessment in advance of any future development. These areas of potential are a composite of pre-contact potential attributed to wet areas and watercourses, combined with the historic potential associated with early homesteads, roads and resource areas.



4.0 RECOMMENDATIONS

Based on the historic research and results of the property inspection, portions of the study area are considered to have archaeological potential and a further detailed assessment is required prior to development on any areas of archaeological potential.

The further detailed assessment should be undertaken by a licenced archaeologist and follow the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011, p. 31- p.32). Fallow fields, areas with mature trees and shrubs, and fields which are not actively being cultivated should undergo a further detailed assessment by way of test pit survey. It should include the excavation of test pits to subsoil by hand in a 5 m grid pattern throughout areas of archaeological potential, with test pits measuring 30 cm in diameter and all back-dirt to be screened through a minimum of 6 mm mesh. Actively cultivated land possessing archaeological potential should undergo further detailed assessment by pedestrian survey. The fields should be cultivated and allowed to weather before being field-walked at 5 m intervals.

This investigation has provided the basis for the following recommendations:

- 1) That a further detailed archaeological assessment be undertaken of any areas of archaeological potential that are to be affected by future development within the study area.



5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

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.

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*.

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

The *Cemeteries Act* R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.



6.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

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

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

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges the electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder's report or other work products.

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

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



7.0 BIBLIOGRAPHY AND SOURCES

Arsenault, G & B. Johnson

1970 **Land Capability for Wildlife – Waterfowl 31 G.** Environment Canada, Supply and Services Canada, Ottawa.

Belden, H.

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

Bourgie, Francine & Jean Pierre Proulx

1980 **Histoire d’Embrun.** Printed by authors.

Brassard, J.M & R. Bouchard

1971 **Land Capability for Wildlife – Ungulates 31 G.** Environment Canada, Supply and Services Canada, Ottawa.

Brault, Lucien

1965 **Histoire des Comtes unis de Prescott et de Russell.** L’Original, Conseil des Comtes unis.

Cartwright, Donald

1973 **French Canadian Colonization in Eastern Ontario: A study of progress and pattern.** Ph.D. Thesis, University of Western Ontario.

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

1973 **The Physiography of Southern Ontario. Second Edition.** University of Toronto Press, Toronto.

Daechsel, Hugh

2007 **Stage 1 Archaeological Assessment of Embrun Lagoon Expansion Lot 6, Concession 10 in the Geographic Township of Russell, Prescott & Russell County.** Consultant report prepared by Heritage Quest for the Public Utilities Department Embrun.

1981 **Sawdust Bay-2 The Identification of a Middle Woodland Site in the Ottawa Valley.** M.A. Thesis, Department of Anthropology, McMaster University.

1980 **An Archaeological Overview of the South Nation River Drainage Basin:** Background Paper No. 3. Report prepared for the South Nation River Conservation Authority.



Daechsel, Hugh & Carmen Bauer

2004 **Archaeological Resource Inventory and Assessment of Potential Russell Township, Prescott Russell County.** Consultants report prepared by Heritage Quest Inc. for Stantec Engineering.

Ellis, Chris J. and Brian D. Deller

1990 "Paleo-Indians" In **The Archaeology of Southern Ontario to A.D. 1650**, ed. By Chris Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5, pp 37-63.

Ellis, Chris J., Kenyon, Ian T. and Michael W. Spence

1990 "The Archaic" In **The Archaeology of Southern Ontario to A.D. 1650**, ed. By Chris Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5, pp 65-124.

Emard, Michel

1974 **Saint-Jacques d'Embrun, Comte de Russell, Ontario: Etude historique et statistique.** Rockland.

Golder

2012 **Stage 1 and 2 Archaeological Assessment of Bear Brook Bridge and the repaving of Highway 417 between OC Road and Boundary Road.** PIF P311-049-2011 & PIF P311-080-2011.

2009 **Stage 2 Archaeological Assessment of Embrun Lagoon Expansion Lot6, Concession 10 in the Geographic Township of Russell, Prescott & Russell County.** Consultant report prepared by Golder for the Public Utilities Department Embrun.

Gourlay, J.L.

1896 **History of the Ottawa Valley.**

Heidenreich, Conrad & J.V. Wright

1987 "Population and Subsistence." Plate 18 In **Historical Atlas of Canada, Volume 1: From the Beginning to 1800.** R. Cole Harris, editor. University of Toronto Press: Toronto.

Jamieson, James Bruce

1980 "The Archaeology of the St. Lawrence Iroquoians" In **The Archaeology of Southern Ontario to A.D. 1650**, edited by Chris J. Ellis & Neal Ferris. Occasional Publication of the London Chapter, OAS, Number 5.

1988 **An Inventory of the Prehistoric Archaeological Sites of Ottawa-Carleton.** Paper submitted to the Ontario Archaeological Society, Ottawa Chapter.



Kennett, Brenda & Jeff Earl

2003: **Stage 1 and 2 Archaeological Assessment of the Miller Brockville Quarry, Part Lots 1 & 2, Concession VI, Geographic Township of Elizabethtown, Leeds County.** Consultants report prepared by Heritage Quest Inc. for Cornwall Gravel.

Pendergast, James F.

1988 **The Maynard-McKeown Site, BeFu-1: A 16th Century St. Lawrence Iroquoian Village site in Grenville County Preliminary Report.**

Ramsden, Peter G.

1990 "The Hurons: Archaeology and Culture History" In **The Archaeology of Southern Ontario to A.D. 1650**, ed. By Chris Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5, pp 361-384.

Rowe, J.S.

1977 **Forest Regions of Canada.** Department of Fisheries and the Environment Canadian forestry Service, Ottawa.

Spence, Michael W.; Phil Robert H. and Carl R. Murphy

1990 "Cultural Complexes of the Early and Middle Woodland Periods" In **The Archaeology of Southern Ontario to A.D. 1650**, ed. By Chris Ellis and Neal Ferris, Occasional Publication of the London Chapter, OAS Number 5, pp 125-169.

Stanely, Wendell

1988 **From Swamp to Shanty: The History of Russell Village and the Western part of Russell Township 1827-1987.** Runge Press, Ottawa.

Van Courtland Edward

1853 "Notice of an Indian Burying Ground" **Canadian Journal** , 1 160-161.

Walling, H.F.

1862 **Maps of the Counties of Stormont, Dundas, Glengarry, Prescott & Russell, Canada West.** National Archives of Canada, Ottawa.

Watson, Gordon D.

1982 "Prehistoric peoples of the Rideau Waterway" In. **Archaeological Historical Symposium, Rideau Ferry, Ontario**, F.C.I. Wyght, Lombardy, Ontario pp. 24-55.



Wicklund, R.E. & N.R. Richards

1962 **Soil Survey of Russell and Prescott Counties.** Research Branch, Canada Department of Agriculture and the Ontario Agricultural College

Wright, James V.

1972 **Ontario Prehistory, an Eleven-Thousand-Year Archaeological Outline.** National Museums of Canada, Ottawa

Census Returns from the National Archives of Canada

C-10012 1871 census returns Russell Township

C-13229 1881 census returns Russell Township

T-6367 1891 census returns Russell Township

Aerial Photographs from the National Air Photo Library

1945 A9557 – 128,130

1985 A31402-05