

the surrounding forest and socialize. The proliferation of sites suggests an increase in the population of 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 BP. 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 located on a property near the Village of Cumberland to the east of the study area (Adams, 2009:8). A significant Woodland occupation has also been identified at the Leamy Lake site (Pilon 1999: 76-80). Finally, an ossuary burial was 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 in 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 Matouweskariini along the Madawaska River to the west, the Onontcharonon 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.

8.9.2 Regional Post-Euro-Canadian Contact History

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 Aboriginal sites throughout the Ottawa River drainage basin has provided evidence of the extent of contact between Aboriginals 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 Aboriginal 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 Aboriginal 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.

8.9.3 Township of Cumberland, County of Russell

The subject Site is located very close to the tri-township border of the former Cumberland, Gloucester and Osgoode Townships. A brief overview of the general historical background of Cumberland Township and the Site is provided below. More information on Gloucester and Osgoode Townships is provided in TSD #7.

The Ottawa River was an important transportation route. Fur trading posts were erected along the Ottawa River where the Algonquin traded with the Europeans. A French trading post was situated across the river from Cumberland in modern-day Buckingham in 1761. This area was controlled by France until 1763 when the British gained control of the region following the completion of the Seven Years' War.

The first official survey of the former Township of Cumberland was conducted in 1791 (CTHS, N.D.) in order to divide the land into individual lots for settlement. Although many of the lots were granted to United Empire Loyalists, very few were settled. Many of the Loyalists had already settled on properties along the St. Lawrence River and remained absentee landowners of their Cumberland lots. Another hindrance to early settlement of the former Township of Cumberland was the lack of roads to the interior. The first major road, Montreal Road (originally called L'Original-Bytown Road), was not built until 1850; this road ran directly through Concession 1 along the Ottawa River (CTHS, N.D.; McGilvray, 2005).

The first settlers of the former Township of Cumberland were Abijah Dunning and Amable Faubert (also written Foubert), both arriving in 1801. Abijah Dunning originally obtained 800 acres of land in the former Township of Cumberland from the Crown and continued to acquire land, eventually coming to own 3,000 acres throughout the former Cumberland, Buckingham and Onslow Townships. Amable Faubert opened up a trading post along the river in 1807 and traded mostly fur, potash and lumber throughout the nineteenth century. The Foubert and Dunning families continued to have a large presence throughout the nineteenth century.

By 1858, the Village of Cumberland had a population of over 1,000 with an additional 2,000 residents in the rural parts of the former Township. Cumberland became a major seasonal forwarding centre along the Ottawa River in the 1870s, where two wharves were built and several forwarding companies were established, including one owned by the Faubert brothers. This helped facilitate a small ship building industry during the mid-nineteenth century (CTHS, N.D.).

In 1882, the Grand Trunk Railway was built through the community of Vars, which provided the first rail transportation route through the Township. Another railway, the Canadian National Railway (CNR), was built through the former Township of Cumberland in 1899 and was extended in 1907 to run through Concession I along the river (CTHS, N.D.). The CNR was closed during the Great Depression and the old rail line was replaced by the construction of Highway 417 in the 1960s and 1970s.

8.9.4 Property History

According to land registry documents, Lots 22-24 in Concession 11 were granted by Crown Patent to Andrew F. Gault in 1865, with all Lots subsequently bought by James Boyd in 1872. The block transfer of large amounts of land is usually indicative of speculative holding rather than settlement. All Lots were sold concurrently between O.N. Schnei, N. Smith, J. Bond, R. Scott and E. Keays during the period between 1875 and 1885 before returning to the possession of A. Gault. The Lots continued to be frequently traded well into the 1890s and early 1900s. It is highly unlikely that the Lots were settled prior to 1872, with the land registry suggesting that the area was settled possibly after 1880.

Lot 25, Concession 11 was granted by Crown Patent to William, F. Powell in 1874 and subsequently sold to John Nicholas in 1880. Ownership appears to have reverted to the Crown later in 1880. A series of entries involving the Ontario Bank occur, the net result of which is that the Lot was obtained from the Chancery by Martin O'Gara in 1885. The Lot was sold immediately by O'Gara and bought and sold with frequency over the next 10 years. The Lot appears to be split in the late 1890's. It is unlikely that the Lot was settled prior to 1880, possibly even the 1890s.

8.9.5 Potential Cultural Heritage Resources

The objective of the cultural heritage evaluation was to determine if any of the properties within the study area had cultural heritage value or interest (in accordance with *Ontario Heritage Act Regulation 9/06* (MTCS, 2006)). This assessment was also necessary to determine what (if any) properties require a heritage impact assessment (or Cultural Heritage Impact Statement). The evaluation consisted of background historical research and site visits.

There are no properties within the study area identified as demonstrating cultural heritage value or interest by the City of Ottawa, the Ontario Heritage Trust, the Historic Sites and Monuments Board of Canada, the Federal Heritage Buildings Review Office, or the NCC.

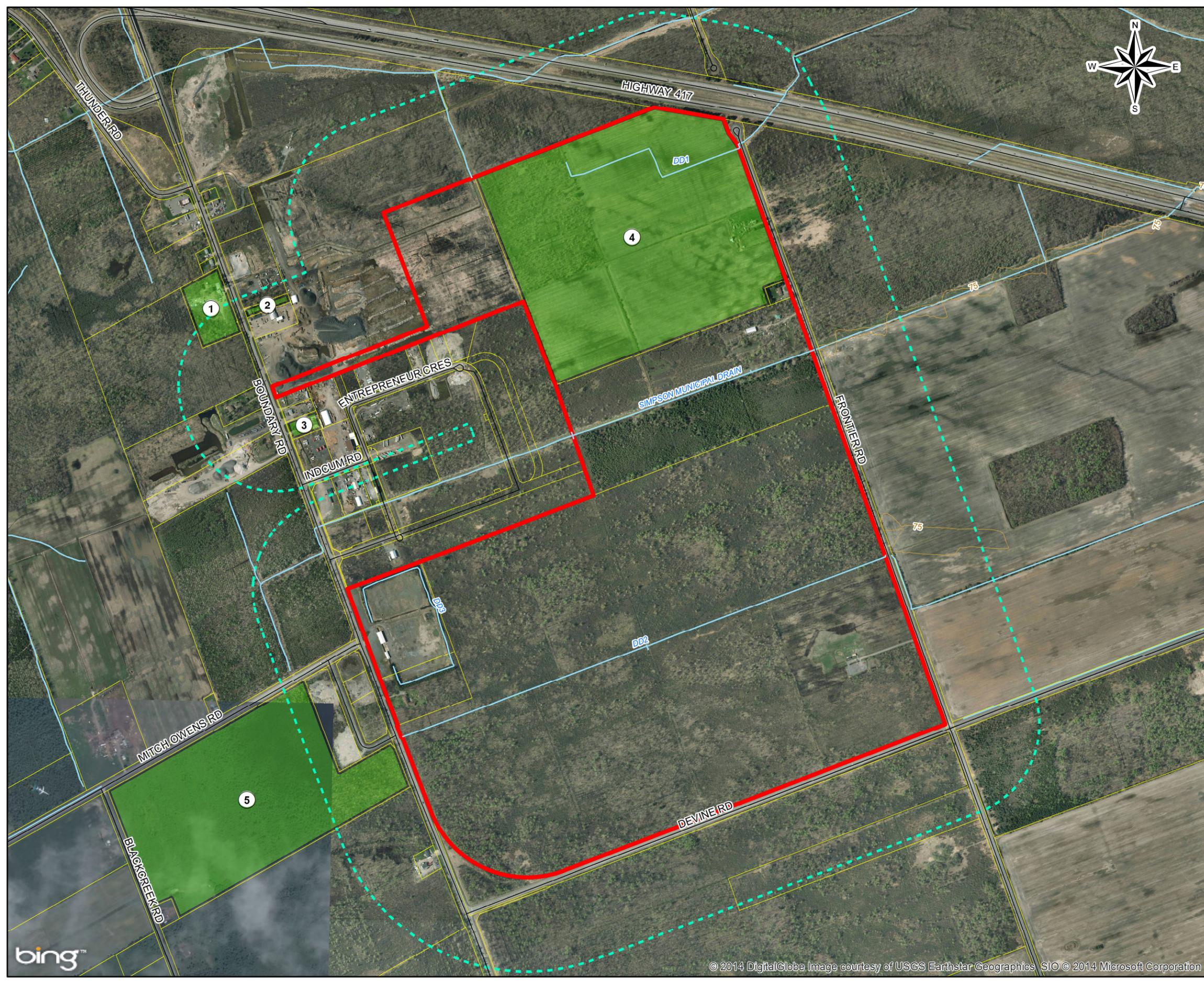
Within the study area for this component (i.e., within a 250-metre buffer of the Site), five properties were identified as having potential cultural heritage resources. Both the MTO in its Environmental Guide for Built Heritage and Cultural Heritage Landscapes (MTO, 2007) and the MTCS, in its Screening for Impact to Built Heritage and Cultural Heritage Landscapes (MTCS, 2010) checklist, employ a rolling 40-year rule to identify properties of potential cultural heritage resources as part of the environment assessment process. The intent of the 40-year rule is to allow a resource to age sufficiently so that it can be better contextualized and a wider perspective applied to it.

The five properties included three former farm complexes (1129 Blackcreek Road, 5507 Boundary Road and 5508 Frontier Road). The two other properties were constructed as part of Post-War development in the rural areas surrounding Ottawa (5384 Boundary Road and 5409 Boundary Road). The property locations are shown on Figure 8.9.5-1.

The field work for the cultural heritage evaluation was carried out on January 22 and September 3, 2013. Each of the five properties was evaluated against *Ontario Heritage Act Regulation 9/06* (MTCS, 2006), “Criteria for Determining Cultural Heritage Value or Interest,” using the City of Ottawa’s Heritage Survey and Evaluation Form.

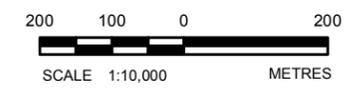
Each of the five properties was evaluated for cultural heritage value or interest. It was found that none of the five potential cultural heritage resources demonstrate cultural heritage value or interest and are therefore not eligible for designation under the *Ontario Heritage Act*.

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- LEGEND**
- ROAD
 - SURFACE WATER FEATURE
 - CITY OF OTTAWA PROPERTY PARCELS
 - 250 m BUFFER AROUND PROPERTY BOUNDARY
 - PROPERTY BOUNDARY
 - PRE-1973 POTENTIAL CULTURAL HERITAGE RESOURCE

- ① 5384 BOUNDARY ROAD
- ② 5409 BOUNDARY ROAD
- ③ 5507 BOUNDARY ROAD
- ④ 5508 BOUNDARY ROAD
- ⑤ 1129 BLACKCREEK ROAD



NOTE
THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING REPORT

REFERENCE
AIR PHOTOS PROVIDED BY CITY OF OTTAWA, FEBRUARY, 2012.
BING MAPS AERIAL, SEPT. 2010, PROVIDED BY ARCGIS ONLINE, ESRI, 2012.
SOURCE: (C) 2010 MICROSOFT CORPORATION AND ITS DATA SUPPLIERS.
LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2012.
PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83 COORDINATE SYSTEM: UTM ZONE 18

PROJECT			
ENVIRONMENTAL ASSESSMENT OF THE CAPITAL REGION RESOURCE RECOVERY CENTRE			
TITLE			
PRE-1973 POTENTIAL CULTURAL HERITAGE RESOURCES			
PROJECT No. 12-1125-0045		SCALE AS SHOWN	REV. 0
DESIGN	ML	DEC. 2013	 FIGURE 8.9.5-1
GIS	BR	DEC. 2013	
CHECK	PLE	AUG. 2014	
REVIEW	PAS	AUG. 2014	



8.9.6 Archaeological Potential

An archaeological assessment was completed to identify known archaeological resources on and in the vicinity of the study area as well as assess the archaeological potential of the Site. The evaluation consisted of background historical research and site visits. Property inspections were conducted on November 22, 2012 and June 18, 2013.

There are no registered archaeological sites within a significant proximity to the study area.

There are a number of criteria employed in the assessment of archaeological site potential. For aboriginal 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 MTCS's set guidelines for archaeological resource potential mapping (MTCS, 2011).

The assessment of archaeological potential was also 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. 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 aboriginal 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 aboriginal site potential. In the case of drumlins and eskers, the entire feature has aboriginal 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.

8.9.6.1 *Aboriginal Archaeological Potential*

Aboriginal potential for the study area is low. The Site has very limited potential for aboriginal resources as it is poorly drained, low lying and a significant distance from any permanent or ancient source of water. In addition, there are no raised glacial or geological features that might be considered areas of aboriginal focus. As such, there is no direct evidence that would suggest that the study area would have been an area of focus or habitation for aboriginal populations in the Ottawa Valley.

8.9.6.2 *Historic Archaeological Potential*

The available historic information (historic maps, land records) indicate that this area of Cumberland Township was settled relatively late compared to other areas of the Township. The roads that border the study area have not been considered significant historic corridors as they do not appear on any maps until 1923. In addition, there is no evidence of historic structures present in the study area in any of the historic maps. The potential for historic archaeological resources within the study area is therefore very low.

8.9.6.3 Archaeological Master Plan

The Archaeological Master Plan does not indicate any archaeological potential within the study area.

In summary, no registered archaeological sites and no areas of archaeological potential were identified by the Archaeological Assessment.

8.10 Agriculture

This section describes the existing agricultural conditions within the Site and Site-vicinity. The information presented in this section has been compiled from more detailed information contained in TSD #8.

The assessment method was based on a compilation and review of agricultural information relevant to the Site, including available published information, visits to the Site and the Site-vicinity, and meetings with farmers and municipal officials. An Agricultural Land Evaluation was completed, including a detailed agricultural capability assessment and a review of compatibility of the Site development with adjacent livestock facilities using Minimum Distance Separation (MDS) Formula (OMAFRA, 2006) calculations.

8.10.1 Site Conditions

The majority of the Site was previously cleared for agricultural purposes. A substantial portion of the Site has been allowed to re-vegetate, indicating marginal success of the attempt to use the Site for agriculture. The predominant form of vegetation is willow and poplar with some pine. There are several ditches crossing the Site in a west-east orientation.

A description of the soils within the Site is provided on Figure 8.10.1-1. The soils in this area have been developed on water deposited parent material consisting of fine sands and clay. This natural limitation combined with the level nature of the Site and the lack of sufficient outlets to provide under-drainage results in the entire Site being constrained by poor drainage. The Simpson Drain that crosses the property in a west-east orientation has a limited distance of influence in the fine sand soils.

Even those areas that have been cleared showed evidence of surface wetness and extended wetness during spring and fall. The wetness constraint for agricultural capability causes several issues that are evident on this Site. Wetness, particularly if it is a major constraint, serves to shorten the growing season, limit growth and restrict the use of planting and harvesting equipment.

The Site visits conducted during this assessment confirmed that the drainage channels crossing the property were full of water with little freeboard. With the exception of the major drainage channels, the inverts of all road culverts were very shallow and would not allow drainage depth sufficient to allow root depth development and infiltration of surface water. The treed areas showed signs of on-going wetness by type of vegetation. A limited soil sample survey confirmed the fine sand and clay soils as depicted on the soils map.

The period in which the soil is dry is less than 90 days in most years with soil deficits ranging from 2.5 to 6.4 centimetres. This restricts some frost sensitive crops but would allow a range of normal farm crops (OMAFRA, 1987).



Source: Excerpt from Map 1, The Soils of the Regional Municipality of Ottawa-Carleton

Legend



Property Boundary

ST6
1

St. Thomas sandy loam, slope class 1 - 0.0-0.5%, poor drainage

M6
2*

Manotick fine sand, slope class 2, nearly level - 0.5-2%, irregular slopes, poor drainage

M6
1

Manotick fine sand, slope class 1 - 0.0-0.5%, poor drainage

B2
1

Bearbrook heavy clay, level, poor drainage



NOTE

THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING REPORT

REFERENCE

FIGURE PROVIDED BY CLARK CONSULTING SERVICES

PROJECT		ENVIRONMENTAL ASSESSMENT OF THE CAPITAL REGION RESOURCE RECOVERY CENTRE			
TITLE		SOILS MAP			
PROJECT No.	12-1125-0045	PHASE No.	4500		
DESIGN	LB	NOV. 2013	NOT TO SCALE	REV.0	
GIS	--	--			
CHECK	PLE	AUG 2014	FIGURE 8.10.1-1		
REVIEW	PAS	AUG 2014			



8.10.2 Land Uses on and Adjacent to the Site

The land uses to the south and east are agricultural. An agricultural land use survey of the Site and the Site-vicinity was conducted. There are no active livestock facilities on lands immediately adjacent to the Site. The closest barn is about 900 metres from the Site. There is a barn to the south at 6086 Frontier Road that is currently occupied by Mann Paving for storage of materials and equipment related to their business. Further south there is a large livestock facility.

The Site has a limited amount of active agricultural use. Cropland occupies approximately 16.3% of the Site. As noted above, this cropland has significant limitations from an agricultural perspective. The bulk of the Site is vacant and has been in non-agricultural production for many years. Within 1,000 metres of the Site, approximately 23% of the land area is devoted to active agricultural production.

8.10.3 Review of Planning Documents

The Site is not designated as an Agricultural Resource Area in the current Official Plan of the City of Ottawa (City of Ottawa, 2013g). Furthermore it is not proposed to change the current designation as part of the Land Evaluation and Area Review for Agriculture (LEAR) Study (LEAR, 2013) being conducted by the City in consultation with the Province. Therefore it is concluded that the Site is not part of a Prime Agricultural Area as defined by the PPS (MMAH, 2014).

8.11 Traffic

This section presents the existing traffic conditions on the roadways and intersections in the area of the Site. The information presented in this section has been compiled from more detailed information contained in TSD #9.

The CRRRC will have an access directly onto Boundary Road (refer to Figure 8.11-1), which would be used mainly by trucks entering and exiting the Site. The proposed access location is approximately 850 metres south of the eastbound Highway on/off ramp and 700 metres north of Mitch Owens Road. Boundary Road is a north-south two lane arterial road under the jurisdiction of the City of Ottawa (Ottawa Road 41). The road has an asphalt surface with a width of approximately 7.5 metres plus gravel shoulders. The posted speed limit along the road in the vicinity of the Site is 80 kilometres per hour (km/h).

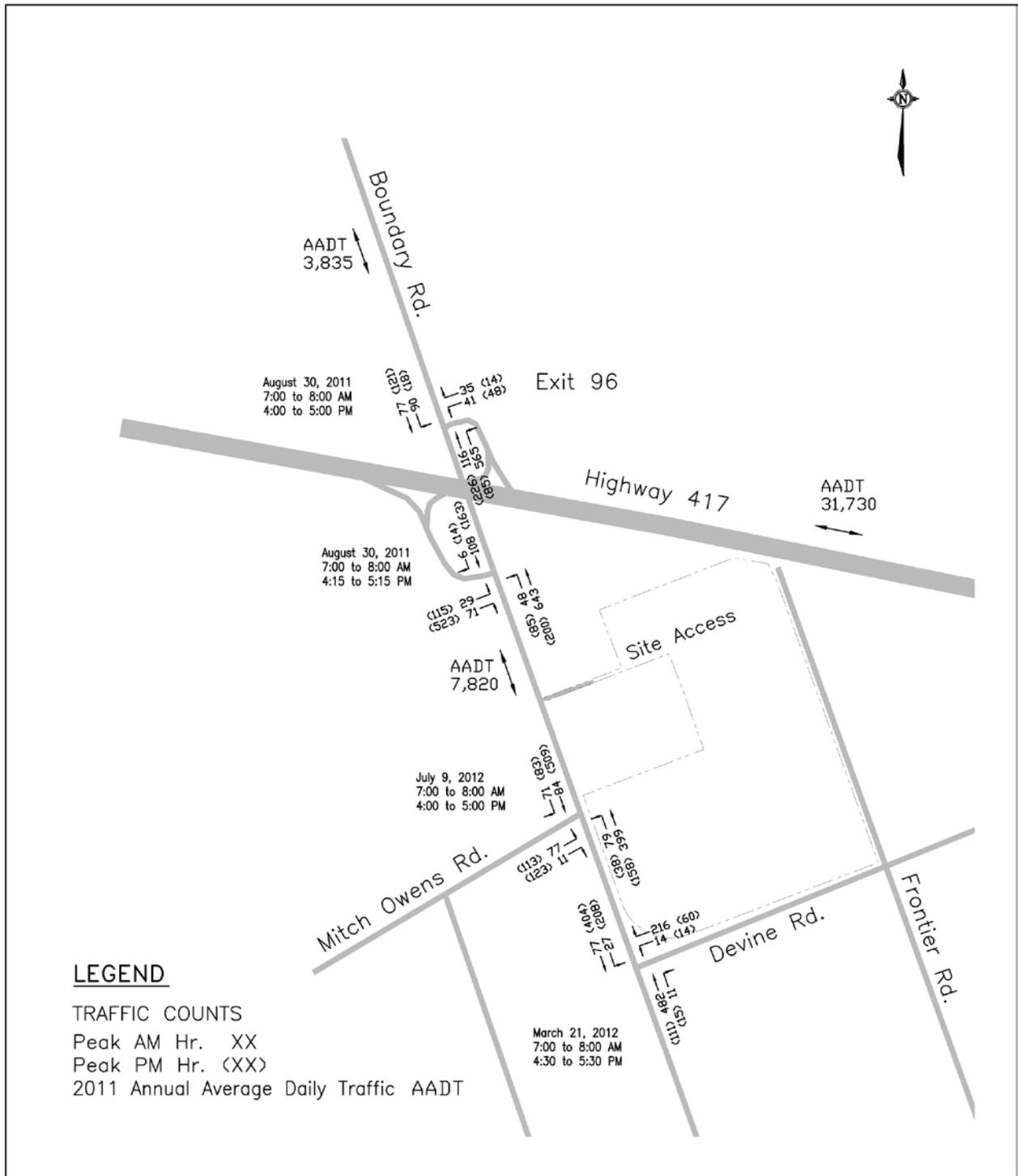
The Site will have a secondary access from Frontier Road, which borders the east limit of the Site. North of Devine Road, Frontier Road is a two lane local road with a gravel surface and “No Exit” signs posted (terminates at Highway 417). South of Devine Road, Frontier Road is a two lane rural collector road under the jurisdiction of the City of Ottawa with a posted speed limit of 80 km/h.

The south property limit of the facility borders onto Devine Road. Devine Road (Ottawa Road 8) is a City of Ottawa two lane rural arterial road with the west limit connecting to Boundary Road (Ottawa Road 41) and the east limit terminating at the east side of Vars. The road has an asphalt surface with gravel shoulders. Devine Road has an unposted speed limit of 80 km/h.

Mitch Owens Road (Ottawa Road 8) is an east-west two lane arterial road located approximately 770 metres north of Devine Road. Mitch Owens Road (Ottawa Road 8) has an asphalt surface and gravel shoulders, with a posted speed limit of 80 km/h. Mitch Owens Road meets Boundary Road at a “T” intersection.

Bordering a portion of the north limit of the Site is Highway 417. Highway 417 is a four lane divided highway under the jurisdiction of the MTO. The highway has two interchanges with Boundary Road (Exit 96) for the both the eastbound and westbound on/off ramps.

Figure 8.11-1 shows the road pattern and the weekday peak AM and PM hour traffic counts taken at the intersections that were examined in the traffic study. The Annual Average Daily Traffic (AADT) is shown along Boundary Road both north and south of Highway 417. The AADT is the total annual traffic volumes divided by the number of days in the year. The figure also shows the date the counts were taken and the peak hour of the counts. The intersection counts at Boundary Road/Mitch Owens Road were obtained from the City of Ottawa, the Highway 417 on/off ramps from the MTO and the Boundary Road/Devine Road counts were taken for this study. The traffic counts determined that over an eight hour period, trucks represent approximately 9.5% of the traffic along Boundary Road between Mitch Owens Road and the eastbound Highway 417 on/off ramps.



NOTE

THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING REPORT

REFERENCE

FIGURE PROVIDED BY D.J. HALPENNY & ASSOCIATES LTD.

PROJECT ENVIRONMENTAL ASSESSMENT OF THE CAPITAL REGION RESOURCE RECOVERY CENTRE

TITLE WEEKDAY PEAK AM AND PM HOUR TRAFFIC COUNTS

PROJECT No. 12-1125-0045		PHASE No. 4500	
DESIGN	DJH	JUNE 2014	NOT TO SCALE
GIS	---	---	REV.0
CHECK	PLE	AUG 2014	FIGURE 8.11-1
REVIEW	PAS	AUG 2014	

