



Waste Management of Canada Corporation

Environmental Assessment for a New Landfill Footprint at the West Carleton Environmental Centre

ARCHAEOLOGY EXISTING CONDITIONS REPORT

Prepared by:

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Project Number:

60191228

Date:

October, 2006



Executive Summary

The following Stage 1 Archaeological Assessment outlines the existing archaeological conditions within the West Carleton Environmental Centre (WCEC) Study Area and surrounds. The existing archaeological conditions data presented here were collected through secondary desktop studies, as well as a field review.

The Stage 1 Archaeological Assessment identified the presence of nine registered archaeological sites and determined that the Study Area exhibits archaeological site potential. As such, it is recommended that a Stage 2 archaeological assessment be conducted within all undeveloped lands within the area bounded by Highway 417, Richardson Side Road, and Carp Road.

Future work will be completed in accordance with the Ministry of Culture's Stage 1-3 Archaeological Assessment Technical Guidelines (2006) in order to identify any archaeological remains that may be present in advance of any construction. This study is considered to be a thorough preliminary archaeological inventory of the Study Area. A more exhaustive exploration will take place as part of the Stage 2 archaeological assessment, to be carried out during the detailed impact assessment.



06EA-025

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June 19, 2008

Mr. Robert Pihl
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RE: Concurrence with Report Entitled "Stage 1 Archaeological Assessment Ottawa Waste Management Facility Environmental Assessment, City of Ottawa, Ontario," PIF/Licence No. P057-274-2006, MCL File 06WS013.

Dear Mr. Pihl:

This office has had the opportunity to review the above noted report. The Stage 1 report is dated October 2007 and was received by this office October 4, 2007. The report documents the Stage 1 archaeological background research conducted for two alternatives for the proposed Ottawa Waste Management Facility.

The background research determined that a large portion of the two alternatives have previously been disturbed by the existing facility. However, areas of archaeological potential were identified within both the west and north alternative. In consequence, the report recommends that a "Stage 2 archaeological assessment should be conducted within all undeveloped lands in the selected area of construction impact" (page 10). This Ministry concurs with this recommendation.

Consequently, a Stage 2 archaeological assessment must be conducted in areas that are proposed to be impacted by this project. If any significant archaeological remains are identified, then any negative impacts will have to be mitigated by either avoidance or excavation.

If you have any questions concerning the above, please do not hesitate to contact us.

Sincerely,

Jim Sherratt
Archaeology Review Officer
Eastern Regioncc. MCL Archaeology Licence Administrator
Gartner Lcc Limited

**Stage 1 Archaeological Assessment
Ottawa Waste Management Facility
Environmental Assessment,
City of Ottawa, Ontario**

Submitted to

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ASI File 06EA-025
Archaeological License P057
MCL PIF P057-274 -2006

October 2006

**ARCHAEOLOGICAL SERVICES INC.
ENVIRONMENTAL ASSESSMENTS**

PROJECT PERSONNEL

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Stage 1 Archaeological Assessment

Ottawa Waste Management Facility Environmental Assessment City of Ottawa, Ontario

1.0 INTRODUCTION

Archaeological Services Inc. (ASI) was contracted by Gartner Lee Limited, Markham, Ontario, on behalf of the Waste management of Canada Corporation (WM) to conduct a Stage 1 archaeological assessment for the Ottawa Waste Management (WM) Facility Environmental Assessment, City of Ottawa, Ontario (Figure 1). The current landfill is located on Lots 3 and 4, Concession 3, City of Ottawa (former Township of Huntley and former County of Carleton) near the intersection of Carp Road and Highway 417. Proposed expansion alternatives would provide additional capacity for the landfill. The West Alternative includes portions of Lots 4 and 5 in Concession 4, the North Alternative includes portions of Lots 4 and 5 in Concession 3, and the Build Over Alternative includes portions of Lots 3 and 4 in Concession 3. The study area includes lands within 4km of the existing facility.

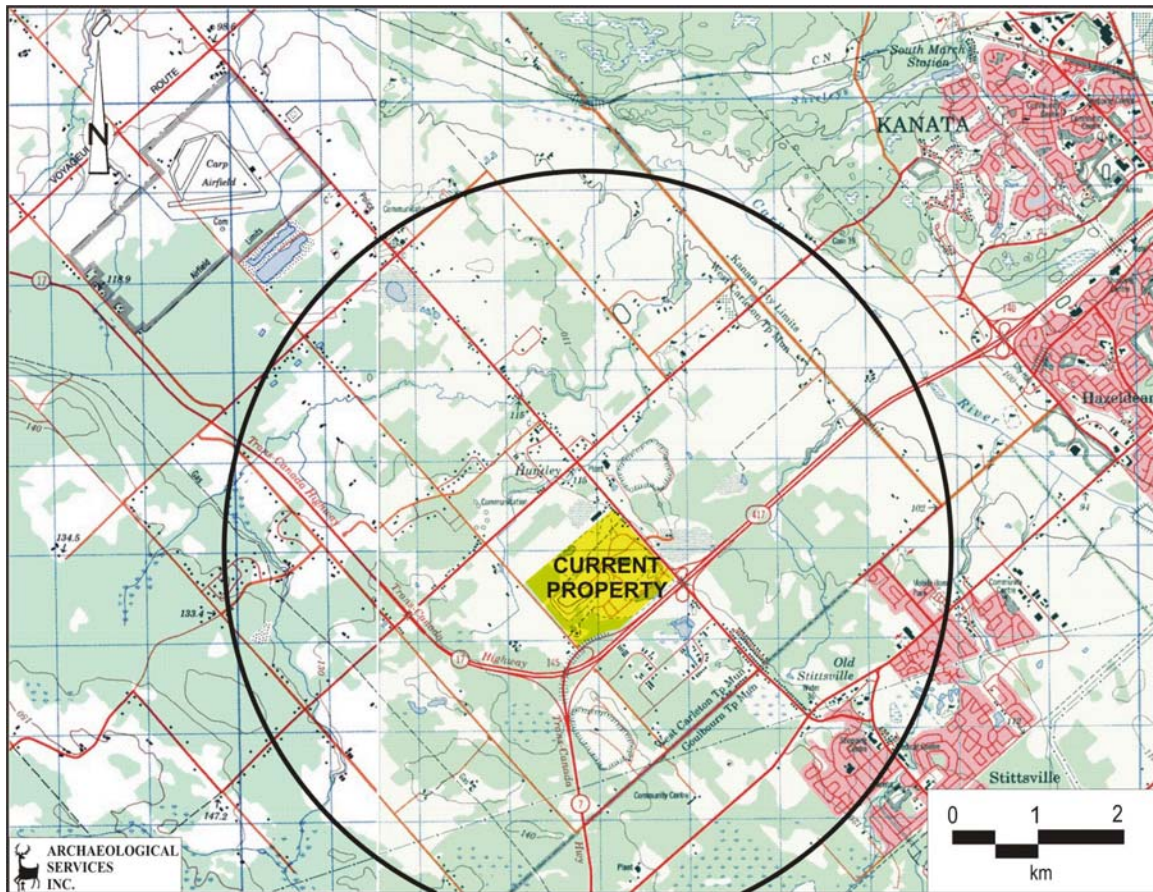


Figure 1: Study area including area within 4 km of the existing property (NTS 31G5 Ottawa 1998) and 31F8 Arnprior 1994)

The assessment was conducted under the project direction of Mr. Robert Pihl, ASI, under an archaeological license (P057) issued to Mr. Pihl. The field review was conducted by Mr. Peter Carruthers (P163) in accordance with the Ontario Heritage Act (2005).

Permission to access the study area and to carry out the activities necessary for the completion of the Stage 1 assessment was granted to ASI by Gartner Lee Limited on January 12, 2006.

This report presents the results of the Stage 1 background research and field review and makes several recommendations.

2.0 BACKGROUND RESEARCH

2.1 Previous archaeological research

In order that an inventory of archaeological resources could be compiled for the study area, three sources of information were consulted: the site record forms for registered sites housed at the Ontario Ministry of Culture; published and unpublished documentary sources; and the files of Archaeological Services Inc.

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the Ontario Ministry of Culture. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden Block is approximately 13 kilometres east to west, and approximately 18.5 kilometres north to south. Each Borden Block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The study area under review is located in the Borden Block *BhFx* and *BhGa*.

According to the OASD there are nine registered sites within four kilometers of the existing property (Table 1). One of these sites is within two kilometers, but none are within the existing or any of the proposed expansion alternatives. Most of the sites are historic homesteads and farmsteads. One historic site is a feldspar mine, consisting of an open trench and shallow shaft that was worked in the first quarter of the twentieth century. Several small pre-contact lithic scatters have also been identified, one of which dates to the Middle or Late Archaic Period.

**Table 1
REGISTERED ARCHAEOLOGICAL SITES WITHIN 4-KM OF PROPERTY**

Borden #	Name	Cultural Affiliation	Site Type	Researcher
BhFx-21	Feldspar Mines	Euro-Canadian	Mine	Swayze 2001
BhFx-22	--	Pre-contact	Lithic scatter	Swayze 2001
BhFx-23	Rockerries Tip	Euro-Canadian	Midden	Swayze 2001
BhFx-24	Huston Homestead	Euro-Canadian	Farmstead	Swayze 2000
BhFx-25	Stewart/Moore Homestead	Euro-Canadian	Farmstead	Swayze 2000
BhFx-26	Allen	Euro-Canadian	Undetermined	Adams HCI 2004
BhFx-27	Corelview	Archaic, Middle to Late	Lithic scatter	Adams HCI 2004
BhGa-6	Cavanagh	Euro-Canadian Pre-contact	Homestead	Swayze 2000
BhGa-7	Fall's Hay Barn	Euro-Canadian	Barn	Swayze 2004

2.2 Physiography and Assessment of Pre-contact Archaeological Potential

The study area is located within the Ottawa Valley Clay Plains physiographic region (Chapman and Putnam, 1984: 205-208). This region is characterized by clay plains interrupted by ridges of rock or sand. The sediments are deep silty clays. The Ottawa Waste Management facility study area falls within the northern portion of the region, a broad valley with the rocky Laurentian uplands rising on either side.

Potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in eastern Ontario after the Pleistocene era, proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variits tributaries would have been important foci for prehistoric activity as aboriginal peoples would have been attracted to the rivers and creeks, especially during the spring, by the abundance of fish, as well as by other important aquatic resources. Adjacent lands with better drainage would have been suitable for habitation

The Ontario Ministry of Culture Primer on Archaeology, Land Use Planning and Development in Ontario (1997: 12-13) stipulates that undisturbed lands within 300 metres of a primary water source, and undisturbed lands within 200 metres of a secondary water source, are considered to exhibit archaeological site potential.

Therefore, depending on the degree of previous land disturbance, it may be concluded that there is potential for the recovery of pre-contact archaeological remains within the study area.

2.3 Assessment of Historic Archaeological Potential: Historical Map Review

The 1879 *Illustrated Historical Atlas of the County of Carleton (including City of Ottawa), Ontario* was reviewed to determine the potential for the presence of historical archaeological remains within the study area (Figure 2). The existing property is comprised of portions of Lots 3 & 4, Concession 3 in the former Township of Huntley. Most of the historic features illustrated on nearly every lot within the study area are residences associated with farmsteads. There are few villages in the vicinity. A few scattered churches, schoolhouses and mills are illustrated, and all are north of Richardson Sideroad. To the north along Carp Road, there is a school house at the Richardson Sideroad intersection (present village of Huntley), a church at the junction with Cavanmore Road, and the post office hamlet of Huntley is near the north limit of the study area. A blacksmith shop is indicated on the southeast corner of Lot 5 Concession 2, adjacent to the existing WM property and within the area of the North Alternative.

farmsteads (i.e., those which are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be captured by the basic proximity to water model outlined above, since these occupations were subject to similar environmental constraints. An added factor is the development of the network of concession roads through the course of the nineteenth century. These transportation routes frequently influenced the siting of farmsteads. Accordingly, undisturbed lands within 100 metres of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites. Many of the historic roads in the study area were discontinuous, interrupted by wetlands. The major historic routes in the vicinity of the proposed WM alternatives coincide with Richardson Sideroad (east of David Manchester Road), Cavanmore Road, Carp Road, William Mooney Road (from Richardson Sideroad nearly to the southwest corner of the existing WM property), and David Manchester Road (from Cavanmore Road to west of the southwest property corner).

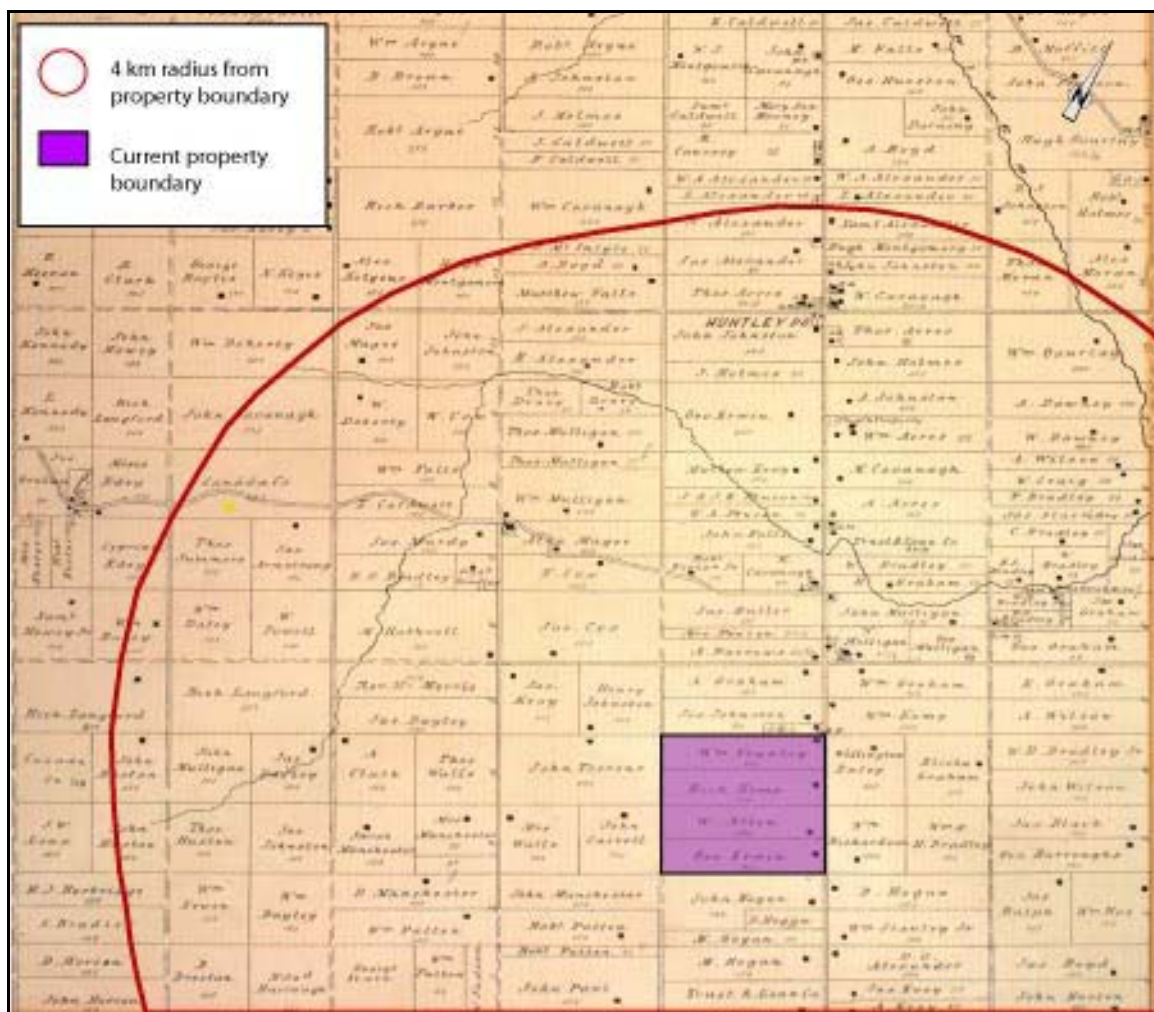


Figure 2: Study area overlaid on a portion of 1879 *Illustrated Historical Atlas of Carlton County, Ontario*

Therefore, depending on the degree of previous land disturbance, it may be concluded that there is potential for the recovery of historic cultural material within the study area. Furthermore, it should be noted that not every feature of potential interest today would have been illustrated on the nineteenth century mapping.

2.4 Assessment of Potential: Summary Based on Region Site Potential Model

In *The Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carlton* (ASI and Geomatics 1999), various criteria, including the presence of a suitable water source and suitable soils, were utilized to generate a model of archeological site potential within the Region. Based on that model and the generated mapping, there is potential for archaeological sites in the southwest quarter of Lot 3 (vicinity of existing property and Build Over Alternative), the northeast corner of Lot 5

(vicinity of North Alternative), in the west and south portions of the West Alternative, and within 100 metres of Carp Road and Richardson Sideroad.

3.0 FIELD REVIEW

A field review was conducted on June 30, 2006, by Mr. Peter Carruthers (P163), ASI. The weather at the time was warm and overcast, with a light falling rain.

3.1 West Expansion Alternative (Figure 3-1)

The area of the West Alternative comprises portions of Lots 4 and 5, Concession 4, former Township of Huntley. Although some more recent structures have been added (Plate 1), these lands are characterized by historic log buildings and field layouts that still reflect the landscape depicted in the historic atlas of 1879. The land tends to be flat and poorly drained, but in places there are knolls or slightly higher ground (Plate 2), often associated with old farmsteads. There is potential for pre-contact and historic sites on the locales of higher ground, particularly along the treed western margin of the area (see ASI and GII 1999). There is also the potential for historic sites within 100 metres of Richardson Sideroad and William Mooney Road.

3.2 North Expansion Alternative (Figure 3-2)

The North Alternative includes the north half of Lot 4 (already part of the current property) and the south half of Lot 5 of Concession 3, former Township of Huntley. The land is flat and poorly drained, with drainage ditches and ponds dug to facilitate drainage (Plate 2). The west half of the proposed expansion area is agricultural fields (Plate 3), and the eastern half has been disturbed by aggregate extraction and grading associated with a kitchen factory (Plate 4). The adjacent lands along Carp Road have been disturbed, for the most part, by residential development (Plate 5).

There is potential for archaeological sites in three locales. One is at the east (southeast) corner of the expansion area where a small remnant of the historical agricultural landscape survives between residential properties and the existing WM facility entrance (Plates 7 and 8). The second is in the west corner of the area where there is a low knoll beyond the low area near the road (Plate 2). The third is the woodlot in the south corner of the expansion area (west corner of the existing property).

3.3 Build Over Alternative (Figure 3-1)

The Build Over Alternative includes the area of the existing facility in Lots 3 and the south half of Lot 4 as well the north half of Lot 4 (part of the current property). The area

has been almost entirely disturbed by the existing facility (Plates 9, 13 and 14), by grading and aggregate extraction (Plate 5), and by construction of stormwater ponds along the southeast margin (Plate 11). The south and west margins are low and wet.

There is potential for archaeological sites in two locales. One, along Carp Road just north of the main entrance to WM's facility, includes a remnant of the historical landscape (Plates 7 and 8). The other is the woodlot in the west corner of the existing property.

4.0 CONCLUSIONS AND RECOMMENDATIONS

The Stage 1 archaeological resource assessment for the Ottawa Waste Management Facility Environmental Assessment, City of Ottawa, Ontario, has determined that nine archaeological sites have been registered within four kilometres of the study area. Additionally, a review of the general physiography and local nineteenth century land use within the study area suggested that it exhibits archaeological site potential.

In light of these results, the following recommendations are made:

1. A Stage 2 archaeological assessment should be conducted within all undeveloped lands in the selected area of construction impact: West Expansion Alternative (Figure 3-1); North Expansion Alternative (Figure 3-2); and Build Over Alternative (Figure 3-1). This work will be done in accordance with the Ministry of Culture's Stage 1-3 Archaeological Assessment Technical Guidelines (2006) in order to identify any archaeological remains that may be present in advance of any construction.

The above recommendation is subject to Ministry of Culture approval, and it is an offence to alter any archaeological site without Ministry of Culture concurrence. No grading or other activities that may result in the destruction or disturbance of an archaeological site are permitted until notice of Ministry of Culture approval has been received.

2. Should deeply buried archaeological remains be found during construction activities, the Heritage Operations Unit of the Ministry of Culture should be immediately notified.
3. In the event that human remains are encountered during construction, the proponent should immediately contact both the Ministry of Culture, and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Business Services.

The documentation related to the archaeological assessment of this project will be curated by Archaeological Services Inc. until such a time that arrangements for their ultimate

transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of Waste Management, the Ontario Ministry of Culture, and any other legitimate interest groups.

5.0 REFERENCES CITED

Archaeological Services Inc. and Geomatics International Inc. *The Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carleton. Planning Report.* Report on file at the Ministry of Culture, Toronto. April 1999.

Chapman, L.J. and F. Putnam. *The Physiography of Southern Ontario.* Ontario Geological Survey, Special Volume 2. Ontario Ministry of Natural Resources, Toronto. 1984.

H. Belden & Co. *Illustrated Historical Atlas of the County of Carleton (including City of Ottawa), Ontario.* 1879.

Ministry of Culture. *Archaeological Assessment Technical Guidelines (Stages 1-3 & Reporting Format).* Cultural Programs Branch, Archaeology & Heritage Planning Unit, Toronto. 1993.

Ministry of Culture. *Standards and Guidelines for Consulting Archaeologists.* Ministry of Culture, Toronto. 2006.

6.0 PLATES

West Expansion Alternative



Plate 1: View to northwest along Wm Mooney Rd bordered by some modern residential properties. Note dips in road at drainage ditches.



Plate 2: View to northeast from W. Mooney Rd. Woodlot edged by cedar and stone fence. Low rise at left of photo. Similar to landscape west of road.

North Expansion Alternative



Plate 3: View to southeast across open fields edged by tree lines. Factory roof and landfill hill in background.



Plate 4: View to southwest across graded land behind factory. Fields in background are undisturbed.

Both North Expansion Alternative and Build Over Alternative



Plate 5: View to south across graded land behind factory. Landfill hill at left.



Plate 6: View to west from Carp Road. Modern residences adjacent to road south of factory.



Plate 7: View to southeast, small area of remnant agricultural landscape. Carp Road at left.



Plate 8: View to southwest, small area of remnant agricultural landscape with archaeological potential.

Build Over Alternative



Plate 9: View to southeast along Carp Road near main entrance to WM facility. Disturbed ROW and adjacent lands.



Plate 10: View to west across Hwy 417 from Carp Road. Note berm along southeast edge of existing facility and landfill hill.



Plate 11: View to north-northeast from berm along southeast edge of existing WM facility. Stormwater management leachate ponds in distance.



Plate 12: View to east along ramp from Hwy 417. Adjacent ditch and lands are disturbed and wet.



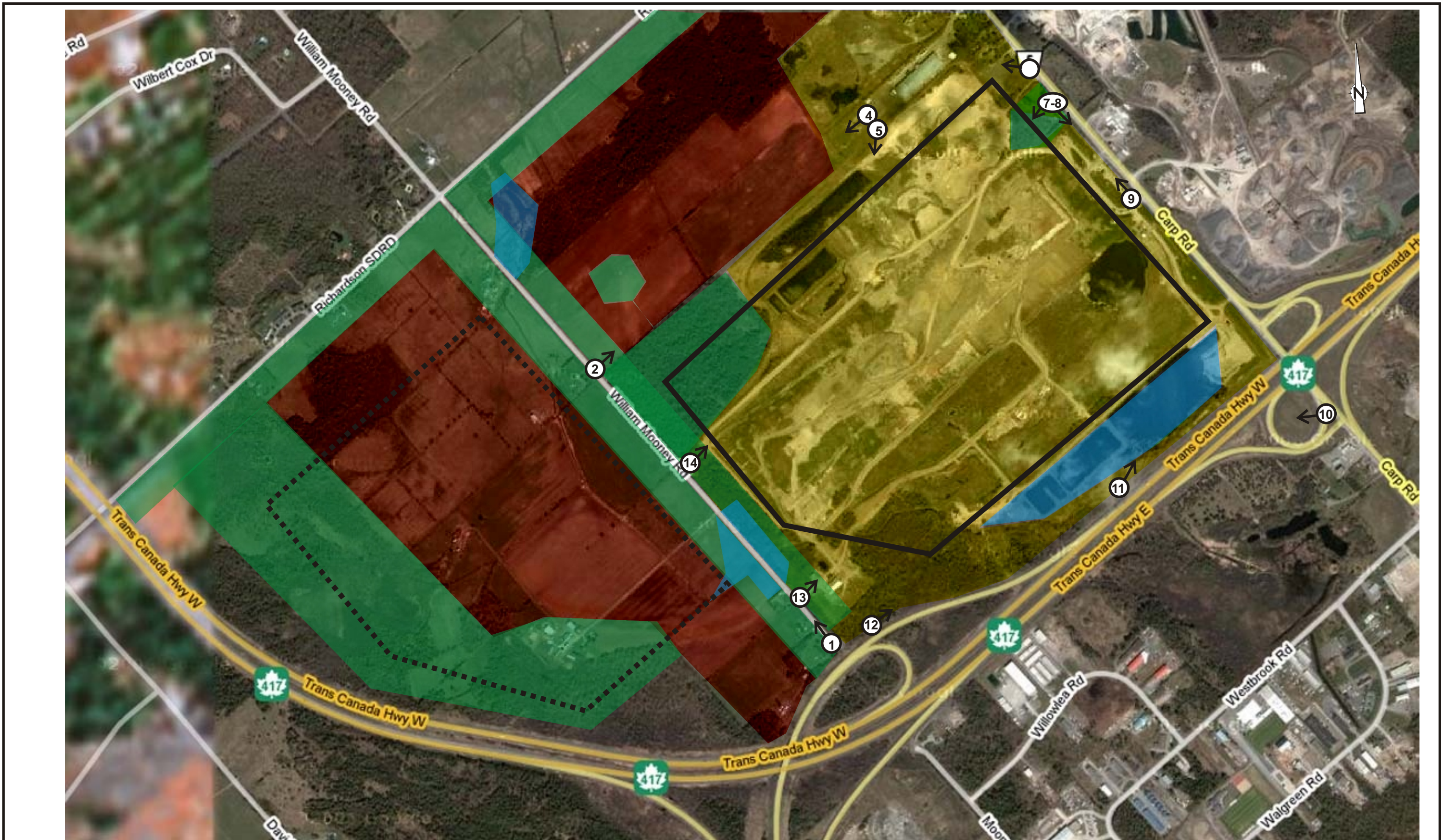
Plate 13: View to northeast, rear entrance of SM facility.



Plate 14: View to northeast, grass-covered berm in foreground surrounds existing facility. Edge of landfill hill rises behind trees.

Figures





ARCHAEOLOGICAL SERVICES INC.

Water source
 Plate location and number

No potential: disturbed
 No potential: wet, low-lying lands

LEGEND

Potential for archaeological sites
 No Potential: distant road and water

West Expansion Alternative
 Build Over Alternative

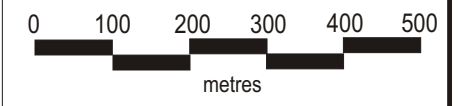
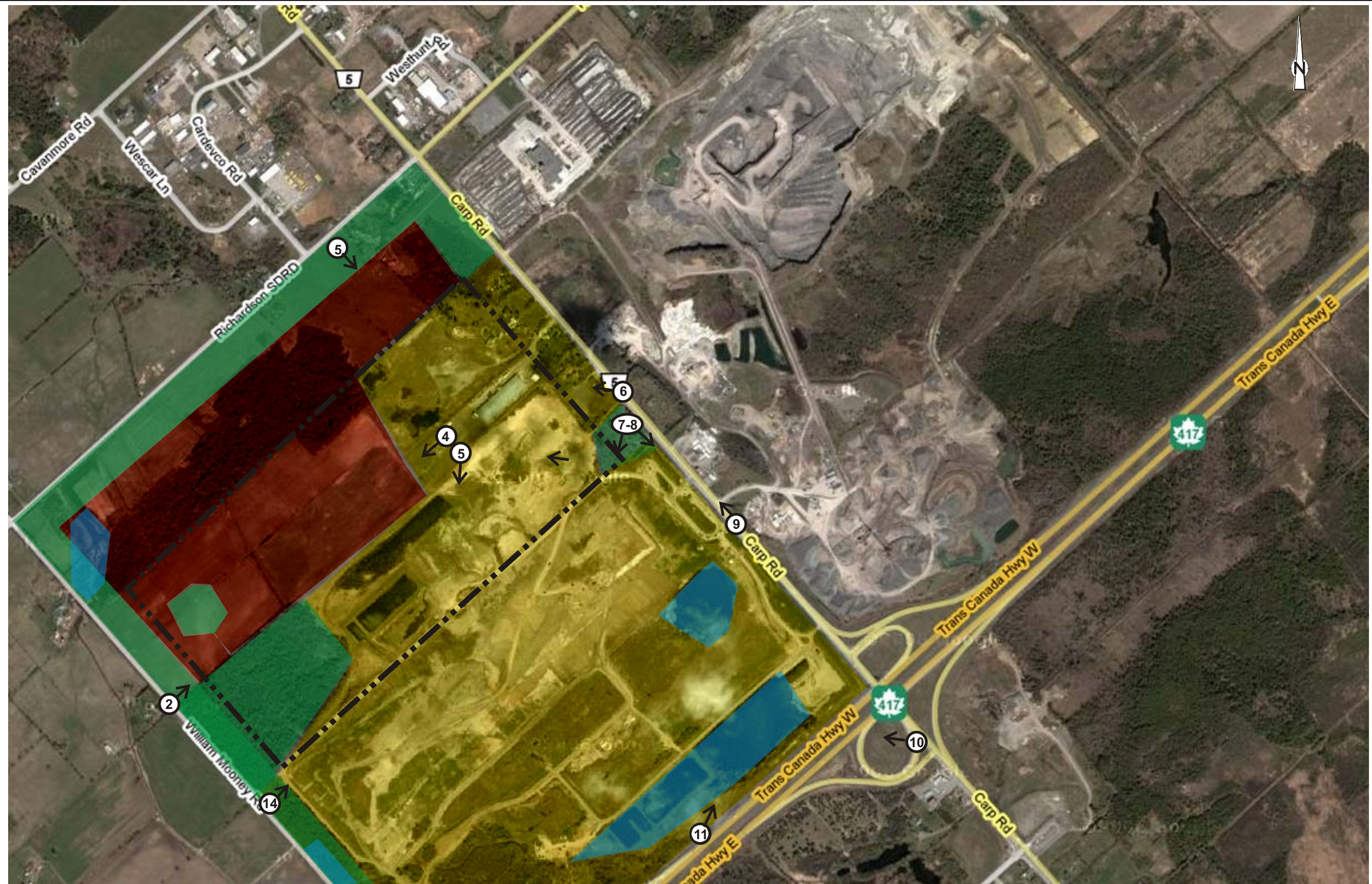


Figure 3-1: WM Ottawa Waste Management Facility - Results of Stage 1 Archaeological Assessment of Build-Over and West Alternatives.



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Water source
 Plate location and number

No potential: disturbed
 No potential: wet, low-lying lands

LEGEND

Potential for archaeological sites
 No potential: distant road and water

North Expansion Alternative

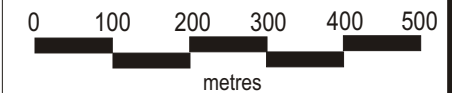


Figure 3-2: WM Ottawa Waste Management Facility - Results of Stage 1 Archaeological Assessment of North Expansion Alternative.