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DOUGLAS A. YAHN - P365

2329059 ONTARIO INC.

STAGE 2 ARCHAEOLOGICAL ASSESSMENT

ROCKRIDGE QUARRY

LOT 21, CONCESSION 8
FORMER TOWNSHIP OF HARVEY,
MUNICIPALITY OF TRENT LAKES,
PROVINCE OF ONTARIO

Submitted to:

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ORIGINAL REPORT DECEMBER 2, 2016

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2329059 Ontario Inc.

Project No.: 151-14010-01

December 2016

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EXECUTIVE SUMMARY

WSP Canada Inc. was retained by 2329059 Ontario Inc. to conduct a Stage 2 Archaeological Assessment of the proposed Rockridge Quarry located on Lot 21, Concession 8, Former Township of Harvey, Municipality of Trent Lakes, in the Province of Ontario.

This archaeological assessment has been triggered by an application by the proponent to the Ministry of Natural Resources and Forestry (MNRF) to proceed with a new Aggregate License. The Ministry of Natural Resources and Forestry (MNRF) is the approval authority under the *Aggregate Resources Act*. The aggregate license process includes the requirement for an archaeological assessment as one of the conditions for approval to ensure that the proponent meets their legal obligations under the *Ontario Heritage Act*.

Archaeological activities were carried out in accordance with the *Standards and Guidelines for Consultant Archaeologists* (Ministry of Tourism, Culture and Sport 2011).

This study involved a review of Stage 1 documents pertaining to the property and Stage 2 site assessment utilizing test pit survey at 5m and 10m transects. The Stage 2 test pit survey was carried out between September 19, 2016 and October 5, 2016. The Stage 2 survey was conducted under clear weather conditions allowing for full visibility of all land features and soils.

Archaeological recommendations have been made based on the review of previous archaeological assessments and the completion of Stage 2 test pit survey. These recommendations include the following:

1. **No artifacts or features of cultural heritage value or interest (CHVI) were encountered during Stage 2 Archaeological Assessment. No further assessment is required.**

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PROJECT PERSONNEL

Project Manager	Douglas A. Yahn, M.E.S. (P365) *Senior Archaeologist*
Field Director	Dale G. Langford, M.E.S. (P474) *Archaeologist*
Field Crew	Stefan Bouchard, HBa (R476) Meaghan Tippett, HBa Shannon Millar, HBa Nikki Cobden
Report Preparation	Dale Langford Douglas A. Yahn
Mapping/GIS	Dale Langford

1 PROJECT CONTEXT

1.1 OBJECTIVES

The objective of a Stage 2 Archaeological Assessment is to provide an overview of archaeological resources present on the property and a determination of whether any of the resources may be artifacts and archaeological sites with cultural heritage value or interest (CHVI). This is accomplished using systematic pedestrian or test pit survey. Following the completion of systematic survey and review of recovered archaeological resources (if present), the archaeologist will provide recommendations regarding further assessment requirements.

1.2 DEVELOPMENT CONTEXT

WSP Canada Inc. was retained by 2329059 Ontario Inc. to conduct a Stage 2 Archaeological Assessment of the proposed Rockridge Quarry located on Lot 21, Concession 8, Former Township of Harvey, Municipality of Trent Lakes, in the Province of Ontario.

This archaeological assessment has been triggered by an application by the proponent to the Ministry of Natural Resources (MNR) to proceed with a new Aggregate License. The Ministry of Natural Resources (MNR) is the approval authority under the *Aggregate Resources Act*. The aggregate license process includes the requirement for an archaeological assessment as one of the conditions for approval to ensure that the proponent meets their legal obligations under the *Ontario Heritage Act*.

This archaeological assessment was carried out during the pre-approval stage of the aggregate license process; therefore detailed design mapping was not available. Figure 1 shows the proposed aggregate site location, while Figure 2 shows the proposed aggregate site boundaries and Stage 2 requirements. The boundaries of the study area correspond to GPS points and mapping provided in the Stage 1 report (WSP 2015) and maps provided by the client.

Permission to access the property to conduct the property inspection was granted by the Client and no limits were placed on this access during the Property Inspection.

1.3 HISTORICAL CONTEXT

1.3.1 PROJECT LOCATION

The property is located on Lot 21, Concession 8, Former Township of Harvey, Municipality of Trent Lakes, in the Province of Ontario. Access to the property was gained via the existing driveways present along County Road 507 (Historic Buckhorn Road).

1.3.2 PRE-CONTACT PERIOD OVERVIEW

Paleoindian period populations were the first to occupy what is now southern Ontario, moving into the region following the retreat of the Laurentide Ice Sheet approximately 11,000 years before present (BP). The first Paleoindian period populations to occupy southern Ontario are referred to as Early Paleoindians (Ellis and Deller 1990:39).

Early Paleoindian period groups are identified by their distinctive projectile point morphologies, exhibiting long grooves, or ‘flutes’, that likely functioned as a hafting mechanism. These Early Paleoindian group projectile morphologies include Gainey (ca. 10,900 BP), Barnes (ca. 10,700 BP), and Crowfield (ca. 10,500 BP)(Ellis and Deller 1990:39-43). By approximately 10,400 BP,

Paleoindian projectile points transitioned to various un-fluted varieties such as Holocombe (ca. 10,300 BP), Hi-Lo (ca. 10,100 BP), and Unstemmed and Stemmed Lanceolate (ca. 10,400 to 9,500 BP). These morphologies were utilized by Late Paleoindian period groups (Ellis and Deller 1990:40).

Both Early and Late Paleoindian period populations were highly mobile, participating in the hunting of large game animals. Paleoindian period sites often functioned as small campsites (less than 200 m^2) where stone tool production and maintenance occurred (Ellis and Deller 1990).

By approximately 8,000 BP the climate of Ontario began to warm. As a result, deciduous flora began to colonize the region. With this shift in flora came new faunal resources, resulting in a transition in the ways populations exploited their environments. This transition resulted in a change of tool-kits and subsistence strategies recognizable in the archaeological record, resulting in what is referred to archaeologically as the Archaic period. The Archaic period in southern Ontario is dived into three phases: the Early Archaic (ca. 10,000 to 8,000 BP), the Middle Archaic (ca. 8,000 to 4,500 BP), and the Late Archaic (ca. 4,500 to 2,800 BP) (Ellis et al. 1990).

The Archaic period is differentiated from earlier Paleoindian populations by a number of traits such as: 1) an increase in tool stone variation and reliance on local tool stone sources, 2) the emergence of notched and stemmed projectile point morphologies, 3) a reduction in extensively flaked tools, 4) the use of native copper, 5) the use of bone tools for hooks, gorges, and harpoons, 6) an increase in extensive trade networks, and 7) the production of ground stone tools. Also noted is an increase in the recovery of large woodworking tools such as chisels, adzes, and axes (Ellis et al. 1990:65-66). The Archaic period is also marked by population growth. Archaeological evidence suggests that by the end of the Middle Archaic period (ca. 4,500 BP) populations were steadily increasing in size (Ellis et al 1990). Over the course of the Archaic period populations began to rely on more localized hunting and gathering territories. By the end of the Archaic period, populations were utilizing more seasonal rounds. From spring to fall, settlements would exploit lakeshore/riverine locations where a broad-based subsistence strategy could be employed, while the late fall and winter months would be spent at interior site where deer hunting was likely a primary focus with some wild edibles likely being collected (Ellis et al. 1990:114). This steady increase in population size and adoption of a more localized seasonal subsistence strategy eventually evolved into what is termed the Woodland period.

The Woodland period is characterized by the emergence of ceramic technology for the manufacture of pottery. Similar to the Archaic period, the Woodland period is separated into three primary timeframes: the Early Woodland (approximately 800 BC to 0 AD), the Middle Woodland (approximately 0 AD to 700/900 AD), and the Late Woodland (approximately 900 AD to 1600 AD) (Spence et al. 1990; Fox 1990).

The Early Woodland period is represented in southern Ontario by two different cultural complexes: the Meadowood Complex (ca. 900 to 500 BC), and the Middlesex Complex (ca. 500 BC to 0 AD). During this period the life ways of Early Woodland population differed little from that of the Late Archaic with hunting and gathering representing the primary subsistence strategies. The pottery of this period is characterized by its relatively crude construction and lack of decorations. These early ceramics exhibit cord impressions, likely resulting from the techniques used during manufacture (Spence et al. 1990).

The Middle Woodland period is differentiated from the Early Woodland period by changes in lithic tool morphologies (projectile points) and the increased elaboration of ceramic vessels (Spence et al. 1990). In southern Ontario the Middle Woodland is observed in three different cultural complexes: the Point Peninsula Complex to the north and northeast of Lake Ontario, the Couture Complex near Lake St. Claire, and the Saugeen Complex throughout the remainder of southern Ontario. These groups can be identified by their use of either dentate or pseudo-scalloped ceramic decorations. It is by the end of the Middle Woodland period that archaeological evidence begins to suggest the rudimentary use of maize (corn) horticulture (Warrick 2000).

The adoption and expansion of maize horticulture during the Late Woodland period allowed for an increase in population size, density, and complexity among Late Woodland populations. As a result, a shift in subsistence and settlement patterns occurred, with the adoption of a more sedentary village life and reliance on maize horticulture, with beans, squash, and tobacco also being grown (Racher 2014). Nearing the end of the Late Woodland Period (approximately 1400 AD) villages reached their maximum size. During this period, increased warfare resulted in the development of larger villages with extensive palisades.

Early contact with European settlers at the end of the Late Woodland, Late Ontario Iroquoian period resulted in extensive change to the traditional lifestyles of most populations inhabiting southern Ontario.

1.3.3 STUDY AREA SPECIFIC HISTORY IN THE POST CONTACT PERIOD

Euro-Canadian occupation in the study area began with a series of surveying efforts between 1818 and 1864. Two years following the completion of surveying, the Harvey Township had reached a population sufficient enough to allow for its designation as a Township in 1866.

The growth of Harvey Township was slow, with growth attributed to the establishment of various acts allowing for the harvesting of resources and the clearing and settling of land. The most important of these was the *Crown Tiber Act* in the mid-19th century, which allowed for lumber companies to harvest desirable lumber from claim areas throughout the township. Initially only select lumber was harvested, such as white oak and white pine, that had a ready market. Later, fuel wood was harvested resulting in the clearing of large sections of land. This cleared land subsequently drew in farmers seeking to settle the small areas of property that would have allowed for agriculture.

Initial farming began in the more desirable sections of land in the south and west of the Township. Later, cleared lands in the north began to be occupied. The settling of northern Harvey Township was also facilitated by the completion of Governor (Buckhorn) Road in 1865.

The bedrock controlled nature of Harvey Township made farming difficult, with farmers wishing to utilize the land forced to remove large quantities of rock from fields before they could work them. This has resulted in a high prevalence of large stone piles and dry-laid stone fence lines throughout the Township.

Following World War II, farming for profit in Harvey Township became impractical as the small parcels of difficult to work land were not worth the financial investment or the time required to compete with larger farms elsewhere. Today the majority of farmland is utilized for hobby or seasonal ranches.

1.3.4 SUMMARY

The property is located on Lot 21, Concession 8, Former Township of Harvey, Municipality of Trent Lakes, in the Province of Ontario. Access to the property was gained via the existing driveways present along County Road 507 (Historic Buckhorn Road).

First Nations populations have a deep, rich history within the region spanning from initial migrations of Early Paleoindian period populations following deglaciation, to the time of contact.

Initial Euro-Canadian occupation began with the survey of Harvey Township between 1818 and 1864. Settlement growth in the area was initially slow, beginning with lumber resource extraction in the mid-19th century. With lands cleared, small scale farming began. Following WWII most commercial farming had stopped, with farms today functioning primarily as either hobby or seasonal ranches.

The property area itself is situated along the Historic Buckhorn Road (presently County Road 507). The property was initially used as farmland, possibly as pasture land due to the extremely thin soil veneer and exposed limestone bedrock. No structures are identified in historic mapping to suggest the presence of historically significant occupation on the property.

1.4 ARCHAEOLOGICAL CONTEXT

1.4.1 CURRENT CONDITIONS

Lands to be subjected to Stage 2 survey consist of a mixture of overgrown pasture land, exposed bedrock, dense juniper bush, and forest. Many areas exhibit poorly drained water saturated sediments.

1.4.2 PHYSIOGRAPHY

Ecoregions are parts of an ecozone and are characterized by distinctive regional ecological factors including climate, flora, fauna, physiography, soil, water, and land usage.

The property is located on Canadian Shield Terrain and lies in the Ontario Shield Ecozone, within the Georgian Bay Ecoregion (Ecoregion 5E) (Crins et al. 2009). Climatic and geological characteristics for this ecoregion are provided below, along with a brief description of dominant vegetation and wildlife species.

The Georgian Bay Ecoregion is situated between Lake Superior and the Quebec Border, on the southern portion of the Precambrian Shield. This Ecoregion is typified by humid and cool-temperate weather, with a mean annual temperature ranging from 2.8 to 6.2 °C. Mean annual precipitation ranges between 771 and 1,134 mm, with the means summer rainfall between 204 and 304 mm.

The Ecoregion is located within the Great Lakes-St. Lawrence Forest Region where species such as Eastern White Pine, Red Pine, Eastern Hemlock and Yellow Birch are common. Towards the southern edge of the ecoregion and within mesic sites Sugar Maple, American Beech, Wild Black Cherry, Basswood, and White Ash dominate, while concentrations of boreal species including White Spruce, Black Spruce, Tamarack, and Balsam Fir can be found on certain landform units or within cooler-than normal sites.

Dominant wildlife species in the ecoregion include Moose, Beaver, Black Bear, Fisher, Pileated Woodpecker, Common Loon, Red-spotted Newt, Northern Two-lined Salamander, Gray Tree frog, American Bullfrog, Snapping Turtle, and Northern Ring-necked Snake. Numerous lakes and rivers in the ecoregion provide habitat for fish species such as Lake Trout, Brook Trout, Lake Whitefish, Walleye, Yellow Perch, Northern Redbelly Dace, and many other species.

The physiography of the study area is characterized by the Dummer Moraines and Georgian Bay Fringe Regions. More specifically the study area hold landforms consisting of limestone plains and bare rock ridges with shallow till. This is observed in the exposed limestone bedrock noted throughout the site, and sharp cliff face located in the eastern portion of the licence area.

Surficial geology in the study area consists of a large limestone plain in the west, dropping of in the east while sediments in the study area consist primarily of sandy loam.

1.4.3 PREVIOUS ARCHAEOLOGICAL ASSESSMENTS

A Stage 1 archaeological assessment was completed for the study area by WSP Canada Inc. in 2016. This assessment indicated that further Stage 2 assessment was required at 5m intervals for undisturbed lands located within 0-50m and at 10m intervals between 50-150m from identified archaeological site (BdGo-10) and historic Buckhorn Road (Figure 3 and 4).

In addition to this, two Stage 1-2 archaeological assessments have been completed for lands immediately south and southwest of the study area. Stage 2 shovel testing for Lots 19 & 20, Concession 8 were limited to areas adjacent to the existing stone barn and out-building structures. Both reports indicated that limited archaeological remains were present to suggest that further Stage 3 site specific assessment was required.

Table 1: Previous archaeological assessments conducted in close proximity to the study area.

Assessment	PIF	Results	Consultant
Stage 1 Archaeological Assessment: Rockridge Quarry	P365-0082-2015	Stage 2 Required	WSP 2016
A Stage I-II Archaeological Assessment/Heritage Assessment of the Proposed Stonescape Quarry II: Located in Part Lot 20, Concession 9, Township of Galway-Cavendish-Harvey (Geographic Township of Harvey), County of Peterborough, Ontario	P156-018-2006	No further archaeological assessment required	York North 2008
A Stage I-II Archaeological Assessment/Heritage Assessment of the Proposed Stonescape Quarry: Located in Part Lots 19 & 20, Concession 8, Township of Galway-Cavendish-Harvey (Geographic Township of Harvey), County of Peterborough, Ontario	P054-046-2004	No further archaeological assessment required	York North 2004

1.4.4 REGISTERED ARCHAEOLOGICAL SITES

Four registered archaeological sites located within 1km of the study area. Three of these sites are located over 500m to the northwest of the study area (BdGo-14, BdGo-15, BdGo-16) while one is located approximately 200m to the south (BdGo-10). All four sites consisted of limited archaeological recoveries associated with Stage 2 test-pit survey and did not represent materials of cultural heritage value or interest requiring Stage 3 site specific assessment.

Table 2: Registered archaeological sites located within a 1km radius of the study area.

Borden Number	Cultural Affiliation	Site Type
BdGo-10	Post-Contact	Homestead
BdGo-14	Post-Contact	Hunting Cabin
BdGo-15	-	Find Spot
BdGo-16	Post-Contact	Homestead

1.4.5 SUMMARY

The western portion of the property consists of cleared agricultural land with various roadways and paths throughout, while the eastern section of the property remains forested with some logging activity being conducted concurrent to property inspection.

Two archaeological assessments have been conducted in close proximity to the study area and four registered archaeological sites are located within a 1km radius. Archaeological investigations yielded limited archaeological remains of cultural heritage value or interest and as such no Stage 3 site specific assessment was recommended.

The study area is located approximately 400m west of Mississauga River. Marsh areas associated with the banks of the Mississauga River extend to the eastern boundaries of the property.

2 FIELD METHODS AND RESULTS

Test pit survey was conducted between September 26, 2016 and October 5, 2016. Conditions during test pit survey ranged from clear and sunny to slightly overcast with light rain.

The Stage 2 assessment was conducted using both 5m and 10m test pit methodologies as well as selective 5m test pit survey where site conditions did not permit the use of standardized grid survey. A summary of lands subjected to various assessment methodologies can be found in Table 1. For description purposes areas subjected to different sur vey methodologies have been divided into three 'Zones' (Figure 5).

Table 3: Stage 2 survey methodologies by percent of land covered.

Assessment Method	Approx. Size (ha)	% Total Land
Zone 1 - Test Pit Survey (5m Intervals)	5.5	4.4%
Zone 2 - Test Pit Survey (10m Intervals)	8.1	3%
Zone 3 - Test Pit Survey (5m Intervals where Conditions Permitted)	10.2	5.6%
Not Assessed (Low/No Potential – WSP 2016)	159.8	87%

All test pits were by hand and all soils were screened through 6mm mesh. Test pits were at least 30cm in diameter and excavated 5cm into sterile subsoil or until bedrock was encountered. All test pits were backfilled following excavation.

2.1 ZONE 1

Zone 1 consisted of all undisturbed lands located within 50m of the historic Buckhorn Road and within 300m of identified archaeological site (BdGo-10).

Test pit survey in this area was conducted at 5m intervals. Test pits varied in depth of 10 to 40cm below surface, with the majority of test pits terminating at bedrock. Where bedrock was not encountered, subsoil consisted of rust coloured silt.

No artifacts were recovered in Zone 1 during 10m test pit survey.

2.2 ZONE 2

Zone 2 consisted of all lands located from 50m to 150m from the historic Buckhorn Road. These lands were survey at 10m test pit intervals. Similar to Zone 1, test pits varied in depth from 10cm to 40 cm, with some areas not tested due to exposed surface bedrock.

Only one section of the property yielded cultural materials. Recoveries consisted of highly fragmented calcined bone fragments (n=2385). Initial test pit intensification at 2.5m yielded limited calcined bone fragments. As such, a 1m x 1m test unit was excavated over the high yield test pit in an effort to confirm that the recoveries did not constitute a natural event.

Test unit excavation yielded a large quantity of calcined bone (n=2303) which, due to their highly fragmented condition, can only be identified as belonging to small and medium mammals (see further description in Section 2.4 and 3.1). A lack of ash or staining in the area and limited presence of charcoal suggests that these recoveries were not burned in-situ.

With no other cultural materials being recovered in association with these bone fragments, limited spatial distribution, and lack of features, it is determined that this recovery has low cultural heritage value or interest (CHVI) and does not require further investigation (confirmed with MTCS staff archaeologist November 7, 2016).

No other artifacts were encountered during 5m test pit survey in Zone 2.

Also of note was the presence of water saturated sediments in the southeastern section of Zone 2. In this area, water saturated sediments were encountered immediately below surface. This ground water is associated with the water saturated lands noted in the southwestern section of Zone 3 (see Section 2.3).

2.3 ZONE 3

Zone 3 consists of all lands identified as being within 50m of potential seasonal water sources. As noted during the Stage 1 investigations, poor drainage associated with surficial bedrock has resulted in the area exhibiting water saturated sediments. As such, the area was tested using selective 5m test pit survey which targeted all lands where land conditions permitted test pit excavations.

The northern section of Zone 3 consisted of lands located in close proximity to a small wetland. This area consisted of a mixture of dense forest, of which sections had been cleared by logging activity enabling 5m interval test pit survey, and dense areas of juniper brush covering shallow bedrock. Areas of extremely dense forest and juniper bush were surveyed wherever land conditions allowed.

The central section of Zone 3 was comprised of lands surrounding a small seasonal drainage. This drainage consisted of very slow moving to standing water resulting from the poor bedrock controlled drainage of the study area. The area consisted of exposed bedrock and water saturated sediments with randomized sections of semi-drained soils. Forest cover in this area was relatively open, allowing for 5m survey intervals to be maintained.

The southwestern section of Zone 3 consisted of a large section of poorly drained, water saturated sediments surrounding a low-lying swamp. The majority of this area was unable to be tested due to water saturated sediments, with the exception of a well-drained pocket of soil located along the western portion of this swamp area. This pocket of well-drained soil was tested at 5m intervals.

No artifacts were recovered during test pit survey in Zone 3.

Field notes and photographs of the property were taken during the test pit survey. The photograph locations and directions were noted and all photographs were catalogued. Locations of images presented in this report can be found on Figure 7.

2.4 RECORD OF FINDS

A total of 2385 calcined bone fragments were recovered during Stage 2 test pit and test unit excavations. Of these, 2303 were recovered from the excavation of a 1m x 1m test unit with the remaining 82 fragments being distributed among 4 positive test-pits excavated at a distance of 2.5m from the initial positive test pit (Table 4).

Table 4: Total Faunal Recoveries by Test Pit/Test Unit.

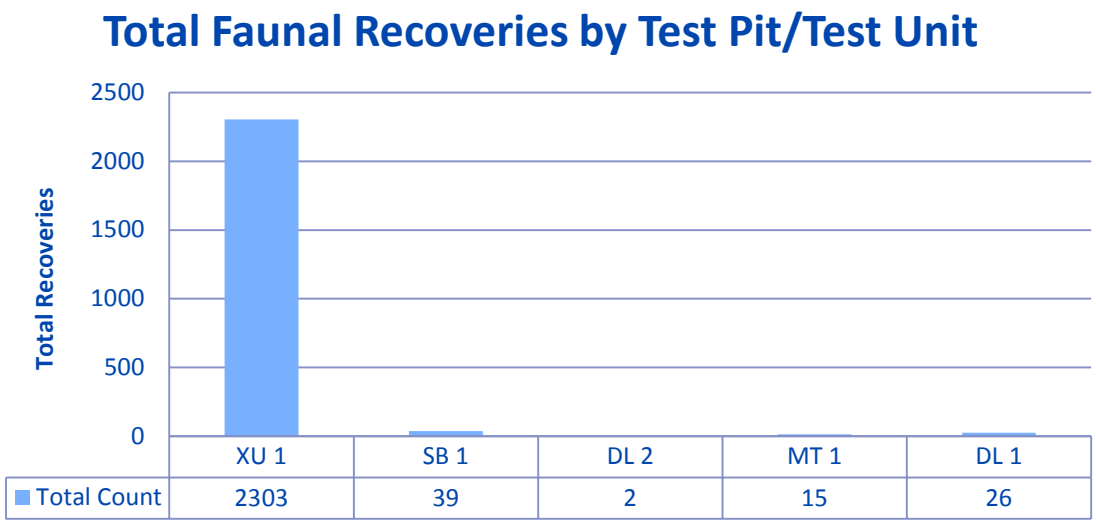
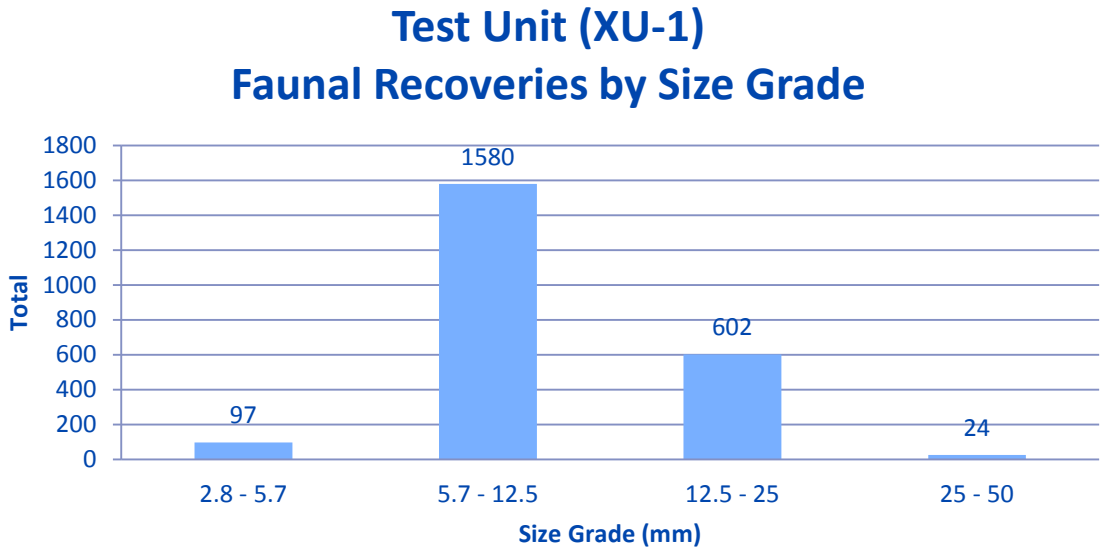


Table 5: 1m x 1m Test Unit (XU-1) - Total Faunal Recoveries by Size Grade.



The highly fragmented nature of these bone fragments did not allow for an analysis of species or a determination of MNI/MNU (Image 36 – Table 5). It can be stated however that the fragments appear to belong to more than one species of medium/small mammal, as a variety of long bone fragments of varying sizes were identified (See Section 3.1 for further interpretation).

No other archaeological materials were recovered during Stage 2 survey.

2.5 INVENTORY OF DOCUMENTATION RECORDS

The following list represents all the documentation taken in the field relating to this project and is being retained by WSP Canada Inc.:

- 5 page of field notes
- 35 digital photographs in JPG format of the subject area
- GPS readings of Photo Locations taken during the property inspection (Appendix B)

3 ANALYSIS AND CONCLUSIONS

3.1 ANALYSIS OF FINDS

Artifact recoveries consisted of 2385 highly fragmented and calcined bone fragments, interpreted as belonging to small-medium mammals. The interpretation is based on observed differences in bone diameter and thickness beyond the standard variation expected in a single specimen.

These recoveries were highly concentrated, being primarily contained to a 1m by 1m area, and were not recovered in association with any other cultural materials. A lack of ash or evidence of features which would indicate in-situ burning suggests that this represents a secondary deposit of waste bone.

Concentrations of fragmented calcined bone on pre-contact sites have been associated with marrow extraction and preparation of bone for the purpose of removing grease and oils. The interpretation of these recoveries as being a secondary deposit would then suggest site cleaning or maintenance following marrow/grease extraction.

Unfortunately the lack of associated artifacts does not allow for the direct association between these fragmented bone remains and pre-contact site-use. It is therefore equally as likely that these recoveries represent contact period site-use associated with the nearby farmstead in which the inhabitants cleaned out and deposited locally sourced (non-butchered) food bone which has since been subjected to additional fragmentation by natural causes.

While a consideration must be made to the possibility that the bone recoveries represent a cremation style burial, no features indicating human association were identified.

The lack of spatial distribution and absence of cultural material by which a determination of cultural affiliation can be derived results in the recovery having low cultural heritage value or interest (CHVI) and does not require further investigation (confirmed with MTCS staff archaeologist November 7, 2016).

3.2 CONCLUSIONS

Stage 2 test-pit survey was carried out at 5m intervals for all undisturbed lands located within 0-50m from registered archaeological sites (BdGo-10), early Euro-Canadian Transportation Routes (historic Buckhorn Road), and seasonally wet terrain and wetland environments. Additional survey at 10m intervals was conducted between 50-150m from registered archaeological sites (BdGo-10) and historic Buckhorn Road (Figure 4).

Artifact recoveries were limited to a collection of highly fragmented and calcined bone, interpreted as belonging to a mixture of small-medium mammals. These recoveries were highly concentrated, being primarily contained to a 1m by 1m area, and were not recovered in associated with any other cultural materials. A lack of ash concentrations or features indicating in-situ burning suggests that this represents a secondary deposit of waste bone.

4 RECOMMENDATIONS

Archaeological activities were carried out in accordance with the *Standards and Guidelines for Consultant Archaeologists* (Ministry of Tourism, Culture and Sport 2011).

This study involved a review of Stage 1 documents pertaining to the property and Stage 2 site assessment utilizing test pit survey at 5m and 10m transects. The Stage 2 test pit survey was carried out between September 19, 2016 and October 5, 2016. The Stage 2 survey was conducted under clear weather conditions allowing for full visibility of all land features and soils.

Archaeological recommendations have been made based on the review of previous archaeological assessments and the completion of Stage 2 test pit survey. These recommendations include the following:

1. No artifacts or features of cultural heritage value or interest (CHVI) were encountered during Stage 2 Archaeological Assessment. No further assessment is required.

5 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 for Consultant Archaeologists (2011a) 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 *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 requires that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

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7 IMAGES

Image 1: View of Stage 2 test pit survey at 5m intervals.

Image 2: Example of test pit in southwest section of Zone 1.

Image 3: View towards house with scraped/graded land in background.

Image 4: View of Stage 2 test pit survey at 5m intervals in Zone 1.

Image 5: View of house with built up lawn and piping visible.

Image 6: View of Stage 2 test pit survey in northwest corner of Zone 1.

Image 7: View of test pit excavations in Zone 1 adjacent to old well..

Image 8: View of test pit survey adjacent to structure in Zone 1.

Image 9: Example of test pit excavated adjacent to structure in Zone 1.

Image 10: View of test pit survey at 10m intervals in Zone 2.

Image 11: View of test pit survey at 5m intervals in Zone 2.

Image 12: Example of test pit located in southeast section of Zone 2.

Image 13: View of Stage 2 test pit with bedrock in Zone 2.

Image 14: Test Pit excavation at 10m intervals in Zone 2.

Image 15: Example of exposed bedrock in Zone 2.

Image 16: View of test pit survey at 5m maximum intervals where dense bush cover allowed (Northern Zone 3).

Image 17: Example of test pit with bed rock termination in Northern Zone 3.

Image 18: Test pit at 5m intervals in Northern Zone 3.

Image 19: Test pit at 5m intervals in Northern Zone 3.

Image 20: View of water saturated terrain in Southern Zone 3.

Image 21: Test pit showing water saturated terrain in Southern Zone 3.

Image 22: Test pit at 5m intervals in section of dry terrain in Southern Zone 3.

Image 23: Example of test pit in Southern Zone 3 with bedrock termination.

Image 24: Example of test pit with near surface bedrock in Southern Zone 3.

Image 25: View of test pit survey at 5m maximum intervals where dense bush cover allowed (Southern Zone 3).

Image 26: View of seasonally wet area in Central Zone 3.

Image 27: View of 5m test pit survey in Central Zone 3.

Image 28: Example of boulder pavement in Central Zone 3.

Image 29: View of 5m test pit survey in Central Zone 3.

Image 30: Example of test pit with silty sand subsoil in Central Zone 3.

Image 31: View of 5m test pit survey in Central Zone 3.

Image 32: Example of boulder pavement in Central Zone 3.

Image 33: View of test pit intensification at 2.5m around positive test pit in Zone 2.

Image 34: View of test unit wall profile showing piece of charcoal. Limited amounts of charcoal were recovered with no evidence of staining or features identified.

Image 35: Floor plan of test unit showing shallow bedrock termination.

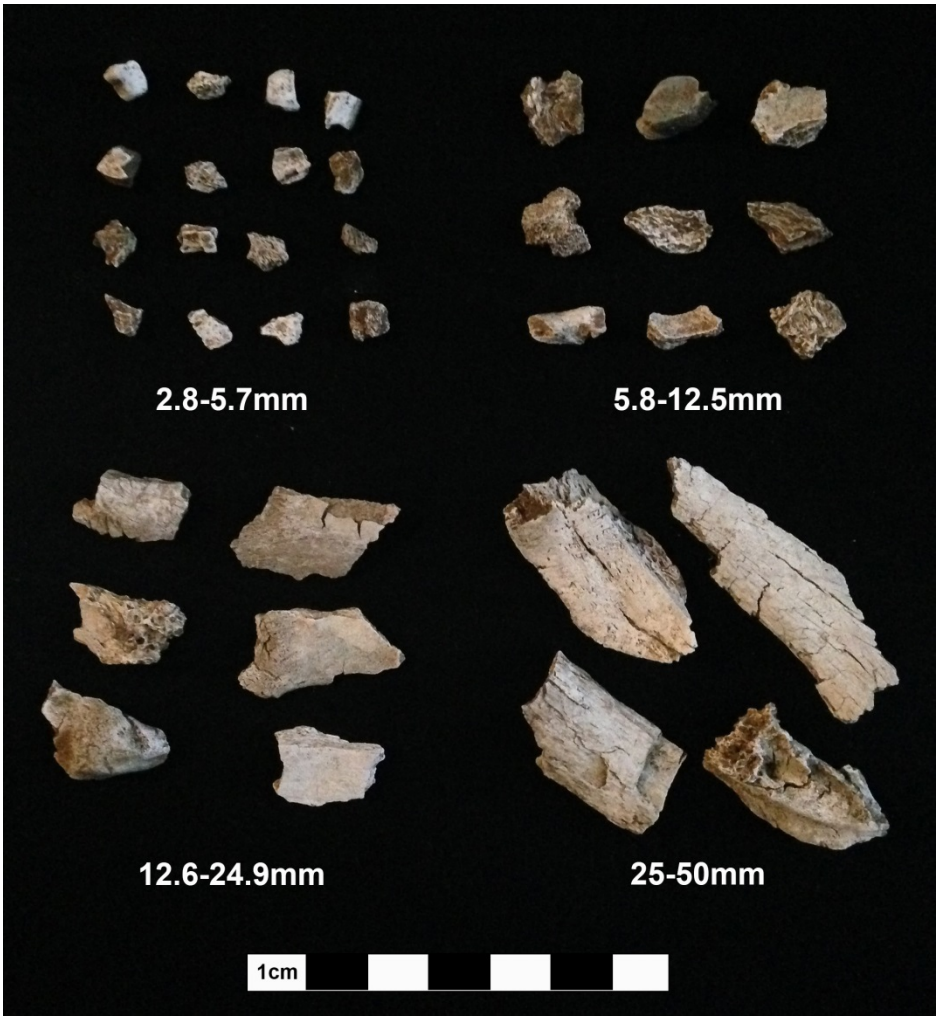


Image 36: Representative sample of calcined bone fragments sorted by size grade.

FIGURES

ROCKRIDGE QUARRY - PROJECT LOCATION 1:24,000 FIGURE 1

LEGEND

Proposed License Area

Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user communi

0 250 500 1,000 M

N

307

36

Flynns Turn

Mississaugua River

Rockcroft

Flynns Turn

Lakes

Point Pleasant

N

1:250,000

PROJECT:
STAGE 2 ARCHAEOLOGICAL ASSESSMENT: ROCKRIDGE QUARRY

CLIENT:
2329059 ONTARIO INC.

PROJECT NO.:
151-14010-01

DATE:
11/1/2016

DRAWN BY:
DGL

CHECKED BY:
DAY

WSP

LEGEND

License Area

0 100 200 400 M

N

PROJECT:
STAGE 2 ARCHAEOLOGICAL ASSESSMENT: ROCKRIDGE QUARRY

CLIENT:
2329059 ONTARIO INC.

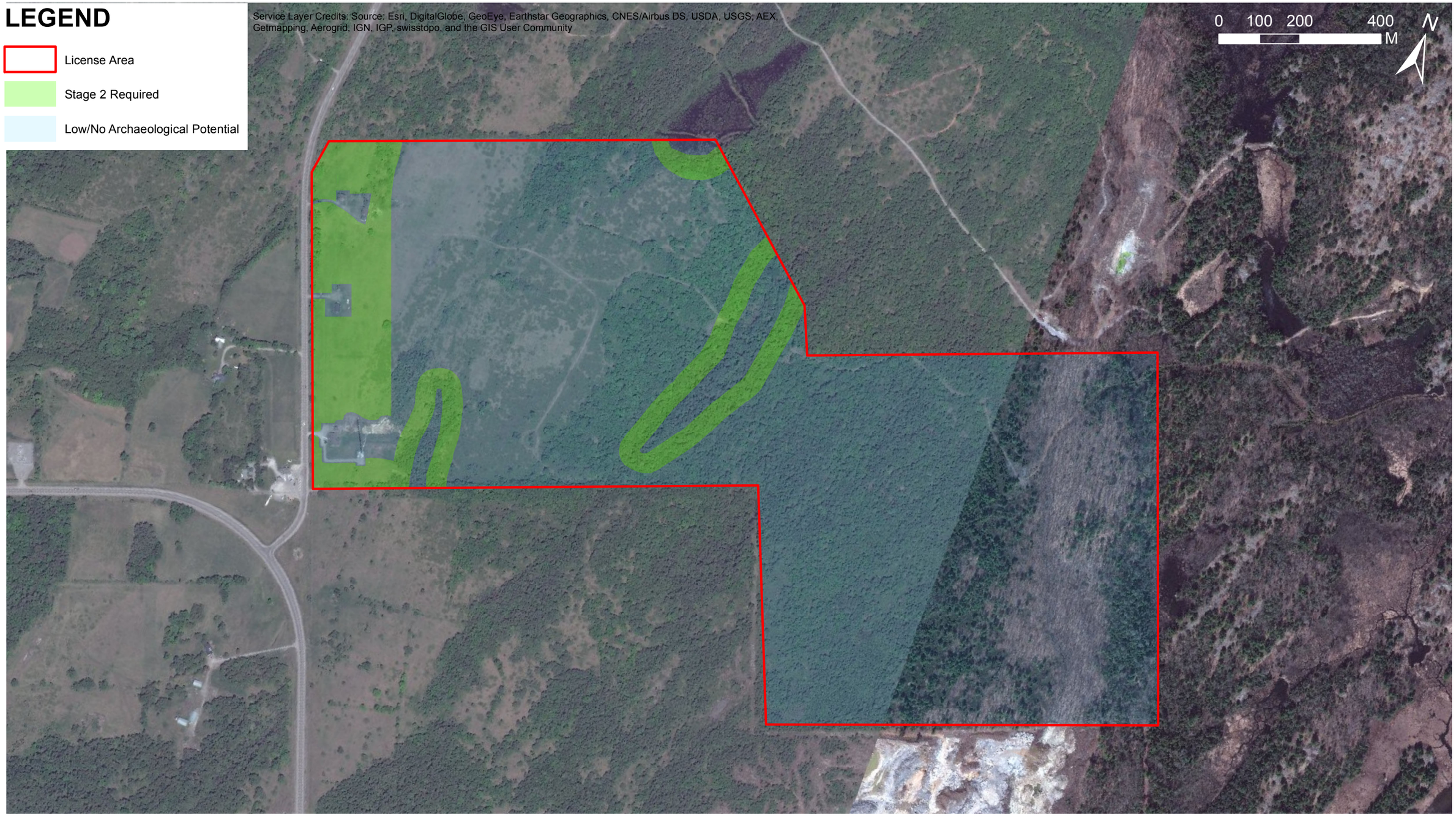
PROJECT NO.:
151-14010-01

DATE:
11/28/2016

DRAWN BY:
DGL

CHECKED BY:
DAY

WSP



PROJECT:
STAGE 2 ARCHAEOLOGICAL ASSESSMENT:
ROCKRIDGE QUARRY

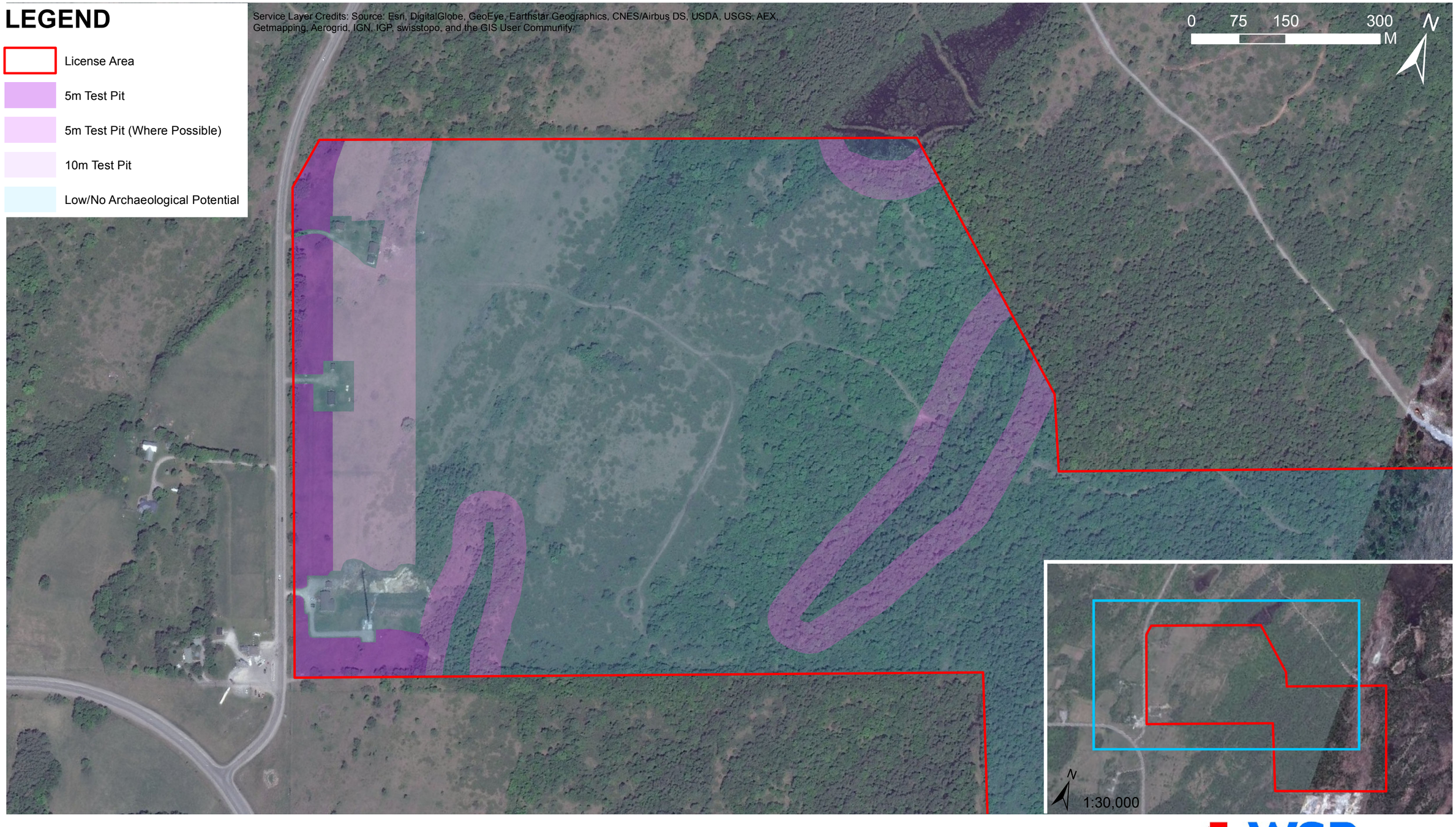
CLIENT:
2329059 ONTARIO INC.

PROJECT NO.:
151-14010-01

DATE:
11/28/2016

DRAWN BY:
DGL

CHECKED BY:
DAY



PROJECT:
STAGE 2 ARCHAEOLOGICAL ASSESSMENT: ROCKRIDGE QUARRY

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PROJECT NO.:
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DATE:
11/28/2016

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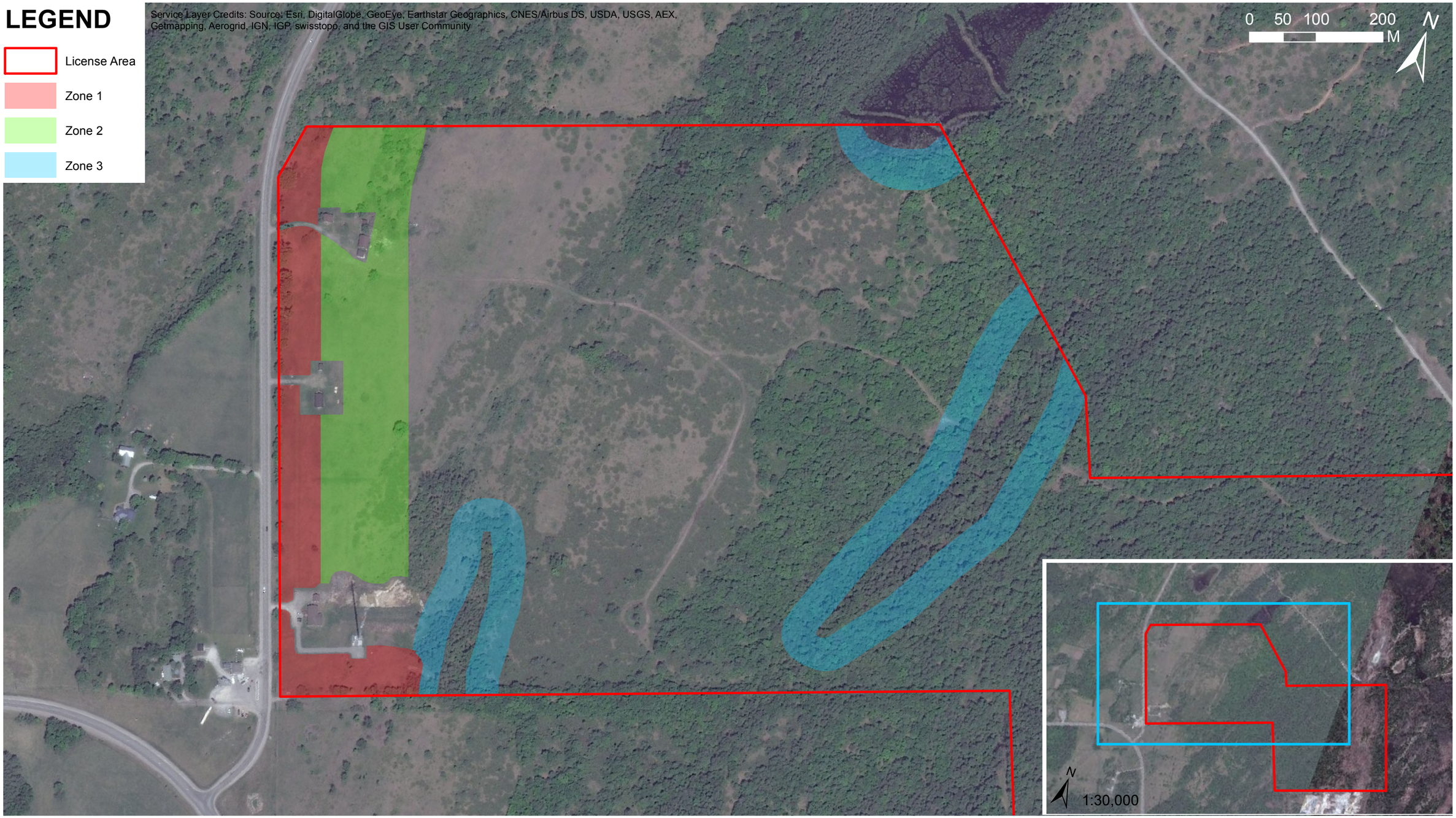

PROJECT:
STAGE 2 ARCHAEOLOGICAL ASSESSMENT: ROCKRIDGE QUARRY

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151-14010-01

DATE:
11/28/2016

DRAWN BY:
DGL

CHECKED BY:
DAY

WSP

LEGEND

- License Area
- 5m Test Pit
- 5m Test Pit (Where Possible)
- 10m Test Pit
- Artifact Revoveries
- Positive Test Unit
- Positive Test Pit
- Negative Test Pit
- Not Excavated (Dense Bush)

0 75 150 300 M

N

1:400

PROJECT:
STAGE 2 ARCHAEOLOGICAL ASSESSMENT:
ROCKRIDGE QUARRY

PROJECT NO.:
151-14010-01

DRAWN BY:
DGL

CLIENT:
2329059 ONTARIO INC.

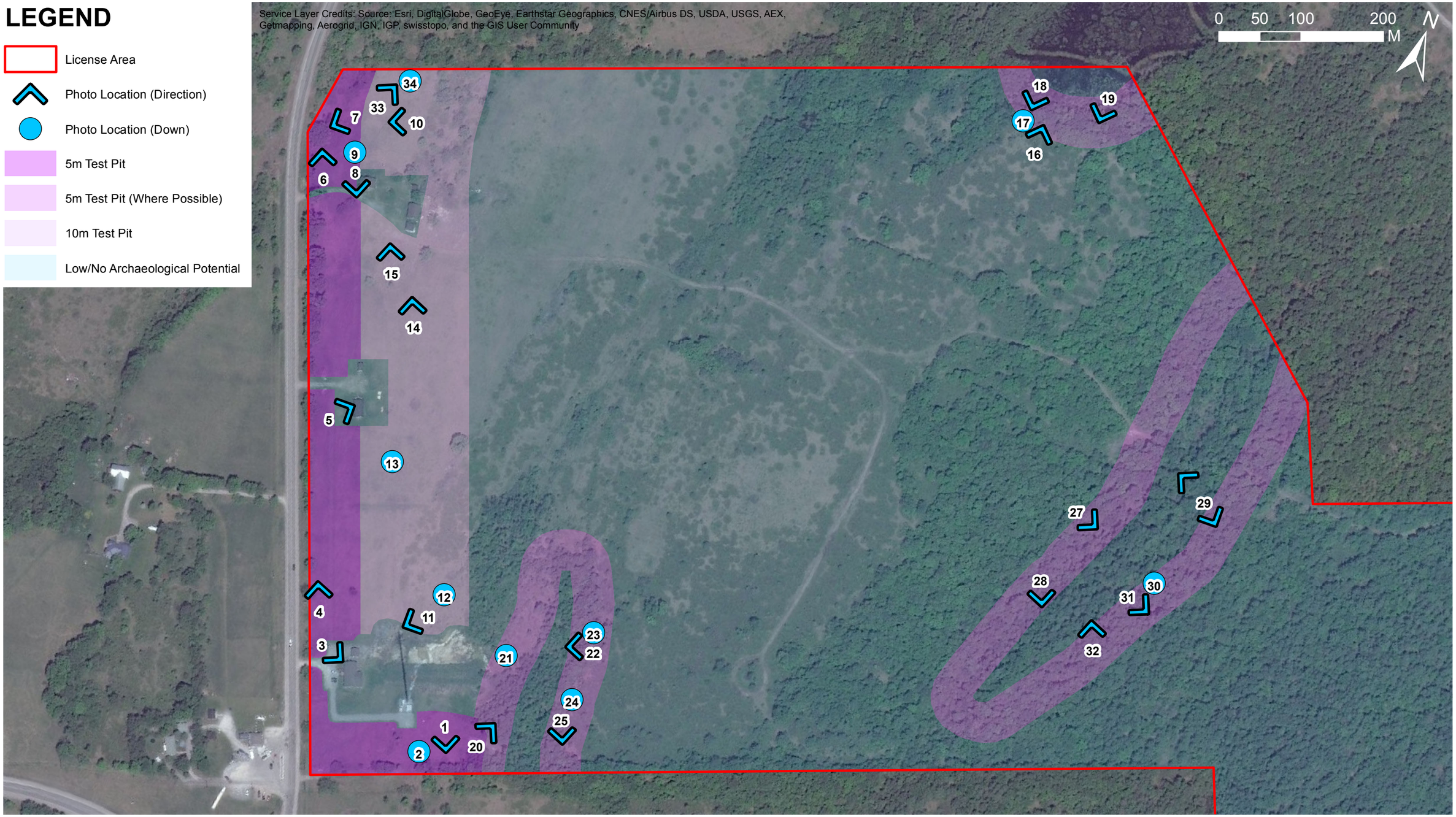
DATE:
11/28/2016

CHECKED BY:
DAY

WSP

LEGEND

- License Area
- Photo Location (Direction)
- Photo Location (Down)
- 5m Test Pit
- 5m Test Pit (Where Possible)
- 10m Test Pit
- Low/No Archaeological Potential



PROJECT:
STAGE 2 ARCHAEOLOGICAL ASSESSMENT:
ROCKRIDGE QUARRY

CLIENT:
2329059 ONTARIO INC.

PROJECT NO.:
151-14010-01

DATE:
11/28/2016

DRAWN BY:
DGL

CHECKED BY:
DAY

WSP

Appendix A

FEATURES INDICATING ARCHAEOLOGICAL POTENTIAL

FEATURES INDICATING ARCHAEOLOGICAL POTENTIAL

The following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites
- Water sources:
    - primary water sources (lakes, rivers, streams, creeks).
    - secondary water sources (intermittent streams and creeks, springs, marshes, swamps).
    - features indicating past water sources (e.g. glacial lake shorelines, relic river. or stream channels, shorelines of drained lakes or marshes, cobble beaches).
    - accessible or inaccessible shoreline (e.g. high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh).
- Elevated topography (e.g. eskers, drumlins, large knolls, plateaux)
- Pockets of well-drained sandy soil, especially near areas of heavy soil or rocky ground
- Distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases
- Resource areas, including:
    - food or medicinal plants (e.g. migratory routes, spawning areas, prairie).
    - scarce raw materials (e.g. quartz, copper, ochre or outcrops of chert).
    - early Euro-Canadian industry (e.g. fur trade, logging, prospecting, mining).
- Areas of early Euro-Canadian settlement. These include places of early military or pioneer settlement (e.g. pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches and early cemeteries.
- Early historical transportation routes (e.g. trails, passes, roads, railways, portage routes).
- Property listed on a municipal register or designated under the Ontario Heritage Act or that is a federal, provincial or municipal historic landmark or site.
- Property that local histories or informants have identified with possible archaeological sites, historic events, activities, or occupations.

Source: Ontario Ministry of Tourism, Culture and Sport
2011 Standards and Guidelines for Consultant Archaeologists
Section 1.3.1

Appendix B

PHOTOGRAPH LOCATIONS

PHOTOGRAPH LOCATIONS

Image	Zone	Easting	Northing	Facing
1	17 T	707863	4943501	SSE
2	17 T	707847	4943478	DOWN
3	17 T	707728	4943525	ESE
4	17 T	707715	4943551	NNW
5	17 T	707661	4943708	NE
6	17 T	707579	4943899	NNW
7	17 T	707585	4943959	SW
8	17 T	707599	4943926	SSE
9	17 T	707598	4943919	DOWN
10	17 T	707631	4943986	WSW
11	17 T	707813	4943580	SW
12	17 T	707809	4943586	DOWN
13	17 T	707726	4943693	DOWN
14	17 T	707699	4943809	NNW
15	17 T	707664	4943845	NNW
16	17 T	708106	4944146	N
17	17 T	708102	4944158	DOWN
18	17 T	708121	4944189	S
19	17 T	708187	4944201	S
20	17 T	707878	4943498	NNE
21	17 T	707880	4943574	DOWN
22	17 T	707947	4943610	WSW
23	17 T	707947	4943602	DOWN
24	17 T	707955	4943555	DOWN
25	17 T	707950	4943565	SSE
26	17 T	708363	4943938	WNW
27	17 T	708292	4943874	ESE
28	17 T	708289	4943805	SSE
29	17 T	708363	4943927	SE
30	17 T	708342	4943845	DOWN
31	17 T	708334	4943836	ESE
32	17 T	708310	4943781	NNW
33	17 T	707618	4944003	NNE
34	17 T	707622	4944006	DOWN
35	17 T	707622	4944006	DOWN

Source: Garmin GPSmap 62s (NAD 83)

Appendix C

ARTIFACT CATALOG

ARTIFACT CATALOG

Date	Project Number	Catalog Number	Unit	Zone	Easting	Northing	Artifact Type	Alteration	Completeness	Artifact Count	Size (mm)
11/24/2016	151-14010-01	RR-S2-01	DL 2	17 T	707624.5	4944007	Faunal	Calcined	Fragment	2	5.7 - 12.5
11/24/2016	151-14010-01	RR-S2-02	MT 1	17 T	707624.5	4944004.5	Faunal	Calcined	Fragment	1	2.8 - 5.7
11/24/2016	151-14010-01	RR-S2-03	MT 1	17 T	707624.5	4944004.5	Faunal	Calcined	Fragment	13	5.7 - 12.5
11/24/2016	151-14010-01	RR-S2-04	MT 1	17 T	707624.5	4944004.5	Faunal	Calcined	Fragment	1	12.5 - 25
11/24/2016	151-14010-01	RR-S2-05	SB 1	17 T	707624.5	4944009.5	Faunal	Calcined	Fragment	35	5.7 - 12.5
11/24/2016	151-14010-01	RR-S2-06	SB 1	17 T	707624.5	4944009.5	Faunal	Calcined	Fragment	4	12.5 - 25
11/24/2016	151-14010-01	RR-S2-07	DL-1	17 T	707619.5	4944004.5	Faunal	Calcined	Fragment	2	2.8 - 5.7
11/24/2016	151-14010-01	RR-S2-08	DL-1	17 T	707619.5	4944004.5	Faunal	Calcined	Fragment	16	5.7 - 12.5
11/24/2016	151-14010-01	RR-S2-09	DL-1	17 T	707619.5	4944004.5	Faunal	Calcined	Fragment	8	12.5 - 25
11/24/2016	151-14010-01	RR-S2-10	XU-1	17 T	707622	4944007	Faunal	Calcined	Fragment	97	2.8 - 5.7
11/24/2016	151-14010-01	RR-S2-11	XU-1	17 T	707622	4944007	Faunal	Calcined	Fragment	1580	5.7 - 12.5
11/24/2016	151-14010-01	RR-S2-12	XU-1	17 T	707622	4944007	Faunal	Calcined	Fragment	602	12.5 - 25
11/24/2016	151-14010-01	RR-S2-13	XU-1	17 T	707622	4944007	Faunal	Calcined	Fragment	24	25 - 50