

Stage 2 Archaeological Assessment of the Elginburg Quarry Expansion, Frontenac County, Ontario

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PIF#:	P191-0085-2013
Development Name:	Elginburg Quarry Expansion
Development Project Designation #:	N/A
Property Location:	Part Lots 12 and 13, Concession 5, Kingston Township (now within the City of Kingston), Frontenac County, Ontario
Date:	April 30, 2014
Report type:	Revised

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Executive Summary and Recommendations

The subject property of the Stage 2 assessment is an approximately 38 hectare parcel of land located west of Elginburg, north of Kingston in Frontenac County. Specifically, the property encompasses part of Lots 12 and 13, Concession 5, in the Township of Kingston (now the City of Kingston) in Frontenac County.

Ground Truth Archaeology conducted a Stage 2 archaeological assessment of the property in November of 2013 for The Cruickshank Group. A Stage 1 assessment conducted in 2010 had identified the property as having archaeological potential, especially along the southern edge where a significant ridge runs along the floodplain of Bur Creek (Berry 2010).

The entire subject property was assessed through a Stage 2 test pit survey at 5m intervals (Figure 8). Four archaeological sites were identified, all along the southern edge of the property. These consisted of a lime kiln (BbGd-59), a foundation (BbGd-60), a small precontact site (BbGd-61) and a non-domestic activity area (BbGd-62). The small precontact site was determined to be an isolated findspot. The other three sites are all of an industrial (non-domestic) nature and appear to date to the second half of the nineteenth century. The industrial sites are likely connected to the Kingston & Pembroke (K&P) Railway that ran along the southern edge of the property (1871) and may be interrelated as part of an industrial landscape. Certainly such sites in a rural landscape are rare in the region and should be considered to have significant cultural heritage value and interpretive potential. It is the intention of the proponent to avoid and protect the sites.

As a result of the Stage 2 archaeological assessment of the subject property and in concordance with the 2011 *Standards and Guidelines for Consultant Archaeologists*, Ground Truth Archaeology makes the following recommendations:

- The archaeological sites BbGd-59, BbGd-60 and BbGd-62 have cultural heritage value and require a Stage 3 archaeological assessment to determine their limits and further understand their nature.
- As the sites are considered to be significant due to their rarity and will be subject to Stage 4 mitigation through avoidance and protection the Stage 3 assessments should at a minimum consist of the hand excavation of 1m² units on a 10m grid centred around the positive Stage 2 test pits and the foundations, with additional units amounting to 40% of the grid unit total placed in areas of interest. The Stage 3 archaeological assessment must adhere to the requirements of the 2011 *Standards and Guidelines for Consultant Archaeologists* (MTC 2011).
- The archaeological site BbGd-61 was found to be an isolated findspot and does not require further archaeological investigation.
- The remainder of the property was found to have no archaeological resources and is considered to have been cleared of all archaeological concerns.

Project Personnel

Licensee	Helen Sheldon (P191)
Project Manager	Nick Gromoff (P206)
Field Director	Helen Sheldon
Cartography	Helen Sheldon
Report Writing	Helen Sheldon
Artifact Analysis	Nick Gromoff
Field Technicians	Chris Cadue, Peter Cassidy, Dan Laderoute, Nathan Laanstra, Colin Smith, John Smith, Peter Smith, Maggie Stewart, Ted Stewart

Project Context

Development Context

In October of 2013 Ground Truth Archaeology was retained by The Cruickshank Group, Kingston, Ontario to undertake a Stage 2 archaeological assessment of an approximately 38 hectare parcel of land backing onto The K&P Trail just west of the village of Elginburg. The property is located within parts of Lots 12 and 13, Concession 5 in Kingston Township, now within the City of Kingston (Figure 1). An existing Aggregate Extraction Facility is owned and operated by The Cruickshank Group on Lot 14 directly east of the subject property and fronting onto Unity Road to the north. It is the intention of The Cruickshank Group to prepare for the future expansion of the existing Aggregate Extraction property on Unity Road.

An archaeological assessment was required by the Ministry of Natural Resources for expansion of the quarry and by the City of Kingston as part of the Official Plan amendment and rezoning process. The Stage 1 archaeological assessment of the property, conducted by Ground Truth Archaeology in 2010 under PIF P246-040-2010, recommended a Stage 2 assessment of the entire property.

The current archaeological assessment was conducted for an application for quarry extension (Figure 6). The legislation triggering the assessment is the Aggregate Resource Act and the Planning Act. The Ministry of Natural Resources and the City of Kingston are the approval authorities for this application. Permission to access the property, conduct archaeological fieldwork and remove artifacts was given by Ken Bangma of the Cruickshank Group prior to the start of archaeological fieldwork.

Historical Context

The following is taken from the 2010 Stage 1 report (Berry 2010):

Upon patent by the Crown Lot 12 was split into eastern and western halves each consisting of 100 acres. The eastern half of Lot 12 was granted to Micajah Purdy in 1798, and the western half was granted in 1802 to John Warner. The eastern half was retained by Micajah Purdy until 1823 when he sold the property to Lewis Day, in the same year Day sold the property to John Lampton Hodgson. In 1825 Warner sold the north-eastern quarter to Hodgson, consolidating his ownership of the majority of the lot (OLR).

In 1828 Hodgson sold the southern 100 acres of Lot 12 to John and Lydia Pugh. Upon the death of John Warner in 1832 his land holdings passed via will to John Vincent and his wife; one of the Vincent's were likely relatives of John Warner. By 1834 the northern 100 acres of Lot 12 were sold to John Patterson. John Patterson was born in Scotland, a Presbyterian, married to Isabella Patterson. The couple had at least seven children according to the 1851 census of Canada West, four of which were adults at the time of enumeration and working in the Kingston Township area (Ancestry.com, 2010a).

In 1849 John and Lydia Pugh sold the southern 100 acres to Timothy Donovan, an Irish Catholic immigrant born in 1811. Donovan only farmed his 100 acre holding, as he owned nearby Lot 14 and maintained his home on that property along with his wife Catharine and their seven children (Ancestry.com, 2010b) (Figure 2). The ownership of Lot 12 remained with the Patterson's and Donovan's for the remainder for the 19th century. In 1879, upon the death of John Patterson, the ownership of the northern part passed to his second oldest son, Francis Patterson. The eldest Patterson son, George, was described as a Seaman in the 1851 census and was likely no longer living on the family farm. In December 1874 the Kingston and Pembroke Railway Company purchased a portion Lot 12 from Timothy Donovan in order to run a rail line across the property (see Figure 3).

Lot 13 within Concession 5 was also split along its eastern and western halves. The east half of Lot 13 was first granted by the Crown to John Cummings et al, in 1802 (OLR). The west half was granted at the same date to Colonel Neil McLean. These men were Loyalists, and would have viewed these properties, by the Crown following the American Revolution, as capital, rather than as working farms.

In 1812, John Cumming and Peter Smith transferred title to the east half of Lot 13 to Peter Smith. The west half was mortgaged by John McLean in 1834 (OLR). In 1838, the Smiths sold the east half to William Dames, who sold it to William Albertson in 1840 (OLR). William Albertson was of Loyalist stock, on all sides. He was born in Kingston Township in 1806, and died there in 1881. His wife Ann Maria Loney was also from Kingston Township. They had many children, mostly girls, and in 1851 were living on Lot 13, in a one storey log house. A labourer, Charles Murray, his wife and daughter were living in a shanty nearby. It seems most likely that the Albertson house of 1851 was in the same location as the one shown on Walling's map of 1860, since the family was enumerated near the Switzers and Gibsons and Jacksons of Jackson's Mill. All of these families' properties lay on or near the fourth concession line. In

1860, Walling's map showed Lot 13 in the possession of W. Albertson (Walling, 1860) (Figure 2).

The Historical Atlas, nearly two decades later, shows W. Albertson owning the east half of Lot 13 (Figure 3). There was a house located at the south end of the property, between the creek to the south, and the railway line to the north. The west half of Lot 13 was owned by Timothy Donovan, who lived on Lot 14 (Meacham, 1878). Donovan purchased the land in 1840 from John McLean (OLR). After the death of William Albertson, his wife, Maria, gave the property to her son, John in 1882. Both halves of the lot remained in the possession of the original settlers until after 1900 (OLR).

In summary, the study area was settled fairly late by local standards, and does not appear to have had any other use than agricultural during the historic period.

Currently the study area contains no buildings and is primarily forested. A few largely grassed areas exist within the interior, surrounded by second growth forest consisting of scattered hardwoods, junipers and numerous thick stands of prickly ash. A significant ridge runs along the south end of the property, at the north edge of the K&P Trail that follows the former line of the Kingston and Pembroke Railway.

Archaeological Context

The study area is located near Elginburg on the east side of an active aggregate extraction site owned and operated by The Cruickshank Group. It consists of approximately 38 hectares extending from a natural gas pipeline easement in the north to the K&P Trail in the south. The only waterway on the property is a small creek that skims the southeast corner (Figure 5). The most significant geographic feature of the property is a prominent ridge that runs along the southern edge, immediately north of the K&P Trail overlooking the floodplain of Bur Creek to the south. The property is primarily forested, with a few overgrown fields.

Consultation with the Ministry of Culture, Tourism and Sport's Archaeological Sites Database during the Stage 1 assessment found that there are no registered sites within the subject property and no registered sites within one kilometre of the property (Berry 2010).

The soil over all of the development property consists of Farmington loam (F1), a well-drained calcareous stony loam till, generally favourable for farming (Canada Dept. of Agriculture 1965) (Figure 10). Although the soil is suitable, the depth of it is not conducive to good farming conditions. With shallow bedrock, the soils over the entire study area are classed as 6R –Class 6 being soils that are only capable of producing perennial forage crops (such as pasture) and cannot be improved primarily because the terrain is unsuitable for farm machinery; and subclass R being soils where solid bedrock is less than one metre below the surface Canada Dept. of Agriculture 1967) (Figure 11).

The parcel of land located immediately to the north of the study area was assessed for archaeological resources in 2009 by Ground Truth Archaeology under PIF P206-048-2008. The study area was found to have low to no potential for the presence of archaeological resources and

no further work was recommended. The Stage 1 archaeological assessment of the current study area was conducted in 2010 by Ground Truth Archaeology under PIF P246-040-2010, with archaeological potential identified as significant and a Stage 2 assessment recommended (Figure 9).

The current Stage 2 archaeological assessment occurred on November 14, 15, 16, 19 and 21, 2013.

Maps

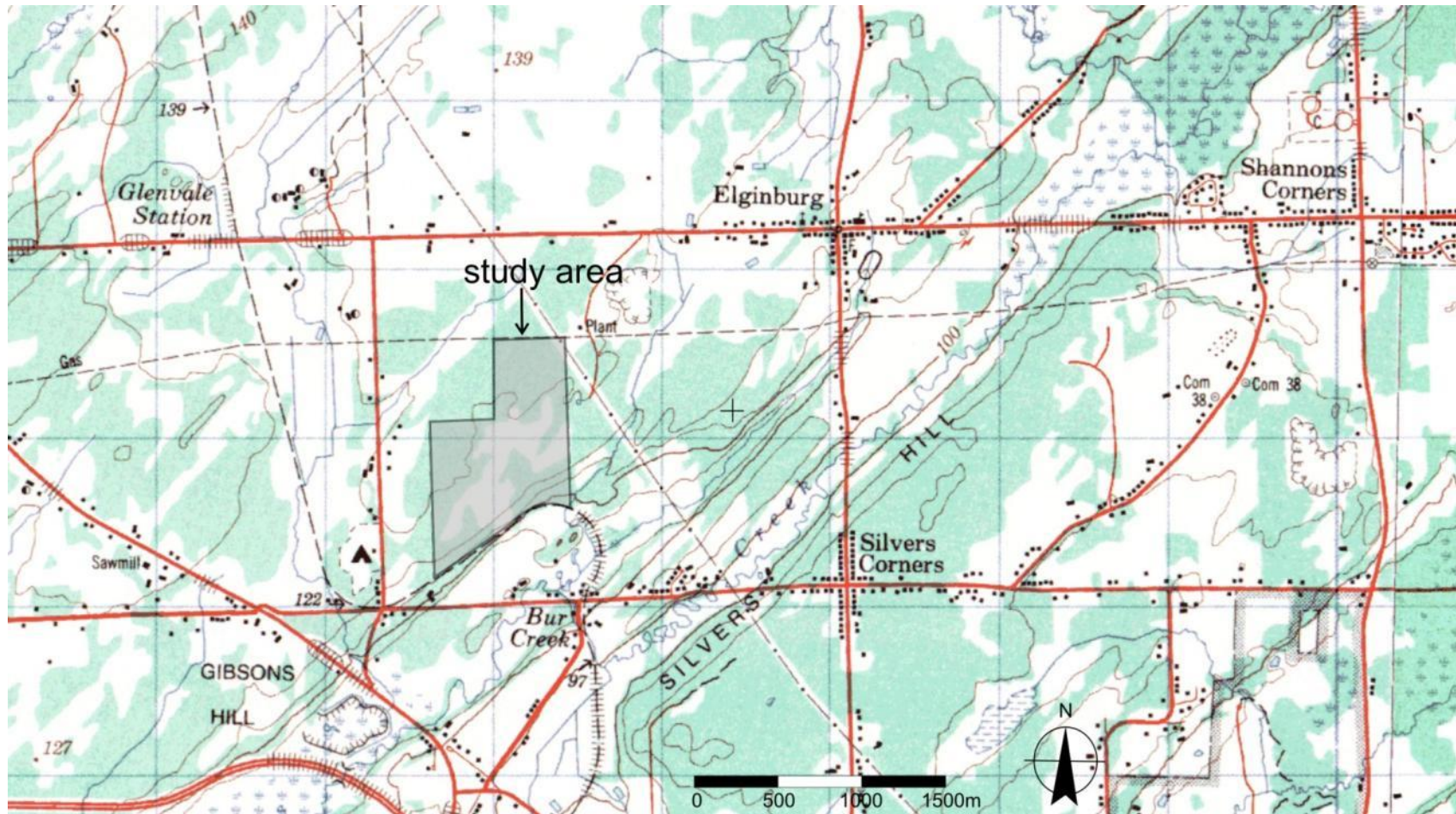
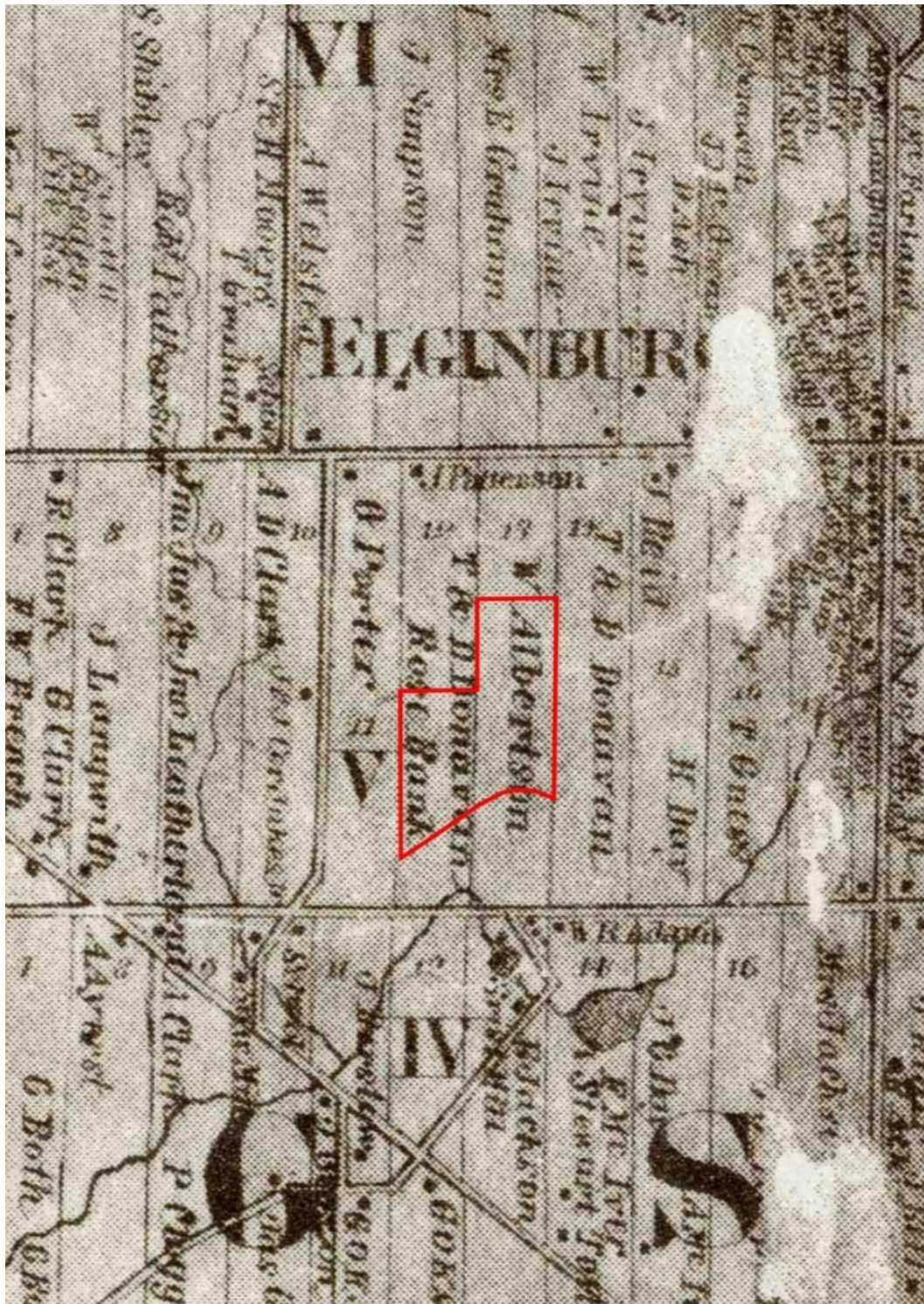


Figure 1: Study area shown on the NTS 1:50,000 map (31 C/7)



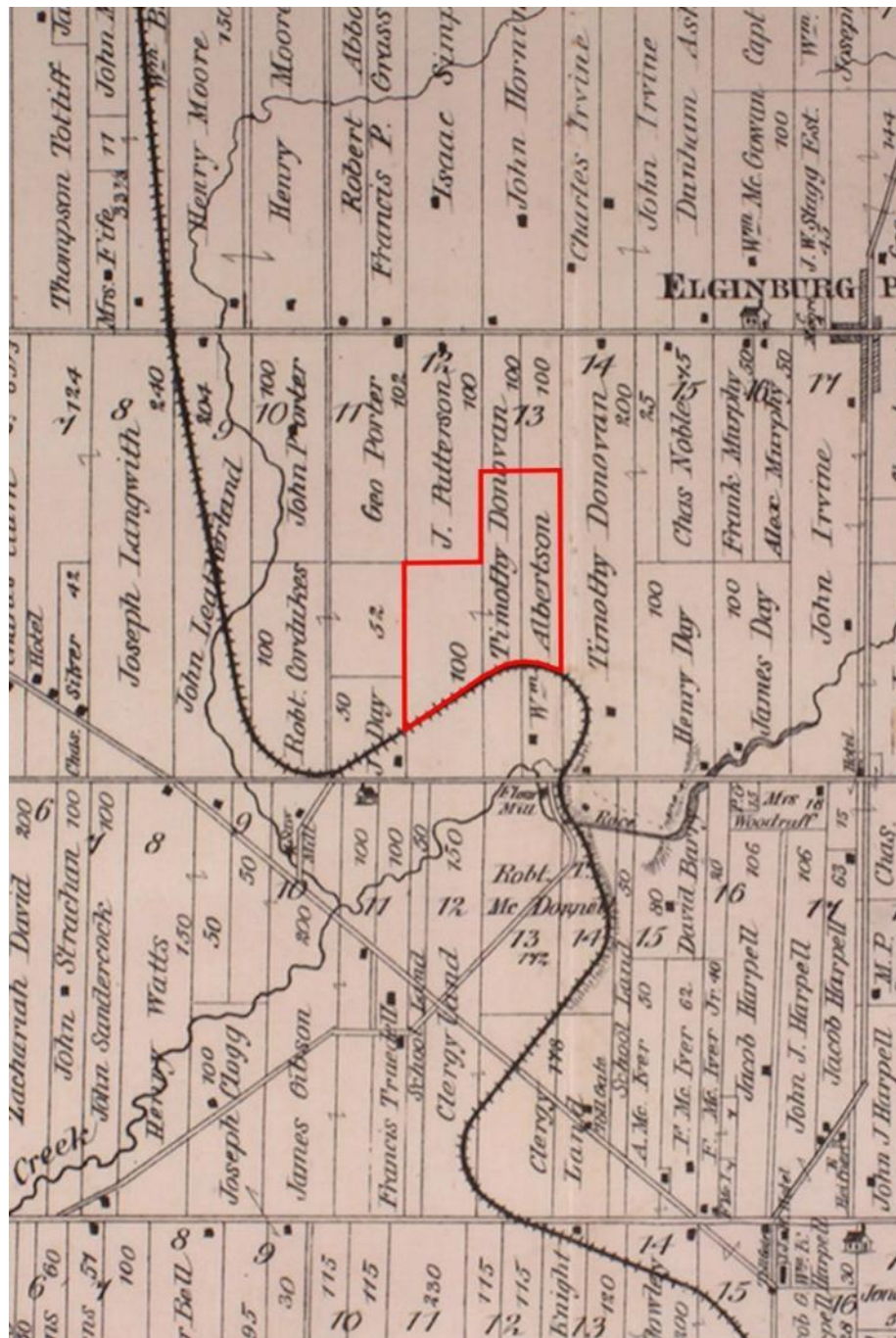


Figure 3: Assessment area shown on the 1878 Meacham map, outlined in red



Figure 4: Assessment area on 1953 aerial photograph

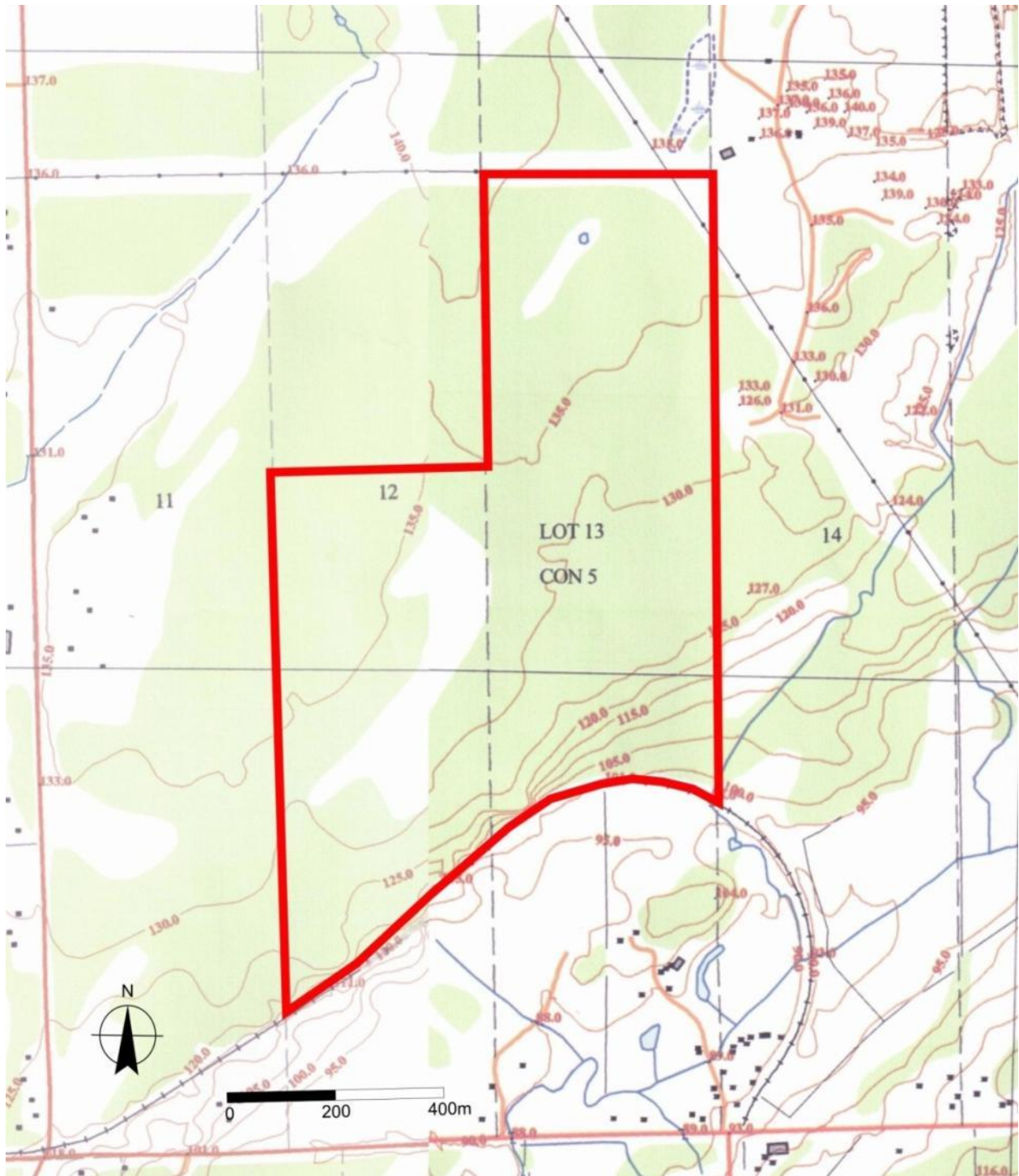


Figure 5: Study area on the OBM (1018 3750 49050/1018 37000 49050)

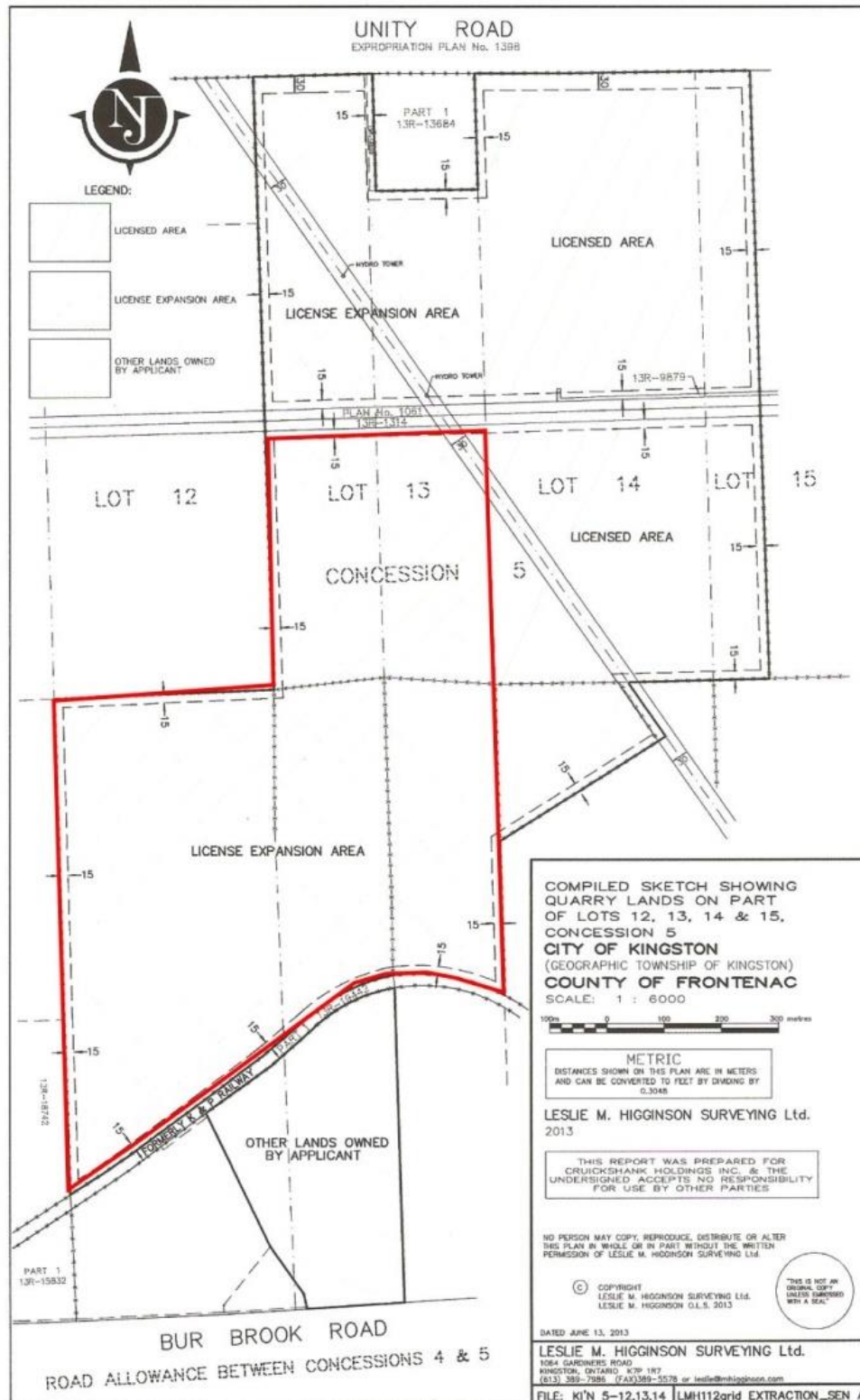


Figure 6: Development plan of property, with the study area outlined in red (base map provided by The Cruickshank Group)

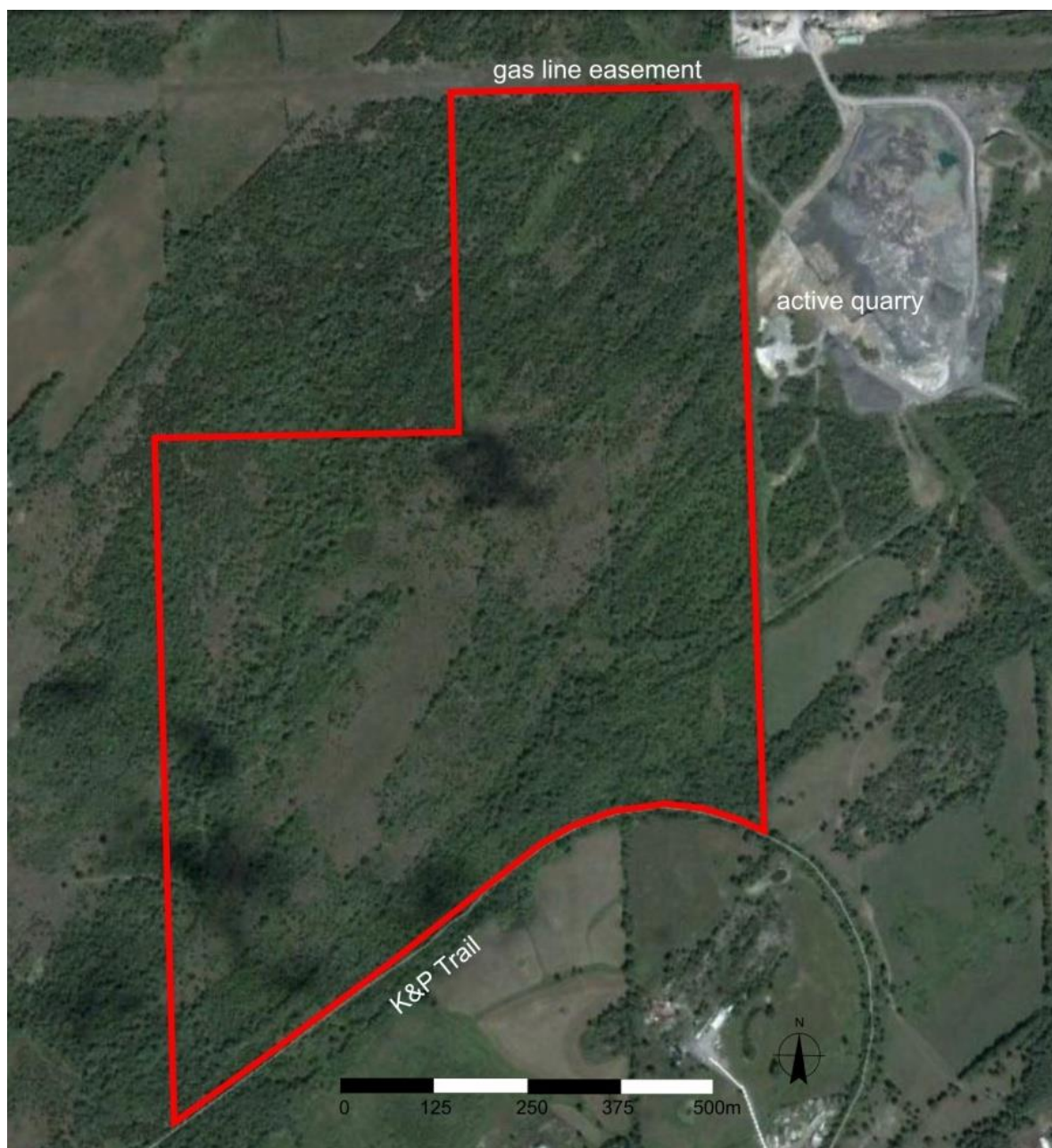


Figure 7: Aerial view of study area (base image Google Earth)



Figure 8: Area of test pit survey (base image Google Earth)

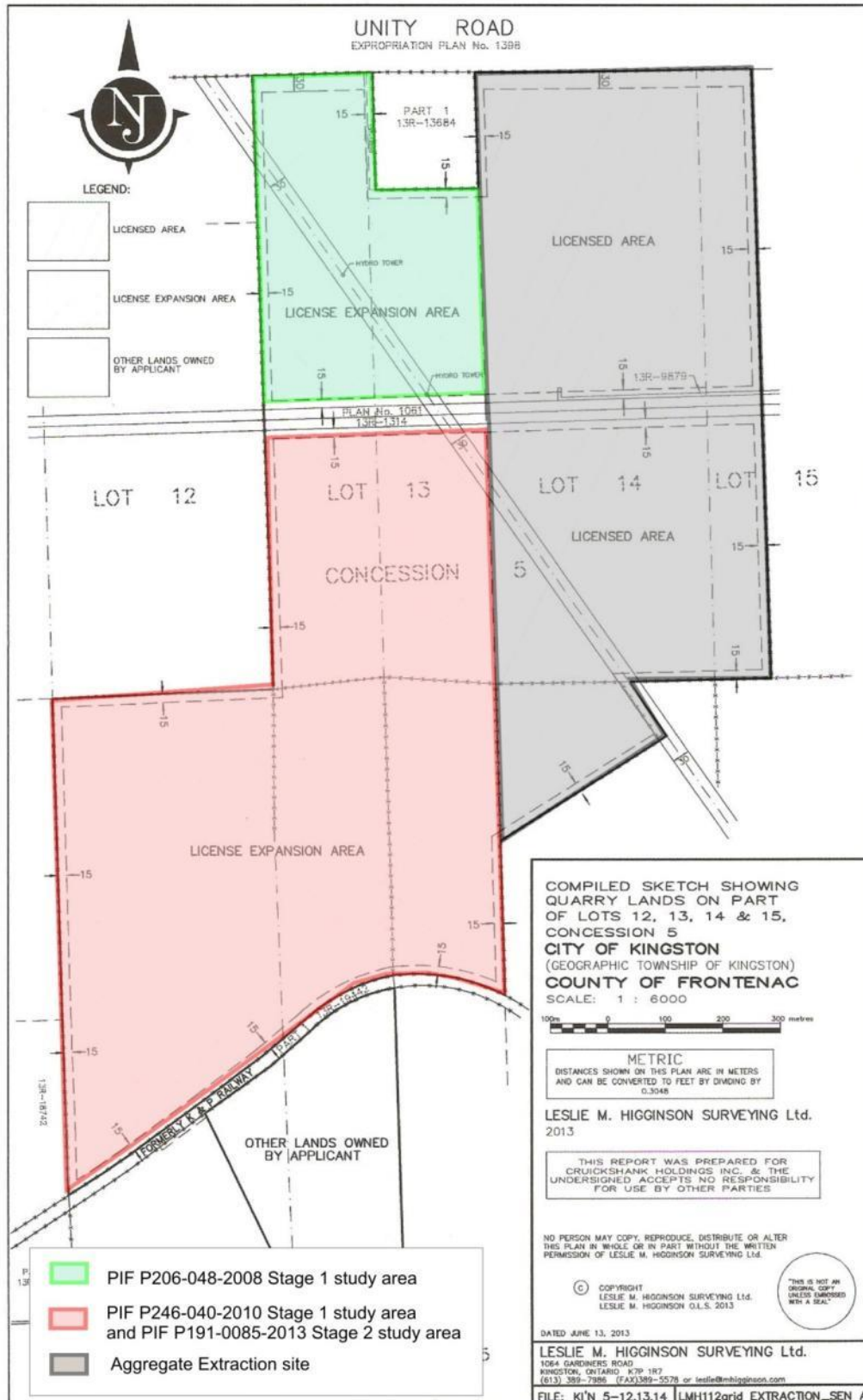


Figure 9: Associated archaeological assessments shown on the development map

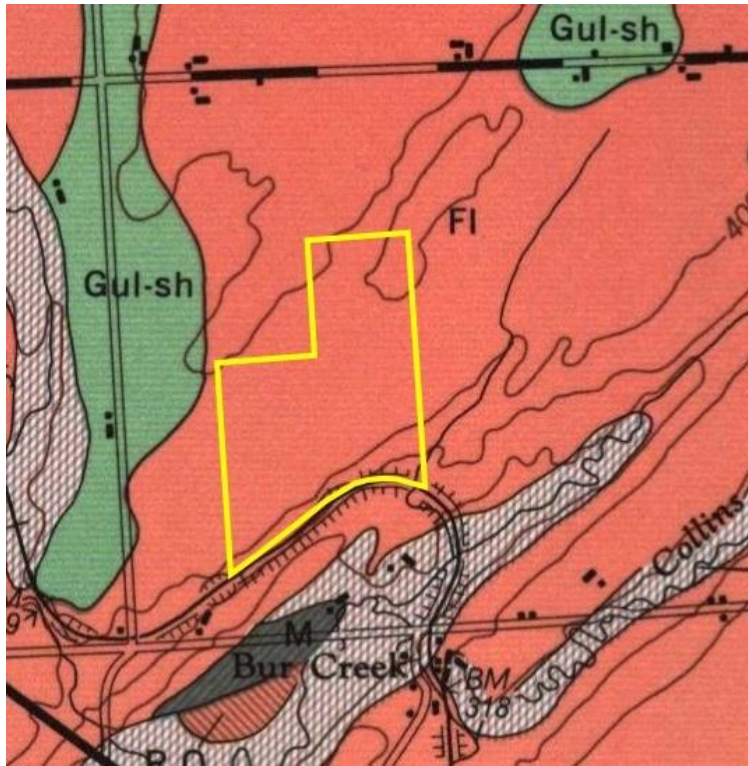


Figure 10: Study area shown on the soil map, outlined in yellow (Canada Dept. of Agriculture 1965)

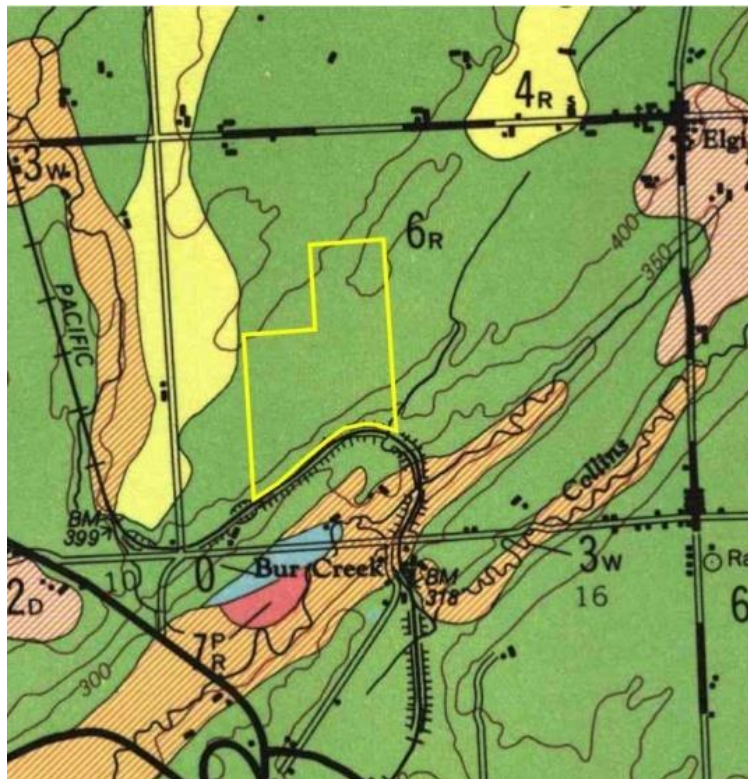


Figure 11: Study area shown on the soil capability map, outlined in yellow (Canada Dept. of Agriculture 1967)

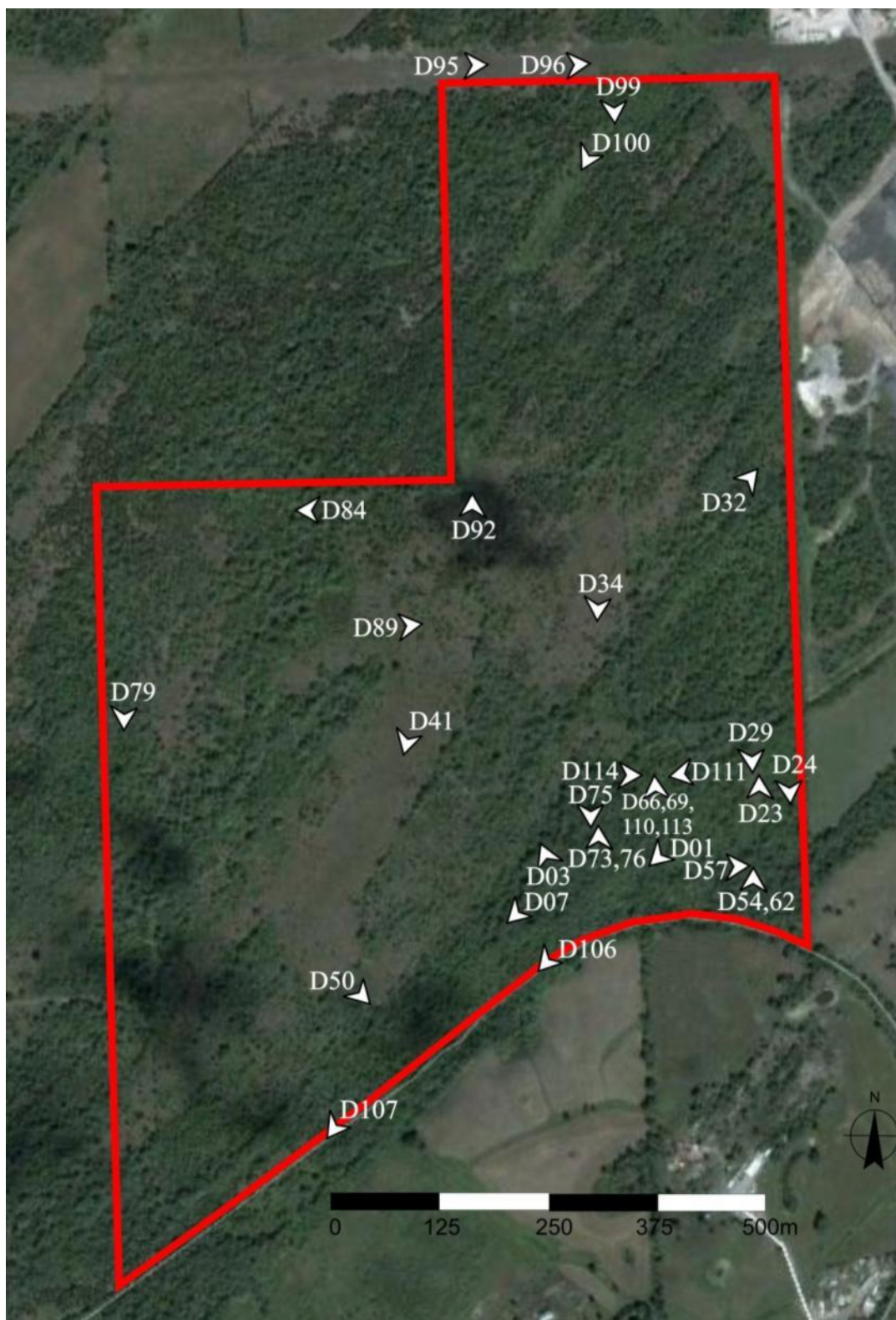


Figure 12: Photograph directions (by photograph catalogue number)

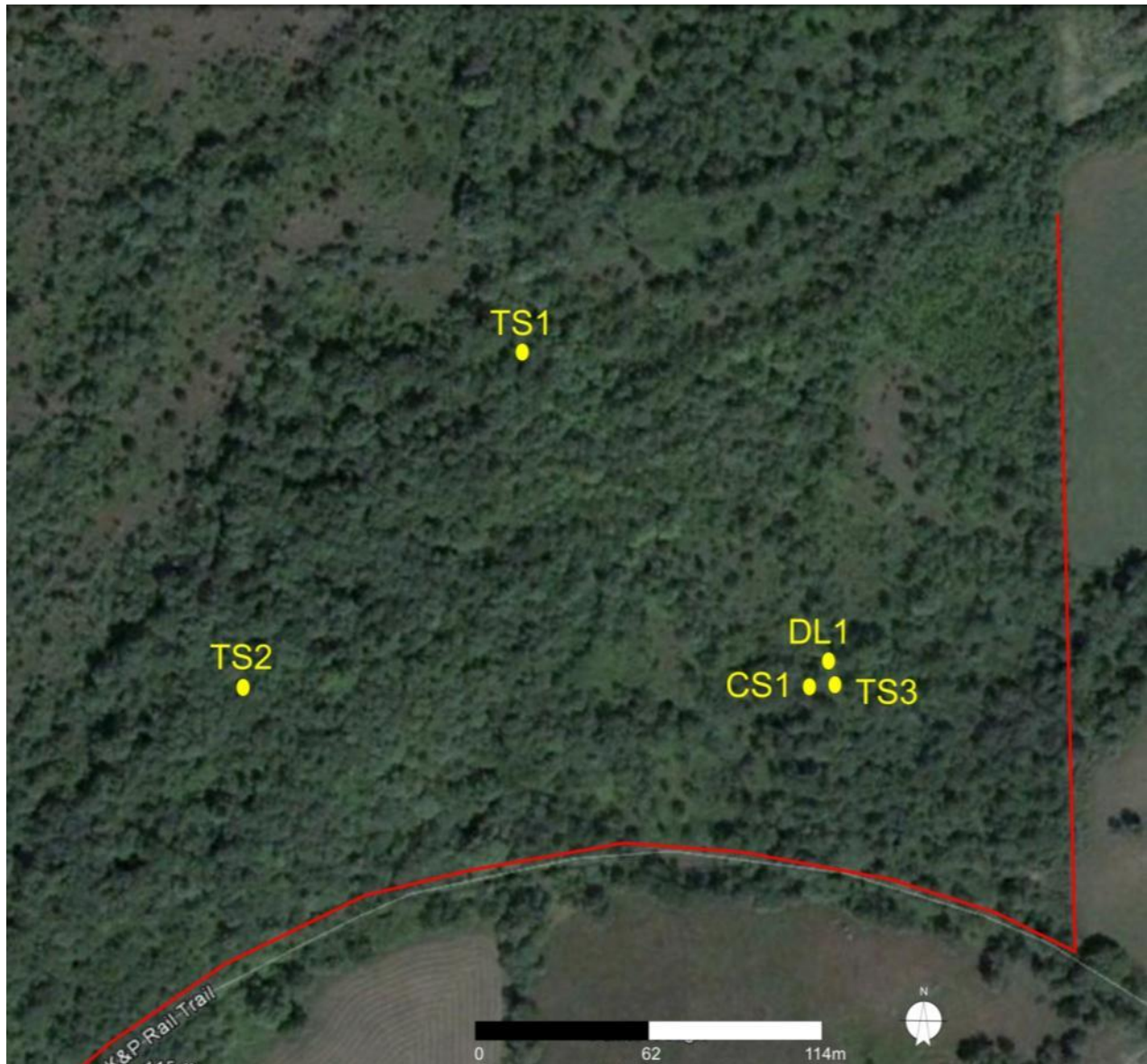


Figure 13: Location of Stage 2 positive test pits in southeast corner of property

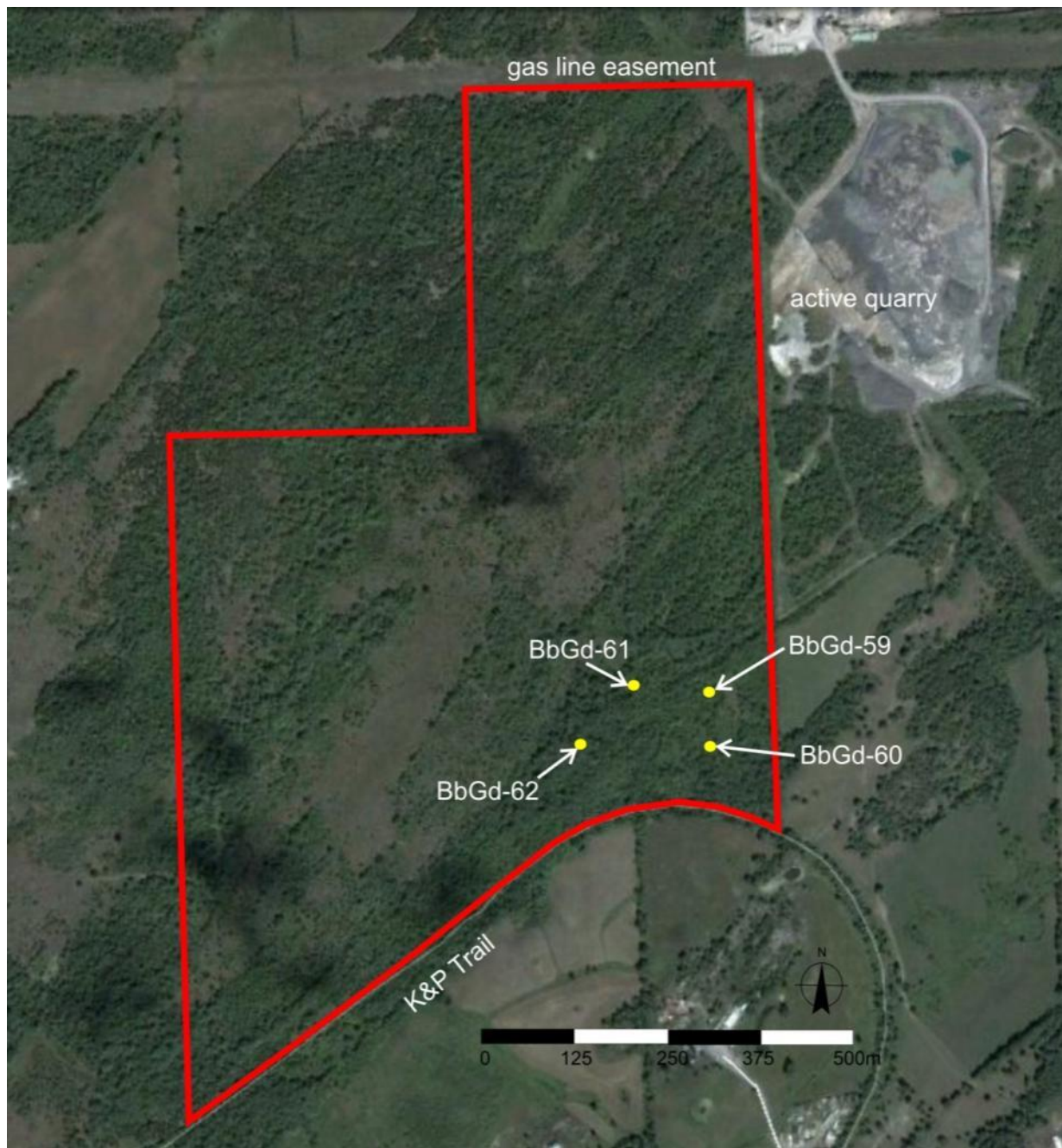


Figure 14: Location of Archaeological Sites

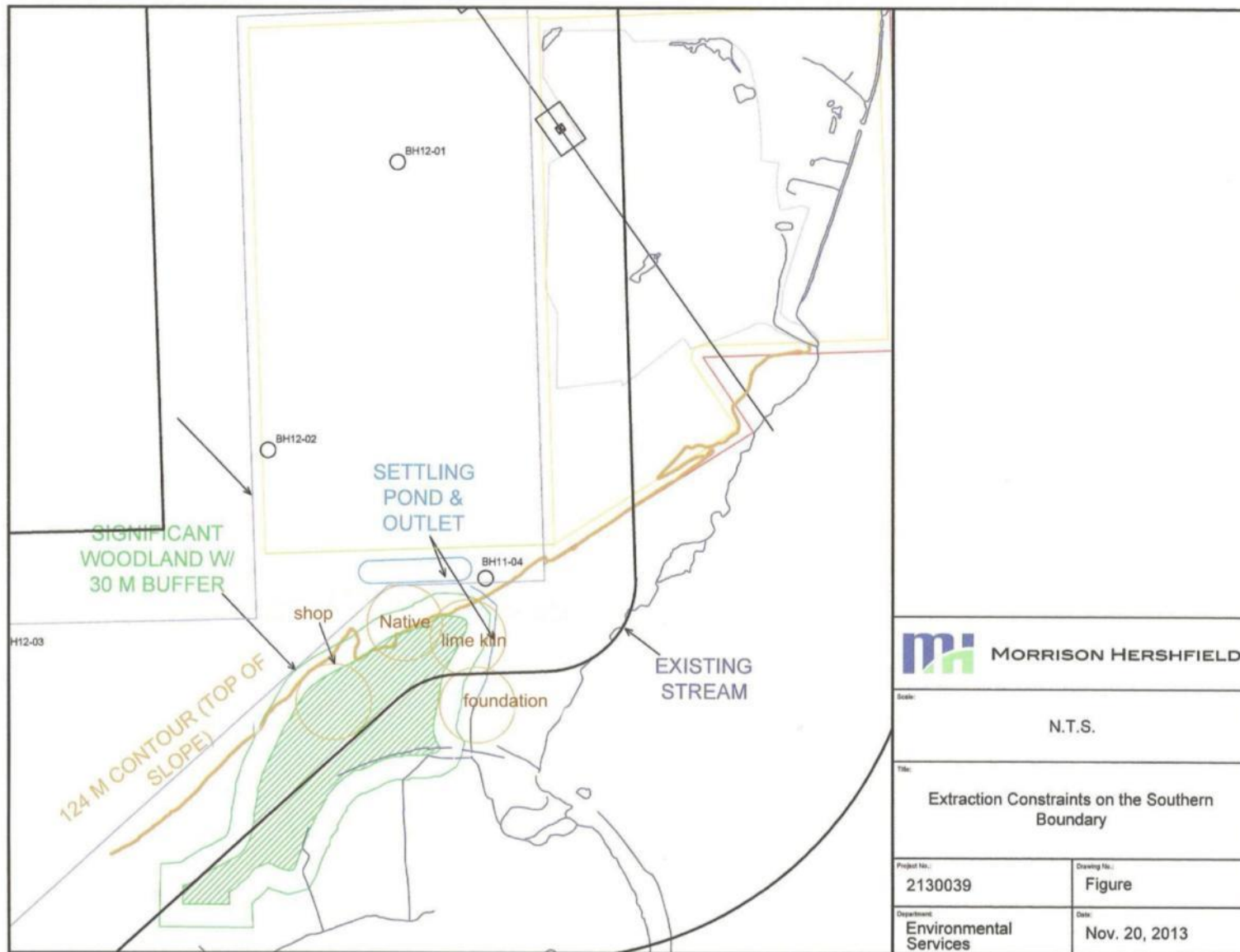


Figure 15: Archaeological constraints at southern boundary with 50m buffer (provided by The Cruickshank Group)

Field Methods

As the study area consisted of a mixture of woodland and the occasional overgrown field, none of the property could be ploughed. Therefore the entire study area was assessed through a test pit survey conducted at 5m intervals. Test pits measured a minimum of 30cm in diameter and were excavated at least 5cm into sterile subsoil, or to bedrock, with all backdirt screened through 6mm steel mesh screens. Test pits were backfilled upon completion and were examined for evidence of fill, stratigraphy and cultural features.

Positive test pits were labelled sequentially with the initials of the field technician responsible. For example the first positive test pit found by Ted Smith was labelled TS1. Finds were flagged and geo-located using a Garmin Etrex HCX GPS with an accuracy of 2-3m.

A catalogue of the artifacts recovered during the Stage 2 assessment is included in the report as Appendix B. The artifacts were catalogued by positive test pit number.

The weather was appropriate for an archaeological assessment with mostly sunny skies and temperatures ranging from 3 to 10° C. No snow or frozen ground was present during the assessment. The field records and associated documentation are stored at the offices of Ground Truth Archaeology in Quinte West, Ontario until a suitable repository is established.

Record of Finds

Inventory of field notes: Author/recorder – Helen Sheldon

Field notes: 1910085NB1-7

Photographs: 1910085D01-114

The soils in the study area were found to be a relatively stone free and adequately drained dark brown to brown-black silty clay that extended either to a light or orange brown sandy clay subsoil or to limestone bedrock. The terrain was generally fairly flat except for the steep ridge at the southern end of the property along the K&P Trial. This slope was examined for above ground features, but was not tested due to the general absence of soil. Bedrock was generally shallow and exposed in places. The vegetative cover consisted of a mixture of thick stands of juniper and prickly ash, the occasional stand of hardwoods and a few overgrown fields. A small portion of the north central area was marshy, with standing water and was not tested due to its permanently wet status (see Figure 8).

Four archaeological sites were discovered, all along the ridge at the southern edge of the property that had been identified as an area of high potential in the Stage 1 assessment (Figure 13). These were allocated the Borden numbers BbGd-59 through BbGd-62 by the Ministry of Tourism, Culture and Sport and are discussed below:

BbGd-59 (lime kiln)

A relatively intact lime kiln was found on a steep rocky slope on the east edge of the property (originally labelled Feature 1). The structure was roughly oval with interior measurements of 2.7 metres E-W and 3.6 metres N-S. It was constructed of 5 to 6 rows of granite fieldstones many of which showed signs of heating, especially on the lower levels. The drawhole was located on the south (downhill) side and was intact. Several railway ties were lying below the kiln and may be the remains of a trolley system used to both bring limestone to the kiln and remove the resulting lime.

No artifacts were recovered from around the lime kiln due to the paucity of soil and the extremely rocky nature of the surroundings.

BbGd-60 (foundation)

Approximately 80 metres south of the lime kiln was a substantial three sided foundation with interior dimensions of 12 metres E-W and 8.5 metres N-S (originally labelled Feature 2). The foundation was rectangular, with east, west and north walls composed of dry laid blocks of roughly cut limestone up to five rows high. The limestone blocks were large – measuring a metre or more in maximum length. The south wall of the foundation was missing, and, as the south end of the east wall is neatly squared with no sign of a south wall ever having been tied into it, it is probable that a south wall did not exist. The foundation is built into the side of the hill and has a stepped bedrock floor.

Three positive test pits occurred around the foundation. Intensification occurred around one of these on the east side of the foundation wall, with a 1m² unit excavated over TS3 and five shovel tests excavated around it. The three shovel tests on the west side of TS3 could not be excavated due to the proximity of the foundation wall.

The soil in the 1m² intensification unit was a dark brown silty clay over a light brown clay subsoil. Subsoil was encountered 30 cm below surface.

BbGd-61 (biface)

A quartz crystal biface and a large secondary flake were found in a single shovel test and labelled TS1. Intensification occurred in the form of excavation of a 1m² unit over TS1 and eight shovel tests around it spaced 2.5 metres from the original find. As absolutely no further cultural material was found, two more 1m² units were excavated 2.5 m east and 2.5 m west of the original find. Both of these units were negative for cultural remains and the biface and flake are considered isolated finds.

The soil was a dark brown–black silty clay with a high loam content over limestone bedrock. Bedrock was encountered at approximately 10cm below surface, with no evidence of subsoil.

BbGd-62 (activity area)

In a mature hardwood setting atop the ridge at the southern edge of the property was positive test pit TS2 containing cut nails and other fragments of burnt metal. Intensification occurred around the original findspot, with a 1m² unit excavated over TS2 and eight shovel tests excavated around the unit at a distance of 2.5 metres from the unit. This site was registered as an archaeological site as it consisted of a deposit of nineteenth century non-domestic material in an otherwise pristine woodland setting. The site may possibly be associated with maple syrup processing and could be a relatively rare example of light industrial activity in a rural setting.

The soil was a dark brown-black silty loam over orange brown sandy clay subsoil, which was encountered at 25 cm below surface.

Images



Plate 1: Fence between east and west halves of Lot 13 (1910085D01)



Plate 2: Testing along the ridge (1910085D03)



Plate 3: Edge of slope on the ridge (1910085D07)



Plate 4: South end of the lime kiln (BbGd-59) (1910085D23)



Plate 5: Railway ties below the lime kiln (1910085D24)



Plate 6: Interior of the lime kiln (BbGd-59) (1910085D29)



Plate 7: East edge of the property, quarry berm in background (1910085D32)



Plate 8: Testing central portion of the study area (1910085D34)



Plate 9: Overgrown field in central portion of study area (1910085D41)



Plate 10: Mature hardwood forest along the ridge (1910085D50)



Plate 11: Intensification at TS3 (BbGd-60) (1910085D54)



Plate 12: Interior of foundation wall at BbGd-60 (1910085D57)



Plate 13: Completed unit at TS3 (BbGd-60) (1910085D62)



Plate 14: Intensification at TS1 (BbGd-61) (1910085D66)



Plate 15: Completed unit at TS1 (BbGd-61) (1910085D69)



Plate 16: Intensification at TS2 (BbGd-62) (1910085D73)



Plate 17: Intensification at TS2 (BbGd-62) (1910085D75)



Plate 18: Completed unit at TS2 (BbG-d62) (1910085D76)



Plate 19: Testing on the west side of the property (1910085D79)



Plate 20: Testing in the northwest corner of the property (1910085D84)



Plate 21: Testing the central portion of the property (1910085D89)



Plate 22: Rideau Trail on the west side of the property (1910085D92)



Plate 23: Gas line easement at the north edge of the study area (1910085D95)



Plate 24: Hydro line in the northeast corner (1910085D96)



Plate 25: Fence between east and west halves of Lot 13 at the north end (1910085D99)



Plate 26: Marshy area in north central portion of the property (1910085D100)



Plate 27: K&P Trail at the south edge of the property (1910085D106)



Plate 28: K&P Trail (1910085D107)



Plate 29: Second completed unit at TS1 (BbGd-61) (1910085D110)



Plate 30: Second completed unit at TS1 (BbGd-61) (1910085D111)



Plate 31: Third completed unit at TS1 (BbGd-61) (1910085D113)



Plate 32: Third completed unit at TS1 (BbGd-61) (1910085D114)

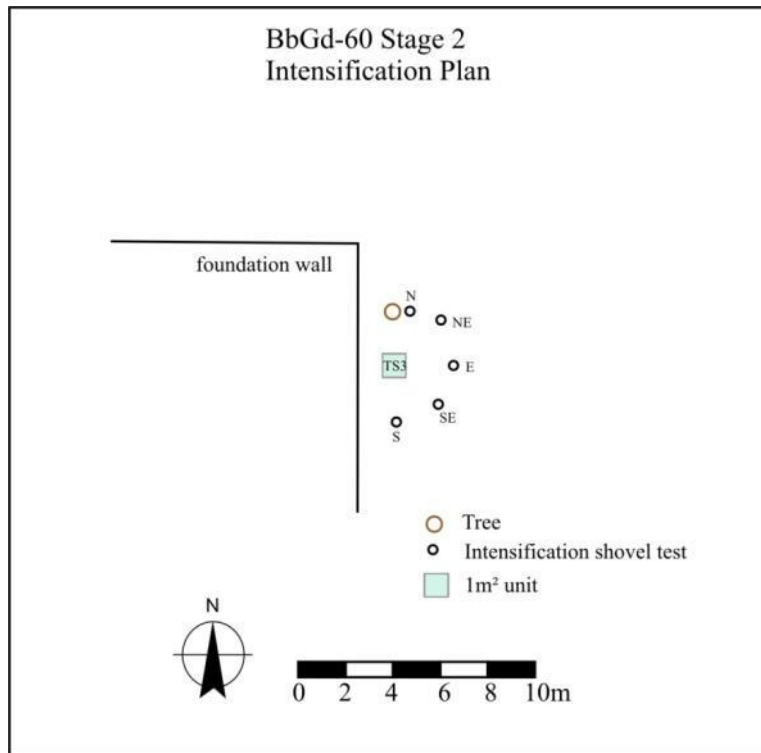


Figure 16: Plan of Stage 2 intensification at BbGd-60

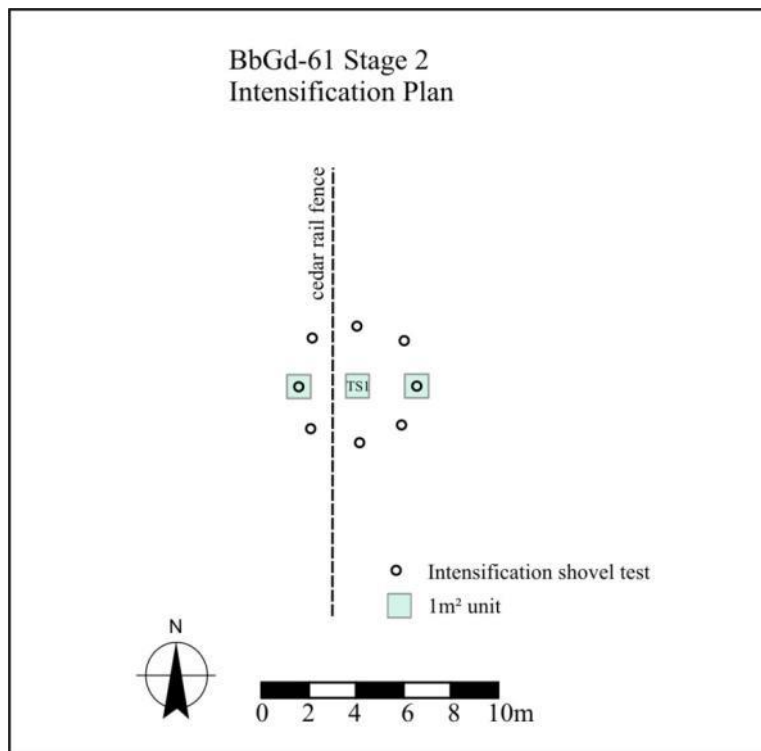


Figure 17: Plan of Stage 2 intensification at BbGd-61

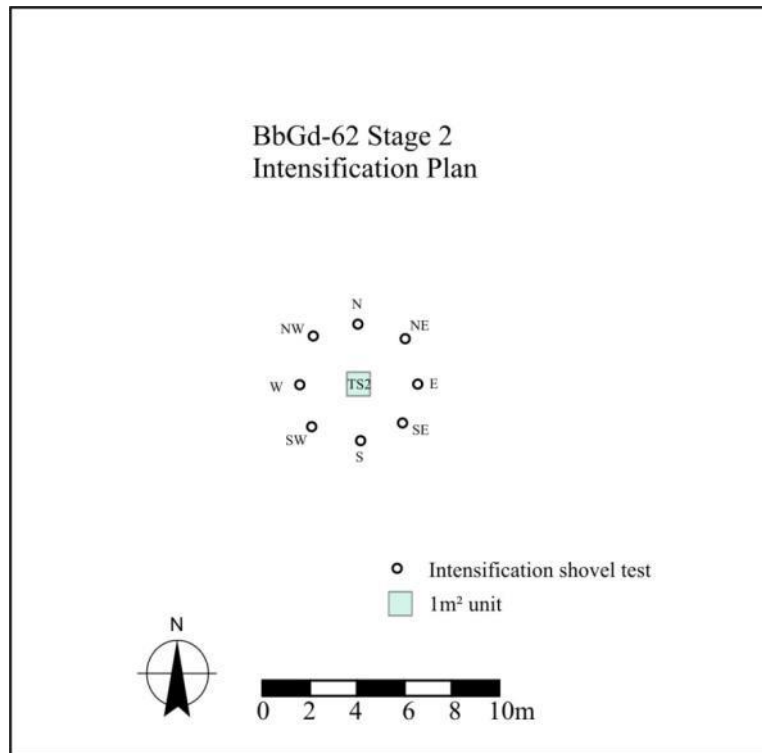


Figure 18: Plan of Stage 2 intensification at BbGd-62



Plate 33: Faunal remains from BbGd-60, TS3 1x1 unit



Plate 34: Metal artifacts from BbGd-60, TS3 1x1 unit – A-C) machine cut nails, D) fence staple, E) wrought nail



Plate 35: Copper tube from BbGd-60, TS3 1x1 unit



Plate 36: Mammal bone fragment and cut nail from BbGd-60, CS1



Plate 37: Wrought nail from BbGd-60, DL1



Plate 38: Artifacts from BbGd-60, TS3 NE shovel test – A) rolled metal fragment, B) cut nail, C) bird bone



Plate 39: Secondary flake from BbGd-61, side 1



Plate 40: Secondary flake from BbGd-61, side 2



Plate 41: Quartz biface from BbGd-61, side 1



Plate 42: Quartz biface from BbGd-61, side 2



Plate 43: Ferrous alloy bracket from BbGd-62, TS2 1x1 unit



Plate 44: Railway spike from BbGd-62, TS2



Plate 45: Hair pin from BbGd-62, TS2 1x1 unit



Plate 46: Assortment of nails from BbGd-62



Plate 47: Clinker from BbGd-62

Analysis and Conclusions

BbGd-60 Artifact Analysis

A total of 25 artifacts was recovered from three positive test pits (CS1, DL1 and TS3) and the subsequent intensification (1m x 1m unit) over TS3 and the pits around it. These positive test pits were found in association with a robust three sided foundation and has subsequently been registered as BbGd-60.

No ceramics were recovered during the Stage 2 investigation of this site. Faunal remains (48%, n=12) were the most common artifact class followed by architectural items (32%, n=8). The faunal remains included two ungulate phalanges. A bird long bone was also recorded. Much of the bone is fragmented, which contributed to the high count.

The architectural artifacts consisted of six cut nails and two wrought nails. As well two copper tubes made by rolling strips of copper longitudinally were recovered. The function of these artifacts is not clear at this point but they may have functioned as crimps for the end of some sort of cordage. A scrap piece of sheet iron and two fence staples made up the rest of the assemblage.

Due to the site's proximity to the railway, the absence of vessel ceramics and the association with the foundation, it is interpreted as the location of some sort of industrial activity, probably associated with the nearby lime kiln (BbGd-59). It may have been a storage shed for equipment used at the lime kiln and for containers of lime (sacks, barrels).

Artifact Class	Artifact Type	# by class	# by type	% of total
Faunal		12		48%
	mammal bone		10	
	bird bone		2	
Architectural		8		32%
	wrought nails		2	
	cut nails		6	
Misc. Copper alloy	unid tube	2	2	8%
Misc. Iron		3		12%
	fence staple		2	
	unid metal		1	
Total			25	100%

Table 1: BbGd-60 Stage 2 artifact assemblage

BbGd-61 Artifact Analysis

Only two artifacts were found at BbGd-61. These were a large secondary flake of a poor quality chert probably obtained in local till and a quartz biface. No other artifacts were recovered from three 1m² units and surrounding shovel tests. Neither of the artifacts is temporally diagnostic, other than being precontact in origin. It is probable that they were dropped at the location as people were travelling along the ridge and they represent an isolated deposition incident.

BbGd-62 Artifact Analysis

An assemblage of 300 artifacts was recovered from positive test pit TS2 and the subsequent intensified testing in and around this unit. Clinker (n=189) apparently from the burning of coal (n=3) was the most common artifact accounting for 63% of the assemblage. Charcoal (n=10) was also recovered indicating that wood, in addition to coal, was burned at the site.

Architectural items (26%, n=77) were also common, with all being machine cut nails (n=65) or wire nails (n=12). The rest of the assemblage was miscellaneous ferrous material (7%, n=21) including bolts (n=4), can fragments (n=3), wire (n=3), a railway spike and a bracket among the identified pieces. There was also a piece of strapping used as a bracket with two rivets through each end. This last piece was likely attached to wood.

The only personal item found was an amber coloured hair clip of plastic. This may be an early form of plastic such as celluloid or pyralin or it may be post 1945 plastic and is intrusive. The tentative interpretation of the BbGd-62 site is a maple syrup processing shack (sugar shack), which used both coal and wood as fuel. The site is located within a mature stand of sugar maples. However, further assessments may unearth evidence of a different function.

Artifact Class	Artifact Type	# by class	# by type	% of total
Architectural		77		26%
	wire nails		12	
	cut nails		65	
Misc. Ferrous		21		7%
	bracket/rivets	1	1	
	bolt		4	
	unid metal		8	
	bracket		1	
	can		3	
	wire		3	
	railway spike		1	
Personal items	hair clip	1	1	<1%
Fuel related		189		63%
	clinker		186	
	coal		3	
Floral	charcoal	10	10	3%
Total		298	298	100%

Table 2: BbGd-62 Stage 2 artifact assemblage

Conclusions

The subject property of the Stage 2 assessment is an approximately 38 hectare parcel of land located west of Elginburg, north of Kingston in Frontenac County. Specifically, the property encompasses part of Lots 12 and 13, Concession 5, in the Township of Kingston (now the City of Kingston) in Frontenac County.

Ground Truth Archaeology conducted a Stage 2 archaeological assessment of the property in November of 2013 for The Cruickshank Group. A Stage 1 assessment conducted in 2010 had identified the property as having archaeological potential, especially along the southern edge where a significant ridge runs along the floodplain of Bur Creek (Berry 2010).

The entire subject property was assessed through a Stage 2 test pit survey at 5m intervals (Figure 8). Four archaeological sites were identified, all along the southern edge of the property. These consisted of a lime kiln (BbGd-59), a foundation (BbGd-60), a small precontact site (BbGd-61) and a non-domestic activity area (BbGd-62). The small precontact site was determined to be an isolated findspot. The other three sites are all of an industrial (non-domestic) nature and appear to date to the second half of the nineteenth century. The industrial sites are likely connected to the Kingston & Pembroke (K&P) Railway that ran along the southern edge of the property (1871) and may be interrelated as part of an industrial landscape. Certainly such sites in a rural landscape are rare in the region and should be considered to have significant cultural heritage value and interpretive potential. It is the intention of the proponent to avoid and protect the sites.

Recommendations

As a result of the Stage 2 archaeological assessment of the subject property and in concordance with the 2011 *Standards and Guidelines for Consultant Archaeologists*, Ground Truth Archaeology makes the following recommendations:

- The archaeological sites BbGd-59, BbGd-60 and BbGd-62 have cultural heritage value and require a Stage 3 archaeological assessment to determine their limits and further understand their nature.
- As the sites are considered to be significant due to their rarity and will be subject to Stage 4 mitigation through avoidance and protection the Stage 3 assessments should at a minimum consist of the hand excavation of 1m² units on a 10m grid centred around the positive Stage 2 test pits and the foundations, with additional units amounting to 40% of the grid unit total placed in areas of interest. The Stage 3 archaeological assessment must adhere to the requirements of the 2011 *Standards and Guidelines for Consultant Archaeologists* (MTC 2011).
- The archaeological site BbGd-61 was found to be an isolated findspot and does not require further archaeological investigation.
- The remainder of the property was found to have no archaeological resources and is considered to have been cleared of all archaeological concerns.

- Should deeply buried archaeological remains be found on the property during development activities, the Ministry of Tourism, Culture and Sport (416-314-7148) should be notified immediately.
- In the event that human remains are encountered during development, the proponent should immediately contact local law enforcement, then Michael D'Mello, Cemeteries Regulation Unit, Ministry of Small Business and Consumer Services, 416-326-8404, and the Ministry of Tourism, Culture and Sport.

Advice on Compliance with Legislation

This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.

It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the *Ontario Heritage Act*.

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

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

Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

References

Maps

National Topographic Series – 1:50,000 map (31 C/7)

1:10, 000 Ontario Base Map - OBM # 1018 3750 49050/1018 37000 49050

Google Earth imagery date July 29, 2005, accessed November 13, 2013

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1953 Provincial Series 4414-29-38. Queen's University Air Photograph Collection

Archival Map References

1860 Kingston inset from the map of the united counties of Frontenac, Lennox and Addington, Canada West, from actual Surveys under the Direction of H. F. Walling. Putnam & Walling Publishers. Queen's University Library Map Collection.

1878 Illustrated Historical Atlas of the Counties of Frontenac, Lennox and Addington, Ontario, Belleville. J.H. Meacham. Reprinted by Mika Silk Screening Limited. 1971.

Canada Department of Agriculture

1965 Soil Map of Frontenac County, Ontario, South Sheet. Soil Survey Report No. 39. Soil Research Institute, Research Branch. Ottawa.

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1967 Soil Capability Map of Frontenac County, Ontario, South Sheet. Soil Research Institute, Research Branch. Ottawa.

Primary Historic Documents

Ontario Land Registry (OLR) Records Kingston Township, Frontenac County

Other

Ancestry.com (2010a) 1851 Census of Canada West.

<http://search.ancestry.ca/iexec/?htx=View&r=5543&dbid=1061&iid=e094-e002348343&fn=John&ln=Patterson&st=r&ssrc=&pid=339005>.

Ancestry.com (2010b) 1881 Census of Canada. [http://search.ancestry.ca/cgi-](http://search.ancestry.ca/cgi-bin/sse.dll?rank=1&new=1&MSAV=0&msT=1&gss=angs-g&gsfn=Timothy&gsln=Donavan&msrpn=1649519&msrpn_PInfo=8-%7c1652393%7c3243%7c5007%7c1649519%7c&msrpn__ftp=Kingston%2c+Ontario%2c+Can)

[bin/sse.dll?rank=1&new=1&MSAV=0&msT=1&gss=angs-](http://search.ancestry.ca/cgi-bin/sse.dll?rank=1&new=1&MSAV=0&msT=1&gss=angs-g&gsfn=Timothy&gsln=Donavan&msrpn=1649519&msrpn_PInfo=8-%7c1652393%7c3243%7c5007%7c1649519%7c&msrpn__ftp=Kingston%2c+Ontario%2c+Can)

[g&gsfn=Timothy&gsln=Donavan&msrpn=1649519&msrpn_PInfo=8-](http://search.ancestry.ca/cgi-bin/sse.dll?rank=1&new=1&MSAV=0&msT=1&gss=angs-g&gsfn=Timothy&gsln=Donavan&msrpn=1649519&msrpn_PInfo=8-%7c1652393%7c3243%7c5007%7c1649519%7c&msrpn__ftp=Kingston%2c+Ontario%2c+Can)

[%7c1652393%7c3243%7c5007%7c1649519%7c&msrpn__ftp=Kingston%2c+Ontario%2c+Can](http://search.ancestry.ca/cgi-bin/sse.dll?rank=1&new=1&MSAV=0&msT=1&gss=angs-g&gsfn=Timothy&gsln=Donavan&msrpn=1649519&msrpn_PInfo=8-%7c1652393%7c3243%7c5007%7c1649519%7c&msrpn__ftp=Kingston%2c+Ontario%2c+Can)

ada&sbo=0&uidh=i64&pcat=ROOT_CATEGORY&h=2756549&recoff=7+8&db=1881Canada
&indiv=1.

Berry, Michael

2010 Stage 1 Archaeological Assessment, Part of Lots 12 & 13, Concession 5, Kingston Township, Frontenac County, City of Kingston. Consultant report, Ground Truth Archaeology.

Gromoff, Nick

2009 Stage 1 Archaeological Assessment for the Cruickshank Re-zoning, Part of Lot 13, Concession V, Kingston Township, Frontenac County, City of Kingston. Consultant report, Ground Truth Archaeology.

Ministry of Tourism and Culture (MTC)

2011 Standards and Guidelines for Consultant Archaeologists. Ministry of Tourism and Culture: Toronto.

Appendix A: Photograph Catalogue

Photo #	Description	Direction	Date
1910085D01	scaling the fence between east and west halves of Lot 13	SW	November 14, 2013
1910085D02	test pit at TS1	N	November 14, 2013
1910085D03	testing along top of ridge at south end of property	N	November 14, 2013
1910085D04	hardwood forest along ridge at south end of property	NW	November 14, 2013
1910085D05	slope at south end of property to the K&P trail	SE	November 14, 2013
1910085D06	testing along top of ridge at south end of property	NE	November 14, 2013
1910085D07	slope at south end of property to the K&P trail	W	November 14, 2013
1910085D08	testing along top of ridge at south end of property	SE	November 14, 2013
1910085D09	testing along top of ridge at south end of property	N	November 14, 2013
1910085D10	testing along top of ridge at south end of property	NE	November 14, 2013
1910085D11	testing in scrub growth at south end of property	N	November 14, 2013
1910085D12	testing in scrub growth at south end of property	N	November 14, 2013
1910085D13	testing south of the ridge along the K&P trail	SE	November 14, 2013
1910085D14	testing south of the ridge along the K&P trail	E	November 14, 2013
1910085D15	exposed bedrock north of the trail	N	November 14, 2013
1910085D16	interior of west wall of Feature 2	NW	November 14, 2013
1910085D17	interior of west wall of Feature 2	NW	November 14, 2013
1910085D18	testing around Feature 2	E	November 14, 2013
1910085D19	northeast corner of Feature 2	NE	November 14, 2013
1910085D20	exterior of west wall of Feature 2	SW	November 14, 2013
1910085D21	Feature 1 - lime kiln	S	November 14, 2013
1910085D22	south end of lime kiln	NW	November 14, 2013
1910085D23	south end of lime kiln	N	November 14, 2013
1910085D24	railway ties south of lime kiln	S	November 14, 2013
1910085D25	south end of east wall of Feature 1	NW	November 15, 2013
1910085D26	interior of lime kiln	N	November 15, 2013

Photo #	Description	Direction	Date
1910085D27	south end of lime kiln	NW	November 15, 2013
1910085D28	interior of west wall of lime kiln	SW	November 15, 2013
1910085D29	interior of lime kiln	S	November 15, 2013
1910085D30	terrain surrounding lime kiln	SE	November 15, 2013
1910085D31	path north of lime kiln	SW	November 15, 2013
1910085D32	scrub growth adjacent to active quarry	NE	November 15, 2013
1910085D33	berm at west edge of active quarry	NE	November 15, 2013
1910085D34	testing on Lot 13 near the quarry	SE	November 15, 2013
1910085D35	testing on Lot 13 near the quarry	N	November 15, 2013
1910085D36	testing on Lot 13 near the quarry	S	November 15, 2013
1910085D37	testing in central portion of property	S	November 15, 2013
1910085D38	testing in central portion of property	SE	November 15, 2013
1910085D39	shallow bedrock in central portion of property	NW	November 15, 2013
1910085D40	shallow bedrock in central portion of property	W	November 15, 2013
1910085D41	grassy clearing in central portion of property	SW	November 15, 2013
1910085D42	forest in central portion of property	NW	November 15, 2013
1910085D43	forest in central portion of property	NW	November 15, 2013
1910085D44	quarry property boundary sign	E	November 15, 2013
1910085D45	Rideau Trail on west edge of property	N	November 15, 2013
1910085D46	testing west edge of property	NE	November 16, 2013
1910085D47	bedrock ledge at west end of south portion of property	NW	November 16, 2013
1910085D48	bedrock ledge at west end of south portion of property	NW	November 16, 2013
1910085D49	testing west edge of property	NW	November 16, 2013
1910085D50	view from ridge at south end of property	S	November 16, 2013
1910085D51	testing southwest edge of property	E	November 16, 2013
1910085D52	southwest edge of property	E	November 16, 2013
1910085D53	testing southwest edge of property	SE	November 16, 2013
1910085D54	intensifying around TS3 at Feature 2	N	November 16, 2013
1910085D55	intensifying around TS3 at Feature 2	N	November 16, 2013
1910085D56	intensifying around TS3 at Feature 2	NE	November 16, 2013
1910085D57	interior of east wall, TS3 in background	E	November 16, 2013
1910085D58	interior of east wall, Feature 2	SE	November 16, 2013
1910085D59	interior of west wall, Feature 2	W	November 16, 2013
1910085D60	south end of east wall, Feature 2	NW	November 16, 2013
1910085D61	intensifying around TS3 at Feature 2	N	November 16, 2013
1910085D62	completed 1x1 unit over TS3	N	November 16, 2013
1910085D63	completed 1x1 unit over TS3	N	November 16, 2013
1910085D64	completed 1x1 in relation to Feature 2	NW	November 16, 2013
1910085D65	intensifying around TS1	NW	November 16, 2013
1910085D66	intensifying around TS1	NW	November 16, 2013
1910085D67	intensifying around TS1	NW	November 16, 2013
1910085D68	completed 1x1 unit over TS1	N	November 16, 2013
1910085D69	completed 1x1 unit over TS1	N	November 16, 2013
1910085D70	completed 1x1 unit over TS1	N	November 16, 2013
1910085D71	intensifying around TS2	N	November 16, 2013
1910085D72	intensifying around TS2	N	November 16, 2013
1910085D73	intensifying around TS2	N	November 16, 2013

Photo #	Description	Direction	Date
1910085D74	intensifying around TS2	S	November 16, 2013
1910085D75	intensifying around TS2	S	November 16, 2013
1910085D76	completed 1x1 unit over TS2	N	November 16, 2013
1910085D77	completed 1x1 unit over TS2	N	November 16, 2013
1910085D78	testing in northwest portion of property	W	November 19, 2013
1910085D79	testing along cedar fence on west edge of property	S	November 19, 2013
1910085D80	testing in northwest portion of property	S	November 19, 2013
1910085D81	borehole pipe	SE	November 19, 2013
1910085D82	Rideau Trail on west edge of property	N	November 19, 2013
1910085D83	property stake on west edge of property	W	November 19, 2013
1910085D84	cedar fence at north edge of west end of property	NW	November 19, 2013
1910085D85	trail at north edge of west end of property	E	November 19, 2013
1910085D86	survey stake in northwest corner of property	W	November 19, 2013
1910085D87	survey stake in northwest corner of property	SW	November 19, 2013
1910085D88	testing along north edge of property	E	November 19, 2013
1910085D89	grassy clearing in central portion of property	E	November 19, 2013
1910085D90	grassy clearing in central portion of property	E	November 19, 2013
1910085D91	grassy clearing in central portion of property	E	November 19, 2013
1910085D92	trail along west edge of property	N	November 21, 2013
1910085D93	trail along west edge of property	N	November 21, 2013
1910085D94	gas line easement at north end of property	E	November 21, 2013
1910085D95	gas line easement at north end of property	E	November 21, 2013
1910085D96	Hydro line in northeast corner of property	E	November 21, 2013
1910085D97	Hydro line in northeast corner of property	E	November 21, 2013
1910085D98	north end of property	S	November 21, 2013
1910085D99	cedar fence between east and west halves of Lot 13	SE	November 21, 2013
1910085D100	marshy area in north portion of property	SW	November 21, 2013
1910085D101	marshy area in north portion of property	SE	November 21, 2013
1910085D102	intensifying west of TS1	W	November 21, 2013
1910085D103	intensifying east of TS1	E	November 21, 2013
1910085D104	intensifying east of TS1	E	November 21, 2013
1910085D105	K&P trail	W	November 21, 2013
1910085D106	K&P trail below TS2	W	November 21, 2013
1910085D107	K&P trail	W	November 21, 2013
1910085D108	K&P trail	W	November 21, 2013
1910085D109	bedrock ledge at west end of south portion of property	NW	November 21, 2013
1910085D110	completed 1x1 unit east of TS1	N	November 21, 2013
1910085D111	completed 1x1 unit east of TS1	NW	November 21, 2013
1910085D112	completed 1x1 unit east of TS1	W	November 21, 2013
1910085D113	completed 1x1 unit west of TS1	N	November 21, 2013
1910085D114	completed 1x1 unit west of TS1	E	November 21, 2013

Appendix B: Artifact Catalogue

Catalogue #	Unit	Material	Class	Type	Variety	Item	Portion	#	Notes
	BbGd-60								
191-0085-01	CS1	faunal	bone: mammal	unid	unid	animal bone	fragment	1	
191-0085-02	CS1	metal	iron	machine made: cut		nail	partial	1	
191-0085-03	DL1	metal	iron	wrought		nail	partial	1	
191-0085-04	TS3	metal	iron	machine made: cut		nail	partial	1	
191-0085-05	TS3 1x1	faunal	bone: mammal	unid	unid	animal bone	fragment	9	
191-0085-06	TS3 1x1	metal	copper alloy	rolled		unid tube	partial	2	3.8mm dia
191-0085-07	TS3 1x1	metal	iron	drawn		fence staple	complete	1	
191-0085-08	TS3 1x1	metal	iron	machine made: cut		nail	partial	2	
191-0085-09	TS3 1x1	metal	iron	machine made: cut		nail	complete	1	
191-0085-10	TS3 1x1	metal	iron	wrought		nail	partial	1	
191-0085-11	TS3-E	metal	iron	drawn		fence staple	complete	1	
191-0085-12	TS3-NE	faunal	bone: bird	unid	long bone	animal bone	partial	2	
191-0085-13	TS3-NE	metal	iron	machine made: cut		nail	partial	1	
191-0085-14	TS3-NE	metal	iron	rolled		unid metal	fragment	1	
	BbGd-61								
191-0085-15	TS1	stone	chert	till	secondary	flake	complete	1	
191-0085-16	TS1	stone	quartz	clear crystal		biface	complete	1	l=45.5mm, w=31.5mm, t=11.8mm
	BbGd-62								
191-0085-17	TS2 1x1	metal	iron	cast		railway spike	partial	1	burnt 14x1.5x1.5cm
191-0085-18	TS2-1x1	clinker	coal clinker			clinker	fragment	10	
191-0085-19	TS2-1x1	floral	wood			charcoal	fragment	5	

Catalogue #	Unit	Material	Class	Type	Variety	Item	Portion	#	Notes
191-0085-20	TS2-1x1	metal	ferrous alloy	rolled		strap bracket	complete	1	2 domed bolts in each end. ~14x2cm.
191-0085-21	TS2-1x1	metal	iron	machine made: cut		nail	complete	14	
191-0085-22	TS2-1x1	metal	iron	machine made: cut		nail	partial	43	
191-0085-23	TS2-1x1	metal	iron	machine made: wire		nail	complete	8	
191-0085-24	TS2-1x1	metal	iron	machine made: wire		nail	partial	3	
191-0085-25	TS2-1x1	metal	iron	cast		bracket	complete	1	
191-0085-26	TS2-1x1	metal	iron	rolled		can	fragment	3	
191-0085-27	TS2-1x1	metal	iron	drawn	light gauge	wire	fragment	2	
191-0085-28	TS2-1x1	metal	iron	drawn	domed	bolt	complete	4	1 burnt
191-0085-29	TS2-1x1	metal	iron	rolled		unid metal	fragment	8	6 burnt
191-0085-30	TS2-1x1	plastic	unid plastic	moulded	amber	hair clip	complete	1	
191-0085-31	TS2-1x1	stone	coal	anthracite		coal	fragment	1	
191-0085-32	TS2-E	clinker	coal clinker			clinker	fragment	4	
191-0085-33	TS2-E	metal	iron	machine made: cut		nail	complete	2	
191-0085-34	TS2-E	metal	iron	machine made: cut		nail	partial	5	
191-0085-35	TS2-E	metal	iron	machine made: wire		nail	complete	1	
191-0085-36	TS2-NE	clinker	coal clinker			clinker	fragment	1	
191-0085-37	TS2-NE	floral	wood			charcoal	fragment	4	
191-0085-38	TS2-NE	stone	coal	anthracite		coal	fragment	1	
191-0085-39	TS2-S	clinker	coal clinker			clinker	fragment	171	
191-0085-40	TS2-S	metal	iron	machine made: cut		nail	partial	1	
191-0085-41	TS2-SE	floral	wood	unid		charcoal	fragment	1	
191-0085-42	TS2-SE	metal	iron	drawn	light gauge	wire	fragment	1	
191-0085-43	TS2-SE	metal	iron	machine made: cut		nail	complete	1	
191-0085-44	TS2-SE	stone	coal	anthracite		coal	fragment	1	