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ORIGINAL REPORT

Stage 1 - 2 Archaeological Assessment:

Oak Ridge Gate,
Part Lot A, Concession 9, (geographic) Township of
Cumberland, Carleton County
City of Ottawa, Ontario

Prepared For

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Report: PA1112-1

1.0 Executive Summary

Paterson Group, on behalf of Ashcroft Homes undertook a Stage 1 and 2 archaeological assessment of the study area located on Part Lot A, Concession 9 in the geographic township of Cumberland (Map 1). This assessment is in accordance with the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011). The objectives of the investigation were to assess the archaeological potential of the property and determine whether further archaeological study was required. This archaeological assessment was required by the City of Ottawa on the study area prior to development activities in accordance with the Planning Act. Ashcroft Homes is planning to develop the property into a residential development (Map 2).

The Stage 1 assessment included a review of the Ontario Ministry of Tourism, Culture and Sport archaeological sites database, relevant environmental, historical and archaeological literature, and primary historical research. The subject property has archaeological potential based on the 1863 and 1879 maps. The maps indicate possibly two post-contact historic Euro-Canadian structures that fall close to the western limit of the current study area. The entire study area has potential as indicated by the City of Ottawa archaeological management plan (Archaeological Services Inc. and Geomatics International Inc. 1999).

The Stage 2 component of the archaeological assessment involved a pedestrian survey of the area, as ploughing was not possible. Subsurface consisted of hand excavated test pits at 5 m intervals. The field portion was undertaken on May 3, 2018. Weather conditions were overcast with rain and a temperature 15° Celsius. Permission to access the property was provided by Ashcroft. There were no archaeological resources with cultural heritage value or interest identified during the Stage 2 Archaeological Assessment.

Based on the results of this investigation it is recommended that:

1. No further archaeological study is required for the study property as delineated in Map 1.

2.0 Table of Contents

1.0 Executive Summary i

2.0 Table of Contents ii

3.0 Project Personnel 1

4.0 Project Context 2

 4.1 Development Context 2

 4.2 Historical Context 2

 4.2.1 Historic Documentation 2

 4.2.2 Pre-Contact Period 2

 4.2.3 Contact Period 3

 4.2.4 Post-Contact Period 4

 4.2.5 Study Area Specific History 4

 4.3 Archaeological Context 5

 4.3.1 Current Conditions 5

 4.3.2 Physiography 5

 4.3.3 Previous Archaeological Assessments 5

 4.3.4 Registered Archaeological Sites and Commemorative Plaques 5

 4.4 Archaeological Potential 5

5.0 Field Methods 7

6.0 Record of Finds 8

7.0 Analysis and Conclusions 9

8.0 Recommendations 10

9.0 Advice on Compliance with Legislation 11

10.0 Closure 12

11.0 Bibliography and Sources 13

12.0 Images 17

13.0 Maps 19

Appendix A: Photographic Catalogue 31

Appendix B: Map Catalogue 31

Appendix C: Document Catalogue 31

3.0 Project Personnel

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4.0 Project Context

4.1 Development Context

Paterson Group, on behalf of Ashcroft Homes undertook a Stage 1 and 2 archaeological assessment of the study area located on Part Lot A, Concession 9 in the geographic township of Cumberland (Map 1). This assessment is in accordance with the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011). The objectives of the investigation were to assess the archaeological potential of the property and determine whether further archaeological study was required. This archaeological assessment was required by the City of Ottawa on the study area prior to development activities in accordance with the Planning Act. Ashcroft Homes is planning to develop the property into a residential development (Map 2).

The City of Ottawa has an archaeological management plan which was developed in 1999, *The Archaeological Resource Potential Mapping Study of the Regional Municipality of Ottawa-Carleton*. The management plan covers the Township of Nepean (Archaeological Services Inc. and Geomatics International Inc. 1999). According to the management plan, the entire property has archaeological potential.

At the time of the archaeological assessment, the study area was owned by Ashcroft Homes. Permission to access the study property was granted by Ashcroft Homes prior to the commencement of any field work; no limits were placed on this access.

4.2 Historical Context

4.2.1 Historic Documentation

There are a few published resources on the history of Cumberland Township. The township is briefly referred to in *Ottawa Country* (Bond 1968), but most notably in *Historical Research for Cumberland Township* (Heinz 1936), and *Memories of Cumberland Township* (Cumberland Township Historical Society 2006). Another useful resource is the *Prescott and Russell Supplement to the Illustrated Atlas of the Dominion of Canada* (1881).

4.2.2 Pre-Contact Period

The Ottawa Valley was not hospitable to human occupation until the retreat of glaciers and the draining of the Champlain Sea, some 10,000 years ago. The Laurentide Ice Sheet of the Wisconsinian glacier blanketed the Ottawa area until about 11,000 B.P. At this time the receding glacial terminus was north of the Ottawa Valley, and water from the Atlantic Ocean flooded the region to create the Champlain Sea. The Champlain Sea encompassed the lowlands of Quebec on the north shore of the Ottawa River and most of Ontario east of Petawawa, including the Ottawa Valley and Rideau Lakes. However, by 10,000 B.P. the Champlain Sea was receding and within 1,000 years was gone from Eastern Ontario (Watson 1990:9).

By circa 11,000 B.P., when the Ottawa area was emerging from glaciations and being flooded by the Champlain Sea, northeastern North America was home to what are commonly referred to as the Paleo-Indian people. For Ontario the Paleo-Indian period is divided into the Early Paleo-Indian period (11,000 – 10,400 B.P.) and the Late Paleo-Indian period (10,500 – 9,400 B.P.), based on changes in tool technology (Ellis and Deller 1990). The Paleo people, who had moved into hospitable areas of southwest Ontario (Ellis and Deller 1990), likely consisted of small groups of exogamous hunter-gatherers relying on a variety of plants and animals who ranged over large territories (Jamieson 1999). The few possible Paleo-Indian period artifacts found, as surface finds or poorly documented finds, in the broader region are from the Rideau Lakes area (Watson 1990) and Thompson's Island near Cornwall (Ritchie 1969:18). In comparison, little evidence exists for Paleo-Indian occupations in the immediate Ottawa Valley, as can be expected given the environmental changes the region underwent, and the recent exposure of the area from glaciations and sea. However, as Watson (1999:38) suggests, it is possible Paleo-Indian people followed the changing shoreline of the Champlain Sea, moving into the Ottawa Valley in the late Paleo-Indian Period, although archaeological evidence is absent.

As the climate continued to warm, the ice sheet receded further allowing areas of the Ottawa Valley to be travelled and occupied in what is known as the Archaic Period (9,500 – 2,900 B.P.). This period is generally characterized by increasing populations, developments in lithic technology (e.g., ground stone tools), and emerging trade networks. Archaic populations remained hunter-gatherers with an increasing emphasis on fishing. Sites from this period in the region include Morrison's Island-2 (BkGg-10), Morrison's Island-6 (BkGg-12) and Allumette Island-1 (BkGg-11) near Pembroke, and the Lamoureaux site (BiFs-2) in the floodplain of the South Nation River (Clermont 1999).

The Woodland Period is characterized by the introduction of ceramics. Populations continued to participate in extensive trade networks that extended across much of North America. Social structure appears to have become increasingly complex with some status differentiation recognized in burials. Towards the end of this period domesticated plants were gradually introduced to the region. This coincided with other changes including the development of semi-permanent villages. The Woodland period is commonly divided into the Early Woodland (1000 – 300 B.C.), Middle Woodland (400 B.C. to A.D. 1000), and the Late Woodland (A.D. 900 – European Contact) periods.

The Early Woodland is typically noted via lithic point styles (i.e., Meadowood bifaces) and pottery types (i.e., Vinette I). Early Woodland sites in the Ottawa Valley region include Deep River (CaGi-1) (Mitchell 1963), Constance Bay I (BiGa-2) (Watson 1972), and Wyght (BfGa-11) (Watson 1980). The Middle Woodland period is identified primarily via changes in pottery style (e.g., the addition of decoration). Some of the best documented Middle Woodland Period sites from the region are from Leamy Lake Park (BiFw-6, BiFw-16) (Laliberté 1999).

The identification of pottery traditions or complexes (Laurel, Point Peninsula, Saugeen) within the Northeast Middle Woodland, the identifiers for the temporal and social organizational changes signifying the Late Woodland Period, subsequent phases within in the Late Woodland, and the overall 'simple' culture history model assumed for Ontario at this time (e.g., Ritchie 1969; Wright 1966, 2004) are much debated in light of newer evidence and improved interpretive models (Engelbrecht 1999; Ferris 1999; Hart 2012; Hart and Brumbach 2003, 2005, 2009; Hart and Englebrecht 2012; Martin 2008; Mortimer 2012). Thus the shift into the period held as the Late Woodland is extremely fuzzy. Needless to say there are general trends for increasingly sedentary populations, the gradual introduction of agriculture, and changing pottery and lithic styles. However, nearing the time of contact, Ontario was populated with somewhat distinct regional populations that broadly shared many traits. In the southwest, in good cropland areas, groups were practicing corn-bean-squash agriculture in semi-permanent, often palisaded villages which are commonly assigned to Iroquoian peoples (Wright 2004:1297-1304). On the shield and in other non-arable environments, including portions of the Ottawa Valley, there seems to remain a less sedentary lifestyle often associated with the Algonquian groups noted in the region at contact (Wright 2004:1485-1486).

4.2.3 Contact Period

Initial contact between the Ottawa Valley Algonquian groups and European explorers occurred during Champlain's travels in 1613. At this time the Algonquian people along the Ottawa River Valley, an important and long-standing trade route to the interior, were middle-men in the rapidly expanding fur-trade industry and alliances were formed or reinforced with the French. Early historical accounts note many different Algonquian speaking groups in the region at the time. Of note for the lower Ottawa Valley area were the Kichesipirini (focused around Morrison Island); Matouweskarini (upstream from Ottawa, along the Madawaska River); Weskarini (around the Petite Nation, Lièvre, and Rouge rivers west of Montreal), Kinouchepirini (in the Bonnechere River drainage); and the Onontchataronon, (along the South Nation River) (Joan Holmes & Associates 1993; Morrison 2005; Pilon 2005). However, little archaeological work has been undertaken of contact period Algonquians (Pilon 2005).

Starting in the 1630s and continuing into the 1700s, European disease spread among the Algonquian groups along the Ottawa River, bringing widespread death (Trigger 1986:230). Additionally, up to 1650 warfare and raiding into the lower Ottawa Valley by the Five Nation Iroquois forced the various Algonquin groups from the area (Morrison 2005:26). By 1701 the Iroquois had been driven from most of southern Ontario and the Ottawa Valley was occupied by the Algonquin Nation (Morrison 2005:27-28).

A traditional lifeway was continued by many of the Algonquian groups in the lower Ottawa Valley above Montreal through to the influx of European settlement in the late 1700s and early 1800s. This included bands noted to be living along the Gatineau River and other rivers flowing into the Ottawa. These traditional bands maintained a seasonal round focused on harvesting activities into the 1800s when development pressures and assimilation policies implemented by the colonial government saw Algonquian lands taken up, albeit under increasing protest and without consideration for native claims, for settlement and industry.

4.2.4 Post-Contact Period

The first survey of 47,000 acres that would become Cumberland Township took place in 1791. A second survey in 1798 stated that counties should be made up of townships within eight judicial districts: Eastern, Johnston, Midland, Home, Niagara, London, Western, and Newcastle. This was executed in 1802, when the area became part of the Eastern District which consisted of the counties of Glengarry, Dundas, Leeds, and Stormont (Cumberland Township Historical Society 2005).

In the summer of 1799, Cumberland Township was named to honour Prince Ernest Augustus I, one of the numerous children of George III, who became Duke of Cumberland on 24 April 1799. By October 1799, Cumberland Township was listed as existing partly in Stormont and Dundas Counties. On January 1, 1800, Cumberland Township was included with the townships of Clarence, Gloucester, Osgoode, Russell, and Cambridge in the County of Russell, which was now included in the Eastern District (Cumberland Township Historical Society 2005).

In Russell County the first settlements occurred along the Ottawa River. The village of Cumberland was established on the south shore of the Ottawa River in 1801. Its strategic location at the confluence of the Lievre and Ottawa Rivers made it a popular early fur trading post. Settlement is not recorded in the interior of the township prior to 1820. By 1828, there were only twelve landowners in the township (Assessment Rolls for Cumberland Township).

By the mid-1800s the village of Cumberland was a major seasonal forwarding centre. A wharf allowed for mail carriers to transport communications, and the village had two telegraph offices. Cumberland also had a small ship building industry (Cumberland Township Historical Society 2005). In 1851, the population of Cumberland township was 1,659 and by 1861 had almost doubled to 2,609 (Bond 1968:22). In 1851, the township consisted of one stone house, 54 frame houses, 46 log houses, and 115 shanties. By 1861, the township had 6 stone houses, 16 frame houses, 315 log houses, and zero shanties (Bond 1968:24).

4.2.5 Study Area Specific History

The 200 acres of Lot A in Concession 9 was granted in thirds by the Crown to Angus Nichol, Jane McGilloway, and Isabella McNab on June 20, 1834. No names are listed for the property on the 1825 Coffin nor 1840 assessment map (Map 3) (Assessment Rolls for Cumberland Township 1834-1848). Jane McGilloway sold her third to Daniel McDougall on May 1, 1839. McDougall purchased Isabella McNab's portion on May 19, 1840, and acquired the final third from Angus Nichol, through a William McDonald, on February 5, 1842. Daniel McDougall and his wife kept the property for ten years before selling it to Laurence M. Mercer on May 11, 1852 for £44. In June of 1858, David Lockhead acquired the rear 40 acres of the property. The 1862 Walling map does not list the owner of the property (Walling 1862). In January of 1877, James McWilliams acquired the front 140 acres from the Maitland family, of whom John Maitland had bought the property from Mercer, for the sum of \$440. The front 140 acres and the back 60 acres may correspond with the new survey of Cumberland Township that shows on the property as a different shape on the Belden map with a road running through it, dividing the property into a large portion to the west and a smaller portion to the east (Map 4) (Belden 1881). James McWilliams was the son of an Irish immigrant, who was the second of six children that were all born in Ontario. Like his father he was a farmer, and bought this property at the age of 33 (Statistics Canada 1881). Lockhead sold his 40 acres to McWilliams in May of 1877 for the large sum of \$240. The study area lies on the south east portion of the lot. The southeast quarter of the lot was sold from John McWilliams, who inherited that portion from his father or brother, to John E. Findlay on December 19, 1912, while the rest of the property passed through various generations of the McWilliams family. In 1919, Findlay passed the property on to Kenneth E. Findlay (OLR:AR26). The usage of the property continued as agricultural throughout majority of the 20th Century as seen in the 1976 aerial photograph (Map 4).

4.3 Archaeological Context

4.3.1 Current Conditions

The study area consists of 0.9 hectares of grassy area (Map 2). Along its northern and western limits, the property is adjacent to a residential subdivision, to the south is a single residential home, and to the east is Trim Road.

4.3.2 Physiography

The study area lies within the Ottawa Valley Clay Plains with some undrained till plains. The region is characterized by poorly drained topography of clay plains interrupted by ridges of rock or sand that offer moderately better drainage. This topography was influenced by the post glacial sequence Champlain Sea (ca. 10,500 to 8,000 B.C.) that deposited these clay soils and were subsequently covered by sand deposits from the emerging fresh water drainage. Some of these sands were eroded to the underlying clay deposits by later channels of the developing Ottawa River. The sections to the north and south of the Ottawa River are characteristically different. On the Ontario side there is a gradual slope, although there are also some steep scarps. (Chapman and Putnam 2007:205-208).

Soils of the study area are dominantly Bearbrook soil (B2) (Map 5 – Soil Survey Complex). Bearbrook soil is reddish brown, heavy marine clay with grey banding. For this area the soil drainage is considered poor. These soils are offshore glaciomarine deposits primarily of clay with silt with low permeability (Map 5 – Surficial Geology of Ontario).

4.3.3 Previous Archaeological Assessments

Archaeological work in the region has primarily consisted of cultural resource management studies related to specific properties or development projects. Projects located within the vicinity of the study property include Stage 1 and 2 assessments for a proposed subdivision located on part of Lots A, B & C, Concession. 8 & 9, Cumberland Township (Swayze 2001), a Stage 1 assessment of Part Lots D and E, Concession 7 and Part Lot 21, Concession 7 in Cumberland Township (Adams 2009), and a Stage 1 assessment for a hydro corridor to Quebec that passed through Cumberland Township (Kennett 1999). Stage 1-4 archaeological assessments of Part Lot 28, Concession 1 were recently completed by Paterson Group for the Cardinal Creek Development (Part Lots 25, 26, 27, Concession 1) (Paterson Group 2012a, 2013a, 2013b, 2013c, 2013d, 2013e, 2014). In 2012, Paterson conducted a Stage 1 Archaeological Assessment of the Mondavi Court development, located directly to the north of the study property (Paterson Group 2012b).

4.3.4 Registered Archaeological Sites and Commemorative Plaques

A search of the Ontario Archaeological Sites Database indicated that five registered archaeological sites are located within a 1 km radius of the study area. The Cardinal Creek Homestead Site (BiFu-5) is a late 19th to early 20th century Euro-Canadian homestead located to the north of the study area. To the northeast is BiFu-3, a Euro-Canadian residential site where no artifacts were found. To the north and west of the study area, Ken Swayze has found what he believes to be a precontact campsites: BiFu-2, BiFu-4, and BiFu-6.

4.4 Archaeological Potential

Based on the Archaeological Resource Potential Map for the City of Ottawa, the entire study area has archaeological potential (Archaeological Services Inc. and Geomatics International Inc. 1999).

Potential for pre-contact sites is based on physiographic variables that include distance from the nearest source of water, the nature of the nearest source/body of water, distinguishing features in the landscape (e.g., ridges, knolls, eskers, and wetlands), the types of soils found within the area of assessment and resource availability. The study area property exhibits indicators for pre-contact archaeological potential due to the proximity of the unidentified lithic scatter (BiFu-6), which may indicate that other pre-contact remains can be found on the study property, and it is located less than 1 km from a tributary of Cardinal Creek.

Potential for historic Euro-Canadian sites is based on proximity to historic transportation routes, historic community buildings such as schools, churches, and businesses, and any known archaeological or culturally significant sites. The study area property exhibits potential for historic period archaeological sites due to the proximity of BiFu-5 (Cardinal Creek Homestead) and BiFu-7 (Cardinal Creek Site) may indicate mid to late 19th century historic sites can be found in this area.

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5.0 Field Methods

The entire property is considered to have archaeological potential according to the 2011 standards set out for consultant archaeologists by the MTCS, due primarily to its proximity to a water source, Cardinal Creek. In accordance with these standards, the entire property was surveyed at a 5-metre test interval.

The entirety of the property was not suitable for ploughing as per Standard 1.d., Section 2.1.2 (MTCS 2011). This area consisted of the overgrown lawn that was shovel tested at 5 meter intervals (Figure 1, Figure 2, and Figure 3) (Map 2). All tests-pits were a minimum of 30 cm in diameter and were excavated into the first 5 cm of subsoil. All soil was screened using 6 mm mesh screens. All test-pits were examined for cultural features and stratigraphy then backfilled. Generally, the soil encountered during the survey was a brown clay over greyish brown clay subsoil (Figure 4).

Photographs were taken during fieldwork to document the current land conditions (see Map 4 for photo locations by catalogue number) Standard 1.a., Section 7.8.6 (MTCS 2011).

Field work took place on May 3, 2018. Weather conditions were overcast with light rain with temperatures around 15° Celsius. Visibility was good and the rain was not significant enough to hinder excavation or screening of soils. Permission to access the property was provided by Ashcroft.

6.0 Record of Finds

Despite having archaeological potential, no archaeological remains, artifacts, or culturally significant soil profiles were encountered during the Stage 2 investigations of the study area.

See Appendices A, B, and C for record photographs, maps, and field notes.

7.0 Analysis and Conclusions

The Stage 1 assessment concluded that there was potential for both pre-contact Aboriginal and historic Euro-Canadian archaeological resources within the study area. As such, a Stage 2 archaeological assessment was conducted on the subject property consisting of a shovel test pit survey at 5 metre intervals.

While the property exhibits indicators of archaeological potential for pre-contact and historic sites, no archaeological remains, artifacts, or culturally significant soil profiles were encountered during the Stage 2 investigations of the study area.

8.0 Recommendations

Based on the results of this investigation it is recommended that:

1. No further archaeological study is required for the study property as delineated in Map 1.

9.0 Advice on Compliance with Legislation

- a. This report is submitted to the *Minister of Tourism and Culture* as a condition of licencing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- b. 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 Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- c. 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 licenced consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- d. 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.

10.0 Closure

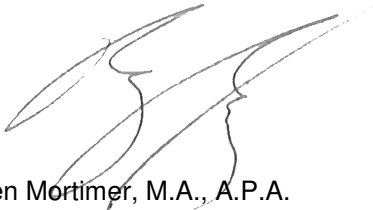
Paterson has prepared this report in a manner consistent with the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made. The sampling strategies incorporated in this study comply with those identified in the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011) however; archaeological assessments may fail to identify all archaeological resources.

The present report applies only to the project described in the document. Use of this report for purposes other than those described herein or by person(s) other than Ashcroft Homes or their agent(s) is not authorized without review by this firm for the applicability of our recommendations to the altered use of the report.

This report is pending Ministry approval.

We trust that this report meets your current needs. If you have any questions or we may be of further assistance, please contact the undersigned.

Paterson Group Inc.



Ben Mortimer, M.A., A.P.A.
Senior Archaeologist



Nadine Kopp, M.A., A.P.A., C.A.H.P.
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2012b *Stage 1 Archaeological Assessment: Proposed Mondavi Court Development, 1765 Trim Rd. Part Lot A, Concession 9, (geographic) Township of Cumberland, County of Russell, City of Ottawa, Ontario.* Copies available from P369-004-2012.

2013a *Revised Stage 1 Archaeological Assessment Proposed Cardinal Creek Development, Lands North of Old Montreal Rd. Part Lot 25, 26, 27 and 28, Concession 1 in the Geographic Township of umberland, Historic County of Russell, Ottawa, Ontario.* Copies available from P369-001-2012.

2013b *Revised Stage 1 Archaeological Assessment Proposed Cardinal Creek Development, Lands South of Old Montreal Rd. Part Lot 25, 26, and 27, and 28 Concession 1 and Part Lot C, D, and E Concession 8 in the Geographic Township of Cumberland, Historic County of Russell, Ottawa, Ontario.* Copies available from P369-003-2012.

2013c *Revised Stage 3 Archaeological Assessment Cardinal Creek Site (BiFu-7) - Part Lot 28 Concession 1, Geographic Township of Cumberland, Ottawa, Ontario.* Copies available from P369-007-2012.

2013d *Stage 1 Archaeological Assessment Hydro One Tower Replacement, Proposed Cardinal Creek Development, Part Lots 28 and 29, Concession 1 in the Geographic Township of Cumberland, Ottawa, Ontario.* Copies available from P369-0022-2013.

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12.0 Images



Figure 1: Test pitting study area (D01).



Figure 2: Test pitting study area (D07).

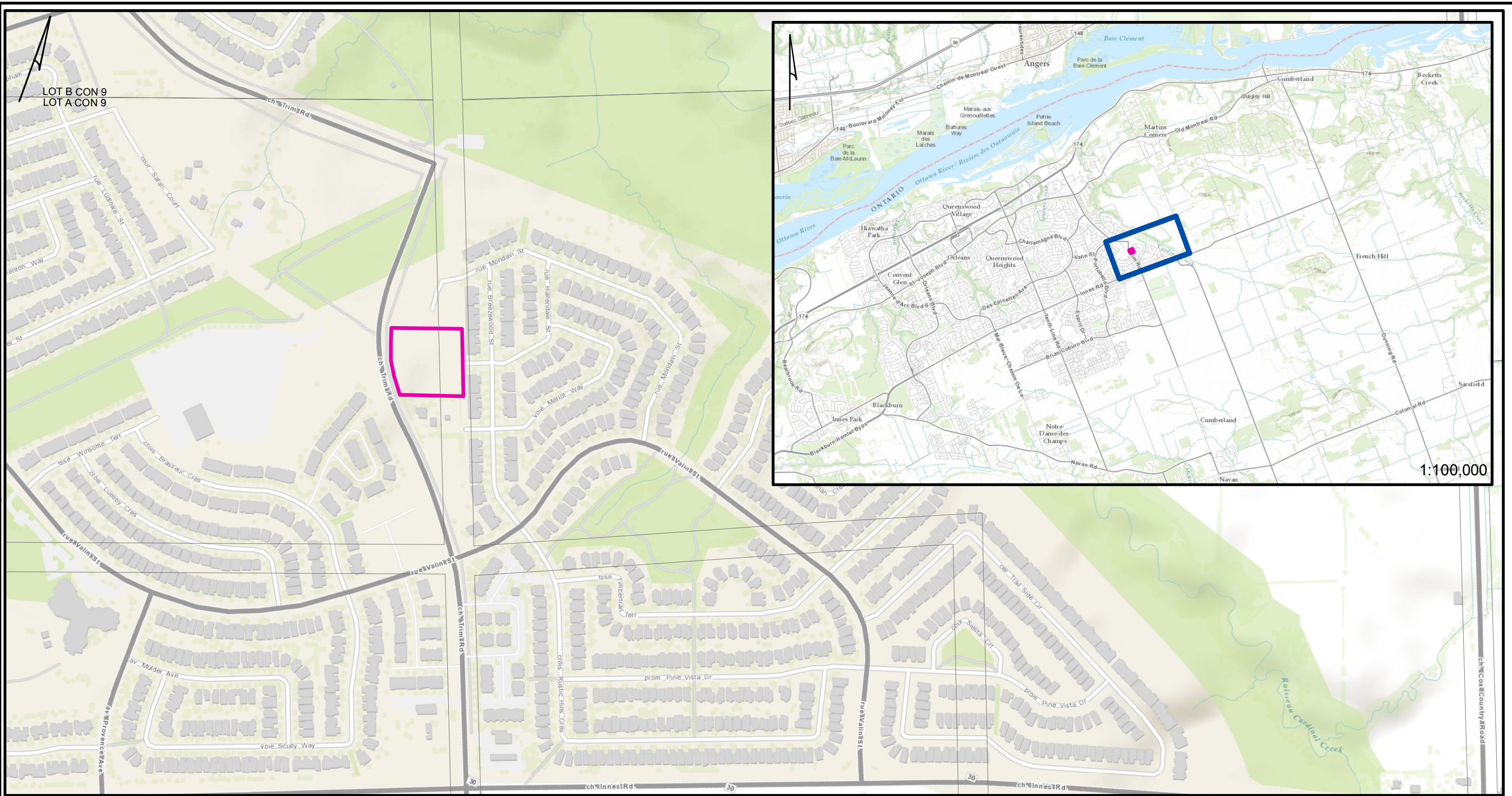


Figure 3: Test pitting study area (D08).

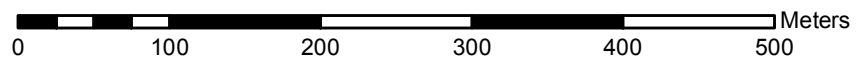


Figure 4: Typical test pit in progress (D04).

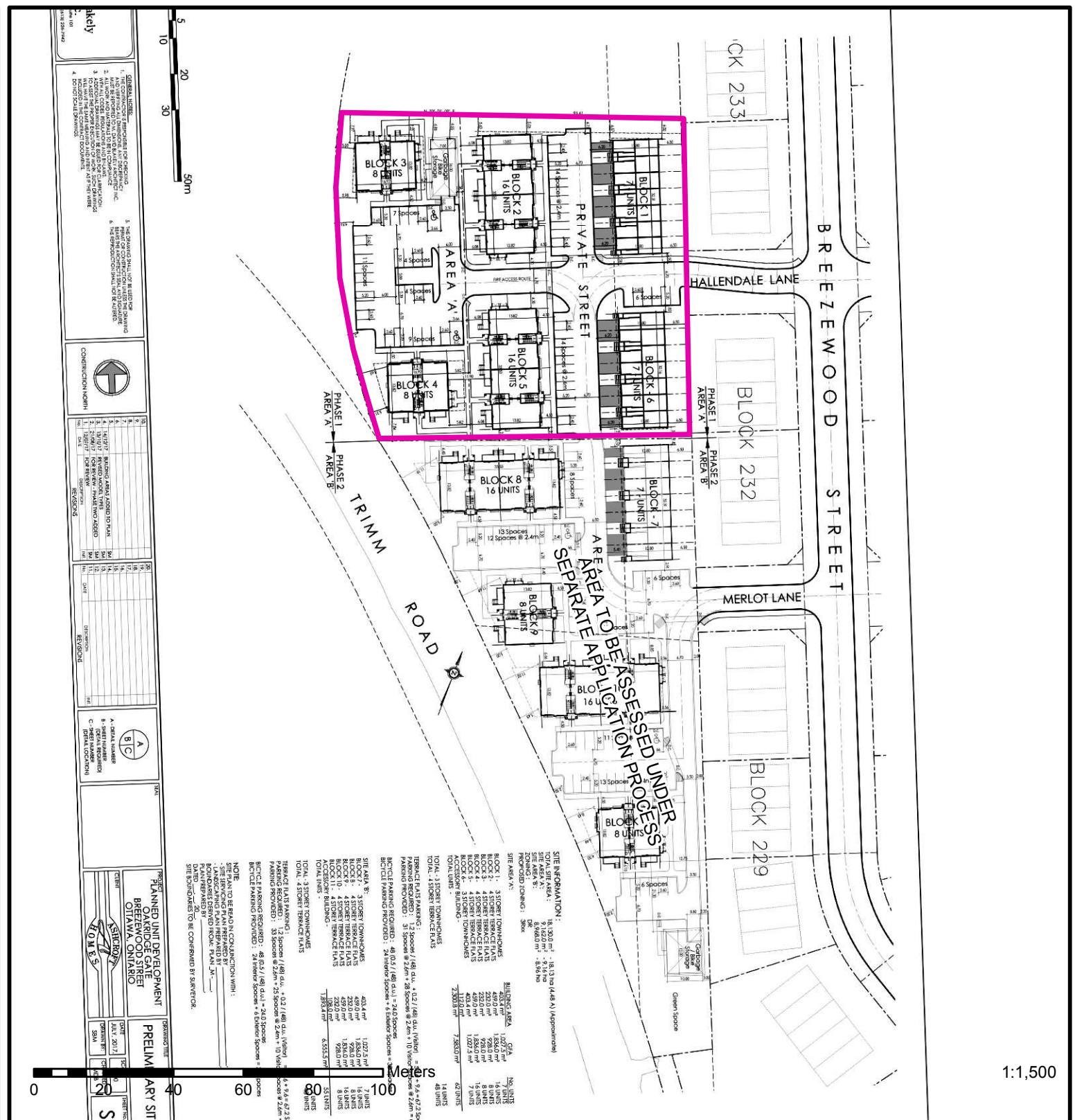
13.0 Maps



 DEVELOPEMENT AREA

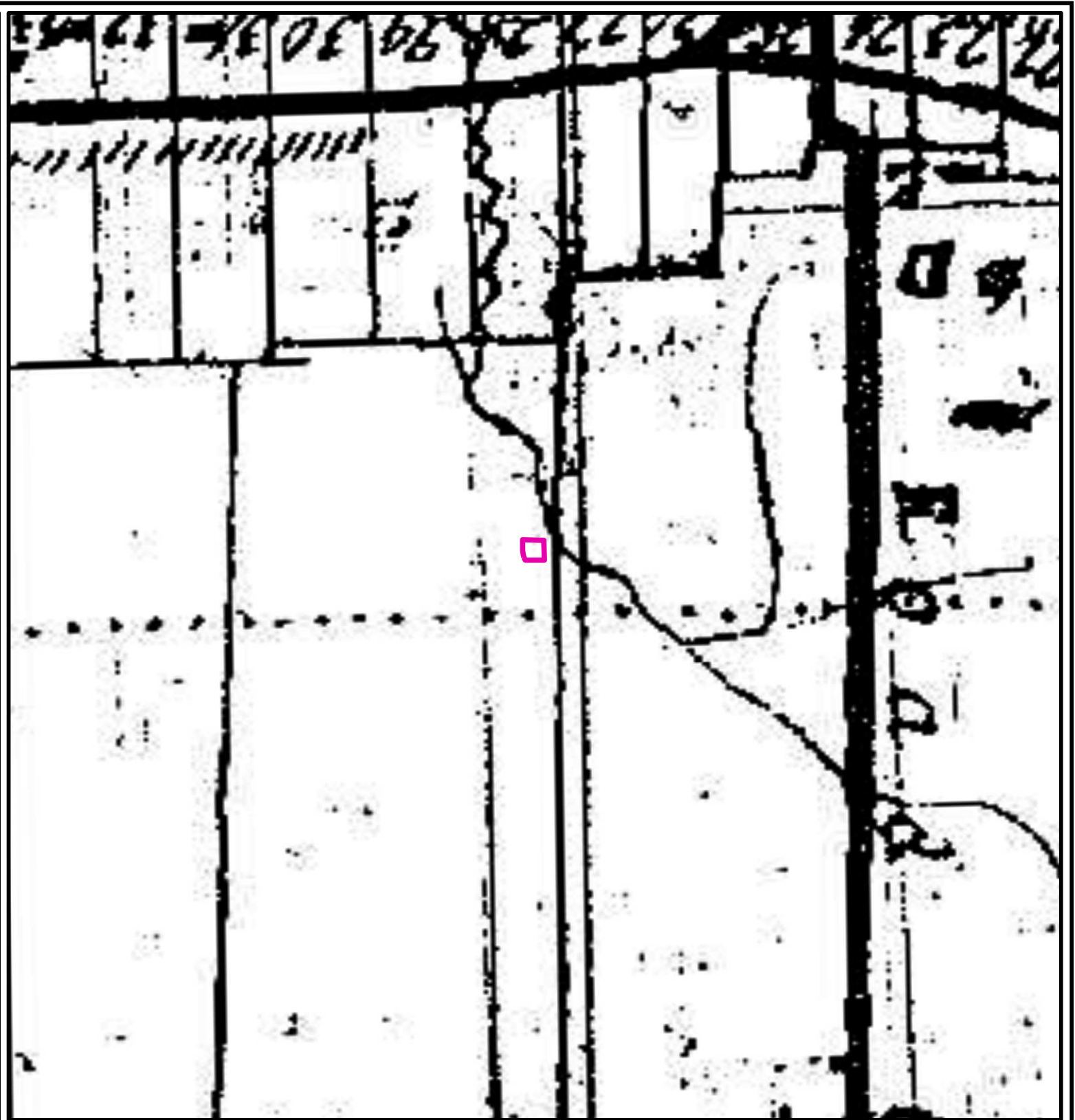
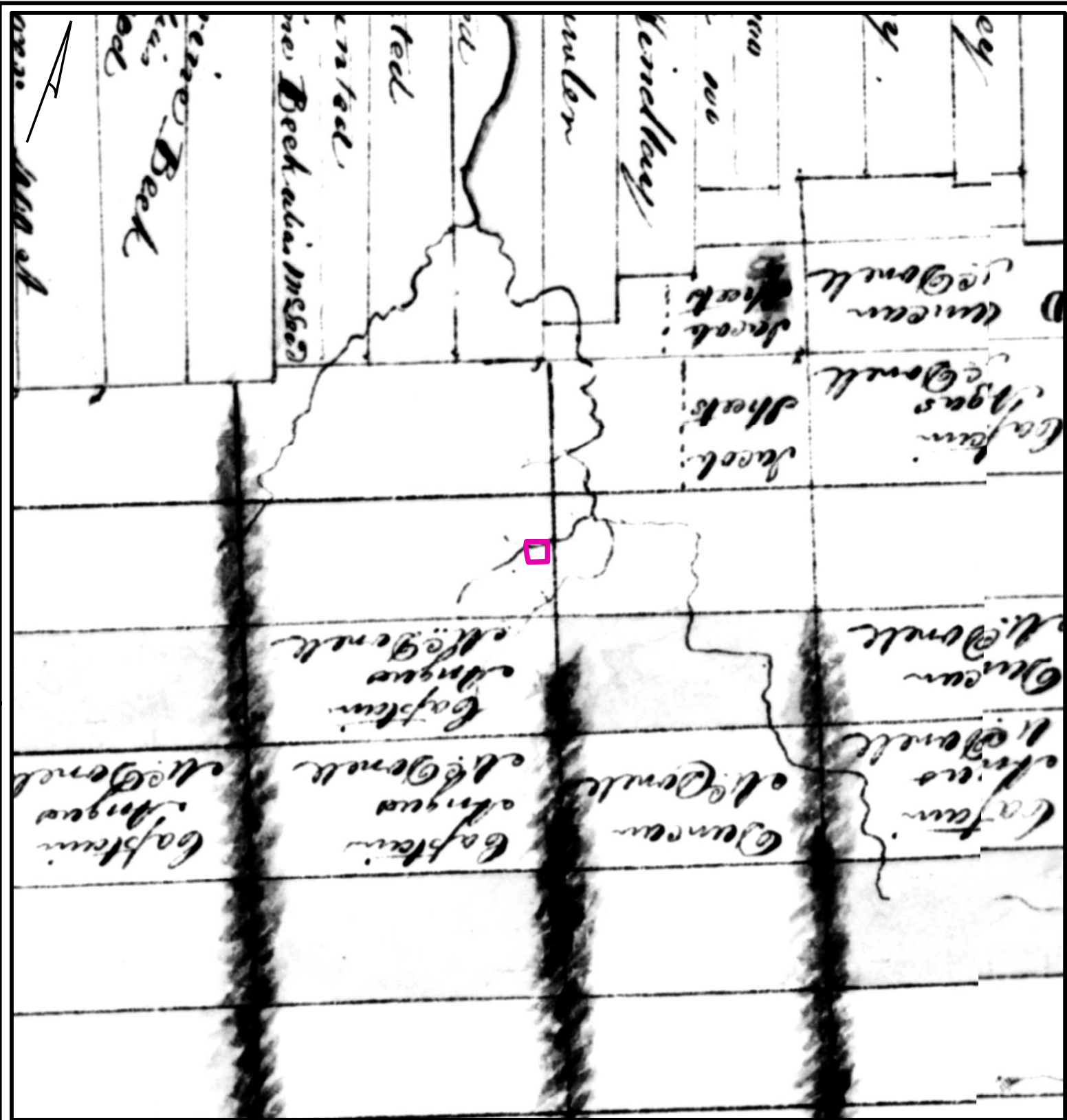


References:
 Projection: Transverse Mercator Datum NAD 83, UTM Zone 18
 Service Layer Credits: City of Ottawa
 Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

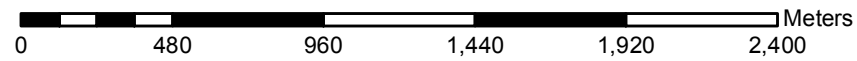


DEVELOPMENT AREA - STAGE 1 & 2 AREA
 STAGE 2 METHODOLOGY- SHOVEL TEST PITS (5 m INTERVAL)

References:
 PROJECTION: TRANSVERSE MERCATOR DATUM NAD 83, UTM ZONE 18
 SERVICE LAYER CREDITS: CITY OF OTTAWA
 AERIAL IMAGERY CIRCA 2017 - GEOTOWA
 PRELIMINARY SITE PLAN REV. 4 DATED JULY 2017 - PROVIDED BY ASHCROFT HOMES

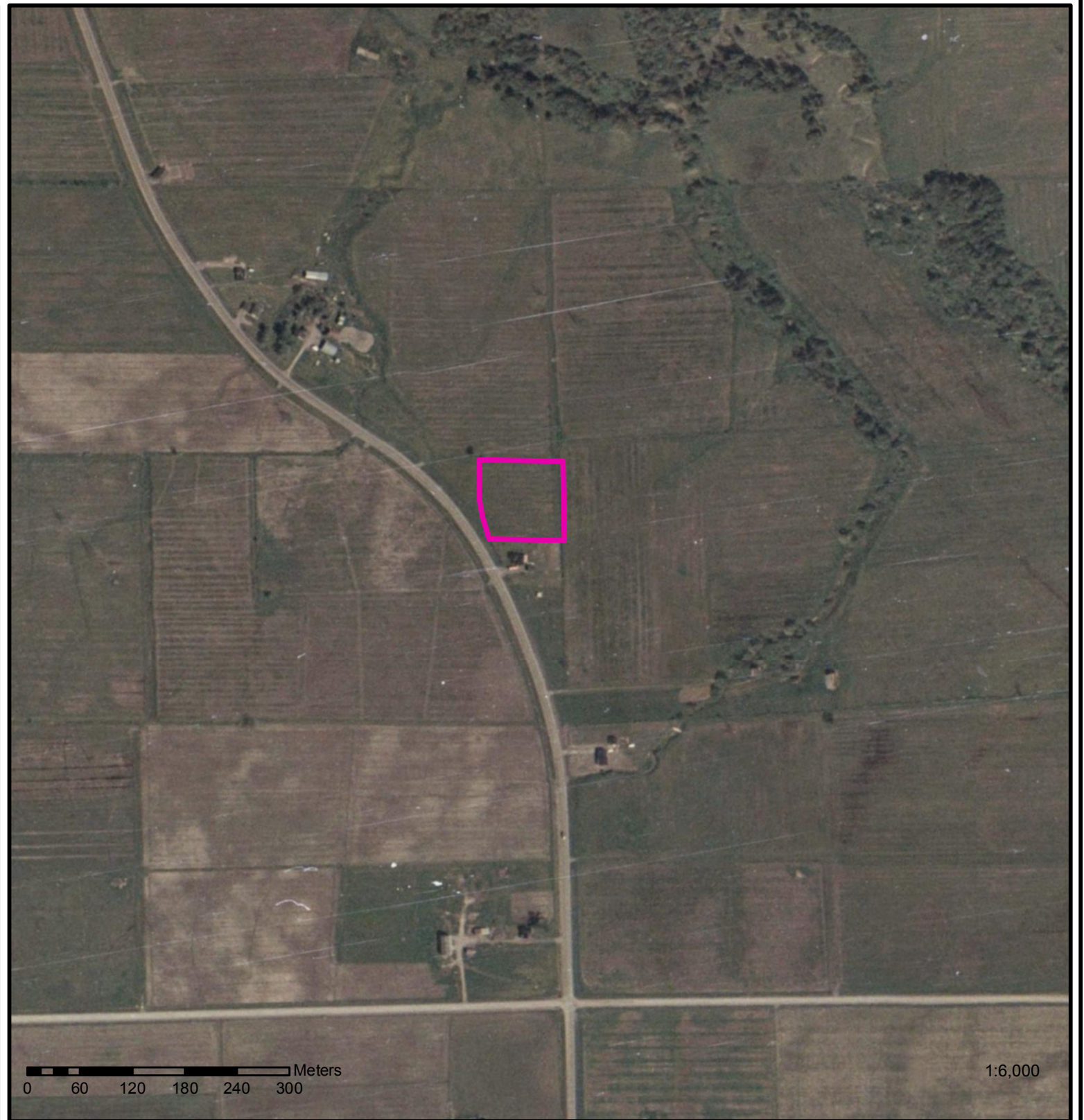


 DEVELOPMENT AREA



References:

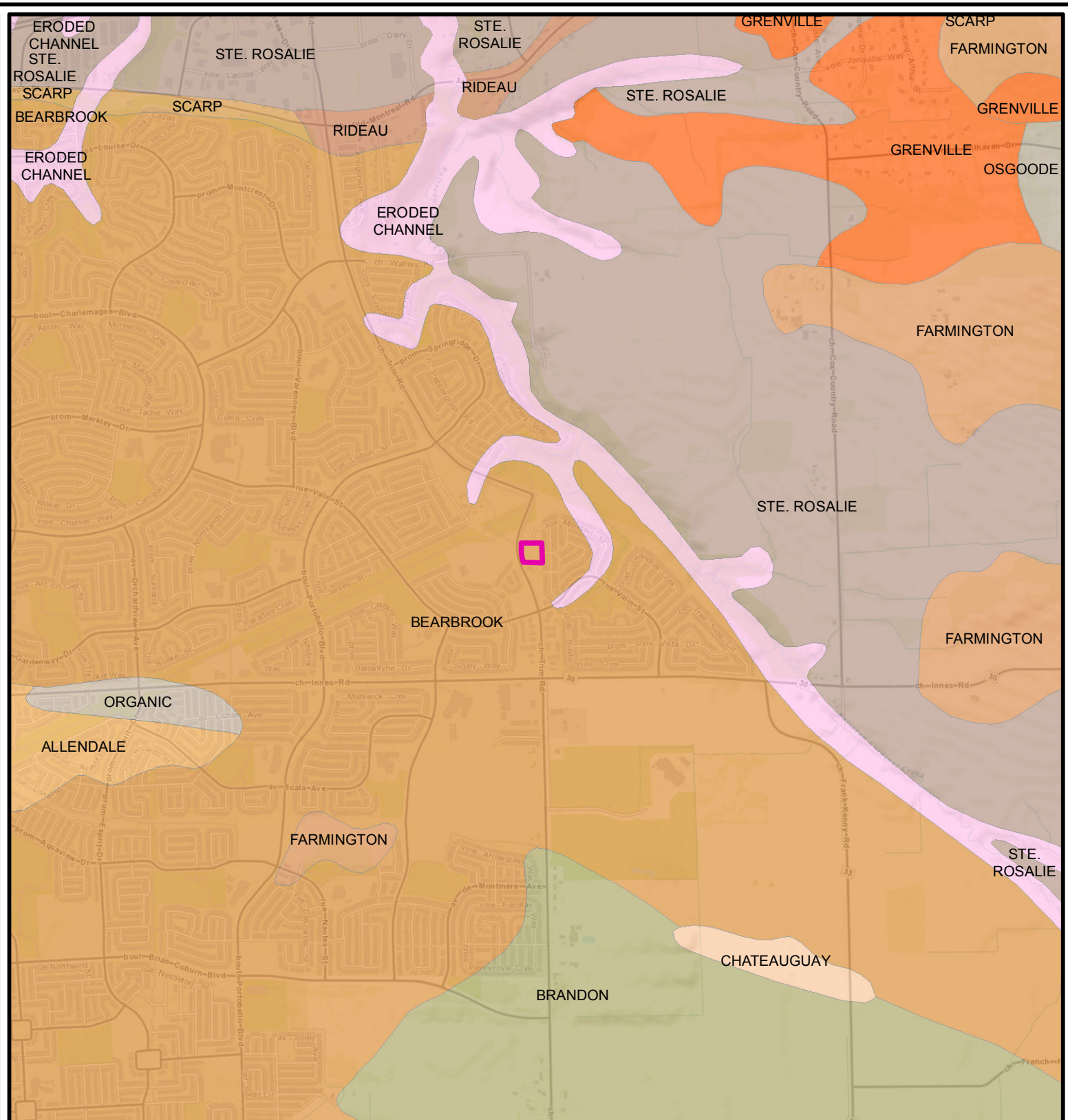
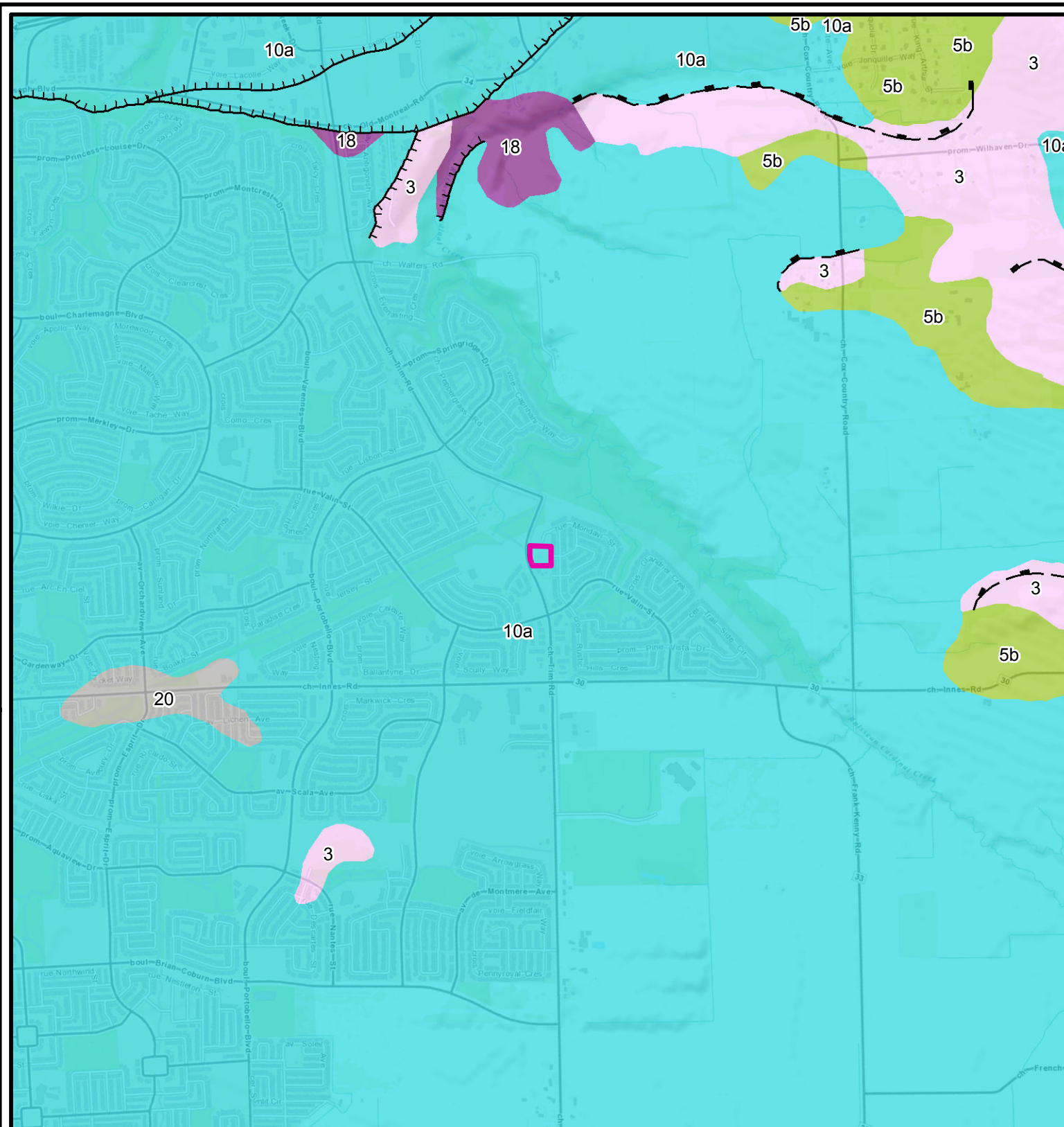
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 SERVICE LAYER CREDITS:
 SEGMENT OF TOWNSHIP OF CUMBERLAND, COFFIN, 1825 (NMC 3425)
 SEGMENT OF ASSESSMENT MAP OF CUMBERLAND, 1840 (NAC MS 116)



 DEVELOPMENT AREA

References:

PROJECTION: TRANSVERSE MERCATOR DATUM NAD 83, UTM ZONE 18
 SERVICE LAYER CREDITS:
 SEGMENT OF ILLUSTRATED HISTORICAL ATLAS OF THE COUNTY OF CARLETON (INCLUDING CITY OF OTTAWA), ONT. TORONTO. H. BELDEN AND CO., 1879.
 1976 AERIAL IMAGER FROM GEOOTTAWA



DEVELOPMENT AREA
 ESCARPMENT
 3: PALEOZOIC BEDROCK
 5B: STONE-POOR, CARBONATE-DERIVED SILTY TO SANDY TILL
 10A: MASSIVE-WELL LAMINATED
 18: COLLUVIAL DEPOSITS
 20: ORGANIC DEPOSITS

Meters
 0 250 500 750 1,000 1,250

References:
 PROJECTION: TRANSVERSE MERCATOR DATUM NAD 83, UTM ZONE 18
 SERVICE LAYER CREDITS: CITY OF OTTAWA
 ONTARIO GEOLOGICAL SURVEY 2010. SURFICIAL GEOLOGY OF SOUTHERN ONTARIO; ONTARIO GEOLOGICAL SURVEY, MISCELLANEOUS RELEASE--DATA 128-REV - USED WITH PERMISSION
 ONTARIO MINISTRY OF AGRICULTURE AND FOOD, 2003. SOIL SURVEY COMPLEX

Appendix A: Photographic Catalogue

Catalogue Number	Subject	Direction	Date	Photographer
PA1112-D01	Test pitting study area	E	2018-05-03	NK
PA1112-D02	Study area looking towards residential property to NE	NE	2018-05-03	NK
PA1112-D03	Study area looking towards Trim Road	NW	2018-05-03	NK
PA1112-D04	Typical test pit		2018-05-03	NK
PA1112-D05	Typical test pit		2018-05-03	NK
PA1112-D06	Test pitting study area	N	2018-05-03	NK
PA1112-D07	Test pitting study area	N	2018-05-03	NK
PA1112-D08	Test pitting study area	S	2018-05-03	NK
PA1112-D09	Test pitting study area	E	2018-05-03	NK

Appendix B: Map Catalogue

Map Number	Description	Created By
1	Location	B. Mortimer
2	Development Plan, Photo Key, Conditions, Methods	B. Mortimer
3	Historic Maps 1	B. Mortimer
4	Historic Maps 2	B. Mortimer
5	Surficial Geology and Soils	B. Mortimer

Appendix C: Document Catalogue

Project	Description	Created By
PA1112	Oak Ridge Gate - Field Notes Stage 2 Site Survey (scanned to PDF "PA1112 – Oak Ridge Gate Field Notes.pdf")	N. Kopp