



ORIGINAL REPORT

Stage 1 Archaeological Assessment:

Stittsville Properties
5993 Flewellyn, 6070 Fernbank, and
6115 Flewellyn Road
Part Lots 24 and 25, Concession 9,
Geographic Township of Goulbourn,
Carleton County,
City of Ottawa, Ontario

Prepared For

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1.0 Executive Summary

Matrix Heritage, on behalf of Caivan (Stittsville West) Ltd. (Caivan), undertook a Stage 1 Archaeological Assessment for the proposed Stittsville Properties development at 5993 Flewellyn, 6070 Fernbank, and 6115 Flewellyn Road on Part Lots 24 and 25, Concession 9, Geographic Township of Goulbourn, Carleton County, now in the City of Ottawa, Ontario (Map 1). Caivan is planning residential development of the property (Map 2). The archaeological assessment was requested by the City of Ottawa in accordance with the Planning Act as a component of a Plan of Subdivision application. This assessment was completed in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' *Standards and Guidelines for Consultant Archaeologists* (2011).

The Stage 1 assessment included a review of updated Ontario Ministry of Heritage, Sport, Tourism, Culture Industries' (MHSTCI) archaeological site database, a review of relevant environmental, historical, and archaeological literature, and primary historical research including: land registry records and historical maps, and a property inspection.

This Stage 1 background assessment concluded that based on criteria outlined in the MHSTCI's *Standards and Guidelines for Consultant Archaeologists* (Section 1.3, 2011), the study area has both pre-contact Aboriginal as well as historic Euro-Canadian archaeological potential.

A property inspection was undertaken on November 24, 2021. Permission to access the property was provided by the proponent with no limitations. Weather conditions were cool and sunny with excellent surface visibility. This site visit revealed recent changes to the nature of the landscape including stockpiling of materials, some topsoil stripping, tree removal, and the creation of new fields where forests appear in past aerial imagery.

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

1. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the pedestrian survey method at 5 m intervals in all agricultural fields as per Section 2.1.1 (MHSTCI 2011) (approximate area shown in green in Map 5). Appropriate field conditions must be achieved prior to assessment as per Section 2.1.1. (MHSTCI 2011).
2. In areas which cannot be ploughed (as per Section 2.1.2, Standard 1. MHSTCI 2011) (approximate area shown in blue in Map 5), a Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the test pit survey method at 5 m intervals, as per Section 2.1.2 (MHSTCI 2011).
3. During Stage 2 assessment, the extent of possibly disturbed areas (approximate areas as shown in orange in Map 5) be confirmed through visual assessment or testing to confirm disturbance as per Section 2.1.8 (MHSTCI 2011).
4. During Stage 2 assessment, the extent of permanently wet areas (approximate areas as shown in pale blue in Map 5) be confirmed through visual assessment and where the criteria of Section 2.1, Standard 2.a.i. (MHSTCI 2011) are met, these areas be excluded from Stage 2 assessment.
5. Confirmed deeply disturbed areas (as shown in red in Map 5), should be excluded from Stage 2 assessment as per Section 1.4, Standard 1.f. (MHSTCI 2011).

6. The Stage 2 archaeological assessment follow the requirements set out in the 2011 Standards and Guidelines for Consultant Archaeologists (MHSTCI 2011).

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3.0 Project Personnel

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Field Director	Nadine Kopp, MA (P378)
Field Crew	Evie Beaudoin
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4.0 Project Context

4.1 Development Context

Matrix Heritage, on behalf of Caivan (Stittsville West) Ltd. (Caivan), undertook a Stage 1 Archaeological Assessment for the proposed Stittsville Properties development at 5993 Flewellyn, 6070 Fernbank, and 6115 Flewellyn Road on Part Lots 24 and 25, Concession 9, Geographic Township of Goulbourn, Carleton County, now in the City of Ottawa, Ontario (Map 1). Caivan is planning residential development of the property (Map 2). The archaeological assessment was requested by the City of Ottawa in accordance with the Planning Act as a component of a Plan of Subdivision application. This assessment was completed in accordance with the Ministry of Heritage, Sport, Tourism and Culture Industries' Standards and Guidelines for Consultant Archaeologists (2011).

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 Goulbourn (Archaeological Services Inc. and Geomatics International Inc 1999). According to the management plan, portions of the development area have archaeological potential (Map 3).

At the time of the Archaeological Assessment, the study area was owned by Caivan. Permission to access the study property was granted by the owner prior to the commencement of any field work; no limits were placed on this access.

4.2 Historical Context

4.2.1 Historic Documentation

The subject property is in the geographic township of Goulbourn, former County of Carleton. Goulbourn Township was first surveyed in 1817 and the first settlers in 1818 included disbanded members of the 99th Regiment, who received military posts in the newly created village of Richmond (Belden 1879; Roberts 2004:185). The early history of Goulbourn is described in *Goulbourn Memories* (Goulbourn Township Historical Society 1996) and *For King and Canada: The 100th Regiment of Foot During the War of 1812* (Roberts 2004). Other useful resources include, *The Carleton Saga* by Harry and Olive Walker (1968), Courtney Bond's *The Ottawa Country* (1968), and Belden's *Illustrated Historical Atlas of Carleton County* (Belden & Co. 1879).

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 (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. 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 Lamoureux 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 2011; Hart and Brumbach 2003, 2005, 2009; Hart and Engelbrecht 2011; Martin 2008; Mortimer 2012). Thus, the shift into the period held as the Late Woodland is not well defined. 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); Matouweskari (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 Algonquins (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 Township of Goulbourn was first surveyed in 1817 by McNaughton, and was named for Sir Henry Goulbourn, the Undersecretary for War and the Colonies and one of the commissioners for negotiating the Treaty of Ghent (War of 1812) (Elliot 1991; Roberts 2004). The township was laid out in the usual 100 acre lots, except for Concession 12, which were 80 acre lots. The Richmond Military Settlement, or Village of Richmond, was created out of Lots 22, 23, 24, and 25 of Concession 3, and the south half of Lots 22, 23, 24, and 25 of Concession 4. The town lots were 1 acre each. Lots were awarded to discharged military as follows: Privates 100 acres, Sergeant 200 acres, Lieutenant 500 acres, Sergeant Major 500 acres, Ensign 500 acres, Captain 800 acres, and Navy Captain 1000 acres. Emigrants were awarded 100 acres (Stanzel 2001). The main group of settlers arrived at Richmond in September of 1818 as temporary tents were set up. It was not until October that land tickets were issued (Roberts 2004:185).

The Tipperary group was settled on land on the northeast corner of the township in the area of the village of Hazeldean (Roberts 2004). Emigrants from Ireland and Scotland moved to the Township, and specifically to the Village of Hazeldean in 1819 (Belden & Co. 1879:253). Goulbourn Township was incorporated into Carleton County in 1821. In 1851 the population of Goulbourn Township was

2,525. There were 15 stone houses, 2 frame houses, 241 log houses, and 100 shanties. The population grew very slowly and by 1861 there were 2,914 residents in the township residing in 19 stone houses, 7 frame houses, and 407 log houses (Bond 1968:24). By the 1870s, the village of Hazeldean, which was located 13 miles from Ottawa, had tri-weekly mail delivery. There was one general store, some trade shops, one school, two churches (Episcopal and Methodist), a Temperance Hall, and an Orange Hall (Belden & Co. 1879:253). By 1878, the population had grown to 3,007. The 55,060 acres that encompassed the township held 2,914 cattle, 3,409 sheep, 1,007 pigs, and 1,075 horses (Belden & Co. 1879:105–109).

4.2.5 Study Area Specific History

Lot 24, Concession 9

The “two hundred acres more or less” of Lot 24, Concession 9 were patented to Robert Argue in 1867 (OLR:Ottawa-Carleton (04), Goulbourn, Book 6). Robert was a son of George Argue, one of the original settlers of the township. George Argue was married to Mary Wilson.

Robert was born in County Cavan in 1810 and emigrated with his parents and siblings around 1821. The 1863 Walling map shows William A. Argue on the east half of Lot 24 with his father Robert on the west half with both dwellings north of the development area (Map 4). Land registry records note this division with the sale of the northeast half to William in January of 1868 (OLR:Ottawa-Carleton (04), Goulbourn, Book 6). In 1883, Robert sold the 100 acres of the west half to his son, Silas. The 1879 Belden map (Map 4) illustrates Silas as the occupant of the west half at that time and indeed the 1881 Census indicates that Robert and his wife continued to live on the west half, with Silas and his family (Statistics Canada 1881). Both halves remained in the Argue family until 1947 (OLR:Ottawa-Carleton (04), Goulbourn, Book 6).

Lot 25, Concession 9

Land registry records show Lot 25, Concession 9 was patented in 1824 to John McGuire, a colour sergeant in the 99th Regiment of Foot whose rank entitled him to the 200 acres. The property was passed to his son, John Jr., who granted the property to his wife Elizabeth and his sons upon his death in 1859. The lot remained in the McGuire family until 1929 when it was sold to John W. Davidson (OLR:Ottawa-Carleton (04), Goulbourn, Book 6).

The Walling map of 1863 shows Mrs. McGuire (widow of John Jr.) living in the northwest corner of the lot and a schoolhouse is depicted just to the east of the homestead, both well removed from the development area. The Belden map of Goulbourn Township from 1879 shows the majority of the lot as being owned by James Maguire, son of John Jr (Map 4). The house shown in 1863 is still depicted in the northwestern corner of the lot. By this time the schoolhouse is no longer depicted on Lot 25 and a new one is shown on Lot 26 to the east. A dwelling is shown on the 1879 map in the southeastern quadrant of the lot, within the development area. This is shown as the Thomas McGuire home, a brother of James (Map 4). At this time the lot appears to have been well situated within the surrounding community. The area's dominant town, Stittsville, as well as the smaller crossroads community of Rathwells Corners, were both nearby.

4.3 Archaeological Context

4.3.1 Current Conditions

The study area is a 66 hectare roughly rectangular parcel. To the northwest and southwest of the development area is existing residential development while to the northeast and southeast is active agricultural land with rural residential homes (Map 5). The northwest boundary is defined by Shea

Road and the southeast by Flewellyn Road. The development area is divided into south-west and north-east halves, corresponding with Lots 24 and 25 respectively. There is a large storm water management pond dividing the halves. The north-east half is generally open with an agricultural field along the eastern limit, with recent disturbances from the adjacent development in the western corner. A high voltage hydro corridor runs diagonally through the western part and defines the eastern boundary of the south-west half of the development area. The south-west half is lightly to heavily wooded with some trails and a seasonal creek visible in topographic mapping (Map 1).

4.3.2 Physiography

The study area lies within the broader Ottawa Valley Clay Plains physiographic region with sandy plains along the western extent (Map 6). The region is characterized by poorly drained topography of clay plains interrupted by ridges of rock or sand that offer moderately better drainage. The study area is located within an area of sand deposits. 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 freshwater 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 development area are predominately Bainsville and Reevecraig, with smaller areas of Richmond, Farmington, and Organic deposits. Bainsville soils are part of the Castor Association and consist of imperfectly drained very fine sandy loam that generally ranges from 15 to 25 cm in thickness (Schut and Wilson 1987:34). Reevecraig soils are fine to very fine calcareous marine or fluvial sands. The topography is generally level to very gently sloping resulting in imperfect drainage with slow to moderate surface runoff (Schut and Wilson 1987:67). Richmond soils are imperfectly drained loamy very fine sands. Farmington soil is typically dark brown to olive in colour and has a sandy loam texture with finer sandy loam and silt occurring less extensively. The soils are typically level or very gently sloped and unevenly drained, with the level areas being imperfectly drained while the sloped areas have very well drainage (Schut and Wilson 1987:38).

The surficial geology of the development area (Map 6) consists of a small area of Paleozoic bedrock which is a limestone or dolomite bedrock along the western edge. A central east to west deposit of fine-to-medium grained sand, that is calcareous and commonly fossiliferous; a nearshore sand generally occurring as a sheet or as bars or spits associated with glaciofluvial materials. Along the north side is a till deposit of sandy and silty compact diamicton, grey at depth but brown where oxidized that consists dominantly of lodgment till. The south-east quarter is characterized as offshore marine deposits of clay and silt. Organic deposits are mapped in the north-east and northwest corners and consist of mainly muck and peat in bogs, fens, swamps, and poorly drained areas.

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. Nearby archaeological assessments in the area include a Stage 2 Archaeological Assessment of Part Lots 27 and 28 Goulbourn Township (Adams 2004), a Stage 1 Assessment for the Hazeldean Road Corridor between Terry Fox Drive and the Old Carp Road (Daechsel 2000), Stage 1 Archaeological Assessment of Lots 14 and 15, Concession 11, Goulbourn Township by Heritage Quest Inc. (Earl 1999), a Stage 1 and 2

Archaeological Assessment of 570 Hazeldean Rd (Paterson Group 2012), and a Stage 1 and 2 Assessment of 590 Hazeldean Road (Paterson Group 2013a, 2013b).

The development abutting the northwest boundary of the study area was assessed through a Stage 1 and 2 undertaken by Adams Heritage (P003-373-2013) and Paterson Group (Adams 2014; Paterson Group 2014). Stage 2 identified two distributions of historic Euro-Canadian artifacts registered as the McGuire 1 site (BhFx-54) and the Mrs. McGuire's School House Site (BhFx-55). Paterson undertook the Stage 3 excavations at both sites in 2015 (Paterson Group 2015a) and subsequent Stage 4 Mitigation of Development Impact through complete excavation in 2016 (Paterson Group 2015b, 2016). Most of the material recovered at both sites dates from the mid-late 19th century, with little material suggesting a post 1900 date.

The McGuire 1 site (BhFx-54) does not correspond with mapped residences on the historic mapping and is likely the remnants of a domestic structure as seen by the vast amount of pane glass, fasteners, door and window hardware alongside the ceramics and personal items. It is speculated that circa 1860, this structure was demolished, abandoned, or moved closer to Fernbank Road to the north, the location of Mrs. McGuire's house and School house by 1863.

Mrs. McGuire's School House (BhFx-55) Stage 4 excavations uncovered no features relating to the schoolhouse, but amassed an artifact assemblage comprised of structural items from the schoolhouse building and items that the students would have used on a daily basis for their lessons: slate boards and pencils, and ink wells.

4.3.4 Registered Archaeological Sites and Commemorative Plaques

A search of the Ontario Archaeological Sites Database indicated that there are two registered archaeological sites within 1 km of the development area, the McGuire 1 site (BhFx-54) and the Mrs. McGuire's School House Site (BhFx-55) noted above. Both sites have been completely mitigated through Stage 4 excavation.

No commemorative plaques or monuments are located within 1 km of the subject property.

4.4 Archaeological Potential

The south eastern frontage along Flewellyn Road and a couple of pockets on the north west side fall in areas of archaeological potential indicated on the City of Ottawa's archaeological potential map (Archaeological Services Inc. and Geomatics International Inc 1999) (Map 3).

Potential for pre-contact Indigenous 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, wetlands), the types of soils found within the area of assessment, and resource availability. While the study area partially consists of imperfectly drained soils it is near wetlands and a seasonal tributary to the Carpo River. There are beach formations and sandy deposits to the west associated with post-glacial landscapes. Accordingly, the entire study area exhibits potential for pre-contact Indigenous archaeological sites.

Potential for historical Euro-Canadian sites is based on proximity to historical transportation routes, historical community buildings such as schools, churches, and businesses, and any known archaeological or culturally significant sites. The development area is located on two main concession roads. Lot 24 was granted in 1824, with both lots being occupied by the 1863 Walling survey (Map 4). A structure is shown in the southeast corner of the study area in the 1879 Belden

map (Map 4). Accordingly, the study area exhibits potential for historical period archaeological sites.

5.0 Field Methods

A field inspection of the subject property was undertaken on November 24, 2021. Permission to access the property was provided by the client, with no limitations. Weather conditions were sunny with temperatures around 2° C. While cool, field conditions were good with good lighting, surface visibility, and no snow cover as per Section 1.2, Standard 2 (MHSTCI 2011).

This inspection was undertaken to confirm the current conditions, geography, topography, and to map features indicating archaeological potential and the extent of disturbances. This information informs decisions regarding what survey strategies are appropriate for Stage 2 assessment ended.

As per Standard 1, Section 1.2, the development area was inspected using a systematic approach. All areas were examined to confirm if features of archaeological potential were present and if there were any areas of disturbance which would have removed archaeological potential.

Field notes and photographs of the property were taken during the visit to document the current land conditions as per Standard 1.a., Section 7.8.6 (MHSTCI 2011). The photograph locations and directions were noted, and all photographs were catalogued (see Appendix A). Photograph locations and directions are shown on Map 5. Please note that photographs are mapped using their figure number. The map and document catalogues are listed in Appendices B and C.

6.0 Record of Finds

A site inspection was undertaken on November 24, 2021, and conditions have changed in the last few years. This is shown in aerial imagery with the heavy forest in the north-east half being removed starting in 2015 and pastures visible in the south-west half in 1976 becoming forests by 2015 (Map 7).

At the time of inspection, the south-west half of the property was predominantly forested varying from dense to sparse with interspersed areas of more open meadow with junipers (Figure 1 to Figure 7). A dry creek bed was noted approximately where a small watercourse is shown on the topographic mapping (Figure 8). Sporadic areas have shallow sandy soils over bedrock; however these are small and irregular (Figure 9). Given the presence of a season creek and the dry sandy soils, the entire south-west portion exhibits factors indicating archaeological potential.

The north-east portion is largely open and exhibits many areas that are waterlogged with wet species growth such as dogwood and bull rushes (Figure 10). The eastern quarter (along Shea Road) is an agricultural field, which at the time of the site visit was very wet with large standing water areas (Figure 11 and Figure 12). South of the hydro corridor is a large earth stockpile from topsoil stripping in this area (Figure 13 and Figure 14). The large area that appears to have been previously stripped is now very wet with high water in between furrows, and some areas with marsh grasses and bull rushes (Figure 10 and Figure 15). The wet soils noted during the site inspection conform with the soil survey which maps the development area as largely overlying imperfectly to poorly drained soils.

The northern part of the north-east half of the study area along Shea Road (03), currently resembles ploughed field (Figure 16) but may be a grubbed and stripped area as there are lots of medium sized rocks and pockets of sandy subsoil on the surface and the aerial imagery documents the more recent removal of the forest along this side (Map 7). The west corner of the north-east parcel has been entirely stripped of topsoil with large stockpiles of earth, boulders, and yellow sand subsoil apparent on the surface (Figure 17 to Figure 19). This area extends to the south and into the hydro corridor that passes diagonally through the parcel.

The southern corner of the north-east half, near Flewellyn Road, has undergone more recent tree removal and piles of trees are present (Figure 20). It is unclear if the area was grubbed. Aerial imagery (Map 7) shows tree piles in a square pattern in this area beginning in 2015, and by 2017 the area is cleared and there are what appear to be deep furrows. It is possible the area is deeply disturbed, however as it is unclear if stumps and roots were removed, completely disturbing the area, it should be tested to confirm if it is indeed deeply and pervasively disturbed.

7.0 Analysis and Conclusions

Matrix Heritage was contracted by Caivan to conduct a Stage 1 Archaeological Assessment for the proposed Stittsville Properties development at 5993 Flewellyn, 6070 Fernbank, and 6115 Flewellyn Road on Part Lots 24 and 25, Concession 9, Geographic Township of Goulbourn, Carleton County, now in the City of Ottawa, Ontario (Map 1). Caivan is planning residential development of the property (Map 2). The Stage 1 assessment included a review of the updated MHSTCI archaeological site databases, a review of relevant environmental, historical and archaeological literature, primary historical research, and a property inspection.

This Stage 1 assessment concludes that, based on criteria outlined in MHSTCI *Standards and Guidelines for Consultant Archaeologists* (Section 1.3, 2011), the entire study area has archaeological potential for pre-contact Indigenous and/or historical Euro-Canadian archaeological sites. This includes factors such as known 19th-century historical settlement in the immediate area, the proximity of historical road networks and water sources. Finally, there are registered Euro-Canadian and Indigenous archaeological sites in proximity to the study area.

The property inspection revealed and documented several wet areas consisting of very saturated soils with bull rushes, dogwood, and other saturated soil species. The lack of drainage is confirmed by the soil survey (Map 6) which identifies the development area as containing imperfectly draining soils with pockets of organics. These areas, as shown in Map 5, should be reviewed and confirmed during Stage 2 assessment and may, at that time, be excluded from shovel testing as per Section 2.1, Standard 2.a.1.i. (MHSTCI 2011).

Aerial imagery and the property inspection document deep disturbances to large areas perhaps associated with the neighbouring subdivision development and stormwater management pond construction, and previous grubbing or topsoil stripping are evident and/or speculated. As these activities have the possibility to remove archaeological potential (Section 1.3.2 MHSTCI 2011), during Stage 2 assessment these areas should be either tested to confirm disturbance where the level of disturbance is unclear (as per Section 2.1.8 MHSTCI 2011) or excluded from Stage 2 test pit assessment (as per Section 1.4, Standard 1.f. MHSTCI 2011) where subsoil was noted on the surface and the disturbance is clearly extensive from the site inspection and aerial imagery (as shown in Map 5),

8.0 Recommendations

The Stage 1 assessment determined that the development area has potential for pre-contact Indigenous and historical Euro-Canadian archaeological resources with areas that are likely permanently wet or deeply disturbed.

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

1. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the pedestrian survey method at 5 m intervals in all agricultural fields as per Section 2.1.1 (MHSTCI 2011) (approximate area shown in green in Map 5). Appropriate field conditions must be achieved prior to assessment as per Section 2.1.1. (MHSTCI 2011).
2. In areas which cannot be ploughed (as per Section 2.1.2, Standard 1. MHSTCI 2011) (approximate area shown in blue in Map 5), a Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the test pit survey method at 5 m intervals, as per Section 2.1.2 (MHSTCI 2011).
3. During Stage 2 assessment, the extent of possibly disturbed areas (approximate areas as shown in orange in Map 5) be confirmed through visual assessment or testing to confirm disturbance as per Section 2.1.8 (MHSTCI 2011).
4. During Stage 2 assessment, the extent of permanently wet areas (approximate areas as shown in pale blue in Map 5) be confirmed through visual assessment and where the criteria of Section 2.1, Standard 2.a.i. (MHSTCI 2011) are met, these areas be excluded from Stage 2 assessment.
5. Confirmed deeply disturbed areas (as shown in red in Map 5), should be excluded from Stage 2 assessment as per Section 1.4, Standard 1.f. (MHSTCI 2011).
6. The Stage 2 archaeological assessment follow the requirements set out in the 2011 Standards and Guidelines for Consultant Archaeologists (MHSTCI 2011).

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 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.
- b. It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licenced 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.

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.

10.0 Closure

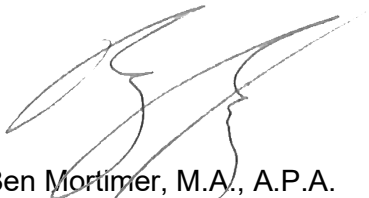
Matrix Heritage has prepared this report in a manner consistent with the time limits and physical constraints applicable to this report. No other warranty, expressed or implied is made. The sampling strategies incorporated in this study comply with those identified in the Ministry of Heritage, Sport, Tourism and Culture Industries' *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 Caivan (Stittsville West) Ltd. 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.

Matrix Heritage Inc.



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

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2013a Stage 1 Archaeological Assessment: 590 Hazeldean Rd., Concession 11, West Part Lot 29, Geographic Township of Goulbourn, City of Ottawa, Ontario. Ottawa.

2013b Stage 2 Archaeological Assessment: 590 Hazeldean Rd., Concession 11, West Part Lot 29, Geographic Township of Goulbourn, City of Ottawa, Ontario. Ottawa.

2014 Stage 2 Archaeological Assessment: Davidson Lands, 5993 Flewellyn Rd, Concession 9, Part lot 25, Geographic Township of Goulbourn, City of Ottawa, Ontario. Ottawa.

2015a Stage 3 Archaeological Assessment: McGuire 1 (BhFx-54) and Mrs. McGuire's School House (BhFx-55) Sites, Davidson Co-Tenancy, 5993 Flewellyn Rd, Concession 9, Part lot 25, Geographic Township of Goulbourn, City of Ottawa, Ontario. Ottawa.

2015b Stage 4 Archaeological Mitigation: Mrs. McGuire's School House (BhFx-55) Site Davidson Co-Tenancy 5993 Flewellyn Rd, Concession 9, Part lot 25 Geographic Township of Goulbourn City of Ottawa, Ontario. Ottawa.

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12.0 Images



Figure 1: Open forest on eastern edge of south-west half (MH1066-D20).



Figure 2: Wooden fence line that runs north-south through south-west half along line of cedar trees with light woods (MH1066-D29).



Figure 3: Open area in northeastern portion of south-west half that has thin soils over bedrock and exposed bedrock in some areas (MH1066-D31).



Figure 4: Open field with trees (MH1066-D47).



Figure 5: Light brush with heavier cedar forest (MH1066-D51).



Figure 6: Open cedar forest on southern portion of south-west half (MH1066-D57).



Figure 7: ATV trail along southwestern corner of the south-west half with adjacent properties (MH1066-D60).



Figure 8: Small dry creek through south-west half (MH1066-D21).

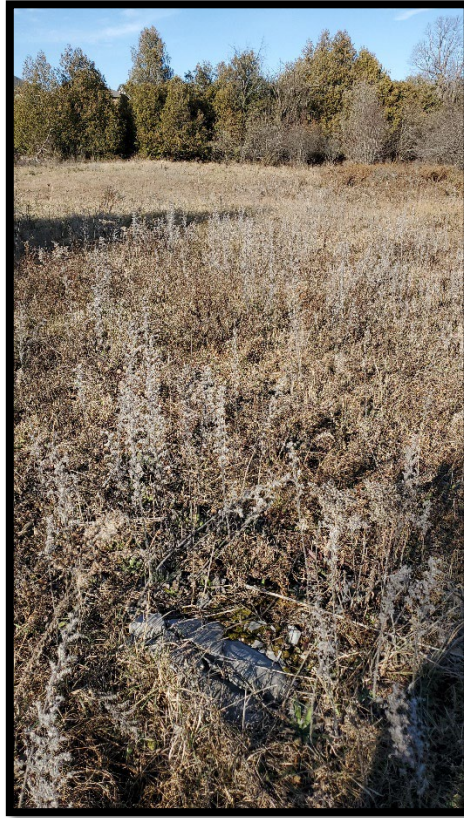


Figure 9: Exposed bedrock in northeastern portion of south-west half (MH1066-D33).



Figure 10: Bull rushes and new growth through stripped areas in north-east half (MH1066-D76).



Figure 11: Field area along Shea Road with large wet areas (MH1066-D81).



Figure 12: Open field area looking west towards large earth pile (MH1066-D82)



Figure 13: Large earth pile in distance from previous stripping in foreground (MH1066-D70),



Figure 14: Large earth pile in distance from previous topsoil stripping (MH1066-D71).



Figure 15: Wet areas visible throughout stripped area (MH1066-D74).



Figure 16: Possibly ploughed field along Shea Road, with large areas of standing water (MH1066-D01).



Figure 17: Stripped area in northern portion of north-east half (MH1066-D08).



Figure 18: Stripped area and earth stockpiles (MH1066-D13).

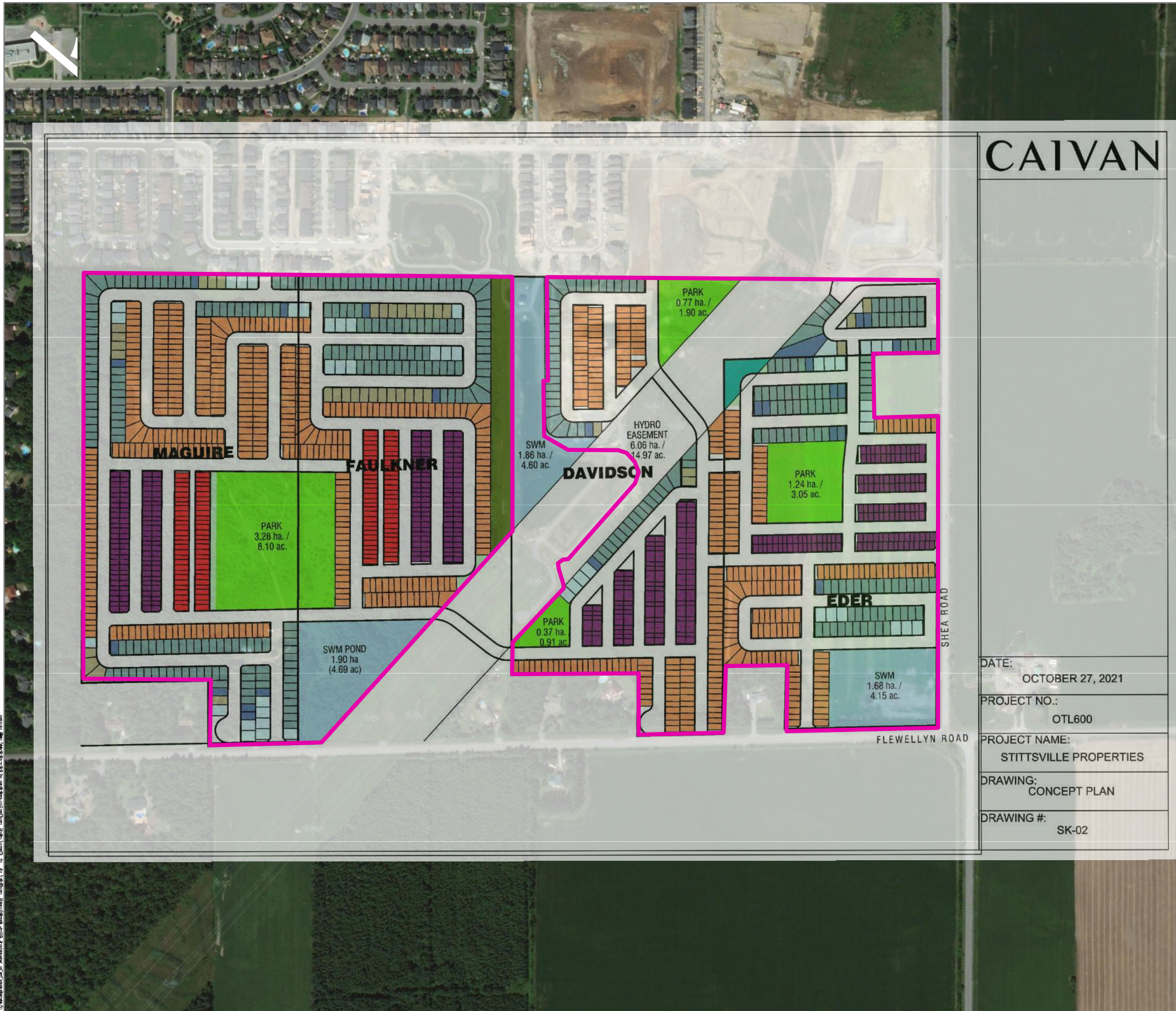


Figure 19: Stripped and disturbed gravelly area (MH1066-D17).



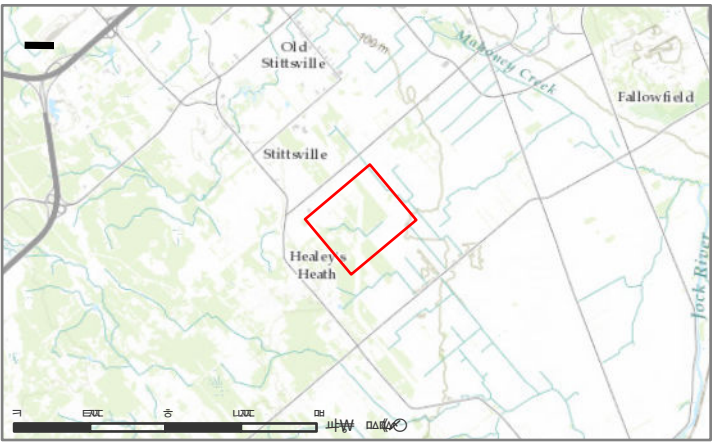
Figure 20: Piles of trees from previous grubbing/stripping in southern area of north-east half (MH1066-D66).

13.0 Maps

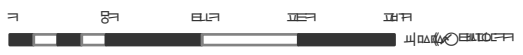


CAIVAN

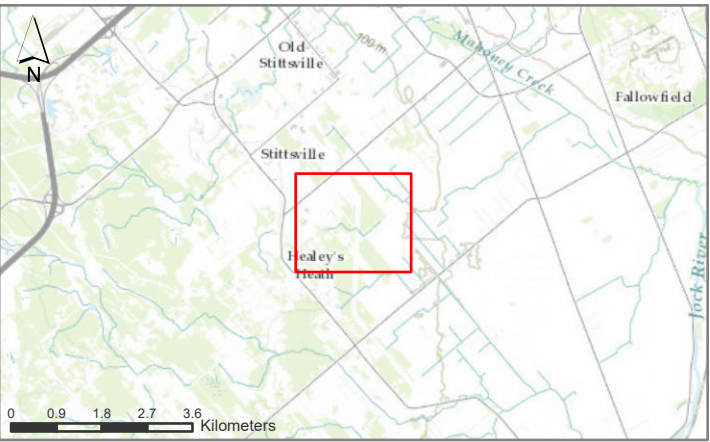
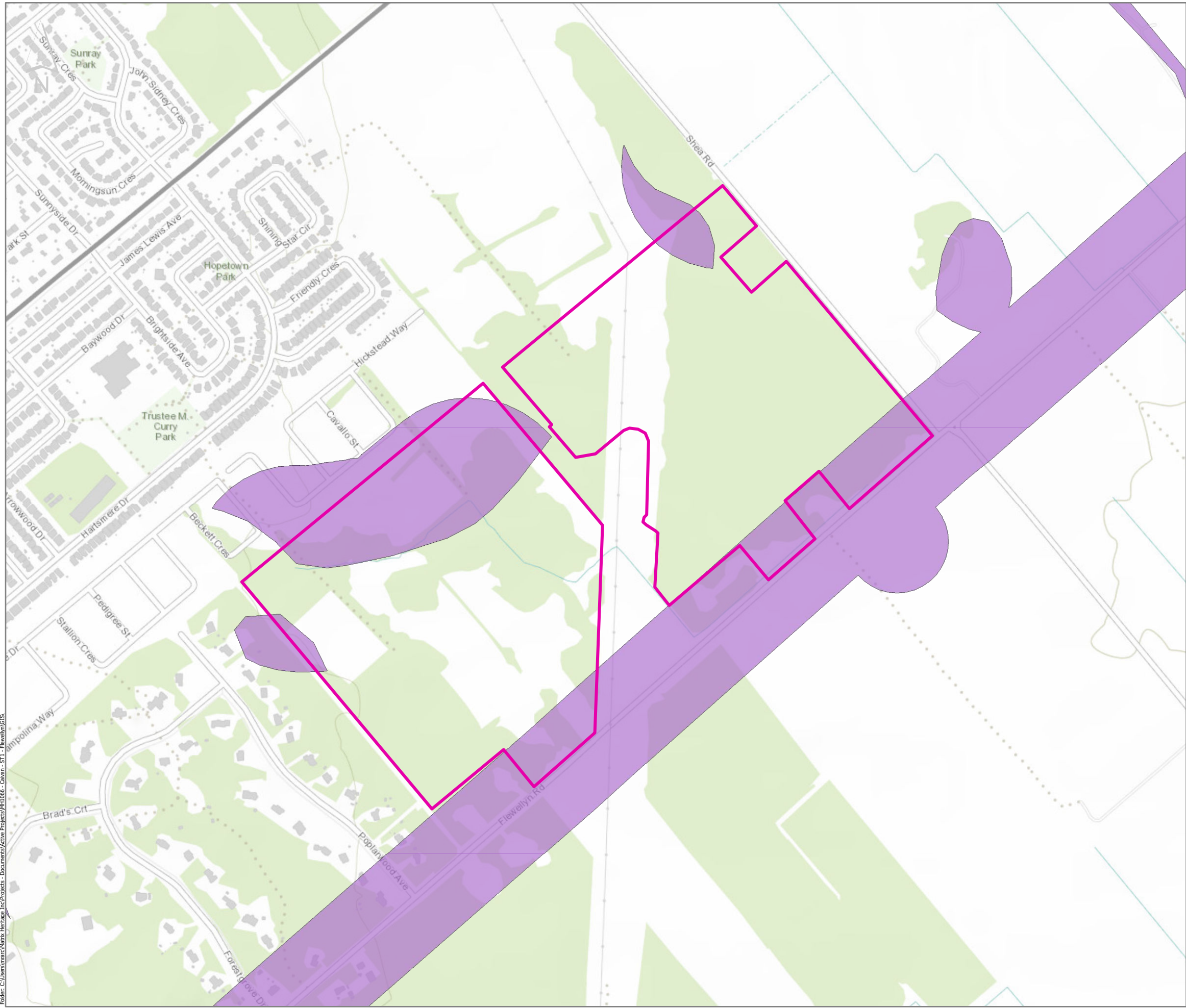
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Map Scale
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CAIVAN is a residential development located in the Stittsville area. The development is situated on a 14.97-acre hydro easement. The development includes a large SWM pond, several parks, and a network of streets. The development is outlined in pink on the map.



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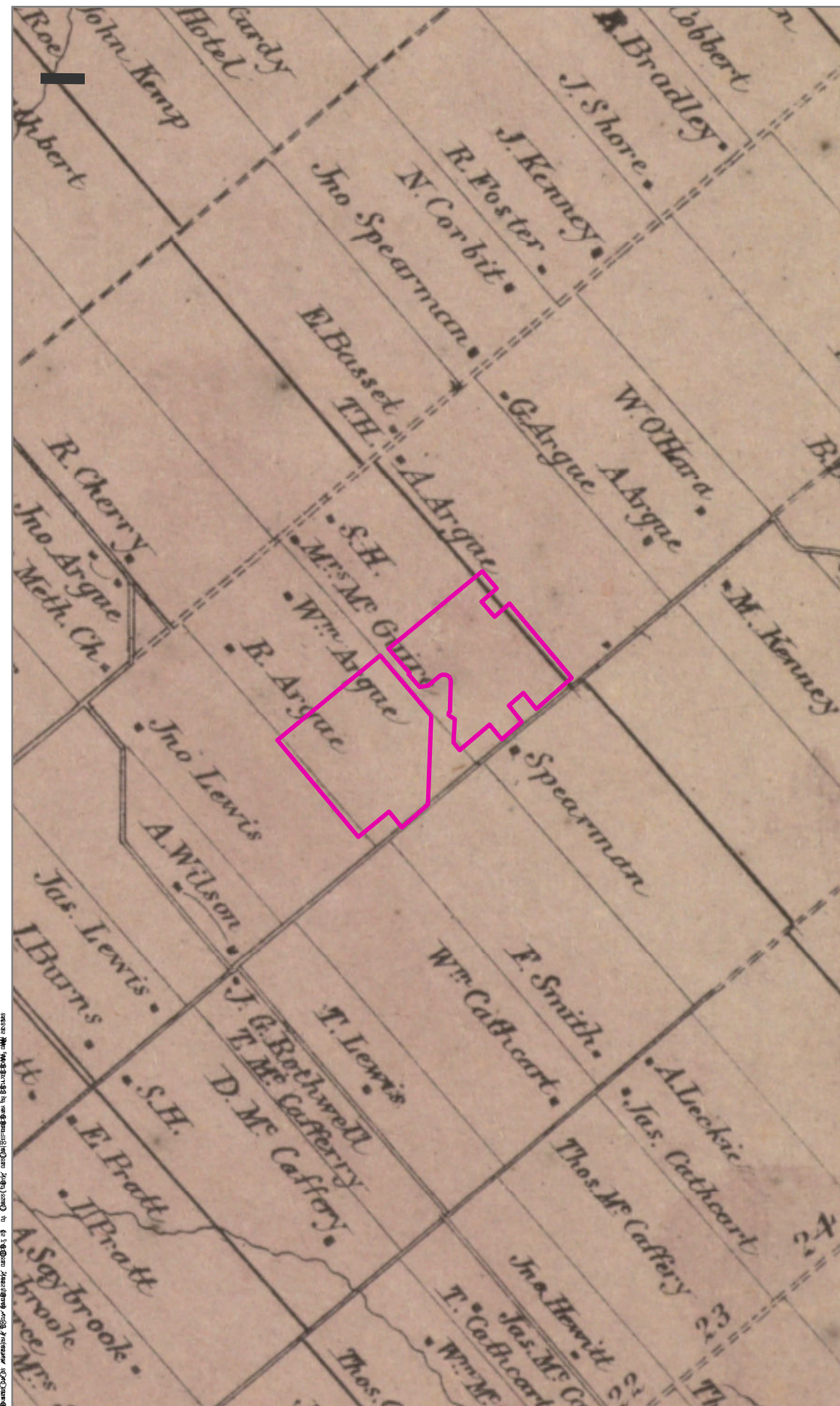
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1999 POTENTIAL MAPPING FROM GEOOTTAWA

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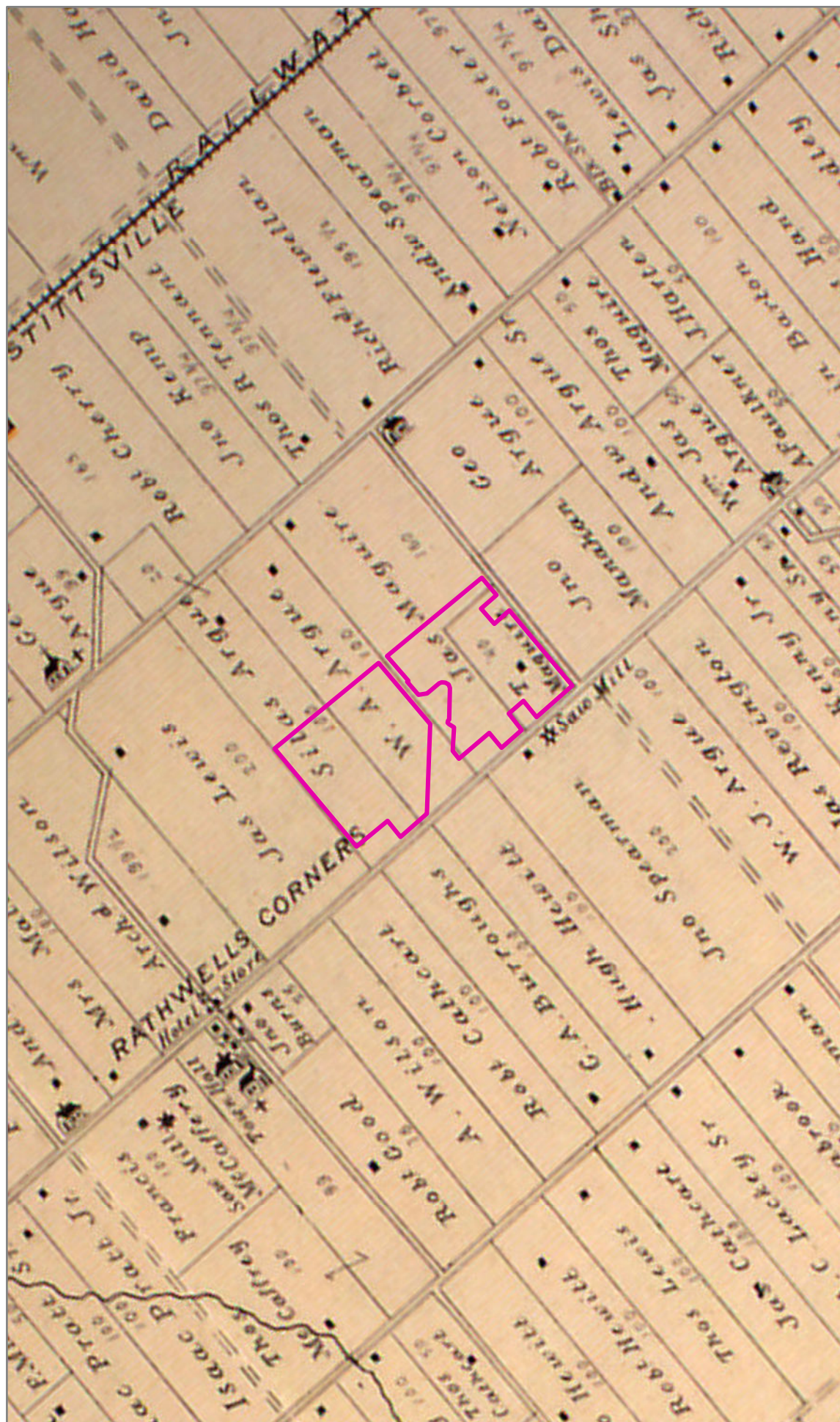
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PROJECT
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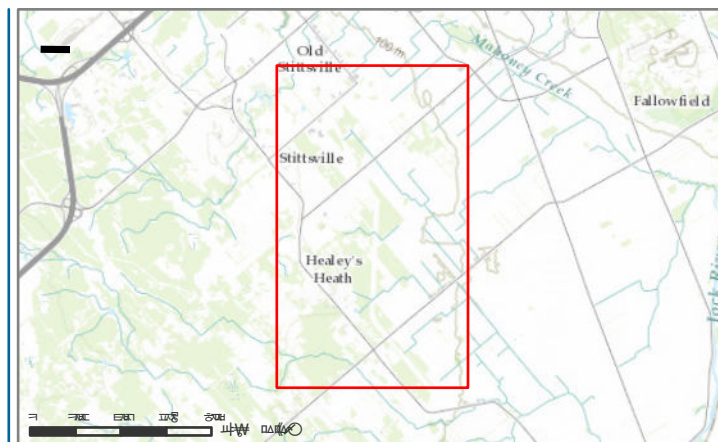
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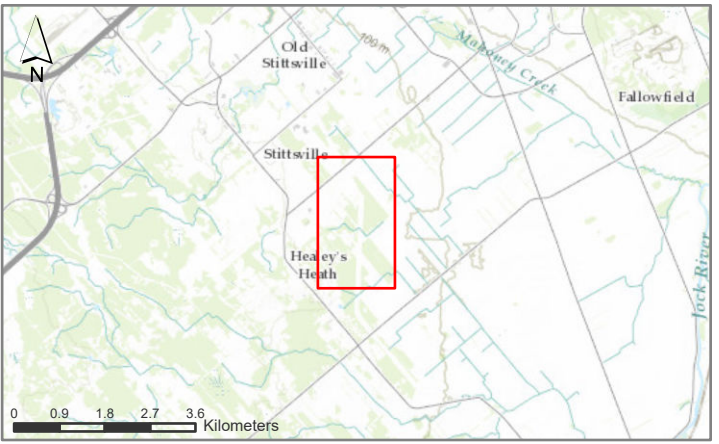
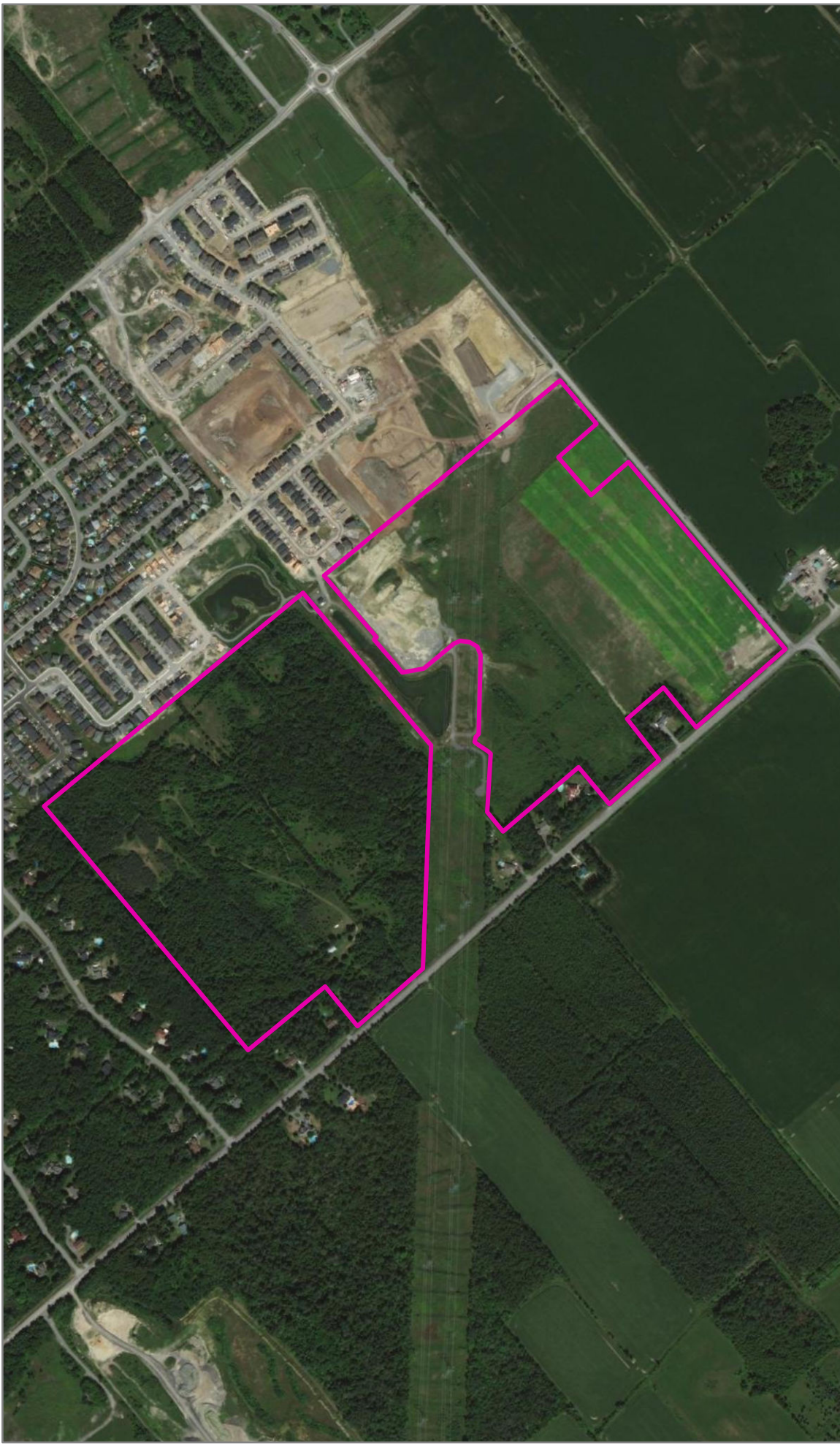
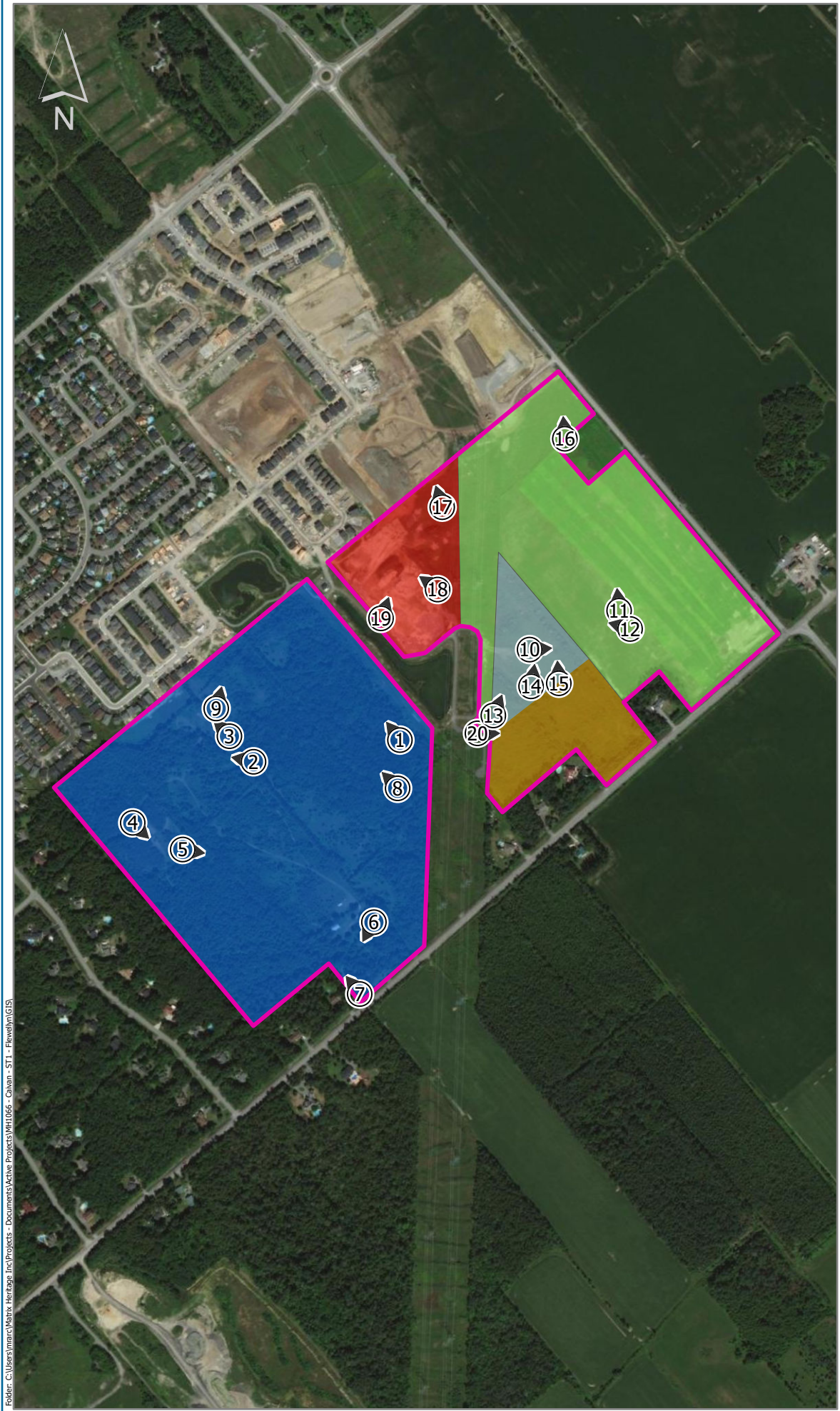
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Matrix

LEGEND

 STUDY AREA

RECOMMENDED METHODOLOGY

STAGE 2 TESTING

 PEDESTRIAN SURVEY (5 M INTERVAL)

 TEST PIT (5 M INTERVAL)

 SHOVEL TEST TO CONFRIM DISTRUBANCE

EXCLUSIONS

 PERMANENTLY WET (CONFIRM DURING STAGE 2)

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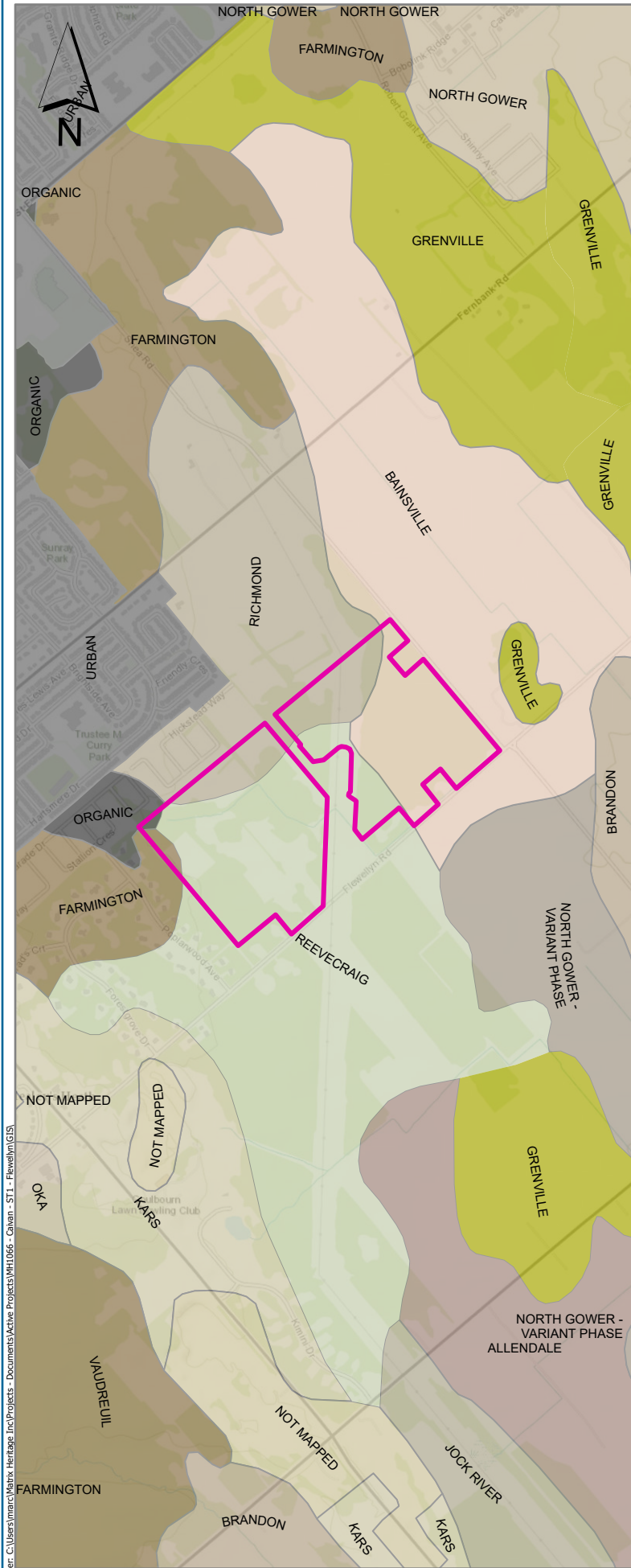
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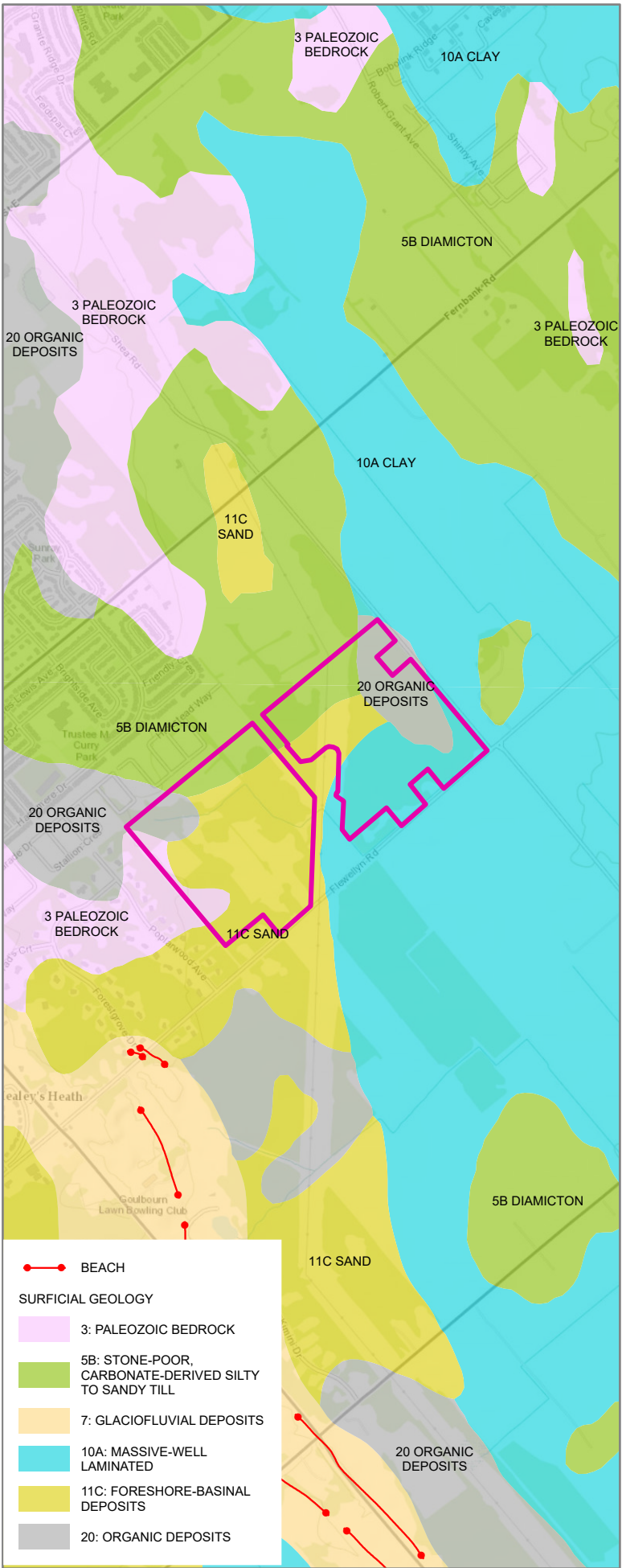
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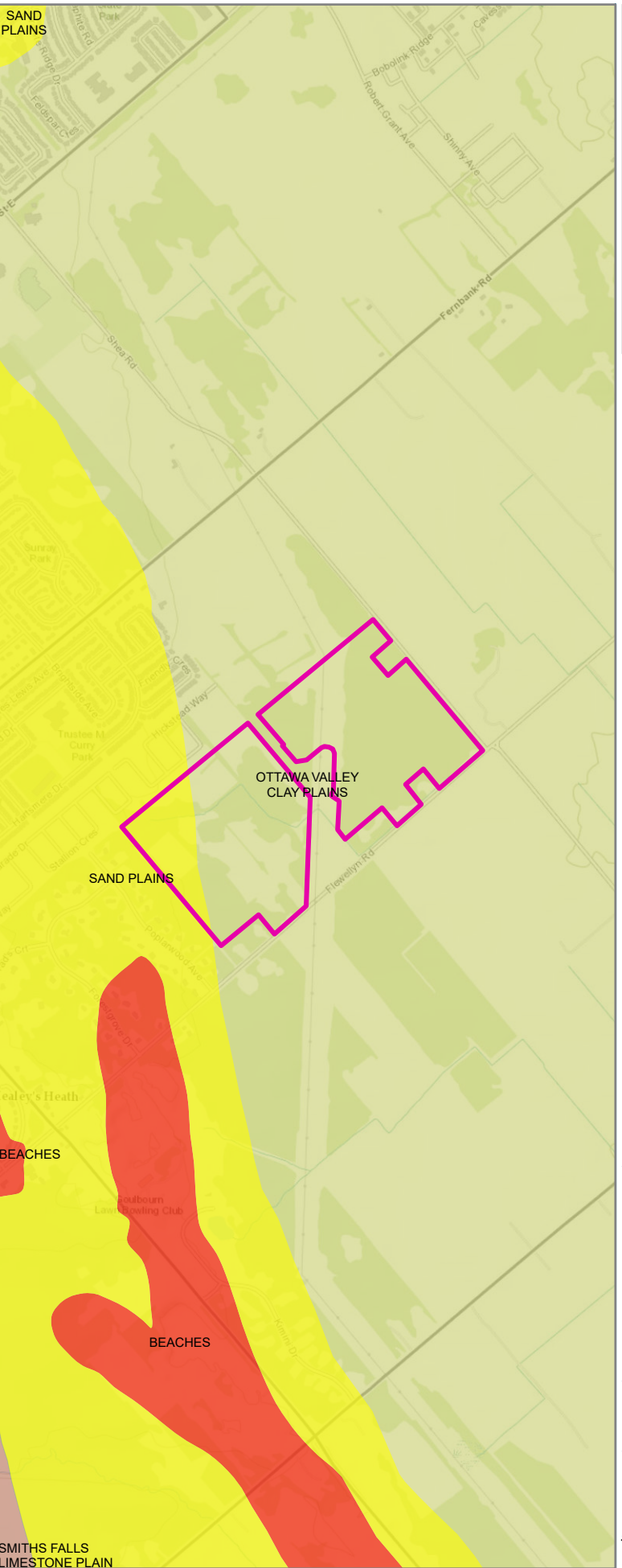
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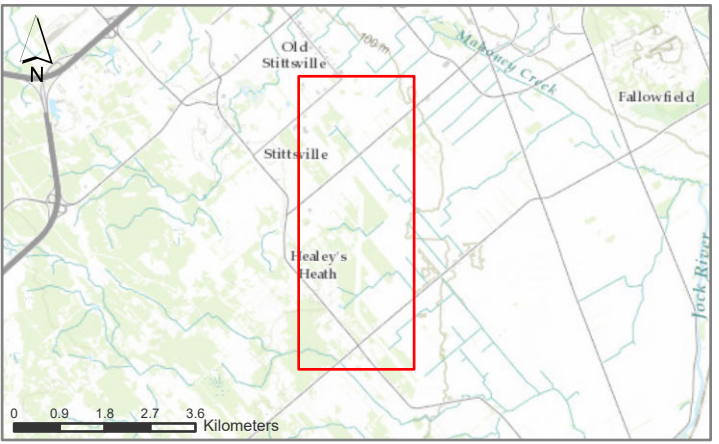
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SURFICIAL GEOLOGY



PHYSIOGRAPHY



LEGEND

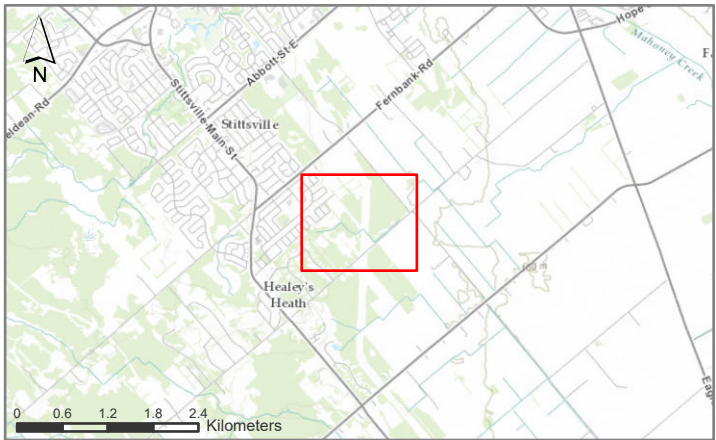
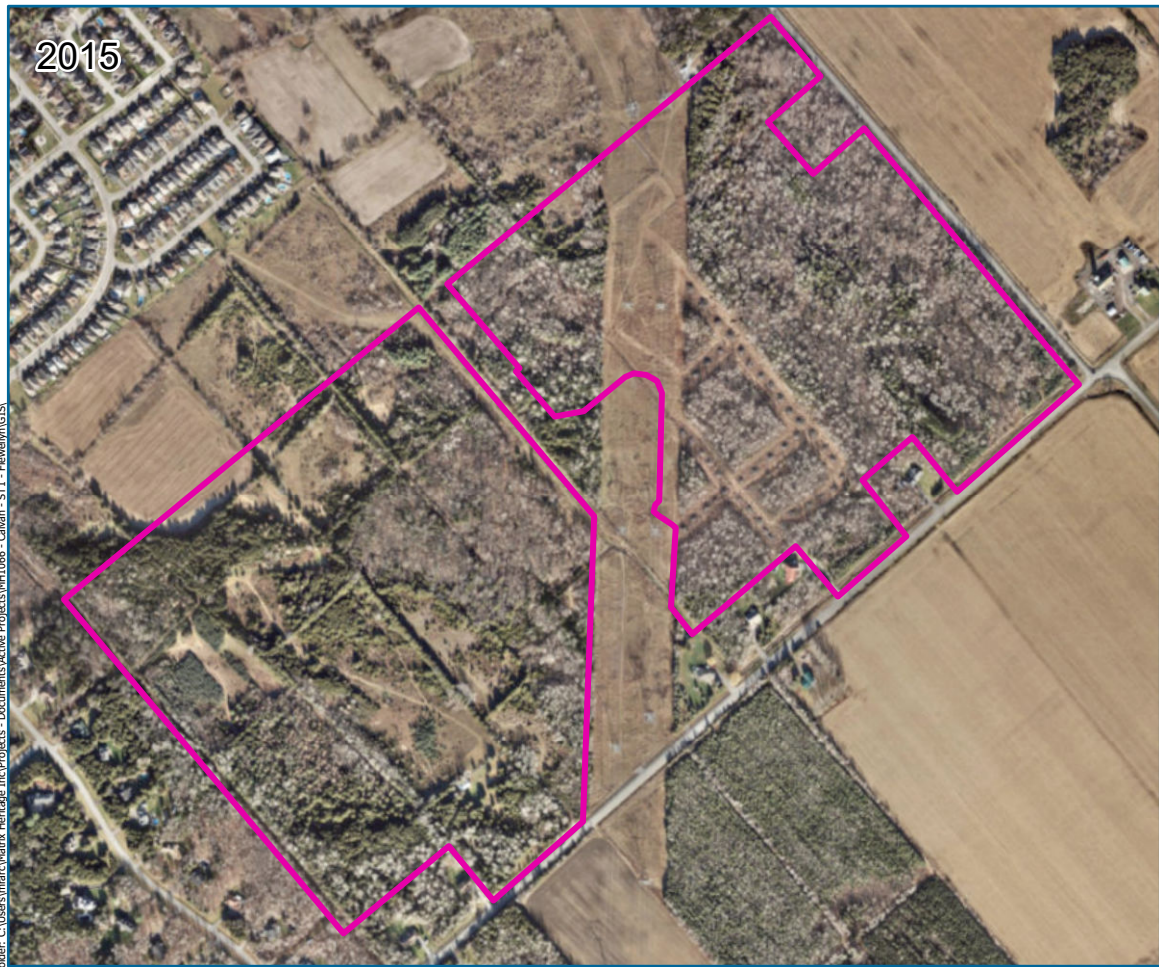
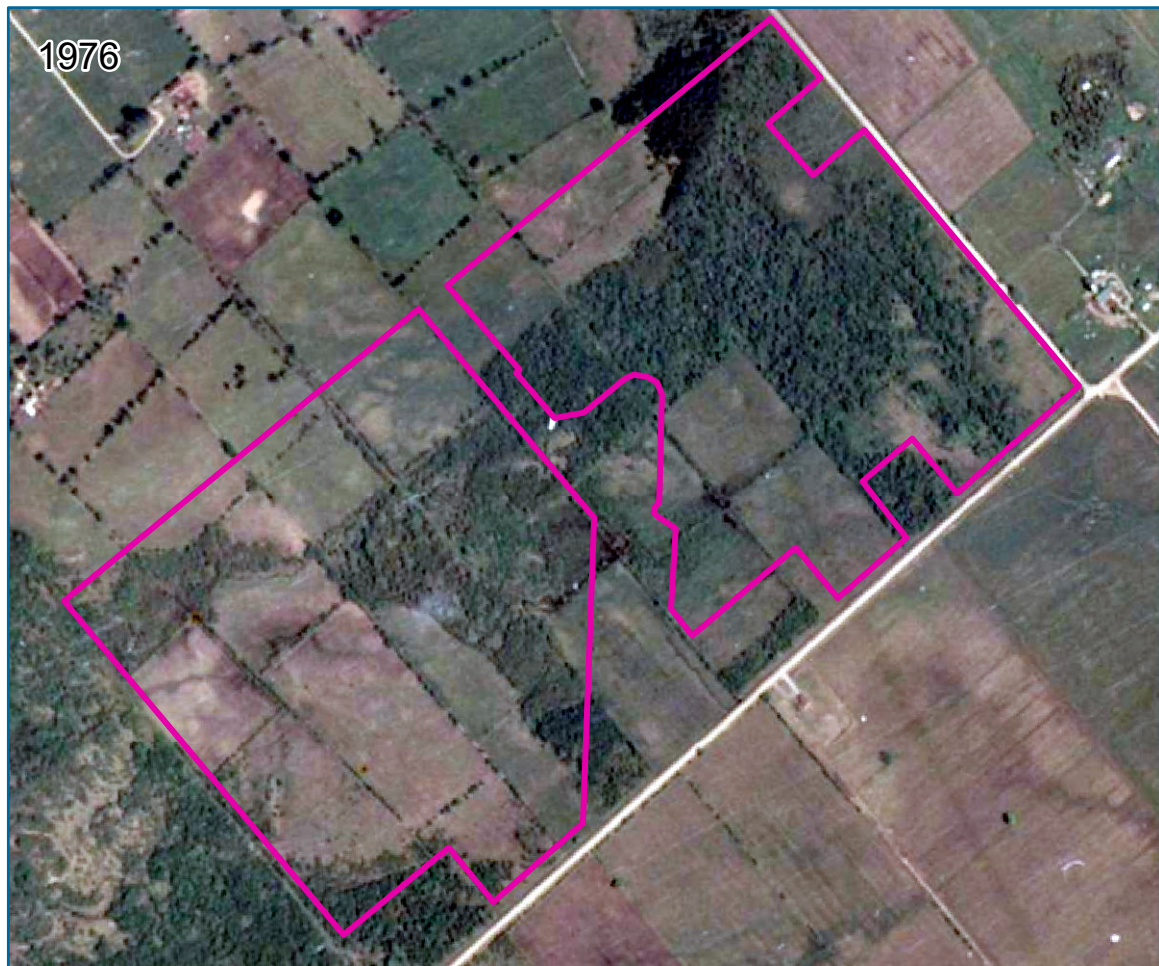
STUDY AREA



0 380 760 1,140 1,520 Meters 1:22,594

REFERENCES:
CITY OF OTTAWA, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, HERE, GARMIN, USGS, NGA, EPA, USDA, NPS, AAFC, NRCAN, CITY OF OTTAWA, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, EPA, USDA, AAFC, NRCAN
SOIL SURVEY COMPLEX LIO
SURFICIAL GEOLOGY OF SOUTHERN ONTARIO 2003
CHAPMAN AND PUTNAM 2007 PHYSIOGRAPHY OF SOUTHERN ONTARIO

| | | | |
|-------------|---|-------------|------------|
| FILE | MH1066 | DATE | 2021-12-15 |
| PROJECTION: | NAD 1983 UTM Zone 18N | CREATED BY: | BM |
| | | CHECKED BY: | NK |
| PROJECT | STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FLEWELLYN ROAD, OTTAWA | | |
| TITLE | SOILS AND GEOLOGY | | |
| | | MAP | 6 |



LEGEND
STUDY AREA



0 150 300 450 600 Meters 1:10,000

REFERENCES:
CITY OF OTTAWA, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, USGS, METI/NASA, NGA, EPA, USDA, AAFC, NRCAN, CITY OF OTTAWA, PROVINCE OF ONTARIO, ESRI CANADA, ESRI, HERE, GARMIN, INCREMENT P, INTERMAP, USGS, METI/NASA, EPA, USDA, AAFC, NRCAN
AERIAL IMAGERY FROM GEOOTTAWA

FILE MH1066 DATE 2021-12-16

PROJECTION: NAD 1983 UTM Zone 18N CREATED BY: BM

PROJECT
STAGE 1 ARCHAEOLOGICAL ASSESSMENT
FLEWELLYN ROAD, OTTAWA CHECKED BY: NK

TITLE MAP
AERIAL IMAGERY 7

Appendix A: Photographic Catalogue

| Photo Number | Description | Direction | Date | Photographer |
|--------------|---|-----------|-----------|--------------|
| MH1060-D001 | General conditions at the southern corner of the site | SW | Nov-05-21 | A. Jackson |
| MH1060-D002 | Test pitting at the south western edge of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D003 | Test pitting and general conditions along western side | N | Nov-05-21 | A. Jackson |
| MH1060-D004 | General conditions at the southern corner of the site | NW | Nov-05-21 | A. Jackson |
| MH1060-D005 | General shot of test pit fill | W | Nov-05-21 | A. Jackson |
| MH1060-D006 | Rock field boundary wall | N | Nov-05-21 | A. Jackson |
| MH1060-D007 | Corner of the stone field boundary | E | Nov-05-21 | A. Jackson |
| MH1060-D008 | Large tree in stone field boundary wall | NW | Nov-05-21 | A. Jackson |
| MH1060-D008 | General site conditions | NE | Nov-05-21 | A. Jackson |
| MH1060-D009 | Large rocks and conditions | NE | Nov-05-21 | A. Jackson |
| MH1060-D010 | Test pitting in the central portion of the study area | NW | Nov-05-21 | A. Jackson |
| MH1060-D011 | Test pitting in the central portion of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D012 | Test pitting in the central portion of the study area | E | Nov-05-21 | A. Jackson |
| MH1060-D013 | Test pitting in the central portion of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D014 | Test pitting in the central portion of the study area | E | Nov-05-21 | A. Jackson |
| MH1060-D015 | Test pitting in the central portion of the study area | E | Nov-05-21 | A. Jackson |
| MH1060-D016 | Test pitting in the central portion of the study area | E | Nov-05-21 | A. Jackson |
| MH1060-D017 | Test pitting in the south central area of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D018 | General view of the centre of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D019 | East-West stone wall with large trees | E | Nov-05-21 | A. Jackson |
| MH1060-D020 | East-west stone wall | SE | Nov-05-21 | A. Jackson |
| MH1060-D021 | Test pitting along east-west wall | S | Nov-05-21 | A. Jackson |
| MH1060-D022 | Test pitting in the central portion of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D023 | Excavated test pit | W | Nov-05-21 | A. Jackson |
| MH1060-D024 | Excavated test pit | S | Nov-05-21 | A. Jackson |
| MH1060-D025 | Test pitting in the central portion of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D026 | Test pitting in the central portion of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D027 | Test pitting in the central portion of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D028 | Test pitting in the central portion of the study area | N | Nov-05-21 | A. Jackson |
| MH1060-D029 | Test pitting in the central portion of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D030 | Test pitting in the central portion of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D031 | Test pitting in the central portion of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D032 | General conditions in the south central portion of the study area | NW | Nov-05-21 | A. Jackson |
| MH1060-D033 | General conditions in the south central portion of the study area | SW | Nov-05-21 | A. Jackson |
| MH1060-D034 | East west wall with old wood fence | NE | Nov-05-21 | A. Jackson |
| MH1060-D035 | Standing water in eastern portion of the study area | N | Nov-05-21 | A. Jackson |
| MH1060-D036 | Standing water in eastern portion of the study area | N | Nov-05-21 | A. Jackson |
| MH1060-D037 | East west wall with old wood fence | SE | Nov-05-21 | A. Jackson |
| MH1060-D038 | South eastern edge of study area, survey nail in stone wall | NE | Nov-05-21 | A. Jackson |
| MH1060-D039 | Close up of stones on east west wall | E | Nov-05-21 | A. Jackson |
| MH1060-D040 | Small area of standing water, disturbed soil, berm in northern corner of study area | N | Nov-05-21 | A. Jackson |
| MH1060-D041 | Small area of standing water, disturbed soil, berm in northern corner of study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D042 | Small area of standing water, disturbed soil, berm in northern corner of study area | NW | Nov-05-21 | A. Jackson |
| MH1060-D043 | Berm in northern portion of study area | W | Nov-05-21 | A. Jackson |
| MH1060-D044 | Berm in northern portion of study area | SW | Nov-05-21 | A. Jackson |
| MH1060-D045 | Berm in northern portion of study area | N | Nov-05-21 | A. Jackson |
| MH1060-D046 | Berm in northern portion of study area | W | Nov-05-21 | A. Jackson |
| MH1060-D047 | Large rock and general conditions in northern portion of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D048 | General conditions in central northern portion of the study area | SW | Nov-05-21 | A. Jackson |
| MH1060-D049 | Test pitting in northern portion of study area, showing height of berm | NW | Nov-05-21 | N. Dilkie |
| MH1060-D050 | General conditions in central northern portion of the study area | SW | Nov-05-21 | A. Jackson |
| MH1060-D051 | General conditions in central northern portion of the study area | S | Nov-05-21 | A. Jackson |
| MH1060-D052 | Berm in northern portion of study area | NW | Nov-05-21 | A. Jackson |
| MH1060-D053 | Test pitting in the central portion of the study area | SW | Nov-05-21 | A. Jackson |
| MH1060-D054 | General conditions in central northern portion of the study area | S | Nov-05-21 | A. Jackson |
| MH1060-D055 | General conditions in central northern portion of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D056 | Berm in northern portion of study area | NW | Nov-05-21 | A. Jackson |
| MH1060-D057 | Berm in northern portion of study area | N | Nov-05-21 | A. Jackson |
| MH1060-D058 | Berm in northern portion of study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D059 | View of study area from on top of the berm | SE | Nov-05-21 | A. Jackson |
| MH1060-D060 | View of study area from on top of the berm | S | Nov-05-21 | A. Jackson |
| MH1060-D061 | View of the berm from on top of the berm | NE | Nov-05-21 | A. Jackson |
| MH1060-D062 | View of the berm from on top of the berm | SW | Nov-05-21 | A. Jackson |
| MH1060-D063 | Disturbed area at the base of the berm in the western corner of the | W | Nov-05-21 | A. Jackson |

| Photo Number | Description | Direction | Date | Photographer |
|--------------|--|-----------|-----------|--------------|
| | study area | | | |
| MH1060-D064 | General conditions in the western portion of the study area | S | Nov-05-21 | A. Jackson |
| MH1060-D065 | Remains of the north south stone boundary wall | SE | Nov-05-21 | A. Jackson |
| MH1060-D066 | Disturbed area at the base of the berm in the western corner of the study area | W | Nov-05-21 | A. Jackson |
| MH1060-D067 | Disturbed area at the base of the berm in the western corner of the study area | N | Nov-05-21 | A. Jackson |
| MH1060-D068 | Large tree at corner of stone boundary walls, where they meet | SE | Nov-05-21 | A. Jackson |
| MH1060-D069 | Large tree at corner of stone boundary walls, where they meet | S | Nov-05-21 | A. Jackson |
| MH1060-D070 | General view of the central portion of the study area, showing openness | NE | Nov-05-21 | A. Jackson |
| MH1060-D071 | Large rocks along the north south boundary wall | W | Nov-05-21 | A. Jackson |
| MH1060-D072 | General view of disturbed soil in the western corner of the study area | N | Nov-05-21 | A. Jackson |
| MH1060-D073 | General view of disturbed soil in the western corner of the study area | NE | Nov-05-21 | A. Jackson |
| MH1060-D074 | General view of disturbed soil in the western corner of the study area | E | Nov-05-21 | A. Jackson |

Appendix B: Document Catalogue

| Project | Description | Created By |
|---------|--|-------------|
| MH1066 | Flewellyn Road Field Notes (One Note File) | Nadine Kopp |

Appendix C: Map Catalogue

| Map Number | Description | Created By |
|------------|------------------------------------|-------------|
| 1 | Location | B. Mortimer |
| 2 | Development Plan | B. Mortimer |
| 3 | Archaeological Potential | B. Mortimer |
| 4 | Historic | B. Mortimer |
| 5 | Methods, Photo Key, and Conditions | B. Mortimer |
| 6 | Soils and Geology | B. Mortimer |
| 7 | Aerial Imagery | B. Mortimer |