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Paterson Group Inc.
Consulting Engineers
154 Colonnade Road South
Ottawa (Nepean), Ontario
Canada K2E 7J5

Tel: (613) 226-7381
Fax: (613) 226-6344
www.patersongroup.ca

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ORIGINAL REPORT

Stage 1 Archaeological Assessment:

Kanata North Urban Expansion Study Area
Concession 3, Part Lots 11, 12, 13, and 14,
And Concession 4, Part Lots 12 and 13,
Geographic Township of March
City of Ottawa, Ontario

Prepared For

Novatech Engineering
On behalf of
Kanata North Landowners Group

Novatech Engineering Consultants Ltd.
Michael Cowpland Drive, Suite 200,
Ottawa, Ontario
K2M 1P6
Tel: 613-254-9643
Fax: 613-254-5667

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PIF: P369-011-2013
Ben Mortimer (P369)
Report: PA1013-1

1.0 Executive Summary

Paterson Group, on behalf of Novatech Engineering Consultants Ltd (Novatech), undertook a Stage 1 archaeological assessment of the study area located at Concession 3, Part Lots 11, 12, 13, and 14, and Concession 4, Part Lots 12 and 13, in the geographic township of March. The objectives of the investigation were to assess the archaeological potential of the property and determine whether further archaeological study was required. Novatech is coordinating the collection of the documentation of existing conditions for various property owners as part the preparation of a Community Design Plan (CDP). The CDP is required by the City of Ottawa in fulfillment of the policies under Section 3.11 of the Official Plan for lands designated Urban Expansion Study Area. The land use planning process to prepare the CDP will be integrated with the Municipal Class Environmental Assessment Process. The approved CDP will ultimately be the basis for a City of Ottawa initiated Official Plan Amendment under the Planning Act to change the designation of the Land from Urban Expansion Study Area to various urban land use designations.

The Stage 1 assessment included a review of updated Ontario Ministry of Tourism, Culture and Sport (Ministry of Tourism and Culture 2011) archaeological sites database, relevant environmental, historical and archaeological literature, and primary historical research, including: historical maps, and land registry records. The subject property has archaeological potential based on its early settlement (1828) and the distance to topographic features (i.e., a branch of Shirley's Creek), as further demonstrated by the fact that the majority of the area is indicated as having potential on the City of Ottawa archaeological management plan (Archaeological Services Inc. & Geomatics International Inc. 1999a, 1999b), and by our potential modelling.

Based on the background research and the distance from topographic features, historic roads and structures, it is determined that the entire study property has archaeological potential. It is recommended that:

1. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the test pit survey method at 5m intervals in all areas which have not been recently ploughed or do not have appropriate conditions for pedestrian survey at the time of the Stage 2 assessment (currently 39.6 ha [25%] as illustrated in blue on Map 7).
2. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the pedestrian survey method in areas that have been recently ploughed and are in appropriate conditions at the time of survey undergo pedestrian survey at 5 m intervals (currently 119.7 ha [75%] as illustrated in pink on Map 7).
3. The Stage 2 archaeological assessment follow the requirements set out in the 2011 *Standards and Guidelines for Consultant Archaeologists* (MTC 2011)

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3.0 Project Personnel

Project Director	Ben Mortimer, MA (P369)
Report Preparation	Nadine Kopp, MA (P378)
	Ben Mortimer, MA (P369)
Archival Research	Nadine Kopp, MA (P378)
GIS and Mapping	Ben Mortimer, MA (P369)

4.0 Project Context

4.1 Development Context

Paterson Group, on behalf of Novatech Engineering Consultants Ltd (Novatech), undertook a Stage 1 archaeological assessment of the study area located at Concession 3, Part Lots 11, 12, 13, and 14, and Concession 4, Part Lots 12 and 13, in the geographic township of March (Map 1). Novatech is coordinating the collection of the documentation of existing conditions for various property owners as part the preparation of a Community Design Plan (CDP). The CDP is required by the City of Ottawa in fulfillment of the policies under Section 3.11 of the Official Plan for lands designated Urban Expansion Study Area. The land use planning process to prepare the CDP will be integrated with the Municipal Class Environmental Assessment Process. The approved CDP will ultimately be the basis for a City of Ottawa initiated Official Plan Amendment under the Planning Act to change the designation of the Land from Urban Expansion Study Area to various urban land use designations.

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 March (Archaeological Services Inc. and Geomatics International Inc. 1999). According to the management plan, large portions of the property have archaeological potential (Map 2).

At the time of the archaeological assessment, the study area was under the ownership of various property holders. Novatech was acting as Project Managers on behalf of the major property owners in the study area, referred to as the Kanata North Landowners Group, to assist in a process that will fulfil the requirements of Section 3.11 in the Official Plan.

4.2 Historical Context

4.2.1 Historic Documentation

The subject property is located in the geographic township of March, former County of Carleton. March Township was first surveyed in 1820 and the first settlers in 1819 included retired officers of the Napoleonic Wars, who received plots on the Broken Front along the Ottawa River (Belden 1879). The early history of March is described in *March Past* (Burns, et al. 1972), *Families and Heritage Homes of March Township: The Historical Project* (Senior Citizen's Club of March Township 1974-1978), and *The Catholic Community of St. Isidore* (No Author 1987). 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* (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 (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 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 Englebrecht 2011; 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 Post-Contact Period

March Township was first surveyed in 1820, although settlers began arriving in 1819. The township acquired its name at a dinner party held in the Village of Richmond in Goulbourn Township, on August 27th 1819. In attendance was the Governor General of British North America, Charles Lennox, Duke of Richmond, who passed away the following day from rabies. The new township that was laid out fronting on the Ottawa River was named after the Duke's son, Charles Gordon-Lennox, Earl of March (Bond 1968:19).

The township is bounded on the northeast by the Ottawa River, the east by Nepean Township, the southeast by Goulbourn Township, the southwest by Huntley Township, and the northwest by Torbolton Township. March Township was originally part of the District of Johnstown, in 1822 it became part of the District of Bathurst, and was incorporated into Carleton County in the 1840s. The 27,993 acres were laid out in seven concessions 7/8 of a mile wide. Only the first two concessions are full concessions, as the others are all broken by the line of Nepean Township or the Ottawa River (Belden 1879:xlvi).

Settlement in March Township began in 1819 when Colonel Lloyd, an veteran of the British Army against Napoleon in Egypt in 1802, and other half pay officers from the Napoleonic wars were influenced to settle along the Ottawa River rather than in the military settlements of Richmond or Perth. Among the first settlers were Lieutenant Thomas Read, Captain Weatherby, and Captain Benjamin Street of the Royal Navy, and Captain John B. Monk of the army. Free land grants were awarded to discharged military as follows: privates 100 acres, sergeants 200 acres, army lieutenants 500 acres, Royal Navy lieutenants and army captains 800 acres, and Royal Navy captains 1,200 acres. Since the township was not officially surveyed until 1820, many of the new settler's were located on the wrong lots, and some had built houses on other's property, luckily these mishaps were solved amicably (Belden 1879:xlvi).

It was not until 1820 that civilians, who were awarded 100 acre half lots, arrived in March Township. Unlike other townships, March did not provide provisions as to the amount of land that needed to be cleared, the only stipulation was that it be settled. Nor were there requirements for the particular style of house to be built upon the land. Settlers were also given a kit of tools consisting of necessary equipment and supplies including a blanket, axe, hand saw, spade, shovel, pick axe, scythe, camp kettle, 12 lbs of nails, and 12 panes of glass. Every retired soldier further received one year of rations (Belden 1879:xlvi).

One civilian of note who settled on the Ottawa River alongside the army and Royal Navy officers was Hamnett Kirkes Pinhey, a civilian merchant from Plymouth, England. Pinhey won distinction during the Napoleonic Wars by getting messages through the French blockade, which later earned him a grant of 1,000 acres along the Ottawa River (Burns, et al. 1972:12). With his wife Mary Ann, he settled on Lot 23 of Concessions 6 and 7. With his great wealth he constructed an estate which he named Horaceville, after his son. In 1823, Pinhey built the first grist and saw mills in the township on his land, followed in 1824-1826 by financing the construction St. Mary's, the first Anglican Church, on his land (Burns, et al. 1972:4, 12). For his service to the community, the government supplemented Pinhey's land grant with another 1,000 acres. With two mills and a church, the Pinhey estate quickly became an early focus for the community and Pinhey emerged as a community leader, shown by the fact that he was a member of the Legislative Council of Upper Canada, and Township Reeve from 1850-1855 (Belden 1879:xlvi).

While the riverfront was settled by officers, the interior of the township was settled between the 1820s and 1840s mainly by Irish farmers, tradesmen, and lower ranking soldiers. In many cases these settler's received the best arable land in the township, as the soils closer to the river were very shallow (Burns, et al. 1972:36). Belden noted that March Township was the poorest in Carleton County in terms of soils, with many areas of exposed bedrock, although there were pockets of good areas with a large number of excellent farms (Belden 1879:xlvi). The first census of the township was undertaken in 1823 by the township clerk Henry Edward, who lived on Lot 22 Concession 4, and enumerated 49 families, a total of 207 people, living within the township (Belden 1879:xlvi; Walker and Walker 1968:254).

During the early settlement of the township the only semblance of a village appeared in the south at what became known as March Corners, with its centre at Lots 10 and 11 of Concession 3 and 4. This hamlet was at the centre of six different roads, and by 1879 had a post office, two general stores, a blacksmith and wagon shop, an orange hall, and the only hotel in the township (Belden 1879:xlvi).

Free land grants in March Township were discontinued in 1824, however, many Irish immigrants continued arriving throughout the 1820s and 1830s (No Author 1987:3). The early Irish Catholic settlers were visited by missionaries from Kingston, Richmond, and Perth. By 1836, there were enough Catholic families to build a log chapel that measured 38' x 23'. It was officially blessed as a Mission of St. Patrick Fallowfield in 1840 by Bishop Ignace Bourget of Montreal. The church was enlarged in 1850 and used until the present church was built in 1887 on two acres land donated by John Lahey on part of Lot 14 Concession 4. The parish was usually referred to the Mission of March, but in 1883 Archbishop Joseph-Thomas Duhamel of Ottawa called it St. Isidore (No Author 1987:3-4).

In 1837, General Lloyd (previously Colonel) initiated action to construct a second Anglican church near the small hamlet of South March. Funds were raised by the community and land donated by John Armstrong and O. Riddell on part of Lot 10 Concession 4. By 1840, St. John's church was completed, and shortly after was visited by John Strachan the Anglican Bishop of Toronto. This church eventually preceded that of St. Mary's and still stands today (Walker and Walker 1968:258).

For numerous years in the early development of the township there were not enough children of school age to necessitate the construction of a schoolhouse. When the need arose, either people were too scattered or too poor to require a school. In 1827, there is reference to a school opened in the home of Mrs. Thomas Read to educate the children of the wealthier families in the township (Burns, et al. 1972:61). Sometime later the first hewed log school building was erected on the land of John G. Street, the son of Captain Street, on his land on Lot 19 Concession 7. For the first two years that the school was open, Street paid the school teacher himself. The first public school erected in the interior of the township was on John Armstrong's land on Lot 11 Concession 3. The first school teacher was John Younghusband, who lived on Lot 12 Concession 4 (Belden 1879:xlvi). By 1863, there were 6 log schools in the township with a total of 155 students in attendance (Walker and Walker 1968:261).

The first post office was established on Lt. Thomas Read's riverfront property sometime prior to 1825. Mail from Hull took as long as four days to arrive. There were no roads to the post office so residents canoed, walked, or went by horseback to retrieve their mail. In one instance, a man named Henry MacLaren drowned while paddling his canoe to receive a letter from his mother in Scotland. By 1825, settlers near March Corners petitioned for a post office, but it was not granted at the time, consequently Jeremiah Goodman was appointed courier to travel weekly between March Corners and the post office on Read's land to deposit and collect mail. By 1848, a post office opened in March Corners with Goodman as postmaster. By 1864, a post office had opened in the hamlet of Dunrobin north of Constance Lake, with Henry Younghusband as the postmaster (Burns, et al. 1972:33). In 1870, the post office on Thomas Read's property burnt down, and was relocated slightly to the south on Lot 20 with W. H. Berry as post master. By 1879, this post office was receiving tri-weekly mail, while the post office at March Corners had become more prominent and was receiving daily mail (Belden 1879:xlvi). By the 1880s, there were three additional post offices established at Marchurst, Malwood, and Harwood Plains (Burns, et al. 1972:33).

By 1842, *Smith's Canadian Gazetteer* noted a significant increase in population to 831 inhabitants (Burns, et al. 1972:13). By 1846, the township produced 6,800 bushels of wheat, 8,900 bushels of oats, 18,700 bushels of potatoes, 700 lbs of butter, and 2,300 lbs of wool. By this time a second saw mill had opened, run by Mr. Headley on Lot 18 Concession 4, while there was still only one gristmill located on Pinhey's land.

March Township reached its boom period in the 1850s and 60s (Burns, et al. 1972:43-44). In 1851, there were 1,125 inhabitants in the township. There were a total of 8 stone houses, 1 frame house, 88 log cabins, and 70 shanties (Bond 1968:23). There were 140 farmers actively involved in agriculture on their own land and approximately 70-80 farm labourers. The township had three blacksmiths, four shoemakers, four carpenters, two tailors, two merchants, and one lumber merchant (Burns, et al. 1972:44, 49). By 1861, the population had grown to 1,454 living in ten stone houses, three frame houses, and 197 log cabins (Bond 1968:23). A total of 153 farmers farmed 21,200 acres of land. Oats were the dominant crop yielding 31,000 bushels, but the Irish dependence on the potato is seen by the 243 acres of potatoes planted that yielded 25,000 bushels (the surveyor noted this was a low yield for the year due to the prevalence of rot). There was growth within the trades as the township now had a total of five blacksmith's, one harness maker, four inn keepers, seven carpenters, six shoemakers, four tanners (all at McMurtry's tannery on Lot 11 Concession 2), one tailor, three weavers, and one wagon maker (Burns, et al. 1972:51-52).

In the summer of 1870, a great fire passed through Carleton County and destroyed much of March Township, although March Corners and Horaceville escaped the flames. Crops, homes, and livestock were burned, though most inhabitants took refuge in rivers and wells. The fire significantly changed the composition of the land as it cleared trees and soil was lost from erosion, altering the drainage system. Swampy areas had dried out and turned into good land for agriculture (Burns, et al. 1972:72).

The first railway to pass through the township was lumber and railway baron John Rudolphus Booth's Ottawa, Arnprior, and Renfrew line in 1888. This line eventually connected to the Canada Atlantic Railway which connected Ottawa to Vermont and facilitated transporting lumber from the interior of Ontario to markets in the United States. In 1904, this line was bought by the Grand Trunk Railway and eventually the CNR line. In 1910-1914 William Mackenzie and Donald Mann's Canadian Northern railway was laid through the township. It is now a part of CNR's main line linking Ontario to the West (Burns, et al. 1972:30).

4.2.4 Study Area Specific History

Lot 11 Concession 3

The north half of Lot 11 was granted to John Armstrong Jul 3, 1828 (OLR:AR19). John Armstrong and his wife Sarah were of Irish decent (Statistics Canada 1851). John was an inn keeper and farmer and lived in a two storey stone house. The Armstrong's had eight children: John Jr., Thomas, Joseph, Samuel, Robert, Mary Jane, Mary Ann, and Rebecca (Ancestry.com 1861). John Armstrong sold off small parcels of his land, while maintaining the majority of the 100 acres. In 1833, he sold half an acre to Hamnet Pinhey. In 1862, he sold 1 acre to Thomas Sproule. A small house with the initials T.S. can be seen in the northwest corner of Lot 11 on the 1879 Belden map (Map 4). In 1874, Armstrong conveyed land to School Section No. 2 (OLR:AR19). While the land for the schoolhouse had not been officially conveyed until this late date, Armstrong had donated the land for its purpose much earlier. School Section No. 2 was the first public school built in the township, although an exact date for its construction is unknown. It is shown on the 1863 map (Map 3), and Mitchell's Directory of 1863 notes that School Section No. 2 had 18 students in attendance under the instruction of John Younghusband (Walker and Walker 1968:261). In 1875, John also conveyed his land to his son Robert, although he lived for another six years until his death on November 2, 1881 at the age of 93 (Ancestry.com 2010b). The 1879 Belden map shows the Robert as the owner of the property with a house built alongside the road that runs to the south of the schoolhouse (Map 4). Robert Armstrong owned the property until the early 20th century (OLR:AR19).

Lot 12 Concession 3

The entire 200 acres of Lot 12 Concession 3 was granted by the Crown to Captain William Brown Bradley on June 14, 1824 (OLR:AR19). William Bradley was born in Savannah, Georgia in 1771. As a United Empire Loyalist, he came to New Brunswick in 1783. In 1796 he married Catherine Clement in Fredericton NB. Together they had five children (Ancestry.com 2010a). When Bradley passed away in 1848, the front (west) 80 acres were willed to Edward Clarke and the rear (east) 120 acres to William B. Bradley Jr.

In May 1852, Clarke passed away and willed his 80 acres to William B. Bradley Jr. who then owned the entirety of the lot. The 1863 map show a Joseph Wheeler on the property, however the land registry records do not mention this name (Map 3). Wheeler may have rented the land from Bradley. In 1870, William B. Bradley retained the rear 120 acres of the lot (in which the study area is located) and sold 3 acres fronting on the concession road to Henry Bradley and 77 acres to Francis Bradley as seen on the 1879 Belden map (Map 4). The rear 120 acres stayed in the Bradley family until it was sold in 1899 to Caroline Codd (OLR:AR19).

Lot 13 Concession 3

The south half of Lot 13 was granted by the Crown to Thomas Morgan on June 15, 1824. The north half was granted to his brother George on May 24, 1828 (OLR:AR19). The Morgan brothers were of Irish decent and were English shipwrights. At first, Thomas was the only one to occupy the land while George worked as a carpenter in Hull, which may account for why the land was granted to George four years after Thomas' land grant (Senior Citizen's Club of March Township 1974-1978). When George Morgan passed away in 1853, the land was held in trust by John Armstrong for Morgan's son William who was 13 at the time of his death. The 1879 Belden map shows that George Morgan was the owner of the property at the time (Map 4). Thomas Morgan married Martha Hedley in 1824 and had eight children (Statistics Canada 1851). The first death in the township was one of Thomas Morgan's daughters who was two or three years old and died while trying to climb a fence but fell on her head (Belden 1879:xlvi). When Thomas passed away in 1859 at the age of 7, he willed his property to his wife (OLR:AR19). The 1863 map shows that Mrs. Morgan owned the property, while the 1879 Belden map shows their son George Hedley Morgan as the owner (Map 3 and Map 4). The entirety of Lot 13 stayed in the Morgan family until the mid 20th century.

Lot 14 Concession 3

Lot 14 was granted by the Crown to the Canada Company on July 9, 1829. The Canada Company was a large private chartered British land development company, incorporated by an act of British parliament on July 27, 1825, to aid the colonization of Upper Canada. John Lahey, of Tipperary, Ireland, bought the property from the Canada Company September 13, 1833. In 1855, John Lahey donated 2 acres of land to the future site of the Catholic Church of St. Isidore. On his death in 1859 at the age of 81 the property passed to his son John Lahey (OLR:AR19; Statistics Canada 1851) John Lahey Jr. was married to Margaret Jane Killeen in 1858, together they had six children (Statistics Canada 1891). Lot 14 stayed in the Lahey family until the early 20th century (OLR:AR19).

Lot 12 and 13 Concession 4

On June 12, 1824, the patent for all 400 acres of lot 12 and 13 was granted to Edward Sands Bradley, the son of Captain William Brown Bradley. In 1825, Edward sold both lots to William Montgomery. That same year, Montgomery sold the north half of Lot 12 to William Armstrong. He sold the south half in 1829 to William B. Bradley Jr. (OLR:AR19). In 1831, Bradley Jr. sold the south half to John Younghusband, the first public school teacher in March Township. With his wife Mary Ashburnen, Younghusband had ten children (Senior Citizen's Club of March Township 1974-1978). Younghusband sold 5 acres along the concession road to John Goodman, the postmaster of March Corners, in 1842. The north half of Lot 12 passed to William Armstrong Jr. in 1877 (OLR). This is the configuration of the lot as seen on the Belden map of 1879 (Map 4), showing Armstrong and Younghusband with houses near Shirley's Brook and another house near the road (that of Goodman). In 1885 Samuel Scissons purchased the Goodman residence. In 1899, George H. Younghusband, John's son, purchased the north half of the lot from the Armstrong family. The property stayed in the Younghusband family until the mid-20th century.

In 1825, Montgomery also sold the property he had acquired on Lot 13. The north half was sold to George Morgan, which was also held in trust for William Morgan after George's death, while the south half was sold to Dominick Burk. Sometime afterwards Elizabeth Edey acquired the south half of Lot 13. The 1863 map shows that the south half of the property was owned by a Edy T. H. (Map 3). In 1873, Joseph Davis acquired the property from Edey (OLR:AR19). The 1879 Belden map shows that both Morgan and Davis

built their houses near the concession road (Map 4). This lot stayed in the Davis and Morgan families until the mid 20th century.

4.2.5 Summary

Based on current knowledge of the pre-contact archaeology of the Ottawa Valley and the proximity to a Shirley's Brook (Map 5), there is potential for pre-contact archaeological sites in this area.

The land registries and historic maps show that although this area was mainly rural, it had a moderate level of occupancy beginning in the early nineteenth century with continued use into the twentieth century. The study area was located to the north of the village of March Corners and close to historic transportation routes in the form of roads. Several important community members in the early development of March Township lived on these properties.

4.3 Archaeological Context

4.3.1 Current Conditions

The study area consists of 159.3 hectares that is characterized primarily as a cultivated field, with lightly wooded areas between field and some areas of more densely wooded areas (Map 5). The property is relatively flat and encompasses Shirley's Brook, a tributary of the Ottawa River (Map 5). The current study area includes existing residential areas and existing structures such as a school and churches that will not be subject to the eventual development, but fall within the larger study area.

4.3.2 Physiography

The study area lies within the Ottawa Valley Clay Plains with some undrained till plains (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. 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).

The study area consists of mainly Rideau Clay (Rc) (Map 6). The clay is very heavy, moderately drained stone-free soil, slightly to medium acid in reaction. The topography is gently undulating. The external drainage is moderate but the heavy clay layers cause slow internal drainage. (Hills, et al. 1944:53). An area to the east of the study area consists of Manotick Sandy Loam (Msl) which consists of undulating layers of acid clay covered by layers of fine sand and silt. The topography varies from slightly to very undulating, with variable drainage due to the difference in texture, depth, and slope between the layers (Hills, et al. 1944:62). A very small area on the western portion of the study area consists of Nepean Sand (Ns). Nepean Sand consists of complex soils developed on shallow drift over sandstone bedrock. The topography generally has rocky slopes, with some level upland areas, with very good drainage (Hills, et al. 1944:73).

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 1 and 2 assessment of Part Lot 11 Concession 4 (Adams 2004), Stage 1 & 2 Archaeological Assessment of Morgan's Creek Subdivision, located at 760 March Road, Part Lot 10, Concession 4 (Adams 2000a; Golder Associates 2011a), a Stage 3 assessment of a lime Kiln (BiFx-5) (Adams 2000b), a Stage 1-3 assessment of

Part lot 17 Concession 3 (Adams 2009b), a Stage 1-3 for the Richardson Ridge Residential Development (Jackson 2009a, b), a Stage 1 and 2 Archaeological Assessment of 30 Richardson Side Road (Golder Associates 2011b), A Stage 1-3 assessment for the Kanata West Business Park (Adams 2009a), and a Stage 1 Archaeological Assessment of Part Lot 20, Concession IV (Hember 2009).

4.3.4 Registered Archaeological Sites and Commemorative Plaques

A search of the Ontario Archaeological Sites Database indicated the South March Lime Kiln Site (BiFx-5) is located directly to the south of the study area on Lot 11 Concession 3. No commemorative plaques or monuments are located in the direct vicinity of the subject property, however approximately 6 km to the south west is the historical plaque for Christ Church built in 1838 in neighbouring Huntley Township that was used by Huntley and March parishes until 1853. The historical plaque for Pinhey's Point Historic Site is located approximately 8 km to the north east and commemorates Hamnett Kirkes Pinhey, one of the first settlers of March Township.

4.3.5 Summary

Archaeological potential is increased by topographic features. The study area consists of moderately drained clay soils to well drained sandy loam soils, and Shirley's Brook traverses part of the property, which greatly increases its archaeological potential. Furthermore, there is one archaeological site located within 1 km of the study property.

5.0 Analysis and Conclusions

5.1 Archaeological Potential

Based on the Archaeological Resource Potential Map and potential modelling based on the proximity to historic streams, structures, and roadways, large portions of the property have archaeological potential (Map 7) (Archaeological Services Inc. and Geomatics International Inc. 1999).

The study area property exhibits indicators for pre-contact archaeological potential as it is close to natural resources. 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, wetlands), the types of soils found within the area of assessment and resource availability. The study area consists of moderately to well drained clay and sandy loam soils; and Shirley's Brook, a tributary of the Ottawa River, passes through a portion of the study area.

The study area property exhibits moderate to high potential for historic period archaeological sites. The land registries, census records, and historic maps show that although this area was mainly rural, the properties were occupied from early as 1824. Likewise the study properties were close to historic transportation routes in the form of roads and the hamlet of March Corners. Upon consultation with archaeological reports from the surrounding area, it was found that one historic period site is located directly to the south of the study area. These indicate that there is archaeological potential for uncovering an historic period site at this location.

5.2 Conclusions

Based on these findings, it should be considered that the entire study area has archaeological potential. As such, a Stage 2 archaeological assessment should be conducted. In ploughable areas, a pedestrian survey strategy at 5 m intervals should be used. The lightly wooded areas should be shovel testing on 5 m intervals. Land to be pedestrian surveyed will be recently ploughed using disking along the furrows to further break up the clayey soils and to provide total topsoil exposure. Rainfall will be required to improve visibility. During a pedestrian survey if a site is found (i.e., there are a number of artifacts identified in a specific area) all diagnostic artifacts should be recovered, while other artifacts are left in the field and their location documented with GPS coordinates. During shovel testing, if artifacts are encountered, intensification should proceed following the Ministry of Culture, Tourism and Sport's *Standards and Guidelines* (2011).

According to the Standards and Guidelines for Consultant Archaeologists (MTCS 2011:22 Section 1.4.2 Standard 1), an area deemed to have archaeological potential by an archaeological management plan can only be exempt from a Stage 2 archaeological assessment when it has been confirmed through a property inspection that the potential for the entire project has been removed through disturbance. Furthermore, property inspection must not be undertaken when snow cover or frozen ground limit surface visibility (MCTS 2011:29 Section 1.2 Standard 2). Given the snow cover and weather conditions at the time of the Stage 1 assessment (March 2013), a field inspection was not carried out. However, portions of the study will undoubtedly qualify for exemption during subsequent Stage 2 surveys (i.e., roadways, building footprints, permanently wet areas and other deep land alterations) as per (MTCS 2011:28 Section 2.1 Standard 2).

6.0 Recommendations

Paterson Group, on behalf of Novatech Engineering Consultants Ltd (Novatech), undertook a Stage 1 archaeological assessment of the study area located at Concession 3, Part Lots 11, 12, 13, and 14, and Concession 4, Part Lots 12 and 13, in the geographic township of March. The objectives of the investigation were to assess the archaeological potential of the property and determine whether further archaeological study was required. Novatech is coordinating the collection of the documentation of existing conditions for various property owners as part the preparation of a Community Design Plan (CDP). The CDP is required by the City of Ottawa in fulfillment of the policies under Section 3.11 of the Official Plan for lands designated Urban Expansion Study Area. The land use planning process to prepare the CDP will be integrated with the Municipal Class Environmental Assessment Process. The approved CDP will ultimately be the basis for a City of Ottawa initiated Official Plan Amendment under the Planning Act to change the designation of the Land from Urban Expansion Study Area to various urban land use designations.

The Stage 1 assessment included a review of updated Ontario Ministry of Tourism, Culture and Sport (MTCS) archaeological sites database, relevant environmental, historical and archaeological literature, and primary historical research, including: historical maps, and land registry records. The subject property has archaeological potential based on its early settlement (1828) and the distance to topographic features (i.e., a branch or tributary of the Carp River), as further demonstrated by the fact that a large portion of the area is indicated as having potential on the City of Ottawa archaeological management plan (Archaeological Services Inc. & Geomatics International Inc. 1999a, 1999b), and our potential modelling.

Based on the background research and the distance from topographic features, historic roads and structures, it is determined that the entire study property has archaeological potential. It is recommended that:

1. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the test pit survey method at 5m intervals in all areas which have not been recently ploughed or do not have appropriate conditions for pedestrian survey at the time of the Stage 2 assessment (currently 39.6 ha [25%] as illustrated in blue on Map 7).
2. A Stage 2 archaeological assessment be conducted by a licensed consultant archaeologist using the pedestrian survey method in areas that have been recently ploughed and are in appropriate conditions at the time of survey undergo pedestrian survey at 5 m intervals (currently 119.7 ha [75%] as illustrated in pink on Map 7).
3. The Stage 2 archaeological assessment follow the requirements set out in the 2011 *Standards and Guidelines for Consultant Archaeologists* (MTC 2011)

7.0 Advice on Compliance with Legislation

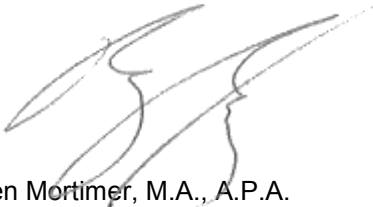
- a. This report is submitted to the *Minister of Tourism and Culture* as a condition of licencing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that 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.

8.0 Closure

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.

A black ink signature of Ben Mortimer, consisting of stylized, overlapping loops and lines.

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

A blue ink signature of Nadine Kopp, written in a cursive style.

Nadine Kopp, M.A., A.P.A.
Project Archaeologist

DRAFT

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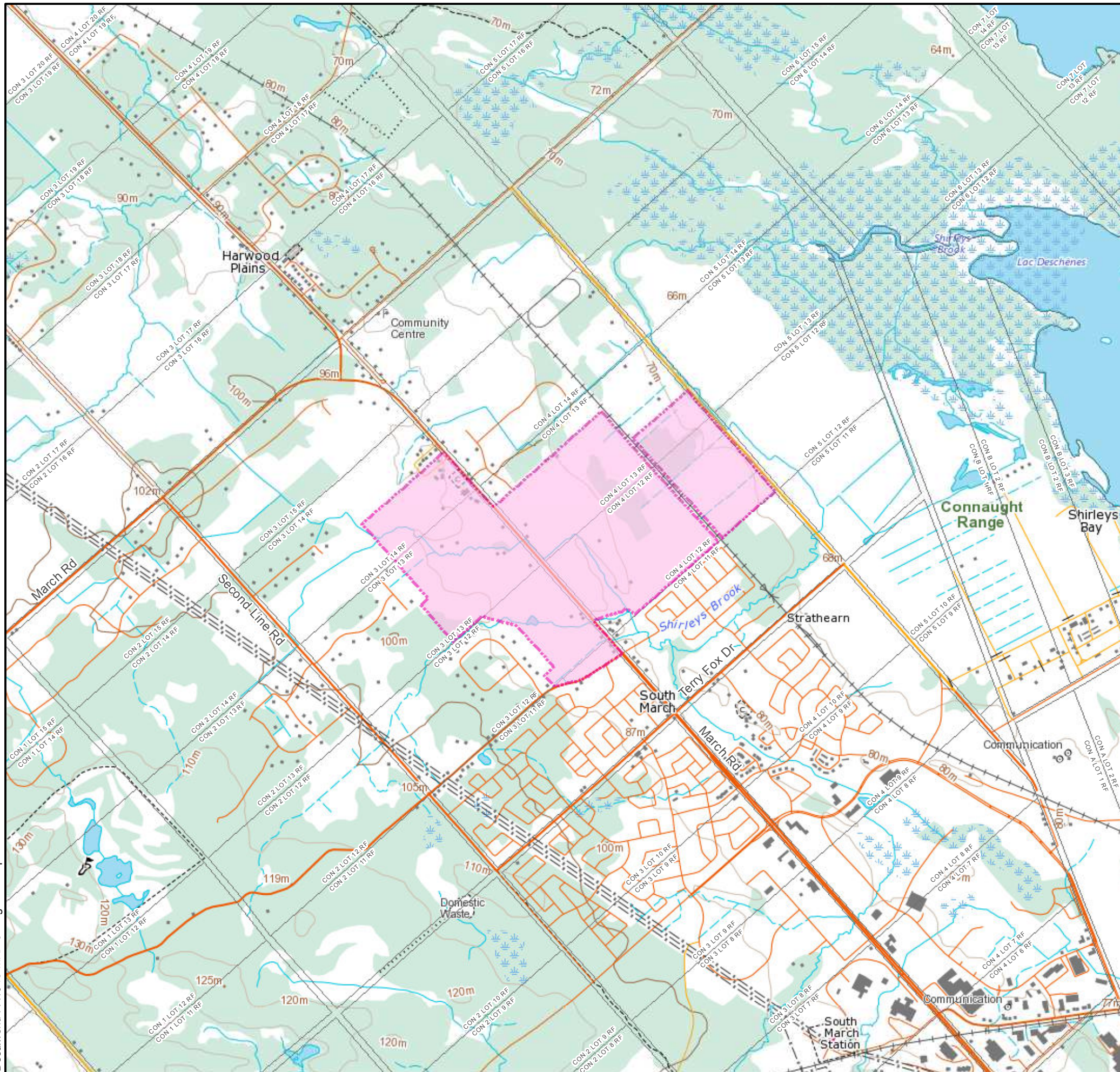
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10.0 Maps

DRAFT



 Study Area

Reference:

Base map from NRCAN WMS-Toporama



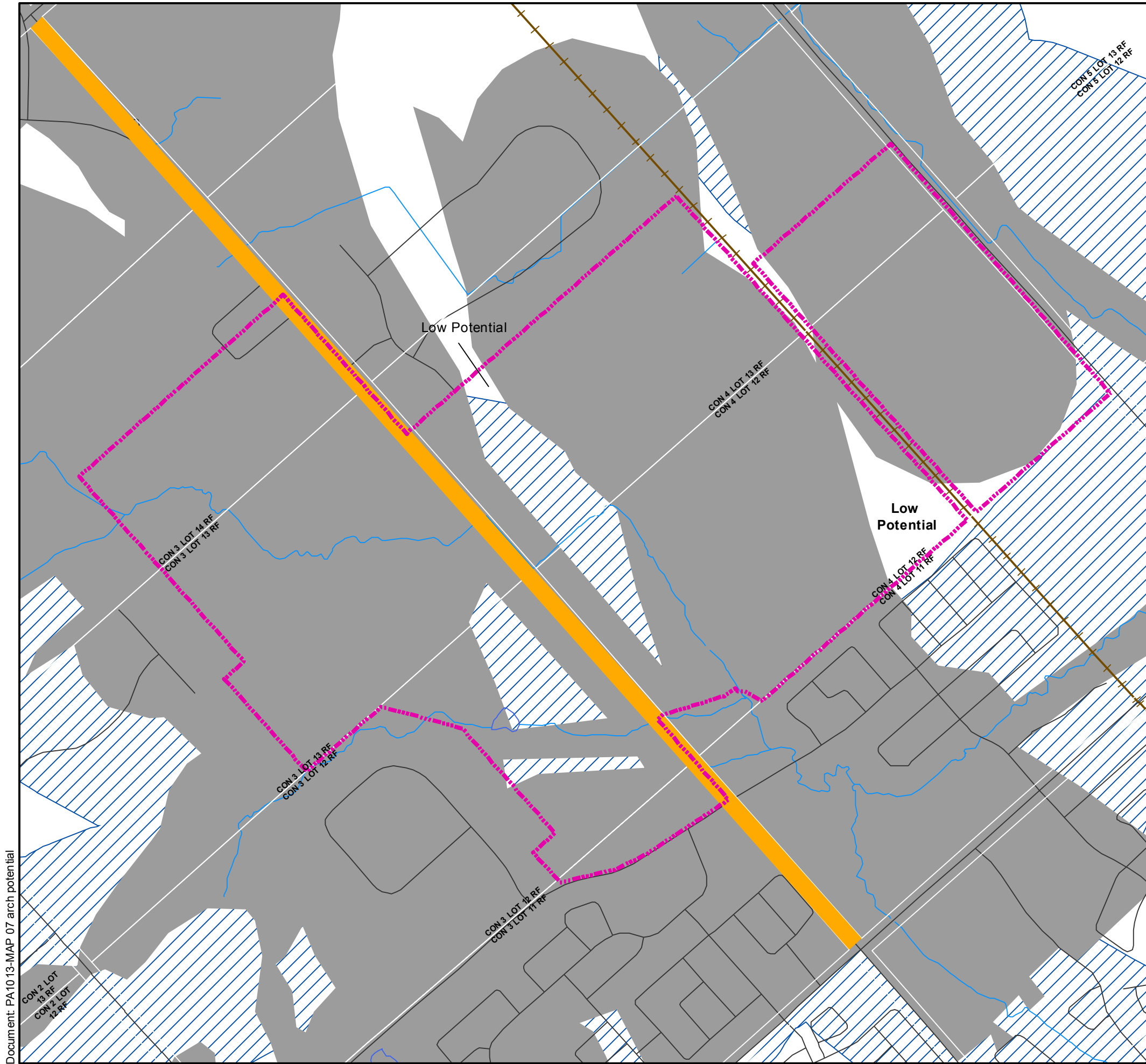
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Kilometers

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Projection: Transverse Mercator Datum NAD 83, UTM Zone 18

Project:	PA1013: Novatech
	Kanata North Urban Expansion Study Area Township of March, City of Ottawa
Title:	Site Location



- Study Area
- Archaeological Potential *
- Archaeological Potential **
- Disturbances - Low Potential**
- Current Highway ***

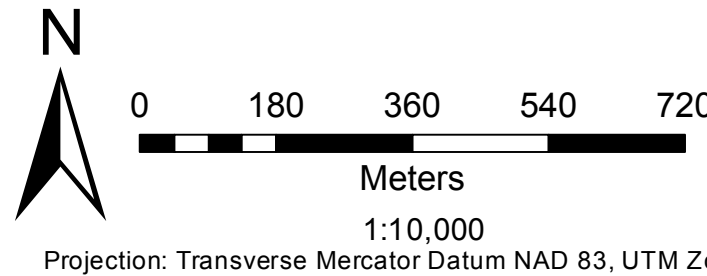
* As Determined by Archaeological Resource Potential Mapping Study (1999)

** Area within 100 m of historic roadways and historic structures, or 200 m from historically or currently mapped streams or creeks.

***As seen on the 2011 air photo, extent from Ottawa GIS, eMaps

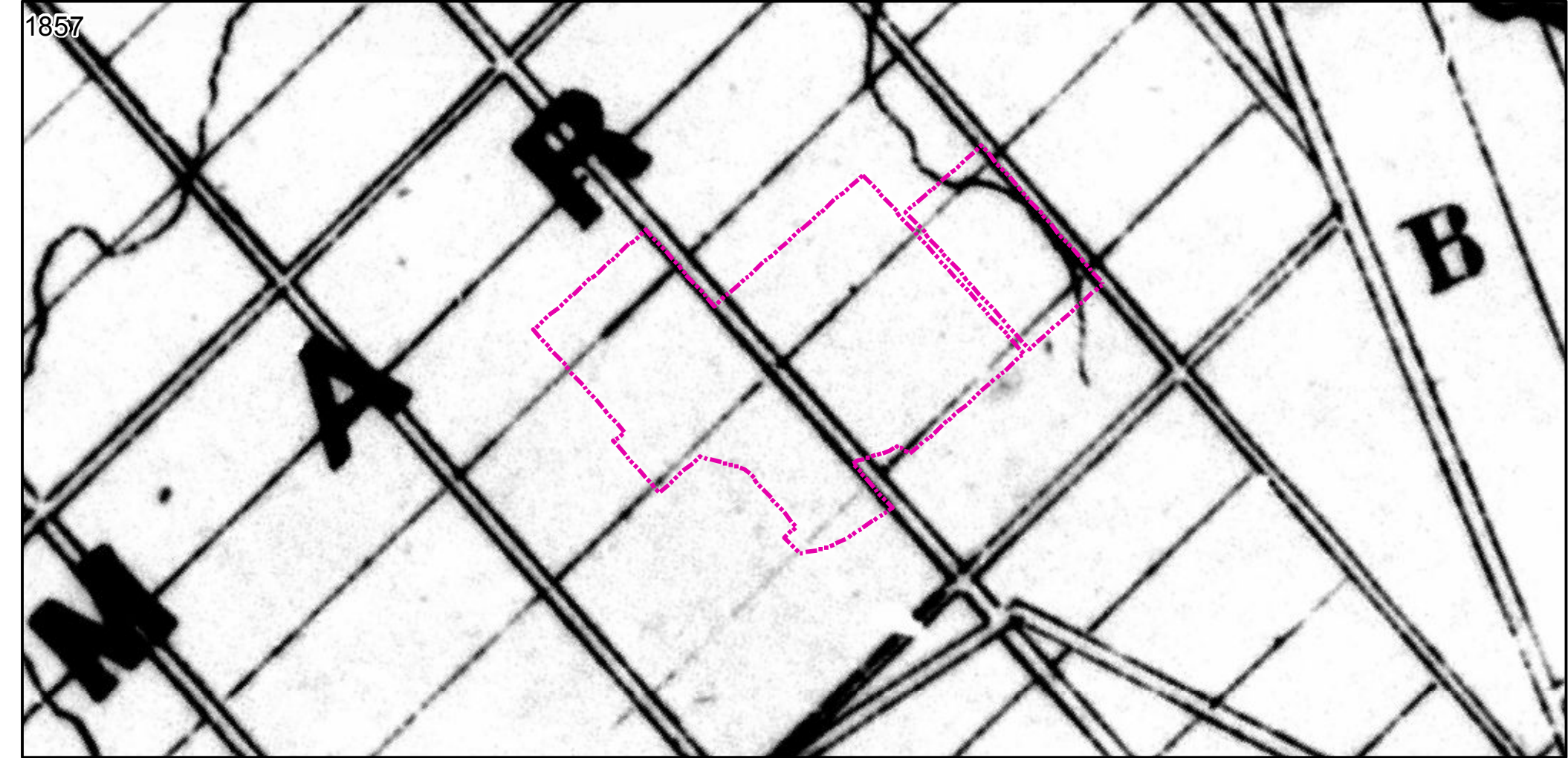
Reference:

- Base map and aerial from Ottawa eMaps
- Archaeological Resource Potential Mapping Study (1999)



Project: PA1013: Novatech
Kanata North Urban Expansion Study Area
Township of March, City of Ottawa

Title: Archaeological Potential

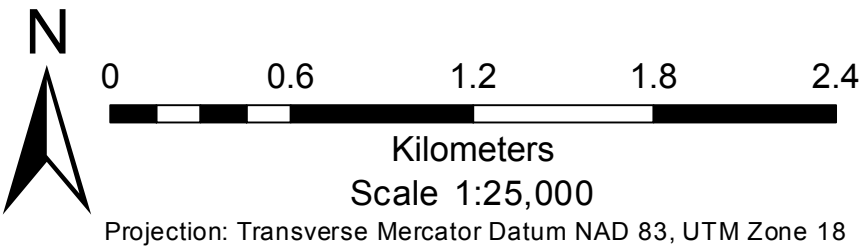


 Study Area

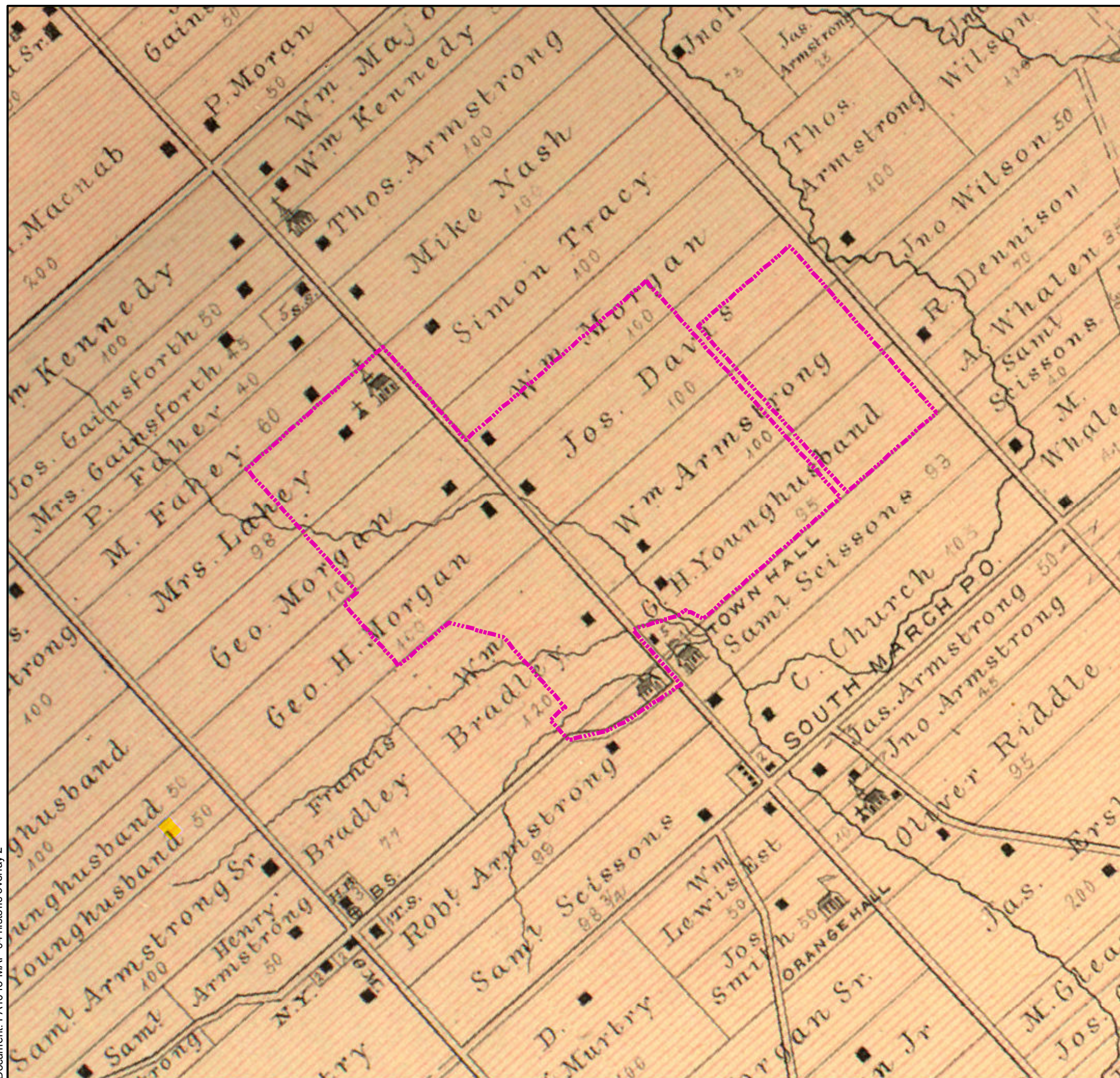
Reference:

Historical Map - Segment of W.A. Austin & Co. 1857 Map of the Counties of Carleton and Russell with a Correct Map of the City of Ottawa., Ottawa. (NMC 11475).

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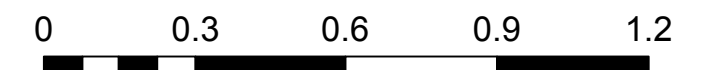


Project:	PA1013: Novatech Kanata North Urban Expansion Study Area Township of March, City of Ottawa
Title:	Georeferenced Historical Maps 1



Reference:

Historical Map - Segment of March Township from Belden, 1879
Illustrated Historical Atlas of the County of Carleton (Including
City of Ottawa), Ont., Toronto.



Kilometers

Scale 1:15,000

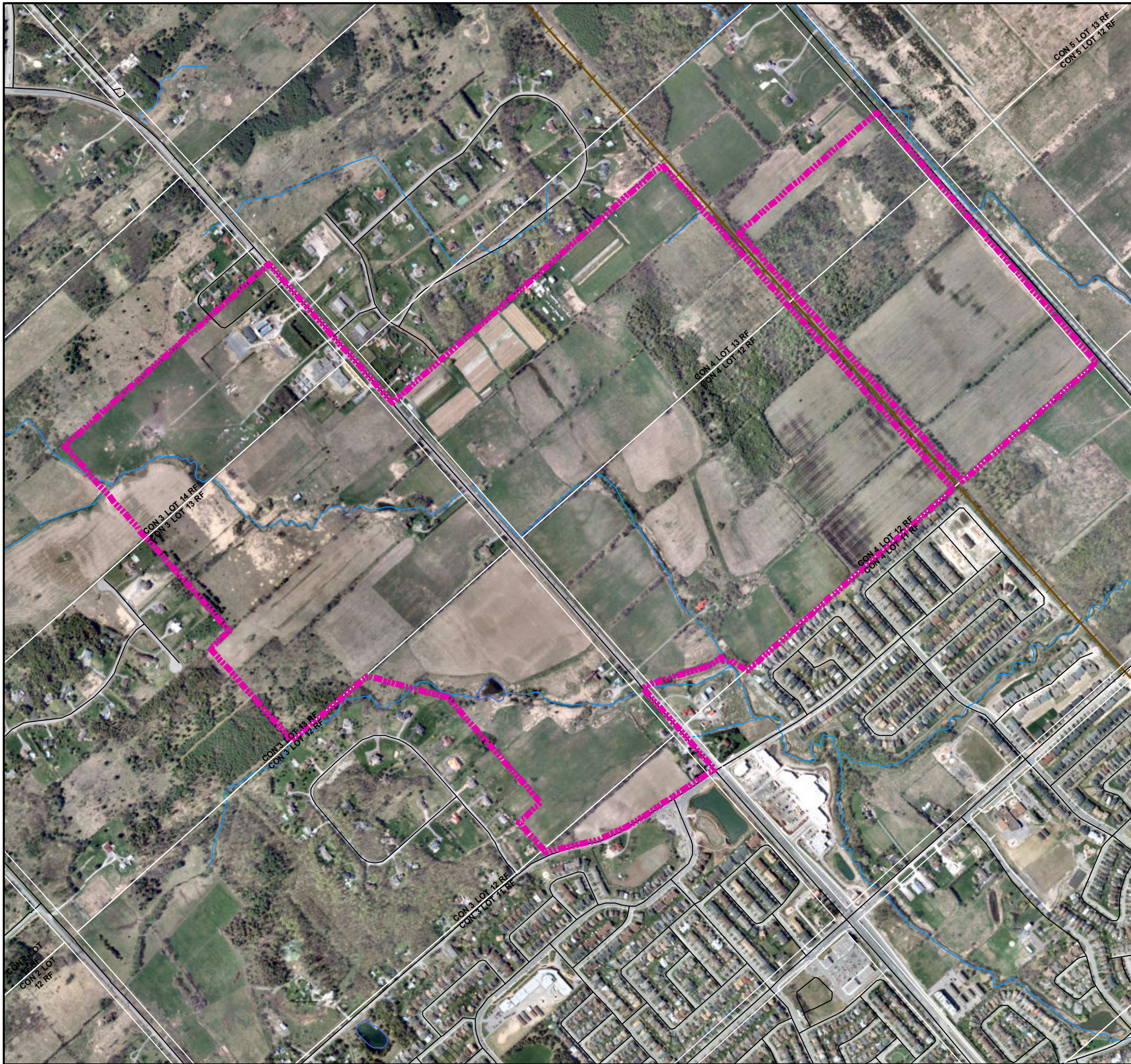
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Project:

ect: PA1013: Novatech
Kanata North Urban Expansion Study Area
Township of March, City of Ottawa

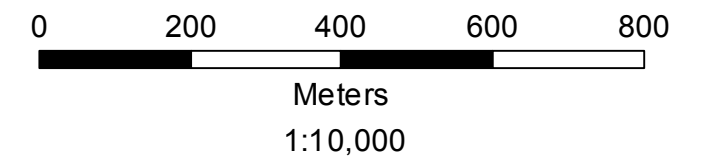
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Georeferenced 1879 Historic Map



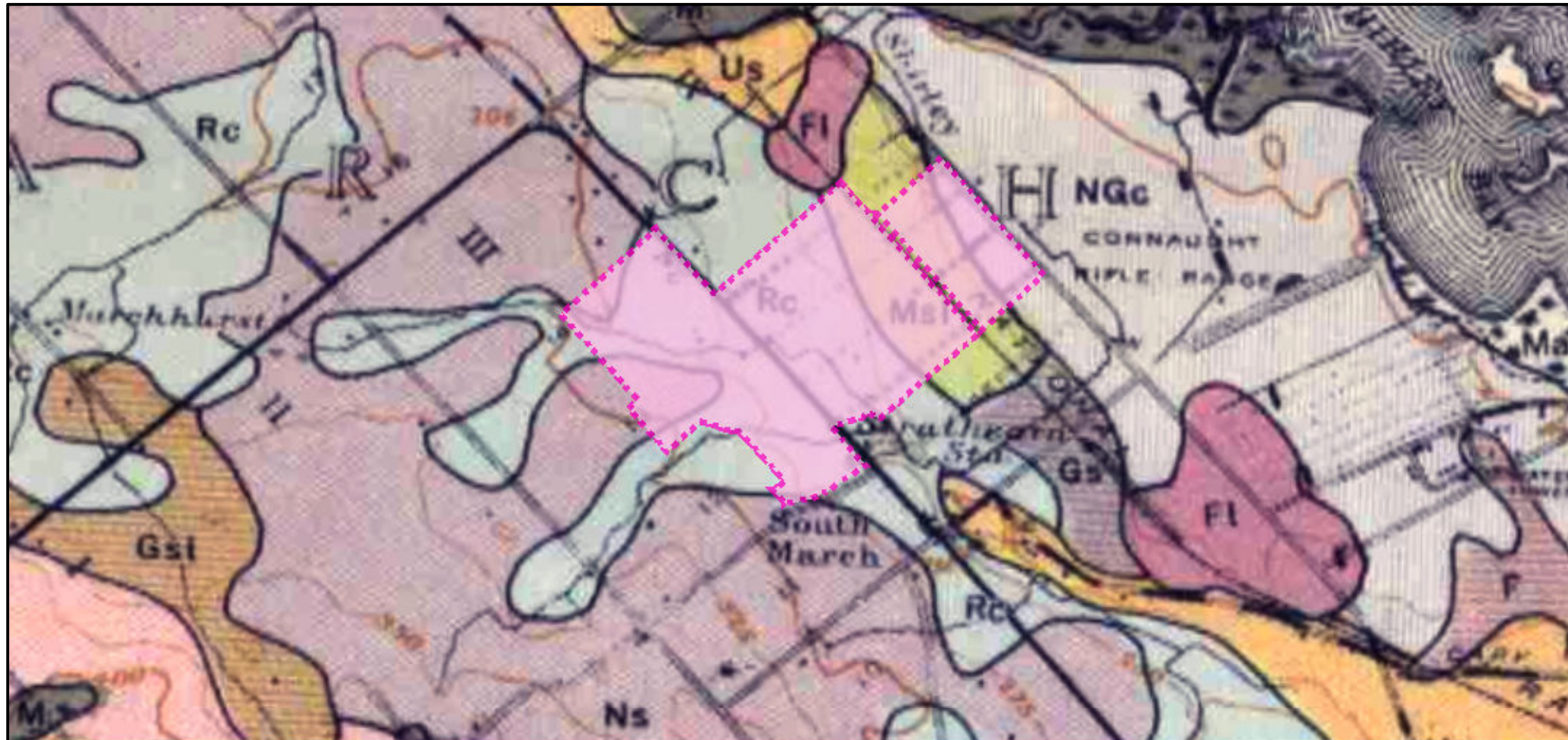
Reference:

Base map and aerial from Ottawa eMaps



Projection: Transverse Mercator Datum NAD 83, UTM Zone 18

Project:	PA1013: Novatech
	Kanata North Urban Expansion Study Area Township of March, City of Ottawa
Title:	Current Conditions Circa 2011

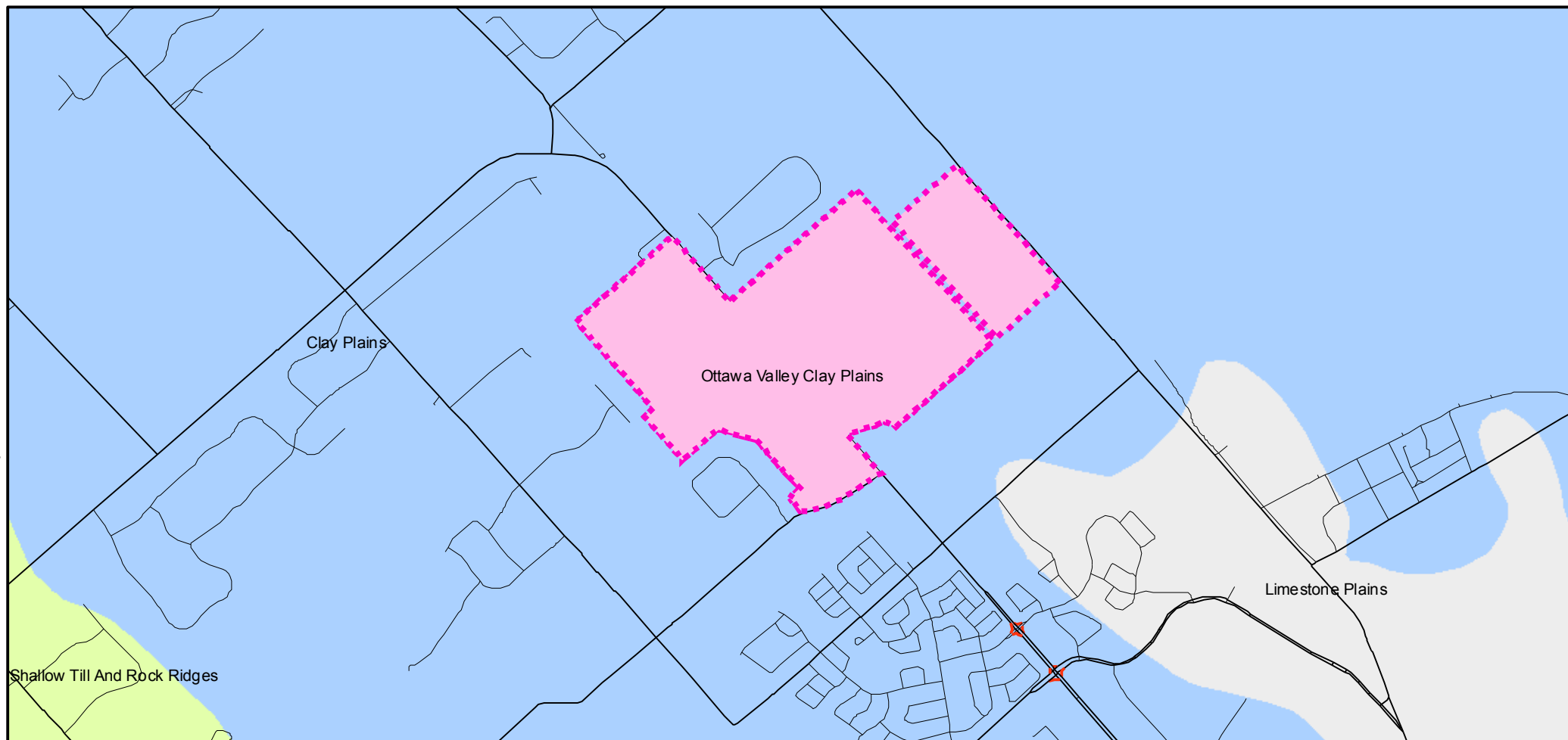


 Study Area

See text for description of soil and physiographic area.

Reference:

Hills, Richards, and Morwick 1944
Chapman and Putnam 2007



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Kilometers

Scale 1:30,000

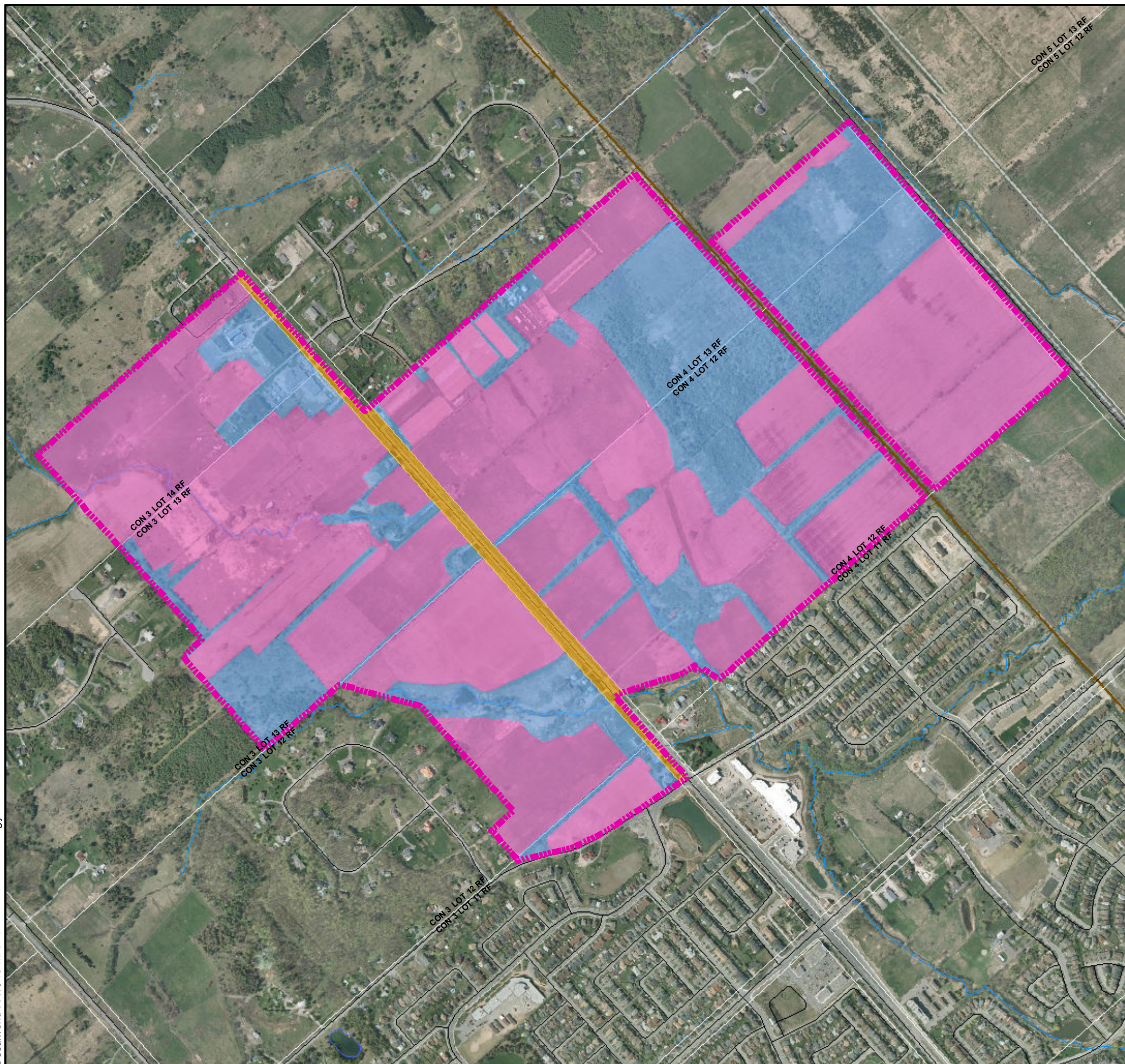
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Project: PA1013: Novatech
Kanata North Urban Expansion Study Area
Township of March, City of Ottawa

Title: Soils and Physiography

patersongroup
consulting engineers

Map 6



Study Area

Proposed Methodology



None - Existing Road Right-of-Way



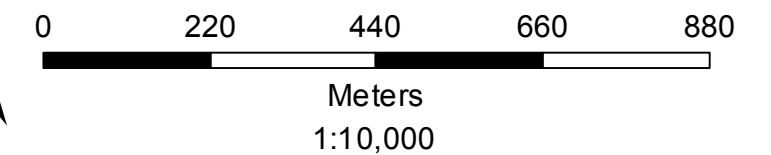
Shovel Testing (5m Interval)



Pedestrian (5m Interval)

Reference:

Base map and aerial from Ottawa eMaps



Projection: Transverse Mercator Datum NAD 83, UTM Zone 18

Project:	PA1013: Novatech
	Kanata North Urban Expansion Study Area Township of March, City of Ottawa
Title:	Proposed Assessment Strategy