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ORIGINAL REPORT

Stage 4 Archaeological Assessment Phase 2 Development, Lot 6, Concession 3 Nepean Township, Carleton County City of Ottawa

PIF Number: P340-0043-2016

Licensee: Shan Ling (P340)

Submitted to:

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REPORT



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Distribution:

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Executive Summary

The Executive Summary highlights key points only; for complete information and findings, as well as the limitations, the reader should examine the complete report.

Golder Associates Ltd. (Golder) was contracted by Minto Communities Canada (Minto) to undertake a Stage 4 archaeological assessment of the McCullough site (BhFw-104). The Stage 4 study area falls within the boundaries of a large residential subdivision proposed by Minto Communities Inc. within Concession 3, Lot 6, Nepean Township, Carleton County, City of Ottawa (Map 1, p. 29). The proposed development project will incorporate a residential subdivision as well as a number of public and private structures and parks (Map 2 p. 30).

All archaeological investigations for this proposed developed were triggered by the Planning Act. Following the recommendations of the Stage 1 report (Golder, 2012), a Stage 2 field investigation was completed. The Stage 2 investigation documented a historic scatter within Operation 16, identified as the McCullough site, which was recommended for a Stage 3 archaeological assessment (Golder, 2015) (Map 3, p. 31). The Stage 3 investigation recovered the remains of 2,385 artifacts which included both 19th and 20th Century artifacts. Based on the high number of 19th Century artifacts a Stage 4 Mechanical Excavation was recommended in order to help to identify any features in the subsoil that may have been missed in the Stage 3. The McCullough Site is located north of Barnsdale Road and west of Greenbank Road.

The principal objectives of this Stage 4 assessment were to determine if there were any archaeological features that were not identified during the Stage 3, to assess the cultural heritage value or interest (CHVI) of the archaeological site, and to determine the need for mitigation based on planned development impacts and recommend appropriate strategies for mitigation and future conservation.

The Crown Patent for both Lots 6 and 7 was granted Christine Mount in 1803; a grant which also included Lot 5 for a total of 600 acres. Mount was most likely an absentee landowner as a large amount of land was conferred in the very early days to former United Empire Loyalists, many whom never actually settled on their granted land. The land registry records indicate that William McCullough purchased the 100 acres comprising the southern half of Lot 6 in 1850 (Inst. No. 4421).

The 1851 census lists William McCullough with his wife Elizabeth and their six young children as living in a one storey log shanty within the property. By 1871, the McCullough family was residing within a dwelling house, with at least two barns/stable on the property. Belden's 1879 map of Nepean Township shows the McCullough residence fronting along Barnsdale Road, located in a relatively similar location as depicted on Walling's 1863 plan, just east of the study area. In 1937 John and Alex McCullough Jr. sold all of their land to William L. Moloughney, who also owned the neighbouring Lot 7 (Inst. No. 289689). The Moloughney family maintained ownership of the property until 1977. Aerial imagery dating to 1945 and 1979 shows the landscape within the Stage 3 study area being used for agricultural cultivation and does not indicate any structures within the project limits.



STAGE 4 ARCHAEOLOGICAL ASSESSMENT PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP

There are seven registered archaeological sites within a 3 kilometer radius of the study area. The closest site to the study area is the McCullough 2 Site (BhFw-111). An historic artifact scatter was noted in this location during the Stage 2 for the Barrhaven South Phase 2 project (Golder, 2015) and identified as an archaeological site and consequently registered with the MTCS following the Stage 3 assessment (Golder, 2016a). A number of subsurface features were identified during the Stage 3 assessment which were completely mitigated during a subsequent Stage 4 excavation (Golder, 2016b). The McCullough 2 is located 215 meters northwest of the McCullough Site and represents the only site within 350 m of the Stage 3 archaeological investigation.

Two previous archaeological assessments have been completed within 50 meters of the study area. The Stage 1 assessment for the Barrhaven South Phase 2 project identified archaeological potential within the study area and recommended a Stage 2 assessment (Golder, 2012). The Stage 2 field assessment was completed in 2015 and identified two historic artifact scatters recommended for additional investigation, these were identified as the McCullough Site (BhFw-104) and the McCullough 2 Site (BhFw-111) (Golder, 2015).

Due to the Cultural Heritage Value or Interest (CHVI) identified for the McCullough site during the Stage 3 field assessment based on the nineteenth century artifact assemblage (Golder, 2015), a Stage 4 mechanical archaeological investigation was recommended and completed on June 30, 2016.

The Stage 4 archaeological investigation was conducted under PIF # P340-0043-2016 issued to Shan Ling of Golder Associates and according to the fieldwork methodology detailed in the MTCS Standards and Guidelines for Consultant Archaeologists (2011). The Stage 4 consisted of the mechanical stripping of topsoil to reveal any features that were not identified in the stage 3. This method was discussed and approved by the MTCS prior to commencement of the Stage 4 investigation (Correspondence March 22, 2016).

The Stage 4 study area consisted primarily of plough disturbed stratum over sterile natural subsoil. No features were found during the mechanical stripping of topsoil. Several automobile parts were found during the excavation which corroborates with the findings of the Stage 3. The soils consisted of very loose sand. The mechanical excavation went at least 5 cm into subsoil (also a very loose compact sand) to ensure that no features were missed.

This report is submitted to the Ministry of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c. 0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological license, and that the archaeological field work and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

Based on the information above, the following recommendation is made:

- 1) That no further archaeological work is required in the area identified as the McCullough 1 (BhFw-104) and that this portion of the site has been mitigated and no longer possesses cultural heritage value or interest.
- 2) The MTCS is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.



Project Personnel

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Abbreviations

MTCS	Ministry of Tourism, Culture and Sport
CRE	Coarse Red Earthenware
RWE	Refined White Earthenware
VWE	Vitrified White Earthenware
mm	Millimeter
cm	Centimeter
m	Meter



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1.0 PROJECT CONTEXT

1.1 Developments Context

Golder Associates Ltd. (Golder) was contracted by Minto Communities Canada (Minto) to undertake a Stage 4 archaeological assessment of the McCullough site (BhFw-104). The Stage 4 study area falls within the boundaries of a large residential subdivision proposed by Minto Communities Inc. within Concession 3, Lot 6, Nepean Township, Carleton County, City of Ottawa (Map 1, p. 29). The proposed development project will incorporate a residential subdivision as well as a number of public and private structures and parks (Map 2, p.30).

All archaeological investigations for this proposed developed were triggered by the *Planning Act*. Following the recommendations of the Stage 1 report (Golder, 2012), a Stage 2 field investigation was completed. The Stage 2 investigation documented a historic scatter within Operation 16, identified as the McCullough site, which was recommended for a Stage 3 archaeological assessment (Golder, 2015) (Map 4, p.32). The Stage 3 archaeological assessment identified 2,385 artifacts which included a mixture of both 19th and 20th Century artifacts. Based on the 19th Century artifacts found a Stage 4 archaeological assessment was recommended which involved the mechanical removal of topsoil to identify archaeological features in the subsoil Map 3, p.31). The McCullough Site is located north of Barnsdale Road and west of Greenbank Road.

Permission to access the site to conduct all required archaeological fieldwork, including the recovery of artifacts, was granted by Mr. Hugh Lalonde of Minto Communities Canada.

1.2 Objectives

The objectives of this Stage 4 archaeological assessment follow the MTCS *Standards and Guidelines for Consultant Archaeologists* (2011):

- to address development impacts on an archaeological site with a level of cultural heritage value or interest that has been determined to require mitigation;
- to document the archaeological context, cultural features and artifacts for all parts of the archaeological site;
- to document the removal of the archaeological site; and,
- to preserve the information about the archaeological site for the future.



2.0 HISTORICAL CONTEXT

2.1 Regional Aboriginal History

The Ottawa Valley was covered by the Laurentide Ice sheet until approximately 11,000 years before present (BP). After the period of deglaciation, the Ottawa Valley was inundated by the Champlain Sea. This sea extended from the Rideau Lakes in the south, along the Ottawa Valley and St. Lawrence areas, and ended around Petawawa to the west. The exact western boundary is unconfirmed as current elevation levels reflect the isostatic rebound of the land following the melting of the glaciers and cannot be used to determine the exact location of the Champlain Sea at the time of its existence. The eastern portion of the sea extended into the Atlantic Ocean.

The earliest possible settlement in the Ottawa area would have occurred following the recession of the Champlain Sea when the vegetation and wildlife had the opportunity to develop within the area and enable the sustainability of humans (Watson, 1999a). Unfortunately, the pre-European contact sequence for occupation within the Ottawa Valley is not completely understood. During the Early and Middle Paleo-Indian Periods (12,000-10,000 BP) Ottawa would have remained inundated by the Champlain Sea, but as the Champlain Sea receded during the Late Paleo-Indian Period (10,000-9,000 BP) it is possible that people migrated along the changing waterfront eventually moving into the Ottawa Valley (Watson, 1999a).

Paleo-Indians were characterized by their nomadic lifestyle. These highly mobile hunters and gatherers relied on caribou, small game, fish and wild plants found in the sub-arctic environment of the time. Although evidence exists of Paleo-Indian occupation in Ontario as early as 11,000 years BP, minimal evidence exists for occupation within the Ottawa Valley by Paleo-Indians. Due to the existence of the Champlain Sea, substantial occupation of the Ottawa area did not occur until the Archaic Period (9,500–2,500 BP). By 8,000 years BP, the lakes and rivers were approximately in their present locations and deciduous forests would have been established. Evidence of earlier occupation by Paleo-Indians in the Ottawa Valley include two bi-facially fluted projectile points found near the Rideau Lakes. This location would have been near the shore of the Champlain Sea during the period fluted points were being utilized (Watson, 1999b). A Late Paleo-Dovetail point was also recovered in Ottawa South sometime around 1918 (Pilon & Fox, 2015) and additional interpretations of Paleo-Indian material have been identified during archaeological investigations near Greenbank Road (Swayze, 2003) Albion Road and Rideau Road (Swayze, 2004).

The environment of Ontario approached present conditions during the succeeding Archaic Period. Stone tool technologies changed during this time as a broader range of tool types were created, although the skill and workmanship declined from earlier Paleo-Indian standards. Ground stone tools appeared, such as adzes and gouges, tool types indicating increased wood working and greater adaptation to new environmental conditions. By 6,000 years ago, copper was being mined in the Upper Great Lakes and was traded into southern Ontario influencing a trade network throughout the region.

During the Middle and Late segments of the Archaic Period, trading networks spanning east and west along the Ottawa River and south to the Great Lakes developed. Sites with Archaic components which demonstrate this expanding network include Morrison's Island and Allumette Island in the Outaouais region of the Ottawa River (Clermont, 1999), sites identified at Lake Leamy near the junction of the Gatineau and Ottawa Rivers, and also in the Rideau Lakes area (Watson, 1982). Other sites with Archaic Period components in the Ottawa Valley include Jessup Falls near the mouth of the South Nation River and at Spencerville near the source of the South Nation River (Daechsel, 1980).



The Archaic Period was followed by the Woodland Period, beginning around 2,500 years ago in Ontario, and lasting until 450 years ago.

This period is distinguished by the first appearance of ceramics, in addition to evidence of ceremonial rituals including elaborate grave goods. Woodland subsistence strategies were still based on hunting and gathering and their migratory routes followed seasonal patterns to proven hunting locations rather than following migrating herds. Trade networks continued to flourish throughout the Woodland Period and reached their peak around 1,800 years ago when they covered much of North America.

Initial pottery forms were crude and imitated vessels made in the Archaic Period out of steatite. One example of this type of pot was located along the Ottawa River at registered site CaGi-1 located in Hull, Quebec (Watson, 1999b). Over time, pottery became more refined and began to include elaborate decorative patterns. These decorative styles are distinct for specific regional populations as well as specific date ranges (Laliberté, 1999).

Towards the end of the Middle Woodland Period (approximately 1,500 years ago) agriculture was introduced and began to take on a significant role in subsistence strategies. It began with the cultivation of corn, beans and tobacco and eventually led to the development of semi-permanent and permanent villages. Many of these villages were surrounded by palisades, indicating increased hostilities between neighbouring groups. This settlement pattern was more common in regions with arable land such as southern Ontario. The impact of these changes did not appear to have been significantly felt in the areas north of the St. Lawrence Valley which continued to be used as a hunting area and trade route where many groups retained a semi-nomadic lifestyle. Middle Woodland sites have been identified in the South Nation Drainage Basin (Daechsel, 1980), within the City of Ottawa west of Bank Street (Golder, 2014a) and along the Ottawa River including the northwest end of Ottawa at Marshall's and Sawdust Bays (Daechsel, 1981).

During the Late Woodland Period, the South Nation River basin appears to have been a zone of interaction between Iroquoian speaking populations who relied primarily on domesticated crops to the south and Algonquian speaking groups who continued a primarily hunter-gatherers lifestyle to the north. The Huron peoples along the north shore of Lake Ontario had moved to the Lake Simcoe – Georgian Bay region, leaving the area of eastern Ontario, except for some small Algonquin groups, unoccupied by the time early French explorers arrived in the area around the beginning of the seventeenth Century. Six St. Lawrence Iroquoian villages dating to ca. 1400 AD have been found in the Spencerville area, while a Middle Woodland site was investigated near Casselman (Clark, 1905).

2.2 Post Contact European-Canadian History

The St. Lawrence Iroquois disappeared during the sixteenth century not long after initial contact with Jacques Cartier in 1535. Étienne Brûlé is reported to have been the first European to pass through what is now the Ottawa area. He portaged at the Rideau Falls in 1610, followed by Champlain in 1613. The Ottawa River served as a major route for explorers, traders and missionaries throughout the seventeenth and eighteenth centuries. A series of trading posts and forts were constructed by the French along the river in the early eighteenth century.

The French documented three Algonquin groups in the regional vicinity of the study area (Heidenreich & Wright, 1987). These included the Matouweskariini along the Madawaska River, the Onontcharonon in the Gananoque River Basin, and the Weskarini, the largest of the three, situated on the Petite Nation River Basin. It is likely that prolonged occupation in the Ottawa area was avoided at this time because of hostilities with Iroquoian speaking populations to the south, although it is suggested that at least the northern reaches of the South Nation River Basin were used as hunting territories by these groups.



Settlement in the Ottawa area was not actively encouraged by the colonial government until the late eighteenth century after John Stegman, the deputy surveyor for Upper Canada, established four townships straddling the Rideau River in 1793.

Commonly acknowledged as the first permanent European resident in the area, Philemon Wright settled in Hull Township with five families and thirty-three men in 1800 (Bond, 1984). This community grew over the next few years along the north shore of the Ottawa River and by 1805 Wright had established a significant lumbering enterprise in the area. Settlement along the south shore of the Ottawa River was very slow through the early nineteenth century. In 1809, Jehiel Collins erected a store at what was to become known as Bellows and later Richmond Landing. The first settler in the area was Ira Honeywell, who, in 1810, constructed a cabin west of the Chaudiere Rapids (Bond, 1984). Another early settler was Braddish Billings, who established a small cabin in Gloucester Township in 1812. Billings went into the lumbering business with Philemon Wright and developed his homestead into a large family estate along the banks of the Rideau River.

The scarcity of roads and poor state of transportation beyond the Ottawa and Rideau River shorelines slowed settlement in many parts of the Ottawa Valley (Belden, 1879). It wasn't until construction began for the Rideau Canal (1827 – 1832) that the new settlement of Bytown experienced its first major growth in population. This resulted in the development of two areas: Lower Bytown east of the Canal, primarily populated by French Canadian and Irish labourers and merchants, and Upper Bytown to the west with a predominantly white Anglo-Saxon Protestant population. Bytown was incorporated as the City of Ottawa on January 1, 1855, with a population of 10,000. The selection of Ottawa as the capital of Canada in 1857 was the major catalyst in the subsequent development of the city.

2.3 Nepean Township

Two years after the 1791 division of the Province of Quebec into Upper and Lower Canada, John Stegman, the Deputy Surveyor for the Province of Upper Canada, undertook an initial survey of four townships (Nepean, North Gower, Osgoode and Gloucester) straddling the Rideau River near its junction with the Ottawa River. This survey was undertaken concurrent to John Graves Simcoe, Lieutenant Governor of the Province of Upper Canada, issuing a proclamation aimed at attracting new settlers to the region.

Nepean Township was surveyed in 1794 by John Stegman in anticipation of 143 settlers arriving in the area lead by George Hamilton, an Irish veteran of the Revolutionary War (Elliott, 1991). Unfortunately though, this first wave of settlers never materialized and the government revoked Hamilton's grant soon after. Those few who did eventually arrive to Nepean found the land to be without any roads and so remote from any settlement that they quickly left the area. By the early 1800s, the original Loyalist settler's children were coming of age and began to claim their inherited land grants. Between 1800 and 1812, Loyalist heirs received 200 grants in Nepean and another portion of the township was set aside for crown and clergy reserves (Elliott, 1991). The land grants did not immediately encourage settlement as the grant holders continued to live along the St. Lawrence and Lake Ontario waterfronts holding their lands in Nepean as investment properties. As such, these properties were the object of speculation and many of the grants were consolidated into the hands a few families. The largest landowners in Nepean during this period were the Fraser family who held 40 lots along the Rideau River in Nepean, including much of what was later to become Ottawa, by acquiring land through their Loyalist rights and then increasing their holdings with speculative purchases (Elliot, 1991).



Despite the numerous land grants, Nepean remained largely an untamed wilderness until the end of the War of 1812.

Following the war, a depression in Great Britain coupled with the lack of enthusiasm displayed during the war by the loyalists to take up arms to defend British North America from their neighbours to the south lead the Colonial Office to disband some units of the army in the colony. The Richmond military settlement in Goulbourn Township was founded under this directive and a road was cut through Nepean Township from the Ottawa River in the area now called Lebreton Flats to the new village site of Richmond on the Jock River (Elliott, 1991). This transportation route, known today as Richmond Road, is the oldest thoroughfare in Ottawa (Woods Jr, 1980) and became Bytown's first road into the hinterland (Taylor, 1986).

In 1833, a forced Road (Jockvale Road/Bren Maur Road) was built from Richmond Road through to Chapman's Mill and the Rideau River. A somewhat dispersed community developed around Chapman's Mill, spreading along the forced Road, which eventually became known as Jockvale (Elliott, 1991).

Another decision with military influence led to the next significant wave of settlement in Nepean Township. The construction of the Rideau Canal (1826-1832) accelerated settlement in Nepean Township and brought a large population of labourers to the area which necessitated infrastructure improvements in the area as new roads were cut to facilitate construction activities. Bytown began to develop at the junction of the Rideau and Ottawa Rivers where work on the canal began. The influx of labourers increased the population of the township from 580 in 1827 to 2,758 just a year later. Much of this population was transient and left the area following the completion of the canal, although some stayed and established homesteads in the area. By 1832, the population of Nepean was sustained at 940, with many of these residents settling within the burgeoning Bytown community (Elliott, 1991).

2.4 Study Area Property History

The McCullough Site is located within the southern half of Lot 6, Concession 3, Nepean Township, Carleton County (Map 1, p. 29).

The Crown Patent for both Lots 6 and 7 was granted Christine Mount in 1803; a grant which also included Lot 5 for a total of 600 acres. Mount was most likely an absentee landowner as a large amount of land was conferred in the very early days to former United Empire Loyalists, many whom never actually settled on their granted land.

In 1839 Joseph Mount, presumably a son or other relative of Christine, sold Lot 6 to Archibald Wilson (Inst. No. 1470). In 1841, Archibald Wilson sold the north half of the lot to Bernard Quinn (Inst. No. 1723) and the south half of the lot to David Gilmour (Inst. No. 1774). The land registry records indicate that William McCullough purchased the 100 acres comprising the southern half of Lot 6 in 1850 (Inst. No. 4421).

The 1851 census lists William McCullough with his wife Elizabeth and their six young children as living in a one storey log shanty within the property. All of the children except for Margaret, the youngest at 1 year old, were listed as having been born in Gloucester Township, with Margaret documented as born in Nepean. This seems to correlate to the land registry records which indicate that William bought the land in 1850 moving his family to Nepean from Gloucester. By 1861, the family had changed little with the exception of older children leaving the home and another younger child being born.



STAGE 4 ARCHAEOLOGICAL ASSESSMENT PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP

Walling's 1863 plan of Nepean Township shows the McCullough family residence fronting along Barnsdale Road, just east of the Stage 3 study area. It is not known if this structure represents the original log shanty built by the McCullough's by 1851, or if they had built a new residence by this time.

By 1871, William and Elizabeth were in their mid-fifties with 5 children still living at home aged 16 to 24. The two youngest sons, William and Thomas, were carriage makers while Alex, the eldest son still at home helped run the farm. At this time the farm was producing wheat, potatoes, hay, oats, rye, peas, apples, butter, honey and wool and had 33 animals including horses, cows, sheep and pigs. The 1871 census also indicates the family was residing in a dwelling house, with two barns/stables located on the property. The McCullough's also owned one carriage/sleigh, three cars/wagons/sleds, three ploughs/cultivators and one fanning mill.

Belden's 1879 map of Nepean Township shows the McCullough residence fronting along Barnsdale Road, corresponding to the location depicted on Walling's 1863 plan, just east of the study area. The fact that both Walling's 1863 plan and Belden's 1879 map both show the family residence in the same general location suggests either that the original log shanty was replaced by the dwelling house in the same location, or the shanty had been removed from the landscape prior to 1863.

William McCullough died in 1899 leaving the southern half of Lot 6 to his wife and children (Inst. No. 18136). Between 1900 and 1911, the siblings sold their inherited portions of the property to their brother Alex making him owner of the entirety of Lot 6 (Inst. No. 18443 and 24152). Alex sold the southern half of Lot 6 to his son Alex Jr. in 1929 (Inst. No. 38358) and in 1937 John and Alex McCullough Jr. sold all of their land to William L. Moloughney, who also owned the neighbouring Lot 7 (Inst. No. 289689). The Moloughney family maintained ownership of the property until 1977.

Aerial imagery dating to 1945 and 1979 shows the landscape within the Stage 3 study area being used for agricultural cultivation and does not indicate any structures within the project limits. A residential house is located east of the study area, in the same general location depicted on the 19th Century mapping and beyond the project's development limits, with outbuildings located to the north. During the Stage 2 field assessment these outbuildings were identified by their foundations, with one being of stone construction and the second foundation represented by concrete. Another outbuilding built of wood planking was also located in this general location and photographed during the Stage 1 site inspection although it was not observed within the landscape during the Stage 2 or 3 field investigations. The general size of this structure is likely too small to be considered a barn and may have been utilized as a storage shed.



3.0 ARCHAEOLOGICAL CONTEXT

3.1 Previous Archaeological Fieldwork

Virtually all of the archaeological work in the region has been undertaken as a result of Cultural Resource Management studies. A list of archaeological investigations that have been undertaken in the vicinity of the study area are outlined below in Table 1 below. Several of these assessment have been completed on properties immediately to the north of the study area. The western portions of Lots 8 and 9 of Concession 3 were the subject of a Stage 1 investigation undertaken by Jacques Whitford (2008) followed by a Stage 2, 3 and 4 conducted by Golder (2010a). The Stage 4 excavations were undertaken on registered archaeological sites BhFw-20 and BhFw-21. Golder conducted Stage 1 and 2 archaeological investigations on Lots 9 and 10 of Concession 3 (2010b), and also Stages 1 through 4 assessments within the eastern half of Lot 7, Concession 3, to the immediate northeast of the present study area (Golder Associates 2011a, 2011b, 2013 & 2014).

Table 1: Archaeological Investigations within the Vicinity of the Study Area,

Project	Stage	Researcher	Date
McCullough 2 Site (BhFw-111), Concession 3	4	Golder Associates	2016b
McCullough 2 Site (BhFw-111), Concession 3	3	Golder Associates	2016a
Barrhaven South Phase 2, Lot 6 and Part Lot 7, Concession 3	2	Golder Associates	2015
Latimer Site BhFw-29, Lot 7, Concession 3	4	Golder Associates	2014
Latimer Site BhFw-29, Lot 7, Concession 3	3	Golder Associates	2013
Barrhaven South Phase 2, Lot 6 and Part Lot 7, Concession 3	1	Golder Associates	2012
3654 & 3658 Jockvale Road Part Lot 9, Concession 2	1	Adams Heritage	2011
Barrhaven South, Phase 1, Part Lot 7, Concession 3,	2	Golder Associates	2011a
Barrhaven South, Phase 1, Part Lot 7, Concession 3,	1	Golder Associates	2011b
Lots 9 and 10, Concession 3, Cambrian and Cedarview Roads Subdivision Site Nepean	1, 2	Golder Associates	2010a
Mattamy Half Moon Bay South Subdivision, Part Lots 8 and 9, Concession 3, Nepean, BhFw-20 and BhFw-21	2	Golder Associates	2010b
Jockvale Road Subdivision, 3760 Prince of Wales Drive, Part Lot 8, Concession 2	1, 2, 3	Northeastern Archaeological Associates Ltd.	2010
Mattamy Half Moon Bay South Subdivision, Part Lots 8 and 9, Concession 3, Nepean	3	Stantec Consulting	2010
Half Moon Bay South Subdivision Location 1 (BhFw-20), Part Lot 9, Concession 3 Location 2 (BhFw-21), Part Lot 8, Concession 3	4	Golder Associates	2010c
Mattamy Half Moon Bay South Subdivision, Lots 8 and 9, Concession 3, Nepean	1	Jacques Whitford	2008
McGuire Site, BhFw-17, Lot 11, Concession 2	3	Golder Associates	2009
Ralph Cabin BhFw-10, and Miller Farm BhFw-11, Part Lot 6, Concession 4, Nepean.	4	Timmins Martelle	2005



STAGE 4 ARCHAEOLOGICAL ASSESSMENT PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP

Project	Stage	Researcher	Date
Fallowfield Road Extension	1	Adams Heritage	2004
Ralph Cabin BhFw-10, and Miller Farm BhFw-11, Part Lot 6, Concession 4, Nepean.	3	Archaeological Services Inc.	2004
Miller Berry Farm, Lot 6 Concession 4	1	Heritage Quest	2003a
Miller Berry Farm, Lot 6 Concession 4	2	Heritage Quest	2003b
Chapman Mills Subdivision, Part Lots 10, 11, 12, 13, Concession 1 and Part Lots 13, 14, 15, Concession 2, Nepean	1, 2, 3	Adams Heritage	2000
Regional Municipality of Ottawa Carleton's Archaeological Master Plan		Archaeological Services Inc.	1999a, 1999b
Jockvale Stormwater Facility and Drainage Area	1	Archaeological Services Inc.	1997

Two previous archaeological assessments have been completed within 50 meters of the study area. The Stage 1 assessment for the Barrhaven South Phase 2 project identified archaeological potential within the study area and recommended a Stage 2 assessment (Golder, 2012). The Stage 2 field assessment was completed in 2015 and identified two historic artifact scatters recommended for additional investigation, corresponding to the McCullough Site (BhFw-104) and the McCullough 2 Site (BhFw-111) (Golder, 2015).

3.2 Stage 3 Archaeological Assessment Recommendations

This Stage 4 archaeological assessment for the McCullough site was undertaken based on the research and field work completed for the Stage 3 report (Golder, 2015), which made the following recommendations:

- 1) Since the impacts by the proposed development encompassing the boundaries of the McCullough site are unavoidable, a Stage 4 archaeological investigation is required for the McCullough site. This Stage 4 archaeological excavation should be conducted by a licenced archaeologist to conform to the Stage 4 excavation recommendations outlined in this report.
- 2) The MTCS is requested to review, and provide a letter indicating their satisfaction with the results and recommendations presented herein, with regard to the 2011 Standards and Guidelines for Consultant Archaeologists and the terms and conditions for archaeological licences, and to enter this report into the Ontario Public Register of Archaeological Reports.

3.3 Known Archaeological Sites

There are seven registered archaeological sites within a 3 kilometer radius of the study area (MTCS Archaeological sites Database accessed June 29, 2016).

Directly to the north are two 19th Century farm sites, BhFw-20 (on Lot 9) and BhFw-21 (on Lot 8), referred to as the Mattamy Half Moon Bay South sites and designated as Location 1 and 2 respectively. Location 1, denoted as registered site BhFw-20, is situated on the eastern portion of Lot 9, Concession 3, and produced an assemblage of late 19th Century to early 20th Century cultural material and features representing a typical farmstead. Location 2, designated as registered site BhFw-21, was located in the central area of Lot 8, Concession 3. This site produced subsurface features and an earlier material culture representing a mid to late 19th Century farm (Golder Associates, 2010b; 2010c).



STAGE 4 ARCHAEOLOGICAL ASSESSMENT PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP

To the west of the study area, located on Lot 6, Concession 4, are two 19th Century farmstead sites. The Ralph Cabin Site (BhFw-10) produced an assemblage of mid to late 19th Century material culture and features indicating the presence of a cabin. The nearby Miller Farm Site (BhFw-11), revealed material culture from the 19th Century and structural evidence of a farm house and outbuildings that was inhabited to the mid-20th Century (Archaeological Services Inc., 2004; Timmins Martelle Heritage Consultants Inc., 2005).

A fifth site, identified as the McGuire Site (BhFw-17), further to the north and east of the study area, was located on the northern portion of Lot 11, Concession 2, Nepean Township. A Stage 3 investigation indicated that the McGuire Site consisted of a farmhouse and carriage shed constructed sometime in the mid-19th Century and removed in the 1960s (Golder Associates, 2009).

To the northeast of the present study area, within Phase 1 of the proposed subdivision, a location of archaeological significance was identified and excavated by Golder Associates (2014b). This site, documented as the Latimer Site (BhFw-29), consisted of two artifact deposits, one along a stone fence line, and another in an open ploughed field. The *loci* adjacent to the stone fence was a small midden deposit while the area within the field to the east was a possible cellar pit later used as a midden. The artifacts from this site dated to the early to mid-19th Century and were likely related to the occupation of Lot 6 by the Latimer family. This site has been investigated during Stage 3 (Golder, 2013) and Stage 4 (Golder, 2014) excavations and has been completed mitigated.

The closest site to the study area is the McCullough 2 Site (BhFw-111). An historic artifact scatter was identified in this location during the Stage 2 for the Barrhaven South Phase 2 project (Golder, 2015) and identified as an archaeological site and consequently registered with the MTCS following the Stage 3 assessment (Golder, 2016a). A number of subsurface features were identified during the Stage 3 assessment which were completely mitigated during a subsequent Stage 4 excavation (Golder, 2016b). The McCullough 2 is located 215 meters northwest of the McCullough Site.



4.0 STAGE 4 ARCHAEOLOGICAL METHODOLOGY

4.1 Archaeological Field Methods

This Stage 4 archaeological excavation was conducted according to the archaeological fieldwork standards and guidelines outlined in the Ministry of Tourism, Culture and Sport's (MTCS) *Standards and Guidelines for Consultant Archaeologists* (2011). Fieldwork was conducted on June 30, 2016, under PIF P340-0043-2016 issued to Shan Ling of Golder Associated, with the site backfilled to existing grade the same day.

The study area was previously subjected to agricultural ploughing for many years, which is consistent with the site stratigraphy noted during the Stage 3 Archaeological Assessment which identified two stratigraphic lots comprising plough zone (Lot 1) and subsoil (Lot 2) (Image 2, p. 22). The Stage 2 and 3 archaeological investigations documented a representative sample of artifacts related to the historic occupation of the site, with the majority of Stage 3 test units located within the current study area yielding lower artifact counts compared to those located within the City of Ottawa property, situated directly east of the current study area.

Based on these attributes, the Stage 4 mitigation of the portion of the McCullough Site within the current study area comprised mechanical topsoil stripping to remove the plough zone (Lot 1) and allow for the identification and documentation of subsurface features of cultural heritage value (Map 5, p.33). A map showing the location of each field photograph represented in this report is included as (Map 6 p.34) and a photographic catalogue is included as Appendix A.

All exposed subsoil surfaces were cleaned by either a shovel or trowel immediately following exposure during mechanical excavation. Due to the very loose compaction of the subsoil sand it was very difficult for the excavator to maintain a flat surface. Close examination of the bucket while it was removing the topsoil was made to ensure that no potential feature was missed. No exposed archaeological deposits were identified along the face of the excavation, or extended beyond the limits of the current Stage 4 archaeological investigation, which negated the need for the shoring of exposed edges during mechanical excavation.

This Stage 4 mitigation strategy was formed in consultation with the Ministry of Tourism, Culture and Sport and is based on Section 4.2.3 "Excavation by mechanical topsoil removal (topsoil stripping)" documented in the Ministry of Tourism, Culture and Sports' *Standards and Guidelines for Consultant Archaeologists* (2011) and Section 4.2.7 "Site-specific requirements: 19th Century domestic archaeological sites" detailed in Section 6.3.2 "Formulating the Strategy for Stage 4" in *The Archaeology of Rural 19th Century Sites: A Technical Bulletin for Consultant Archaeologists in Ontario (Draft)* issued by the Ministry of Tourism, Culture and Sport (2014).

The site perimeter was staked out and all archaeological features were topographically surveyed using a Trimble R8 Model 2 Global Navigation Satellite System (GNSS) unit. The Trimble R8 Model 2 GPS receiver has built in Wide-Area Augmentation System (WAAS) and European Geostationary Navigation Overlay Service (EGNOS) capability and supports a wide range of satellite signals, including GPS L1/L2C/L5, GLONASS L1/L2 and Galileo. The GNSS receiver is a dual frequency differential GPS (DGPS) capable of real time kinematic (RTK) corrections within the Can-Net Virtual Reference Station (VRS) network.



STAGE 4 ARCHAEOLOGICAL ASSESSMENT PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP

The GPS data collected during the Stage 4 archaeological investigation was differentially corrected using the Cansel base station network (CAN-NET) with the Ottawa base station representing the primary base station used for the present survey. All horizontal coordinates were collected using the Universal Transverse Mercator (UTM) projection and North American Datum (NAD) 83 (Zone 18), with all elevations corrected to geodetic values referencing geoid model HT2_0e.

The accuracy of the collected survey observations ranged from less than 1 cm to 5 cm, depending on the number of satellites in view, the position of the satellites in relation to each other, the strength of each satellite signal and the distance of the base station from the GPS receiver.

The topographic survey at the McCullough Site was completed on June 29, 2016 a day prior to mechanical excavation. A range pole was used to provide a two metre antenna height for the entire survey. The collected horizontal coordinates comprised a six digit easting with three decimal places, and a seven digit northing with three decimal places. Therefore, each survey observation can be considered a permanent and known datum point regardless of any future disturbances to the physical location of each observation.

Due to safety concerns from the open excavation and surrounding residential properties, the site was backfilled and levelled to the existing surrounding grade on June 30, 2016 (Image 8, p.25). The mechanical excavator with a smooth bucket was used to backfill the site.

All fieldwork was completed under favourable weather conditions that at no point hindered the archaeological fieldwork or recording of the features and/or deposits. A review of the weather conditions on site during Stage 4 archaeological fieldwork is provided as Table 2 (below):

Table 2: Weather Conditions on Site during Stage 4 Archaeological Fieldwork

Date of Archaeological Fieldwork	Task	Weather Conditions on Site
June 30	Mechanical excavation of McCullough site	Sunny no clouds 27°C



5.0 RECORD OF FINDS

The Stage 4 archaeological investigation was conducted employing the methods described in Section 2.0 of this report. An inventory of the documentary record generated from the fieldwork is provided in Table 3 (below), and the results of the Stage 4 investigation are described below.

Table 3: Inventory of Documentary Record

Document Type	Current Location of Document	Addition Comments
Field Notes	Golder Associates Ltd. Ottawa Office	Original field note book with photocopies in project file (Pages 6-10) 30 June 2016
Maps provided by Client	Golder Associates Ltd. Ottawa Office	Stored in the project file
Digital Photographs	Golder Associates Ltd. Ottawa Office	Stored electronically in the project file with photographic catalogue attached as Appendix A

No features were identified during the Stage 4 mechanical excavation of the study area. As discussed with the MTCS no artifacts were collected though several car parts were identified while the excavation was taking place.



6.0 ANALYSIS AND CONCLUSIONS

The majority of the 19th Century artifacts that were uncovered during the Stage 3 excavation consisted of machine cut nails and other structural artifacts. It was hypothesised that these artifacts may be associated with a previous structure associated with the original settlement of the land. The purpose of the Stage 4 was to identify if any feature associated with this original settlement may have left features in the soil. Excavation commenced in the north east corner and then continued south (Image 1, p. 22). The backdirt was placed on the western edge of the site. For ease of excavation the northern section was excavated in two parts, first the east half then the west. No Features were identified during the Stage 4 mechanical monitoring (Images 3-7, 10-11, pp. 23-25, 26-27). Several car parts were identified during excavation which corroborates with the onsite car demolition activity that was described in the Stage 3 (Image 3, p. 23). No other artifacts or features of cultural significance were identified during this study. Several of the Stage 3 excavation units were identified during mechanical stripping.

The site, as outlined in the Stage 3, consisted of two lots. **Lot 1** was a medium brown sand topsoil of loose compaction. This lot had been previously ploughed and is currently left to fallow. All of the artifacts recovered from the Stage 3 excavation were recovered from this lot. **Lot 2** consisted of an orange yellow subsoil sand of very loose compaction. No artifacts or archaeological features were identified within the subsoil.



7.0 RECOMMENDATIONS

The Stage 4 archaeological assessment of McCullough 1 (BhFw-104) has led to the conclusion that the site no longer possesses any archaeological resources that can provide new information regarding the development and use of the property.

This investigation has provided the basis for the following recommendation:

- 1) That no further archaeological work is required in the area identified as the McCullough 1 (GhFw-104) and that this portion of the site has been mitigated and no longer possesses cultural heritage value or interest.



8.0 ADVICE AND COMPLIANCE WITH LEGISLATION

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

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

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

The *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33, requires that any person discovering or having knowledge of a burial site shall immediately notify the police or coroner. It is recommended that the Registrar of Cemeteries at the Ontario Ministry of Consumer Services is also immediately notified.



9.0 IMPORTANT INFORMATION AND LIMITATION OF THIS REPORT

Golder Associates Ltd. ("Golder") has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied, is made.

This report has been prepared for the specific site, design objective, developments and purpose described to Golder by Minto Communities Canada (the "Client"). The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

The information, recommendations and opinions expressed in this report are for the sole benefit of the Client. No other party may use or rely on this report or any portion thereof without Golder's express written consent. If the report was prepared to be included for a specific permit application process, then upon the reasonable request of the client, Golder may authorize in writing the use of this report by the regulatory agency as an Approved User for the specific and identified purpose of the applicable permit review process. Any other use of this report by others is prohibited and is without responsibility to Golder. The report, all plans, data, drawings and other documents as well as all electronic media prepared by Golder are considered its professional work product and shall remain the copyright property of Golder, who authorizes only the Client and Approved Users to make copies of the report, but only in such quantities as are reasonably necessary for the use of the report by those parties. The Client and Approved Users may not give, lend, sell, or otherwise make available the report or any portion thereof to any other party without the express written permission of Golder. The Client acknowledges the electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore the Client cannot rely upon the electronic media versions of Golder's report or other work products.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the Client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sampling and testing program may fail to detect all or certain archaeological resources. The sampling strategies incorporated in this study comply with those identified in the MTCS' *Standards and Guidelines for Consultant Archaeologists* (2011).



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**STAGE 4 ARCHAEOLOGICAL ASSESSMENT
PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP**

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11.0 IMAGES



**STAGE 4 ARCHAEOLOGICAL ASSESSMENT
PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP**



Image 1: North east corner showing backhoe excavating facing south.



Image 2: Landscape showing site from the north facing southeast.



**STAGE 4 ARCHAEOLOGICAL ASSESSMENT
PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP**



Image 3: North east western segment facing northeast.



Image 4: North central western segment facing northeast



**STAGE 4 ARCHAEOLOGICAL ASSESSMENT
PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP**



Image 5: North central segment facing northeast.



Image 6: South central segment facing northeast.



**STAGE 4 ARCHAEOLOGICAL ASSESSMENT
PHASE 2 DEVELOPMENT, LOT 6, CONCESSION 3, NEPEAN TOWNSHIP**



Image 7: South east segment facing northeast.



Image 8: Backfilling in eastern half facing southeast.



Image 9: Showing car part (belt) from car demolition.



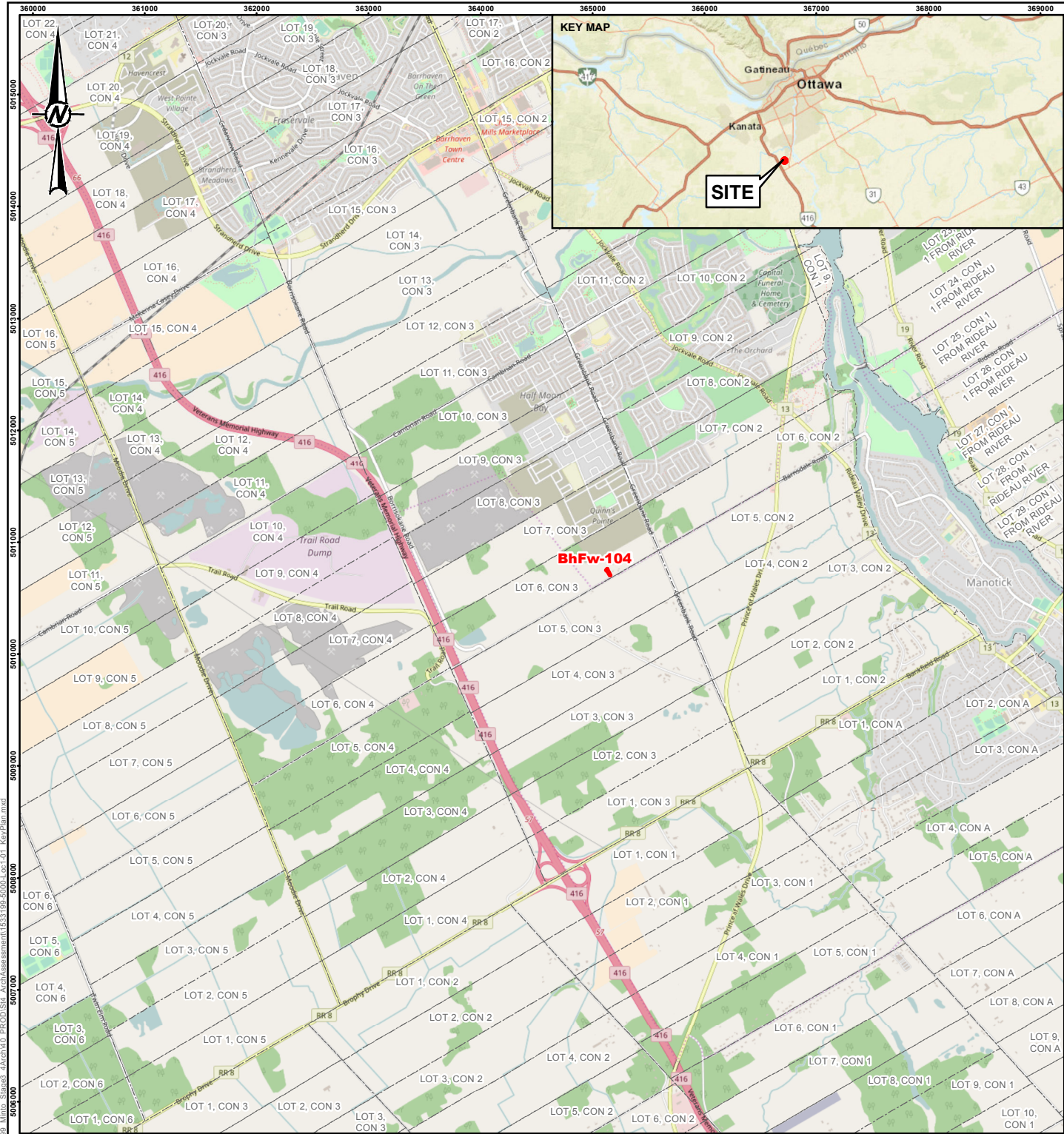
Image 10: Northwest eastern segment facing southwest.



Image 11: North central eastern segment facing south west.

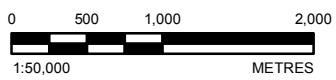


12.0 MAPS



LEGEND

 BhFw-104 STAGE 3 STUDY AREA



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1533199.

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3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
MINTO COMMUNITIES INC.

PROJECT
STAGE 4 ARCHAEOLOGICAL ASSESSMENT, MCCULLOUGH SITE (BhFw-104), LOT 6, CONCESSION 3 (RIDEAU FRONT), NEPEAN TOWNSHIP, CARLETON COUNTY, CITY OF OTTAWA

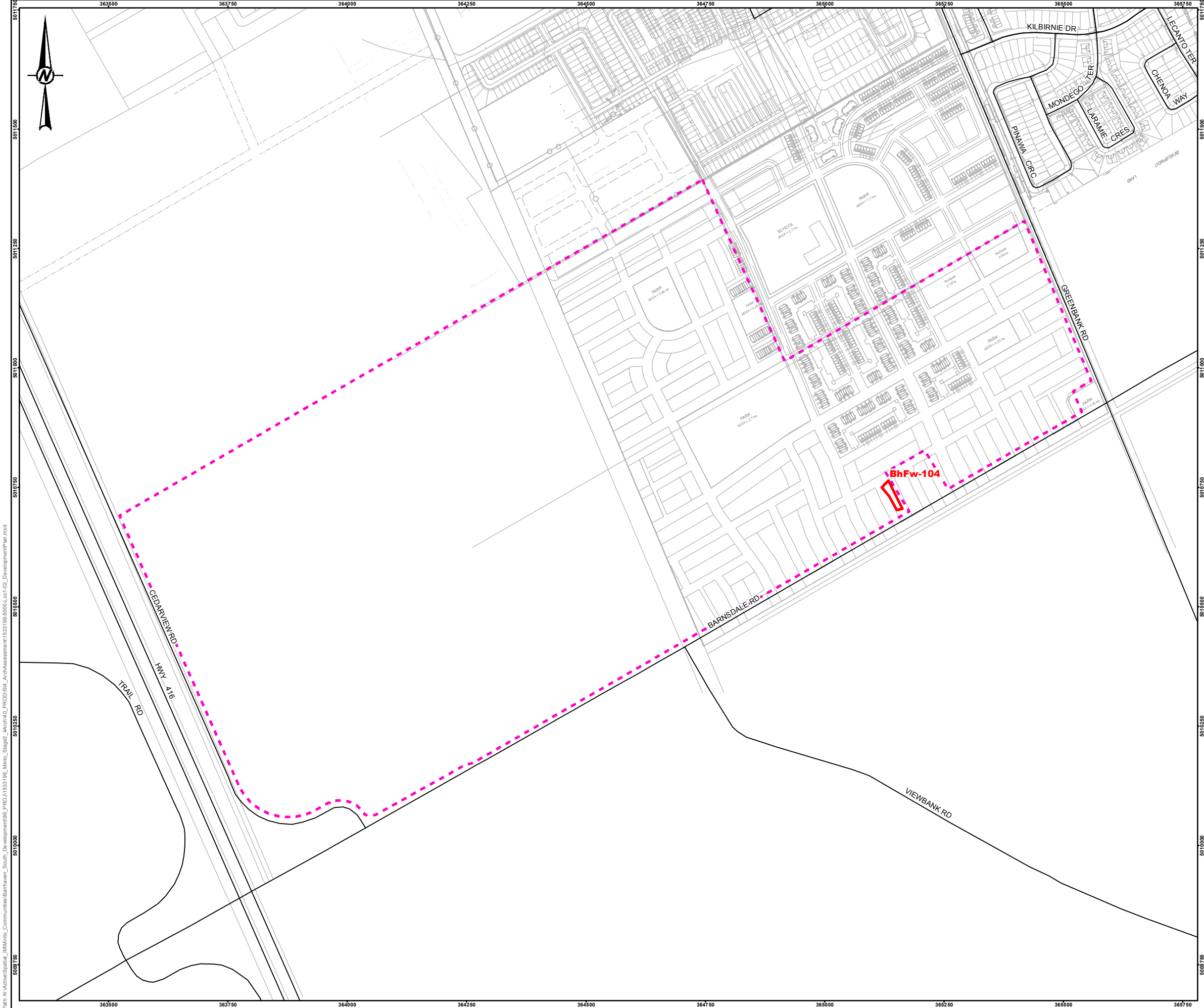
TITLE
KEY PLAN

CONSULTANT	YYYY-MM-DD	2017-05-24
	DESIGNED	----
	PREPARED	BR
	REVIEWED	SL
	APPROVED	HJD



PROJECT NO. 1533199	PHASE 5000	REV. 0	MATCH 1
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IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM 25mm



- LEGEND**
- ROAD
 - BhFw-104 STAGE 3 STUDY AREA
 - DEVELOPMENT BOUNDARY



NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1533199.

- REFERENCE(S)**
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 - PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
MINTO COMMUNITIES INC.

PROJECT
STAGE 4 ARCHAEOLOGICAL ASSESSMENT, MCCULLOUGH SITE (BHFw-104), LOT 6, CONCESSION 3 (RIDEAU FRONT), NEPEAN TOWNSHIP, CARLETON COUNTY, CITY OF OTTAWA

TITLE
DEVELOPMENT PLAN

CONSULTANT	YYYY-MM-DD	2017-05-24
DESIGNED	---	
PREPARED	BR	
REVIEWED	SL	
APPROVED	HJD	

PROJECT NO. 1533199 PHASE 5000 REV. 0 MAP 2

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LEGEND

- HYDRO POLE
- ROAD
- BOUNDARY OF STAGE 4 SOIL STRIPPING
- DEVELOPMENT BOUNDARY

KEY MAP

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1533199.

REFERENCE(S)

1. LAND INFORMATION ONTARIO (LIO) DATA PRODUCED BY GOLDER ASSOCIATES LTD. UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2011.
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3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT

MINTO COMMUNITIES INC.

PROJECT

STAGE 4 ARCHAEOLOGICAL ASSESSMENT, MCCULLOUGH SITE (BhFw-104), LOT 6, CONCESSION 3 (RIDEAU FRONT), NEPEAN TOWNSHIP, CARLETON COUNTY, CITY OF OTTAWA

TITLE

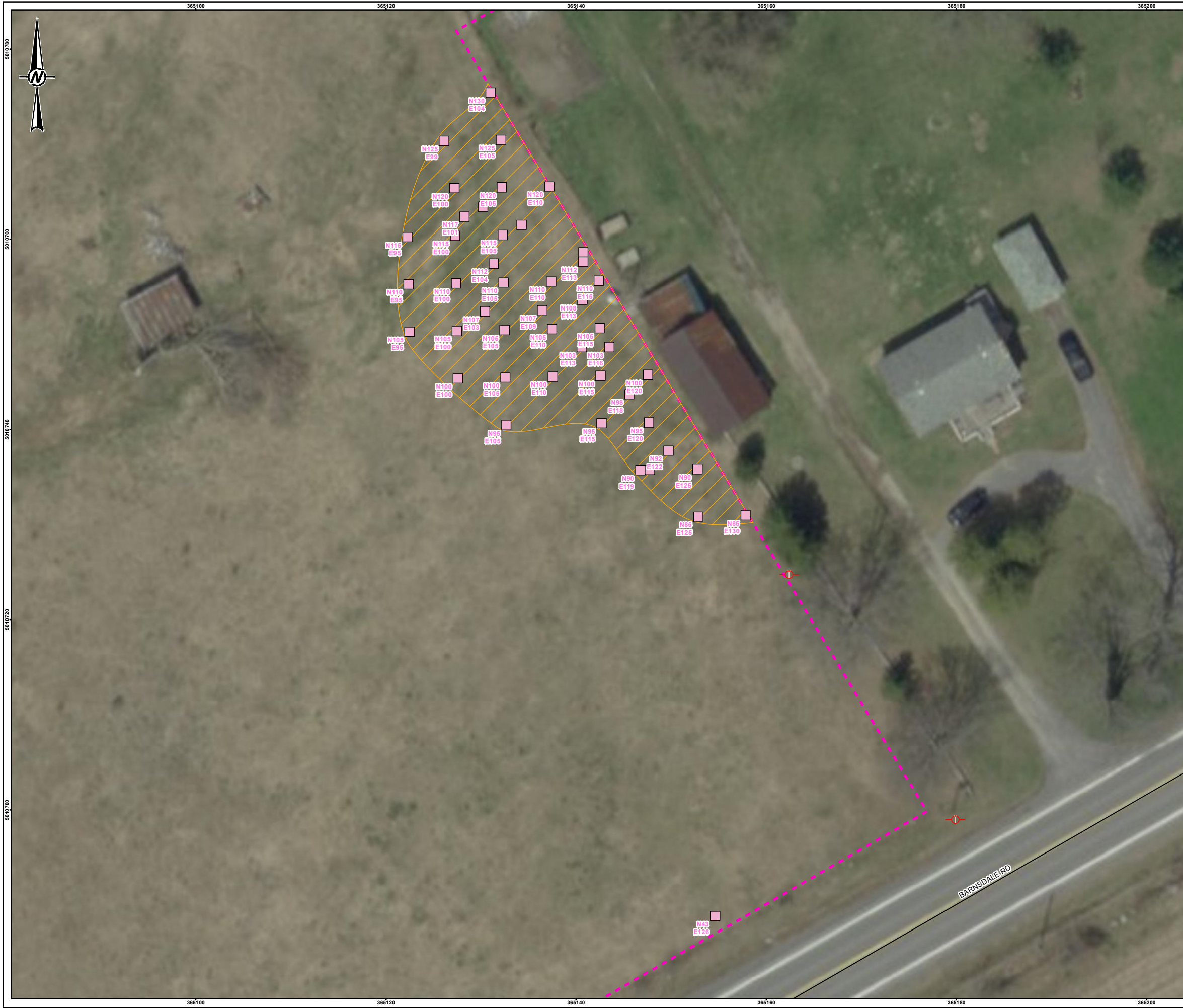
SITE PLAN

CONSULTANT	YYYY-MM-DD	2017-05-24
DESIGNED	---	
PREPARED	BR	
REVIEWED	SL	
APPROVED	HJD	

PROJECT NO.	PHASE	REV.	MAP
1533199	5000	0	3

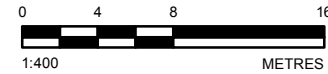
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 28mm

Path: N:\Active\Spatial_M\Minto_Communities\Barham, South Development\99_PROJ\1531199_Minto_Stage3_ArchV0_PRODDisk_ArchAssessment\1531199-5000\Lot105_Site_ExcStrategy.mxd



LEGEND

- HYDRO POLE
- ROAD
- EXCAVATION UNIT (1x1 m)
- BOUNDARY OF STAGE 4 SOIL STRIPPING
- DEVELOPMENT BOUNDARY



NOTE(S)
1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1533199.

REFERENCE(S)
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3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
MINTO COMMUNITIES INC.

PROJECT
STAGE 5 ARCHAEOLOGICAL ASSESSMENT, MCCULLOUGH SITE (BhFw-104), LOT 6, CONCESSION 3 (RIDEAU FRONT), NEPEAN TOWNSHIP, CARLETON COUNTY, CITY OF OTTAWA

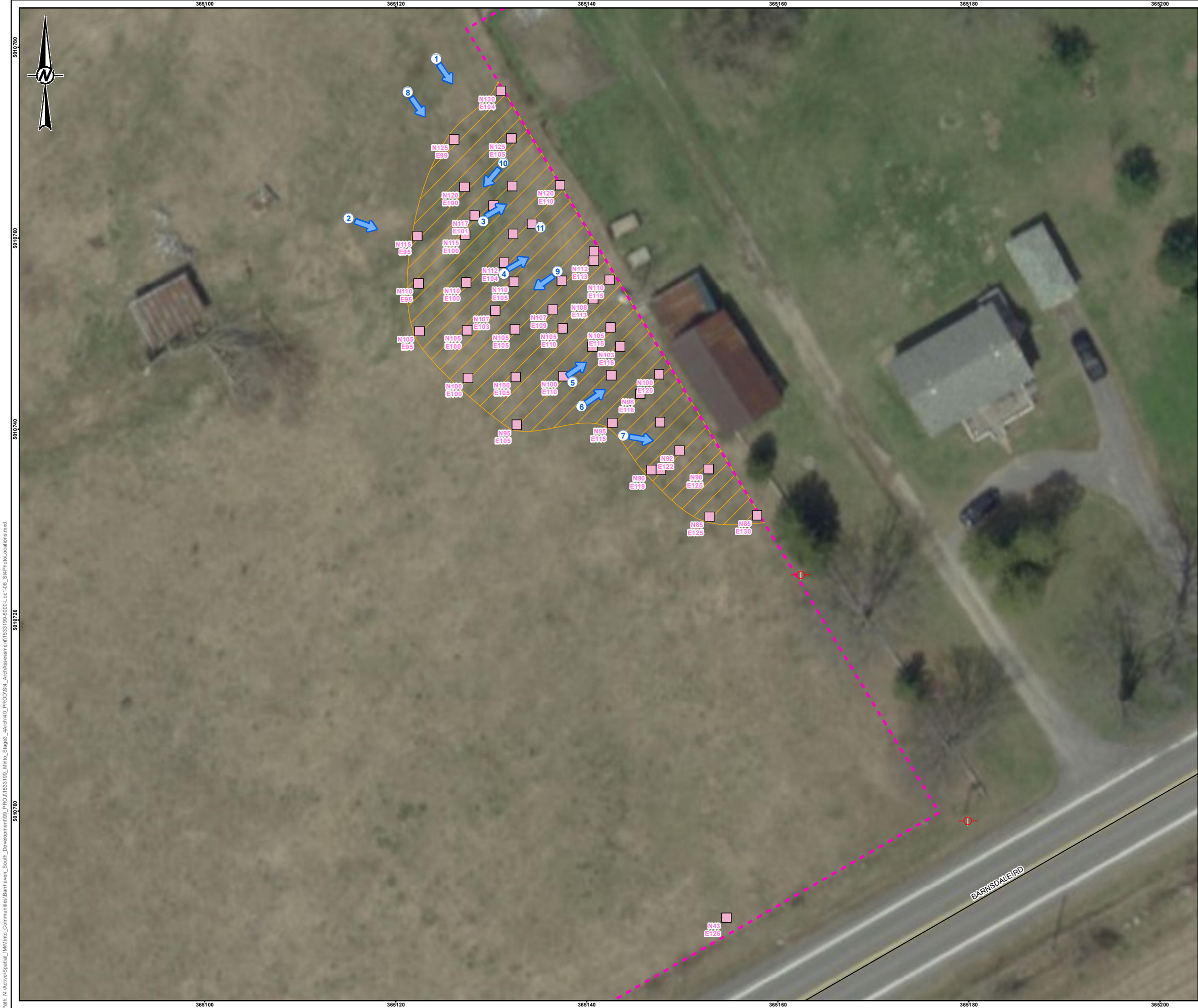
TITLE
STAGE 4 EXCAVATION STRATEGY

CONSULTANT	YYYY-MM-DD	2017-05-24
DESIGNED	---	
PREPARED	BR	
REVIEWED	SL	
APPROVED	HJD	



PROJECT NO.	PHASE	REV.	MAP
1533199	5000	0	5

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: 28mm



LEGEND

- HYDRO POLE
- PHOTO LOCATION AND DIRECTION
- ROAD
- EXCAVATION UNIT (1x1 m)
- BOUNDARY OF STAGE 4 SOIL STRIPPING
- DEVELOPMENT BOUNDARY

KEY MAP

0 4 8 16
1:400 METRES

NOTE(S)

1. THIS FIGURE IS TO BE READ IN CONJUNCTION WITH THE ACCOMPANYING GOLDER ASSOCIATES LTD. REPORT NO. 1533199.

REFERENCE(S)

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3. PROJECTION: TRANSVERSE MERCATOR DATUM: NAD 83
COORDINATE SYSTEM: MTM ZONE 9 VERTICAL DATUM: CGVD28

CLIENT
MINTO COMMUNITIES INC.

PROJECT
STAGE 4 ARCHAEOLOGICAL ASSESSMENT, MCCULLOUGH SITE (BhFw-104), LOT 6, CONCESSION 3 (RIDEAU FRONT), NEPEAN TOWNSHIP, CARLETON COUNTY, CITY OF OTTAWA

TITLE
STAGE 4 PHOTO LOCATION AND DIRECTION FOR BHFW-104

CONSULTANT	YYYY-MM-DD	2017-05-24
	DESIGNED	---
	PREPARED	BR
	REVIEWED	SL
	APPROVED	HJD

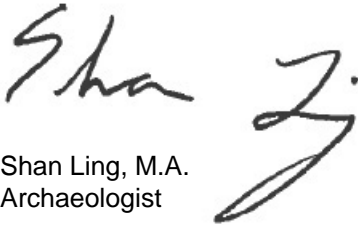
PROJECT NO.	PHASE	REV.	MAP
1533199	5000	0	6



CLOSURE

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

GOLDER ASSOCIATES LTD.



Shan Ling, M.A.
Archaeologist



Hugh Daechsel, M.A.
Principal, Senior Archaeologist

HJD/STWL/ca

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APPENDIX A

Photographic Catalog



APPENDIX A Photographic Catalogue

Project #: 1533199

Project Name: McCullough

Stage: 4

Exp. #	Subject	Direction	Date	Photographer
001	North east corner showing backhoe excavating facing south	South	June 30 2016	Shan Ling
002	Landscape showing site from the north facing southeast	Southeast	June 30 2016	Shan Ling
003	North east western segment facing northeast	Northeast	June 30 2016	Shan Ling
004	North central western segment facing northeast	Northeast	June 30 2016	Shan Ling
005	North central segment facing northeast	Northeast	June 30 2016	Shan Ling
006	South central segment facing northeast	Northeast	June 30 2016	Shan Ling
007	South east segment facing northeast	Northeast	June 30 2016	Shan Ling
008	Backfilling in eastern half facing southeast	Southeast	June 30 2016	Shan Ling
009	Showing car part (belt) from car demolition	N/A	June 30 2016	Shan Ling
010	North west eastern segment facing southwest	Southwest	June 30 2016	Shan Ling
011	North central eastern segment facing south west	Southwest	June 30 2016	Shan Ling

\\golder.gds\gal\ottawa\active\2015\3 proj\1533199 minto communities stage 3 phase 2 barrhaven south ottawa\07 stage 4 mccullough\reporting\final\appendix a photo catalog mccullough stage 4.docx

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