

Appendix C

Cultural Heritage Environment





ORIGINAL REPORT

Stage 1 Archaeological Assessment

*Chatham-Kent Wallaceburg Treatment Servicing Class EA,
Lot A and Lots 1-6, Concession 1, Gore of the Former Geographic Township of
Chatham, Lot 1, Concession 19, Former Geographic Township of Chatham,
Base Line and Bluewater Line ROW, Former Geographic Township of Chatham,
Base Line ROW, Gores of the Former Geographic Townships of Chatham and
Camden, McCreary Line ROW, Gores of the Former Geographic Townships of
Chatham and Camden, Baldoon Road and Boarder Road ROWs, Former
Geographic Townships of Chatham and Dover, Elbow Line ROW, Former
Geographic Township of Chatham, Formerly Kent County, Now Municipality of
Chatham-Kent, Ontario*

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Acronyms and Abbreviations

Acronym	Definition
CHVI	Cultural heritage value or interest
EA	Environmental Assessment
LLPS	Low lift pump station
MCM	Ministry of Citizenship and Multiculturalism
ROW	Right-of-way
WTP	Water treatment plant

Executive Summary

The Executive Summary highlights key points from the report only; for complete information and finding the reader should examine the complete report.

Background

Golder Associates Ltd., a member of WSP (Golder) was retained by Jacobs to conduct a Stage 1 Archaeological Assessment as part of a Schedule C Municipal Class Environmental Assessment for the Wallaceburg Water Treatment Plant in the Municipality of Chatham-Kent, Ontario (Map 1). The purpose of the project is to evaluate a new water treatment plant with a new intake.

The Study Area, as defined by Jacobs, is comprised of eight areas:

- The Potential New LLPS Area, approximately 369.6 hectares of land for a new low lift pump station (LLPS) located on part of Lot A and Lots 1-6, Concession 1 in the Gore of the former geographic Township of Chatham in Kent County, now Municipality of Chatham-Kent, Ontario;
- the WTP Area, which is the existing Wallaceburg Water Treatment Plant (WTP), a 10.7 hectare parcel of land located at 6780 Base Line, legally described as part of Lot 1, Concession 19 in the former geographic Township of Chatham;
- the right-of-way (ROW) of Base Line and Bluewater Line between the Potential New LLPS Area and the WTP Area;
- the ROW of Base Line between Murray Street in Wallaceburg in the Gore of the former geographic Township of Chatham and North Street south of Dresden in the Gore of the former geographic Township of Camden;
- the ROW of McCreary Line between Kimball Road outside Wallaceburg in the Gore of the former geographic Township of Chatham and the Dresden elevated tank outside Dresden in the Gore of the former geographic Township of Camden;
- the ROW of Baldoon Road between Base Line and the Sydenham River adjacent to the WTP Area on the border of the former geographic Townships of Chatham and Dover;
- the ROW of Border Road between the Sydenham River and the 18th Concession Drain on the border of the former geographic Townships of Chatham and Dover; and
- the ROW of Elbow Line including a 30-metre wide unpaved ROW between Elbow Line and Swan Line in the former geographic Township of Chatham.

Combined, the Study Area totals approximately 465.7 hectares and consists of agricultural and residential lands, low-lying swampy lands, and the existing Wallaceburg Water Treatment Plant, as well as approximately 39.15 kilometres of municipal ROW. This Stage 1 Archaeological Assessment was conducted to meet the standard requirements of the *Environmental Assessment Act*, R.S.O 1990, c.E.18 (Government of Ontario 1990a), as required by the Municipality of Chatham-Kent.

Based on the criteria outlined in the Ministry of Tourism, Culture and Sport's (MCM) 2011 *Standards and Guidelines for Consultant Archaeologists*, the Study Area was determined to have archaeological potential for both pre-contact Indigenous and historical Euro-Canadian sites. This determination was based on the proximity of the Sydenham River, the Chenail Ecarté (The Snye), and Running Creek, the proximity of registered archaeological sites, and the fact that the Study Area is located in an area within Chatham Township with a history of Euro-Canadian occupation dating back to the early 19th century.

All portions of the Study Area were systematically inspected to confirm if features of archaeological potential were present and if there were any areas of deep and extensive disturbance, which would have removed archaeological potential. As stated in Section 1.4.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), a property may only be exempt from Stage 2 assessment once deep and extensive ground disturbance has been confirmed through a property inspection.

Results

The Stage 1 property inspection revealed that portions of the Study Area have been subject to deep and extensive disturbance from the construction of residential structures and farm buildings, driveways, roads, drainage ditches, buried utilities, and the existing Wallaceburg Water Treatment Plant's buildings and infrastructure. Other portions of the Study Area, such as cultivated agricultural lands, woodlots, overgrown grassy areas, and manicured lawns found not to have been subject to previous disturbance or be permanently wet were found to retain archaeological potential, and as such should be subject to Stage 2 Archaeological Assessment prior to development (Map 10A-I).

Recommendations

Given the combined results of the background study and property inspection, it is concluded that portions of the Study Area, including cultivated agricultural lands, manicured lawns, and woodlots, retain archaeological and should be subject to Stage 2 Archaeological Assessment prior to development (Map 10A, B, C, F, and I). Due to complete and extensive previous disturbances, and permanent wetness, the remainder of the Study Area does not retain archaeological potential, and, as such, no further archaeological work is recommended for these portions of the Study Area (Map 10A-I). Finally, additional archaeological work is recommended for the Weiser Site (AdHo-1), located in the Study Area, due to the potential for burials at the site.

For portions of the Study Area that can be ploughed (i.e., cultivated agricultural land), the Stage 2 assessment should be conducted by a licensed archaeologist using the pedestrian survey method at 5 metre intervals, as per Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (Map 10A, B, and I). These fields should be recently ploughed, weathered, and exhibit at least 80% surface visibility.

For portions of the Study Area that cannot be ploughed, the Stage 2 assessment should be conducted by a licensed archaeologist using the shovel test pit survey method at 5 metre intervals as per the Section 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists* (Map 10A, B, C, F, and I). Test pits should be dug by hand and be at least 30 centimetres in diameter and excavated 5 centimetres into subsoil. All soil should be screened through 6 millimetre hardware cloth to facilitate the recovery of cultural materials, and each test pit should be examined for stratigraphy, cultural features, and fill.

Given the potential for burials at the Weiser Site (AdHo-1), Stage 3 AA is recommended for the site, followed by archaeological monitoring of construction activities at the site. The Stage 3 AA should consist of the hand excavation of one meter by one metre square test units across the site. Indigenous communities should be engaged prior to the commencement of the Stage 3 AA. Following the Stage 3 AA, any construction activities at the Weiser Site (AdHo-1) should be subject to monitoring by a licensed archaeologist.

Given the identified historical significance of the Sydenham River, a marine archaeological assessment should also be completed prior to any proposed impact to the marine landscape which includes property up to the high-water mark along the shoreline. The marine archaeological assessment should be completed by an archaeologist licensed in the Province of Ontario under a Marine Permit issued by the Ministry of Citizenship and Multiculturalism.

There are no current planned development impacts to the other watercourses flowing through the Study Area. If this should change through design plan revisions, then an assessment for potential marine archaeological resources for these other watercourses may be required.

The Ontario Ministry of Citizenship and Multiculturalism is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licencing.

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1.0 PROJECT CONTEXT

1.1 Development Context

Golder Associates Ltd., a member of WSP (Golder) was retained by Jacobs to conduct a Stage 1 Archaeological Assessment for the Chatham-Kent Wallaceburg Water Treatment Servicing Class Environmental Assessment (EA). The Study Area for this Stage 1 assessment consists of approximately 369.6 hectares of land for a new low lift pump station (LLPS) located on part of Lot A and Lots 1-6, Concession 1 in the Gore of the former geographic Township of Chatham in Kent County, now Municipality of Chatham-Kent, Ontario (the “Potential New LLPS Area”). Additionally, the Study Area includes the existing Wallaceburg Water Treatment Plant (WTP), a 10.7 ha parcel of land located at 6780 Base Line, legally described as part of Lot 1, Concession 19 in the former geographic Township of Chatham (the “WTP Area”), the right-of-way (ROW) of Base Line and Bluewater Line between the Potential New LLPS Area and the WTP Area in the Gore of the former geographic Township of Chatham, the ROW of Base Line between Murray Street in Wallaceburg in the Gore of the former geographic Township of Chatham and North Street south of Dresden in the Gore of the former geographic Township of Camden, and the ROW of McCreary Line between Kimball Road outside Wallaceburg in the Gore of the former geographic Township of Chatham and the Dresden elevated tank outside Dresden in the Gore of the former geographic Township of Camden, the ROW of Baldoon Road between Base Line and the Sydenham River adjacent to the WTP Area on the border of the former geographic Townships of Chatham and Dover, the ROW of Border Road between the Sydenham River and the 18th Concession Drain on the border of the former geographic Townships of Chatham and Dover, and the ROW of Elbow Line including a 30-metre wide unpaved ROW between Elbow Line and Swan Line in the former geographic Township of Chatham (Map 1 and Map 2A and B). Combined, the Study Area totals approximately 465.7 hectares and consists of agricultural and residential lands, low-lying swampy lands, and the existing Wallaceburg Water Treatment Plant, as well as approximately 39.15 kilometres of municipal ROW.

This Stage 1 Archaeological Assessment was conducted to meet the standard requirements of the *Environmental Assessment Act*, R.S.O 1990, c.E.18 (Government of Ontario 1990a), as required by the Municipality of Chatham-Kent.

The Stage 1 Archaeological Assessment was conducted under professional archaeological license P457, issued to Lafe Meicenheimer of Golder by the Ontario Ministry of Citizenship and Multiculturalism (MCM) (PIF # P457-0095-2020). Permission to enter the Study Area to conduct all required archaeological field activities was not needed, as the property inspection of the Study Area was conducted entirely from public lands.

1.2 Historical Context

Table 1 provides a general outline of the pre- and post-contact culture history for Kent County, drawn from Ellis and Ferris (1990), while Map 3 displays the pre-contact Indigenous culture history of southwestern Ontario.

Table 1: Cultural Chronology for Kent County

Period		Time Range (circa)	Characteristics
Paleo	Early	9000 - 8400 BC	Gainey, Barnes, and Crowfield traditions; small bands; mobile hunters and gatherers; utilization of seasonal resources and large territories; fluted projectiles
	Late	8400 - 8000 BC	Holcombe, Hi-Lo, and Lanceolate biface traditions; continuing mobility; campsite/way-station sites; smaller territories are utilized; non-fluted projectiles
Archaic	Early	8000 - 6000 BC	Side-notched, Corner-notched, and Bifurcate Base traditions; growing diversity of stone tool types; heavy woodworking tools appear (e.g., ground stone axes and chisels)
	Middle	6000 - 2500 BC	Stemmed (Kirk, Stanly/Neville), Brewerton side- and corner-notched traditions; reliance on local resources; populations increasing; more ritual activities; fully ground and polished tools; net-sinkers common; earliest copper tools
	Late	2000 - 950 BC	Narrow Point, Broad Point, and Small Point traditions; less mobility; use of fish-weirs; true cemeteries appear; stone pipes emerge; long-distance trade (marine shells and galena)
Woodland	Early	950 - 400 BC	Meadowood tradition; cord-roughened ceramics emerge; Meadowood cache blades and side-notched points; bands of up to 35 people
	Middle	400 BC - AD 500	Saugeen tradition; stamped ceramics appear; Saugeen projectile points; cobble spall scrapers; seasonal settlements and resource utilization; post holes, hearths, middens, cemeteries, and rectangular structures identified
	Transitional	AD 550 - 900	Princess Point tradition; cord roughening, impressed lines and punctate designs on pottery; adoption of maize horticulture at the western end of Lake Ontario; oval houses and 'incipient' longhouses; first palisades; villages with 75 people
	Late (Ontario Iroquois Tradition)	AD 900 - 1300	Early - Glen Meyer tradition; settled village-life based on agriculture; small villages (0.4 ha) with 75–200 people and 4–5 longhouses; semi-permanent settlements
		AD 1300 - 1400	Middle - Uren and Middleport traditions; classic longhouses emerge; larger villages (1.2 ha) with up to 600 people; more permanent settlements (30 years)
		AD 1400 - 1600	Late - Larger villages (1.7 ha); examples up to 5 ha with 2,500 people; extensive croplands; also, hamlets, cabins, camps and cemeteries; potential tribal units; fur trade begins ca. 1580; European trade goods appear
	Late (Western Basin Tradition)	AD 500 - 900	Riviere au Vase - introduction of corn
		AD 900 - 1200	Young Phase - dense storage pits, proto-settlements
		AD 1200 - 1400	Springwell Phase - emergence of agricultural villages
		AD 1400 - 1550	Wolf Phase - palisaded villages, warfare and displacement

1.2.1 Paleo Period

The first human occupation of southwestern Ontario, known as the Paleo Period, begins just after the end of the Wisconsin Glacial Period. During this time there was a complex series of ice retreats and advances that played a large role in shaping the local topography. Southwestern Ontario was finally ice free by about 12,500 years ago, but the first evidence of human settlement dates to about 11,000 years ago when this area was inhabited by Indigenous groups that had been living south of the Great Lakes.

Our current understanding of Early Paleo settlement patterns suggests that small bands consisting of up to 25 to 35 individuals followed a pattern of seasonal mobility extending over large territories (Ellis and Deller 1990:54). Sites from this time are exceedingly rare, in part because population densities are thought to have been very low, with all southwestern Ontario being occupied by perhaps only 100 to 200 people (Ellis and Deller 1990:54).

Many Early Paleo sites are located in elevated locations on well-drained loamy soils, and many have been found on former beach ridges associated with post-glacial Lake Algonquin that had previously occupied the Lake Huron/Georgian Bay basin. Given their placement in elevated locations, which were likely conducive to the interception of migratory mammals such as caribou, it has been suggested that these sites may represent communal hunting camps. Although most Early Paleo sites are relatively small, there are a few large sites, such as one located close to Parkhill, Ontario, which covered as much as 6 hectares (Ellis and Deller 1990:51). However, it appears that these larger sites were formed when the same general locations were occupied for short periods of time over the course of many years.

There are also smaller Early Paleo camps scattered throughout the interior of southwestern Ontario, usually situated adjacent to wetlands.

The Late Paleo Period (8400 - 8000 BC) has been less well researched than the Early Paleo, and as a result it is poorly understood. By this time, the environment of southwestern Ontario was coming to be dominated by closed coniferous forests with some minor deciduous elements. It seems that many of the large game species that had been hunted in the early part of the Paleo Period had either moved further north or became extinct.

During the Late Paleo Period people continued to cover large territories as they moved about in response to seasonal resource fluctuations. On a province-wide basis Late Paleo projectile points are far more common than Early Paleo materials, suggesting a relative increase in population.

The end of the Paleo Period was heralded by numerous technological and cultural innovations that appeared throughout the Archaic Period. These innovations may be best explained in relation to the dynamic nature of the post-glacial environment and region-wide population increases.

1.2.2 Archaic Period

During the Early Archaic Period (8000 - 6000 BC), the jack and red pine forests that characterized the Late Paleo environment were replaced by forests dominated by white pine with some associated deciduous trees (Ellis, Kenyon and Spence 1990:68-69). Notable technological changes during this period include the appearance of side- and corner-notched projectile points not found during the previous Paleo times, and the introduction of ground stone tools such as celts and axes, which suggest woodworking was increasing in importance. In addition to the introduction of new tools, there may have been some reduction in the degree of seasonal movement of groups, although it is still suspected that population densities were quite low, and band territories large.

During the Middle Archaic Period (6000 - 2500 BC) the trend towards more diverse toolkits continued, as the presence of net-sinkers and fish weirs suggest that fishing was becoming an important aspect of the subsistence economy. It was also at this time that "bannerstones" were first manufactured. Bannerstones are carefully crafted ground stone devices that may have served as a counterbalance for "atlatls" or spear-throwers.

Another characteristic of the Middle Archaic is an increased reliance on local, often poor-quality chert resources for the manufacturing of projectile points. It seems that during earlier periods, when groups occupied large territories, it was possible for them to visit a primary outcrop of high-quality chert at least once during their seasonal round. However, during the Middle Archaic, groups inhabited smaller territories that often did not encompass a source of high-quality raw material. In these instances, it appears that lower quality materials which had been deposited by the glaciers in the local till and river gravels were utilized more regularly.

The apparent reduction in territory size may be linked to gradual region-wide population growth which led to the infilling of the landscape and a reorganization of subsistence practices as more people became more reliant on resources from smaller areas. It may also have been the impetus for the development of long-distance trading as shown by the increased presence of exotic materials and items during the later part of the Middle Archaic Period. For example, tools manufactured from natural sources of copper found in areas northwest of Lake Superior were being widely traded across the northeast (Ellis, Kenyon and Spence 1990:66).

During the Late Archaic (2500 - 950 BC) the trend towards decreased territory size and a broadening subsistence base continued. Late Archaic sites are far more numerous than either Early or Middle Archaic sites, and it seems that the local population had expanded. It is during the Late Archaic that more formal cemeteries appear. The appearance of cemeteries during the Late Archaic has been interpreted as a response to increased population densities and competition between local groups for access to resources. It is argued that cemeteries would have provided strong symbolic claims over a local territory and its resources. These cemeteries are often located on heights of well-drained sandy/gravel soils adjacent to major watercourses such as the Thames River.

This suggestion of increased territoriality is also consistent with the regionalized variation present in Late Archaic projectile point styles. It was during the Late Archaic that distinct local styles of projectile points appear. Also, during the Late Archaic the trade networks which had been established during the Middle Archaic continued to flourish. Native copper from northern Ontario and marine shell artifacts from as far away as the Mid-Atlantic coast are frequently encountered as grave goods. Other artifacts such as polished stone pipes and banded slate gorgets also appear on Late Archaic sites. One of the more unusual and interesting of the Late Archaic artifacts is the "birdstone". Birdstones are small, bird-like effigies usually manufactured from green banded slate. While the function of these artifacts is presently poorly understood, they are especially common in the London area.

1.2.3 Woodland Period

The Early Woodland Period (950 - 400 BC) is distinguished from the Late Archaic Period primarily by the addition of ceramic technology. While the introduction of pottery provides a useful demarcation point for archaeologists, it may have made less difference in the lives of the Early Woodland peoples.

The first pots were thick walled and friable. It has been suggested that they were used in the processing of nut oils by boiling crushed nut fragments in water and skimming off the oil (Spence, Pihl and Murphy 1990:137). These vessels were not easily portable, and individual pots must not have sustained a long use life.

There have also been numerous Early Woodland sites located at which no pottery was found, suggesting that these early vessels had yet to assume a central position in the day-to-day lives of Early Woodland peoples.

Other than the introduction of ceramic technology, the life ways of Early Woodland peoples show a great deal of continuity with the preceding Late Archaic Period. For instance, birdstones continue to be manufactured, although the Early Woodland varieties have "pop-eyes" which protrude from the sides of their heads. Likewise, the thin, well-made projectile points which were produced during the terminal part of the Archaic Period continue in use. However, the Early Woodland variants were side-notched rather than corner-notched, giving them a slightly altered and distinctive appearance.

The trade networks which were established in the Middle and Late Archaic also continued to function, although there does not appear to have been as much traffic in marine shell during the Early Woodland Period. During the last 200 years of the Early Woodland Period, projectile points manufactured from high quality raw materials from the American Midwest begin to appear on sites west of the London area.

In terms of settlement and subsistence patterns, the Middle Woodland (400 BC - AD 900) provides a major point of departure from the Archaic and Early Woodland Periods. While Middle Woodland peoples still relied on hunting and gathering to meet their subsistence requirements, fish became an even more important part of their diet. This is especially true in the nearby London area, where some Middle Woodland sites have produced literally thousands of bones from spring spawning species such as walleye and sucker. In addition, Middle Woodland peoples relied much more extensively on ceramic technology. Middle Woodland vessels are often garishly decorated with hastily impressed designs covering the entire exterior surface and upper portion of the vessel interior. Consequently, even very small fragments of Middle Woodland vessels are easily identifiable.

It is also at the beginning of the Middle Woodland Period that rich, densely occupied sites appear on the valley floor of major rivers. While the valley floors of floodplains had been utilized by earlier peoples, Middle Woodland sites are significantly different in that the same location was repeatedly occupied over several hundred years. Because this is the case, rich deposits of artifacts often accumulated.

Unlike earlier seasonally utilized locations, these Middle Woodland sites appear to have functioned as base camps, occupied off and on over the course of the year. There are also numerous small upland Middle Woodland sites, many of which can be interpreted as special purpose camps from which localized resource patches were exploited. This shift towards a greater degree of sedentism continues the trend witnessed from at least Middle Archaic times and provides a prelude to the developments that follow during the Late Woodland Period.

The Ontario Iroquoian and Western Basin are two archaeological traditions that characterize pre-contact Indigenous communities living in western southwestern Ontario during the Late Woodland Period (ca. AD 500 - 1650). Peoples of the Western Basin Tradition lived throughout the southwestern-most portion of the province, from the present-day Sarnia/Windsor area to about London. Iroquoian peoples, on the other hand, appear to have lived from the present-day Chatham area east to Toronto. Each of these traditions are divided into distinct temporal phases (see Table 1) defined by material cultural attributes, and settlement and subsistence patterns that exhibit a shift towards larger and more permanent villages due to an increasing reliance on cultivated plants such as corn, beans, squash, sunflower, and tobacco (Dodd et al. 1990; Foreman 2011; Fox 1990; Lennox and Fitzgerald 1990; Murphy and Ferris 1990). Corn may have been introduced into southwestern Ontario from the American Midwest as early as AD 600, however, it did not become a dietary staple until at least 300 to 400 years later (Fox 1990:185; Smith 1990; Williamson 1990:312).

The first phase of the Western Basin Tradition is known as the Riviere au Vase Phase (AD 500 - 900). Many archaeologists believe that it is possible to trace a direct line from these peoples to the later Algonkian speaking groups that inhabited extreme Southwestern Ontario at the time of first European contact. While settlement and subsistence patterns during the Riviere au Vase Phase continue to follow patterns established during earlier

periods, there were significant changes in some aspects of material culture that make sites from this time period easy to distinguish. Across the region, this period witnessed the emergence of paddled vessel construction techniques and cord wrapped stick decorations. There was also a change in projectile point styles from larger Middle Woodland types to much smaller forms such as Raccoon, Jack's Reef, Port Maitland and Levanna, that clearly functioned as arrowheads rather than spear points (Murphy and Ferris 1990).

In addition to these changes in ceramics and lithics, there was also a major discontinuity in exchange networks and in the complexity of mortuary ceremonialism. While it is likely that Riviere au Vase peoples were aware of and even made limited use of corn horticulture, the evidence for this is limited, and it is clear that corn horticulture never achieved as prominent a role as it did with the groups living in the Grand River Drainage to the east. Riviere au Vase ceramics have been recovered from sites in southern Michigan and northern Ohio and extreme southwestern Ontario, including the Sarnia area (Murphy and Ferris 1990).

The transition to the subsequent Younger Phase of the Western Basin Tradition occurs around AD 900, although it is not well defined. There is a clear continuation in ceramic styles between these two phases, without any clear markers to easily separate the materials. Younger ceramics tend to be more complexly decorated, often with elaborate neck decorations consisting of filled triangles or plaits. In terms of settlement and subsistence, hunting and gathering patterns continue from earlier periods, although corn is more regularly encountered on Younger Phase sites. In fact, recent dietary reconstructions from the Krieger site in Chatham-Kent indicate an increasing reliance on maize horticulture at this time, perhaps to a similar extent as the contemporary and more sedentary Iroquoian groups to the east (Watts et al. 2011).

Additionally, there appears to be a trend toward larger, more substantial occupations in the Younger Phase, which suggests both an increase in population, as well as a trend towards reduced mobility. A reduction in mobility is supported by recent discoveries in the Arkona area, which identified the presence of palisaded villages with multiple house structures dating to the Younger Phase (Golder 2012a, 2012b), a settlement pattern previously believed to have begun during the subsequent Springwells Phase.

By approximately AD 1200, the Younger Phase transitioned into the subsequent Springwells Phase with the appearance of collared castellated vessels decorated with horizontal motifs and a more frequent occurrence of larger Western Basin sites with multiple house structures and palisades (Murphy and Ferris 1990).

True longhouses have been identified on sites near Windsor, and it appears that during the summer months, corn horticulture was becoming a growing component of the subsistence economy. Major Springwells Phase communities have been documented in the Windsor area, along the southern and eastern margins of Lake St. Clair, as well as in the Sydenham River drainage (Murphy and Ferris 1990).

The Wolf Phase (AD 1400 - 1550) is the final and most poorly understood phase of the Western Basin Tradition in southwestern Ontario. Wolf Phase ceramics emerge out of the highly decorated late Springwells Phase styles such as Mixer Dentate. At present, Wolf Phase sites are only known from the extreme western ends of Essex, Kent and Lambton counties. It appears that the Wolf Phase witnesses a continuation of the trend towards reduced residential mobility and the emergence of true villages that had begun during the Springwells Phase (Murphy and Ferris 1990).

1.2.4 Post-Contact Indigenous Period

The post-contact Indigenous occupation of southern Ontario was heavily influenced by the dispersal of various Iroquoian-speaking peoples, such as the Huron and closely related Petun, by the New York State Iroquois and the subsequent return of Algonkian-speaking groups from northern Ontario at the end of the 17th century and beginning of the 18th century (Schmalz 1991).

The nature of their settlement size, population distribution, and material culture shifted as European settlers encroached upon their territory. However, despite this shift, “written accounts of material life and livelihood, the correlation of historically recorded villages to their archaeological manifestations, and the similarities of those sites to more ancient sites have revealed an antiquity to documented cultural expressions that confirms a deep historical continuity to Iroquoian systems of ideology and thought” (Ferris 2009:114). First Nation peoples of Southern Ontario have left behind archaeologically significant resources throughout Southern Ontario which show continuity with past peoples, even if they have not been recorded in historical Euro-Canadian documentation.

Portions of southwestern Ontario were also occupied by Algonkian-speaking groups both before and after European contact. Generally, the pre-contact Indigenous presence in much of southern Ontario reflects occupation by northern Iroquoian speakers. During and following the Iroquois Wars of the mid-17th century and the dispersal of the Iroquoian-speaking Huron-Petun and Neutral, a considerable reduction in the extent of territory occupied by Algonkian speakers occurred in southern Ontario. Beginning about 1690, northern Algonkian speakers from northern Ontario began to move southwards and southern Iroquoian speakers began to push southern Algonkian-speakers further west (Ferris 2009; Schmalz 1991).

1.2.5 Historical Euro-Canadian Period

Following the Toronto Purchase of 1787, today’s southern Ontario was within the old Province of Quebec and divided into four political districts: Lunenburg, Mechlenburg, Nassau, and Hesse. These became part of the Province of Upper Canada in 1791, and renamed the Eastern, Midland, Home, and Western Districts, respectively. The Study Area is within the former Hesse District, then later the Western District, which originally included all lands lying to the west of a line running north from Long Point on Lake Erie to Georgian Bay. Each district was further subdivided into counties and townships, with the Study Area falling within Kent County in the Township and Gore of Chatham near Wallaceburg and the Gore of Camden Township near Dresden.

One of the earliest written historical records of this area is found as part of Treaty Number 2, which:

... was made with the O[dawa], Chippew[a], Pottawatom[i] and Huro[n] May 19th, 1790, portions of which nations had established themselves on the Detroit River all of whom had been driven by the Iroquois from the northern and eastern parts of the Province, from the Detroit River easterly to Catfish Creek and south of the river La Tranche [Thames River] and Chenail Ecarte, and contains Essex County except Anderdon Township and Part of West Sandwich; Kent County except Zone Township, and Gores of Camden and Chatham; Elgin County except Bayham Township and parts of South Dorchester and Malahide. In Middlesex County, Del[a]ware and Westminster Townships and part of North Dorchester [are included].

Morris 1943:17

1.2.5.1 Chatham Township

Following Treaty Number 2, and in response to numerous land petitions from United Empire Loyalists, the British government ordered crown surveys to be completed for the tract of land that would become Kent County. Within Chatham Township, the lots fronting on the Thames River were surveyed according to the single front survey system by Patrick McNiff between 1790 and 1791 (Kent Historical Society 1939). The interior portions of these townships were later surveyed according to the same system by Abraham Iredell, William Hambly, and Thomas Smith between 1795 and 1810.

Aside from some early squatters that had arrived in the area as early as 1780, formal settlement of Chatham Township was not initiated until 1792, when United Empire Loyalists and French immigrants began settling along the banks of the Thames River (H. Belden and Co. 1880; Lauriston 1989). Many of these early settlers were forced off the Thames by rising water levels during the early 19th century and relocated within the interior of Chatham Township. Additional settlement of the interior portions of Chatham Township did not occur until the 1830s, when an influx of settlers, primarily from northern Ireland and Scotland, began arriving in the area. These settlers typically located along the well-drain banks of Pain Court and Big Creeks (Lauriston 1989).

Once the well-drained lands in Chatham Township were taken up, the pace of growth and development in the area remained relatively slow, likely related to the flat topography and the poor natural drainage of the landscape, which hindered agricultural development and the prosperity of local farmers in the area. This hypothesis is supported by the fact that in 1846, only 2.1% of the acreage available in Chatham Township was under cultivation, and the population of the Township was only 799 (Smith 1846).

In 1852, the Great Western Railway was constructed just beyond the southern limits of Chatham Township, with a station situated in the Town of Chatham. The introduction of railway communication, along with an increased demand for timber to be used for building and fuel purposes, appears to have triggered some additional growth and development in the Kent County area (Kent Historical Society 1939), and by 1861, the population of Chatham Township had reached 3,585 (McEvoy et al. 1867).

By 1880, the population of Chatham Township had increased to 5,048 and was considered by local residents to be 90% settled (Ontario Agriculture Commission 1880). This comparatively fast pace of growth between 1861 and 1880 can likely be attributed to the introduction of funding for roadside drainage ditches in 1872 and tile underdrains in 1879 (Jones 1946, Herniman 1968), which drastically improved the drainage characteristics of the area, and by extension, the success of the local farmers. Proceeding into the 20th century, the population in Chatham Township continued to grow, eventually reaching 6,916 in 1980 (Carter 1984).

In 1998, Chatham Township was amalgamated with the City of Chatham and the rest of Kent County to form the new Municipality of Chatham-Kent. In 2016, the Municipality had a population of 102,042 residents (Statistics Canada 2016).

1.2.5.2 Camden Township

Though surveyed at the end of the 18th century, Camden Township did not see many settlers until the after the 1820s. Settlement of the Township was concentrated along the Sydenham River, with Dresden and the area of Dawn Mills east of Dresden gaining settlers following the construction of a sawmills and a grist mill around 1825 (Belden and Company 1880; Francis 2015). Thamesville, the other major settlement within Camden Township situated on the Thames River, was also founded around the same time, though did not see much growth until the mid-19th century and the arrival of the Great Western Railway (Belden and Company 1880). Aside from Dresden and Thamesville, Camden Township did not see major population growth or settlement throughout the 19th or 20th centuries.

1.2.5.3 Wallaceburg

A portion of the Study Area is located in close proximity to Wallaceburg.

Wallaceburg is located on the North Sydenham River in the Gore of the Township of Chatham. It originated from the Baldoon Settlement, which was founded by Thomas Douglas, the fifth Earl of Selkirk. Douglas purchased 4,200 acres where the Sydenham River meets the Chenail Ecarté (The Snye) in 1803 with the intention of providing 50-acre plots to settlers from his native Scotland, naming the settlement Baldoon after a family estate in Scotland (Mann 1968). The Earl had arranged for carpenters to arrive ahead of the settler to begin building

houses, however many fled to Sandwich after arriving, afraid of the local Indigenous populations near Baldoon, leaving no houses for the arriving colonists. The first winter saw the death of 42 of the original 102 settlers due to disease and other hardships (Mann 1968). The following spring, the Earl advised his manager at Baldoon, Alexander McDonnell, to relocate the colonists either up the Sydenham River, down to the St. Clair River, or south inland towards Chatham. McDonnell ignored this advice, and after many years of mismanagement, hardship, and the War of 1812, the Earl sold the majority of the Baldoon lands to John McNab and the colonists began moving upriver to the forks of the Sydenham River, where present-day Wallaceburg is located (Mann 1968).

The land at the forks of the Sydenham proved to be much better than the marshy land of Baldoon, and soon a small community began to grow. It was originally called “The Forks,” but when the post office was established in 1834, postmaster Hugh McCallum suggested Wallaceburg in honour of the Scottish hero William Wallace (Mann 1968, Belden and Company 1880). The community grew slowly throughout the mid-19th century, fueled by the lumber industry, and was incorporated as a village in 1875 and a town in 1896 (Mann 1968).

When the lumber industry began to wane in the late 19th century, other industries, including glass, brass, and sugar manufacturing, as well as tourism, helped Wallaceburg remain relevant in the 20th century (Mann 1968).

1.2.5.4 Dresden

A portion of the Study Area is located in close proximity to Dresden.

Dresden is located on the Sydenham River in the Gore of the Township of Camden. It was founded by a lumber merchant in 1825 and named after Dresden, Germany. The settlement slowly grew as a centre of the local lumber industry until the 1860s when the cleared land drew settlers and it evolved into an agricultural centre (Francis 2015).

In 1841, Reverend Josiah Henson, a former U.S. slave, moved to Dresden and purchased 200 acres of land to build a self-sufficient community for fugitives from slavery. The community was known as the Dawn Settlement and was centred around the British-American Institute, a vocational school that aimed to provide Black Canadians with skills to prosper, and to disprove the belief of slavery proponents who argued that African-Americans were incapable of independent living (Ontario Heritage Trust n.d.). The Dawn Settlement grew during the 1840s and included farmland, a grist mill, a sawmill, and a brickyard. Following administrative problems, the management of the settlement was taken over by the British and Foreign Anti-Slavery Society and continued until 1868, when the school closed. Following the closure of the British American Institute, residents of the Dawn Settlement gradually moved away. Reverend Henson remained in Dresden and remained an important leader in Canada’s African-Canadian community and is purported to be the inspiration behind Harriet Beecher-Stowe’s anti-slavery novel *Uncle Tom’s Cabin*. His homestead was converted into a museum in the mid-20th century, with the Ontario Heritage Trust obtaining ownership in 2005 and designating the property under the *Ontario Heritage Act* (Ontario Heritage Trust n.d.). The Josiah Henson Museum of African-Canadian History historic site is located between the Base Line and McCreary Line ROWs in the Gore of Camden Township.

Dresden was incorporated as a village in 1872 and a town in 1882 and remains an agricultural community today (Francis 2015).

1.2.5.5 Walpole Island First Nation (Bkejwanong Territory)

The Study Area is located across the Chenail Ecarté (The Snye) from Walpole Island First Nation. The Walpole Island 46 Reserve (*Bkejwanong*) is the unceded territory of the Ojibwe, Potawatomi, and Odawa peoples of the Walpole Island First Nation. *Bkejwanong* consists of six islands, with Walpole Island being the largest. It is known for its diverse wetlands, and hunting, fishing, and trapping remain a large part of the community economy (Giiwedini Noodin n.d.).

1.2.6 Study Area Specific Context

The Study Area falls within Lot A and Lots 1 to 6, Concession 1 in the Gore of the former geographic Township of Chatham, as well as part of Lot 1, Concession 19 in the former geographic Township of Chatham. Additionally, the Study Area includes the municipal ROW of Base Line and Bluewater Line between the Potential New LLPS Area and the WTP Area in the Gore of the former geographic Township of Chatham, the ROW of Base Line between Murray Street in Wallaceburg in the Gore of the former geographic Township of Chatham and North Street in Dresden in the Gore of the former geographic Township of Camden, the ROW of McCreary Line between Kimball Road outside Wallaceburg in the Gore of the former geographic Township of Chatham, and the Dresden elevated tank outside Dresden in the Gore of the former geographic Township of Camden, the ROW of Baldoon Road between Base Line and the Sydenham River adjacent to the WTP Area on the border of the former geographic Townships of Chatham and Dover, the ROW of Border Road between the Sydenham River and the 18th Concession Drain on the border of the former geographic Townships of Chatham and Dover, and the ROW of Elbow Line including a 30-metre wide unpaved ROW between Elbow Line and Swan Line in the former geographic Township of Chatham (Map 1).

Portions of the patent plans for the Gore of Chatham Township and Chatham Township have faded and are illegible, though land registry records indicate that most of the patents for the Lots within the Study Area were issued in the 1820s (Table 2). Despite names being faded on these patent plans, the patent plan for the Gore of Chatham Township indicates that the WTP Area and the ROWs of Baldoon Road and Base Line are adjacent to what was the Baldoon Settlement, which was the precursor to Wallaceburg and settled in the early 19th century (Map 4; see Section 1.2.5.3 above). The patent plan for the Gore of Camden Township does not indicate any roads or settlements (Map 5).

Table 2: Original Patent Holders for Lots within the Study Area

Lot	Concession	Township	Patent Receiver	Year Issued
A	1	Gore of Chatham	Thomas Smith	1821
1	1	Gore of Chatham	Thomas Smith	1821
2	1	Gore of Chatham	James Stuart	1823
3	1	Gore of Chatham	James Johnson	1835
4	1	Gore of Chatham	James Johnson	1823
5	1	Gore of Chatham	James Johnson	1839
6	1	Gore of Chatham		
1 (Western Part)	19	Chatham	William Jones	1829

There are no available historical maps of the Study Area until Shackleton and McIntosh's *Map of Kent County* published in 1876 (Map 6). This map indicates owners for several lots within the Study Area (Table 3), and Baldoon Road and Border Road on the border of Chatham and Dover Townships, as well as Elbow Line in Chatham Township are shown. Additionally, Bluewater Line, McCreary Line, and Base Line in both Gores of Chatham and Camden are shown, though no residential structures are depicted on this map. As the survey lots of the Chatham Gore and the Camden Gore were laid out perpendicular to one another, McCreary Line was originally staggered by approximately 160 m where the two Gores met at Mandaumin Road. The two sections of McCreary Line were connected as an elongated S curve in the mid-20th century, and as such two small portions of Lot 30, Concession 3 in the Gore of Chatham and Lot 5, Concession 1 in the Gore of Camden became part of the municipal ROW. The 1876 *Map of Kent County* depicts a church in the Study Area at the northwest corner of McCreary Line and Mandaumin Road, or the southwest corner of Lot 30, Concession 3 in the Gore of Chatham Township (Map 6).

Table 3: Lot Owners Listed on Shackleton and McIntosh's 1876 Map of Kent County

Lot	Concession	Township	Owner
1 (East Half)	1	Gore of Chatham	J. and A. Johnston
2 (West Half)	1	Gore of Chatham	J. Arnold
2 (East Half)	1	Gore of Chatham	E. Marshall
3	1	Gore of Chatham	A. and B. Stewart
4 (East Half)	1	Gore of Chatham	M. Johnston
5	1	Gore of Chatham	J. Fisher
30 (Southern Third)	3	Gore of Chatham	L. Lewis
5 (Northwestern Quarter)	1	Gore of Camden	J. Haslip
5 (Southern Half)	1	Gore of Camden	J. Adkin

The 1880 map of Chatham and Camden Townships from the *Illustrated Historical Atlas of Essex and Kent Counties* provide fewer owners than the 1876 map (Table 4), though several structures are shown within the Potential New LLPS Area, including domestic structures on Lots 1, 4, and 5, Concession 1 in the Gore of Chatham, and a schoolhouse in the southern half of Lot 4 at the intersection of what is now Bluewater Line and Mirwin Road (Map 7). There is also a store, wharf, and ferry across the Chenail Ecarté depicted in the southwest corner of the Potential New LLPS Area. Finally, the church depicted in the 1876 *Map of Kent County* at the intersection of McCreary Line and Mandaumin Road in the southwest corner of Lot 30, Concession 3 is depicted again the 1880 maps of both Chatham and Camden Township.

Table 4: Lot Owners Listed on the 1880 *Illustrated Historical Atlas of Kent County's* Map of Chatham Township

Lot	Concession	Township	Owner
1	1	Gore of Chatham	Jas. Johnson
4	1	Gore of Chatham	William Cole (Tenant)
5	1	Gore of Chatham	Jas. Fisher
1	19	Chatham	John Buchanon
30	3	Gore of Chatham	C.P. Farshee
5	1	Gore of Camden	David Scott

Topographic maps from throughout the 20th century (Map 9A and B) show that there was little development in the Study Area until the latter half of the 20th century, when residential developments occurred along Bluewater Line in the southeastern portion of the Potential New LLPS Area as well as along Dufferin Avenue/Highway 32 along the northern edge of the Potential New LLPS Area. The channel connecting Running Creek to the Chenail Ecarté along Arnold Road between Lots 5 and 6, Concession 1 in the Gore of Chatham first appears on mapping in 1913. Similarly, the channel connecting Running Creek to the Chenail Ecarté though Lot 5, Concession 1 in the Gore of Chatham first appears on mapping in 1963, and the majority of the interior of Potential New LLPS area has remained farmland since the 19th century. The existing WTP first appears on mapping in 1963, while the Dufferin Avenue/Highway 32 bridge to Walpole Island first appears in 1976. Additionally, the 18th Concession Drain along Elbow Line and between Elbow Line and Border Road first appears on mapping in 1963. There has been little residential development along Base Line and McCreary Line between Wallaceburg and Dresden in the 20th century, and most of the lands adjacent to these ROW portions of the Study Area remain farmland. The aforementioned sections of McCreary Line mismatched at the boundary of the Gores of Chatham and Camden Townships at Mandaumin Road were connected as an elongated S curve in the mid-20th century, which first

appears on mapping in 1976. As such, two small portions of Lot 30, Concession 3 in the Gore of Chatham and Lot 5, Concession 1 in the Gore of Camden became part of the municipal ROW. The church depicted at this intersection on 19th century mapping does not appear on any 20th century mapping.

1.3 Archaeological Context

1.3.1 Study Area Overview

The Study Area is approximately 465.7 hectares of land combined, and 39.15 kilometres of municipal ROW situated within the St. Clair Clay Plains physiographic region, which is described as:

“Adjoining Lake St. Clair in Essex and Kent County Counties and the St. Clair River in Lambton County are extensive clay plains covering 2,270 square miles. The region is one of little relief, lying between 575 and 700 feet a.s.l., except for the moraine at Ridgetown and Blenheim which rises 50 to 500 feet higher.... Glacial Lake Whittlesey, which deeply covered all of these lands, and Lake Warren which subsequently covered nearly the whole area, failed to leave deep stratified beds of sediment on the underlying clay till except around Chatham, between Blenheim and the Rondeau marshes, and in a few other smaller areas. Most of Lambton and Essex Counties, therefore, are essentially till plains smoothed by shallow deposits of lacustrine clay which settled in the depressions while the knolls were being lowered by wave action.”

Chapman & Putnam 1986:147

Localized topography of the Study Area is flat, sitting around 180 metres above sea level. The soils of the Study Area include Brookston Loam and Brookston Clay Loam, which are poorly drained and high in organic matter, Berrien Sandy Loam, which is imperfectly drained and low in organic matter, and Brookston Sandy Loam, which is similar to Brookston Loam and Clay Loam in low-lying areas and similar to Berrien Sandy Loam on knolls (Ontario Agricultural College 1930). The bedrock deposits in the vicinity date to the Upper Devonian Period and consist of the Kettle Point Formation (Hewitt 1972).

The closest potable water sources are the Sydenham River, the Chenail Ecarté (The Snye), and Running Creek. The Sydenham River originates near Ilderton, Ontario and flows approximately 165 kilometres southwest to Lake St. Clair via the Chenail Ecarté (SCRCA 2019). The Chenail Ecarté is a tributary of the St. Clair River that flows between Walpole Island and the mainland of Ontario. Finally, Running Creek is a tributary of the Chenail Ecarté that flows from the Chenail Ecarté to the North Sydenham River in Wallaceburg.

The Study Area lies within the Mixed-wood Plains ecozone of Ontario (The Canadian Atlas Online 2015). Although largely altered by recent human activity, this ecozone once supported a wide variety of deciduous trees, such as various species of ash, birch, chestnut, hickory, oak, and walnut, as well as a variety of birds and small to large land mammals, such as raccoon, red fox, white tailed deer, and black bear.

Currently, the Study Area consists of agricultural and residential lands, low-lying swampy lands, the existing Wallaceburg Water Treatment Plant, and municipal ROWs, including existing roads and drainage ditches.

1.3.2 Previous Archaeological Work

A search of the Ontario Archaeological Sites Database (OASD) indicated that there are 11 registered archaeological sites located within a 1 km radius of the Study Area (MCM 2020). Two of these sites are within the Study Area, and five sites are within 300 metres of the Study Area.

Table 5: Sites within a 1 kilometre Radius of the Study Area

Borden #	Site Name	Site Type	Affinity
AdHo-1*	Weiser	Campsite	Pre-Contact Indigenous
AdHn-9**	Butler	Homestead	Afro-Canadian, Euro-Canadian
AdHn-10**	CanEnerco East	Scatter	Post-Contact
AdHn-11**	CanEnerco West	Scatter	Afro-Canadian, Euro-Canadian
AdHo-19	Miller Burial	Burial	Pre-Contact Indigenous, Late Woodland
AdHo-20	Libby	Village, Burial	Pre-Contact Indigenous, Middle Woodland, Late Woodland Western Basin; Post-Contact
AdHo-30	Arena	Scatter	Pre-Contact Indigenous
AdHo-31**	Shirley Williams 1	Homestead, Burial	Post-Contact
AdHo-32**	Shirley Williams 2	Campsite, Homestead	Pre-Contact Indigenous; Post-Contact
AdHn-34	Location 23	Dump	Post-Contact
AdHn-37*	Location 3	Campsite/Scatter	Pre-Contact Indigenous

*Site within Study Area. **Site within 300 metres of Study Area.

There have been a number of archaeological assessments completed within 50 metres of the Study Area.

The Weiser Site (AdHo-1), located within the current Study Area, was the subject of numerous archaeological investigations by field schools for the University of Windsor in the 1970s. Accounts from the 19th century describe a 1.5-m high semi-circular earthwork enclosing approximately 2 ha that opened northward facing Running Creek, as well as low mounds near the opening and across the creek (Reid 1978, Murphy and Ferris 1990). Modern agriculture has subsequently leveled these earthworks, though their presence was confirmed by infrared photography in the 1970s, showing a circular enclosure surrounded by a semi-circular fortification. Excavations at the site carried out by the University of Windsor revealed a circular house form in the northern half of the enclosure and a partially disturbed bundle burial outside of the enclosure (Kroon 1974). Scant publications for the work during the 1970s exists, though a large artifact sample was collected, including Western Basin Wolf Phase (AD 1400-1550) pottery sherds, lithics, and a large quantity of fish and mammal bones (Murphy and Ferris 1990). Based on the location of the site and the faunal assemblage recovered, Reid suggested that the Weiser Site (AdHo-1) was a large seasonally occupied village used primarily during the summer months (Reid 1978). To the best of our knowledge, no additional work has taken place at the Weiser Site (AdHo-1).

In 1997, Alder Heritage Assessments conducted a Stage 1-2 Archaeological Assessment for the proposed Chatham 7-17-XII NPS Pipeline (Archaeological Consulting License 97-014). The assessment was within the northern portion of the ROW of Base Line from the Chatham 7-17-XII natural gas production facility south of Tupperville to pumping station in an agricultural field at the intersection of Base Line and Greenvale Line. Additionally, this assessment also surveyed agricultural lands adjacent to its study area (Alder Heritage Assessments 1997). The portion of the Base Line ROW included in this Stage 1-2 assessment is within the current Study Area. This Stage 1-2 assessment found the Base Line ROW to be previously disturbed by construction of the road and buried utilities. It also resulted in the identification of three Euro-Canadian archaeological sites in agricultural fields adjacent to the study area: Butler (AdHn-9), CanEnerco East (AdHn-10), and CanEnerco West (AdHn-11). Further work was recommended for Butler (AdHn-9) (Alder Heritage Assessments 1997).

In 1999, D.R. Poulton and Associates conducted a Stage 1-2 Archaeological Assessment for the replacement of a small section of Union Gas pipeline (CIF # 1999-031-030). This assessment was adjacent to the McCreary Line ROW portion of the current Study Area and did not identify any archaeological resources (D.R. Poulton 2002).

In 2015 and 2016, Stantec conducted a Stage 1 Archaeological Assessment for the Panhandle Reinforcement Project (PIF # P256-0388-2015). The Stage 1 assessment encompassed a study area measuring approximately 47,310 hectares in St. Clair Township in Lambton County and the Municipality of Chatham-Kent, including portions of the Base Line ROW between Wallaceburg and Dresden and the McCreary Line ROW within the current Study Area (Stantec 2016). This assessment, which included a property inspection, found that the majority of its study area retained archaeological potential, and these areas were recommended for Stage 2 assessment, including the portion of the McCreary Line at Mandaumin Road within the current Study Area. The report also found that all municipal ROWs, including the portions of the Base Line ROW between Wallaceburg and Dresden and the McCreary Line ROW within the current Study Area, had been subject to previous disturbance and were not recommended for further archaeological work (Stantec 2016).

Following this Stage 1 assessment, Stantec conducted a Stage 2 Archaeological Assessment for the Panhandle Reinforcement Project in 2017 for a 233-hectare corridor between the Union Gas Dawn Compressor Station and the Union Gas Dover Transmission Station (PIF # P256-0401-2016). The Stage 2 assessment involved pedestrian and test pit survey and resulted in the identification of 26 archaeological locations, 11 of which were recommended for Stage 3 Archaeological Assessment (Stantec 2017). One of these sites, Location 23 (AdHn-34), is located approximately 70 metres from the Base Line ROW, Wallaceburg and Dresden portion of the current Study Area.

Stantec also completed a Stage 1 Archaeological Assessment for the Union Gas Chatham-Kent Rural Pipeline Expansion Project in 2018 (PIF # P256-0531-2018). The study area for this Stage 1 encompassed approximately 4,150 hectares in the Municipality of Chatham-Kent, including a portion of the Base Line ROW between Wallaceburg and Dresden within the current Study Area (Stantec 2018). This assessment, which included a property inspection, found that the majority of its study area retained archaeological potential, including a portion of the Base Line ROW within the current Study Area. These areas were recommended for Stage 2 Archaeological Assessment (Stantec 2018). The report also reviewed previous assessments within its study area, including Alder Heritage Assessments' 1997 Stage 1-2 assessment, and determined that although CanEnerco East (AdHn-10) and CanEnerco West (AdHn-11) were not recommended for further work in 1997, these sites retain further cultural heritage value or interest, and Stage 3 assessment is recommended for these sites (Stantec 2017).

Following this Stage 1 assessment, Stantec conducted two Stage 2 archaeological assessments for the Chatham-Kent Rural Pipeline Expansion Project in 2018 and 2019 (PIF #s P256-0540-2018 and P256-0571-2019). The 2018 Stage 2 assessment encompassed a 55.52-hectare study area (Stantec 2019a), while the 2019 Stage 2 assessment encompassed a revised 57.54-hectare study area (Stantec 2019b). The Stage 2 assessments involved pedestrian and test pit surveys and assessed areas within and outside of the municipal ROWs, including a portion of the Base Line ROW between Wallaceburg and Dresden within the current Study Area.

The assessments resulted in the identification of three archaeological locations. Two of the locations were not recommended for further work (Stantec 2019a), while the pre-contact Indigenous site Location 3 (AdHn-37), located adjacent to the current Study Area, was recommended for Stage 3 assessment (Stantec 2019b). No areas of the Base Line ROW, Wallaceburg and Dresden portion of the current Study Area were recommended for further work.

Stantec conducted the Stage 3 Archaeological Assessment for Location 3 (AdHn-37) in 2019 (PIF # P256-0576-2019), which consisted of the hand-excavation of 17 one by one metre square test units and resulted in the recovery of eight pieces of lithic debitage, two retouched flakes, one utilized flake, and one core fragment (Stantec 2019c). As a result, Location 3 (AdHn-37) was identified as a small campsite or activity area and was not recommended for Stage 4 mitigation (Stantec 2019c).

To the best of our knowledge, no additional archaeological assessments have been conducted within 50 metres of the current Study Area.

Information concerning specific site locations is protected by provincial policy and is not fully subject to the *Freedom of Information Act*. The release of such information in the past has led to looting or various forms of illegally conducted site destruction. Confidentiality extends to all media capable of conveying location, including maps, drawings, or textual descriptions of a site location. For this reason, maps and data that provide information on archaeological site locations are provided as supplementary documentation and do not form part of this public report.

The MCM will provide information concerning site location to the party or an agent of the party holding title to a property, or to a licensed archaeologist with relevant cultural resource management interests.

1.3.3 Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present within a property. In accordance with the MCM's 2011 *Standards and Guidelines for Consultant Archaeologists* the following are features or characteristics that indicate archaeological potential:

- Previously identified archaeological sites.
- Water sources:
 - Primary water sources (lakes, rivers, streams, creeks).
 - Secondary water sources (intermittent streams and creeks; springs; marshes; swamps).
 - Features indicating past water sources (e.g., glacial lake shorelines indicated by the presence of raised gravel, sand, or beach ridges; relic river or stream channels indicated by clear dip or swale in the topography; shorelines of drained lakes or marshes; and cobble beaches).
 - Accessible or inaccessible shoreline (e.g., high bluffs, swamps or marsh fields by the edge of a lake; sandbars stretching into marsh).
- Elevated topography (eskers, drumlins, large knolls, plateaux).
- Pockets of well drained sandy soil, especially near areas of heavy soil or rocky ground; distinctive land formations that might have been special or spiritual places, such as waterfalls, rock outcrops, caverns, mounds, and promontories and their bases (there may be physical indicators of their use, such as burials, structures, offerings, rock paintings or carvings).
- Resource areas including:
 - Food or medicinal plants.
 - Scarce raw minerals (e.g., quartz, copper, ochre or outcrops of chert).
 - Early Euro-Canadian industry (fur trade, mining, logging).

- Areas of Euro-Canadian settlement.
- Early historical transportation routes.

In recommending a Stage 2 property survey based on determining archaeological potential for an area, the MCM stipulates the following:

- No areas within 300 metres of a previously identified site; water sources; areas of early Euro-Canadian Settlement; or locations identified through local knowledge or informants can be recommended for exemption from further assessment.
- No areas within 100 metres of early transportation routes can be recommended for exemption from further assessment.
- No areas within the property containing an elevated topography; pockets of well-drained sandy soil; distinctive land formations; or resource areas can be recommended for exemption from further assessment.

Based on the criteria outlined above, the Study Area was determined to have archaeological potential for both pre-contact Indigenous and historical Euro-Canadian sites. This determination was based on the proximity of the Sydenham River, the Chenail Ecarté (The Snye), and Running Creek, the proximity of registered archaeological sites, and the fact that the Study Area is located in areas of Chatham and Camden Townships with a history of Euro-Canadian occupation dating back to the early 19th century.

1.3.4 Features Indication the Removal of Archaeological Potential

As stated in Section 1.3.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011), archaeological potential can be determined to be removed either entirely or in part when background research and property inspection confirm extensive and deep land alterations that have severely damaged the integrity of any archaeological resources that may be present. Types of disturbance that remove archaeological potential may include: quarrying; major landscaping involving grading below topsoil; building footprints; and sewage and infrastructure development.

As discussed in Section 1.2.6 above, the Study Area has been impacted by activities relating to the construction of residential and farm structures, the existing WTP, buried municipal utilities, ditches, and roads. The Study Area was surveyed and documented accordingly to confirm the presence and extent of surface disturbance (see Section 2.1 below).

2.0 FIELD METHODS

2.1 Stage 1 Archaeological Assessment

As part of this Stage 1 Archaeological Assessment, property inspections were conducted on October 27, 2020, March 22, 2021, and January 14, 2022, under archaeological consulting license P457, issued to Lafe Meicenheimer by the MCM (PIF# P457-0095-2020). The inspections were undertaken to gain first-hand knowledge of the Study Area, to determine if there were any areas of disturbance that would affect archaeological potential, and to determine what survey strategies would be appropriate for a Stage 2 assessment, should it be required.

All portions of the Study Area were systematically inspected to confirm if features of archaeological potential were present and if there were any areas of deep and extensive disturbance, which would have removed archaeological potential. As stated in Section 1.4.2 of the *Standards and Guidelines for Consultant Archaeologists* (Government of Ontario 2011:22), a property may only be exempt from Stage 2 assessment once deep and extensive ground disturbance has been confirmed through a property inspection.

The weather on October 27, 2020 was overcast and 4°C, while the weather on March 22, 2021 was sunny and 18°C and the weather on January 14, 2022 was mostly cloudy and -5°C. Weather on all days permitted good visibility of land features and contributing to no reduction in the chance of observing features of archaeological potential. Field notes and photographs of the property were taken during the inspection. The photograph locations and directions can be seen on Map 10A -I.

3.0 RECORD OF FINDS

The Stage 1 property inspection was conducted employing the methods described in Section 2.0. Map 10A-I illustrate the areas inspected, while Image 1 to Image 14 show the field conditions.

Table 6 provides an inventory of the documentary record generated in the field.

Table 6: Inventory of Documentary Record

Document Type	Current Location of Document	Additional Comments
Field Notes	Golder Office in London	Two pages from original field book. Hard copy stored in project folder and digitally in project file.
Hand Drawn Maps	Golder Office in London	Eight maps stored in project folder and digitally in project file.
Maps provided by Client	Golder Office in London	Three maps stored in project folder and stored digitally in project file.
Digital Photographs	Golder Office in London	A total of 153 digital photos stored digitally in project file.

Areas of perceived disturbance were inspected and documented as outlined in Section 2.1 above.

Disturbed areas within the Potential New LLPS Area included residential and farm structures and their associated driveways and outbuildings, as well as existing roads and buried utilities. Disturbed areas within the WTP Area include buildings and infrastructure related to the existing WTP, a bulk water station and its driveway, and a solar farm. Finally, the majority of the municipal ROWs were found to be disturbed by the prior construction of roads and road embankments, drainage ditches, and buried utilities.

Low-lying swampy areas within the Potential New LLPS Area and WTP Area were found to be permanently wet.

4.0 ANALYSIS AND CONCLUSIONS

The Study Area (Map 1) was determined to have archaeological potential, as indicated by the criteria laid out in Section 1.3.3. A property inspection revealed that portions of the Study Area have been subject to deep and extensive disturbance, while other portions retained archaeological potential. Each area is discussed in detail below.

4.1 Potential New LLPS Area

The Potential New LLPS Area consists of approximately 369.6 hectares of agricultural and residential lands, low-lying swampy lands, and small portions of woodlot. Disturbed areas within the Potential New LLPS Area included residential buildings and farm structures and their associated driveways and outbuildings, as well as existing roads and buried utilities. Additionally, the channel connecting Running Creek to the Chenail Ecarté along Arnold Road between Lots 5 and 6, Concession 1 in the Gore of Chatham on the eastern side of the Potential New LLPS Area was constructed in the early 19th century, while the channel connecting Running Creek to the Chenail Ecarté through Lot 5, Concession 1 was constructed in the mid-20th century (see Section 1.2.6 and Map 9A-B). As such, all archaeological potential has been removed and no further archaeological work is necessary for these portions of the Study Area (Map 10A; Image 1 to Image 3). As well, low-lying swampy areas were found to be permanently wet and no further archaeological work is necessary for these portions of the Potential New LLPS Area (Map 10A-B; Image 4). All agricultural land, woodlots, and manicured lawns found not to have been subject to previous disturbance or be permanently wet within the Potential New LLPS were found to retain archaeological potential and as such should be subject to Stage 2 Archaeological Assessment prior to development (Map 10A-B; Image 5 to Image 7).

No development impacts are expected to impact the portion of Running Creek flowing through the Study Area.

4.2 WTP Area

The WTP Area consists of 10.7 hectares of land containing the existing WTP, a bulk water station and its driveway, a solar farm, and several areas of manicured lawn. Disturbed areas within the WTP Area include the buildings and infrastructure related to the existing WTP, a bulk water station and its driveway, and a solar farm (Map 10C; Image 8 to Image 11). As well, low-lying swampy areas were found to be permanently wet and no further archaeological work is necessary for these portions of the WTP Area (Map 10C; Image 12). As such, all archaeological potential has been removed and no further archaeological work is necessary for these portions of the Study Area. Areas of manicured lawn found not to have been subject to previous disturbance or be permanently wet within the WTP Area were found to retain archaeological potential and as such should be subject to Stage 2 Archaeological Assessment prior to development (Map 10C; Image 13 and Image 14).

4.3 Base Line and Bluewater Line ROW

The Study Area included approximately 3.7 kilometres of the municipal ROW of Base Line and Bluewater Line between the Potential New LLPS Area and the WTP Area. The entirety of this ROW was found to be disturbed from the previous construction of roads and their shoulders, drainage ditches, and buried utilities (Image 15 to Image 17). As such, all archaeological potential has been removed and no further archaeological work is necessary for these portions of the Study Area (Map 10D).

4.4 Base Line ROW, Wallaceburg to Dresden

The Study Area included approximately 14.2 kilometres of the municipal ROW of Base Line between Murray Street in Wallaceburg and North Street south of Dresden. A large portion of this ROW was previously assessed as part of other Stage 1 and 2 archaeological assessments (see Section 1.3.2) and recommended for no further

work (Stantec 2016, 2018, 2019a, and 2019b). As such, the portion of this ROW not subject to previous assessments, approximately 1.6 kilometres, was included in the property inspection. The entirety of this ROW was found to be disturbed from the previous construction of roads and their shoulders, drainage ditches, and buried utilities (Image 18). As such, all archaeological potential has been removed and no further archaeological work is necessary for these portions of the Study Area (Map 10E).

4.5 McCreary Line ROW

The Study Area included approximately 16.5 kilometres of the municipal ROW of McCreary Line between Kimball Road outside Wallaceburg and the Dresden elevated tank outside Dresden. A large portion of this ROW was previously assessed as part of other Stage 1 and 2 Archaeological Assessments (see Section 1.3.2) and recommended for no further work (Stantec 2016). As such, the portion of this ROW not subject to previous assessment, approximately 1.4 kilometres of ROW as well as part of the intersection of McCreary Line and Mandaumin Road, was included in the property inspection. The majority of this ROW was found to be disturbed from the previous construction of roads and their shoulders, drainage ditches, and buried utilities (Image 19). As such, all archaeological potential has been removed and no further archaeological work is necessary for these portions of the Study Area (Map 10F). Two triangular areas of open, overgrown grassy land at the intersection of McCreary Line and Mandaumin Road found not to have been subject to previous disturbance were found to retain archaeological potential and as such should be subject to Stage 2 Archaeological Assessment prior to development (Map 10F; Image 20 and Image 21).

4.6 Baldoon Road ROW

The Study Area included approximately 760 metres of the municipal ROW of Baldoon Road between the Base Line and the Sydenham River adjacent to the WTP Area. The entirety of this ROW was found to be disturbed from the previous construction of Baldoon Road and its shoulders, buried utilities, and drainage ditches (Image 22 and Image 23). Additionally, the southern terminus of the ROW was found to be disturbed from the previous construction of a gravel parking lot for an adjacent dog park (Image 24). Finally, the bank of the Sydenham River was found to be previously disturbed by the installation of wooden piling and stabilization of the riverbank (Image 25 and Image 26). Given these impacts, it has been determined that all archaeological potential within this portion of the Study Area has been removed and no further archaeological work is necessary (Map 10G). Given the identified historical significance of the Sydenham River, a marine archaeological assessment should also be completed prior to any proposed impact to the marine landscape of the Sydenham River within the Study Area, which includes property up to the high-water mark along the shoreline (Map 10H).

4.7 Border Road ROW

The Study Area included approximately 1.5 kilometres of the municipal ROW of Border Road between the Sydenham River and the 18th Concession Drain. The entirety of this ROW was found to be disturbed from the previous construction of Border Road and its shoulders, buried utilities, and the Townline Drain (Image 27 to Image 30). Additionally, the bank of the Sydenham River was found to be previously disturbed by the installation of steel sheet piling and stabilization of the riverbank, as well as culverts for the Townline Drain (Image 31). Given these impacts, it has been determined that all archaeological potential within this portion of the Study Area has been removed and no further archaeological work is necessary (Map 10H). Given the identified historical significance of the Sydenham River, a marine archaeological assessment should also be completed prior to any proposed impact to the marine landscape of the Sydenham River within the Study Area, which includes property up to the high-water mark along the shoreline (Map 10H).

4.8 Elbow Line ROW

The Study Area included approximately 2.4 kilometres of the municipal ROW of Elbow Line, including approximately 1.9 kilometres of Elbow Line itself and a 30-metre wide, mostly unpaved section of the ROW between Elbow Line and Border Road that crosses Highway 40/St. Clair Road as well as manicured lawn and agricultural land. The majority of this ROW was found to be disturbed from the previous construction of roads and their shoulders, buried utilities, and the 18th Concession Drain (Image 32 to Image 35). Given these impacts, it has been determined that all archaeological potential within this portion of the Study Area has been removed and no further archaeological work is necessary (Map 10I). A strip of cultivated agricultural land measuring approximately 305 metre long by 17 m wide along the southern edge of the 18th Concession Drain between Highway 40/St. Clair Road and Border Road was found to retain archaeological potential, and, as such, should be subject to Stage 2 Archaeological Assessment prior to development (Map 10I; Image 35).

5.0 RECOMMENDATIONS

Given the combined results of the background study and property inspection, it is concluded that portions of the Study Area, including cultivated agricultural lands, manicured lawns, and woodlots, retain archaeological and should be subject to Stage 2 Archaeological Assessment prior to development (Map 10A, B, C, F, and I). Due to complete and extensive previous disturbances, and permanent wetness, the remainder of the Study Area does not retain archaeological potential and as such, no further archaeological work is recommended for these portions of the Study Area (Map 10A-I). Finally, additional archaeological work is recommended for the Weiser Site (AdHo-1), located in the Study Area, due to the potential for burials at the site.

For portions of the Study Area that can be ploughed (i.e., cultivated agricultural land), the Stage 2 assessment should be conducted by a licensed archaeologist using the pedestrian survey method at 5 metre intervals as per Section 2.1.1 of the *Standards and Guidelines for Consultant Archaeologists* (Map 10A, B, and I). These fields should be recently ploughed, weathered, and exhibit at least 80% surface visibility.

For portions of the Study Area that cannot be ploughed, the Stage 2 assessment should be conducted by a licensed archaeologist using the shovel test pit survey method at 5 metre intervals as per the Section 2.1.2 of the *Standards and Guidelines for Consultant Archaeologists* (Map 10A, B, C and F). Test pits should be dug by hand and be at least 30 centimetres in diameter and excavated 5 centimetres into subsoil. All soil should be screened through 6 millimetre hardware cloth to facilitate the recovery of cultural materials, and each test pit should be examined for stratigraphy, cultural features, and fill.

Given the potential for burials at the Weiser Site (AdHo-1), Stage 3 AA is recommended for the site, followed by archaeological monitoring of construction activities at the site. The Stage 3 AA should consist of the hand excavation of one meter by one metre square test units across the site. Indigenous communities should be engaged prior to the commencement of the Stage 3 AA. Following the Stage 3 AA, any construction activities at the Weiser Site (AdHo-1) should be subject to monitoring by a licensed archaeologist.

Given the identified historical significance of the Sydenham River, a marine archaeological assessment should also be completed prior to any proposed impact to the marine landscape of the Sydenham River within the Study Area, which includes property up to the high-water mark along the shoreline (Map 10H). The marine archaeological assessment should be completed by an archaeologist licensed in the Province of Ontario under a Marine Permit issued by the Ministry of Citizenship and Multiculturalism.

There are no current planned development impacts to the other watercourses flowing through the Study Area. If this should change through design plan revisions, then an assessment for potential marine archaeological resources for these other watercourses may be required.

The Ontario Ministry of Citizenship and Multiculturalism is asked to review the results and recommendations presented herein, accept this report into the Provincial Register of archaeological reports and issue a standard letter of compliance with the Ministry's 2011 *Standards and Guidelines for Consultant Archaeologists* and the terms and conditions for archaeological licencing.

6.0 ADVICE ON COMPLIANCE WITH LEGISLATION

This report is submitted to the Ministry of Citizenship and Multiculturalism as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act* (Government of Ontario 1990b). The report is prepared 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 regards to alterations to archaeological sites by the proposed development.

It is an offence under Section 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alterations to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological reports referred to in Section 65.1 of the *Ontario Heritage Act* (Government of Ontario 1990b).

Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48(1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48(1) of the *Ontario Heritage Act* (Government of Ontario 1990b).

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 (Government of Ontario 2002). It is recommended that the Registrar of Cemeteries at the Ministry of Consumer Services is also immediately notified.

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 (Government of Ontario 1990b).

7.0 IMPORTANT INFORMATION AND LIMITATIONS OF THIS REPORT

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 Jacobs (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 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 that 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, if any, comply with those identified in the Ministry of Tourism, Culture and Sport's 2011 *Standards and Guidelines for Consultant Archaeologists*

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9.0 IMAGES



Image 1: A representative example of previous disturbance in the Potential New LLPS Area; residential structures, driveways, roads, and buried utilities; facing northwest, October 27, 2020 (Map 10A).



Image 2: A representative example of previous disturbance in the Potential New LLPS Area; residential structures, driveways, roads, and buried utilities; facing southeast, October 27, 2020 (Map 10A).



Image 3: A representative example of previous disturbance in the Potential New LLPS Area; residential structures, driveways, road, and drainage ditches; facing east, October 27, 2020 (Map 10A).



Image 4: A representative example of a low-lying wet area in the Potential New LLPS Area; facing southeast, October 27, 2020 (Map 10A).



Image 5: A representative example of cultivated agricultural lands and woodlot within the Potential New LLPS Area; facing north, October 27, 2020 (Map 10A).



Image 6: A representative example of cultivated agricultural lands and woodlot within the Potential New LLPS Area; facing southwest, October 27, 2020 (Map 10A).



Image 7: A representative example of manicured lawn within the Potential New LLPS Area; facing southeast, October 27, 2020 (Map 10A).



Image 8: A representative example of previous disturbance in the WTP Area; existing WTP buildings and infrastructure; facing southwest, October 27, 2020 (Map 10C).



Image 9: A representative example of previous disturbance in the WTP Area; existing WTP infrastructure; facing southwest, October 27, 2020 (Map 10C).



Image 10: A representative example of previous disturbance in the WTP Area; bulk water station and its driveway; facing southwest, October 27, 2020 (Map 10C).



Image 11: A representative example of previous disturbance in the WTP Area; solar farm; facing east, January 14, 2022 (Map 10C).



Image 12: A representative example of a low-lying wet area in the WTP Area; facing northeast, October 27, 2020 (Map 10C).



Image 13: A representative example of manicured lawn within the WTP Area; facing southeast, October 27, 2020 (Map 10C).



Image 14: A representative example of manicured lawn within the WTP Area; facing east, October 27, 2020 (Map 10C).



Image 15: A representative example of previous disturbance within the ROW of Base Line between the Potential New LLPS and WTP Areas; road, road embankments, and drainage ditches; facing west, October 27, 2020 (Map 10D).



Image 16: A representative example of previous disturbance within the ROW of Base Line between the Potential New LLPS and WTP Areas; road, road embankments, drainage ditches, and buried utilities; facing east, October 27, 2020 (Map 10D).



Image 17: A representative example of previous disturbance within the ROW of Base Line between the Potential New LLPS and WTP Areas; road, road embankments, drainage ditches, and buried utilities; facing southeast, October 27, 2020 (Map 10D).



Image 18: A representative example of previous disturbance within the ROW of Base Line between Wallaceburg and Dresden; road, road embankments, drainage ditches, and buried utilities; facing west, March 22, 2021 (Map 10E).



Image 19: A representative example of previous disturbance within the ROW of McCreary Line; road, road embankments, and drainage ditches; facing west, March 22, 2021 (Map 10F).



Image 20: Overgrown grassy area at the intersection of McCreary Line and Mandaumin Road; facing northwest, March 22, 2021 (Map 10F Inset).



Image 21: Overgrown grassy area at the intersection of McCreary Line and Mandaumin Road; facing northeast, March 22, 2021 (Map 10F Inset).



Image 22: A representative example of previous disturbance within the ROW of Baldoon Road; road, drainage ditches, and buried utilities; facing southeast, January 14, 2022 (Map 10G).



Image 23: A representative example of previous disturbance within the ROW of Baldoon Road; road, drainage ditches, and buried utilities; facing northwest, January 14, 2022 (Map 10G).



Image 24: Previous disturbance within the ROW of Baldoon Road; parking lot for adjacent dog park; facing southeast, January 14, 2022 (Map 10G).



Image 25: Previous disturbance of the Sydenham River bank within the ROW of Baldoon Road; wooden pile and bank stabilization; facing southwest, January 14, 2022 (Map 10G).



Image 26: Previous disturbance of the Sydenham River bank within the ROW of Baldoon Road; bank stabilization; facing northeast, January 14, 2022 (Map 10G).



Image 27: A representative example of previous disturbance within the ROW of Border Road; road and the Townline Drain; facing northwest, January 14, 2022 (Map 10H).



Image 28: A representative example of previous disturbance within the ROW of Border Road; road, road embankment, and buried utilities; facing northwest, January 14, 2022 (Map 10H).



Image 29: A representative example of previous disturbance within the ROW of Border Road; road and the Townline Drain; facing northwest, January 14, 2022 (Map 10G).



Image 30: A representative example of previous disturbance within the ROW of Border Road; road, road embankment, and buried utilities; facing northwest, January 14, 2022 (Map 10H).



Image 31: Previous disturbance of the Sydenham River bank within the ROW of Border Road; sheet piling, bank stabilization, and culverts; facing southwest, January 14, 2022 (Map 10H).



Image 32: A representative example of previous disturbance within the ROW of Elbow Line; road, road embankment, and the 18th Concession Drain; facing southwest, January 14, 2022 (Map 10I).



Image 33: A representative example of previous disturbance within the ROW of Elbow Line; road, road embankment, and the 18th Concession Drain; facing northeast, January 14, 2022 (Map 10I).



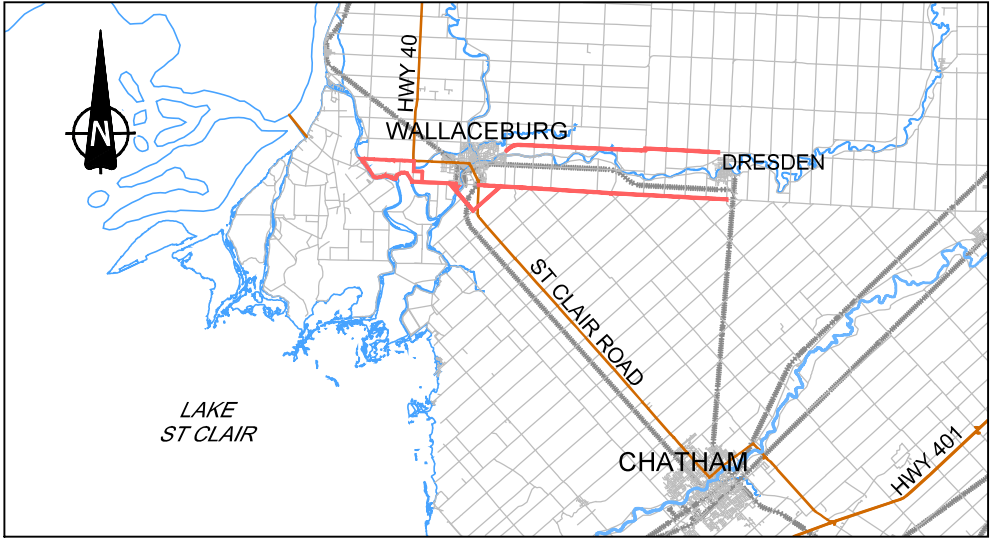
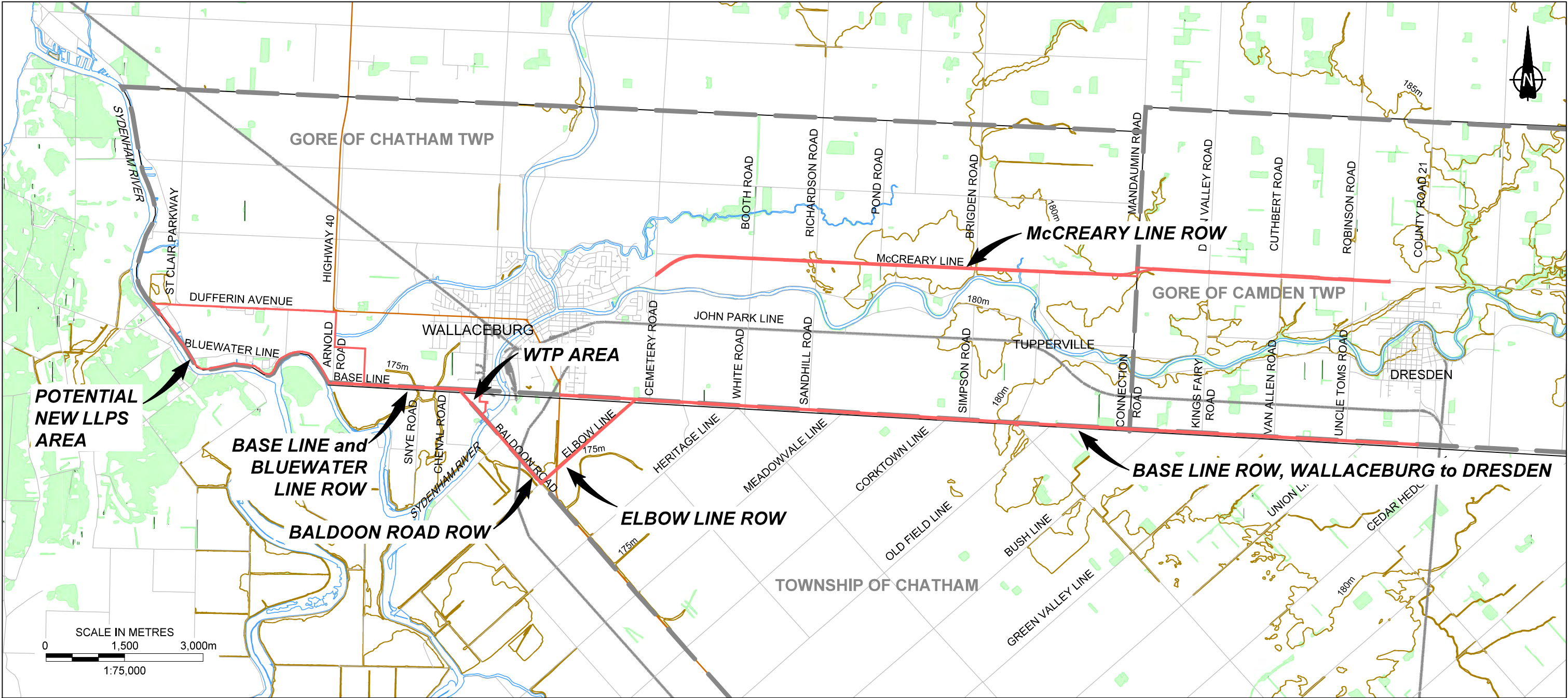
Image 34: Previous disturbance within the ROW of Elbow Line; the 18th Concession Drain, its embankment, and buried utilities; facing northeast, January 14, 2022 (Map 10I).



Image 35: Cultivated agricultural land as well as previous disturbance within the ROW of Elbow Line; the 18th Concession Drain; facing northeast, January 14, 2022 (Map 10I).

10.0 MAPS

All maps follow on the succeeding pages.



KEY PLAN

- LEGEND**
- APPROXIMATE LOCATION OF STUDY AREA
 - HISTORICAL TOWNSHIP/MUNICIPALITY BOUNDARY
 - CHATHAM** HISTORICAL TOWNSHIP/MUNICIPALITY

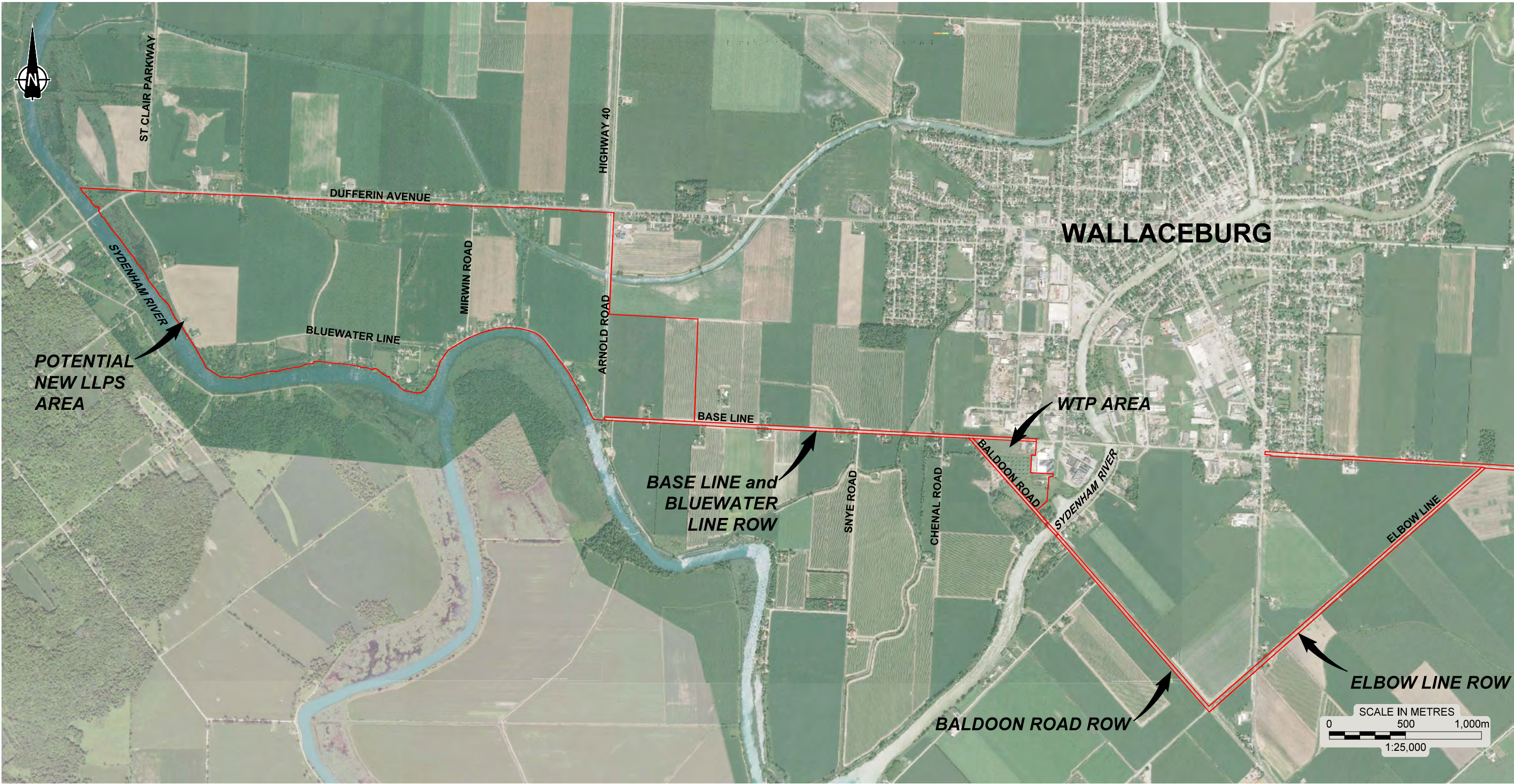
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NOTES

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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		LOCATION OF STUDY AREA			
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		FILE No.		20141199-1000-R01001	
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CHECK		LCMMT	Oct 17/22		



LEGEND

— APPROXIMATE LOCATION OF STUDY AREA

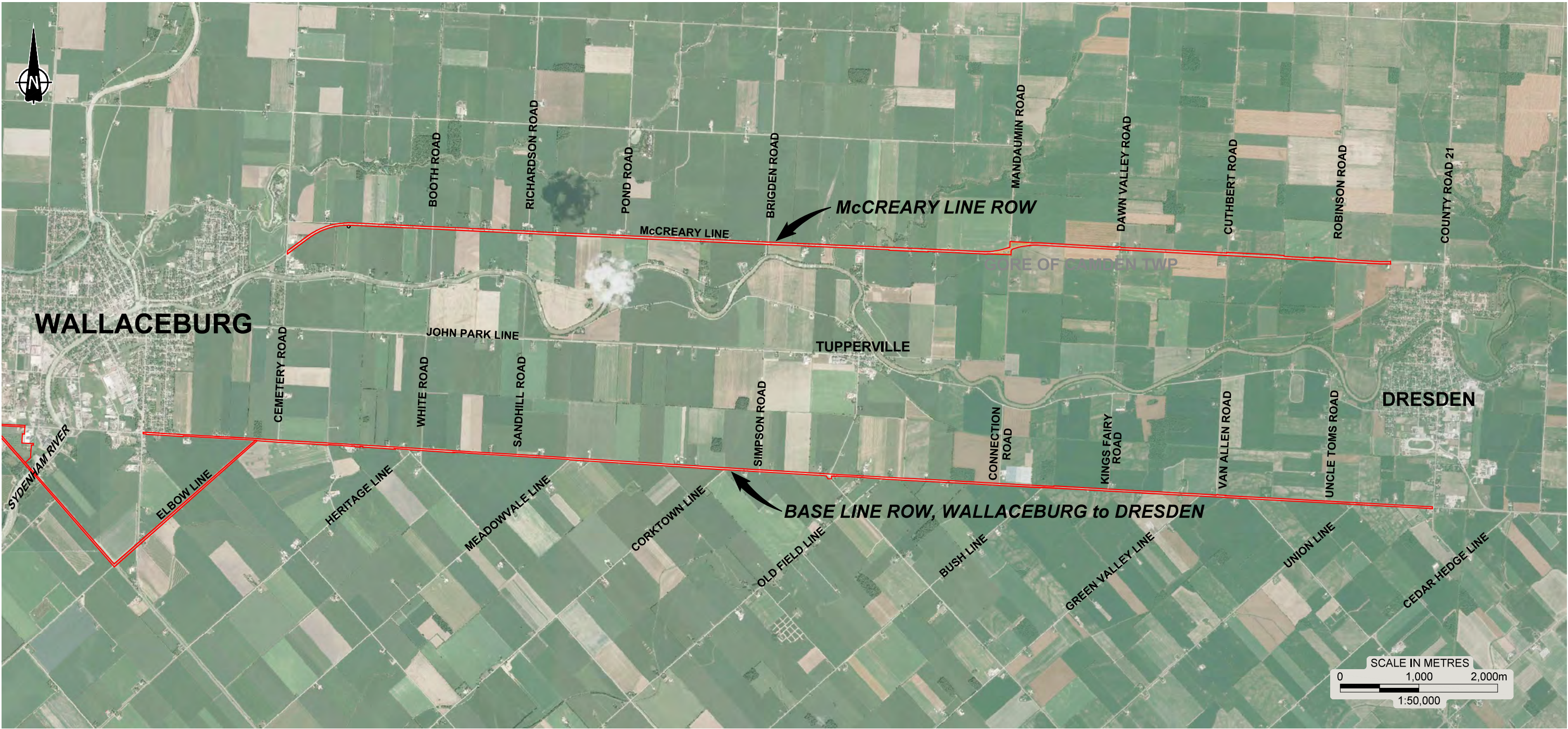
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NOTES

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BING IMAGERY USED FOR ILLUSTRATION PURPOSES ONLY AND NOT TO BE USED FOR MEASUREMENTS.
ALL LOCATIONS ARE APPROXIMATE.

PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		DETAIL OF STUDY AREA; POTENTIAL NEW LLPS AREA, BASE LINE and BLUWATER LINE ROW, and WTP AREA			
		PROJECT No.	20141199	FILE No20141199-1000-R01002	
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		MAP 2A			



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— APPROXIMATE LOCATION OF STUDY AREA

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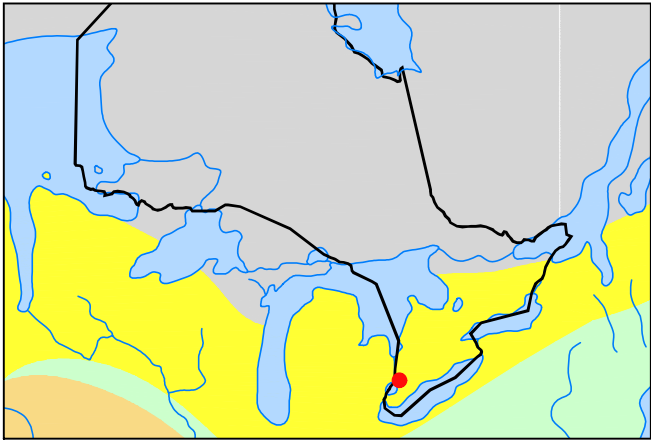
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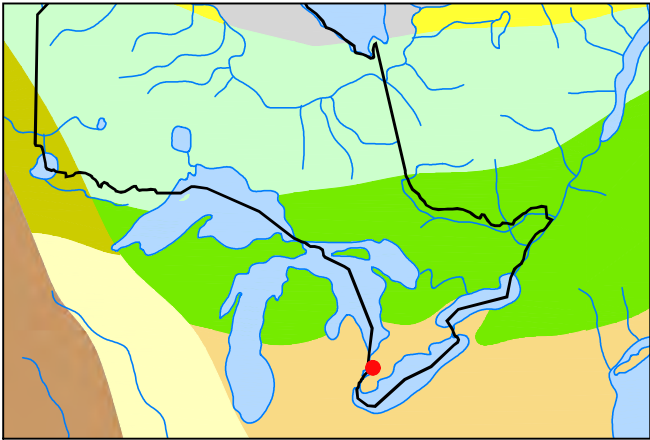
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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		DETAIL OF STUDY AREA; BASE LINE ROW (WALLACEBURG TO DRESDEN) and McCREARY LINE ROW			
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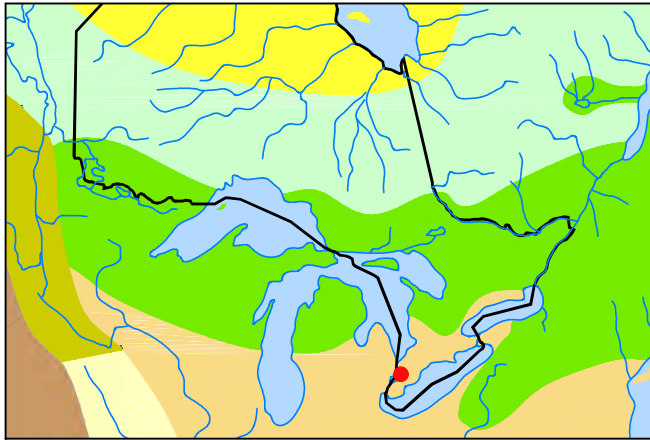
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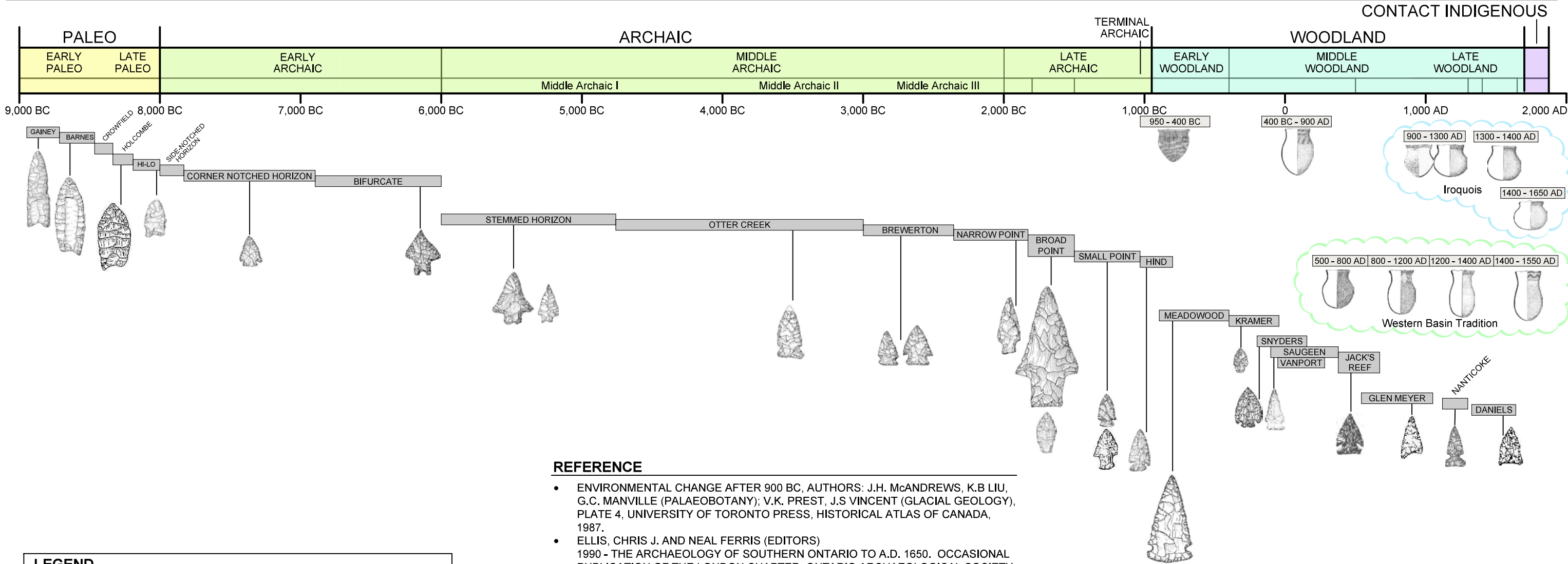
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5,000 BC



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LEGEND

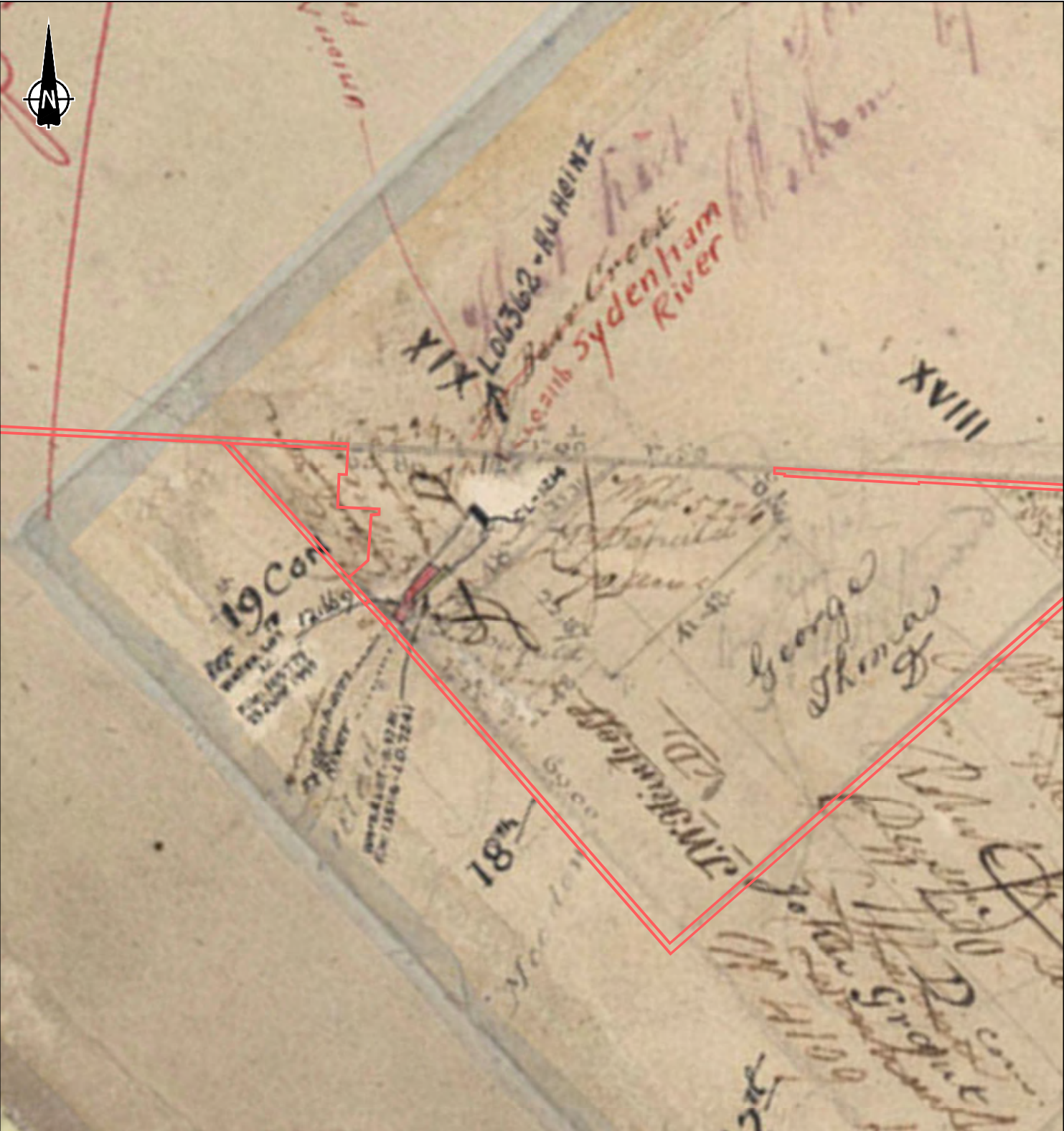
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| Boreal Forest | Grassland |
| Great Lakes-St. Lawrence Forest | Lichen Woodland |
| Deciduous Forest | Parkland |

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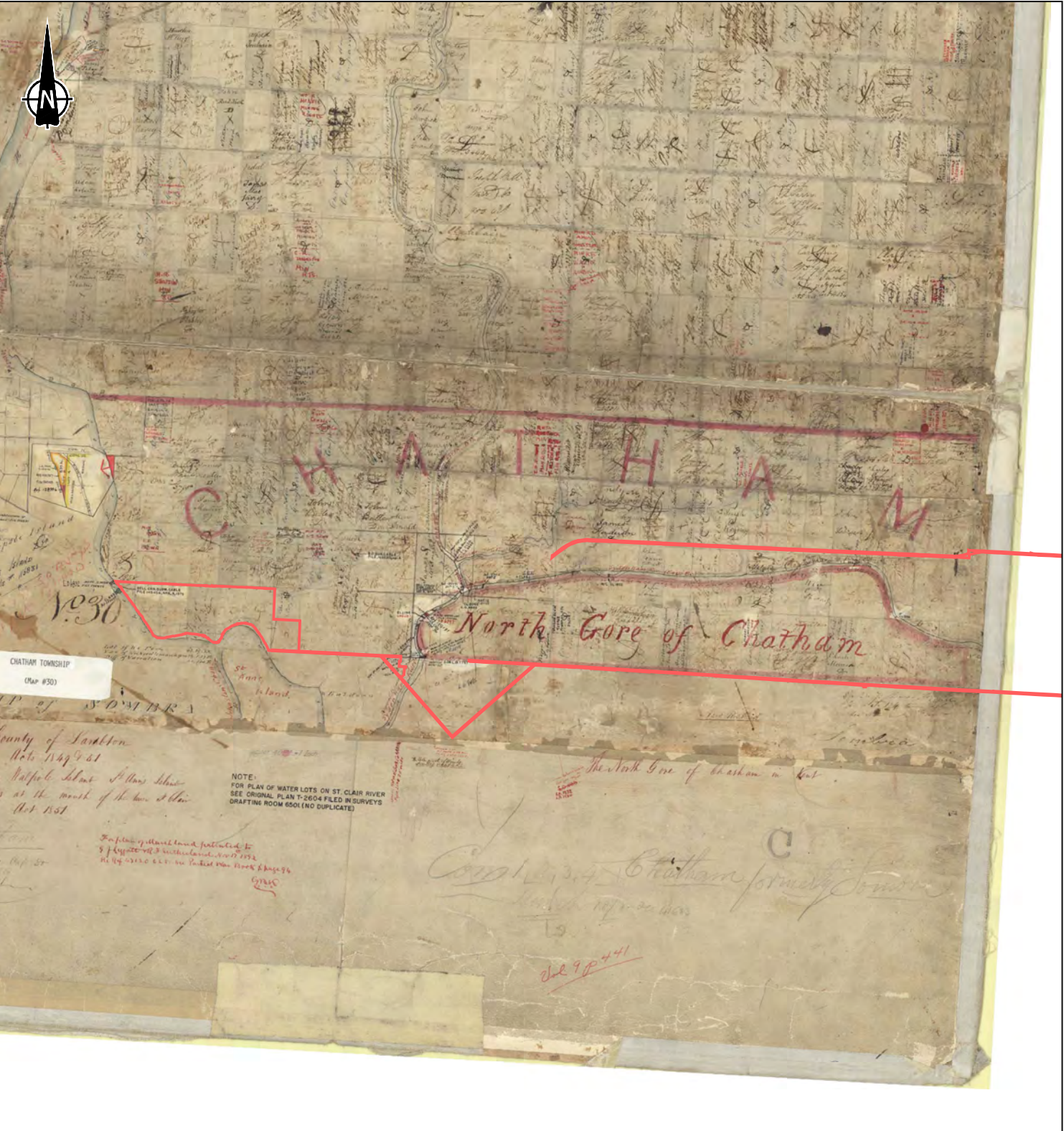
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- FOX, W.A. - 1981 NANTICOKE NOTCHED POINTS. KEWA 81-3.
- FOX, W.A. - 1981 DANIELS TRIANGULAR POINTS. KEWA 81-1.

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	MAP 3			

CHATHAM TOWNSHIP



GORE OF CHATHAM TOWNSHIP



LEGEND

APPROXIMATE LOCATION OF STUDY AREA

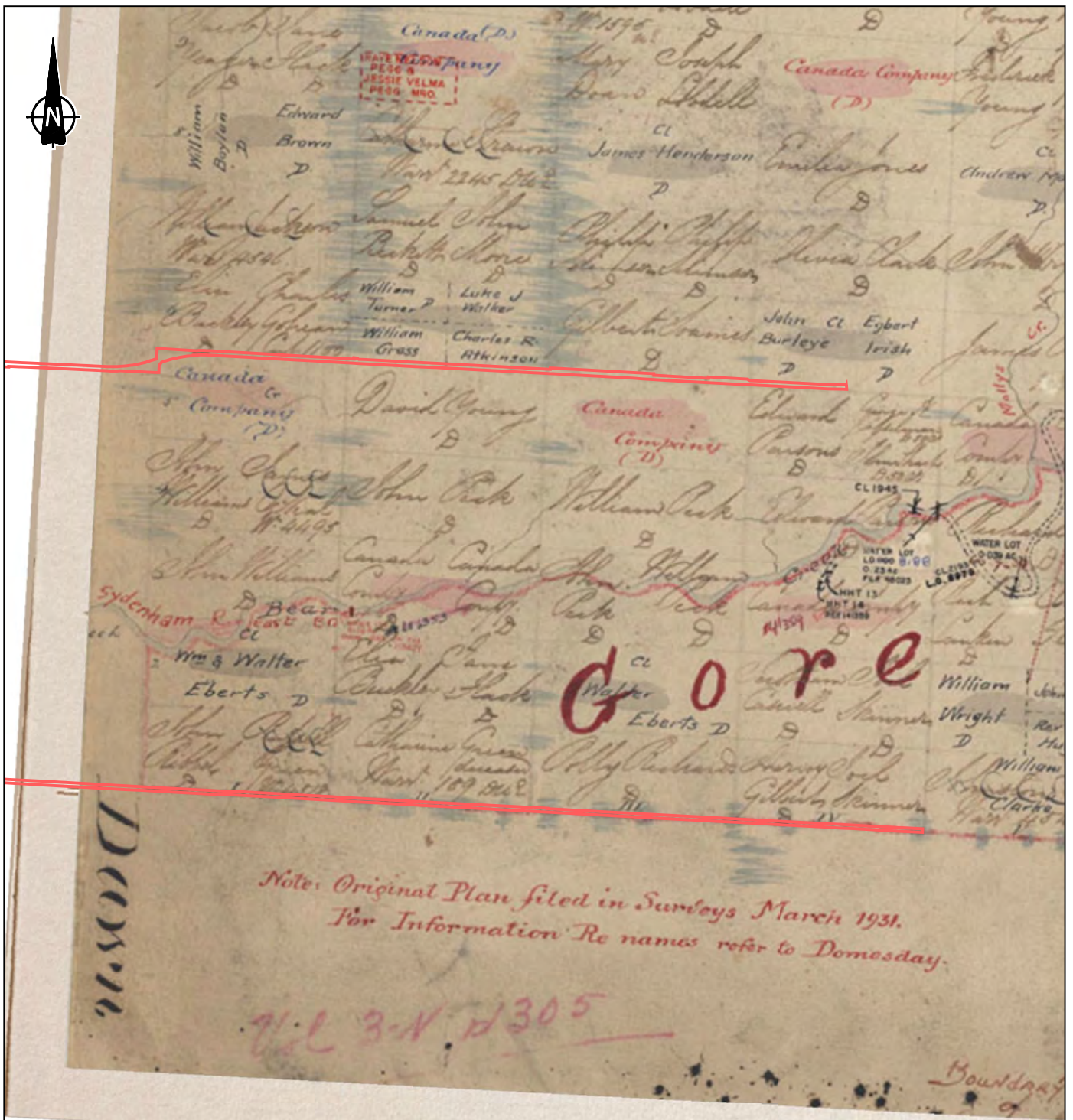
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TOWNSHIP OF SOMBRA AND GORE OF CHATHAM PATENT PLAN.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

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MAP 4				



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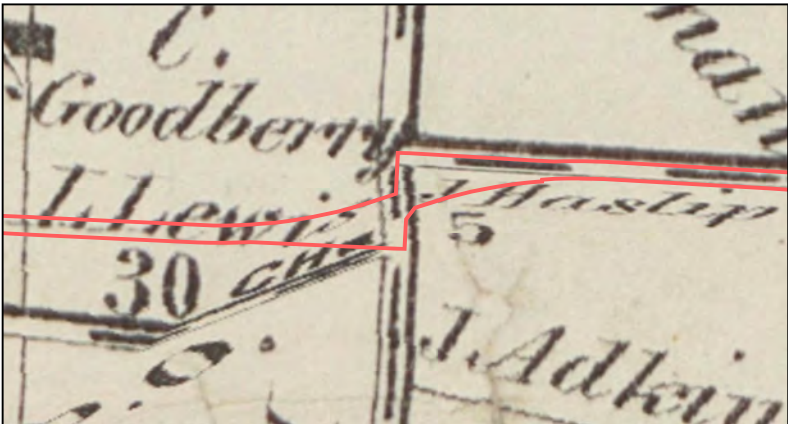
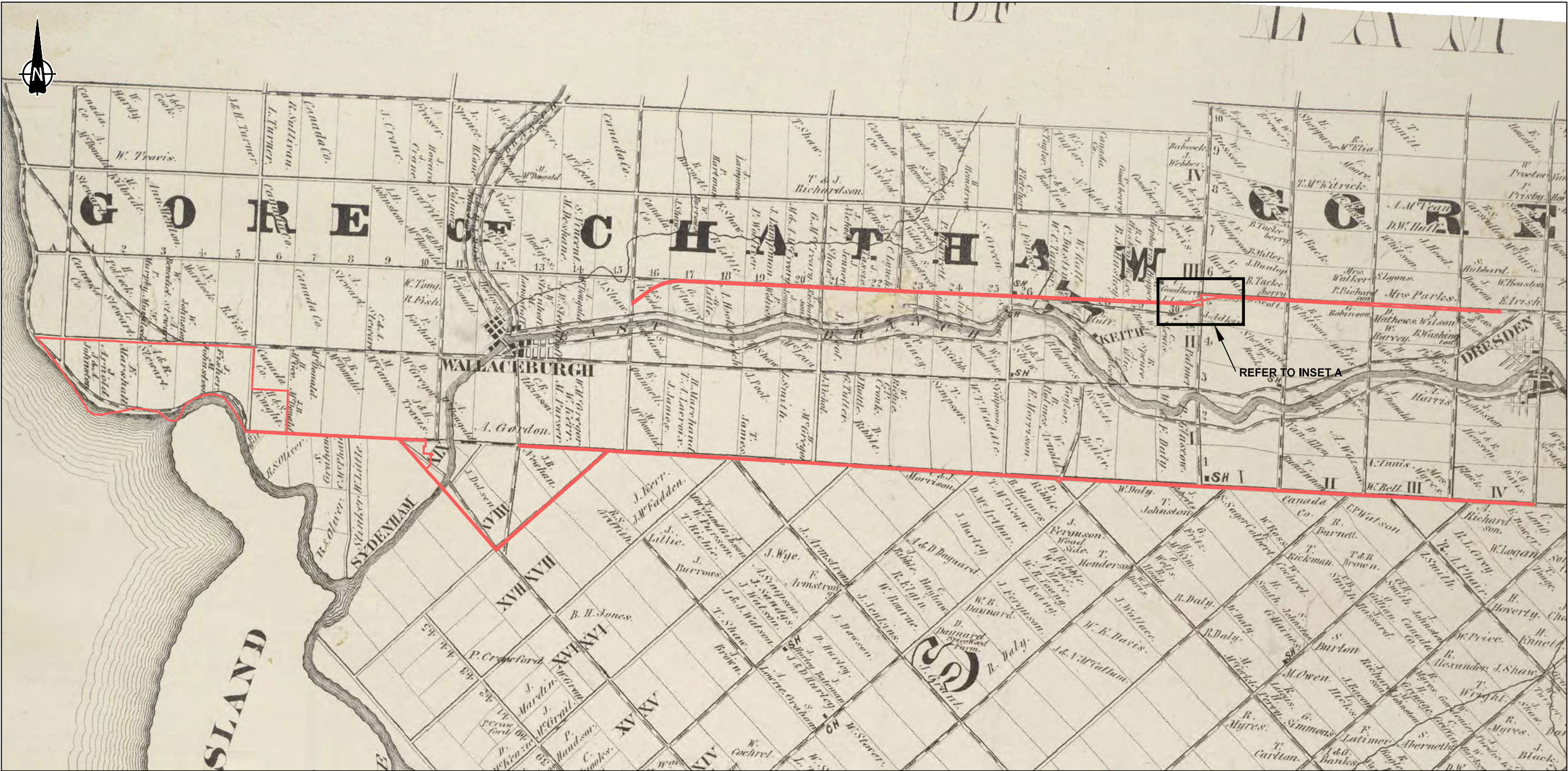
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NOTES

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ALL LOCATIONS ARE APPROXIMATE.

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				MAP 5



INSET A

LEGEND

— APPROXIMATE LOCATION OF STUDY AREA

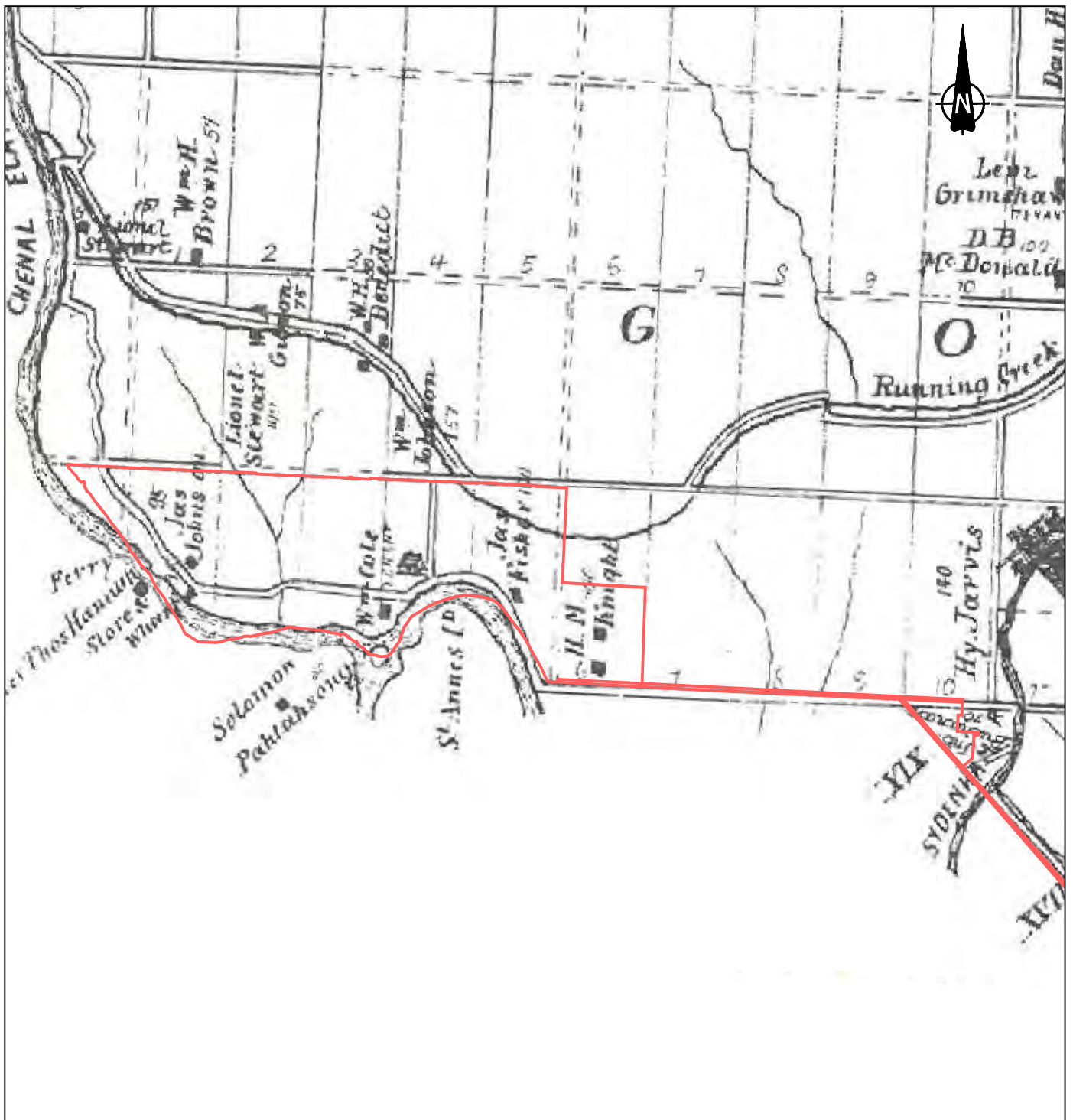
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NOTES

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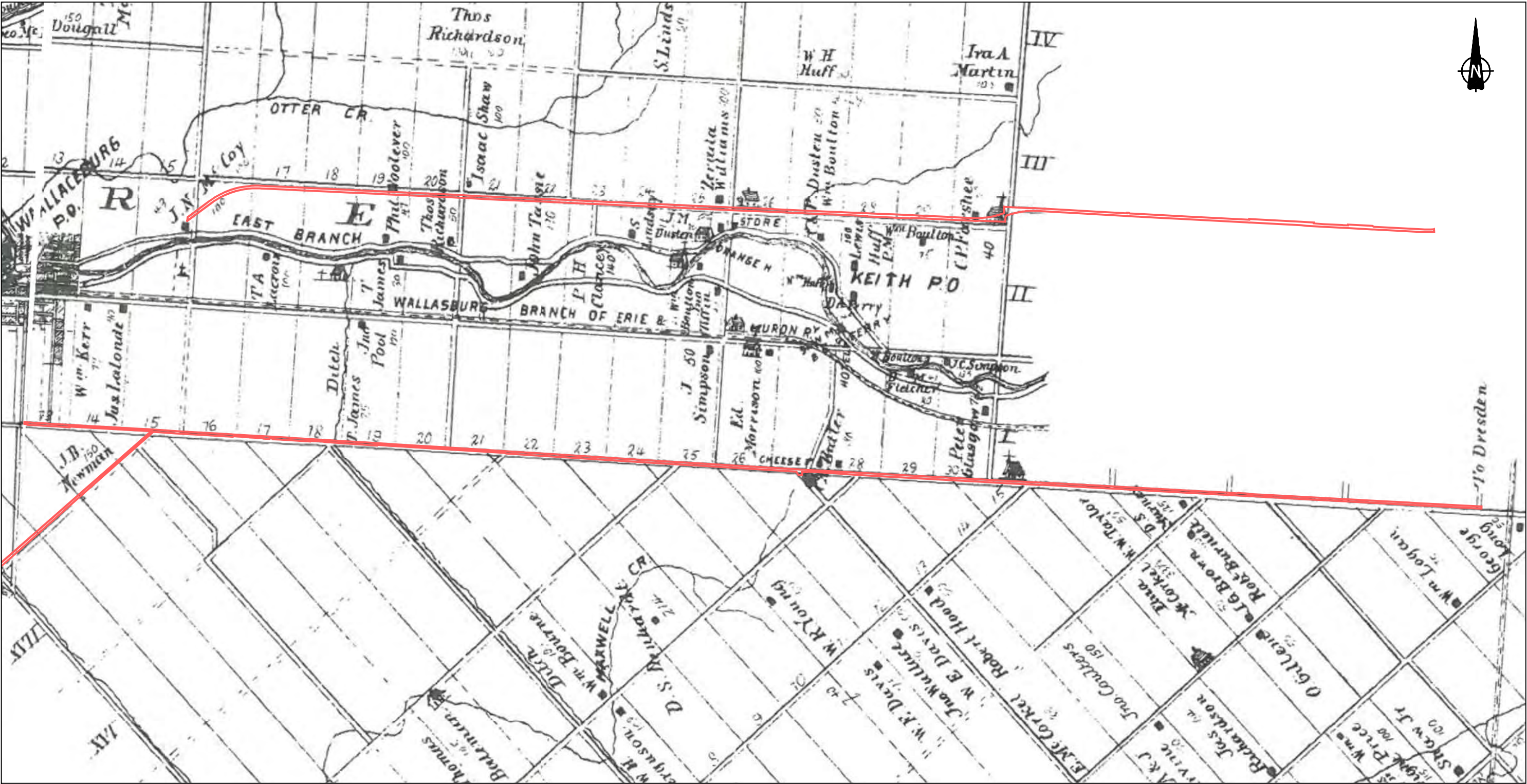
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ALL LOCATIONS ARE APPROXIMATE.

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TITLE	A PORTION OF THE 1880 ILLUSTRATED HISTORICAL ATLAS OF KENT COUNTY MAP OF CHATHAM TOWNSHIP; POTENTIAL NEW LLPS AREA, BASE LINE and BLUEWATER LINE ROW, and WTP AREA				
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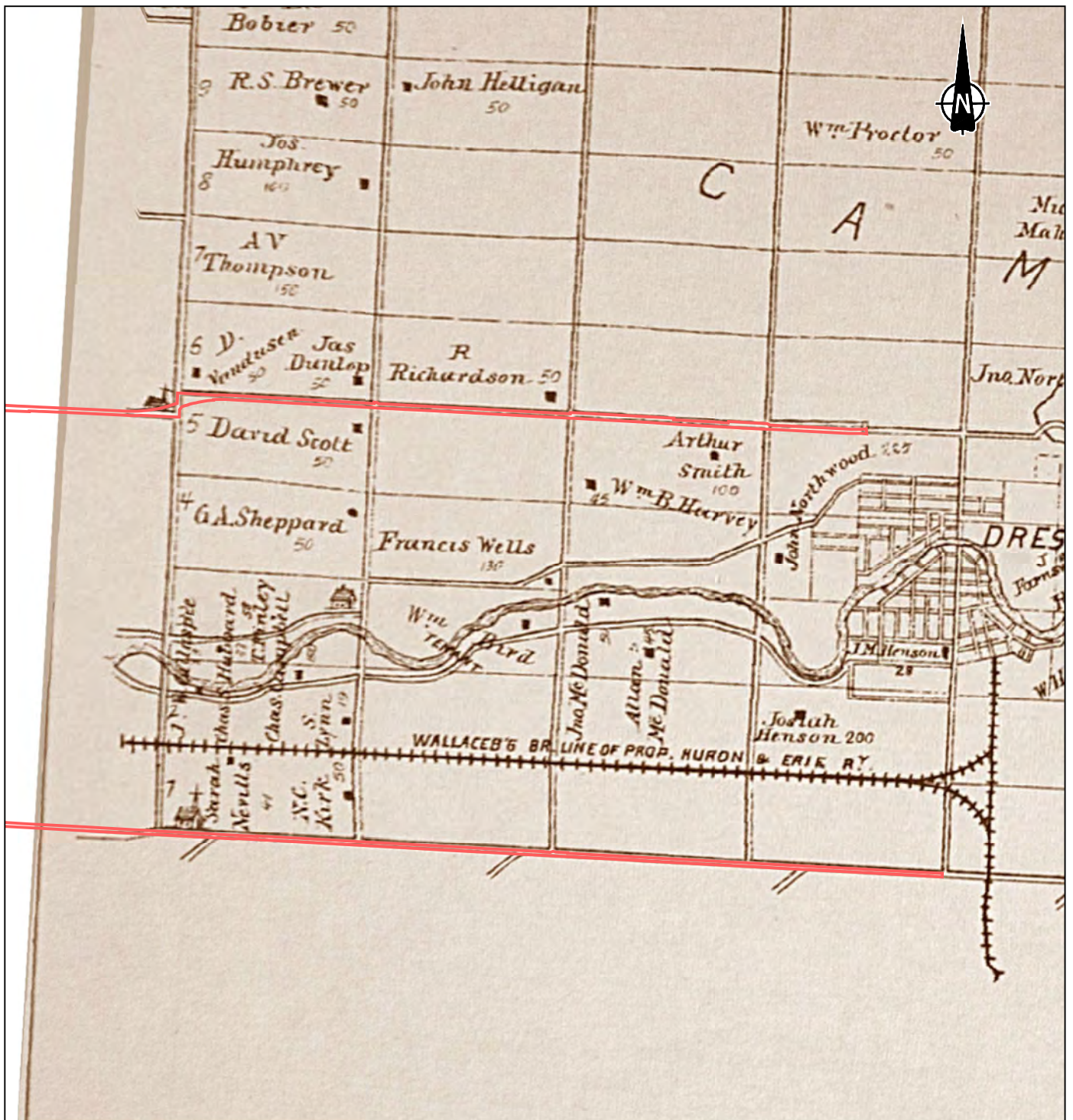
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PROJECT	STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO					
TITLE	A PORTION OF THE 1880 ILLUSTRATED HISTORICAL ATLAS OF KENT COUNTY MAP OF CHATHAM TOWNSHIP BASE LINE ROW (WALLACEBURG to DRESDEN) and McCREARY LINE ROW					
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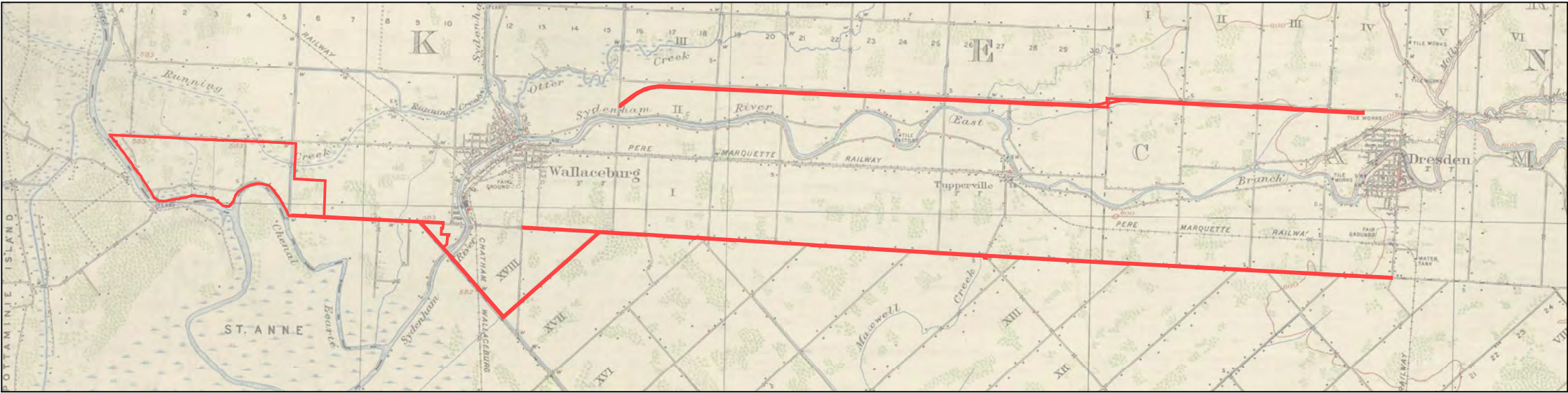
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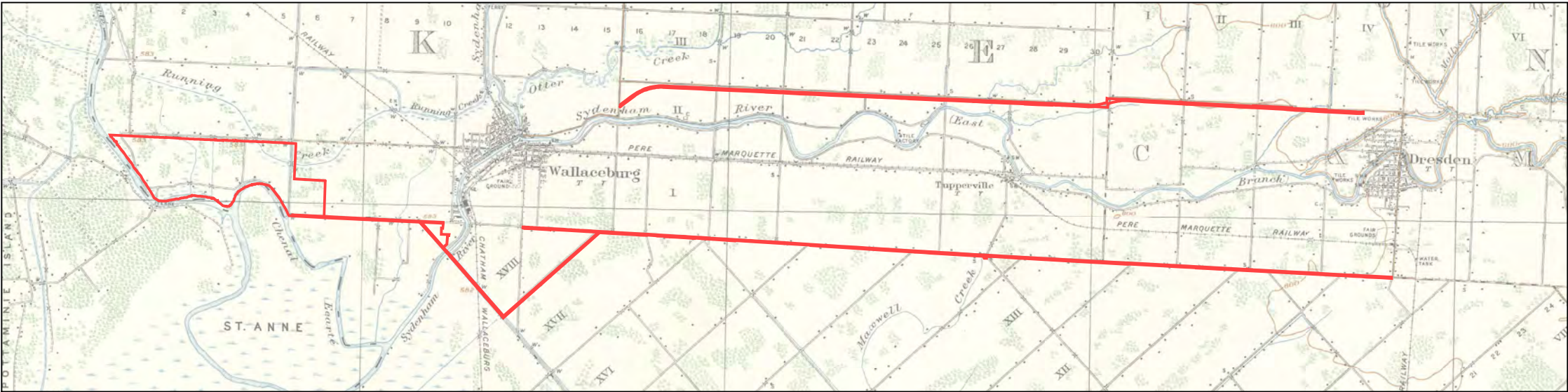
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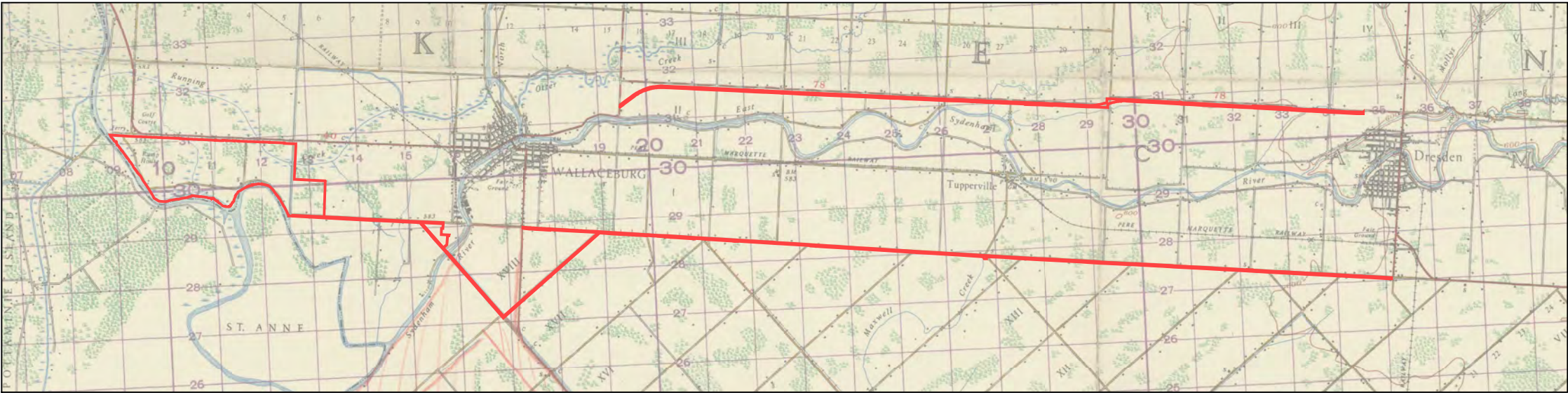
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TITLE	A PORTION OF THE 1880 ILLUSTRATED HISTORICAL ATLAS OF KENT COUNTY MAP OF CAMDEN TOWNSHIP BASE LINE ROW (WALLACEBURG to DRESDEN) and McCREARY LINE ROW			
wsp GOLDER		PROJECT No.	20141199	FILE No20141199-1000-R01004
		CADD	DCH/AM	Sept 13/22
		CHECK	LOM/MT	Oct 17/22
		SCALE	AS SHOWN	REV.
		MAP 8		



1913



1924



1939



LEGEND

— APPROXIMATE LOCATION OF STUDY AREA

REFERENCE

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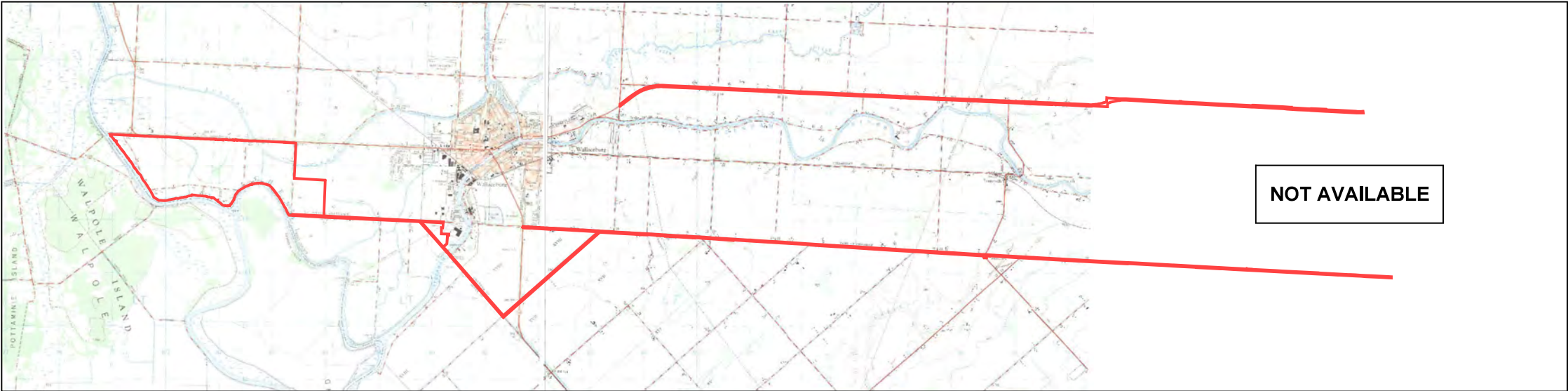
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1939, DEPARTMENT OF NATIONAL DEFENCE, WALLACEBURG, ONTARIO.

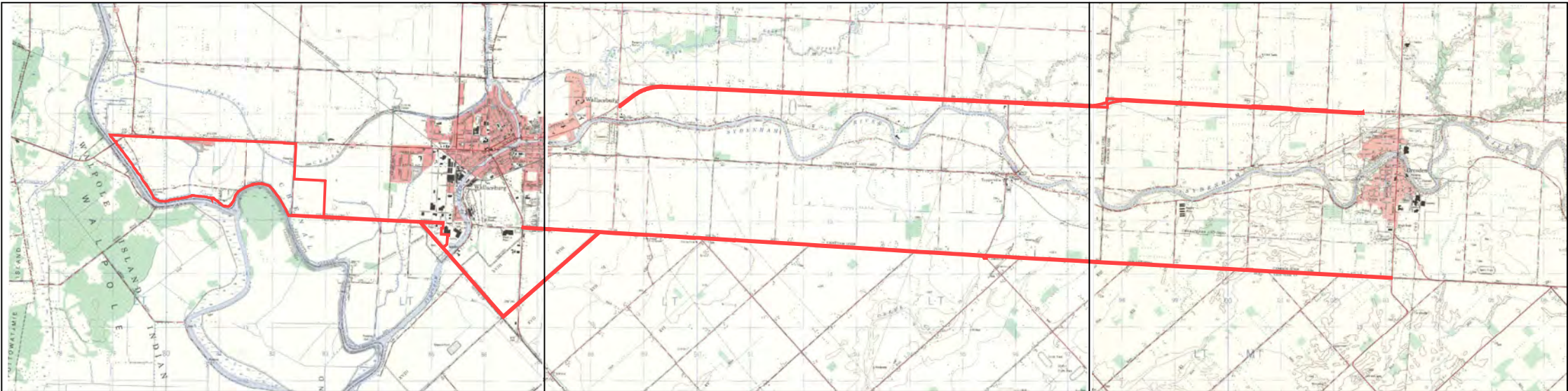
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ALL LOCATIONS ARE APPROXIMATE.

PROJECT	STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO				
	TITLE				
20th CENTURY TOPOGRAPHIC MAPS (1 of 2)					
	PROJECT No.		20141199	FILE No20141199-1000-R01009	
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	CADD	DCH/AM	Oct 11/22	MAP 9A	
	CHECK	LCM/MT	Oct 17/22		



1963



1976

1975

1974



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— APPROXIMATE LOCATION OF STUDY AREA

REFERENCE

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1963, DEPARTMENT OF ENERGY, MINES AND RESOURCES, WALLACEBURG, ONTARIO, 40J/9C & 40J/9D, EDITION 1. DEPARTMENT OF ENERGY, MINES AND RESOURCES, SURVEYS AND MAPPING BRANCH, OTTAWA.

1974, DEPARTMENT OF ENERGY, MINES AND RESOURCES, DRESDEN, KENT COUNTY, ONTARIO, 40J/9B, EDITION 1. DEPARTMENT OF ENERGY, MINES AND RESOURCES, SURVEYS AND MAPPING BRANCH, OTTAWA.

1975, DEPARTMENT OF ENERGY, MINES AND RESOURCES, TUPPERVILLE, KENT COUNTY, ONTARIO, 404J/9C, EDITION 2. DEPARTMENT OF ENERGY, MINES AND RESOURCES, SURVEYS AND MAPPING BRANCH, OTTAWA ; AND

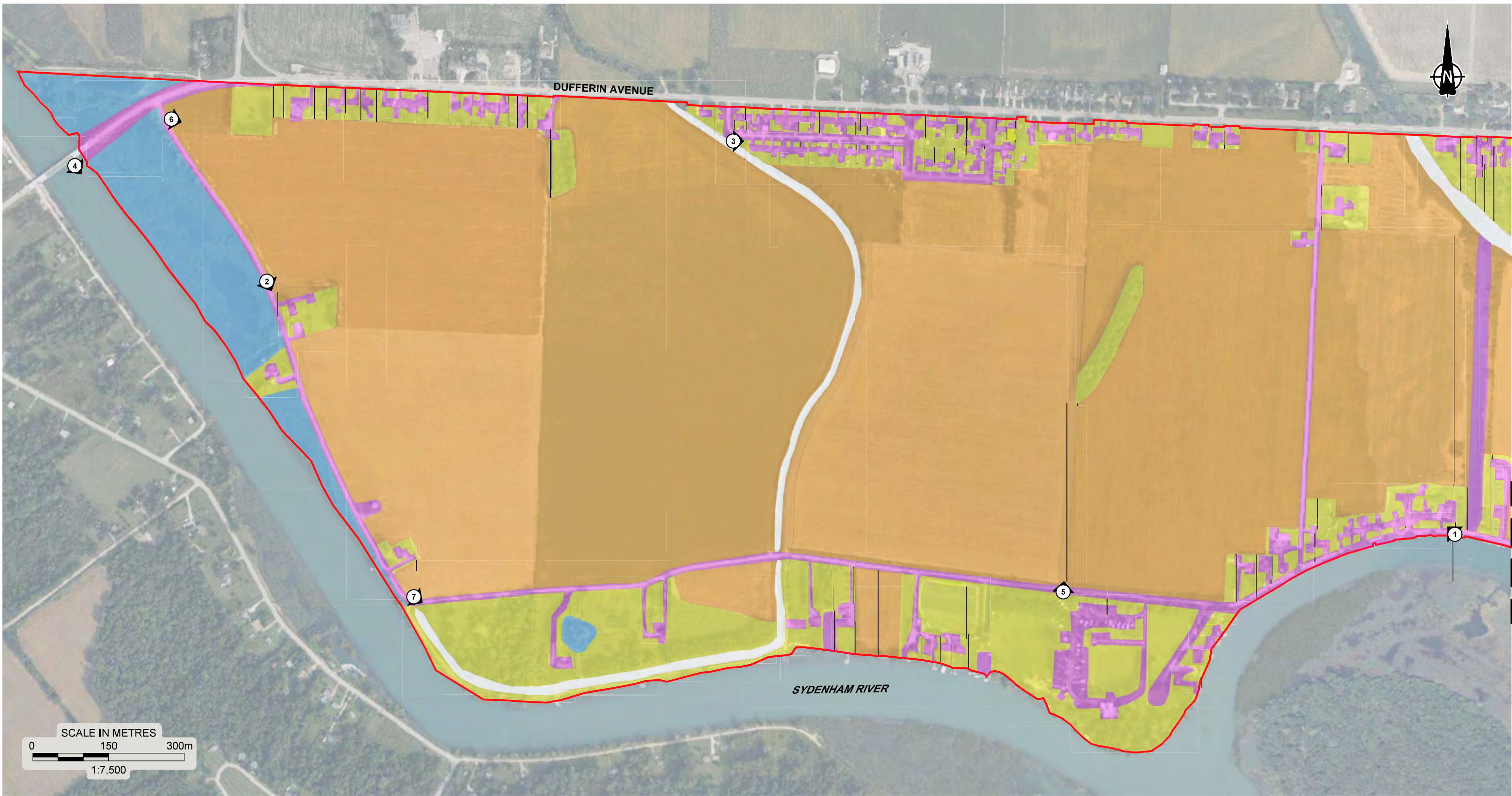
1976 WALLACEBURG, ONTARIO, 40J/9D, EDITION 2. DEPARTMENT OF ENERGY, MINES AND RESOURCES, SURVEYS AND MAPPING BRANCH, OTTAWA.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT	STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
	TITLE 20th CENTURY TOPOGRAPHIC MAPS (2 of 2)			
	PROJECT No.		20141199	FILE No20141199-1000-R01009
	SCALE		AS SHOWN	REV.
	CADD	DCH/AM	Oct 11/22	MAP 9B
	CHECK	LCM/MT	Oct 17/22	

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Original Format is Tabloid 279mm x 432mm



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- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER
- PREVIOUSLY DISTURBED; NO FURTHER ASSESSMENT REQUIRED
- PERMANENTLY WET; NO FURTHER ASSESSMENT REQUIRED
- AREA RECOMMENDED FOR STAGE 2 TEST PIT SURVEY
- AREA RECOMMENDED FOR STAGE 2 PEDESTRIAN SURVEY
- NO DEVELOPMENT TO WATERCOURSE EXPECTED

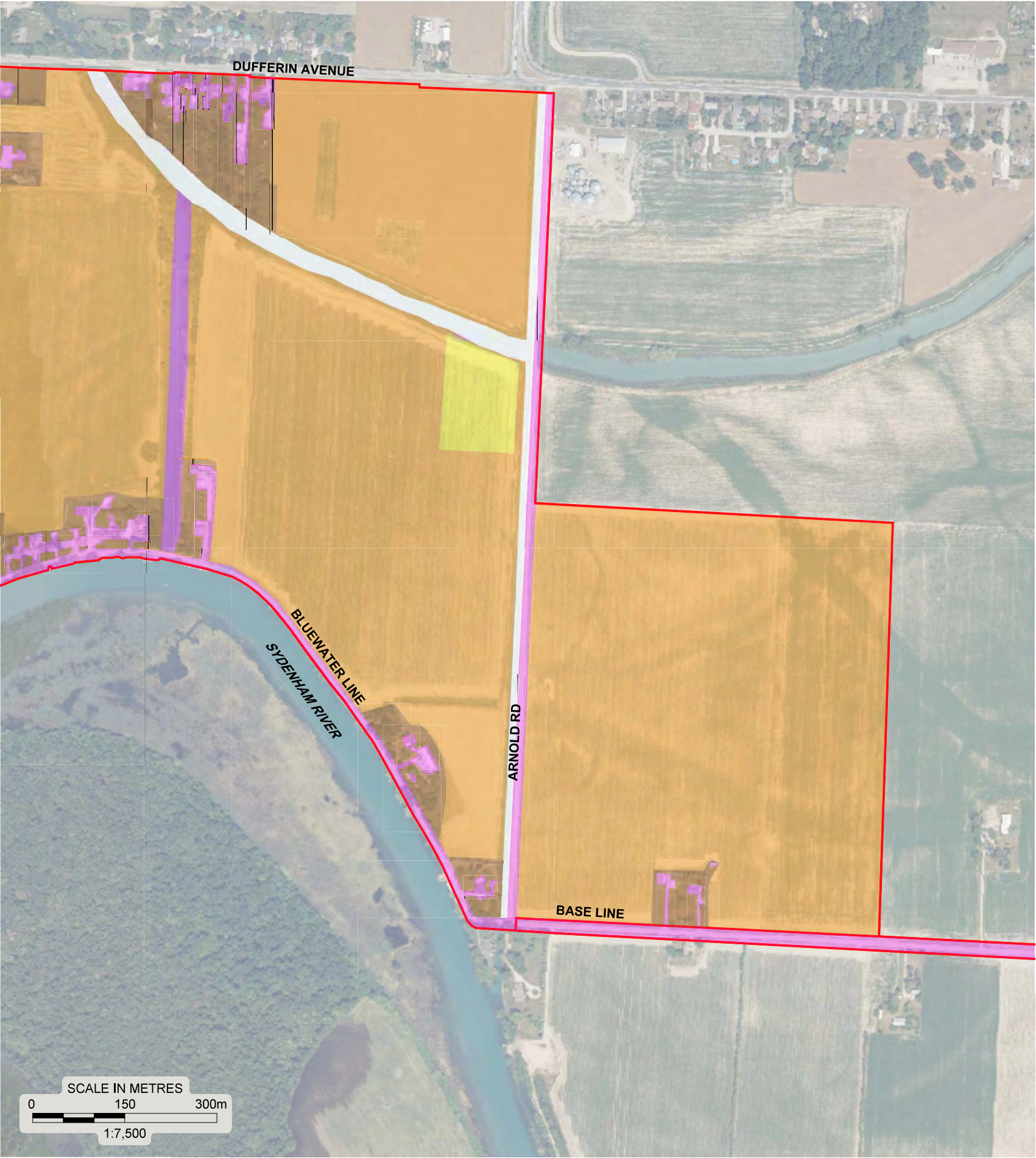
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ALL LOCATIONS ARE APPROXIMATE.

PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		STAGE 1 RESULTS: POTENTIAL NEW LLPS AREA			
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		CADD	DCH/AM	Sept 15/22	SCALE AS SHOWN
		CHECK	LCMMT	Oct 17/22	REV.
		MAP 10A			



LEGEND

APPROXIMATE LOCATION OF STUDY AREA

1

PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER

PREVIOUSLY DISTURBED; NO FURTHER ASSESSMENT REQUIRED

PERMANENTLY WET; NO FURTHER ASSESSMENT REQUIRED

AREA RECOMMENDED FOR STAGE 2 TEST PIT SURVEY

AREA RECOMMENDED FOR STAGE 2 PEDESTRIAN SURVEY

NO DEVELOPMENT TO WATERCOURSE EXPECTED

STAGE 3 ARCHAEOLOGICAL ASSESSMENT RECOMMENDED

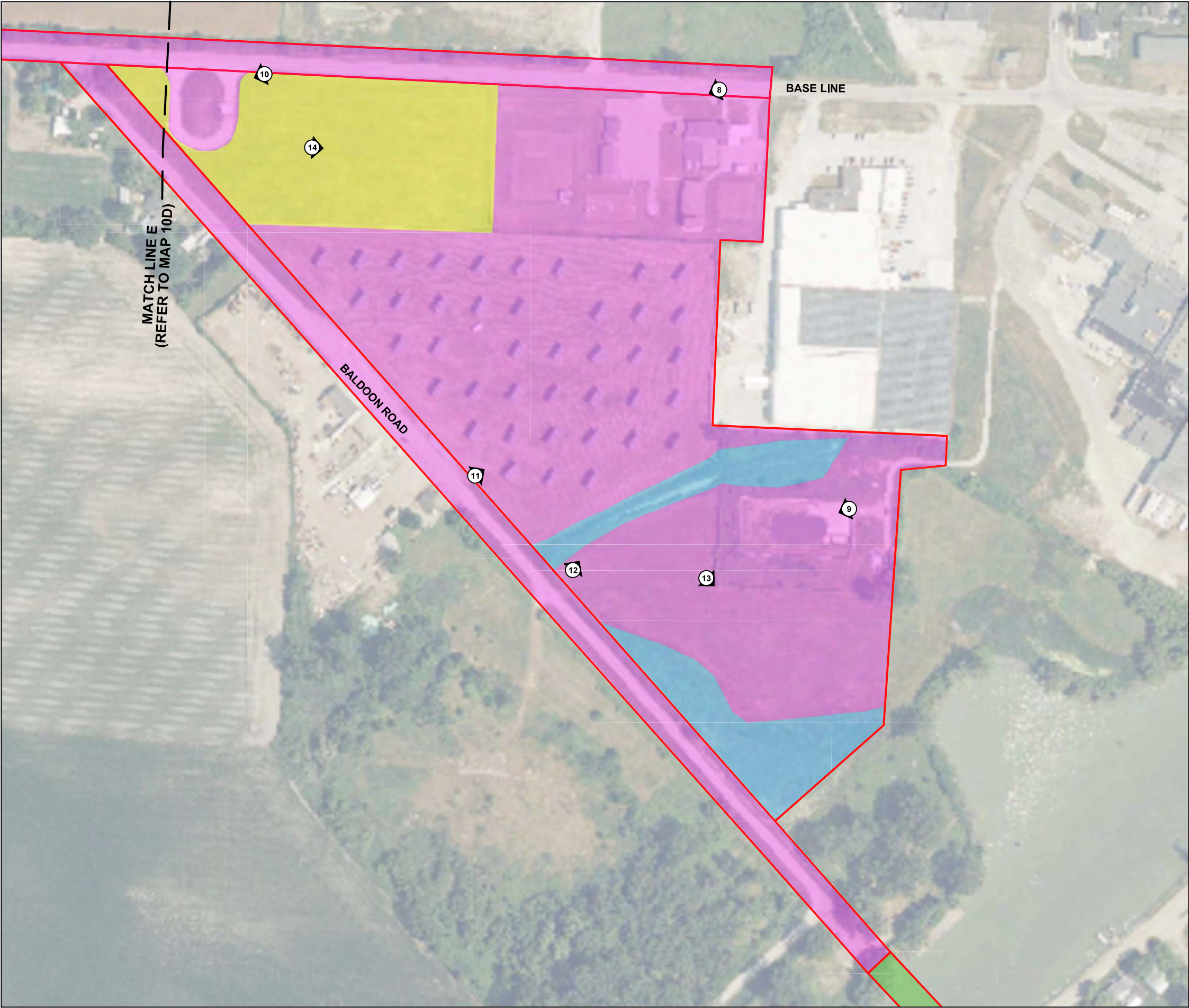
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BING IMAGERY USED FOR ILLUSTRATION PURPOSES ONLY AND NOT TO BE USED FOR MEASUREMENTS.
ALL LOCATIONS ARE APPROXIMATE.

PROJECT				STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE				STAGE 1 RESULTS: POTENTIAL NEW LLPS AREA			
wspGOLDER		PROJECT No.		20141199		FILE No20141199-1000-R01010	
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		CHECK				MAP 10B	



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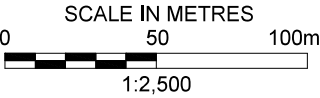
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- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER
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- PERMANENTLY WET; NO FURTHER ASSESSMENT REQUIRED
- AREA RECOMMENDED FOR STAGE 2 TEST PIT SURVEY
- MARINE ARCHAEOLOGICAL ASSESSMENT RECOMMENDED PRIOR TO DEVELOPMENT IMPACTS

REFERENCE

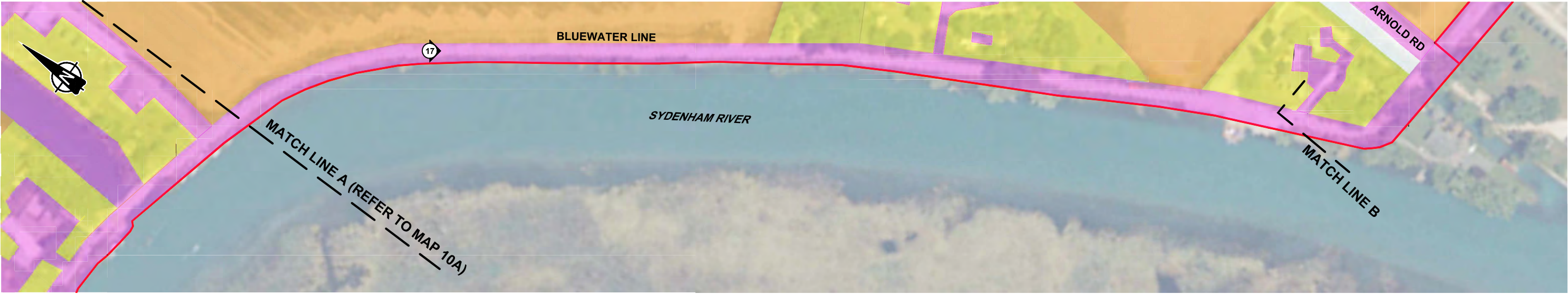
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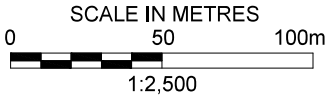
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ALL LOCATIONS ARE APPROXIMATE.



PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		STAGE 1 RESULTS WTP AREA			
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		REV.			
		CADD	DCH/AM	Sept 15/22	MAP 10C
		CHECK	LCM/MT	Oct 17/22	



All views
except where
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LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER
- PREVIOUSLY DISTURBED; NO FURTHER ASSESSMENT REQUIRED
- AREA RECOMMENDED FOR STAGE 2 PEDESTRIAN SURVEY
- AREA RECOMMENDED FOR STAGE 2 TEST PIT SURVEY
- NO DEVELOPMENT TO WATERCOURSE EXPECTED

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 AND SEPTEMBER 15 -2022 (IMAGE DATE UNKOWN).

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PROJECT	STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO				
TITLE	STAGE 1 RESULTS BASE LINE and BLUEWATER LINE ROW				
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	CADD	DCH/AM	Sept 15/22		
	CHECK	LCMMT	Oct 17/22		
MAP 10D					



LEGEND

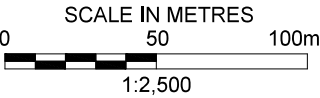
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- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER
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- PREVIOUSLY ASSESSED; NO FURTHER ASSESSMENT REQUIRED

REFERENCE

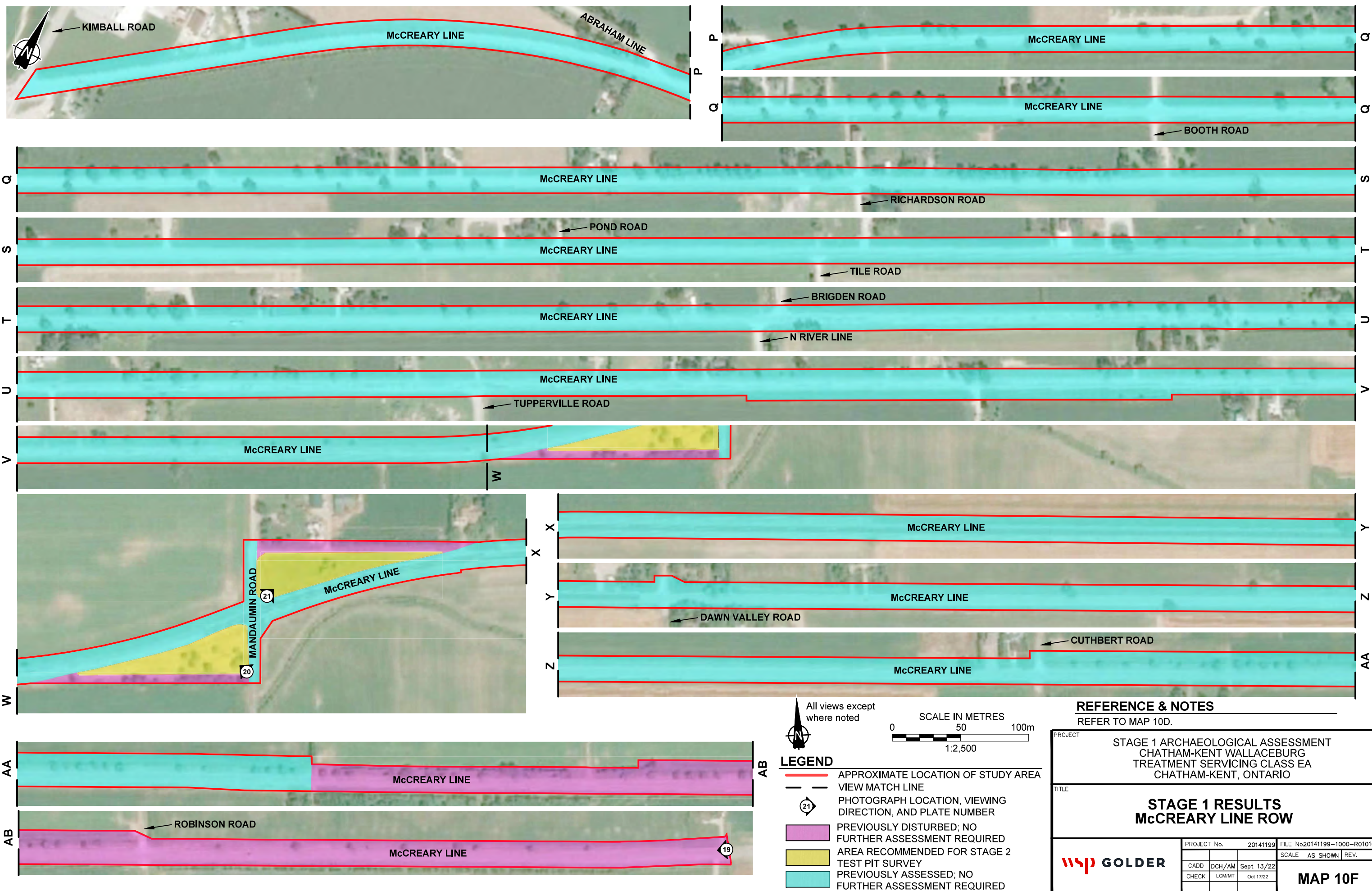
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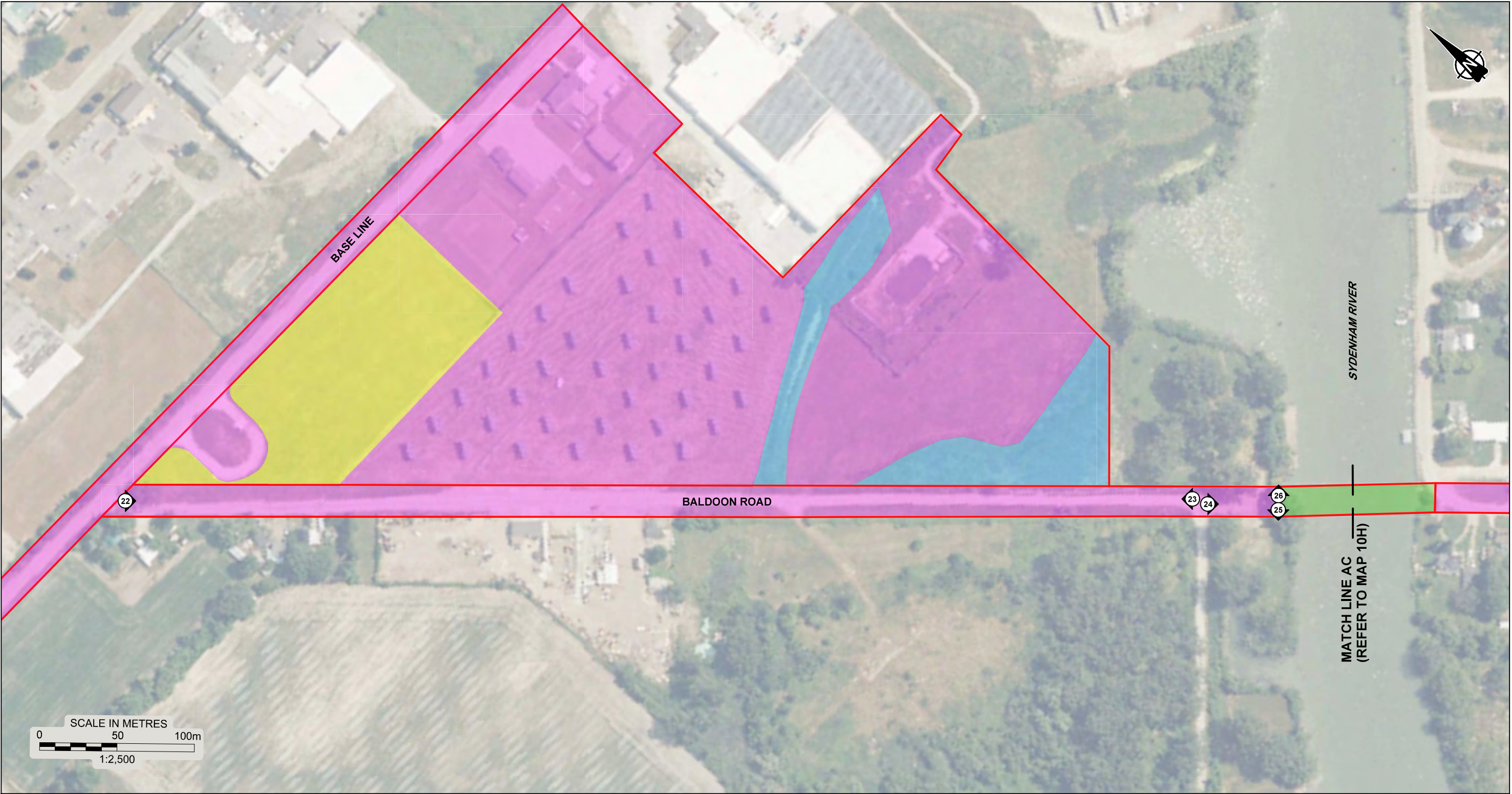
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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		STAGE 1 RESULTS BASE LINE ROW (WALLACEBURG to DRESDEN)			
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		CHECK	LCMMT	Oct 17/22	REV.
MAP 10E					





LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- VIEW MATCH LINE
- Ⓢ PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER

- PREVIOUSLY DISTURBED; NO FURTHER ASSESSMENT REQUIRED
- PERMANENTLY WET; NO FURTHER ASSESSMENT REQUIRED
- AREA RECOMMENDED FOR STAGE 2 TEST PIT SURVEY
- MARINE ARCHAEOLOGICAL ASSESSMENT RECOMMENDED PRIOR TO DEVELOPMENT IMPACTS

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF SEPTEMBER 15 - 2022 (IMAGE DATE UNKNOWN).

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		STAGE 1 RESULTS BALDOON ROAD ROW			
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		MAP 10G			



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- VIEW MATCH LINE
- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER
- PREVIOUSLY DISTURBED; NO FURTHER ASSESSMENT REQUIRED
- AREA RECOMMENDED FOR STAGE 2 PEDESTRIAN SURVEY
- MARINE ARCHAEOLOGICAL ASSESSMENT RECOMMENDED PRIOR TO DEVELOPMENT IMPACTS

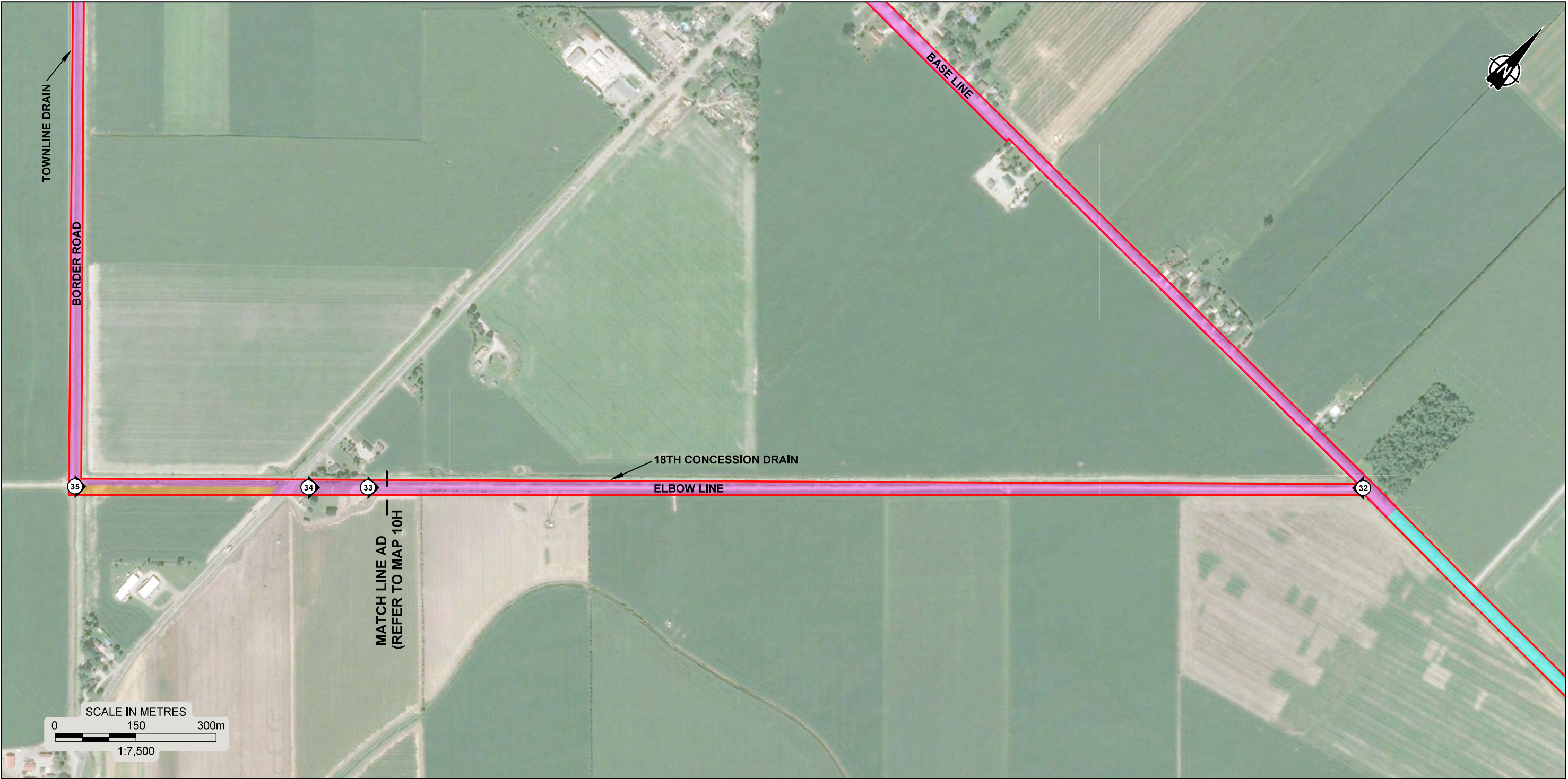
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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		STAGE 1 RESULTS BORDER ROAD ROW			
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	MAP 10H				



LEGEND


- APPROXIMATE LOCATION OF STUDY AREA
- VIEW MATCH LINE
- PHOTOGRAPH LOCATION, VIEWING DIRECTION, AND PLATE NUMBER
- PREVIOUSLY DISTURBED; NO FURTHER ASSESSMENT REQUIRED
- AREA RECOMMENDED FOR STAGE 2 PEDESTRIAN SURVEY
- PREVIOUSLY ASSESSED; NO FURTHER ASSESSMENT REQUIRED

REFERENCE

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PROJECT		STAGE 1 ARCHAEOLOGICAL ASSESSMENT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO					
TITLE		STAGE 1 RESULTS ELBOW LINE ROW					
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		CHECK	LCM/MT	Oct 17/22			

11.0 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.



Lafe Meicenheimer, M.A.
Project Archaeologist



Michael Teal, M.A.
Director, Archaeology and Heritage - Ontario

LCM/MT/ly/ca

[https://golderassociates.sharepoint.com/sites/124790/project files/6 deliverables/1000 - archaeology/aoda compliant report/p457-0095-2020_31jan2023_aoda.docx](https://golderassociates.sharepoint.com/sites/124790/project%20files/6%20deliverables/1000%20-%20archaeology/aoda%20compliant%20report/p457-0095-2020_31jan2023_aoda.docx)



golder.com



ORIGINAL REPORT

Cultural Heritage Screening Report

Chatham-Kent Wallaceburg Treatment Servicing Class Environmental Assessment

Submitted to:

Jacobs

72 Victoria Street South
Suite 300
Kitchener, Ontario
N2G 4Y9

Submitted by:

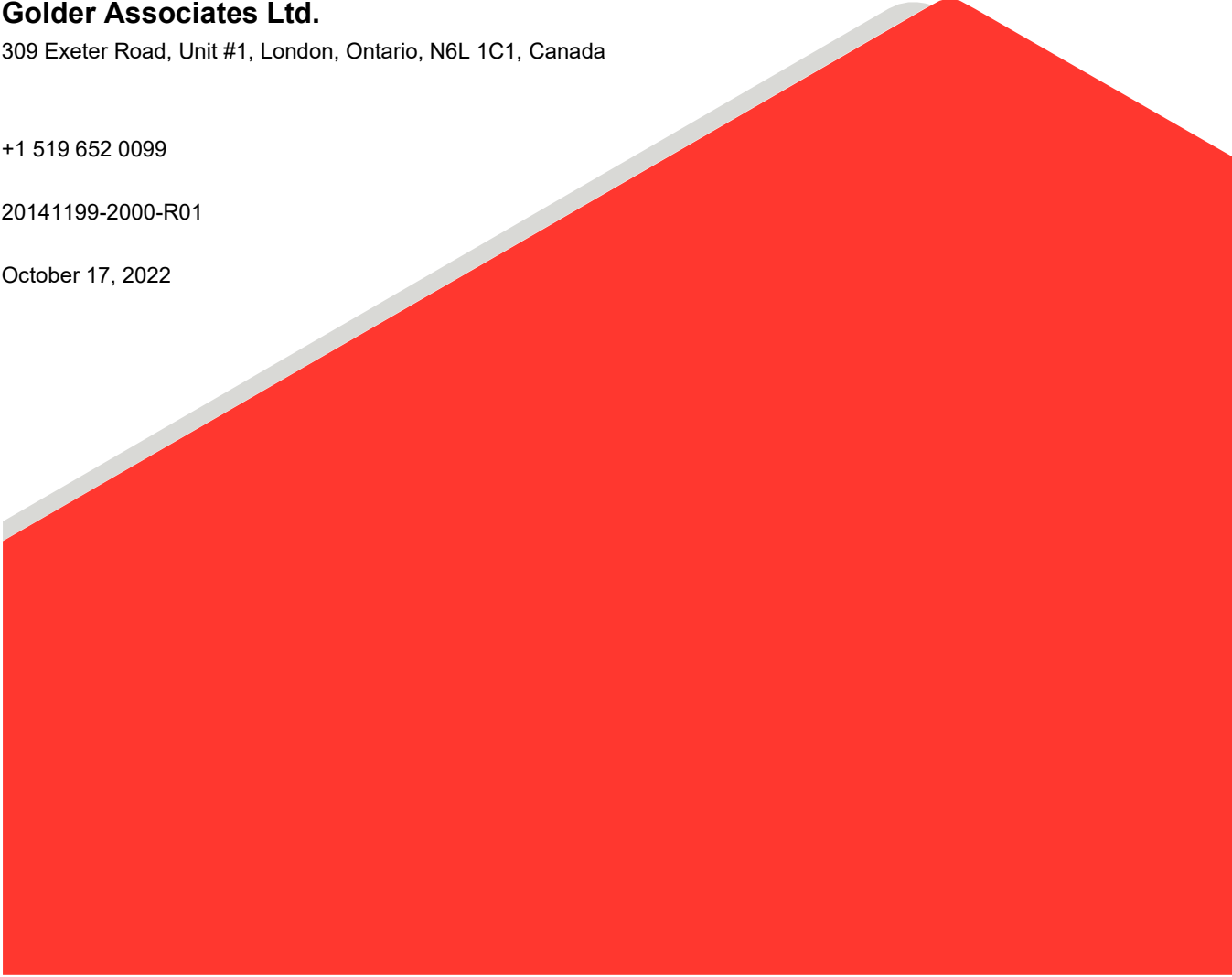
Golder Associates Ltd.

309 Exeter Road, Unit #1, London, Ontario, N6L 1C1, Canada

+1 519 652 0099

20141199-2000-R01

October 17, 2022

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Distribution List

1 e-Copy - Jacobs

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Acronyms and Abbreviations

Acronym	Definition
CHECPIA	Cultural Heritage Existing Conditions and Preliminary Impact Assessment
CHER	Cultural Heritage Existing Conditions Report
CHR	Cultural Heritage Report
CHSR	Cultural Heritage Screening Report
CHVI	Cultural heritage value or interest
EA	Environmental Assessment
EAA	Environmental Assessment Act
HCD	Heritage Conservation District
HIA	Heritage Impact Assessment
LLPS	Low Lift Pump Station
MCEA	Municipal Class Environmental Assessment
MCM	Ministry of Citizenship and Multiculturalism
OHA	Ontario Heritage Act
PPS	Provincial Policy Statement
ROW	Right-of-way
WTP	Water treatment plant

Executive Summary

Background

In March 2020, Jacobs retained Golder Associates Ltd. (Golder) to conduct a Cultural Heritage Screening Report (CHSR) as part of a Schedule C Municipal Class Environmental Assessment (MCEA) for the Wallaceburg Water Treatment Plant (the Project) in the Municipality of Chatham-Kent, Ontario (Figure 1). The purpose of the project is to evaluate a new water treatment plant with a new intake.

The Study Area, as defined by Jacobs, is comprised of eight areas:

- The Potential New LLPS Area, approximately 369.6 hectares of land for a new low lift pump station (LLPS) located on part of Lot A and Lots 1-6, Concession 1 in the Gore of the former geographic Township of Chatham in Kent County, now Municipality of Chatham-Kent, Ontario;
- the WTP Area, which is the existing Wallaceburg Water Treatment Plant (WTP), a 10.7 hectare parcel of land located at 6780 Base Line, legally described as part of Lot 1, Concession 19 in the former geographic Township of Chatham;
- the right-of-way (ROW) of Base Line and Bluewater Line between the Potential New LLPS Area and the WTP Area;
- the ROW of Base Line between Murray Street in Wallaceburg in the Gore of the former geographic Township of Chatham and North Street south of Dresden in the Gore of the former geographic Township of Camden;
- the ROW of McCreary Line between Kimball Road outside Wallaceburg in the Gore of the former geographic Township of Chatham and the Dresden elevated tank outside Dresden in the Gore of the former geographic Township of Camden;
- the ROW of Baldoon Road between Base Line and the Sydenham River adjacent to the WTP Area on the border of the former geographic Townships of Chatham and Dover;
- the ROW of Border Road between the Sydenham River and the 18th Concession Drain on the border of the former geographic Townships of Chatham and Dover; and
- the ROW of Elbow Line including a 30-metre wide unpaved ROW between Elbow Line and Swan Line in the former geographic Township of Chatham.

The objectives of this CHSR are to identify from desktop sources all known and potential built heritage resources and cultural heritage landscapes within or crossed by the Study Area and determine if the Project will require subsequent cultural heritage studies such as a Cultural Heritage Existing Conditions and Preliminary Impact Assessment (CHECPIA) or site-specific Cultural Heritage Evaluation Reports (CHERs) or Heritage Impact Assessments (HIAs). This CHSR follows the *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* checklist published by the Ministry of Citizenship and Multiculturalism (MCM) in 2016.

Results

Background research and desktop analysis of the Project Study Area based on the Ministry of Citizenship and Multiculturalism (MCM) *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* (2016) checklist identified:

- No protected heritage properties designated under Part IV of the *Ontario Heritage Act*
- No protected heritage properties designated under Part V of the *Ontario Heritage Act*
- No properties listed (not designated) on the Municipality of Chatham-Kent's Municipal Heritage Register Part I – Designated Properties or Municipal Heritage Register – Listed Properties in the Community of Wallaceburg
- 286 properties with buildings or structures 40 or more years old of potential cultural heritage value or interest (CHVI)

These are identified by area in the following sub-sections. the completed MCM *Checklist* and supplementary documentation is provided in Appendix A and Appendix B.

Recommendations

Due to the high number of potential built heritage resources in the Study Area, Golder recommends to:

- site and route all infrastructure to avoid the built heritage resources and cultural heritage landscapes identified in this CHSR.
- properties of potential CHVI can be avoided by limiting all construction to within public rights-of-way.
- if properties of potential CHVI property cannot be feasibly avoided, consult the Municipality of Chatham-Kent to determine if a Cultural Heritage Evaluation Report (CHER) is required.
 - if required, the CHER should determine if the property meets the criteria for CHVI prescribed in *Ontario Regulation 9/06*. If the CHER finds that the resource has CHVI, conduct an HIA prior to detailed design to recommend the appropriate mitigations.

If multiple potential built heritage resources and cultural heritage landscapes identified in this CHSR cannot be feasibly avoided, Golder recommends to:

- conduct a Cultural Heritage Existing Conditions and Preliminary Impact Assessment (CHECPIA) prior to detailed design. The CHECPIA should:
 - evaluate at a preliminary level the properties of potential CHVI to determine if they meet the criteria for CHVI prescribed in *Ontario Regulation 9/06*.
 - identify impacts to the properties evaluated to have CHVI.
 - recommend the appropriate mitigations to avoid or reduce adverse impacts to all built heritage resources and cultural heritage landscapes.

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APPENDICES

APPENDIX A

MTCS Checklist

APPENDIX B

Supplementary Documentation

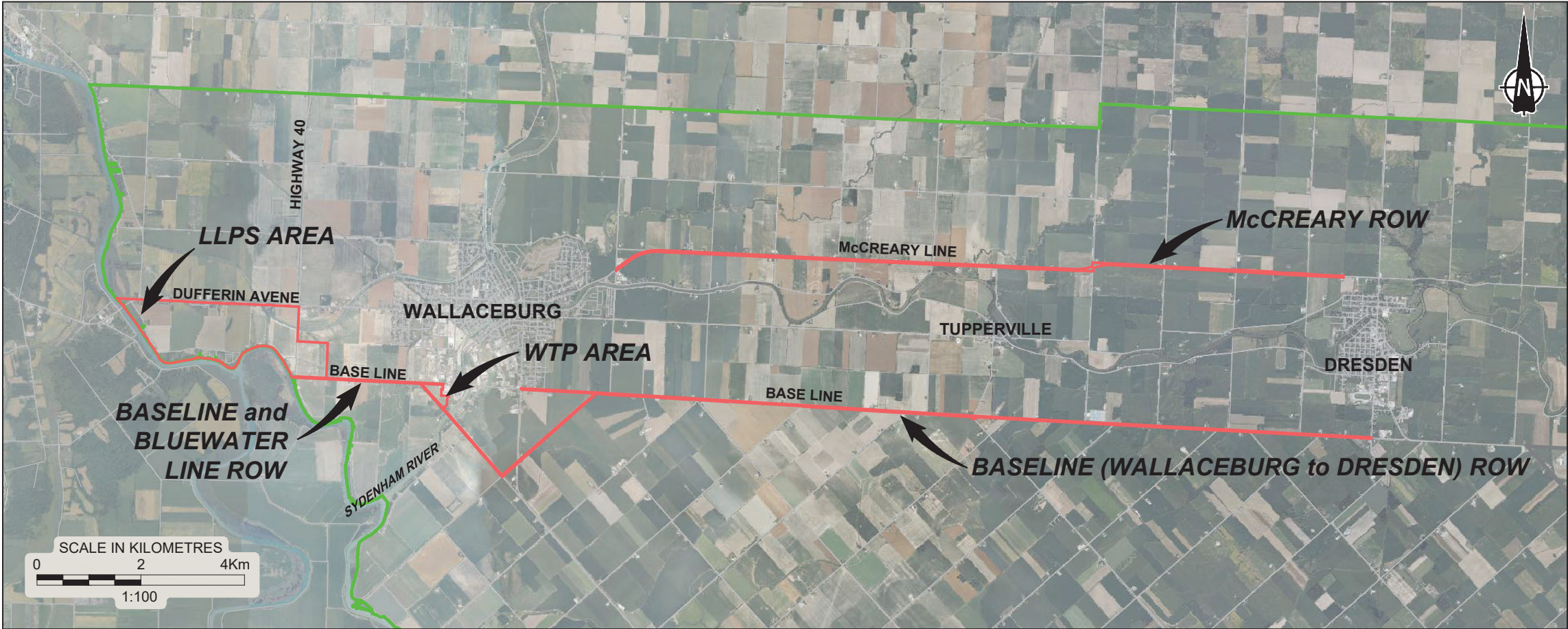
1.0 INTRODUCTION

In March 2020, Jacobs retained Golder Associates Ltd. (Golder) to conduct a Cultural Heritage Screening Report (CHSR) as part of a Schedule C Municipal Class Environmental Assessment (MCEA) for the Wallaceburg Water Treatment Plant (the Project) in the Municipality of Chatham-Kent, Ontario (Figure 1). The purpose of the project is to evaluate a new water treatment plant with a new intake.

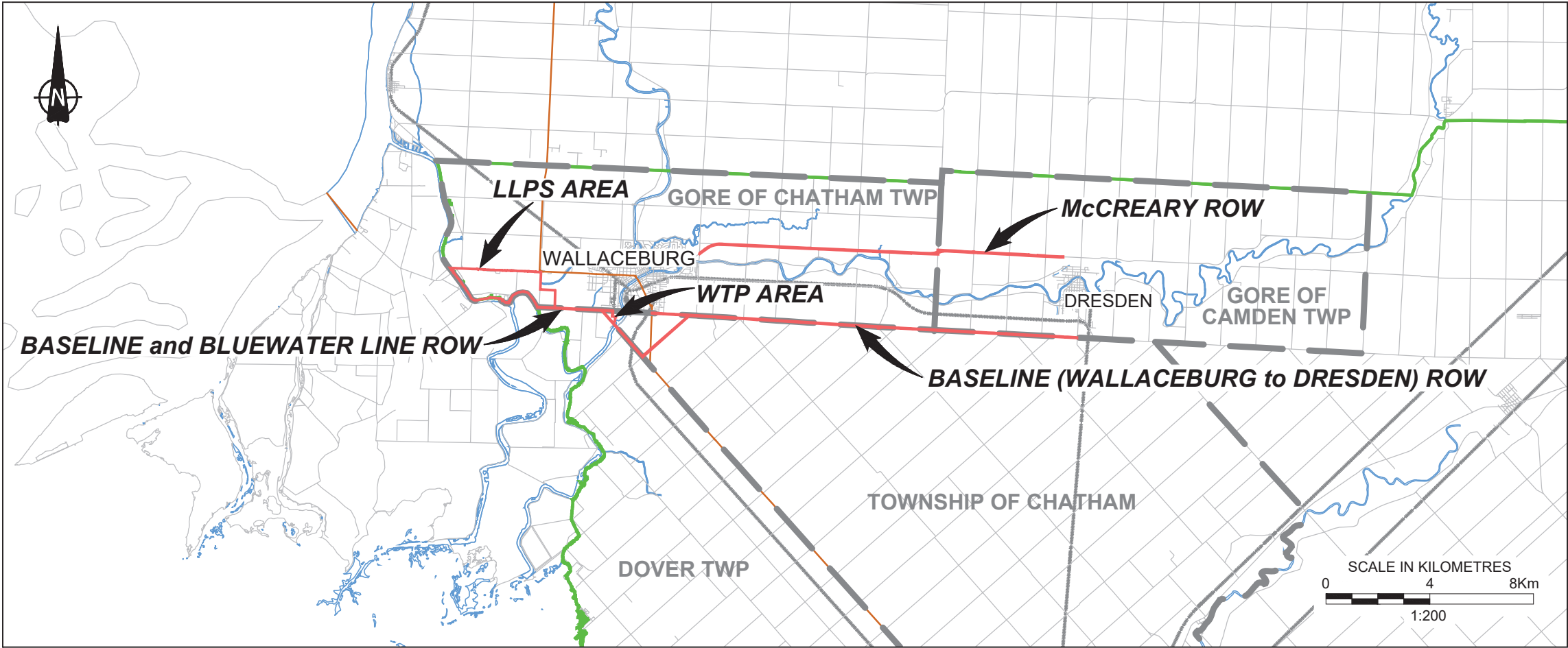
The Study Area, as defined by Jacobs, is comprised of five areas:

- The Potential New LLPS Area, approximately 369.6 hectares of land for a new low lift pump station (LLPS) located on part of Lot A and Lots 1-6, Concession 1 in the Gore of the former geographic Township of Chatham in Kent County, now Municipality of Chatham-Kent, Ontario;
- the WTP Area, which is the existing Wallaceburg Water Treatment Plant (WTP), a 10.7 hectare parcel of land located at 6780 Base Line, legally described as part of Lot 1, Concession 19 in the former geographic Township of Chatham;
- the right-of-way (ROW) of Base Line and Bluewater Line between the Potential New LLPS Area and the WTP Area;
- the ROW of Base Line between Murray Street in Wallaceburg in the Gore of the former geographic Township of Chatham and North Street south of Dresden in the Gore of the former geographic Township of Camden;
- the ROW of McCreary Line between Kimball Road outside Wallaceburg in the Gore of the former geographic Township of Chatham and the Dresden elevated tank outside Dresden in the Gore of the former geographic Township of Camden; and
- the ROW of Baldoon Road between Base Line and the Sydenham River adjacent to the WTP Area on the border of the former geographic Townships of Chatham and Dover;
- the ROW of Border Road between the Sydenham River and the 18th Concession Drain on the border of the former geographic Townships of Chatham and Dover; and
- the ROW of Elbow Line including a 30-metre wide unpaved ROW between Elbow Line and Swan Line in the former geographic Township of Chatham.

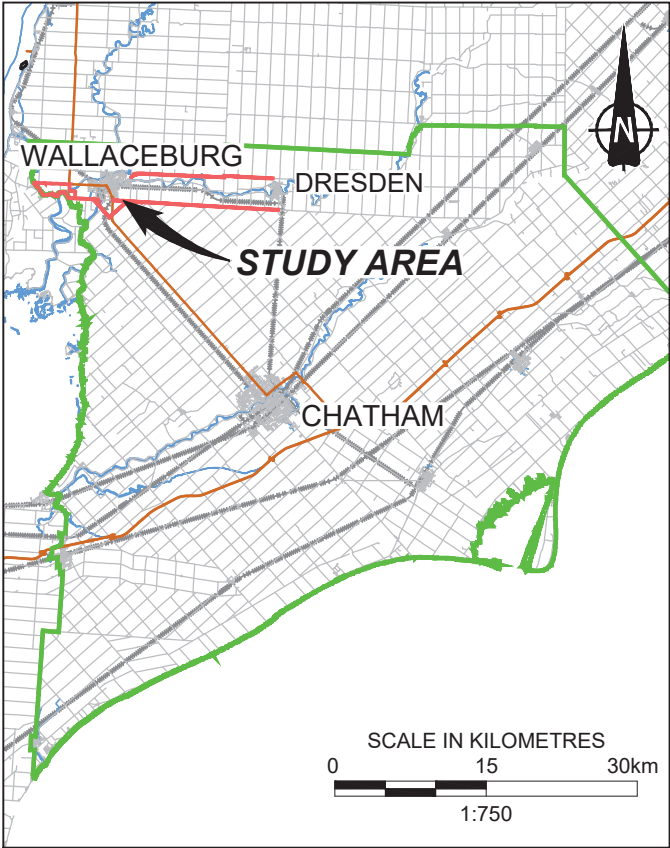
The objectives of this CHSR are to identify from desktop sources all known and potential built heritage resources and cultural heritage landscapes within or crossed by the Study Area and determine if the Project will require subsequent cultural heritage studies such as a Cultural Heritage Existing Conditions and Preliminary Impact Assessment (CHECPA) or site-specific Cultural Heritage Evaluation Reports (CHERs) or Heritage Impact Assessments (HIAs). This CHSR follows the *Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes* checklist published by the Ministry of Citizenship and Multiculturalism (MCM) in 2016.



AERIAL IMAGERY



REGIONAL MAP



KEY PLAN

LEGEND

- APPROXIMATE STUDY AREA
- MUNICIPALITY OF CHATHAM-KENT BOUNDARY
- HISTORICAL TOWNSHIP/MUNICIPALITY BOUNDARY
- CHATHAM HISTORICAL TOWNSHIP/MUNICIPALITY

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020;
MNR LIO, OBTAINED 2021, PRODUCED BY GOLDER ASSOCIATES LTD UNDER LICENCE FROM ONTARIO MINISTRY OF NATURAL RESOURCES, © QUEENS PRINTER 2021;
BING IMAGERY AS OF SEPTEMBER 15 - 2022 (IMAGE DATE UNKNOWN);
SHACKLETON, J.W. AND MCINTOSH, F.J., 1876, SHACKLETON AND MCINTOSH'S MAP OF THE COUNTY OF KENT. CHATHAM;
AND CANMAP STREETFILES V2008.4.

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT		CULTURAL HERITAGE SCREENING REPORT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		LOCATION OF STUDY AREA			
wsp GOLDER		PROJECT No.	20141199	FILE No	20141199-2000-R01001
		CADD	DCH/AM	Oct 11/22	SCALE AS SHOWN
		CHECK	LCM/MT	Oct 17/22	REV.
		FIGURE 1			

2.0 KEY LEGISLATION & POLICIES

In Ontario, several provincial and municipal policies and legislation guide identifying, protecting, and managing built heritage resources and cultural heritage landscapes.

2.1 Environmental Assessment Act

The *Environmental Assessment Act* (EAA) was drafted to ensure that Ontario's environment is protected, conserved, and wisely managed. Under the EAA, "environment" includes not only natural elements such as air, land, water and plant and animal life, but also the "social, economic and cultural conditions that influence the life of humans or a community", and "any building, structure, machine or other device or thing made by humans". To determine the potential environmental effects of a new development, the Environmental Assessment (EA) process was created to standardize decision-making.

2.2 Planning Act and Provincial Policy Statement 2020

The Ontario *Planning Act* (1990) and associated *Provincial Policy Statement 2020* (PPS 2020) mandate heritage conservation in land use planning. Under the *Planning Act*, conservation of "features of significant architectural, cultural, historical, archaeological or scientific interest" are a "matter of provincial interest" and integrates this at the provincial and municipal levels through the PPS 2020. Issued under Section 3 of the *Planning Act*, PPS 2020 recognizes that cultural heritage and archaeological resources "provide important environmental, economic, and social benefits", and that "encouraging a sense of place, by promoting well-designed built form and cultural planning, and by conserving features that help define character, including *built heritage resources* and *cultural heritage landscapes*" supports long-term economic prosperity (PPS 2020:6,22).

The importance of identifying and evaluating built heritage and cultural heritage landscapes is recognized in two policies of PPS 2020:

- Section 2.6.1 – Significant built heritage resources and significant cultural heritage landscapes shall be conserved.
- Section 2.6.3 – Planning authorities shall not permit development and site alteration on adjacent lands to protected heritage property except where the proposed development and site alteration has been evaluated and it has been demonstrated that the heritage attributes of the protected heritage property will be conserved.

Each of the italicised terms is defined in Section 6.0 of PPS 2020:

- **Adjacent lands:** for the purposes of policy 2.6.3, those lands contiguous to a *protected heritage property* or as otherwise defined in the municipal official plan.
- **Built heritage resource:** means a building, structure, monument, installation or any manufactured or constructed part or remnant that contributes to a property's cultural heritage value or interest as identified by a community, including an Indigenous community. *Built heritage resources* are located on property that may be designated under Parts IV or V of the *Ontario Heritage Act*, or that may be included on local, provincial, federal and/or international registers.
- **Conserved:** means the identification, protection, management and use of built heritage resources, cultural heritage landscapes, and archaeological resources in a manner that ensures their cultural heritage value or interest is retained. This may be achieved by the implementation of recommendations set out in a conservation plan, archaeological assessment, and/or heritage impact assessment that has been approved, accepted, or adopted by the relevant planning authority and/or decision-maker. Mitigative measures and/or alternative development approaches can be included in these plans and assessments.

- **Cultural heritage landscape:** means a defined geographical area that may have been modified by human activity and is identified as having cultural heritage value or interest by a community, including an Indigenous community. The area may include features such as buildings, structures, spaces, views, archaeological sites, or natural elements that are valued together for their interrelationship, meaning, or association. Cultural heritage landscapes may be properties that have been determined to have cultural heritage value or interest under the *Ontario Heritage Act*; or have been included on federal and/or international registers, and/or protected through official plan, zoning by-law, or other land use planning mechanisms.
- **Development:** means the creation of a new lot, a change in land use, or the construction of buildings and structures requiring approval under the Planning Act.
- **Heritage attributes:** the principal features or elements that contribute to a protected heritage property's cultural heritage value or interest, and may include the property's built, constructed, or manufactured elements, as well as natural landforms, vegetation, water features, and its visual setting (e.g., significant views or vistas to or from a protected heritage property).
- **Protected heritage property:** property designated under Parts IV, V, or VI of the *Ontario Heritage Act*; property subject to a heritage conservation easement under Parts II or IV of the *Ontario Heritage Act*; property identified by the Province and prescribed public bodies as provincial heritage property under the Standards and Guidelines for Conservation of Provincial Heritage Properties; property protected under federal legislation, and UNESCO World Heritage Sites.
- **Significant:** means, in regard to cultural heritage and archaeology, resources that have been determined to have cultural heritage value or interest. Processes and criteria for determining cultural heritage value or interest are established by the Province under the authority of the *Ontario Heritage Act*.

Importantly, the definition for *significant* includes a caveat that “while some significant resources may already be identified and inventoried by official sources, the significance of others can only be determined after evaluation.”

For municipalities, PPS 2020 is implemented through an Official Plan, which may outline further heritage policies.

2.3 Ontario Heritage Act and Ontario Regulation 9/06

The *Ontario Heritage Act* (OHA) enables the Province and municipalities to conserve significant individual properties and areas. For provincially owned, administered, or occupied heritage properties, compliance with the MCM Standards and Guidelines is mandatory under Part III of the OHA and holds the same authority for ministries and prescribed public bodies as a Management Board or Cabinet directive. For municipalities, Part IV, and Part V of the OHA enables council to “designate” individual properties (Part IV), or properties within a heritage conservation district (HCD) (Part V), as being of “cultural heritage value or interest” (CHVI). Evaluation for CHVI under the OHA (or *significance* under PPS 2020) is guided by *Ontario Regulation 9/06* (O. Reg. 9/06), which prescribes the *criteria for determining cultural heritage value or interest*. O. Reg. 9/06 has three categories of absolute or non-ranked criteria, each with three sub-criteria:

- 1) The property has design value or physical value because it:
 - i) Is a rare, unique, representative or early example of a style, type, expression, material or construction method;
 - ii) Displays a high degree of craftsmanship or artistic merit; or,
 - iii) Demonstrates a high degree of technical or scientific achievement.

- 2) The property has historic value or associative value because it:
- i) Has direct associations with a theme, event, belief, person, activity, organization, or institution that is significant to a community;
 - ii) Yields, or has the potential to yield information that contributes to an understanding of a community or culture; or,
 - iii) Demonstrates or reflects the work or ideas of an architect, artist, builder, designer, or theorist who is significant to a community.
- 3) The property has **contextual value** because it:
- i) Is important in defining, maintaining or supporting the character of an area;
 - ii) Is physically, functionally, visually or historically linked to its surroundings; or,
 - iii) Is a landmark.

A property needs to meet only one criterion of *O. Reg. 9/06* to be considered for designation under Part IV of the *OHA*. If found to meet one or more criterion, the property's CHVI is then described with a Statement of Cultural Heritage Value or Interest (SCHVI) that includes a brief property description, a succinct statement of the property's cultural heritage significance, and a list of its heritage attributes. In the *OHA* heritage attributes are defined slightly differently to the PPS 2020 and directly linked to real property¹; therefore, in most cases a property's CHVI applies to the entire land parcel, not just individual buildings or structures. Once a municipal council decides to designate a property, it is recognized through by-law and added to a "Register" maintained by the municipal clerk. A municipality may also "list" a property on the Register to indicate it as having potential cultural heritage value or interest.

¹ The *OHA* definition "heritage attributes means, in relation to real property, and to the buildings and structures on the real property, the attributes of the property, buildings and structures that contribute to their cultural heritage value or interest."

3.0 SCOPE & METHOD

The scope for a CHSR is outlined in the *MCM Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes: A Checklist for the Non-Specialist* (2016; the *MCM Checklist*). The *MCM Checklist* provides a tool to identify from desktop sources all known or recognized built heritage resources and cultural heritage landscapes in a Study Area, as well as commemorative plaques, cemeteries, Canadian Heritage River watersheds, properties with buildings 40 or more years old, or potential cultural heritage landscapes. Since cultural heritage is linked to real property under the *OHA*, the desktop analysis included all parcels within or crossed by the Study Area boundaries.

To complete the *MCM Checklist*, Golder undertook the following tasks:

- **Task 1:** Review of federal, provincial, and municipal heritage registers, inventories, databases, historical maps, and aerial imagery to identify known or potential cultural heritage resources within the Study Area. These sources include:
 - *Canadian Register of Historic Places* (<https://www.historicplaces.ca/en/pages/about-apropos.aspx>)
 - *Parks Canada Directory of Federal Heritage Designations* (http://www.pc.gc.ca/apps/dfhd/search-recherche_eng.aspx) and *Directory of Heritage Railway Stations* (<https://www.pc.gc.ca/en/culture/clmhc-hsmbc/pat-her/gar-sta/on>)
 - *Ontario Heritage Trust Ontario Places of Worship Inventory* (<https://www.heritagetrust.on.ca/en/places-of-worship/places-of-worship-database/search>) and *Plaque Database* (<https://www.heritagetrust.on.ca/en/index.php/pages/tools/plaque-database>)
 - *Canadian Heritage Rivers System* (<https://chrs.ca/en>)
 - *Ontario Historical County Maps Project Web Map Application* (<http://utoronto.maps.arcgis.com/apps/webappviewer/index.html?id=8cc6be34f6b54992b27da17467492d2f>)
 - *Historic Topographic Map Digitization Project* (<https://ocul.on.ca/topomaps/collection/>)
 - Municipality of Chatham-Kent
 - *Municipal Heritage Register Part I – Designated Properties* (<https://www.chatham-kent.ca/localgovernment/governmentresources/Documents/Designated%20Properties.pdf>)
 - *Municipal Heritage Register – Listed Properties in the Community of Wallaceburg* (<https://www.chatham-kent.ca/localgovernment/governmentresources/Documents/Community%20of%20Wallaceburg.pdf>)
 - *Municipal Heritage Register – Listed Properties in the Community of Dresden* (<https://www.chatham-kent.ca/localgovernment/governmentresources/Documents/Community%20of%20Dresden.pdf>)
 - Google Street View©
- **Task 2:** Contact heritage planning staff at the Municipality of Chatham-Kent.

- **Task 3:** Map all identified known and potential built heritage resources and cultural heritage landscapes and recommended further studies based on the MCM *Checklist*. To reduce complexity in mapping and description, the Study Area was divided into eight areas:
 - **The Potential New LLPS Area** consisting of approximately 369.6 hectares of land for a new low lift pump station (LLPS) located on part of Lot A and Lots 1-6, Concession 1 in the Gore of the former geographic Township of Chatham.
 - **The Base Line and Bluewater Line ROW** between the Potential New LLPS Area and the WTP Area in the Gore of the former geographic Township of Chatham.
 - **The WTP Area** consisting of the existing Wallaceburg Water Treatment Plant (WTP), a 10.7 hectare parcel of land located at 6780 Base Line, located on part of Lot 1, Concession 19 in the former geographic Township of Chatham.
 - **The Base Line ROW** between Murray Street in Wallaceburg in the Gore of the former geographic Township of Chatham and North Street south of Dresden in the Gore of the former geographic Township of Camden.
 - **The McCreary Line ROW** between Kimball Road outside Wallaceburg in the Gore of the former geographic Township of Chatham and the Dresden elevated tank outside Dresden in the Gore of the former geographic Township of Camden.
 - **The Baldoon Road ROW** between Base Line and the Sydenham River adjacent to the WTP Area on the border of the former geographic Townships of Chatham and Dover.
 - **The Border Road ROW** between the Sydenham River and the 18th Concession Drain on the border of the former geographic Townships of Chatham and Dover.
 - **The Elbow Line ROW** including a 30-metre wide unpaved ROW between Elbow Line and Swan Line in the former geographic Township of Chatham.

4.0 STUDY RESULTS

4.1 Overview of Study Results

Tasks 1 to 3 identified:

- No protected heritage properties designated under Part IV of the *Ontario Heritage Act*
- No protected heritage properties designated under Part V of the *Ontario Heritage Act*
 - No properties listed (not designated) on the Municipality of Chatham-Kent's Municipal Heritage Register Part I – Designated Properties or Municipal Heritage Register – Listed Properties in the Community of Wallaceburg
- 309 properties with buildings or structures 40 or more years old of potential cultural heritage value or interest (CHVI)

These are identified by area in the following sub-sections. the completed MCM *Checklist* and supplementary documentation is provided in Appendix A and Appendix B.

4.2 Results of Engagement

Table 1 lists the results of engagement with Greg Houston, Planner II of the Municipality of Chatham-Kent Planning Services heritage planning staff.

Table 1: Municipal engagement

Information Request	Response Received
Query sent via email on December 8, 2020 to confirm that the Municipality's registry of designated properties, listed properties, and cultural heritage landscapes is up to date.	Response received via email on December 9, 2020 stating that the Municipality's registries are up to date and that there are no listed or designated properties within the Study Area, nor cultural landscapes. The email noted that the Study Area is adjacent to adjacent to Walpole Island First Nation, Bkejwanong Territory.
Queries sent via email on April 6 and May 5, 2021 following additions to the Study Area to confirm that the Municipality's registry of designated properties, listed properties, and cultural heritage landscapes is up to date.	Responses received via email on April 7 and May 5, 2021 stating that the Municipality's registries are up to date and that there are no listed or designated properties within the Study Area, nor cultural landscapes. The email on April 7 noted several properties in the registers in the general vicinity of the Study Area, though none of these are within or adjacent to the Study Area.
Query sent via email on January 28, 2022 following additions to the Study Area to confirm that the Municipality's registry of designated properties, listed properties, and cultural heritage landscapes is up to date.	Response received via email on February 1, 2022 stating that the Municipality's registries are up to date and that there are no listed or designated properties within the Study Area, nor cultural landscapes.

4.3 Identified Known and Potential Built Heritage Resources & Cultural Heritage Landscapes

4.3.1 Potential New LLPS Area

Table 2 lists the known and potential properties of CHVI in the Potential New LLPS Area in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 2.

Table 2: Known and Potential Properties of CHVI in the Potential New LLPS Area Identified through Desktop Analysis

Civic Address	Description	Cultural Heritage Status
8 Ash Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
6217 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
29069 Bluewater Crescent	Property with buildings or structures 40 or more years old	Property of potential CHVI
5595 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5599 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5616 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5732 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5856 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5858 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5860 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5878 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5928 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5969 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5975 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5997 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
5999 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6001 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6005 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6009 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6011 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6015 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6025 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6029 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
3073 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
3077 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI

Civic Address	Description	Cultural Heritage Status
3081 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
3085 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
3089 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
3093 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
3097 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4001 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4005 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4015 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4045 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4047 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4049 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4073 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4077 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4081 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4085 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4089 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4093 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4097 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5001 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5007 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5009 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5011 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5017 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5021 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5025 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5029 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI

Civic Address	Description	Cultural Heritage Status
5033 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5037 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5041 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5045 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5049 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5055 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5057 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5061 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5065 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5067 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5069 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5073 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5077 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5081 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5085 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5087 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5089 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
5093 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
6009 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
6013 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
6017 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
6021 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
6065 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
6069 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
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6097 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7001 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7013 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7017 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7021 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7025 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7029 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7033 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7035 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
7049 Dufferin Avenue	Property with buildings or structures 40 or more years old	Property of potential CHVI
4 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
8 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
12 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
16 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
20 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
24 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
28 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
32 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
36 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
40 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
44 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
48 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
52 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI

Civic Address	Description	Cultural Heritage Status
56 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
60 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
64 Irwin Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
1 Maple Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
9 Maple Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
13 Maple Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
17 Maple Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
21 Maple Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
29108 Mirwin Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29232 Mirwin Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
4 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
5 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
8 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
9 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
12 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
13 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
16 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
17 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
20 Poplar Street	Property with buildings or structures 40 or more years old	Property of potential CHVI



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 (IMAGE DATE UNKOWN).

NOTES

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PROJECT

CULTURAL HERITAGE SCREENING REPORT
CHATHAM-KENT WALLACEBURG
TREATMENT SERVICING CLASS EA
CHATHAM-KENT, ONTARIO

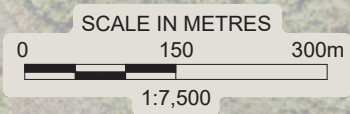
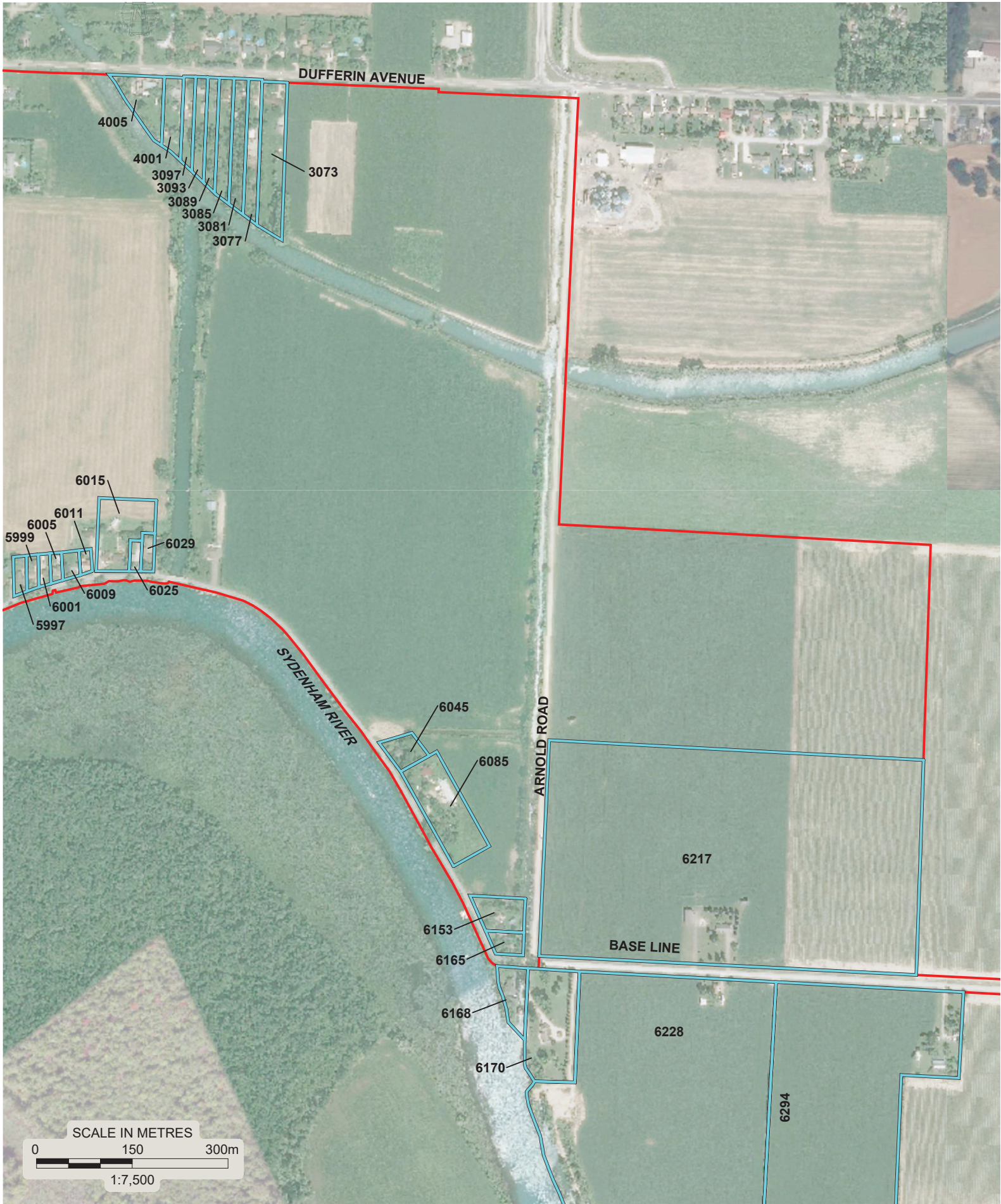
TITLE

KNOWN AND POTENTIAL PROPERTIES OF
CHVI IDENTIFIED IN THE POTENTIAL NEW LLPS
AREA (1 of 2)

wspGOLDER

PROJECT No.	20141199	FILE No.20141199-2000-R01002
CADD	DCH/AM	Sept 13/22
CHECK	LCM/MT	Oct 17/22

SCALE	AS SHOWN	REV.
FIGURE 2A		



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 (IMAGE DATE UNKOWN).

NOTES

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ALL LOCATIONS ARE APPROXIMATE.

PROJECT	CULTURAL HERITAGE SCREENING REPORT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO				
	TITLE KNOWN AND POTENTIAL PROPERTIES OF CHVI IDENTIFIED IN THE POTENTIAL NEW LLPS AREA (2 of 2)				
wspGOLDER	PROJECT No.		20141199		FILE No.20141199-2000-R01002
	CADD		DCH/AM	Oct 11/22	SCALE AS SHOWN
	CHECK		LCMMT	Oct 17/22	REV.
	FIGURE 2B				

4.3.2 Base Line and Bluewater Line ROW

Table 3 lists the known and potential properties of CHVI adjacent to the Base Line and Bluewater Line ROW in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 3.

Table 3: Known and Potential Properties of CHVI Adjacent to the Base Line and Bluewater Line ROW Identified through Desktop Analysis

Civic Address	Description	Cultural Heritage Status
8 Baldoon Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
6217 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6228 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6294 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6305 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6359 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6370 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6447 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6460 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6469 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6482 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6520 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6560 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6568 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6590 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6596 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6045 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6085 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6153 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6165 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6168 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
6170 Bluewater Line	Property with buildings or structures 40 or more years old	Property of potential CHVI



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 (IMAGE DATE UNKOWN).

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PROJECT

CULTURAL HERITAGE SCREENING REPORT
CHATHAM-KENT WALLACEBURG
TREATMENT SERVICING CLASS EA
CHATHAM-KENT, ONTARIO

TITLE

KNOWN AND POTENTIAL PROPERTIES OF
CHVI IDENTIFIED ADJACENT TO
BASE LINE and BLUEWATER LINE ROW

PROJECT No.	20141199	FILE No	20141199-2000-R01002
CADD	DCH/AM	Sept 13/22	SCALE AS SHOWN
CHECK	LCMMT	Oct 17/22	REV.

FIGURE 3

4.3.3 WTP Area

Table 4 lists the known and potential properties of CHVI in the WTP Area in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 4.

Table 4: Known and Potential Properties of CHVI in the WTP Area Identified through Desktop Analysis

Civic Address or Location	Description	Cultural Heritage Status
6750/6780 Base Line	Existing Water Treatment Plant; Property with buildings or structures 40 or more years old	Property of potential CHVI



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

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PROJECT		CULTURAL HERITAGE SCREENING REPORT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		KNOWN AND POTENTIAL PROPERTIES OF CHVI IDENTIFIED IN THE WTP AREA			
	PROJECT No.		20141199		FILE No20141199-2000-R01002
	CADD		DCH/AM	Sept 13/22	SCALE AS SHOWN
	CHECK		LCM/MT	Oct 17/22	REV.
			FIGURE 4		

4.3.4 Base Line ROW, Wallaceburg to Dresden

Table 5 lists the known and potential properties of CHVI adjacent to the Base Line ROW, Wallaceburg to Dresden in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 5.

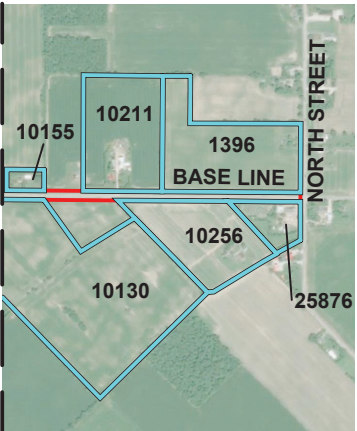
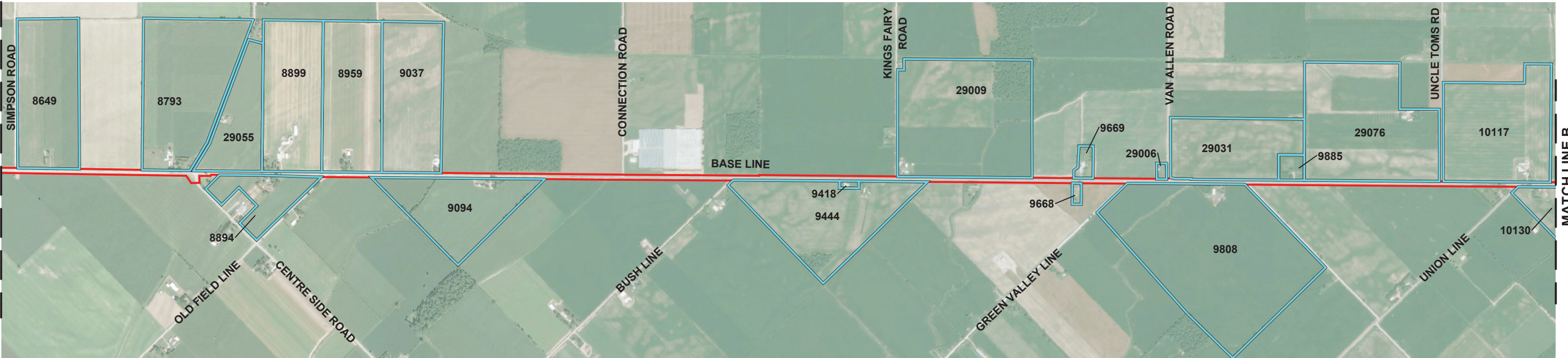
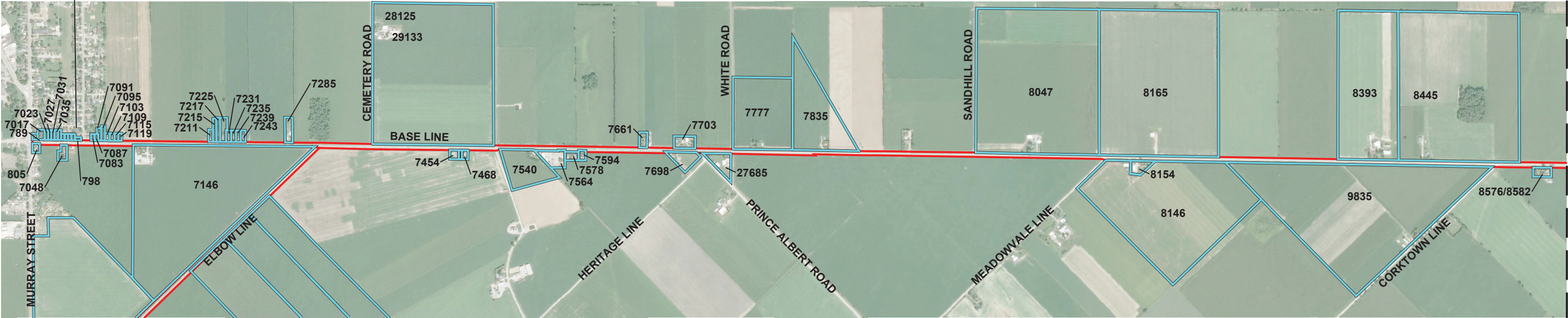
Table 5: Known and Potential Properties of CHVI Adjacent to the Base Line ROW, Wallaceburg to Dresden Identified through Desktop Analysis

Civic Address	Description	Cultural Heritage Status
798 Albert Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
7017 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7023 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7027 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7031 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7035 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7039 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7043 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7048 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7051 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7055 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7059 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7083 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7087 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7091 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7095 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7103 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7109 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7115 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7119 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7146 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7211 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7215 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI

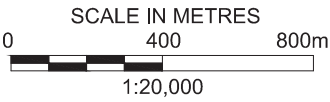
Civic Address	Description	Cultural Heritage Status
7217 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7225 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7231 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7235 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7239 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7243 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7285 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7454 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7468 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7540 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7564 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7578 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7594 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7661 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7698 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7703 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7777 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7835 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8047 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8146 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8154 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8165 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8393 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8445 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8582 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8649 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI

Civic Address	Description	Cultural Heritage Status
8793 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8894 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8899 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8959 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9037 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9094 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9418 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9444 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9668 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9669 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9808 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9885 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
10117 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
10130 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
10155 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
10211 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
10256 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
25876 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
29125 Cemetery Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29133 Cemetery Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29055 Centre Side Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
9835 Corktown Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
29009 Kings Ferry Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
789 Murray Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
805 Murray Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
1396 North Street	Property with buildings or structures 40 or more years old	Property of potential CHVI

Civic Address	Description	Cultural Heritage Status
27685 Prince Albert Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29076 Uncle Toms Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29006 Van Allen Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29031 Van Allen Road	Property with buildings or structures 40 or more years old	Property of potential CHVI



- LEGEND**
- APPROXIMATE LOCATION OF STUDY AREA
 - KNOWN/ POTENTIAL PROPERTY OF CHVI



REFERENCE


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PROJECT				CULTURAL HERITAGE SCREENING REPORT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE				KNOWN AND POTENTIAL PROPERTIES OF CHVI IDENTIFIED ADJACENT TO BASE LINE ROW (WALLACEBURG to DRESDEN)			
 GOLDER		PROJECT No.		20141199		FILE No: 20141199-2000-R01002	
		CADD	DCH	Sept 13/22		SCALE	AS SHOWN
		CHECK	LCMMT	Oct 17/22		REV.	
				FIGURE 5			

4.3.5 McCreary Line ROW

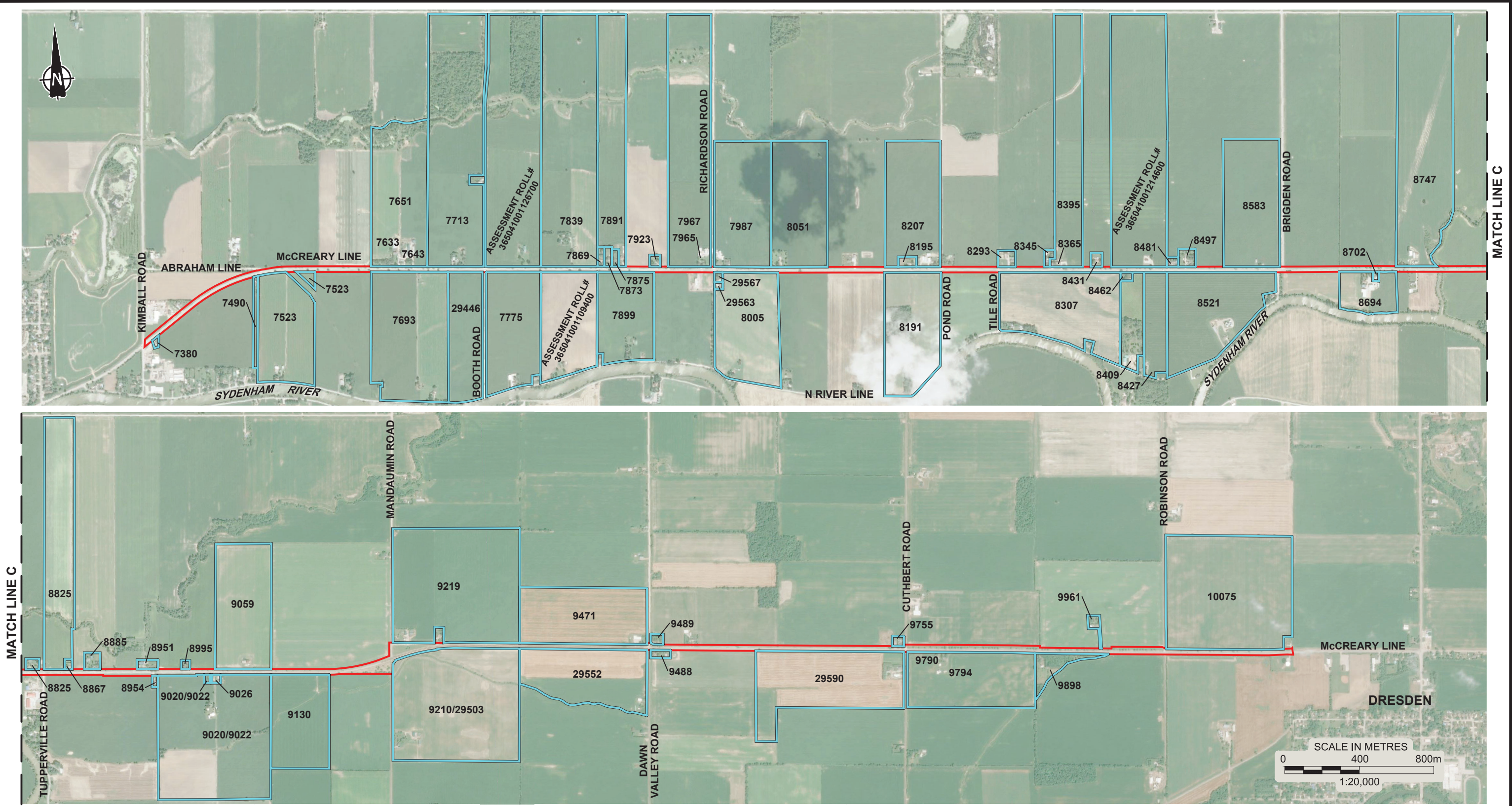
Table 6 lists the known and potential properties of CHVI adjacent to the McCreary Line ROW in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 6.

Table 6: Known and Potential Properties of CHVI Adjacent to the McCreary Line ROW Identified through Desktop Analysis

Civic Address/Roll #	Description	Cultural Heritage Status
29446 Booth Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29552 Dawn Valley Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29590 Cuthbert Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29503 Mandaumun Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
7380 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7490 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7633 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7643 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7651 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7713 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
Assessment Roll # 365041001126700	Property with buildings or structures 40 or more years old	Property of potential CHVI
7839 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7869 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7873 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7875 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7891 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7923 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7965 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7967 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7987 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8051 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8195 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8207 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8293 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8345 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8365 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI

Civic Address/Roll #	Description	Cultural Heritage Status
8395 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8431 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8462 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
Assessment Roll # 365041001214600	Property with buildings or structures 40 or more years old	Property of potential CHVI
8481 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8497 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8583 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8694 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8702 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8747 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8825 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8867 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8885 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8951 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8954 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8995 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9020 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9022 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9026 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9056 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9130 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9219 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9471 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9488 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9489 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9525 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9755 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9790 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9794 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9898 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI

Civic Address/Roll #	Description	Cultural Heritage Status
9961 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
10075 McCreary Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7523 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7693 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
7775 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
Assessment Roll # 365041001109400	Property with buildings or structures 40 or more years old	Property of potential CHVI
7899 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8005 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8191 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8307 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8409 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8427 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8521 North River Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
29563 Richardson Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
29567 Richardson Road	Property with buildings or structures 40 or more years old	Property of potential CHVI



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 (IMAGE DATE UNKOWN).

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PROJECT

CULTURAL HERITAGE SCREENING REPORT
CHATHAM-KENT WALLACEBURG
TREATMENT SERVICING CLASS EA
CHATHAM-KENT, ONTARIO

TITLE

KNOWN AND POTENTIAL PROPERTIES OF CHVI
IDENTIFIED ADJACENT TO
McCREARY LINE ROW

GOLDER

PROJECT No.	20141199	FILE No	20141199-2000-R01002
CADD	DCH/AM	Sept 13/22	SCALE AS SHOWN
CHECK	LCMMT	Oct 17/22	REV.

FIGURE 6

4.3.6 Baldoon Road ROW

Table 7 lists the known and potential properties of CHVI adjacent to the Baldoon Road ROW in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 7.

Table 7: Known and Potential Properties of CHVI Adjacent to the Baldoon Road ROW Identified through Desktop Analysis

Civic Address/Roll #	Description	Cultural Heritage Status
8 Baldoon Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
12 Baldoon Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
24 Baldoon Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
88 Baldoon Road	Property with buildings or structures 40 or more years old	Property of potential CHVI



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 (IMAGE DATE UNKOWN).

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PROJECT		CULTURAL HERITAGE SCREENING REPORT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		KNOWN AND POTENTIAL PROPERTIES OF CHVI IDENTIFIED ADJACENT TO THE BALDOON ROAD ROW			
	PROJECT No.		20141199		FILE N:20141199-2000-R01002
	CADD	DCH/AM	Sept 13/22		SCALE AS SHOWN
	CHECK	LCMMT	Oct 17/22		REV.
					FIGURE 7

4.3.7 Border Road ROW

Table 8 lists the known and potential properties of CHVI adjacent to the Border Road ROW in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 8.

Table 8: Known and Potential Properties of CHVI Adjacent to the Border Road ROW Identified through Desktop Analysis

Civic Address/Roll #	Description	Cultural Heritage Status
28254 Border Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
28252 Border Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
28248 Border Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
28246 Border Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
28240 Border Road	Property with buildings or structures 40 or more years old	Property of potential CHVI
8537 Wren Line	Property with buildings or structures 40 or more years old	Property of potential CHVI



LEGEND


- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 (IMAGE DATE UNKOWN).

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PROJECT		CULTURAL HERITAGE SCREENING REPORT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO			
TITLE		KNOWN AND POTENTIAL PROPERTIES OF CHVI IDENTIFIED ADJACENT TO THE BORDER ROAD ROW			
		PROJECT No.		20141199	
		FILE No		20141199-2000-R01002	
		SCALE		AS SHOWN	
		REV.			
		CADD	DCH/AM	Sept 13/22	
		CHECK	LCMMT	Oct 17/22	
		FIGURE 8			

4.3.8 Elbow Line ROW

Table 9 lists the known and potential properties of CHVI adjacent to the Elbow Line ROW in alphabetical order by street name. These known and potential properties of CHVI are mapped on Figure 9.

Table 9: Known and Potential Properties of CHVI Adjacent to the Elbow Line ROW Identified through Desktop Analysis

Civic Address/Roll #	Description	Cultural Heritage Status
7146 Base Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
27957 Elbow Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
8973 Heritage Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
9023 Heritage Line	Property with buildings or structures 40 or more years old	Property of potential CHVI
955 Murray Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
985 Murray Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
1011 Murray Street	Property with buildings or structures 40 or more years old	Property of potential CHVI
1021 Murray Street	Property with buildings or structures 40 or more years old	Property of potential CHVI



LEGEND

- APPROXIMATE LOCATION OF STUDY AREA
- KNOWN/ POTENTIAL PROPERTY OF CHVI

REFERENCE

DRAWING BASED ON PARCEL DATA SET PROVIDED BY JACOBS, DECEMBER 2020; AND BING IMAGERY AS OF MARCH 6 - 2021 (IMAGE DATE UNKOWN).

NOTES

THIS DRAWING IS SCHEMATIC ONLY AND IS TO BE READ IN CONJUNCTION WITH ACCOMPANYING TEXT.
BING IMAGERY USED FOR ILLUSTRATION PURPOSES ONLY AND NOT TO BE USED FOR MEASUREMENTS.
ALL LOCATIONS ARE APPROXIMATE.

PROJECT	CULTURAL HERITAGE SCREENING REPORT CHATHAM-KENT WALLACEBURG TREATMENT SERVICING CLASS EA CHATHAM-KENT, ONTARIO				
	TITLE KNOWN AND POTENTIAL PROPERTIES OF CHVI IDENTIFIED ADJACENT TO THE ELBOW ROAD ROW				
	PROJECT No.		20141199		
wsp GOLDER	CADD	DCH/AM	Sept 13/22	SCALE	AS SHOWN
	CHECK	LCM/MT	Oct 17/22	REV.	
	FIGURE 9				

5.0 RECOMMENDATIONS

Due to the high number of potential built heritage resources in the Study Area, Golder recommends to:

- site and route all infrastructure to avoid the built heritage resources and cultural heritage landscapes identified in this CHSR.
 - properties of potential CHVI can be avoided by limiting all construction to within public rights-of-way.
- if properties of potential CHVI property cannot be feasibly avoided, consult the Municipality of Chatham-Kent to determine if a Cultural Heritage Evaluation Report (CHER) is required.
 - if required, the CHER should determine if the property meets the criteria for CHVI prescribed in *Ontario Regulation 9/06*. If the CHER finds that the resource has CHVI, conduct an HIA prior to detailed design to recommend the appropriate mitigations.

If multiple potential built heritage resources and cultural heritage landscapes identified in this CHSR cannot be feasibly avoided, Golder recommends to:

- conduct a Cultural Heritage Report: Existing Conditions and Preliminary Impact Assessment (CHR) prior to detailed design. The CHR should:
 - evaluate at a preliminary level the properties of potential CHVI to determine if they meet the criteria for CHVI prescribed in *Ontario Regulation 9/06*.
 - identify impacts to the properties evaluated to have CHVI.
 - recommend the appropriate mitigations to avoid or reduce adverse impacts to all built heritage resources and cultural heritage landscapes.

Signature Page

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 Joel Conrad of WSP at joel.conrad@wsp.com.

Golder Associates Ltd.



Lafe Meichenheimer, M.A.
Project Archaeologist



Michael Teal, M.A.
Director, Archaeology and Heritage - Ontario

LCM/HC/RN/MT/ly/ca/mp

c:\users\mopatell\downloads\20141199-2000-r01 jacobs wallaceburg wtp ea chsr_aoda-30jan2023.docx

APPENDIX A

MTCS Checklist

**Criteria for Evaluating Potential
for Built Heritage Resources and
Cultural Heritage Landscapes
A Checklist for the Non-Specialist**

This checklist has been reviewed and filled out, all relevant questions and answers have been retained.

Project or Property Name: Chatham-Kent Wallaceburg Treatment Servicing Class Environmental Assessment

Project or Property Location (upper and lower or single tier municipality): Municipality of Chatham-Kent:

Proponent Name: Jacobs

Proponent Contact Information: Ray Yu (ray.yu@jacobs.com)

Screening Questions

1. Is there a pre-approved screening checklist, methodology or process in place? No

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found **not** to be of cultural heritage value? No.
3. Is the property (or project area):
 - a. identified, designated or otherwise protected under the Ontario Heritage Act as being of cultural heritage value? No.
 - b. National Historic Site (or part of)? No.
 - c. designated under the Heritage Railway Stations Protection Act? No.
 - d. designated under the Heritage Lighthouse Protection Act? No.
 - e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)? No.
 - f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site? No.

Part B: Screening for Potential Cultural Heritage Value

4. Does the property (or project area) contain a parcel of land that:
 - a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque? No.
 - b. has or is adjacent to a known burial site and/or cemetery? No.
 - c. is in a Canadian Heritage River watershed? No.
 - d. contains buildings or structures that are 40 or more years old? Yes.
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):
 - a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area? No.
 - b. has a special association with a community, person or historical event? No.
 - c. contains or is part of a cultural heritage landscape? No.

APPENDIX B

Supplementary Documentation

Meicenheimer, Lafe

From: Greg Houston <GREG.HOUSTON@chatham-kent.ca>
Sent: May 5, 2021 13:31
To: Meicenheimer, Lafe
Subject: RE: Attn. Heritage Planner. Wallaceburg CHSR

EXTERNAL EMAIL

Good Afternoon,

The properties I had listed in my previous e-mail were the only heritage properties located in the general area of the study area. If they are not located within your limits, then there are none.

Thanks,

Greg Houston

Planner II, Planning Services
Municipality of Chatham-Kent

P 519.360.1998 x3045

E greg.houston@chatham-kent.ca

www.chatham-kent.ca

From: Meicenheimer, Lafe <Lafe_Meicenheimer@golder.com>
Sent: May 5, 2021 12:12 PM
To: Greg Houston <GREG.HOUSTON@chatham-kent.ca>
Subject: RE: Attn. Heritage Planner. Wallaceburg CHSR

NOTE: This email chain appears to contain email from outside Golder

Hi Greg,

I'm just following up regarding this assessment. Are you aware of any additional built heritage concerns along the municipal rights-of-way of Base Line from Murray Street in Wallaceburg to North Street south of Dresden, and McCreary Line from Kimball Road outside of Wallaceburg to the water tower outside Dresden?

Thanks,

Lafe Meicenheimer (M.A.) (he, him, his)
Staff Archaeologist



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Please consider the environment before printing this email.

From: Greg Houston <GREG.HOUSTON@chatham-kent.ca>
Sent: April 7, 2021 14:12
To: Meicenheimer, Lafe <Lafe_Meicenheimer@golder.com>
Subject: RE: Attn. Heritage Planner. Wallaceburg CHSR

EXTERNAL EMAIL

Good Afternoon Lafe,

Unfortunately our website is down right now until tomorrow but I have listed a few properties below in the general area to consider: These would fall within Chatham (Township) and Camden.

7230 John Park Line
8296 Starkweather Line - Designated
10 John Park Line
9112 Glasgow Line
29251 Uncle Tom's Road – Designated

Thanks,

Greg Houston
Planner II, Planning Services
Municipality of Chatham-Kent

P 519.360.1998 x3045
E greg.houston@chatham-kent.ca
www.chatham-kent.ca

From: Meicenheimer, Lafe <Lafe_Meicenheimer@golder.com>
Sent: April 6, 2021 3:43 PM
To: Greg Houston <GREG.HOUSTON@chatham-kent.ca>
Subject: RE: Attn. Heritage Planner. Wallaceburg CHSR

NOTE: This email chain appears to contain email from outside Golder

Greg,

I hope this email finds you well. The study area for this project has been amended to include the municipal rights-of-way of Base Line from Murray Street in Wallaceburg to North Street south of Dresden, and McCreary Line from Kimball Road outside of Wallaceburg to the water tower outside Dresden. I checked the *Municipal Heritage Register Part I* and the *Listed Properties in the Community of Wallaceburg* and found no registered or listed properties within the new portions of the Study Area.

Besides the registers, there any built heritage concerns that you are aware of in this Study Area?

Thanks again for your help!

Take care,

Lafe Meichenheimer (M.A.)

Staff Archaeologist



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From: Greg Houston <GREG.HOUSTON@chatham-kent.ca>

Sent: December 9, 2020 08:38

To: Meichenheimer, Lafe <Lafe_Meichenheimer@golder.com>

Subject: RE: Attn. Heritage Planner. Wallaceburg CHSR

EXTERNAL EMAIL

Good Morning Lafe,

Our Register is up to date and there are no listed or designated properties in the area.

One thing I will note is the study area is adjacent to Walpole Island First Nation, Bkejwanong Territory.

Thanks,

Greg Houston

Planner II, Planning Services

Municipality of Chatham-Kent

P 519.360.1998 x3045

E greg.houston@chatham-kent.ca

www.chatham-kent.ca

From: Meichenheimer, Lafe <Lafe_Meichenheimer@golder.com>

Sent: December 8, 2020 11:03 AM

To: CKplanning <CKplanning@chatham-kent.ca>

Subject: Attn. Heritage Planner. Wallaceburg CHSR

Hello,

I am conducting a Cultural Heritage Screening Report for the Wallaceburg Water Treatment Servicing Class EA and I have a few questions for the Heritage Planner. Please find the Study Area attached for reference.

Are the registers found online up to date? I checked the *Municipal Heritage Register Part I* and the *Listed Properties in the Community of Wallaceburg* and found no registered or listed properties within the Study Area.

Besides the registers, there any built heritage concerns that you are aware of in this Study Area?

Thank you in advance for your help,

Lafe Meicenheimer (M.A.)

Staff Archaeologist



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