STAGE 1 ARCHAEOLOGICAL ASSESSMENT
ERIN WASTEWATER SERVICING
PART OF LOTS 22-25, CONCESSION 7,
PART OF LOTS 23-26, CONCESSION 8,
PART OF LOTS 11-18, CONCESSION 9,
AND PART OF LOTS 12-17, CONCESSION 10
(FORMER TOWNSHIP OF ERIN)
TOWN OF ERIN
COUNTY OF WELLINGTON, ONTARIO

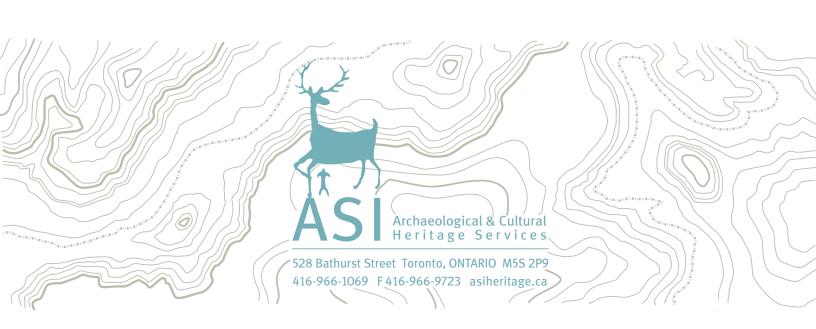
### **ORIGINAL REPORT**

Prepared for:

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Archaeological Licence #P094 (Merritt)
Ministry of Tourism, Culture and Sport PIF# P094-0233-2017
ASI File: 16EA-007

15 December 2017



Stage 1 Archaeological Assessment
Erin Wastewater Servicing
Part of Lots 22, 23 and 25, Concession 7,
Part of Lots 23-26, Concession 8,
Part of Lots 11-18, Concession 9,
and Part Of Lots 12-17, Concession 10
(Former Township Of Erin)
Town Of Erin
County Of Wellington, Ontario

#### **EXECUTIVE SUMMARY**

Archaeological Services Inc. (ASI) was contracted by Ainley Group to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Erin Wastewater Servicing Municipal Class Environmental Assessment in the Town of Erin. This project involves the proposed construction of a wastewater collection system, forcemains, and sanitary pumping stations for the Villages of Erin and Hillsburgh and the establishment of a centralised wastewater treatment facility in Erin Village. The sewer network is not designed to depart the existing road right-of-ways.

The Stage 1 background study determined that two previously registered archaeological sites are located within one kilometre of the Study Area. The property inspection determined that parts of the Study Area exhibit archaeological potential and will require Stage 2 assessment, prior to development.

In light of these results, the following recommendations are made:

- 1. The Study Area exhibits archaeological potential. These lands require Stage 2 archaeological assessment by test pit and pedestrian survey at a five metre intervals, where appropriate, prior to any proposed impacts to the property;
- 2. The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance or low and wet conditions. These lands do not require further archaeological assessment; and,
- 3. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.



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# 1.0 PROJECT CONTEXT

Archaeological Services Inc. (ASI) was contracted by Ainley Group to conduct a Stage 1 Archaeological Assessment (Background Research and Property Inspection) as part of the Erin Wastewater Servicing Municipal Class Environmental Assessment in the Town of Erin (Figure 1). This project involves the proposed construction of a wastewater collection system, forcemains, and sanitary pumping stations for the Villages of Erin and Hillsburgh and the establishment of a centralised wastewater treatment facility in Erin Village. The sewer network is not designed to depart the existing road right-of-ways.

All activities carried out during this assessment were completed in accordance with the *Ontario Heritage Act* (1990, as amended in 2009) and the 2011 *Standards and Guidelines for Consultant Archaeologists* (S & G), administered by the Ministry of Tourism, Culture and Sport (MTCS).

In the S & G, Section 1, the objectives of a Stage 1 archaeological assessment are discussed as follows:

- To provide information about the history, current land conditions, geography, and previous archaeological fieldwork of the Study Area;
- To evaluate in detail the archaeological potential of the Study Area that can be used, if necessary, to support recommendations for Stage 2 archaeological assessment for all or parts of the Study Area; and,
- To recommend appropriate strategies for Stage 2 archaeological assessment, if necessary.

This report describes the Stage 1 archaeological assessment that was conducted for this project and is organized as follows: Section 1.0 summarizes the background study that was conducted to provide the historical and archaeological contexts for the project Study Area; Section 2.0 addresses the field methods used for the property inspection that was undertaken to document its general environment, current land use history and conditions of the Study Area; Section 3.0 analyses the characteristics of the project Study Area and evaluates its archaeological potential; Section 4.0 provides recommendations; and the remaining sections contain other report information that is required by the S & G, e.g., advice on compliance with legislation, works cited, mapping and photo-documentation.

# 1.1 Development Context

All work has been undertaken as required by the *Environmental Assessment Act*, RSO (1990) and regulations made under the Act, and are therefore subject to all associated legislation. This project is being conducted in accordance with the Municipal Engineers' Association document *Municipal Class Environmental Assessment* (2000 as amended in 2007, 2011 and 2015).

Authorization to carry out the activities necessary for the completion of the Stage 1 archaeological assessment was granted by Ainley Group on April 18, 2017.



#### 1.2 Historical Context

The purpose of this section, according to the S & G, Section 7.5.7, Standard 1, is to describe the past and present land use and the settlement history and any other relevant historical information pertaining to the Study Area. A summary is first presented of the current understanding of the Indigenous land use of the Study Area. This is then followed by a review of the historical Euro-Canadian settlement history.

# 1.2.1 Indigenous Land Use and Settlement

Southern Ontario has been occupied by human populations since the retreat of the Laurentide glacier approximately 13,000 years before present (BP) (Ferris 2013). Populations at this time would have been highly mobile, inhabiting a boreal-parkland similar to the modern sub-arctic. By approximately 10,000 BP, the environment had progressively warmed (Edwards and Fritz 1988) and populations now occupied less extensive territories (Ellis and Deller 1990).

Between approximately 10,000-5,500 BP, the Great Lakes basins experienced low-water levels, and many sites which would have been located on those former shorelines are now submerged. This period produces the earliest evidence of heavy wood working tools, an indication of greater investment of labour in felling trees for fuel, to build shelter, and watercraft production. These activities suggest prolonged seasonal residency at occupation sites. Polished stone and native copper implements were being produced by approximately 8,000 BP; the latter was acquired from the north shore of Lake Superior, evidence of extensive exchange networks throughout the Great Lakes region. The earliest evidence for cemeteries dates to approximately 4,500-3,000 BP and is indicative of increased social organization, investment of labour into social infrastructure, and the establishment of socially prescribed territories (Ellis et al. 1990, 2009; Brown 1995:13).

Between 3,000-2,500 BP, populations continued to practice residential mobility and to harvest seasonally available resources, including spawning fish. Exchange and interaction networks broaden at this time (Spence et al. 1990:136, 138) and by approximately 2,000 BP, evidence exists for macro-band camps, focusing on the seasonal harvesting of resources (Spence et al. 1990:155, 164). It is also during this period that maize was first introduced into southern Ontario, though it would have only supplemented people's diet (Birch and Williamson 2013:13–15). Bands likely retreated to interior camps during the winter. It is generally understood that these populations were Algonquian-speakers during these millennia of settlement and land use.

From approximately 1,000 BP until approximately 300 BP, lifeways became more similar to that described in early historical documents. During the Early Iroquoian phase (AD 1000-1300), the communal site is replaced by the village focused on horticulture. Seasonal disintegration of the community for the exploitation of a wider territory and more varied resource base was still practised (Williamson 1990:317). By the second quarter of the first millennium BP, during the Middle Iroquoian phase (AD 1300-1450), this episodic community disintegration was no longer practised and populations now communally occupied sites throughout the year (Dodd et al. 1990:343). In the Late Iroquoian phase (AD 1450-1649) this process continued with the coalescence of these small villages into larger communities (Birch and Williamson 2013). Through this process, the socio-political organization of the First Nations, as described historically by the French and English explorers who first visited southern Ontario, was developed. By AD 1600, the communities within Simcoe County had formed the Confederation of Nations encountered by the first European explorers and missionaries. In the 1640s, the



traditional enmity between the Haudenosaunee <sup>1</sup> and the Huron-Wendat (and their Algonkian allies such as the Nippissing and Odawa) led to the dispersal of the Huron-Wendat.

After the dispersal, the Haudenosaunee established a series of settlements at strategic locations along the trade routes inland from the north shore of Lake Ontario, including Teiaiagon, near the mouth of the Humber River; and Ganestiquiagon, near the mouth of the Rouge River. Their locations near the mouths of the Humber and Rouge Rivers, two branches of the Toronto Carrying Place, strategically linked these settlements with the upper Great Lakes through Lake Simcoe. The west branch of the Carrying Place followed the Humber River valley northward over the drainage divide, skirting the west end of the Oak Ridges Moraine, to the East Branch of the Holland River. Another trail followed the Don River watershed.

When the Senecas established Teiaiagon at the mouth of the Humber, they were in command of the traffic across the peninsula to Lake Simcoe and the Georgian Bay. Later, Mississauga and earliest European presence along the north shore, was therefore also largely defined by the area's strategic importance for accessing and controlling long established economic networks. Prior to the arrival of the Seneca, these economic networks would have been used by indigenous groups for thousands of years. While the trail played an important part during the fur trade, people would also travel the trail in order to exploit the resources available to them across south-central Ontario, including the various spawning runs, such as the salmon coming up from Lake Ontario or herring or lake trout in Lake Simcoe.

Due, in large part, to increased military pressure from the French upon their homelands south of Lake Ontario, the Haudenosaunee abandoned their north shore frontier settlements by the late 1680s, although they did not relinquish their interest in the resources of the area, as they continued to claim the north shore as part of their traditional hunting territory. The territory was immediately occupied or re-occupied by Anishinaabek groups, including the Mississauga, Ojibwa (or Chippewa) and Odawa, who, in the early seventeenth century, occupied the vast area extending from the east shore of Georgian Bay, and the north shore of Lake Huron, to the northeast shore of Lake Superior and into the upper peninsula of Michigan. Individual bands were politically autonomous and numbered several hundred people. Nevertheless, they shared common cultural traditions and relations with one another and the land. These groups were highly mobile, with a subsistence economy based on hunting, fishing, gathering of wild plants, and garden farming. Their movement southward also brought them into conflict with the Haudenosaunee.

Peace was achieved between the Haudenosaunee and the Anishinaabek Nations in August of 1701 when representatives of more than twenty Anishinaabek Nations assembled in Montreal to participate in peace negotiations (Johnston 2004:10). During these negotiations captives were exchanged and the Iroquois and Anishinaabek agreed to live together in peace. Peace between these nations was confirmed again at council held at Lake Superior when the Iroquois delivered a wampum belt to the Anishinaabek Nations.

In 1763, following the fall of Quebec, New France was transferred to British control at the Treaty of Paris. The British government began to pursue major land purchases to the north of Lake Ontario in the early nineteenth century, the Crown acknowledged the Mississaugas as the owners of the lands between Georgian Bay and Lake Simcoe and entered into negotiations for additional tracts of land as the need arose to facilitate European settlement.

<sup>&</sup>lt;sup>1</sup> The Haudenosaunee are also known as the New York Iroquois or Five Nations Iroquois and after 1722 Six Nations Iroquois. They were a confederation of five distinct but related Iroquoian–speaking groups - the Seneca, Onondaga, Cayuga, Oneida, and Mohawk. Each lived in individual territories in what is now known as the Finger Lakes district of Upper New York. In 1722 the Tuscarora joined the confederacy.





In 1805, the Mississaugas were granted one mile (approximately 1.6 km) on either side of the Credit River, Twelve Mile Creek and Sixteen Mile Creek. In 1818, the majority of the Mississauga Tract was acquired by the Crown excluding the lands tracts flanking the Credit River, Twelve Mile Creek and Sixteen Mile Creek. In 1820, the remainder of Mississauga land was surrendered except approximately 81 hectares (ha) along the Credit River (Heritage Mississauga 2012:18). In 1825-26 the Credit Indian Village was established as an agricultural community and Methodist mission near present day Port Credit (Heritage Mississauga 2009a; Mississaugas of the New Credit First Nation 2014). By 1840 the village was under significant pressure from Euro-Canadian settlement that plans begun to relocate the settlement. In 1847 the Credit Mississaugas were made a land offer by the Six Nations Council to relocate at the Grand River. In 1847, 266 Mississaugas settled at New Credit, approximately 23 km southwest of Brantford. In 1848 a mission of the Methodist Church was established there by Rev. William Ryerson (Woodland Indian Cultural Education Centre 1985). Although the majority of the former Mississauge Tract had been surrendered from the Mississauga by 1856 (Gould 1981), this does not exclude the likelihood that the Mississauga continued to utilise the landscape at large during travel (Ambrose 1982) and for resource extraction.

The eighteenth century saw the ethnogenesis in Ontario of the Métis, when Métis people began to identify as a separate group, rather than as extensions of their typically maternal First Nations and paternal European ancestry (Métis National Council n.d.). Living in both Euro-Canadian and Indigenous societies, the Métis acted as agents and subagents in the fur trade but also as surveyors and interpreters. Métis populations were predominantly located north and west of Lake Superior, however, communities were located throughout Ontario (MNC n.d.; Stone and Chaput 1978:607,608). During the early nineteenth century, many Métis families moved towards locales around southern Lake Huron and Georgian Bay, including Kincardine, Owen Sound, Penetanguishene, and Parry Sound (MNC n.d.). By the mid-twentieth century, Indigenous communities, including the Métis, began to advance their rights within Ontario and across Canada, and in 1982, the Métis were federally recognized as one of the distinct Indigenous peoples in Canada. Recent decisions by the Supreme Court of Canada (Supreme Court of Canada 2003, 2016) have reaffirmed that Métis people have full rights as one of the Indigenous people of Canada under subsection 91(24) of the Constitution Act, 1867.

# 1.2.2 Euro-Canadian Land Use: Township Survey and Settlement

Historically, the Study Area is located in the Former Erin Township, County of Wellington in part of Lots 22, 23 and 25, Concession 7, part of Lots 23-26, Concession 8, part of Lots 11-18, Concession 9, and part Of Lots 12-17, Concession 10.

The S & G stipulates that areas of early Euro-Canadian settlement (pioneer homesteads, isolated cabins, farmstead complexes), early wharf or dock complexes, pioneer churches, and early cemeteries are considered to have archaeological potential. Early historical transportation routes (trails, passes, roads, railways, portage routes), properties listed on a municipal register or designated under the *Ontario Heritage Act* or a federal, provincial, or municipal historic landmark or site are also considered to have archaeological potential.

For the Euro-Canadian period, the majority of early nineteenth century farmsteads (i.e., those that are arguably the most potentially significant resources and whose locations are rarely recorded on nineteenth century maps) are likely to be located in proximity to water. The development of the network of concession roads and railroads through the course of the nineteenth century frequently influenced the



siting of farmsteads and businesses. Accordingly, undisturbed lands within 100 m of an early settlement road are also considered to have potential for the presence of Euro-Canadian archaeological sites.

The first Europeans to arrive in the area were transient merchants and traders from France and England, who followed Indigenous pathways and set up trading posts at strategic locations along the well-traveled river routes. All of these occupations occurred at sites that afforded both natural landfalls and convenient access, by means of the various waterways and overland trails, into the hinterlands. Early transportation routes followed existing Indigenous trails, both along the lakeshore and adjacent to various creeks and rivers (Archaeological Services Inc. 2006).

## Erin Township

The land within Erin Township was acquired by the British from the Mississaugas in 1818. The first township survey was undertaken in 1819, and the first legal settlers occupied their land holdings in the following year. The township was first named after a poetic name for Ireland, *Ierne*, mentioned by the Greek geographer Strabo. Erin was initially settled by the children of Loyalists, soldiers who had served during the War of 1812, and by immigrants from England, Scotland and Ireland (Armstrong 1985:143; Erin Centennial Committee 1967; McMillan 1974; Rayburn 1997:113; Smith 1846:55–56). In 1842 a meeting was held in the home of Abraham Buck and the first officers were appointed to administer the affairs of the township. Henry Trout Sr. was appointed as the township clerk, Philander Hopkins was the collector of taxes, and Archibald Patterson and Robert Neily were made the township wardens (Mika and Mika 1977:680). The population of Erin had reached 981 by 1835 and by 1850 it had increased to 3035 (Mika and Mika 1977:680). Until this time Erin Township was part of the District of Wellington. During 1850 and 1851 it was under the jurisdiction of the Waterloo County Council. In 1852 Erin Township was run under the United Counties of Wellington, Waterloo, and Grey. It was made part of the County of Wellington when it was formed in 1854 (Mika and Mika 1977).

#### Village of Erin

A small community developed around 1828-29 with a series of mills on the Credit River, later rebuilt by Daniel McMillan (Brown 2017). In 1839 a post-office was established at "McMillan's Mills", and within a year village lots had been laid out. By 1851 the population was approximately 300 and had a distillery, a tannery, and carding, oatmeal and grist-mills. In 1879 the population had reached 750 and a branch of the Credit Valley Railway (CVR) was completed through Erin to Toronto. In the Village of Erin, as elsewhere, mills anchored growth and the settlement soon expanded to include more houses and two more mills that were built in 1838 and 1840. The first store was opened in 1836 by a Miss Caldwell, and William Cornock soon followed with the village's first dry goods store, a distillery and a post office. Churches, schools, inns, hardware stores and other amenities soon followed. Originally called McMillan's Mill after its founding family, in 1851 the village, population 300, was re-named Erin. The village was legally incorporated in 1879 and the first meeting of council took place in 1881 (County of Wellington 1998).

# Village of Hillsburgh

The first settler in this region was Nathaniel Rozell, in 1820 who built a house on Lot 1, Concession 7. In 1821, William How and his family settled on Lots 22 and 23, Concession 7, and the settlement was named Howville (McMillan 1974:6–7; Erin Centennial Committee 1967). The village was not founded until the 1840s, when a tavern and sawmill were constructed by Hiram and Nazareth Hill (Town of Erin 2017a). It became a post office village in 1851, the same year Gooderham & Worts distillers bought land



along the river to build a large grist mill, saw mill, and a cooperage for producing barrels for their business in Toronto, in what is now the iconic "Distillery District" (Town of Erin n.d.). Registered plans of subdivision for this village date from 1857-1862. It contained two grist mills, a woollen factory, a foundry and tannery. The village also contained four churches, four stores, three hotels, and a telegraph office. It was a station on the CVR, later the Canadian Pacific Railway (CPR), and the population was approximately 400 in 1873 (Crossby 1873:145; Rayburn 1997:158; Scott 1997:102; Winearls 1991:697). The "Station Road" over the Gooderham & Worts dam was built when the CVR arrived in 1879 to connect the village with the train on the west side of the mill pond (Town of Erin n.d.). The Hillsburgh Pioneer/God's Acre Cemetery was founded by the How family on Lot 24, Concession 7, and William How was buried there in 1854, among other early settlers (Town of Erin n.d.). The cemetery was not used after 1900 (Town of Erin 2017b).

# Credit Valley Railway

The Credit Valley Railway was constructed between 1877 and 1879 to improve trade opportunities in southern Ontario (Town of Caledon 2009). The project was backed by George Laidlaw and was intended to connect Toronto with Orangeville via Streetsville. Construction began in 1874 and over several subsequent years several branches were added to the proposed line. The first section of track from Parkdale (Toronto) to Milton was opened in 1877. In 1873, survey work was completed and track was first laid in 1876. Construction on the railway reached the Forks of the Credit by 1879 with a station at the northern end of the longest curved timber trestle of the time, which spanned 1,146 feet through the river valley at a height of 85 feet (Town of Caledon 2009:7.30). The line was completed in 1881 but nearly bankrupted the company. It was established in direct competition with the Toronto, Grey and Bruce Railway in the hopes of stimulating trade and economic opportunities in the outlying areas. In 1883 the line was taken over by the Canadian Pacific Railway (Heritage Mississauga 2009b; Town of Caledon 2009). All trains were discontinued and the tracks were torn up in 1988, and the easement became the Elora-Cataract Trailway in 1993, a 47 kilometre long multi-use path, owned and managed by the Credit Valley and Grand River Conservation Authorities, which follows the former railroad easement, connecting Elora, Belwood, Orton, Hillsburgh, Erin, and Forks of the Credit Provincial Park (Town of Erin 2017c; Elora Cataract Trailway 2017).

# 1.2.3 Historical Map Review

The 1861 Map of the County of Wellington (Leslie and Wheelock 1861) and the 1881 Illustrated Historical Atlas of the Township of Erin (H. Parsell & Co. 1881) were examined to determine the presence of historic features within the Study Area during the nineteenth century (Figures 2 and 3).

It should be noted, however, that not all features of interest were mapped systematically in the Ontario series of historical atlases, given that they were financed by subscription, and subscribers were given preference with regard to the level of detail provided on the maps. Moreover, not every feature of interest would have been within the scope of the atlases.

In addition, the use of historical map sources to reconstruct/predict the location of former features within the modern landscape generally proceeds by using common reference points between the various sources. These sources are then geo-referenced in order to provide the most accurate determination of the location of any property on historic mapping sources. The results of such exercises are often imprecise or even contradictory, as there are numerous potential sources of error inherent in such a process, including the vagaries of map production (both past and present), the need to resolve differences of scale and



resolution, and distortions introduced by reproduction of the sources. To a large degree, the significance of such margins of error is dependent on the size of the feature one is attempting to plot, the constancy of reference points, the distances between them, and the consistency with which both they and the target feature are depicted on the period mapping.

Table 1: Nineteenth-century property owner(s) and historical features(s) within or adjacent to the Study Area

1861

1877

Con #	Lot #	Property Owner(s)	Historical Feature(s)	Property Owner(s)	Historical Feature(s)
7	22	Howe & Brothers	None	Wm Howe	Saw mill
	23	Howe & Brothers	None	Wm Howe	House
	24	Gooderham & Worts	Saw mill Grist mill Store/Post Office Town lots	Gooderham & Worts	Town lots CVR
	25	Hiram Hill	Inn Town lots	Gooderham & Worts J. Collins	Town lots House
8	23	Geo. Henshaw	School house Town lots	M. Henshaw	Town lots, house, CVR
	24	Robert Nodwell	None	R. Nodwell	None
	25	Jno Green Jas. B. Boustead	Town lots Inn	J. Green J. Kirk	Town lots None
	26	Geo. Berry	None	A. Taylor	Town lots
9	11	Jno McLarin	None	J. McLaren	None
	12	Wm Clark	None	J. McLaren	House
	13	Crozier Chas McMillan	None Town lots	H. Crozier	House
	14	Chas McMillan	Town lots Mill pond Inn	A. Thompson	Town lots, mill pond
	15	Hugh McMillan Thos. Brown	None Town lots mill pond	D. Medley W. Hull	House Mill pond
	16	The Late Daniel McMillan	None	R. Johnston R. Medley D. McMillan J. McArthur S Irwine	None None None None House
	17	Edward White	None	E White	House, CVR
	18	Jno McMillan		J. McMillan	House
10	12	Mrs. Milloy Wm. Clark Wm Price	None None None	H. Malloy W. Hunter J.H. Mr. Gamble	None House None House
	13	John Shingler Hiram Shingler	Town lots None	J. Shingler W. Wilson	Town lots None
	14	None	Inn (2), grist mill, town lots	W. Cornack	Town lots
		Wm Cornack S. L. Shotter	None None		



		1861		1877	
Con #	Lot #	Property Owner(s)	Historical Feature(s)	Property Owner(s)	Historical Feature(s)
	15	None Late D. McMillan	Town lots None	A. McLellan	Town lots
	16	Dun McMillan	None	D. McMillan	House, CVR
	17	Jno. R. Thompson	None	J. R. Thompson A. Thompson	House House

According to the 1861 map, the villages of Hillsburgh and Erin were both established. Hillsburgh is depicted as having two inns, a store and post office, a saw and grist mill, and a school house, while Erin is shown to have three inns and a grist mill. The Study Area is illustrated within the historical centre the villages adjacent to the West Credit River, with historic transportation routes in Hillsburgh including what are now Main, Orangeville, Barker, Church, and Ann Streets; while in Erin these include what are now Main, Dundas, Daniel, English, William, Spring, Centre and Church Streets, Church Boulevard, and Country Road 124. The 1877, shows both town centres had grown, and the Credit Valley Railway ran through both Hillsburgh and Erin. Three mill ponds are illustrated in Erin.

# 1.2.4 Twentieth-Century Mapping Review

The 1906 Map of the County of Wellington, Villages of Hillsburg and Erin (Lloyd 1906), the 1937 National Topographic Series, Orangeville Sheet (Department of National Defence 1937), and the 1954 aerial photo of the Town of Erin (University of Toronto 1954) were examined to determine the extent and nature of development and land uses within the Study Area (Figures 4-7). The 1906 maps show that the Study Area is located within the historic centre of the villages of Erin and Hillsburgh. In Erin, historic transportation routes are shown, including the Canadian Pacific Railway and Main, Mill, Guelph, and Belfountain Streets, as well as the Credit River, mills ponds, parks, and numerous town lots. In Hillsburgh, the CPR, mills ponds, a church, and numerous town lots are also shown, as well as historic transportation routes such as Gravel Road (now Trafalgar Road North), Orangeville Street, and what is now Highway 22.

By 1937, numerous structures are shown within the Study Area along the main streets, as well as a few residential neighbourhoods on both sides of the road. Two farmsteads are shown in the area of the proposed WWTP sites. Both Erin and Hillsburgh have a grist mill, a school, a post office, and a church. Erin also has a race track, while there is a cemetery shown in Hillsburgh.

The 1954 aerial photo of the Town of Erin shows little development of the Study Area into the midtwentieth century within the villages of Erin and Hillsburgh, surrounded by a rural agricultural landscape along the CPR and West Credit River.

A review of available Google satellite imagery in the village of Erin shows that the residential subdivision on Armstrong Street, Treelong Crescent and Leenders Lane was constructed in 2004, and commercial/industrial development intensified on Erin Park Drive, Erinville Drive, and Thompson Crescent since 2004. Imagery of the village of Hillsburgh shows that the Study Area has remained relatively unchanged since 2004.



# 1.3 Archaeological Context

This section provides background research pertaining to previous archaeological fieldwork conducted within and in the vicinity of the Study Area, its environmental characteristics (including drainage, soils or surficial geology and topography, etc.), and current land use and field conditions. Three sources of information were consulted to provide information about previous archaeological research: the site record forms for registered sites available online from the MTCS through "Ontario's Past Portal"; published and unpublished documentary sources; and the files of ASI.

### 1.3.1 Current Land Use and Field Conditions

A Stage 1 property inspection was conducted on June 22, 2017 that noted the Study Area is located within the Villages of Erin and Hillsburgh. The Study Area in Hillsburgh follows Trafalgar Road North through the historic village centre, roughly between Wellington Road 22 and Howe Street. The Study Area in Erin follows Main Street/Ninth Line, roughly between Wellington Road 52 and Sideroad 17. Both villages have nineteenth- and twentieth-century residential developments to the east and west of the main streets, small public parks, commercial developments, schools and churches. The WWTP sites are within active agricultural fields southwest of Tenth Line on either side of Wellington Road 52. Development along Sideroad 17, Erin Park Drive, Thompson Crescent, and Erinvile Drive is predominantly commercial. Small creeks and ponds are dotted along both sides of Trafalgar Road North in the village of Hillsburgh, and drain into the village of Erin along the west side of Main Street. The former CPR alignment is now the Elora-Cataract Trailway, connecting both villages.

# 1.3.2 Geography

In addition to the known archaeological sites, the state of the natural environment is a helpful indicator of archaeological potential. Accordingly, a description of the physiography and soils are briefly discussed for the Study Area.

The S & G stipulates that primary water sources (lakes, rivers, streams, creeks, etc.), secondary water sources (intermittent streams and creeks, springs, marshes, swamps, etc.), ancient water sources (glacial lake shorelines indicated by the presence of raised sand or gravel beach ridges, relic river or stream channels indicated by clear dip or swale in the topography, shorelines of drained lakes or marshes, cobble beaches, etc.), as well as accessible or inaccessible shorelines (high bluffs, swamp or marsh fields by the edge of a lake, sandbars stretching into marsh, etc.) are characteristics that indicate archaeological potential.

Water has been identified as the major determinant of site selection and the presence of potable water is the single most important resource necessary for any extended human occupation or settlement. Since water sources have remained relatively stable in Ontario since 5,000 BP (Karrow and Warner 1990:Figure 2.16), proximity to water can be regarded as a useful index for the evaluation of archaeological site potential. Indeed, distance from water has been one of the most commonly used variables for predictive modeling of site location.

Other geographic characteristics that can indicate archaeological potential include: elevated topography (eskers, drumlins, large knolls, and 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 (migratory routes, spawning areas) are also considered characteristics that indicate archaeological potential (S & G, Section 1.3.1).

The Study Area is situated within spillways and kame moraines of the Hillsburgh Sandhills and Guelph Drumlin Field physiographic regions. Spillways are typically broad troughs floored wholly or in part by gravel beds and are typically vegetated by cedar swamps in the lowest beds (Chapman and Putnam 1984:15). The Hillsburgh sandhills are a natural boundary on the southeastern flank of the Dundalk till plain and covers an area of approximately 16,576 hectares. This region was the first land exposed by the recession of the Laurentide glacier. The region has an elevation of between 427-488 metres above sea level and is characterised by rough topography, sandy materials and a flat-bottomed swampy valley intersection the moraine. Fine sand is the prevalent soil type (Chapman and Putnam 1984: 135-136).

The Guelph Drumlin Field physiographic region (Chapman and Putnam 1984: 137-139) centres upon the City of Guelph and Guelph Township and occupies roughly 830 square kilometres. Within the Guelph Drumlin Field, there are approximately 300 drumlins of varying sizes. For the most part these hills are of the broad oval type with slopes less steep than those of the Peterborough drumlins and are not as closely grouped as those in some other areas. The till in these drumlins is loamy and calcareous, and was derived mostly from dolostone of the Amabel Formation that can be found exposed below the Niagara Escarpment. Spillways are the former glacial meltwater channels. They are often found in association with moraines but in opposition are entrenched rather than elevated landforms. They are often, though not always, occupied by stream courses, the fact of which raises the debate of their glacial origin.

Figure 8 depicts surficial geology for the Study Area. The surficial geology mapping demonstrates that the Study Area is underlain by glaciofluvial deposits, diamicton or till, and ice-contact stratified deposits of sand and gravel (Ontario Geological Survey 2010). There are numerous former sand and gravel pits in the Village of Erin, and the Study Area is adjacent to drumlins. Figure 9 depicts the soil darinage in the Study Area. Soil types consist of Brisbane loam, Caledon fine sandy loam, Donnybrook sandy loam, and Hillsburgh fine sandy loam, all grey-brown podzols with good drainage; as well as Gilford loam, a grey-brown podzols wih poor drainage; and muck, an organic matter soil with very poor drainage (Hoffman et al. 1963).

The Study Area contains the West Credit River subwatershed, forming part of the headwaters of the Credit River. It covers approximately 105 square kilometres in the Towns of Erin of Caledon, draining from north-west of Hillsburgh to the Forks of the Credit, 68% of which is agricultural land, 15% is woodlands, 14% is wetland, and 3% is urban within Hillsburgh, the Village of Erin, and Belfountain (County of Wellington 1998).

## 1.3.3 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological sites registered within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on latitude and longitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referenced by a four-letter designator, and sites within a block are numbered sequentially as they are found. The Study Area under review is located in Borden block *AkHa*.



According to the OASD, two previously registered archaeological sites are located within one kilometre of the Study Area, neither of which is within 50 metres (Ministry of Tourism, Culture and Sport 2016). A summary of the sites is provided below.

Table 2: List of previously registered sites within one kilometre of the Study Area

Borden #	Site Name	Cultural Affiliation	Site Type	Researcher
AkHa-9	N/A	EuroCanadian	Homestead; scatter	Stantec 2002
AkHa-19	N/A	EuroCanadian	Homestead	AAL 2013

AAL - Archaeological Assessments Ltd.

According to the background research, one previous report details fieldwork within 50 m of the Study Area.

ASI (2014) conducted a Stage 1 Archaeological Assessment (Background Study and Property Inspection) as part of the Hillsburgh Dam Bridge Municipal Class Environmental Assessment, located on Station Street and was constructed in 1917. No previously registered archaeological sites were located within one kilometre of the study area, and the property inspection determined that the majority of the study area has been disturbed by previous dam construction and grading within the right-of-way (ROW). Small parts of the study area to the north and south of the dam were documented to possess archaeological potential and were recommended for Stage 2 test pit survey, prior to and proposed work.

#### 2.0 FIELD METHODS: PROPERTY INSPECTION

A Stage 1 property inspection must adhere to the S & G, Section 1.2, Standards 1-6, which are discussed below. The entire property and its periphery must be inspected. The inspection may be either systematic or random. Coverage must be sufficient to identify the presence or absence of any features of archaeological potential. The inspection must be conducted when weather conditions permit good visibility of land features. Natural landforms and watercourses are to be confirmed if previously identified. Additional features such as elevated topography, relic water channels, glacial shorelines, well-drained soils within heavy soils and slightly elevated areas within low and wet areas should be identified and documented, if present. Features affecting assessment strategies should be identified and documented such as woodlots, bogs or other permanently wet areas, areas of steeper grade than indicated on topographic mapping, areas of overgrown vegetation, areas of heavy soil, and recent land disturbance such as grading, fill deposits and vegetation clearing. The inspection should also identify and document structures and built features that will affect assessment strategies, such as heritage structures or landscapes, cairns, monuments or plaques, and cemeteries.

The Stage 1 archaeological assessment property inspection was conducted under the field direction of John Sleath (P382) of ASI, on June 22, 2017, in order to gain first-hand knowledge of the geography, topography, and current conditions and to evaluate and map archaeological potential of the Study Area. It was a visual inspection only and did not include excavation or collection of archaeological resources. Fieldwork was only conducted when weather conditions were deemed suitable, per S&G Section 2. Previously identified features of archaeological potential were examined; additional features of archaeological potential not visible on mapping were identified and documented as well as any features that will affect assessment strategies. Field observations are compiled onto the existing conditions of the



Study Area in Section 7.0 (Figures 10-13) and associated photographic plates are presented in Section 8.0 (Plates 1-44).

#### 3.0 ANALYSIS AND CONCLUSIONS

The historical and archaeological contexts have been analyzed to help determine the archaeological potential of the Study Area. These data are presented below in Section 3.1. Results of the analysis of the Study Area property inspection are presented in Section 3.2.

# 3.1 Analysis of Archaeological Potential

The S & G, Section 1.3.1, lists criteria that are indicative of archaeological potential. The Study Area meets the following criteria indicative of archaeological potential:

- Previously identified archaeological sites (AkHa-9, AkHa-19)
- Water sources: primary, secondary, or past water source (West Credit River);
- Early historic transportation routes (CVR; Main, Church, Orangeville, Barker, Ann, Dundas, Daniel, English, William, Spring, and Centre Streets, Church Boulevard, and Country Road 124);
- Proximity to early settlements (villages of Erin and Hillsburgh; mills, farmsteads); and
- Well-drained soils (Brisbane loam, Caledon fine sandy loam, Donnybrook sandy loam, and Hillsburgh fine sandy loam)

According to the S & G, Section 1.4 Standard 1e, no areas within a property containing locations listed or designated by a municipality can be recommended for exemption from further assessment unless the area can be documented as disturbed. The Town of Erin Heritage Register was not accessible at this time, however ASI is aware that there are many nineteenth-century properties still standing within the historic village centres of Erin and Hillsburgh (Town of Erin n.d., n.d.b). ASI will also be producing a Cultural Heritage Resource Assessment of the Study Area as part of this EA.

These criteria are indicative of potential for the identification of Indigenous and Euro-Canadian archaeological resources, depending on soil conditions and the degree to which soils have been subject to deep disturbance.

# 3.2 Analysis of Property Inspection Results

The property inspection determined that the proposed wastewater treatment plant sites are located within active agricultural fields and exhibit archaeological potential. The three sanitary pumping stations sites in Hillsburgh and sites #1A, 1B, 2, 3, 4, both site 5's, 7, and 8 in Erin all exhibit archaeological potential. Some sections of the proposed sewer and forcemain routes depart from the road and exhibit archaeological potential. These areas will require Stage 2 archaeological assessment prior to any development (Figures 10-13: areas highlighted in green and orange). According to the S & G Section 2.1.1, pedestrian survey is required in actively or recently cultivated fields (eg. Plates 41-44; Figure 13: areas highlighted in orange). According to the S & G Section 2.1.2, test pit survey is required on terrain where ploughing is not viable, such as wooded areas, properties where existing landscaping or infrastructure would be damaged, overgrown farmland with heavy brush or rocky pasture, and narrow



linear corridors up to 10 metres wide (eg. Plates 1-2, 7, 16, 17, 21, 22, 24, 29-31, 33-35, 37, 39; Figures 10-13: areas highlighted in green).

The remainder of the gravity sewer and forcemain networks as well as SPS Site #6 and part of SPS site 1A have been subjected to deep soil disturbance events associated with the construction of the paved and graded-gravel road networks in Hillsburgh and Erin, a storm sewer system, and parking lots. According to the S & G Section 1.3.2 these areas do not require Stage 2 test pit survey (Plates 1-20, 22-29, 32, 33, 35-39, 41, 43; Figures 9-13: areas highlighted in yellow). Parts of the study area are located in low and wet conditions adjacent or crossing under the West Credit River, and according to the S& G Section 2.1 do not retain potential and do not require further survey (Plate 28, 34, ; Figure 7: areas highlighted in blue).

#### 3.3 Conclusions

The Stage 1 background study determined that two previously registered archaeological sites are located within one kilometre of the Study Area. The property inspection determined that the proposed gravity sewer is within the existing disturbed roadways. Parts of the Study Area within the SPS and WWTP sites, and parts where the forcemains and sewers depart the road, exhibit archaeological potential and will require Stage 2 assessment, prior to development.

#### 4.0 RECOMMENDATIONS

In light of these results, the following recommendations are made:

- 1. The Study Area exhibits archaeological potential. These lands require Stage 2 archaeological assessment by test pit and pedestrian survey at a five metre intervals, where appropriate, prior to any proposed impacts to the property;
- The remainder of the Study Area does not retain archaeological potential on account of deep and extensive land disturbance or low and wet conditions. These lands do not require further archaeological assessment; and,
- 3. Should the proposed work extend beyond the current Study Area, further Stage 1 archaeological assessment should be conducted to determine the archaeological potential of the surrounding lands.

NOTWITHSTANDING the results and recommendations presented in this study, ASI notes that no archaeological assessment, no matter how thorough or carefully completed, can necessarily predict, account for, or identify every form of isolated or deeply buried archaeological deposit. In the event that archaeological remains are found during subsequent construction activities, the consultant archaeologist, approval authority, and the Cultural Programs Unit of the MTCS should be immediately notified.



#### 5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

ASI also advises compliance with the following legislation:

- This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, RSO 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological field work and report recommendations ensure the conservation, preservation and protection of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological field work on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject 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 sec. 48 (1) of the *Ontario Heritage Act*.
- The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.



#### 6.0 REFERENCES CITED

#### Ambrose, M.T.

1982 An Archaeological Survey of Highway 407 from Highway 10 to Airport Road (W.P. 87-78-00), Regional Municipality of Peel.

# Archaeological Services Inc.

2006 Historical Overview and Assessment of Archaeological Potential Don River Watershed, City Of Toronto.

# Armstrong, F. H.

1985 Handbook of Upper Canadian Chronology. Dundurn Press, Toronto.

## ASI, (Archaeological Services Inc.)

2014 Stage 1 Archaeological Assessment (Background Study and Property Inspection) Hillsburgh Dam Bridge Municipal Class Environmental Assessment Study Part of Lot 24, Concession 7, Former Township of Erin Town of Erin, County of Wellington, Ontario. [P392-0117-2014].

## Birch, J., and R. F. Williamson

2013 The Mantle Site: An Archaeological History of an Ancestral Wendat Community. Rowman & Littlefield Publishers, Inc., Latham.

#### Brown, A.

2017 Ontario's Historical Plaques: The Founding of Erin. <a href="http://ontarioplaques.com/Plaques/Plaque\_Wellington04.html">http://ontarioplaques.com/Plaques/Plaque\_Wellington04.html</a>.

# Brown, J.

1995 On Mortuary Analysis – with Special Reference to the Saxe-Binford Research Program. In Regional Approaches to Mortuary Analysis, edited by L. A. Beck, pp. 3–23. Plenum Press, New York.

# Chapman, L.J., and F. Putnam

1984 The Physiography of Southern Ontario. Vol. 2. Ontario Geologic Survey, Special Volume. Ontario Ministry of Natural Resources, Toronto.

## County of Wellington

1998 West Credit Subwatershed Study Characterization Report.



# Crossby, P. A.

1873 Lovell's Gazetteer of British North America. John Lovell, Montreal.

### Department of National Defence

1937 Orangeville Sheet. National Topographic Series.

## Dodd, C. F., D. R. Poulton, P. A. Lennox, D. G. Smith, and G. A. Warrick

1990 The Middle Ontario Iroquoian Stage. In The Archaeology of Southern Ontario to A.D. 1650, edited by C. J. Ellis and N. Ferris, pp. 321–360. Occasional Publication of the London Chapter OAS Number 5. Ontario Archaeological Society Inc., London.

#### Edwards, T.W.D., and P. Fritz

1988 Stable-Isotope Palaeoclimate Records from Southern Ontario, Canada: Comparison of Results from Marl and Wood. Canadian Journal of Earth Sciences 25: 1397–1406.

## Ellis, C. J., and D. B. Deller

1990 Paleo-Indians. In The Archaeology of Southern Ontario to A.D. 1650, edited by C. J. Ellis and N. Ferris, pp. 37–64. Occasional Publication of the London Chapter OAS Number 5. Ontario Archaeological Society Inc., London.

### Ellis, C. J., I. T. Kenyon, and M. W. Spence

1990 The Archaic. In The Archaeology of Southern Ontario to A.D. 1650, edited by C. J. Ellis and N. Ferris, pp. 65–124. Occasional Publication of the London Chapter OAS Number 5. Ontario Archaeological Society Inc., London.

## Ellis, C. J., P. A. Timmins, and H. Martelle

2009 At the Crossroads and Periphery: The Archaic Archaeological Record of Southern Ontario. In Archaic Societies: Diversity and Complexity across the Midcontinent., edited by T. D. Emerson, D. L. McElrath, and A. C. Fortier, pp. 787–837. State University of New York Press, Albany, New York.

# Elora Cataract Trailway

2017 About Us. <a href="http://trailway.org/about-us/">http://trailway.org/about-us/</a>>.

# Erin Centennial Committee

1967 Erin Centennial History 1842-1967.



#### Ferris, N.

2013 Place, Space, and Dwelling in the Late Woodland. In Before Ontario: The Archaeology of a Province, pp. 99–111. McGill-Queen's University Press.

## Gould, A.

1981 History of the Mississauga Indians. Appendix to the Maracle Site Report.

#### H. Parsell & Co.

1881 Illustrated Historical Atlas of Waterloo & Wellington Counties, Ontario 1881-1877. Walker & Miles.

# Heritage Mississauga

2009a Port Credit. <a href="http://www.heritagemississauga.com/page/Port-Credit">http://www.heritagemississauga.com/page/Port-Credit</a>.

2009b Railways in Mississauga. <a href="http://www.heritagemississauga.com/page/Railways-inMississauga">http://www.heritagemississauga.com/page/Railways-inMississauga</a>.

# 2012 Heritage Guide: Mississauga.

<<a href="http://www.heritagemississauga.com/assets/Heritage%20Guide%20-%20Final%20-%202012.pdf">http://www.heritagemississauga.com/assets/Heritage%20Guide%20-%20Final%20-%202012.pdf</a>>.

#### Hoffman, D.W., B.C. Matthews, and R.E. Wicklund

1963 Soil Survey of the County of Wellington. Ontario Soil Survey. Research Branch, Canada Department of Agriculture and the Ontario Agricultural College, Guelph.

#### Johnston, D.

2004 Connecting People to Place: Great Lakes Aboriginal in Cultural Context. Unpublished paper prepared for the Ipperwash Commission of Inquiry.

# Karrow, P.F., and B.G. Warner

1990 The Geological and Biological Environment for Human Occupation in Southern Ontario. In The Archaeology of Ontario to A.D. 1650, pp. 5–36. Occasional Publications 5. London Chapter, Ontario Archaeological Society, London.

## Leslie, G., and C. J. Wheelock

1861 Map of the County of Wellington, Canada West. Orangeville.

#### Lloyd, F.P.

1906 Atlas of Wellington County. Historical Atlas Publishing Co.



#### McMillan, C. J.

1974 Early History of the Township of Erin. Boston Mills Press, Cheltenham.

#### Métis National Council

n.d. The Métis Nation.

n.d. Métis Historic Timeline. <a href="http://www.metisnation.org/culture-heritage/m%C3%A9tis-timeline/">http://www.metisnation.org/culture-heritage/m%C3%A9tis-timeline/</a>.

## Mika, N., and H. Mika

1977 Places In Ontario: Their Name Origins and History, Part I, A-E. Vol. 2. Encyclopedia of Ontario. Mika Publishing Company, Belleville.

## Ministry of Culture

1990 Ontario Heritage Act, R.S.O. [as amended in 2009]. Province of Ontario.

# Ministry of Tourism, Culture and Sport

2016 PastPortal.

# Mississaugas of the New Credit First Nation

2014 History. Accessed June 1, 2016 from <a href="http://www.newcreditfirstnation.com/our-culture.html">http://www.newcreditfirstnation.com/our-culture.html</a>>.

## Municipal Engineers Association

2000 Municipal Class Environmental Assessment.

#### Ontario Geological Survey

2010 Surficial geology of Southern Ontario.

#### Rayburn, A.

1997 Place Names of Ontario. University of Toronto Press, Toronto.

# Scott, W.B.

1997 Ontario Place Names: The Historical, Offbeat or Humorous Origins of More Than 1,000 Communities. Lone Pine Publishing, Edmonton.



#### Smith, W.H.

1846 Smith's Canadian Gazetteer, Comprising Statistical and General Information Respecting All Parts of the Upper Province, or Canada West. H. & W. Rowsell, Toronto.

# Spence, M. W., R. H. Pihl, and C. Murphy

1990 Cultural Complexes of the Early and Middle Woodland Periods. In The Archaeology of Southern Ontario to A.D. 1650, edited by C. J. Ellis and N. Ferris. Occasional Publication of the London Chapter OAS Number 5. Ontario Archaeological Society Inc., London.

# Stone, L.M., and D. Chaput

1978 History of the Upper Great Lakes. In Handbook of North American Indians, edited by Bruce G. Trigger, pp. 602–609. Smithsonian Institution, Washington.

## Supreme Court of Canada

2003 R. v. Powley. September 19.

2016 Daniels v. Canada (Indian Affairs and Northern Development). April 14.

#### Town of Caledon

2009 Cultural Heritage Landscape Inventory Report.

#### Town of Erin

- n.d. Hillsburg(h) Heritage Walking Trail.
- n.d. Downtown Erin Heritage Walking Trail.
- 2017a History of Erin. <a href="http://www.erin.ca/living-here/history-erin">http://www.erin.ca/living-here/history-erin</a>.
- 2017b Cemeteries within the Town of Erin. <a href="http://www.erin.ca/living-here/cemeteries">http://www.erin.ca/living-here/cemeteries</a>>.
- 2017c Trails. <a href="mailto:rin.ca/living-here/trails">http://www.erin.ca/living-here/trails</a>>.

## University of Toronto

1954 Digital Aerial Photographs, Southern Ontario 1954, Hunting Survey Corporation. <a href="http://maps.library.utoronto.ca/data/on/AP\_1954/index.html">http://maps.library.utoronto.ca/data/on/AP\_1954/index.html</a>.

#### Williamson, R. F.

1990 The Early Iroquoian Period of Southern Ontario. In The Archaeology of Southern Ontario to A.D. 1650, edited by C. J. Ellis and N. Ferris, pp. 291–320. Occasional Publication of the London Chapter OAS Number 5. Ontario Archaeological Society Inc., London.



# Winearls, J.

1991 Mapping Upper Canada 1780-1867. An Annotated Bibliography of Manuscript and Printed Maps. University of Toronto, Toronto.

# Woodland Indian Cultural Education Centre

1985 Mississaugas of New Credit Reserve: Community Profile. <<a href="http://www.casbrant.ca/files/upload/Mississaugas%20of%20the%20New2.pdf">http://www.casbrant.ca/files/upload/Mississaugas%20of%20the%20New2.pdf</a>>.



# 7.0 MAPS



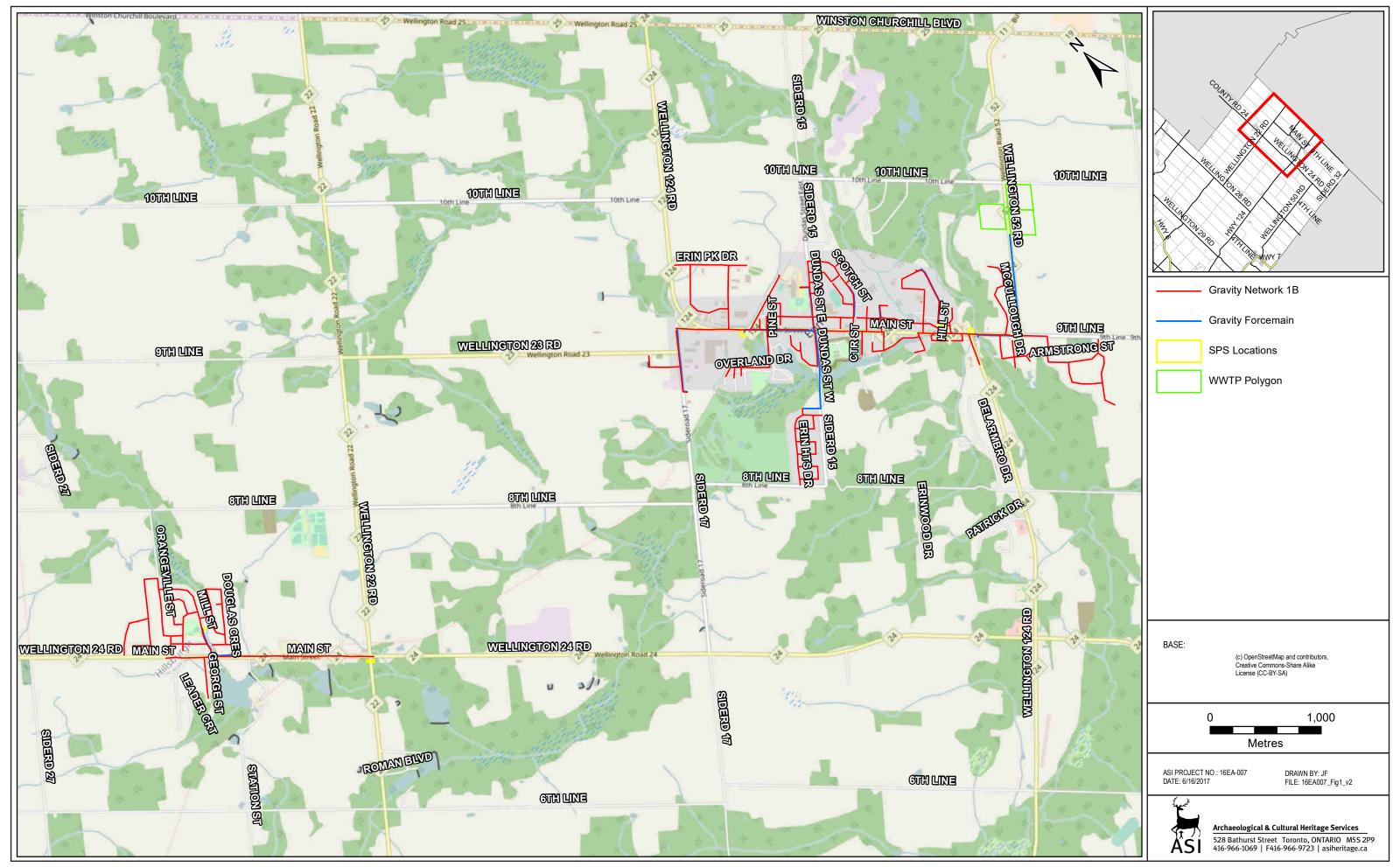
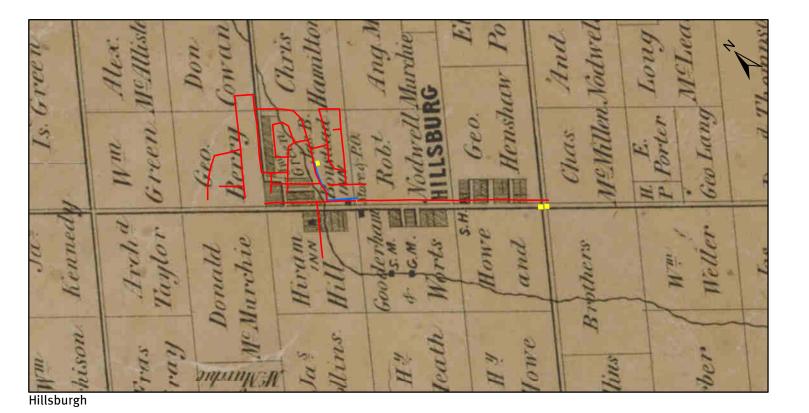


Figure 1: Erin Wastewater Servicing - Location of the Study Area





ASI

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Gravity Forcemain

Gravity Forcemain

SPS Locations

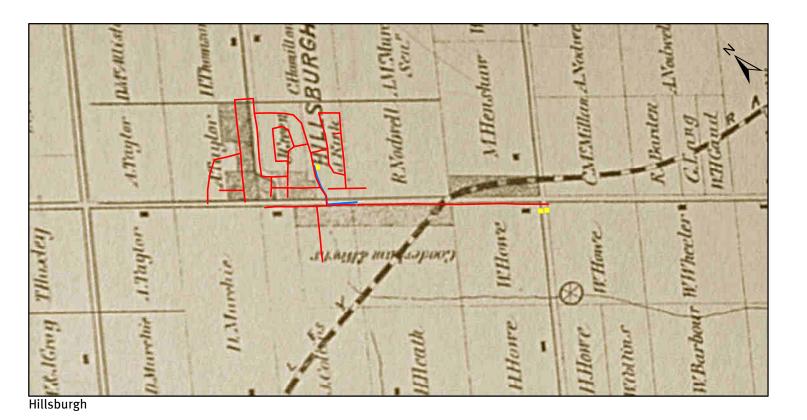
Base:
1906 Map of the Village of Hillsburg
1906 Map of the Village of Erin

ASI PROJECT NO: 16E-007 DATE: 616/2017

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Figure 2: Erin Wastewater Servicing Study Area (Approximate Location) Overlaid on the 1862 Map of the County of Wellington





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SPS Locations

Gravity Network 1B WWTP Polygon | Base: 1906 Map of the Village of Hilbsburg 1906 Map of the Village of Erin | DRAWN BY: JF FILE: 16EA007\_fig3\_hist

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500

Figure 3: Erin Wastewater Servicing Study Area (Approximate Location) Overlaid on the 1877 Illustrated Historical Atlas of the Township of Erin

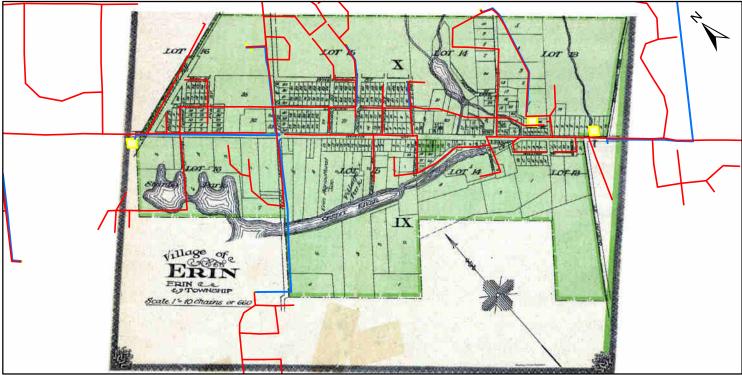


Figure 4: Erin Wastewater Servicing Study Area (Approximate Location) Overlaid on the 1906 Map of the Village of Erin

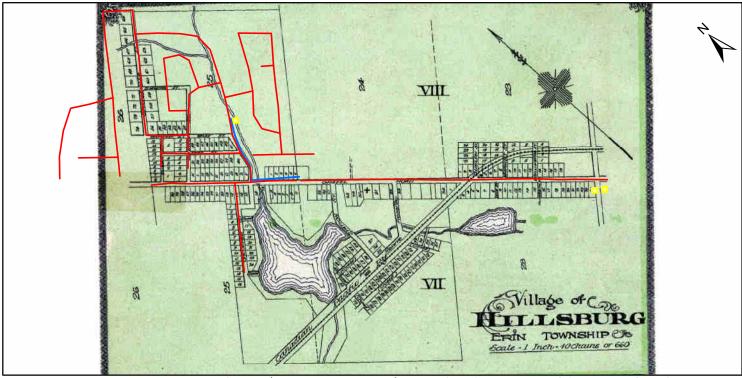
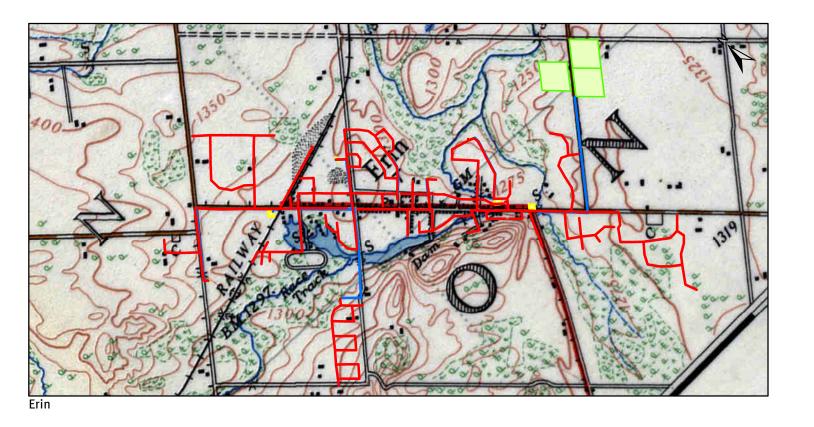
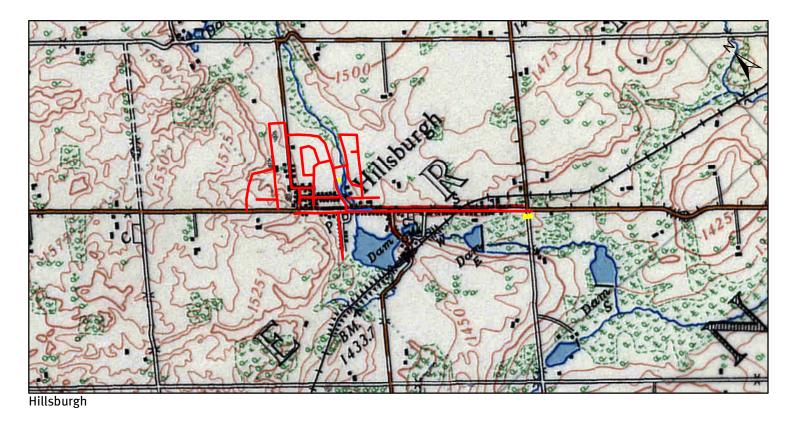


Figure 5: Erin Wastewater Servicing Study Area (Approximate Location) Overlaid on the 1906 Map of the Village of Hillsburg













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Gravity Forcemain

SPS Locations

Gravity Network 1B WWTP Polygon
Hillsburg
1906 Map of the Village of
Hillsburg
1906 Map of the Village of
Hillsburg
1906 Map of the Village of
Erin

ASIPROJECT NO: 16EA-007 DATW: 07-06-20 DATW: 07-

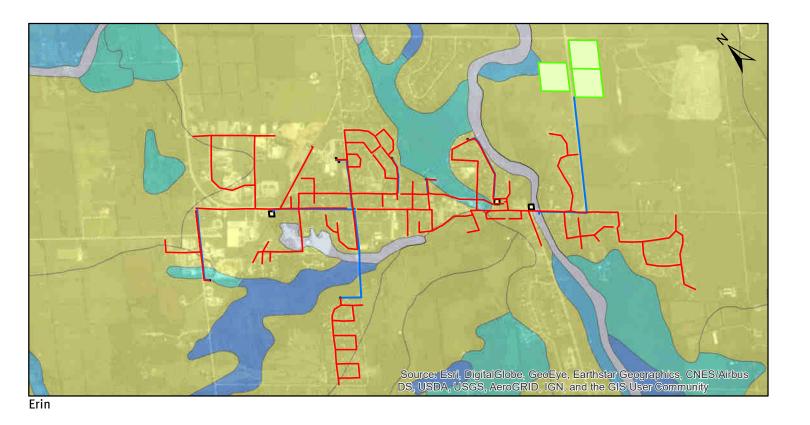
 $Figure \ 7: Erin \ Was tewater \ Servicing \ Study \ Area \ (Approximate \ Location) \ Overlaid \ on \ the \ 1954 \ Aerial \ Photo \ of \ the \ County \ of \ Wellington$ 

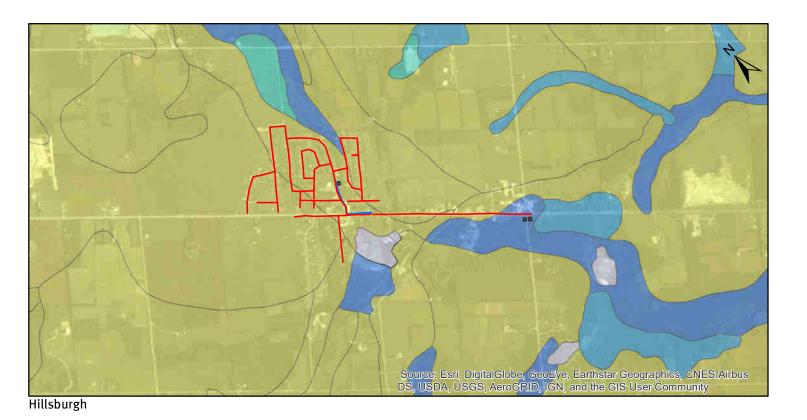




Gravity Network 1B Surfacial Geology Surficial Geology of Southern Ontario Gravity Forcemain Paleozoic Bedrock Archaeological & Cultural Heritage Services SPS Locations Diamicton Ontario Ministry of Northern Development and Mines Kilometers WWTP Polygon 528 Bathurst Street Toronto, ONTARIO M5S 2P9 416-966-1069 | F416-966-9723 | asiheritage.ca gravel organic deposits ASI PROJECT NO.: 16EA-007 DATE: 2017-06-20 DRAWN BY: AB FILE: 16EA007\_fig8 sand

Figure~8: Erin~Wastewater~Servicing~Study~Area~-Surficial~Geology





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Gravity Forcemain | No Data | Well | Mperfectly | Imperfectly | Poorty | Very Poorty

WTP Polygon | Rawn BY: AB FILE: 16EA007\_fig9

Gravity Network 1B Wellington\_Soils

Figure 9: Erin Wastewater Servicing Study Area - Soil Drainage

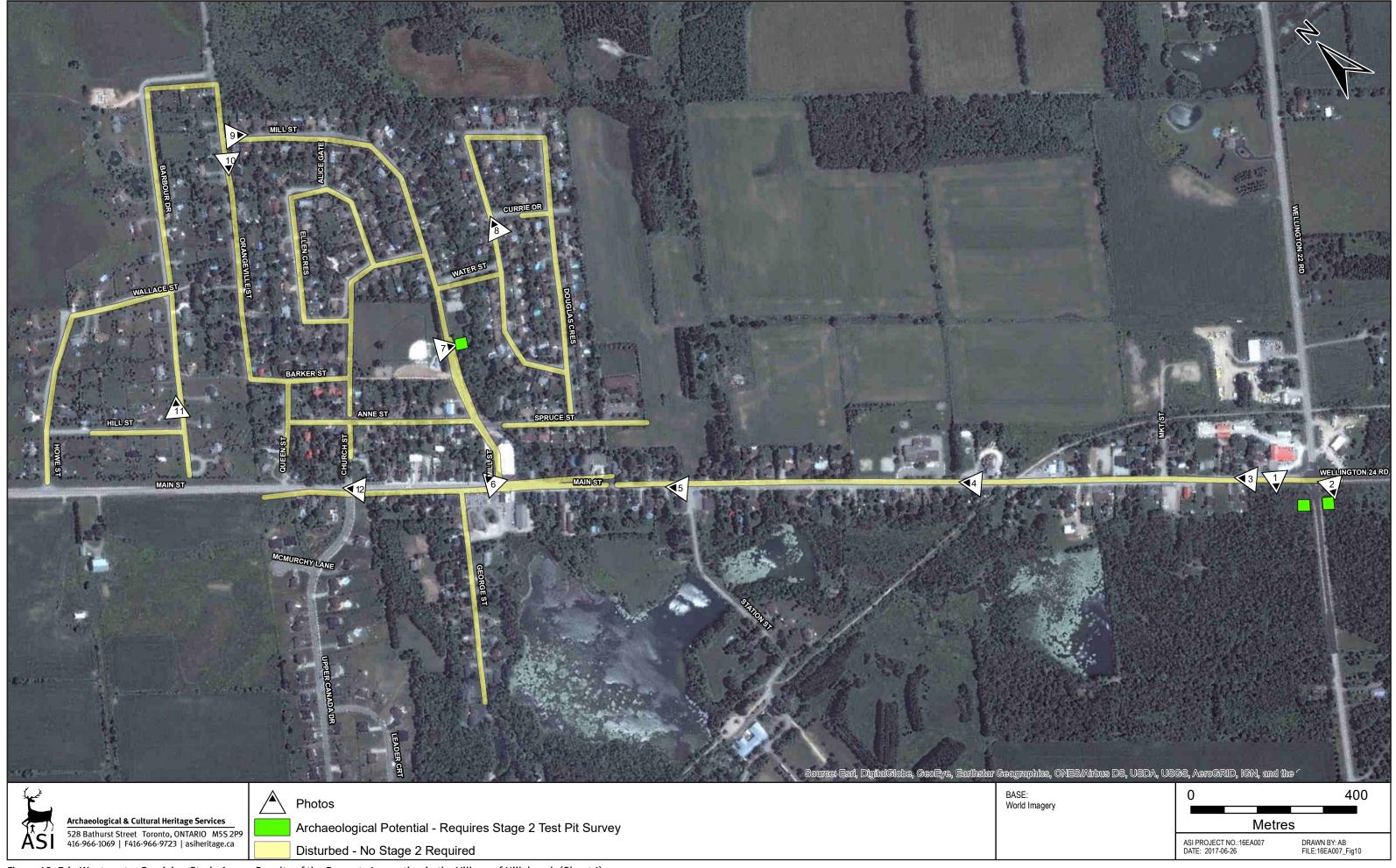


Figure 10: Erin Wastewater Servicing Study Area – Results of the Property Inspection in the Village of Hillsburgh (Sheet 1)

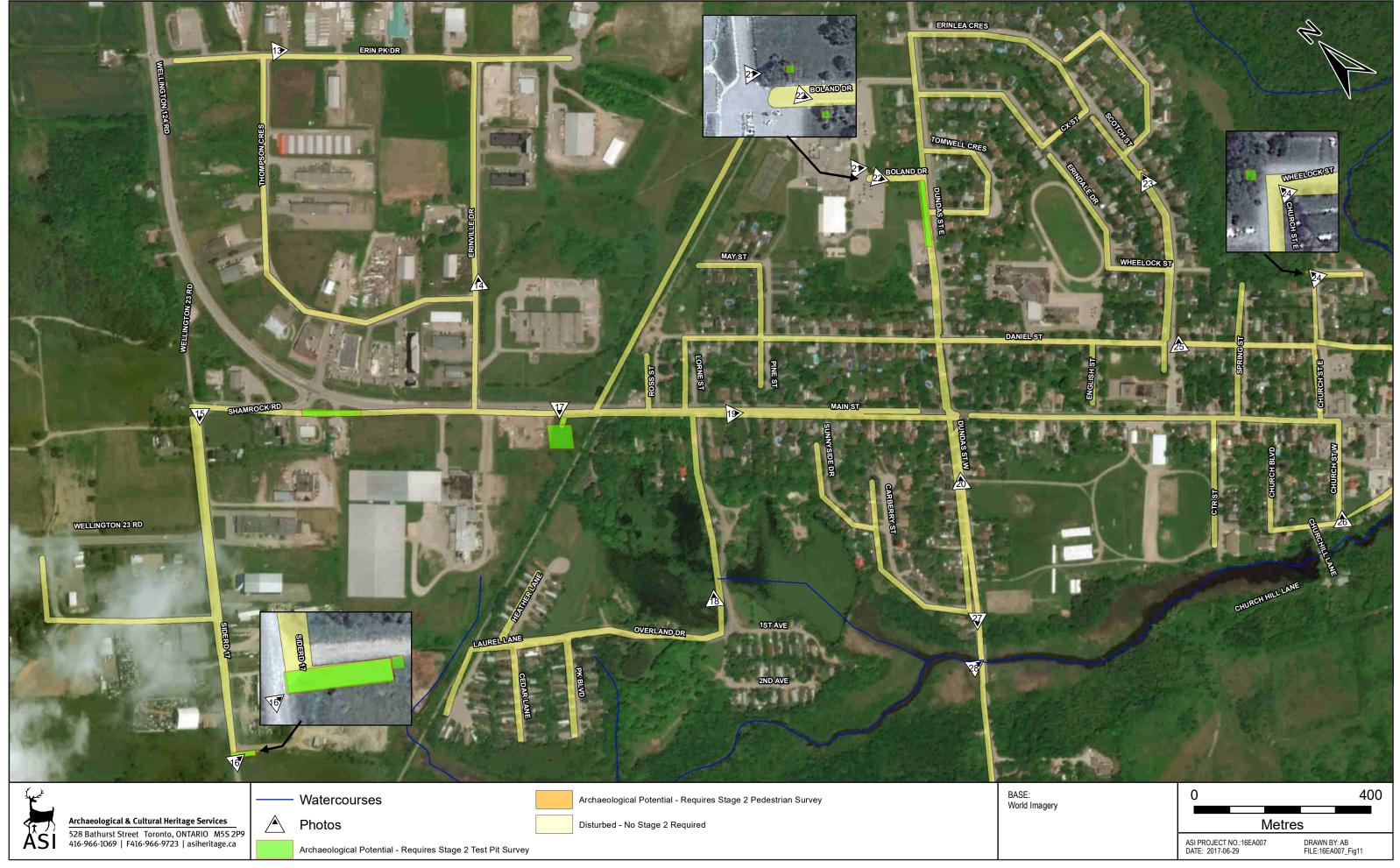


Figure 11: Erin Wastewater Servicing Study Area – Results of the Property Inspection in the Village of Erin (Sheet 2)

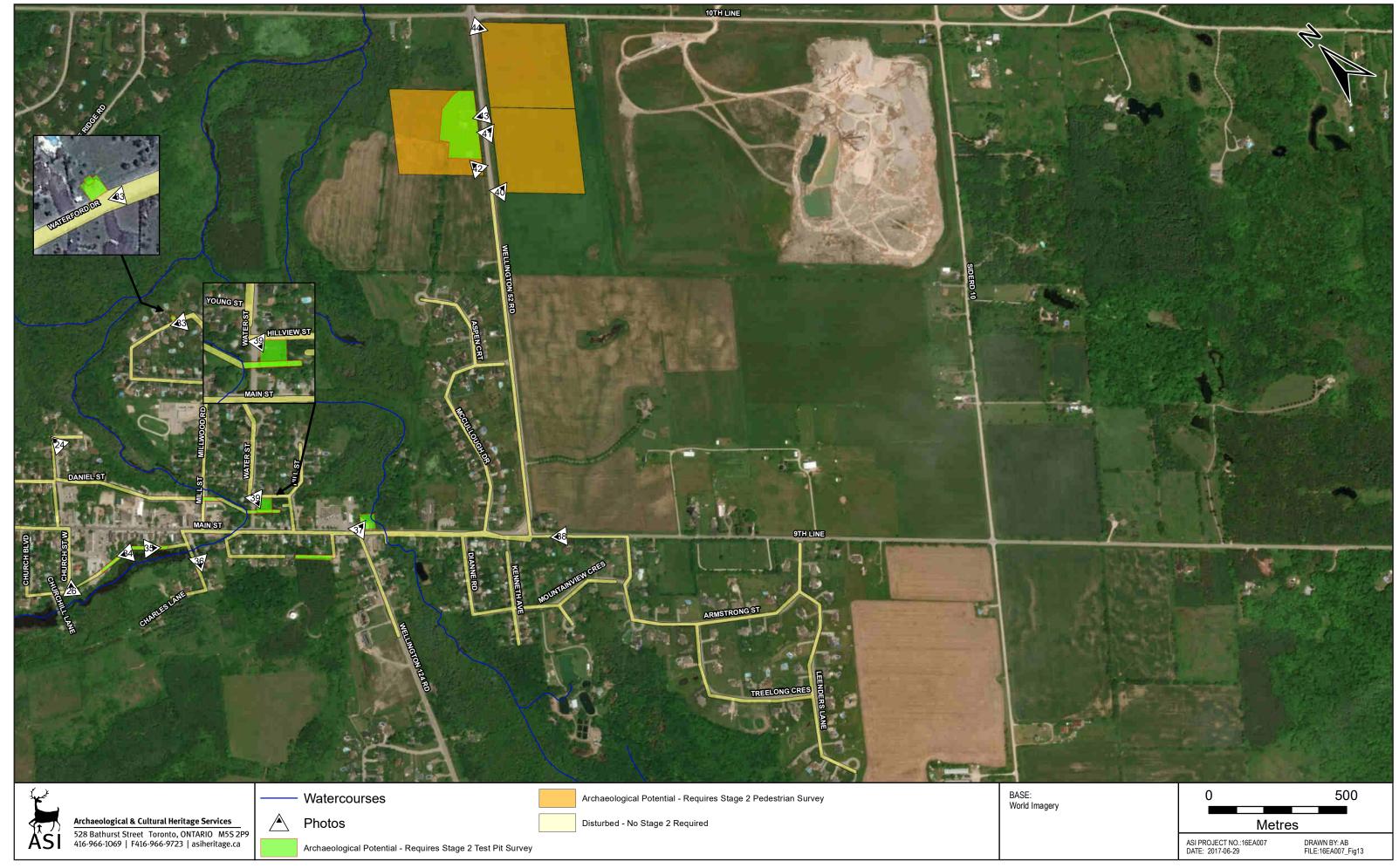


Figure 12: Erin Wastewater Servicing Study Area – Results of the Property Inspection in the Village of Erin (Sheet 3)



Figure 13: Erin Wastewater Servicing Study Area – Results of the Property Inspection in the Village of Erin (Sheet 4)

## 8.0 IMAGES



Plate 1: Southwest view of Hillsburgh SPS site; Area beyond disturbed road exhibits potential, requires Stage 2 test pit survey



Plate 2: South view of Hillsburgh SPS site; Area beyond disturbed road exhibits potential, requires Stage 2 test pit survey



Plate 3: Northwest view of Main St, Hillsburgh; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 4: Northwest view of Main St, Hillsburgh; Proposed sewer route is within the disturbed ROW, no Stage 2 required





Plate 5: Northwest view of Main St, Hillsburgh; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 7: East view of Hillsburgh SPS site; Area beyond disturbed road exhibits potential, requires Stage 2 test pit survey



Plate 9: Southeast view of Mill St at Orangeville St, Hillsburgh; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 6: North view of Main St and Mill St, Hillsburgh; Proposed sewer route and forcemain are within the disturbed ROW, no Stage 2 required



Plate 8: Northeast view of Mill St, Hillsburgh; Proposed sewer route is within the disturbed road, no Stage 2 required



Plate 10: Southwest view of Orangeville St, Hillsburgh; Proposed sewer route is within the disturbed ROW, no Stage 2 required





Plate 11: Northeast view of Barbour Dr, Hillsburgh; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 13: Southeast view of Erin Park Dr, Erin; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 15: South view of Wellington 23 Rd, Erin; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 12: Northwest view of Main St, Hillsburgh; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 14: Northeast view of Erinville Dr, Erin; Proposed sewer route is within the disturbed ROW, no Stage 2 required



Plate 16: East view of SPS site #4, Erin; Area beyond the disturbed road exhibits potential, requires Stage 2 test pit survey





Plate 17: South view of SPS site #2, Erin; Area beyond the disturbed road exhibits potential, requires Stage test pit 2 survey



Plate 18: Northeast view of Overland Dr, Erin; Proposed sewer route is within the disturbed road, no Stage 2 required



Plate 19: Southeast view of Main St, Erin; Proposed sewer route and forcemain are within the disturbed road, no Stage 2 required



Plate 20: Northeast view of Dundas St W at Main St, Erin; Proposed sewer route and forcemain are within the disturbed road, no Stage 2 required



Plate 21: Southeast view of SPS site #5, northeast side of Boland Dr, Erin; Area exhibits potential, requires Stage 2 test pit survey



Plate 22: South view of SPS site #5, southwest side of Boland Dr, Erin; Area beyond disturbed parking lot exhibits potential, requires Stage 2 test pit survey





Plate 23: North view of SPS site #7, Erin; sewer route, and forcemain are within the disturbed road, if proposed SPS site #7 will impact the lawn, Stage 2 test pit survey is required



Plate 24: North view of SPS site #8, Erin; Area north of disturbed road exhibits potential, requires Stage 2 test pit survey

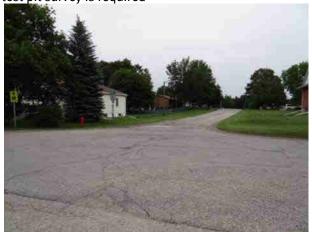


Plate 25: Northeast view of Scotch St at Daniel St, Erin; Proposed sewer route and forcemain are within the disturbed road, no Stage 2 required



Plate 26: Northeast view of Church St and Church Blvd, Erin; Proposed sewer route is within the disturbed road, no Stage 2 required



Plate 27: Southwest view of Dundas St W, Erin; Proposed sewer route is within the disturbed road, no



Plate 28: East view of Dundas St W bridge and West Credit River, Erin; Lands adjacent to disturbed bridge



Stage 2 required



Plate 29: Southwest view of Dundas St W, Erin; Proposed forcemain is within the disturbed road, no Stage 2 required. Any impacts beyond the gravel shoulder require Stage 2 survey.

footings are sloped, low and wet, no Stage 2 required



Plate 30: Southeast view of proposed forcemain along existing trail north of Erin Height Blvd, Erin; Area exhibits potential, requires Stage 2 test pit survey



Plate 31: Southwest view of SPS site 3, Erin; Area exhibits potential, requires Stage 2 test pit survey



Plate 32: Northeast view of Erin Height Blvd, Erin; Proposed sewer route is within the disturbed road, no Stage 2 required.





Plate 33: West view of Waterford Dr, Erin; sewer route is within the disturbed road, SPS site #6 to the north requires Stage 2 test pit survey



Plate 35: Southeast view between Charles St and Church Blvd, Erin; Proposed sewer route is within the disturbed road and parking lot, no Stage 2 required.



Plate 37: East view of SPS site #1A; Area surrounding the disturbed parking lot retains potential, requires Stage 2 test pit survey



Plate 34: West view of West Credit River behind storefronts on Main St near Church Blvd; Area requires Stage 2 test pit survey



Plate 36: South view of Charles St and bridge, Erin; Proposed sewer route is within the disturbed road, no Stage 2 required.



Plate 38: Northwest view of 9<sup>th</sup> Line and Wellington Rd 52, Erin; Proposed sewer route and forcemain are within the disturbed road, no Stage 2 required.





Plate 39: South view of SPS site #1B; Area beyond disturbed road retains potential, requires Stage 2 test pit survey



Plate 40: Northeast view of WWTP site; Area southwest of the disturbed road retains potential, requires Stage 2 pedestrian survey



Plate 41: Northeast view of proposed WWTP site on Wellington Road 52; Area beyond disturbed road retains potential, requires Stage 2 pedestrian survey



Plate 42: North view of proposed WWTP site; Area retains potential, requires Stage 2 pedestrian survey



Plate 43: West view of proposed WWTP site; Area beyond disturbed road retains potential, requires Stage 2 pedestrian and test pit survey



Plate 44: South view of proposed WWTP site; Area southwest of the disturbed road retains potential, requires Stage 2 pedestrian survey

