FISHER ARCHAEOLOGICAL CONSULTING

ACTON WASTE WATER TREATMENT PLANT UPGRADES
ACTON, ONTARIO

Stage 1: Archaeological Background Research
Final Report

CIF# P042-228-2010

ACTON WASTE WATER TREATMENT PLANT UPGRADES
ACTON, ONTARIO

STAGE 1: ARCHAEOLOGICAL BACKGROUND RESEARCH

FINAL REPORT

Submitted to:

The Ontario Ministry of Tourism and Culture

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STAGE 1: ARCHAEOLOGICAL BACKGROUND RESEARCH
FINAL REPORT

1.0 INTRODUCTION

Fisher Archaeological Consulting (FAC) was retained by Dillon Consulting Limited, London office, Ontario, to conduct a Stage 1: Archaeological Background Research study for Proposed Upgrades to the Acton Waste Water Treatment Plant (WWTP). The Background Research is part of the Environmental Assessment for the proposed expansion project and has been prepared for review by the Ontario Ministry of Tourism and Culture (MTC).

The legal description of the property associated with the Acton WWTP is 202 Churchill Road South, in the Town of Halton Hills (Acton) and is comprised of approximately five hectares on Part Lot 26, Concession 3 of the former Esquesing Township in the Regional Municipality of Halton. The Study Area for this assessment is the section of the property comprising the WWTP facility itself, the gated and fenced area which includes all the existing structures of the WWTP, as well as the site of the proposed upgrades (***Figures 1 and 2***).

The Study Area is located at the southeast edge of the Town of Acton, on the south side of Churchill Road. While Churchill Road (the original Esquesing Township boundary between Concessions 3 & 4) runs northwest to southeast, this report will employ a Grid North system with the CN Railway representing the east-west line (***Figure 2***). The existing structures of the WWTP facility are fenced in completely on all sides, the main access gate being approximately 160m from the Churchill Road, down a winding driveway that crosses the Canadian National (CN) rail line approximately 50 metres south of Churchill Road and 110 metres north of the WWTP main gate. CN owns an east-west strip of land extending approximately 15 to 20 metres on either side of its tracks. Between the railway tracks and the main WWTP gate, north of the Study Area, the driveway runs past the former Acton Landfill Site, now closed and capped; east of the driveway is open and undeveloped land, while west of the drive is tree covered.

A disused access road enters the Study Area from the west, formerly connecting with Acton's Agnes Street; the gate for the former road is still part of the WWTP fence, approximately 130 metres southwest of the main gate. To the west of the Study Area, the land consists of treed hillocks, ponds and marsh; the Town of Acton is not visible in this direction. East of the Study Area are more treed hillocks and marsh. The south of the Study Area backs on to a marsh, through which runs Black Creek, a year round watercourse. Black Creek runs within 20 metres of the entire fenceline. No development is visible to the west, south, or east of the Study Area.

The Study Area has a varied topography sloping north to south, quite steeply over parts of the area 100 metres south of the main gate. The southern half of the Study Area is generally level, a small rise present on the west side between the pond and the disused access road. The present grade of the Study Area

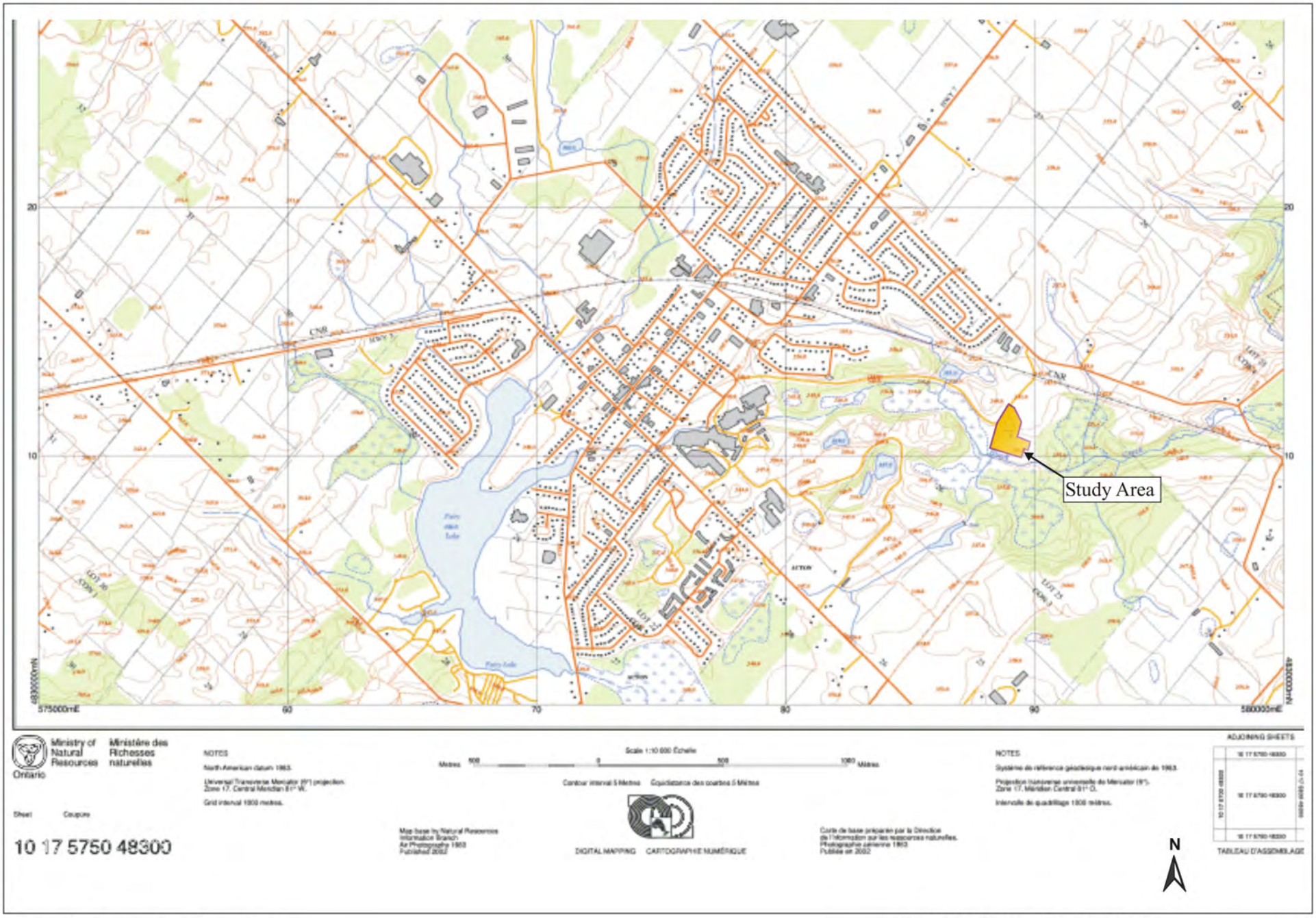

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Figure 1: Study Area Location and Topography

- WWTP Property Boundaries

- Study Area

Grid N

Not to Scale

Registered Plan 1098
Town of Halton Hills
by Thomas J. Packowski, OLS
Fred G. Cunningham Inc.
1996

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Figure 2: Study Area Site Plan

appeared, upon visual inspection, to be more than one metre higher than the surface of the marshland to the south.

This report comprises a Stage 1: Background Study, as outlined in the *Archaeological Assessment Technical Guidelines* (MCzCR:1993; now MTC). Archaeological consultants, licensed by MTC, are required to follow these guidelines during land use planning as part of the evaluation of cultural heritage resources. There are four stages for archaeological work:

Stage 1 Background research and "windshield" survey. The purposes of the Stage 1 archaeological assessment are two-fold. Firstly, it is to determine the potential for the presence of as yet undocumented cultural heritage resources, and secondly, to determine whether known cultural heritage resources are extant on the subject land(s);

Stage 2 Field work. Stage 2 is the actual field examination of high potential areas, and involves either surface survey of ploughed fields or shovel testing in areas that are undisturbed or cannot be cultivated;

Stage 3 Field activities conducted when archaeological artifacts/features are encountered during the Stage 2 survey. The purpose of Stage 3 is to gather information that will be employed to delineate and evaluate the significance of the site in question in order to determine appropriate mitigation measures;

Stage 4 Mitigation of development impacts to archaeological sites, through site excavation or avoidance. This occurs once the field assessment has been completed and the assessment report has been reviewed by the Ministry of Tourism and Culture (MTC).

This report pertains only to the Stage 1 level of archaeological investigation, and the work was conducted under the Provincial archaeological license number P042, pertaining to CIF # P042-228-2010.

Information about the archaeological potential of the Study Area was gathered from various sources. The archaeological potential for Aboriginal presence has been assessed using the data collected from the Ontario Sites Database (OSD), and from environmental data collected from geological, soils, National Topographic Series and Ontario maps. Pioneer (Euro-Canadian) site potential has been assessed using data from the OSD system, from historic maps, and from primary and secondary historic sources. During the "windshield" visual assessment, a Study Area is checked for vegetation cover (land use), crop development if any (ploughed or pasture), proximity to water sources, type of soil (at a broad level of classification), if the land had been disturbed, current structures and physiographic features.

2.0 BACKGROUND

The following discussion details the environmental and cultural setting of the research area. This provides a framework for conducting the archaeological potential survey of the Study Area. Models predicting site

location may be formulated by attempting to understand environmental requirements of various populations – both Aboriginal and Euro-Canadian (MacDonald 1988:34).

2.1 Environmental Setting

There are a number of environmental factors such as water sources, soil types, physiographic features and vegetation that will influence the settlement and the archaeological potential of an area.

2.1.1 Physiographic Features

Physiographic features would have influenced transportation routes, gathering places, food sources, climate (micro-environments), overall vegetation patterns, soil formation and determined the presence or absence of lithic resources.

The Study Area is located at the southeast extremes of Acton, near which "the Paris and Galt Moraines lie close together, while the drumlins lie immediately behind and in front" (Chapman & Putnam 1973:77). The region sits on a limestone plain, and Acton itself lies on the eastern limb of the Horseshoe Moraine (*ibid*: 202, appendix map). Approximately three kilometers east of the Study Area is the Niagara Escarpment, one of the most significant physiographic features in Southern Ontario, a major "topographic break produced by differential erosion of harder and softer rock" (*ibid*: 11).

2.1.2 Soils

The soils of the Study Area may be broken into two types. The northmost section is comprised mainly of Font soil, a well-drained sandy loam derived from outwash gravel, and a member of the Gray Brown Lusivol Great Soil Group (Soil Report 43:1971). The southern section of the Study Area, nearest the marshland, is composed of Colwood soil, a poorly drained silt loam, derived from water deposited fine sand and silt, and a member of the Humic Gleysol Great Soil Group (*ibid*). The underlying bedrock formation is Lockport/Guelph (Chapman & Putnam 1973: 4-5).

2.1.3 Water Sources

The presence or absence of water is a major factor in determining the archaeological potential, Aboriginal or Euro-Canadian, in a given area. Ready access to sources of water, 200 to 300 metres or less, would have provided people with a major transportation route (canoe, boat, *etc.*), and an abundance of floral and faunal resources (waterfowl, turtles, salmon, edible plants, *etc.*).

The Historic Atlas of 1877 claims "the water power of this township [Esquesing] is unexcelled," a large number of mills being in operation along the Credit River (Walker & Miles 1877:55). The Credit River runs 93 kilometres from Orangeville to Port Credit (Chapman & Putnam 1973:154), crossing through Esquesing well to the east of Acton and the Study Area. The Historic Atlas also depicts a creek, possibly Black Creek, that runs across Lot 26, Concession 3 as connecting to the west branch of the Credit River (***Figure 3***).

The Black Creek, a year-round stream is between 15 to 75 metres from the Study Area (***Figure 1***). This would indicate high archaeological potential, both for Aboriginal and Euro-Canadian sites.

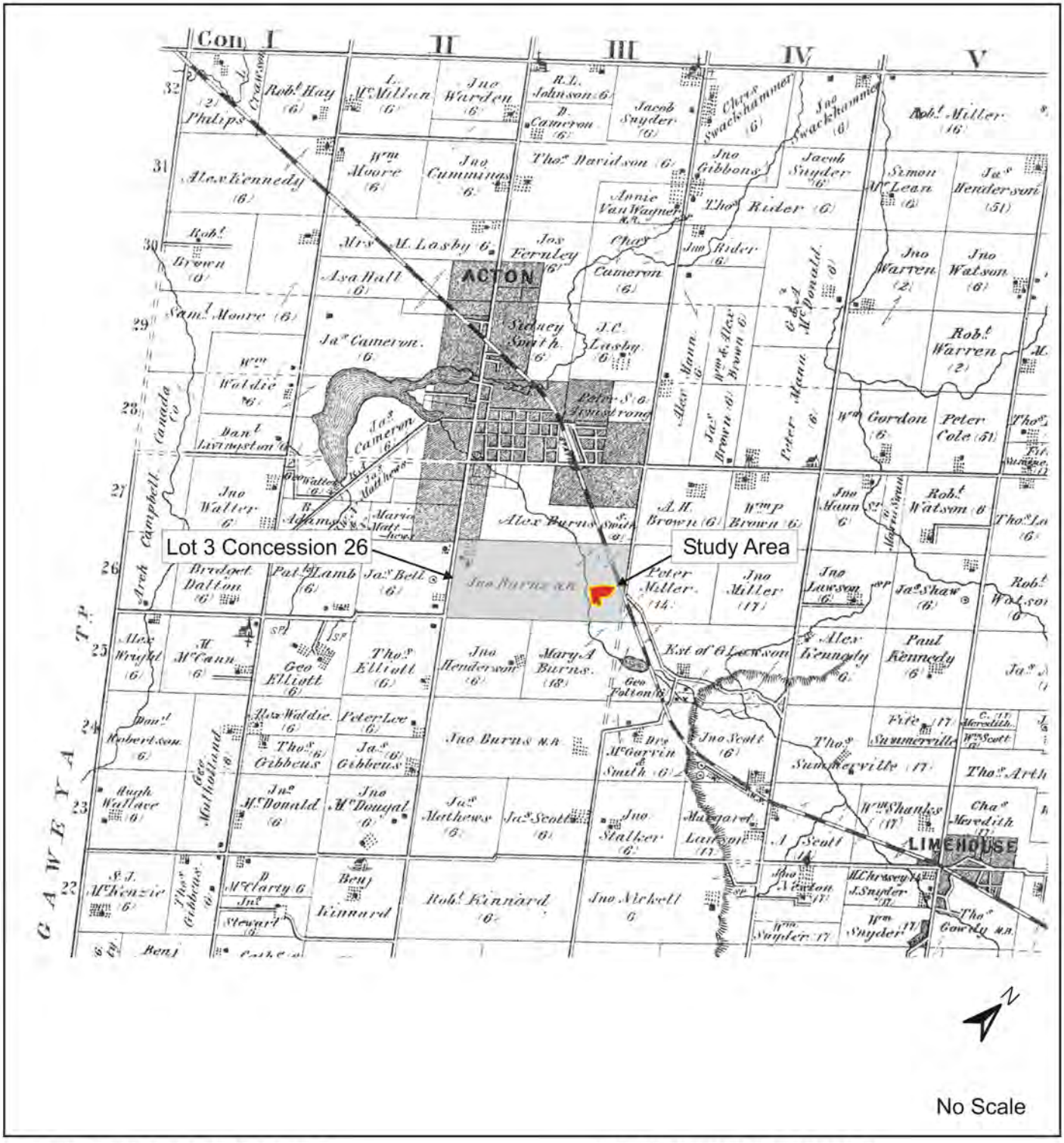

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Figure 3: Study Area, *ca.* 1877
Historic Atlas of the County of Halton,
Portion of Esquesing Township

2.1.4 Vegetation

The natural vegetation of a given region has much bearing on the archaeological potential for that region. The Region of Halton is home to two significant forest types: the Southern Deciduous forest; and the Great Lakes-St. Lawrence forest. The Southern Deciduous forest that is present through the northeastern United States, is found south of Highway 5, while the Great Lakes-St. Lawrence forest "is found in the northern three-quarters of Halton" (www.halton.ca : Halton's History - Natural Setting). The Study Area falls in this latter forest region, being composed "sugar maple, beech, white pine, and yellow birch" (*ibid*).

The Study Area is located within the Historic Township of Esquesing, which "derives its name from the magnificent pine timber with which it was formerly covered, the word signifying, in the...Aboriginal language], 'the land of the Tall Pines'" (Walker & Miles 1877:55). While the "tall pines" have long since been cleared, they would have been a valuable resource to both pioneers and early industrial pursuits.

Visual assessment determined that, while the Study Area shows little vegetation itself, to the east and west there are numerous deciduous trees growing on and around the small rolling hills. The presence of marsh vegetation (cat-tails, *etc.*) was noted to the south of the Study Area.

2.1.5 Topography of Study Area

Upon visual inspection, the Study Area has a varied topography, from steep slopes to level, landscaped lawns. The highest point of elevation is the hillock in the northeast corner, the location of the biodigesters, which have their own separate fence within the overall fencing system of the WWTP. The land generally slopes north to south, levelling out at the base of the driveway and of the biodigester hill, the only other significant slope being on the west side of the Study Area, leading down to the pond (***Figure 4***), a short yet steep bank south of driveway at the old access road gate.

The southern part of the Study Area has a small stone-lined, man-made pond (3m deep) on the west, and an expanse of level, landscaped lawn all along the southeast perimeter. The lawn was formerly the sprinkler/spray beds, and were decommissioned *ca*. the year 2000 (***Figures 2 & 4***).

South of the Study Area fence line is a further drop in elevation, no less than one metre, as the WWTP slopes to the marsh and the banks of Black Creek. To the west and east of the Study Area, the land is rolling, with a mix of wood lots, treed hillocks, and more marsh. To the north of the Study Area, the land is more level, the capped landfill site on the east of the driveway, a small wood lot on the west.

2.2 Research Area History

Immigration to this region of Ontario by Euro-Canadian pioneers began in the mid 19th century. Prior to this, Aboriginal peoples were inhabiting the area for more than 8,000 years.

FAC requested the Ontario Archaeological Sites Database (OASD) be searched by the Ministry of Tourism and Culture (MTC), to determine the number of registered sites within a two kilometre radius of the Study Area. There is only one registered site within this zone. It is AjHa-23 and is an Euro-Canadian

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N

Not to Scale

Key to Development Dates

1948 -

1948 - (decommissioned *ca*. 2000)

1968 -

1978 -

2000 -

1996 -

2002 -

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Figure 4: Study Area Structures & Development

homestead site dating to the mid 19th century. It is located on high ground between two tributaries of Black Creek, overlooking swampy ground.

2.2.1 Regional History

The survey for the historic Township of Esquesing, Halton County, in the present-day Regional Municipality of Halton, was first conducted in 1819, both Kennedy and Bristol conducted the surveys (Land Surveyor's of Ontario nd:55). By 1821, the Township had 424 residents, most hailing frome the British Isles (Walker & Miles 1877:55). By 1871, a large number of mills were in operation along the Credit River. While19th century Halton County was best known for its lumber industry, the towns of Acton and Georgetown soon developed reputations in leather manufacture (www.halton.ca : Halton's History - Railways, Industries & Societies).

The first Crown Patent for land within the present-day Town of Acton was for 100 acres, issued January 28, 1829 to "Silas Emes, of the E ½ Lot 28 in the Second Concession of Esquesing" (no author 1939:*viii*). Acton was first called *Danville*, named after a clerk at the village drygoods store, and later *Adamsville*, after some of the town's early settlers (Walker & Miles 1877:58). Among the first settlers in Acton were the Reverend Zenas Adams, Rufas Adams and Ezra Adams (McDonald 1996:94). The present-day name of *Acton* was given after the 1844 acquisition of a post-office (Walker & Miles 1877:58).

Situated on the Grand Trunk Railway line, Acton rapidly developed its own industry and trade. The first tannery was built by Nellis in 1840 (no author:*ix*). By 1877, when the town's population had reached 900 residents, Acton's industry included the Wright sheepskin tannery, the "Canada Glove Works," and the Beardmore "Sole Leather Tannery" which was " one of the largest in the Province" (Walker & Miles 1877:58).

2.2.2 History of the Study Area

A variety of historic documents was examined to trace the land use since the arrival of Euro-Canadian pioneers. These sources included, but were not limited to, land registry records, historic maps, National Topographic Series (NTS) maps, and aerial photographs. Following is a summary of the information gathered.

Table 1
Summary of Land Registry Records: Part Lot 26, Concession 3, Historic Township of Esquesing

Instr	Instr No	Its Date	Reg Date	Grantor	Grantee	Comments
Patent	N/A	17 Feb 1836	N/A	Crown	Mary Kostiter	200 Acres
B&S	1005I	9 June 1836	11 June 1836	William Miller & Wife, formerly Mary Kostiter	Thomas Burns	200 Acres
B&S	287B	23 July 1853	25 July 1853	Thomas Burns	Thomas Burns	100 Acres, E ½ except 4 Acres sold to Railway.

Instr	Instr No	Its Date	Reg Date	Grantor	Grantee	Comments
B&S	475B	21 April 1853	3 March 1854	Thomas Burns	Toronto & Guelph Railway	3.54 Acres, part of Lot 26
Prob. of Will	646B	9 May 1859	26 July 1860	Thomas Burns	Mary Ann Burns	92 Acres, E ½
Prob. of Will	468	11 Sept 1876	14 April 1888	Janet Alexander, Wife of Reverend Joseph Alexander	Her Husband Joseph Alexander	All her real & personal estates whatsoever.
Quit Claim Deeds	5167 B	13 April 1888	-----	Reverend Joseph Alexander, a Widower	John Burns	E ½ and other lands.
B&S	2309 X	26 Feb 1904	19 March 1904	John, Walter H. & Elizabeth Burns, Sons & Trustees of John Burns.	Donald D. Mann	8 Acres, All that part of Lot 26 lying to the N or NE of the G. T. R. Co.'s right of way; $140
B&S	9183 "3" [?] (2714 F[?])	26 June 1908	29 July 1908	John, Walter H. & Elizabeth Burns, her Attorney W. H. Burns, Sons & Trustees under Will of John Burns.	Alfred Owen Beardmore	All of Lot 26 except parts sold to Toronto & Guelph Railway Co., and Donald D. Mann, and Other Land.
Grant	1996 8-H2	5 Oct 1954	30 Nov 1954	Beardmore & Co. Ltd.	The Corp of the Town of Acton	6.55 Acres, Part of E ½, with Right of Way.

The Crown Patent for Lot 26, Concession 3 of Esquesing Township was issued in 1836 to Mary Kostiter, consisting of a full 200 acres. While the lot did experience some division during the mid and late 19th century, it was reunited to nearly its full 200 acre allotment by 1908, which was purchased by Leather Tanning Magnate Alfred Beardmore. Only about 12 acres of the original 200 did not go to Beardmore: the Toronto and Guelph Railway Co. held nearly 4 acres, acquired in 1853; and the 8 acres lying N or NE of the Railway Co.'s land. The former holding of 4 acres is still railway land today, owned by Canadian National Railway. The Latter 8 acres has changed hands a number of times, and has been further subdivided, part of which currently belongs to the Subject Property at large, but does not fall within the Study Area. The Study Area itself came to the Town of Acton through transaction with the Beardmore Tanning Co.in the mid-20th century, and has remained Town property ever since.

Table 2
Summary of Documented Land Use: Part Lot 26, Concession 3,
Historic Township of Esquesing

Document	Date	Comments
Historic Atlas	1877	- Study Area not shown on Map of Acton. - Map of "Northern part of Esquesing" shows Lot 26, Concession 3 as belonging to J. Burns. - two farm houses and an orchard pictured in the SW corner of Lot 26, though no evidence of development is shown in Study Area. - the G. T. Railway runs NW -SE across the NNW corner of Lot 26, but north of the Study Area. - a creek depicted running NW-SE across centre of NE ½ of Lot 26, almost parallel to railroad and south of Study Area. This creek is shown to eventually connect to "West Branch of River Credit".
Soil Map No. 43	1971	- no structural development of Study Area, though map depicts an unnamed abandoned railway line runs near or through the Study Area, to the north of a creek [Black Creek?].
Plan of Survey, Reg. Plan 1098, Town of Halton Hills.	1996	- Canadian National Railway runs across Lot 26 where G. T. Railway was shown on 1877 Historic Atlas. - road allowance between Concessions 3 & 4 is now called Churchill Road South. - sprinkler beds depicted in SE quadrant. - control and filter buildings and shed not yet built on sprinkler bed. - no evidence of abandoned railway running through or near Study Area.
Aerial Photograph - Prospect Park Wells, Acton. Courtesy Dillon Consulting.	*ca.* 2000	- shows absence of lawn grass on sprinkler/spray beds. - shed not yet built east of control building.
Aerial Photograph	post-2002	- shed now present to east of control building. - well-kept lawn shown of
Topographic Map 40 P/9.	2nd ed. 1952	- CN owns former G. T. rail lines, which follow the same course as in Historic Atlas, north of Study Area. - unnamed creek runs below Study Area, as in Historic Atlas. -abandoned railway shown, running grid E-W through Study Area, between CN rail line and unnamed creek [Black Creek?]. No other development shown on or near Study Area.
	4th ed. 1980	- creek south of Study Area now named Black Creek. - abandoned railway no longer shown. - Sewage Plant labeled on map, with one small structure depicted in Study Area. - "Dump" now shown to the west of Study Area, 200m south of the C. N. lines.
	5th ed. 1985	- more structures, now five, depicted in Study Area, still labelled "Sewage". - "Dump" now shown 500m below C.N. lines, still 500m from Sewage Plant. - "Waste" now depicted 300m southwest of Study Area and 500m to south of Dump.
	6th ed. 1994	- now six structures in Study Area, still labeled "Sewage". - Dump as in 5th Ed., but "Waste" now termed "Settling Ponds".

The available 19th century documentation of the Study Area was limited to the maps of the 1877 Historic Atlas. This source showed no development of the Study Area itself, though the Guelph & Toronto Railway did run within 300 metres to the north.

The 20th century documentation examined, including aerial photographs and superceded topographic maps, indicate that the Study Area remained undeveloped until the mid to late 1900s, when the Sewage treatment plant was established on the site. While no structures appear on the 1952 topographic map, an unnamed abandoned railway appears to have run E-W between the C. N. Rail and Black Creek, parallel to the C.N. Line and across the Study Area. This abandoned railway is only seen elsewhere on Soil Map No. 43, 1971, and is not pictured in either the 1877 Historic Atlas, suggesting a late 19th or early 20th century rail system. From 1980 on, the progression of Aerial Photographs and Topographic Maps shows a steady increase in the number of structures within the Sudy Area. At all times, Black Creek has been depicted south of the Study Area.

According to information obtained during interviews with WWTP staff, structural development of the WWTP began in 1948, with structural upgrades in 1968, 1978, 1996, 2000, & 2002 (***Figure 4***). The digesters, drying beds, sprinkler beds, Plant A, first control building, and the man-made pond are all original to 1948. The service building was built in 1968, while the primary & secondary clarifiers and the aeration tanks were all constructed in 1978. The stairs to the digesters, replacing the former flagstone path, were put in 1996, during which process the digester's hillock was cut into revealing a sandy soil 13 feet deep. The sprinkler/spray beds and the pond were decommissioned around 2000. The new control and filter buildings, as well as a small shed, were built partly on the northernmost former sprinkler bed.

The new control building and the filter building were constructed in 2000, partly over the former small sprinkler bed. As the foundation was being excavated, pumps were frequently employed to prevent the trench from flooding with the water that seeped steadily up from the marshy soil. While digging the foundation, a row of large logs, bark on, was uncovered below the level of the sprinkler bed (***Figure 7***). The logs, thought to be white pine, were roughly three feet in diameter and 10 to 12 feet in length, clean cut, and surrounded by peat moss. Laid side by side, their ends pointing approximately grid N-S, the logs were below the sprinkler bed pipe system, which was set below the frostline.

The presence of the logs suggests that not only was the WWTP ground surface built up well above the natural grade of the surrounding marsh, but that some development had occurred within the Study Area prior to the WWTP structures of 1948. The logs may have been the base of the abandoned railroad, or more probably, a former corduroy road. Corduroy roads, logs laid side by side to provide a rough though functional surface, were used "in marshy and wet areas where animals and wheels could get bogged down, [and] an alterative construction technique was needed" (Joseph *et al.* 2006:8).

3.0 RESULTS

The preferred design option for the WWTP upgrades is presented in ***Figure 5***. Upon consultation with WWTP staff on the known history and use on the Study Area, as well as a review of the available historic and modern documents, and after a visual assessment (windshield survey) of the Study Area, the archaeological potential results (see ***Figure 6 and Table 3***) may be summarized as follows:

A) The entire Study Area is between 15 to 75 metres from a year round small watercourse (Black Creek). The very close proximity to year round water is considered to indicate Aboriginal archaeological potential;

B) The Study Area is more than 75 metres from an historic railway (Guelph Toronto, present-day CN), and more than 150 metres from the nearest historic road (present-day Churchill Road South). An historic railway running within 50 metres of a Study Area increases the historic archaeological potential of the area, as does an historic highway within 100 metres – therefore neither the CN railway nor Churchill Road directly affects the Archaeological Potential of this Study Area.

Regarding historic Euro-Canadian archaeological potential, proximity to water is a significant factor being a means of transport, irrigation, industrial power, *etc*. There is one registered site within two kilometres of the Study Area, and it is a mid 19th century homestead. The early 19th century survey and subsequent Euro-Canadian habitation of the Halton region render the Euro-Canadian archaeological potential high;

C) The hillock on which the digesters sit, though obviously disturbed during the construction & upgrading of the digesters, otherwise appears to have maintained its natural topography, and could still have sections of undisturbed soil and high archaeological potential;

D) The level surface of the south half of the Study Area appears to have been landscaped and raised above the surrounding natural marsh. The presence of the logs found during construction of the new control/filter buildings suggests that the WWTP ground surface had been built up well above the natural grade of the surrounding marshland;

E) The actual structures of the WWTP, and their necessary underground pipe systems, have created obvious disturbance in their immediate vicinities, reducing archaeological potential in those areas.

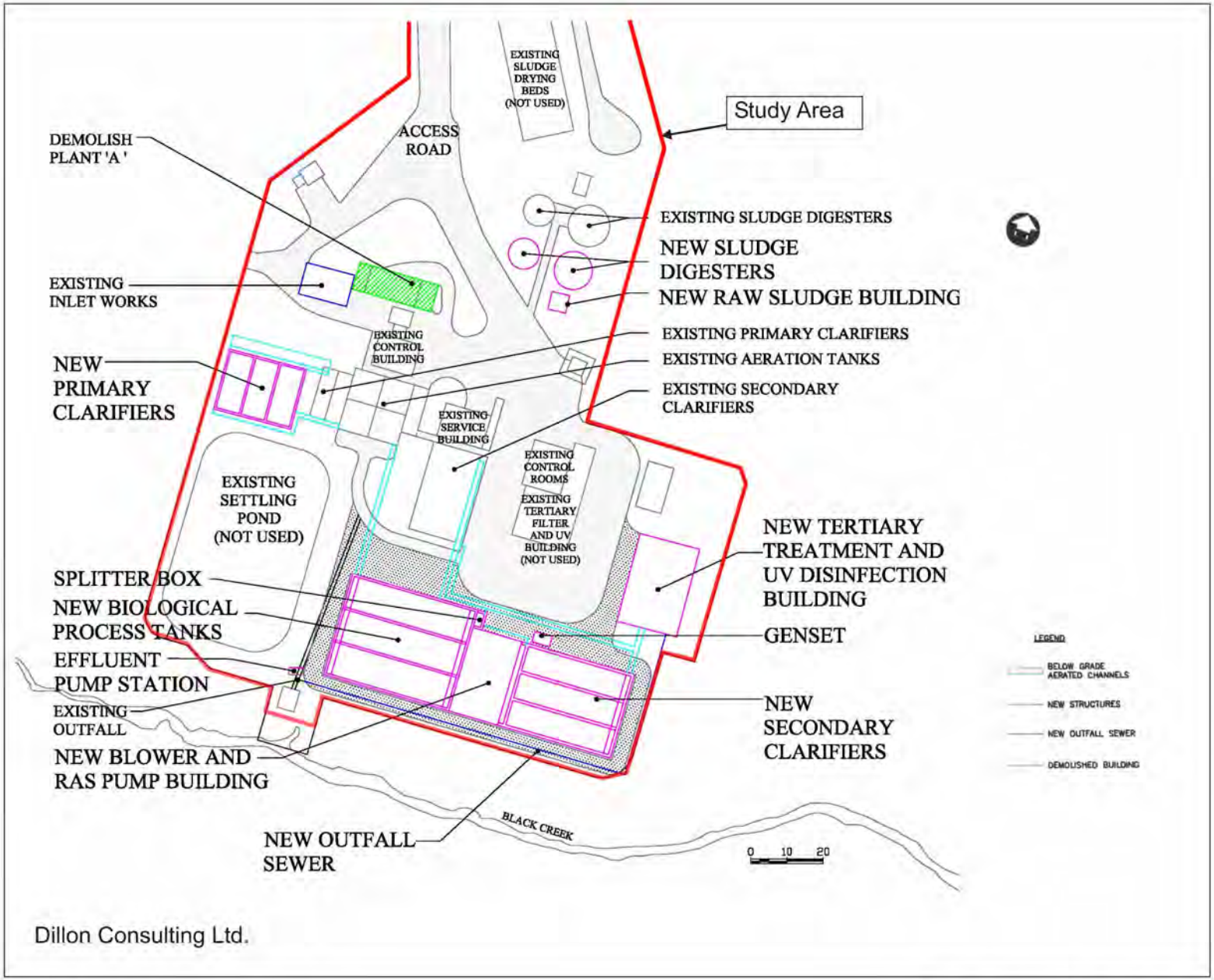

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Figure 5: Preferred Option 2

Google Earth Image 2010

Key

- 4 - Location and direction of photographic plates
- Buildings added since 1996
- Location of Logs discovered during foundation excavation

Archaeological Potential

High -

Low -

Grid N

Not to Scale

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Figure 6: Archaeological Potential

Table 3
Archaeological Potential

	Hist. E-C Potential	**Aboriginal Arch. Potential**	**Water/ Marsh**	**Topography**	**Comments**
Digester hillock & N 1/4 of Study Area.	High, natural high ground	High, natural high ground	<100 metres, entire Study Area in close prox-imity to Black Creek	possible natural topography outside of digester fence, driveway corridor may be significantly disturbed	- disturbance possibly limited to immediate vicinity of digesters - south side of hillock steeply sloped (low potential)
S 3/4 of Study Area, excluding pond and main pocket of WWTP Structures	Low to High	Low		artificially raised and landscaped	- row of logs found below level of sprinkler beds during construction of new control/filter building, *ca*. 2000 (high potential). -rest of the area is considered low
Pond and pre-2000 WWTP Structures	Low, industrial disturbance	Low, industrial disturbance		man-made, stone lined pond, 3m deep; industrial development	- significant disturbance natural soil.

Therefore, there are only a few specific locations which may still retain archaeological potential within the Study Area of the Acton WWTP. The north end prior to the split in the driveway may still retain some potential, the area outside of the inner fence of the digesters could retain potential, and the south side of this hill would be considered to have low potential. However, there is a proviso to this. The presence of this sand hill in close proximity to the creek, could indicate the potential of Aboriginal burials. The construction details of the preferred option (Option 2, see ***Figure 5***) indicate a new sludge building and digester tanks are slated for the south side of this hill. This construction should be monitored to ensure that no burials will be impacted.

The only other area of concern is the probable corduroy road found during the control/filter building construction. The placement of the road indicates that remnants may still be intact in the southwest corner of the Study Area. The road would appear to be heading to/from the bend in the creek, and probably had been impacted by the construction of the pond. However, there may still be remnants of this road between the pond and the control/filter building. Any construction activities in this area should be monitored by an archaeologist.

The remainder of the Study Area is considered to have low archaeological potential.

4.0 RECOMMENDATIONS

The Stage 1: Background Research and Windshield Survey of the Study Area indicates varied archaeological potential for both Aboriginal and Euro-Canadian material. Therefore, as a result of the Stage 1: Background Research, it is recommended that:

1) Stage 2: Assessment, either shovel testing and , or monitoring, be conducted in all areas indicated as having high archaeological potential as presented in ***Figure 6***;

2) No further archaeological work is recommended for areas identified as being of low archaeological potential (see ***Figure 6***).

3) This report is submitted to the Minister of Tourism and Culture as a condition of licensing in accordance with Part VI of the *Ontario Heritage Act*, R.S.O. 1990, c0.18. The report is reviewed to ensure that the licensed consultant archaeologist has met the terms and conditions of their archaeological licence, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.

4) 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*.

5) The Cemeteries Act requires that any person discovering human remains must notify the police or coroner and the Registrar of cemeteries, Ministry of Small Business and Consumer Services (416 326-8406).

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PROJECT PERSONNEL

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Windshield Survey:	Stewart Macdougall Emma Grant
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APPENDIX A
NPD TABLE FOR PROPOSED ACTON WASTE WATER TREATMENT PLANT UPGRADES, ONTARIO

Permission was obtained to enter the property described in the above report	Yes
The licensee had permission to remove any archaeological objects recovered during the scope of the above named project	NA
The archaeological record will be curated at FAC's facilities	

Fieldwork Dates	**Weather**	**Ground Conditions**
Windshield Survey (entered Property) November 19, 2010	clear, mix of sun and cloud.	NA

Plate 1: View of control/filter buildings, shed, and SE quadrant of Study Area; facing Grid SE from atop the digester.

Plate 2: View of filter building and shed, with digester on hill in background; facing Grid NW.

Plate 3: View of WWTP structures across pond, digester on hill in background; facing Grid NE, from SW corner of pond.

Plate 4: View of "Plant A", service building, aeration tanks, primary clarifiers - pond in background; facing Grid SW.

Plate 5: View of "Plant A" and service building, treed hillock (not part of Study Area) in background; facing Grid W.

Plate 6: View north, from atop digester, across closed Landfill toward CN tracks and Churchill Rd S.; facing Grid N.