

APPENDIX J
ARCHAEOLOGICAL ASSESSMENTS

ARCHAEOLOGICAL ASSESSMENT (STAGE 1)
IN THE CITY OF MISSISSAUGA, PEEL REGION

LAKEVIEW WATERFRONT CONNECTION PROJECT

LOTS 4, 5 AND 6, CONCESSION III SOUTH OF DUNDAS STREET
HISTORIC TORONTO TOWNSHIP, PEEL COUNTY

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ORIGINAL REPORT
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Executive Summary

A Stage 1 Archaeological Assessment of the Lakeview Waterfront Connection Project (LWC Project) was triggered by the Environmental Assessment Act for revitalization projects along the Lake Ontario waterfront. Situated in the City of Mississauga on Lots 4, 5 and 6, Concession III South of Dundas Street, the LWC Project is bordered between Lakeshore Road West to the north, Etobicoke Creek to the east, Serson Creek storm channel to the west and extends westerly along the shore to connect to the eastern pier of the Ontario Power Generation's circulation channel.

The purpose of the Stage 1 background study is to document the property's archaeological and land use history and present condition in order to evaluate the property's archaeological potential.

The Lakeview Waterfront Connection Project (LWC Project), led by the Region of Peel and Credit Valley Conservation (CVC), with assistance from Toronto and Region Conservation Authority (TRCA) and City of Mississauga, will create new park lands along the eastern Mississauga waterfront. New coastal wetlands will be established, near shore and terrestrial habitats will be improved, and public access to the waterfront will be provided. The LWC Project will coordinate with other Region of Peel (and possibly other local government) infrastructure projects in order to maximize reuse of locally generated materials. The LWC Project is the first project arising through the City of Mississauga's Inspiration Lakeview visioning process (2010/2011).

The study area has been subjected to heavy disturbances with the presence of the G.E. Booth Waste Water Treatment Facility (WWTF), the Long Branch Rifle Ranges, the Arsenal Lands, and lands immediately adjacent to the Etobicoke Creek affected by Hurricane Hazel. Consequently, the spatial veracity of any potentially buried heritage resources in these areas has been severely compromised and likely destroyed by these heavy disturbances.

The review of latent geographic and cultural features, with careful consideration of available aerial photography, has indicated 45% of the LWC Project area has the potential for intact cultural heritage resources.

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

- Stage 2 archaeological assessment is required in all areas not previously disturbed prior to any future ground disturbances within the boundaries of the LWC Project;
- Archaeological monitoring, followed by a Stage 2 archaeological assessment if necessary, is required for the removal of parking lots as they may have capped existing cultural heritage resources.
- All areas documented as disturbed require no further archaeological assessment.

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1.0 INTRODUCTION AND PROJECT CONTEXT

1.1 Development Context

A Stage 1 background study for the Lakeview Waterfront Connection Project was triggered by an Individual Environmental Assessment (EA) undertaken for Lots 4, 5 and 6, Concession III South of Dundas Street in the City of Mississauga (**Maps 1 and 2**). The objectives of this study are to provide information about the property's geography, history, previous archaeological fieldwork and current land condition in order to evaluate the property's potential to contain cultural heritage resources that might be impacted by the modifications proposed in the EA.

The Lakeview Waterfront Connection Project (LWC Project), led by the Region of Peel and Credit Valley Conservation (CVC), with assistance from Toronto and Region Conservation Authority (TRCA) and City of Mississauga, will create new park lands along the eastern Mississauga waterfront. New coastal wetlands will be established, nearshore and terrestrial habitats will be improved, and public access to the waterfront will be provided. The LWC Project will coordinate with other Region of Peel (and possibly other local government) infrastructure projects in order to maximize reuse of locally generated materials. The LWC Project is the first project arising through the City of Mississauga's Inspiration Lakeview visioning process (2010/2011).

The portion of the LWC Project that is discussed in this Stage 1 background is comprised of the Arsenal Lands, Marie Curtis Park, Region of Peel greenspace, the G.E. Booth WWTF and industrial businesses (**Map 2**).

1.2 Project Methodology

1.2.1 Background Research

Following the Standards and Guidelines for Consultant Archaeologists set by the Ministry of Tourism, Culture and Sport, the background study conducted for this report includes the following research information and sources:

- the most current list of archaeological sites from the Ministry of Tourism, Culture and Sport's archaeological sites database for the presence of sites in the project area and sites within a 1km radius of the project area;
- reports of previous archaeological field work within a radius of 50m around the property
- topographic maps at 1:10,000 (recent and historical) or the most detailed scale available
- historic settlement maps and atlases
- known archaeological management plans or other archaeological potential mapping
- aerial photography (both recent and historical)
- title deeds and other land registry documents
- historical land use and ownership records including assessment rolls, census records and commercial directories
- organizations with oral or written information about the land use of the property and area
- secondary historical document sources such as local and regional histories and academic research

The background investigation for the study area encompasses the historical and cultural contexts of the people who lived both within and adjacent to the study boundaries. Archival research of historic and modern heritage documents was conducted using available resources at the Peel Archives and various internet genealogical resources to provide a detailed synopsis of EuroCanadian/Settlement period families on these properties. Relevant heritage documents accessed for this study included nineteenth century surveyor's maps and land abstracts for each property. Secondary sources that document the settlement of Toronto Township, Lakeview Village, and the surrounding area were also reviewed.

In addition to archival research, a review of documented property alterations, during the nineteenth and twentieth centuries in the study area, provides the means to evaluate the potential for cultural heritage resources and landscapes to remain intact within undisturbed pockets of these properties. Despite the level of archaeological potential evaluated through the modelling process, the potential for encountering intact resources is often mitigated by the degree of modern development and construction activities, largely in urban and near urban settings.

Detailed archival research into historic and modern heritage documents was conducted as a component of this study and is presented in Section 2.1.

1.2.2 Property Inspection

Property inspections are conducted in guidance with the 2011 Ministry of Tourism, Culture, and Sport Standards and Guidelines for Consulting Archaeologists and to gain first-hand knowledge of the geography, topography, and current condition of the project area, and to evaluate and map archaeological potential. However, due to the size of the LWC Project study area and the heavy disturbance to the land, no property inspection was conducted.

Identified Structures and Built Features

Arsenal Lands

In 1910, the Minister of Militia and Defense for the Dominion of Canada purchased part Lot 4 and 5 for a military training facility. Often the term Arsenal Lands is used locally to define the area west of Etobicoke Creek to the former location of the aerodrome site west of the Long Branch Rifle Ranges. By the early 1940s a large munitions factory was constructed on the property to support the Second World War and was known as the Small Arms Limited. In addition to the 81,000 square foot factory there existed a water tower, several administration buildings and miscellaneous outbuildings. Many jobs became available and Lakeview had a housing boom to shelter the women who came to produce munitions for the men who were overseas. After the war, the company became part of Canadian Arsenal Limited and continued to produce a small amount of weapons for the Crown but was later sold due to competition with private companies. Since that time, the property has been leased to Ontario Power Generation for use as a training facility for hydro workers, has been used as a drill hall for the Cadet Organization Police School, was sold to Canada Post for use as a sorting and distribution centre and most recently purchased by the TRCA in the early 1990s. In 1996 the large factory was demolished. The only surviving structures of the wartime industry are the Small Arms Inspection building built in 1941 and the water tower built in 1910 during World War I.

Long Branch Rifle Ranges

In 1868 the Ontario Rifle Association was formed to train militia. At the request of the City of Toronto their base of operation was moved in 1891 from Garrison Commons at Fort York to property in Lakeview which became known as the Long Branch Rifle Ranges. The range acted as a training ground for the Department of National Defense during World War II and as the administration offices for the Royal Ontario Air Force. The Long Branch Rifle Range closed its doors in 1957. While the majority of the rifle ranges lay to the west of the study area, a portion is now in the location of the G.E. Booth WWTF. Earthen-filled wooden baffles and a concrete backstop the only surviving remnants of the rifle ranges located in the greenspace south of the Small Arms Inspection Building. This area is currently owned by the Region of Peel.

Marie Curtis Park

Located between Etobicoke Creek and the Arsenal Lands, Marie Curtis Park was constructed in the aftermath of Hurricane Hazel. The area was known as the Etobicoke Flats in the early 1920s and a small shanty community was established. Flooding was a regular occurrence at the mouth of the Etobicoke Creek with minor floods recorded up until 1930. During the 1930s and 1940s, the area was prone to severe flooding which increased public concerns regarding the state of the Etobicoke Creek. As a result, the Etobicoke Creek Conservation Authority was formed to monitor and make recommendations. In 1954 Hurricane Hazel devastated homes near the mouth of the creek, resulting in the evacuation of several hundred people. The local government petitioned the provincial and federal government to purchase the affected properties and create a public park. The park is comprised of the once privately owned lots which had waterfront cottages built on them and a donated parcel of land from Canadian Arsenal Ltd. The park was named after former reeve of the Village of Long Branch Marie Curtis.

Existing Cultural Heritage Programs

Heritage Register

The *Ontario Heritage Act (OHA)* gives municipal heritage advisory committees the responsibility of researching and recommending to municipal council properties of cultural value or interest. The properties are recorded and monitored through a heritage register as *designated* (under the OHA) or *listed* (non-designated properties with cultural heritage interest or value that may become candidates for designation).

In 2009, the City of Mississauga designated the Small Arms Inspection Building and the water tower as a historic industrial and cultural landscape in recognition of the wartime significance of the property during World Wars I and II, including the contributions of women in the workforce, as well as the development of Lakeview.

Plaques

There are no plaques within the LWC project area but two exist adjacent to and are directly related to the history of the property. One provincial plaque erected by the Archaeological and Historic Sites Board, now known as the Ontario Heritage Trust, is in commemoration of Canada's First Aerodrome, located west of the Long Branch Rifle Ranges, and states:

In May, 1915, Curtiss Aeroplanes and Motors, Ltd. established Canada's first aerodrome and flying school on this site. The school, and the Curtiss aircraft factory on Strachan Avenue in Toronto were managed by John A.D. McCurdy, Canada's first aviator. Most of the graduates went to England at their own expense, to join the Royal Flying Corps or the Royal Naval Air Service. When the Royal Flying Corps, Canada, was created in January, 1917, its first flying units were based at Long Branch. Later that year, when Armour Heights and Leaside were prepared for flying, Long Branch became the ground training school for the cadet wing of the R.F.C.

The second plaque was erected on the east bank of Etobicoke Creek in Marie Curtis Park by the Metropolitan Toronto Parks and Property and reads:

On October 16, 1954, Metropolitan Toronto experienced wide-spread devastation and extensive loss of life as a result of Hurricane Hazel. Many people acted very bravely in their attempts to help and rescue their fellow citizens. This plaque is to commemorate those that lost their lives and those that displayed such acts of courage and heroism in this area.

2.0 HISTORICAL CONTEXT

2.1 Historical Environment

Prehistoric Environment

Located within the Iroquois Plain physiographic region (Chapman and Putnam 1984:190), the former shoreline of Glacial Lake Iroquois is situated approximately 3.8 kilometres west, or inland, of the existing shoreline (**Map 3**). Lake Iroquois was formed before 12,000 BP (before present) as the Ontario lobe of the Wisconsin glacier retreated from the Lake Ontario basin. Isostatic uplift of its outlet, combined with blockage of subsequent lower outlets by glacial ice, produced a water plain substantially higher than modern Lake Ontario. Waterlaid sediments that are free of stones and have a very level topography, evident within the area, are typical of beach deposits laid down in shallow waters (Chapman and Putnam 1984:61, Karrow and Warner 1990:7).

By 10,000 years ago Early Lake Ontario was considerably smaller than the earlier Lake Iroquois. This low water phase began around 11,400 BP when the St. Lawrence River outlet became established. Climatic changes during the Holocene were the result of "interplay of movements of continental cyclonic weather systems, fluctuating Great Lakes levels and associated climatic influences, and site-specific microclimate regimes" (Karrow and Warner 1990:35). Changes in forest composition reflect these climatic changes. During the Early Holocene ameliorating winters and warm, dry summers that were longer and warmer than present resulted in changes in the landscape in southern Ontario from treeless tundra to spruce forest by *ca.* 10,000 BP (Karrow and Warner 1990:33-35).

After 10,000 BP a gradual increase in atmospheric humidity in conjunction with warm summers led to the replacement of spruce forests by jack pine which were dominant between 9800 and 8500 BP but were replaced by white pine by 8000 BP, suggesting a gradual increase in humidity and a continuation of hot summers. These forests would have been similar to, although not directly analogous with a modern boreal forest, insofar as a variety of hardwood and mast trees such as oak were present. In this relatively open boreal forest, subsistence resources were probably woodland caribou and/or elk, moose, beaver, hare and fish (Dibb 2004:126; Lennox 2002:8). With the exception of a mid-Holocene warm/dry period between 6000 and 3000 years ago (Yu and McAndrews 1994:151), after *ca.* 7500 years ago the southern Ontario climate shifted from deglacial to postglacial (Yu 2003:387), and an essentially modern but slightly drier climate. Mixed coniferous-deciduous forest dominated the region. Subsistence resources at this time likely included a wide variety of aquatic animals, as well as waterfowl attracted to the riverine and marsh environment. Deer, fish, beaver, hare, duck and turtle as well as seasonal plants such as berries, sedges and nut trees were all possible food items established at this time (Ellis *et al.* 1990:111-114; Jamieson 2002:31; Ritchie 1994:34). Sand plains were rich in nut bearing trees such as oak, hickory, chestnut, walnut and beech. The well drained soils in this area were highly suited for growing Native horticultural crops and along with the rich food sources in the environment would have provided an ideal locale for more sedentary agriculturalists that populated southern Ontario after A.D. 900 (Karrow and Warner 1990:14).

Historical Environment

The early nineteenth century settler families in this area would have encountered thriving forests filled with plenty of hardwood trees important for building homes and fuelling fires. Families were fortunate if their land had a substantial water source, such as a stream, creek or spring that would attract game animals, provide fish and be a source of drinking water. Clearing the land would have been a tedious, painstaking task but of high importance. The planting, growing and harvesting of crops was vital if the pioneer families were to survive through the harsh winter months. Early accounts of the area indicate that Etobicoke Creek suggested that parts of the creek amounted to little more than a seasonal stream, sometimes dissipating to isolated pools during the summer months. This affected the ability of the water

to consistently power mills for flour and lumber. Milling became an unattractive business with the lack of a steady flow and periodic flooding. Only a small handful of water powered mills were able to operate during the nineteenth century.

Primary historic accounts of the environs around Etobicoke Creek and the Mississauga shoreline come from early surveyor diaries, including Samuel Wilmot, who in 1805 surveyed and mapped 200 acre parcels of land in Toronto Township. Unfortunately, his diary did not survive but the map he recorded did and illustrated timber lots to be reserved to build masts, old roads, land to be saved for clergy and crown reserves, and swamp or marshy areas (**Map 4**).

The Atlas of Peel County (Miles 1877) provides a wealth of historical information including discussions of population, geography, road, soil, stock, water power, settlement, agriculture and individual villages. Noted is the Niagara Escarpment, dividing the area into upper and lower regions. The study area, being in the lower region, is recorded as being slightly undulating, with a gradual but continual ascent from the lake to the base of the escarpment. The soil, being of loamy clay and sandy loam, was unsuitable for growing wheat, but excelled in crops such as peas, barley, oats, rye, corn and all root vegetables.

The alignment of the mouth of the Etobicoke Creek has changed dramatically over the past 200 years (**Image 1** and **Map 5**), as has the shoreline of Lake Ontario (**Map 5**), based on surveyor's maps and twentieth century aerial photography. Slight errors are not unusual for the nineteenth century maps, but it is reasonable to expect that the course of the creek has changed due to the effects of erosion and storm events during the past 200 years, and engineering works during the last 60 to 100 years. This point is illustrated through the aerial photography of the LWC Project area with the changing shape of the mouth of Etobicoke Creek (**Images 2-9**). Additionally, an early depiction of Applewood Creek is located in an 1851 surveyed map (**Map 6**) found in the Township Papers at the Peel Archives of Lots 4, 5 and 6 Concession III SDS. It is illustrated as a long narrow inlet west of the mouth of the "Etobicoke River".

2.2 Overview of Local Area Historical Context

PalaeoIndian Period – 12,000 to 10,000 BP.

As the glaciers retreated from southern Ontario, nomadic peoples gradually moved into the areas recently vacated by the massive ice-sheets. It should be remembered that, as the glaciers melted at the end of the last ice age 12,000 years ago, the landscape of southern Ontario was very much like the tundra of the present day eastern sub-arctic. During this time, the entire population of southern Ontario is thought to be somewhere between 100 and 200 individuals. These PalaeoIndians lived in small family groups and presumably hunted caribou and other fauna associated with the cooler environment of this time period. This reconstruction is substantiated by the location of a single toe bone of a caribou at a site in Detroit and the presence of arctic hare, arctic fox and a large ungulate at the Udora site (a PalaeoIndian encampment) near the south shore of Lake Simcoe.

During this time, the water levels and shorelines of lakes Huron and Ontario were fluctuating due to the run-off of the melting glaciers. Traditionally, the PalaeoIndian occupation of southern Ontario has been associated with these glacial lake shorelines. However, recent investigations in the greater Toronto area indicate that these peoples also exploited interior locations away from the glacial lakes, such as kettle lake areas along the Oak Ridges Moraine.

Archaic Period – 10,000 to 2800 BP.

As the climate in southern Ontario warmed, Aboriginal populations adapted to these new environments and associated fauna. Thus, many new technologies and subsistence strategies were introduced and developed by the Archaic peoples of this time period. Woodworking implements such as groundstone axes, adzes and gouges began to appear, as did net-sinkers (for fishing), numerous types of spear points

and items made from native copper, which was mined from the Lake Superior region. The presence of native copper on archaeological sites in southern Ontario and adjacent areas suggests that Archaic groups were involved in long range exchange and interaction. The trade networks established at this time were to persist between Aboriginal groups until European contact.

To harvest the new riches of the warming climate, the Archaic bands of southern Ontario followed an annual cycle, which exploited seasonably available resources in differing geographic locales within watersheds. For example, from spring through fall, bands joined together and inhabited sites in lakeshore environments where abundant foodstuffs such as fish, waterfowl and wild rice enabled the establishment of larger multi-season occupations. As the seasons changed and aquatic resources became scarce, these bands split into smaller groups and moved inland to exploit other resources that were available during the fall and winter, such as deer, rabbit, squirrel and bear, which thrived on the forest margins of these areas.

Unfortunately, due to the fluctuating Lake Ontario water levels at the end of the ice age, the shoreline would have sat at a location that is currently 10 to 20 meters below the present surface level. Aboriginal groups of this era would have exploited the shoreline environments in these now submerged locations and associated archaeological sites representing these seasonal activities are now under water. Consequently, our understanding of the Archaic uses of the Lake Ontario shoreline is poor.

Initial Woodland Period – approximately 1000 B.C. (2800 BP) to A.D. 700

Early in the Initial Woodland period, band size and subsistence activities were generally consistent with the groups of the preceding Archaic period. Associated with the earliest components of this cultural period is the introduction of clay pots. Ceramic vessels provided a means for long-term storage of abundant resources. With the ability to store foodstuffs during times of plenty, the stress of harder times was greatly reduced as it would have been possible to take advantage of accumulated goods. Additionally, around two thousand years ago a revolutionary new technology, the bow and arrow, was brought into southern Ontario and radically changed the approach to hunting and warfare. These two technological innovations allowed for major changes in subsistence and settlement patterns. As populations became larger, camps and villages with more permanent structures were occupied longer and more consistently. Generally, these larger sites are associated with the gathering of two or more band groups into what are referred to as “macrobands”. Often, these larger groups would reside in favourable locations to cooperatively take advantage of readily exploitable resources such as fish. It was also during this period that elaborate burial rituals and the interment of numerous exotic grave goods with the deceased began to take place. Increased trade and interaction between southern Ontario populations and groups as far away as the Atlantic coast and the Ohio Valley was also taking place.

It was also during this period that a brief horizon of Hopewellian influences (from Ohio) emerged, resulting in more elaborate burial rituals, such as cremation, burial mound construction (as with those most popularly seen at the Serpent Mounds near Peterborough, Ontario, for example) and the interment of numerous exotic grave goods with the deceased began to take place. In fact, these goods, which include large caches of well-crafted lithic blades, sheets of mica, marine shells, shark teeth, silver and copper beads, and artifacts such as platform smoking pipes and decorative ear ornaments, all indicate that the Initial Woodland period was one of increased trade and interaction between southern Ontario populations and groups as far away as the east coast and the Ohio Valley.

Late Woodland Period – A.D. 700 to 1650

Around A.D. 700, maize was introduced into southern Ontario from the south. With the development of horticulture as the predominant subsistence base, the Late Woodland Period gave rise to a tremendous population increase and the establishment of permanent villages. These villages consisted of longhouses measuring six metres wide and high and extending anywhere from three to 15 metres in length. Quite often these villages, some of which are one to four hectares in size, were surrounded by multiple rows of

palisades suggesting that defence was a community concern. Aside from villages, Late Woodland peoples also inhabited hamlets and special purpose cabins and campsites that are thought to have been associated with larger settlements. A hamlet consisted of a small scattering of longhouses (approximately one acre in size) that were used on a year-round basis by lower numbers of people that were related to those in the village, but for various reasons lived outside of the village. Cabin sites are those sites that consist of just one longhouse, perhaps built for those individuals whose crops were located a fair distance away from the original village. As such, they were only inhabited on a seasonal basis during times of planting and harvest. Finally, there are special purpose campsites: locations that were temporarily used by Late Woodland peoples in order to extract a particular resource (such as fish, deer, or plant foods). Unfortunately, because of their short-term use, there are generally few artifacts and they rarely contain evidence of structural remains. Many of these campsites are associated with Algonkian-speaking nations who continued a relatively nomadic lifestyle (primarily on the Canadian Shield areas where crop cultivation was not predictable) although travel to and trade with their Iroquoian-speaking counterparts was common.

Social changes were also taking place, as reflected in the fluorescence of smoking pipes; certain burial rituals; increased settlement size; and distinct clustering of both longhouses within villages (clan development) and villages within a region (tribal development). One interesting socio-cultural phenomenon that occurred during this period as a result of the shift in emphasis from hunting to horticulture was a movement away from the traditional patrilineal and patrilocal societies of the preceding band-oriented groups to a matrilineal orientation. Also associated with the Late Woodland period are the large communal grave sites known as ossuaries. Ossuaries are large circular pits (approximately 4 to 10 meters in diameter) that contain the skeletal remains of hundreds of individuals. Historically we know that, every ten years or so, the inhabitants of one or several villages would exhume the remains of their ancestors from their original resting places, clean and wrap them in fur robes, and re-inter them in prepared pits a short distance from the hosting village. The purpose of this secondary and final burial was to reaffirm and strengthen community ties. At the end of this tremendously powerful ceremony, which could last up to 10 days, it was believed that the souls of the deceased were finally at rest and united with one another in the spiritual world.

After centuries of small-scale warfare and the gradual depletion of resources, such as soil nutrients and firewood, the Late Woodland groups that inhabited the north shore of Lake Ontario began moving their villages northward towards Georgian Bay. It was these groups that eventually evolved into the Petun and Huron Nations witnessed and recorded by the early French missionaries and explorers during the seventeenth century as the newcomers traveled up the Trent-Severn waterway on their journeys inland from the St. Lawrence. By AD 1650, the numbers of people in both of those nations dwindled through contact with Europeans (and their diseases) and many relocated or were adopted through continued warfare with the League Iroquois (Five Nations) from New York State.

Descendants of the PreContact indigenous peoples continue to reside on reserve lands and in urban areas throughout Ontario, as well as in other provinces and many U.S. states, and are actively involved in consultations with the provincial and federal governments relating to ancestral sites (particularly burial grounds and other sacred spaces) and proposed projects that might have an impact on ancestral territories and Aboriginal rights under the Canadian constitution.

PostContact Period – A.D. 1650 to 1805

Also called the Early Historic Period, these years are characterized by the arrival of a small number of Europeans interested in exploration, trade, and establishing missions, coupled with a gradual adoption of European materials by First Nations peoples. In terms of material culture, it is often difficult to distinguish between *Haudenosaunee*, *Anishinaabe*, *Métis* and colonial settler campsites during these early years. This is due to the interaction and adoption of each other's material goods and subsistence

strategies which blur cultural boundaries. Such interaction was essential to early explorers and missionaries who relied on local people for survival strategies and knowledge of the local landscape. These permeable boundaries continued until the Crown established segregated reserves in the eighteenth and early nineteenth centuries for the *Haudenosaunee* and *Anishinaabe* communities who remained here while granting properties to European settlers.

The French explorers and fur traders began to travel along the Lake Ontario shoreline and explore parts of the north shore inland. They followed the centuries-old route of the well-established west branch of the Toronto Carrying Place Trail along the Humber River and the east branch along the Rouge River north to the Holland River and beyond, to the upper lakes. It was at this time that the Métis culture developed, resulting initially from the union of indigenous women with the fur traders and a blending of cultural traditions with the ensuing generations began.

Later PostContact/Settlement Period – 1805 to 1900

Peel County

The county of Peel was created in 1805 following the purchase of the southern part of the Mississauga Tract by the British Crown. The territory was named after Sir Robert Peel, a past Prime Minister of England. The First Purchase of Peel County included the survey of the southern half of Toronto Township. A Second Purchase of the remainder of the Mississauga Tract in 1818 included the northern half of Toronto Township as well as the townships of Albion, Caledon and Chinguacousy. This latter purchase or “New Survey” greatly extended the northern boundary of Peel County by an additional 648,000 acres.

The lot and concession grid pattern of the New Survey was distinct from that of the previous survey, with a different orientation of concessions and lot dimensions as the 200 acre lots were now typically granted in square 100 acre parcels. This configuration was intended to facilitate farming and provide access to transportation corridors.

Both Albion and the Gore of Toronto Townships included eleven concessions laid out west to east. In the townships of Caledon, Chinguacousy and North Toronto, six concessions were laid out on either side of Hurontario Street, also known as Centre Road. As this centre baseline duplicated the numbering of the concessions, concessions were further identified as West of Hurontario Street (WHS) or East of Hurontario Street (EHS). In South Toronto Township, concession numbers follow a similar duplication divided by baseline Dundas Street. The concessions are identified as North of Dundas Street (NDS) and South of Dundas Street (SDS).

Fully surveyed between 1818 and 1819, the townships of Albion, Caledon and Chinguacousy were opened for settlement in 1820. Peel was considered a component of York County and was governed by the Home District Council that met in Toronto until 1851. Between 1851 and 1866 Peel was administered by a council made up of members from the united counties of York and Peel.

Early settlements in the townships developed around water-powered mill sites on the Credit River and Humber River and at various crossroads. Development was also influenced by local landforms such as the Peel Plain, the Niagara Escarpment and the Oak Ridges Moraine. By 1821, 120 new inhabitants called the area home. In the 1870s the arrival of several railways, including the Toronto Grey and Bruce, Hamilton and Northwestern and Credit Valley, spurred additional settlements at various junctions.

Toronto Township (South)

The land which forms Toronto Township was originally part of the extended territory of the native Mississauga people who sold or alienated a portion of their lands to the British Crown in 1805 which is

known as the Old Survey. The remaining portion of the township, situated above the Base Line (Eglinton Avenue West), was purchased by the Crown in 1818 and is known as the New Survey. The lands formed part of the County of York in the Home District until 1849, and it then became part of the United Counties of York, Peel and Ontario until Peel was set apart as a separate county in 1865.

Toronto Township South was first surveyed by Samuel Wilmot in 1806 and included one of the province's leading roads, Dundas Street. Unfortunately the Survey Diaries for the "Old Survey" are no longer extant, although the Diaries kept by Bristol and Wilmot for the north half of the township do exist. We do know however that the "Old Survey" was undertaken by Samuel Wilmot and the resultant plan bears the date June 28, 1806 (**Map 4**). This early map does not show any structures on the lot although there are some interesting details clearly indicated. These include:

- The line of the present day Lakeshore Road East in existence since 1806
- Dixie Road opened through to the shoreline of Lake Ontario between 1806 and *ca.* 1880 (now closed)
- The route of the "old" Lakeshore Road, named as the "Road to York," crossing through the south limits of this lot (probably a native trail which was in existence prior to 1806)
- A small inlet to the west of the mouth of the Etobicoke Creek, shown on maps of 1806, 1849, 1856 and 1859

Many of the early settlers were United Empire Loyalists, soldiers and the descendants of Loyalists in search of land patents and grants. Dundas Street became thickly settled and, through funding, the road was graveled by 1836 to accommodate the increase in travel on the road. The township was recorded by many to have the most valuable land in Peel County which fuelled interest and growth in the township. The population grew steadily over the years with over 800 inhabitants calling the township home in 1821 to more than 7,500 by 1851. The railway came through in 1879 and Dundas Street was paved in 1917.

Communities of Long Branch and Lakeview

The lands surveyed under the Old Survey in the early 1800s included the survey Lakeshore Road and once opened, provided ideal settlement opportunities in what became known as the Long Branch and Lakeview communities. During the eighteenth century, the lands which comprise the LWC Project were not part of a village or hamlet, but would have been associated with nearby Port Credit, Summerville and Mimico.

For nearly a hundred years the area remained rural with a predominantly agricultural economy. In 1891, the Ontario Rifle Association relocated the rifle ranges from Toronto's Garrison Commons to the Lakeview area and named it the Long Branch Rifle Ranges. Long Branch is a community that began as a summer retreat for Torontonians on the east side of Etobicoke Creek. Many families popped tents or stayed in the shacks and shanties built on the sandbar that extended across the mouth of the creek during the summer months. In 1883, a subdivision plan was registered for Long Branch Park which included 219 cottage lots.

The Long Branch and Lakeview community saw its roots as a rural landscape shift to a military community and finally to an industrial and residential neighbourhood. The majority of known history of the lands that make up the LWC Project are from the twentieth century and are discussed at the end of this section.

Lots 4, 5 and 6 Concession III South of Dundas Street

The land which forms the LWC Project Study Area is comprised historically of Lots 4, 5 and 6 Concession III South of Dundas Street (SDS) in former Toronto Township, Peel County. Modern

alterations have been made to the Regional boundaries and the east part of Lot 4 was amalgamated with Etobicoke to form part of the City of Toronto. The LWC Project Study Area, which was the former location of some Imperial works and the Toronto Barracks Site just prior to the outbreak of World War I, later became the property of the Ontario Water Resources Commission and now forms part of Marie Curtis Park.

The lands that form Lots 4 and 5 Concession II SDS were originally granted by the Crown to Colonel Samuel Smith, a United Empire Loyalist, on August 11, 1806. Colonel Smith was born in Long Island, New York in 1756 and served with the Queen's Rangers throughout the Revolutionary War. He arrived in Upper Canada and resided at Niagara for a time where he petitioned for a grant of 2,000 acres of land on August 30, 1793. Smith was granted 1,600 acres on Etobicoke Creek as well as 500 acres in York and 1,000 acres in Flamborough Township which were later exchanged for lands on the Etobicoke in 1796. He was married by the Rev. Robert Addison to Jane Isabella Clarke at St. Mark's Church, Niagara, on October 21, 1799. Smith became a member of the Executive Council of Upper Canada in 1813, and served as administrator of the Province in the absence of the Lieutenant Governor during 1817-1818 and in 1820. By April 1817, Smith had been informed of the fact that the survey of Toronto Township was erroneous and that the survey line did not extend far enough back to complete the depth of the Concession. The deficiency amounted to a width of 8 chains (528 feet, or 160.9 m) or 120 acres (48.56 ha) which Smith petitioned to obtain in the Broken Front Concession (now Concession III SDS.) This was granted to Smith by an Order-in-Council on June 3, 1817 and he obtained the patent for the Broken Front Lot on July 11, 1817.

Broken Front Lot 5 was originally a Crown Reserve which had been reserved under orders from Lieutenant Governor Francis Gore for Valentine Harding on December 28, 1810. Broken Front Lots 6, 7 and 9 were granted to Thomas Lucas under Gore's orders on February 22, 1808, and his settlement duties were complete by November 24, 1809 as part of the Settlement Duties Agreement. The agreement included the following conditions: five cleared and fenced acres, a house 16x20 feet in size, and clearing the roads surrounding the property, all within five years.

Colonel Smith did settle on his lands on the east side of Etobicoke Creek which were described by Robert Gourlay in his *Statistical Account of Upper Canada* (1817):

I shall describe the residence and neighbourhood of the President of Upper Canada from remembrance, journeying past it on my way to York from the westward, by what is called the Lake Road through Etobicoke. For many miles not a house had appeared, when I came to that of Colonel Smith, lonely and desolate. It had once been genteel and comfortable; but was now going to decay. A vista had been opened through the woods towards Lake Ontario; but the riotous and dangling undergrowth seemed threatening to retake possession from the Colonel of all that had once been cleared, which was of narrow compass. How could a solitary half-pay officer help himself, settled down upon a block of land, whose very extent barred out the assistance and convenience of neighbours? Not a living thing was to be seen around. How different it might be, thought I, were a hundred industrious families compactly settled here out of the redundant population of England!

From Henry Scadding, *Toronto of Old*, p. 244.

Following the death of Colonel Smith, Lot 4 passed to William Allan as administrator of the estate. It was then sold to Ann Nelles, daughter of Samuel Smith, in September 1843. She in turn sold the land to Clark Gamble (May 1846) who then deeded it to Samuel Bois Smith, son of Samuel Smith, in June 1846. A confirmation deed was registered between James McDonell and his cousin, Samuel B. Smith, in

August 1853. Subsequent owners on this Lot included Marion Halliday (1874), Marion Webster (1895 and 1902), and His Majesty King George V (1910). A smaller ten acre parcel was sold to Ellen Bansley (1855) which was sold later in the same year to Charles Bansley. The Toronto and York Radial Railway Company purchased a right-of-way in 1907.

Legal title to Lot 5 is very similar to that of Lot 4 with the exception that Samuel B. Smith purchased the interest in part of the land from Jaspar Gilkinson in April 1858. The manner by which Gilkinson acquired title to a portion of this land is unclear from the abstract index to deeds.

A small ten-acre parcel was sold by Smith to Richard Polley in January 1847, which became the subject of a legal action in the Court of Chancery between William P. Howland and Lewis Moffatt during Michaelmas term 1861. Moffatt being the successful litigant sold the acreage to James Hamilton (1875), while later owners were Daniel Death (1878), Mary Death, Bernard W. Death (1894, 1895), Hector B. Death and Minnie Jones (1906.)

The Crown Patent to Lot 6 was acquired by Thomas Lucas on November 27, 1809. He sold it to Samuel Smith in March 1818 for £140. Title to this Lot is then identical to Lot 5 with the exception that Mary Lucas executed a Release to the title of the lands in favour of Lewis Moffatt in April 1866. In September 1905, the land was divided between Hector B. Death (44 2/10 acres) and Bernard Death (39 2/10 acres). In October 1909, the land was sold by these men to the City and District Land Company for \$12,000. In September 1910, the City and District Land Company acquired the water Lot in front of Lot 6 “for military purposes,” and the land, including the water Lot, was then sold to His Majesty King George V (January 1911, July and November 1912.) In July 1912 Plan 15115, “The Toronto Barracks Site,” was registered on title.

Assessment rolls for these lands are late in date, available only from 1865 onwards, and do not indicate the presence of any structures. Like other assessment rolls from this period, the value was based upon the amount of acreage held, crops and livestock (including dogs), and the military services for which adult males were liable was noted. These Broken Front Lots were occupied at this time by various tenant farmers who worked small parcels of land (½ acre, 12 acres, etc.) such as Lumley and Cooper (Lot 4), Wyman, Brown, Foster and Caslor (Lot 5), and Brown and Leary (Lot 6).

Unfortunately, the 1842 and 1851 census returns are missing for this division of Toronto Township. The 1861 census indicated that mixed agriculture was being carried out on this land by tenants as well as freeholders. For example, John Polley farmed on Lot 6 and grew spring and fall wheat, barley, peas, buckwheat, potatoes, and hay. Livestock included steers, milch cows, horses and sheep. Additional farm produce included wool, butter, and barrels of pork for market. The assessed value of his farm was \$4800, with \$150 in farm equipment/machinery. Polley’s neighbour on Lot 7, Michael Barnes, lived in a one story frame house erected in 1855 with his wife and seven children. His enumeration was similar to Polley except that he also grew oats, Indian corn, carrots and raised pigs. Barnes owned a “pleasure carriage” worth \$60.

In 1871, Lot 6 was occupied by an English tenant farmer named Mark Abbey with his wife and family of six children. The enumerated farm produce was nearly identical to that of a decade earlier, but now additionally included turnip, apples, pears/plums, colts, flannel cloth and twenty muskrat skins. Farm equipment included wagons, ploughs, reapers, horse rakes and fanning mills. The enumeration of Alice Griffith, widow of John (on Concession II SDS) noted the same crops and livestock as that of her other neighbours (1871 Toronto Township agricultural census).

These lands are historically and cartographically well documented with a history of European settlement that began only after the “Old Survey” was completed in June 1806. Some of these Lots were held as

Crown Reserves and granted to individuals favoured by the Executive Council, such as Samuel Smith, while other allotments were not immediately occupied or taken up and were later re-granted. The first-hand observations made by Robert Gourlay in 1817 suggested that Smith improved just a portion of his extensive acreage that had quickly been allowed to fall into a state of disrepair- perhaps due to the volume of responsibilities he faced as a member of the Executive Council and temporary administrator of the Province of Upper Canada. After Smith's death in 1826, the lands remained in control of his executors until they were once again sold in the 1840's. Evidence from the census rolls and assessments during the period 1861-1871 indicated that the land was held by a number of small tenant farmers who were engaged in mixed agriculture. By the time of World War I the lands had been sold to His Majesty King George V for "military purposes" and later came under the control of the Ontario Water Resources Commission.

An affidavit in the "Township Papers" indicated that a log house 16x20 feet in size had been erected on Lot 6 by the end of November 1809 (**Image 10**). However, it may have been destroyed or allowed to fall into decay because a sketch of these Lots in 1851 (**Map 6**), and a map in 1859 (**Map 7**), depicted no structures on any of the Broken Front Lots. In 1877, a house is illustrated on each of Lots 5 and 6 (**Map 8**).

The maps indicate the presence of an early "Road to York" in 1806 (**Map 4**), which ran across the width of these Lots, while Dixie Road extended to the lakeshore between 1806 and ca. 1880. Two islands at the mouth of the Etobicoke Creek later became joined to the mainland due to the deposition of silt at the mouth of the creek (**Image 1**). The extent to which these lots were cleared by the City and District Land Company, as well as any subsequent modifications made by the Dominion government, is not reflected in the documentary evidence consulted. Stone quarrying was carried out "at the margins of the waters of the Lake" on Lot 7 in the Broken Front Concession, which caused "injury" (perhaps erosion?) to the farm of Richard Cuthbert. It is not known for certain whether similar quarrying activities were carried out on the adjoining Lots 4, 5 and 6 although it remains a distinct possibility.

Twentieth Century History of the Communities of Long Branch and Lakeview

Between the early 1800s and 1940s the Lakeview community witnessed a shift from a predominantly agricultural community to a shanty town and to a community serving military industries. At the mouth, and on either side of Etobicoke Creek, the terrain was flat, and alluvial soil was deposited annually by seasonal floods making it a suitable location for growing crops. However, early pioneers avoided the Flats when building homes due to these seasonal floods. The area soon became known as the Etobicoke Flats and records indicate a dwelling was built there by 1921. The lands situated around the mouth of Etobicoke Creek became a desirable location for cottagers and a few permanent residents to retreat to enjoy fishing and canoeing. During the 1920s, some inhabitants of the shanty town built their cabins on stilts to mitigate the effects of the minimal flooding that occurred.

The Ontario Rifle Association established the Long Branch Rifle Ranges in Lakeview in the early 1890s after relocating from the Garrison Commons in Toronto. In 1910, Lot 4 belonging to the Halliday Family was purchased by the Department of National Defense to train cadets and militia. Immediately east of and adjacent to the Rifle Ranges was the Long Branch Aerodrome and Flying School which opened in 1915 (**Image 11**). During World War I, that site became the Royal Flying Corps and the location of air cadet ground-training. When World War I ended a subdivision plan was registered for the lands east of the Etobicoke Creek and the "island" that was formed at the mouth of the creek (**Map 9**).

The Department of National Defense purchased a portion of the Long Branch Rifle Ranges (Lots 4-9, part Lot 10) in 1935 from the Ontario Militia Department. In 1940, construction began on the Canada Small Arms School and the Small Arms Militia Training Centre in the location of the former aerodrome (**Image 12**). Construction included huts for officers and staff, orderly rooms, quartermaster stores and dining

halls. The following year the Small Arms Ltd. plant on Lot 5 (**Images 13 and 14**) was built. Between 1941 and 1946, the factory produced large quantities of rifles and ammunition to be used overseas. The workforce was largely made up of women supporting the war effort. The Long Branch Rifle Ranges closed in 1957.

This area was also used for weapons testing. In 1942 the Royal Canadian Artillery fired howitzer shells at a buoy target 1,000 yards from the Lake Ontario shoreline and the Royal Canadian Air Force dropped eleven pound bombs over the lake. These bombs were declared harmless to the residents unless they hit land which would penetrate three feet into the ground. One incident did occur when three of these smoke bombs fell in a field on the east side of the Etobicoke Creek in Alderwood nearly hitting children whom were playing in the field.

At the height of production, Small Arms Ltd. employed over 5,000 people. The Lakeview and Long Branch area saw an economic boom requiring new housing including the building of a dormitory on Dixie Road, new transportation links for factory workers, and two new schools. Following the war, Small Arms Ltd. became a division of Canada Arsenal Limited which continued the production of small arms and by 1970 the company employed 200 people. Canada Arsenal Ltd. closed in 1976 and later sold to Canadian engineering company SNC-Lavalin Group Inc. The Small Arms Inspection Building (bottom right corner of **Image 13**) was in lease to the Ontario Power Generation in 1975 for use as a training centre for hydro workers and the back of the building was used by the Cadet Organization Police School as a drill hall.

After 1930, local flooding became a public concern. In 1948, record flooding pushed the recently formed Etobicoke Creek Conservation Authority to voice its concerns. They noted the flats were never suitable for permanent residents and cottages should be moved and reconstructed at new locations. They further recommended that the area be turned into a park for the community. All of the conservation authority's recommendations were ignored except one which saw the lower section of the Etobicoke Creek straightened and a 60-foot channel constructed to allow the creek a direct outlet to the lake.

In 1954, Hurricane Hazel struck the Lakeshore and Long Branch community causing massive flooding and killing seven people. **Image 3** is a post-hurricane aerial photograph that clearly shows the area impacted by the flooding and subsequently restored. Several hundred people had to be evacuated from the Pleasant Valley Trailer Park, north of Lakeshore Road East and some were relocated to the old barracks which were used as temporary housing. Residents recall several houses and trailers were washed out into Lake Ontario. In the aftermath, the community put forth an idea to turn the flooded area into a park since residents were unable to return to the condemned streets. Of the 192 properties to be expropriated, 43 were completely destroyed, 68 seriously damaged and 37 slightly damaged. In addition to the expropriation of these properties by the government, the creek was completely channelized and the entire area was raised with clean fill. The park was named in honour of Reeve Marie Curtis of Long Branch and opened in to the public in 1959. **Image 15** is a 1972 aerial photograph which illustrates the alterations to the mouth of the Etobicoke Creek and Marie Curtis Park post Hurricane Hazel.

3.0 ARCHAEOLOGICAL CONTEXT

3.1 Known Archaeological Sites Within the Study Area

The Ontario Archaeological Sites Database, administered by the Ministry of Tourism Culture and Sport (MTC), indicates that no archaeological site is registered within the LWC Project area but one archaeological site is located within one kilometre.

The Colonel Samuel Smith Homestead (AIGv-028) was registered by Dena Doroszenko of the Ontario Heritage Trust in 1984. A large quantity of historic artifacts and two stone foundations of two outbuildings were documented during the assessment. Doroszenko notes that there was no clear evidence the assessment included Smith's main house and a portion of the site had been bulldozed during development of the adjacent townhouses.

3.2 Previous Archaeological and Heritage Assessments

TRCA Heritage Impact Assessment for 1352 Lakeshore Rd. E. (2009)

A Heritage Impact Statement was conducted by Gillespie Heritage Consulting on behalf of the TRCA for 1352 Lakeshore Road east, or the Small Arms Inspection Building and water tower. Its scope was to highlight the historical background on Canada's wartime munitions production in World War II, the community of Lakeview, the Arsenal Lands and surrounding areas, and the Small Arms Ltd; provide a written description of architectural features and alterations of the Small Arms Inspection Building; and evaluate the building complex in accordance with the "Criteria for Determining Cultural Heritage Value or Interest" provided in Ontario Regulation 9/06 of the Ontario Heritage Act; and search the Ontario Heritage Properties Database for comparable examples.

Since the release of this report, the Small Arms Limited Building & Water Tower has been designated under the terms of the Ontario Heritage Act as a historical and cultural heritage landscape under bylaw number 258-2009.

TRCA Stage 1 and 2 Archaeological Assessment of the Arsenal Lands Hanlan Feedermain (2011)

A Stage 1 and 2 archaeological assessment was completed in the 2011 in advance of the proposed construction of the Hanlan Feedermain in the City of Mississauga. This archaeological work was conducted under PIF 303-123-2011. The assessment was completed on Lot 5 Concession III SD in the historic Toronto South Township, Peel County on TRCA property known as the Arsenal Lands. Approximately 60% of the project area was assessed as disturbed based on Stage 2 identification of extensive land alteration. No artifacts or cultural features were identified.

TRCA Stage 1 and 2 Archaeological Assessment of the Marie Curtis Park Restorations (2012)

A Stage 1 and 2 archaeological assessment was completed in 2012 for various restoration work throughout trail systems in Marie Curtis Park and Maurice Breen Park, east of Dixie Road, along Lakeshore Boulevard West. This archaeological work was conducted under PIF# 338-035-2012. The assessment was completed on TRCA property on Lots 4, 5 and 6 Concession III South of Dundas Street in the City of Mississauga. Approximately 65% of the project area was assessed as disturbed with evidence of deep fill. No artifacts or cultural features were identified.

SJAHCE Marine Archaeological Assessment (2012)

The Scarlett Januses Archaeological and Heritage Consulting and Education (SJAHCE) firm was commissioned to conduct the marine background research for the entire LWC Project study area, and the hydrographic survey for the area east of the Ontario Power Generation (OPG) areas (approximately the east half of the entire study area) for possible archaeological resources. In summary, no significant cultural materials were located during the archaeological assessment with the exception of numerous magnetometer readings near the shore in front of Marie Curtis Park. These readings were noted to come from beneath the sand and their cultural significance could not be determined. SJACHE test pitted positive magnetic readings from handheld metal detectors 5m apart to a depth of 1.2m deep along the waterfront of Marie Curtis Park and determined all of their findings to be no more than 40 years old. The remainder of the project area was considered to exhibit low archaeological potential. This archaeological work was conducted under PIF P303-123-2011.

3.3 Existing Land Conditions

The LWC Project area is bordered by Etobicoke Creek to the east, Serson Creek to the West and Lakeshore Road East to the north and extends outwards into the lakebed of Lake Ontario. It is comprised of Marie Curtis Park, the Arsenal Lands, Region of Peel greenspace and portions of the G.E. Booth WWTF, the former Long Branch Rifle Range and small industrial buildings (**Map 2**). Having a rich history in wartime industries, the LWC Project area has seen a great deal of land disturbances including the numerous buildings erected and torn down for the Long Branch Rifle Ranges, the Small Arms Ltd. factory and administration buildings, several natural and varied creek alignments and flooding events from the past 150 years. In 1954, Hurricane Hazel devastated the land around the mouth of Etobicoke Creek severely altering the landscape. The land on either side of Etobicoke Creek has since been groomed into Marie Curtis Park and the mouth of the creek channeled to flow directly into Lake Ontario.

More recently the TRCA determined soil in the Arsenal Lands to be contaminated where the Small Arms Ltd. factory previously stood and did not meet parkland criteria. Extensive soil remediation was undertaken in 1999 and the soil appropriately disposed of. One area south of the Small Arms Inspection Building houses the identified low level radioactive waste that has been collected from the property and stored in an engineered containment facility managed by the TRCA.

The vast majority of the existing natural cover within the LWC Project area is restricted to the greenspace owned by the Region of Peel. This is the location of Marie Curtis Park and the wooden baffles and concrete backstop built in the 1940s by the Small Arms Ltd.

The topography of the project area varies from smooth to gently sloping with few stones to a variable topography. The soil profile is comprised of two soil types, Chinguacousy clay loam, characterized as grey-brown podzolic, with imperfect drainage, and Bottom Land, an alluvial soil with variable drainage.

3.4 Potential to Contain Archaeological Resources

Determining archaeological potential can be obtained through various research routes. A favourable way of acquiring this information includes creating a probability model. These models are created under careful consideration of several variables including: distance to water, stream order, soil type, drainage, physiographic region, degree of slope, and proximity to registered archaeological sites.

Archaeological Site Predictive Models (ASPM) are a tool used to assist in determining the probability of encountering archaeological sites. In 1990, the Toronto and Region Conservation Authority's Archaeological Master Plan was designed for use by TRCA project planners in order to assess the

potential for cultural resources within a particular property. The model employs High, Medium and Low probability categories based on the several variables noted above, the three most significant factors that determine settlement location of past peoples being close proximity to water, well drained soils, and flat to gently sloping terrain.

While the model does not forecast exact site locations, it does present a generalized prediction based on the known settlement patterns of PreContact peoples. The accuracy of such models have not been thoroughly studied and compared with archaeological finds in the last two decades, however, it is quite clear that most sites are located in high probability areas. A scenario where archaeological potential is nil, occurs when there is reliable, convincing data to determine that a location has been thoroughly disturbed and that no potential remains for intact archaeological resources to survive. Nevertheless, even in areas of disturbance, there is still the possibility to encounter deeply buried deposits containing cultural resources. Low potential is often found in low lying wetlands and may be the case for adjacent lands near the mouth of the Etobicoke Creek which has seen a tremendous amount of water fluctuations and shoreline formations in the last 200 years. Scenarios like this greatly reduce the potential for encountering archaeological sites, except in small pockets of undisturbed land at higher elevated locations within the study area. Of significant importance is the marine archaeological assessment conducted by SJAHCE (2012) which identified several positive test pits in front of Marie Curtis Park. All of the material observed during the investigation was described as garbage and refuse and nothing was retained. Some of these finds could be associated remnants or refuse of the houses that existed on the sandbar and island formed by Etobicoke Creek (**Image 2, Map 9 and 13**) and that were later destroyed by Hurricane Hazel.

It should be stressed that accessible water is one of the most fundamental influences on human settlement and is therefore a major indicator of archaeological potential. In its 2011 Standards and Guidelines, The Ministry of Tourism, Culture and Sport notes that archaeological sites are likely to be discovered in project and study areas that are within 300 metres of primary water source (lakes, rivers, streams and creeks), secondary water sources (intermittent streams and creeks, springs, marshes and swamps) and features that indicate past or ancient water sources (glacial lake shorelines). Thus, areas with high probability to contain PreContact cultural resources are approximately within 300 metres of a water source with good soil drainage and level to gently undulating topography.

While EuroCanadian and other PostContact settlement were dictated by the same needs as those of PreContact peoples, environmental constraints were lessened due to land clearances and road building. However, primary and permanent water resources were crucial for establishing mills, which were vital for further settlement. Areas with high probability to contain EuroCanadian sites are typically within 100 metres from historic transportation routes. These routes are in many cases have a similar alignment to modern roads.

One alternative method includes an extensive review of cartographic documents including historic map, topographic maps and some early twentieth century aerial photography, but is limited to only defining EuroCanadian potential. This method was applied to the LWC Project Study Area.

Based on the variables for archaeological predictive modeling, the study area would be expected to demonstrate high potential for EuroCanadian sites (**Map 14**). However, a review of historic maps (**Maps 7 and 8**), topographic maps (**Map 10 to 13**) and aerial photographs (**Images 2 to 9**) revealed the majority of the LWC Project Study Area has been disturbed by twentieth century construction.

Some of these disturbances include the location of the former Small Arms Ltd. factory, the G.E. Booth WWTF and the location of the old barracks with portions incorporated into an industrial park and a restricted area that holds radioactive waste and soil from the munitions plant. In addition, a landfill site is

known to have existed during the mid-twentieth century on the west side of Etobicoke Creek in what is now Marie Curtis Park. A risk assessment of closed landfill sites in and around Toronto conducted in March of 1990 by Morrison Beatty Consulting Engineers and Hydrogeologists detailed the boundaries of this landfill and has been outlined on **Map 14**.

The area with the highest potential to uncover intact cultural resources is the greenspace owned by the Region of Peel which includes the 1940s wooden baffles and concrete backstop south of the Small Arms Ltd. factory. Other areas of potential include the south side of Lakeshore Road East which would have been a favourable location for early nineteenth century pioneers to build their homes, and Marie Curtis Park.

The potential to locate nineteenth century remains are associated outbuildings to the house illustrated on the 1877 historic map (**Map 8**) on Lot 5 south of where the Small Arms Ltd. factory once stood. This structure may also be the same structure illustrated on the 1909 (**Map 10**), 1922 (**Map 11**) and 1931 (**Map 12**) topographic maps. The 1940 topographic map (**Map 13**) no longer illustrates a house, rather a large factory and water tower. Examples of cultural resources that are associated with the 1877 structure include outbuildings like barns, sheds, privies and middens. Furthermore, the 1909 topographic map (**Map 10**) illustrates seven structures that would have been some time after the creation of the 1877 map and this area could contain the potential to find nineteenth century cultural resources. No further nineteenth century EuroCanadian potential could be identified.

Marie Curtis Park has undergone a number of extensive events and activities that have affected the potential to find intact cultural material, including the destructive events of Hurricane Hazel and use of the area as a landfill site. However, the potential remains to locate deeply buried cultural resources beneath these disturbances. These modern deposits may have capped the cultural layer, for no evidence was discovered indicating the cultural layer was disturbed.

4.0 ANALYSIS AND CONCLUSIONS

TRCA's Archaeology Resource Management Services has completed a Stage 1 archaeological assessment of the Lakeview Waterfront Connection Project on Lots 4, 5 and 6 on Concession III South of Dundas Street in the City of Mississauga.

The objectives of the background study have been met in that the geographic and cultural features of both the LWC Project area and its surroundings have been fully evaluated. In addition, archival research of the settlement of the surrounding area plus documentation of development projects provides a detailed inventory of potential disturbances within the study area.

The following are the results of the Stage 1 assessment:

- The two nineteenth century structures illustrated on the 1877 map have been eradicated by twentieth century development. Potential does exist to find archaeological remains of outbuildings that may be associated with these homes. Archaeological remains of one log cabin known to be standing in 1806 may exist in undisturbed areas of the LWC Project area.
- The study area has been subjected to heavy disturbances with the presence of the G.E. Booth WWTF, the Long Branch Rifle Ranges, the Arsenal Lands and lands immediately adjacent to the Etobicoke Creek affected by Hurricane Hazel. Consequently, the spatial veracity of any potentially buried heritage resources has been severely compromised and would likely have been destroyed due to these heavy disturbances.
- The potential to locate intact cultural resources exists:
 - Within the Region of Peel greenspace between the Arsenal Lands and G.E. Booth WWTF
 - along the south side of Lakeshore Road East
 - beneath twentieth century deposits in Marie Curtis Park
- Previous assessments conducted by TRCA and SJAHCE in Marie Curtis Park have demonstrated high levels of disturbance caused by extensive flooding and deposition of fill along Etobicoke Creek.

5.0 RECOMMENDATIONS

The review of latent geographic and cultural features, with careful consideration of available aerial photography, has indicated approximately 45% of the LWC Project area has the potential for buried cultural resources (**Map 14**).

It is therefore recommended that:

- Stage 2 archaeological assessment is required in all areas identified as holding potential prior to any future ground disturbances within the boundaries of the LWC Project;
- Archaeological monitoring, followed by a Stage 2 archaeological assessment if necessary, is required for the removal of parking lots as they may have capped existing cultural heritage resources.
- All areas documented as disturbed require no further archaeological assessment.

Advice on Compliance with Legislation

- a) 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, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism and Culture, a letter will be issued by the ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- b) It is an offence under Sections 48 and 69 of the *Ontario Heritage Act* for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeology Reports referred to in Section 65.1 of the *Ontario Heritage Act*.
- c) Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.

TRCA Archaeology Resource Management Services: (416) 661-6600 ext. 6417
City of Mississauga Heritage Preservation Services: (905) 615-3200
Programs and Services Branch of the Ministry of Tourism, Culture & Sport: (416) 314-7144

- d) The *Cemeteries Act*, R.S.O. 1990 c. C.4 and the *Funeral, Burial and Cremation Services Act*, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.

Peel Regional Police: (905) 453-3311
Registrar of Cemeteries at the Ministry of Consumer Services: (416) 326-8392

- e) Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the *Ontario Heritage Act* and may not be altered, or have artifacts removed from them, except by a person holding an archaeological license

References Cited or Consulted

- Chapman, L.J., & D.F. Putman.
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David Hatton, Supervisor Soil Management, Toronto and Region Conservation Authority

Kyle Neill, Reference Archivist, Peel Archives

Matthew Wilkinson, local historian, Heritage Mississauga

Appendix A: Images

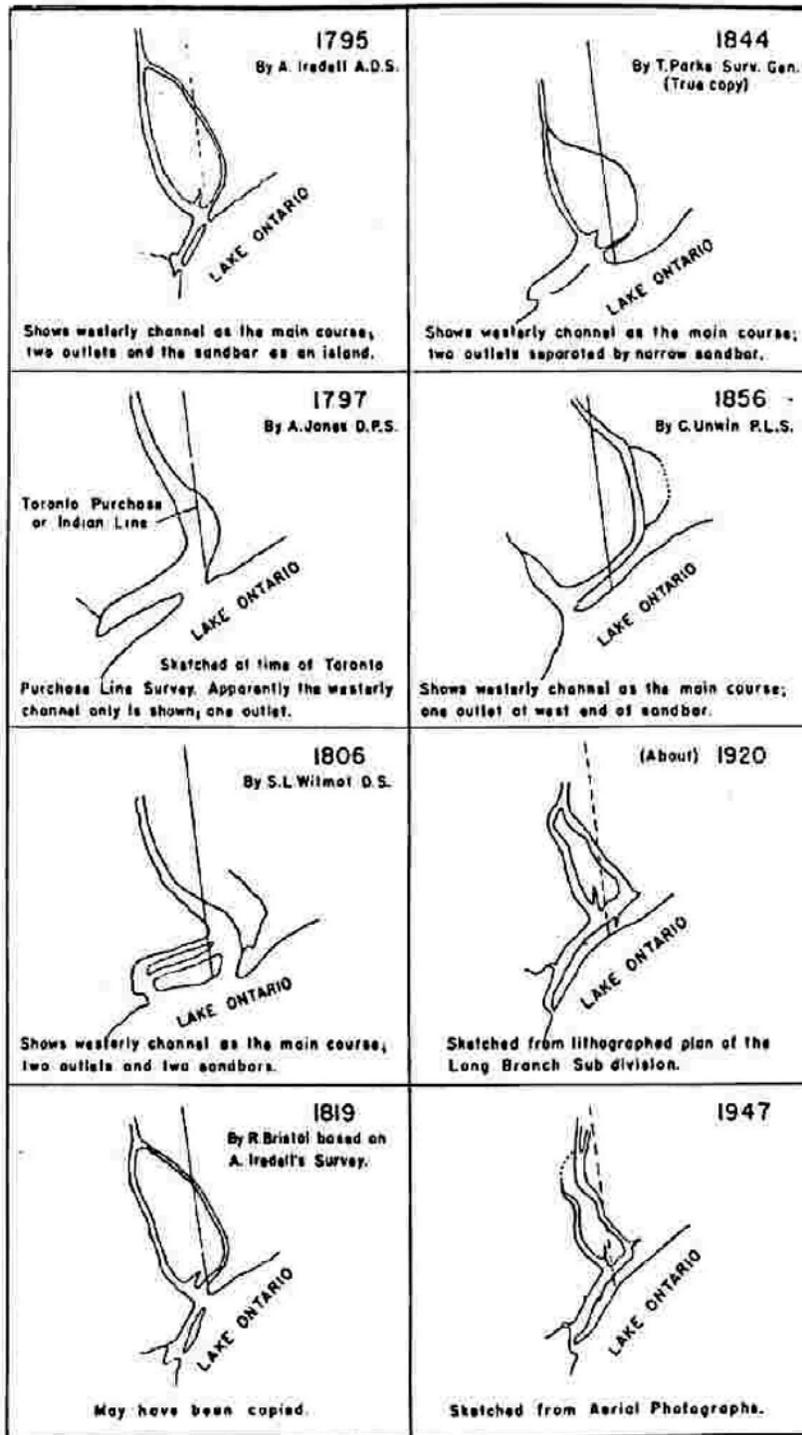


Image 1 Etobicoke Creek Mouth Alignment 1795-1947 (Etobicoke Valley Conservation Report 1947)



Image 2 1946 Aerial Photograph



Image 3 1954 Aerial Photograph



Image 4 1958 Aerial Photograph



Image 5 1967 Aerial Photograph



Image 6 1976 Aerial Photograph



Image 7 1983 Aerial Photograph



Image 8 1989 Aerial Photograph



Image 9 1999 Aerial Photograph

1732

Personally appeared before me Richard Beasley Esq^r
 one of his Majesty's Justices of the Peace Robert Lucas
 and John M. Carter and make oath on the holy
 Evangelist of Almighty God that the following duties
 are done on the broken fronts of lots Number 6, 7 and
 9 in the Township of Toronto namely five Acres of
 land cleared and under fence or House sixteen feet by
 twenty — the road cleared on the back line

Robert Lucas
 John M. Carter

Sworn before me at Barton 21st Day of November
 one thousand eight hundred and nine

Richard Beasley J.P.

Thomas Lucas the grantee of the above lots this day
 appeared before me and made oath that the settling
 duties mentioned as performed in the above Certificate is
 performed true to the best of his knowledge and belief

W. Allan J.P.

Image 10 Record of structure existing on Lot 6 in 1806



Image 11 Aerial view of the Long Branch Aerodrome c.1916 (Mississauga Library Services)

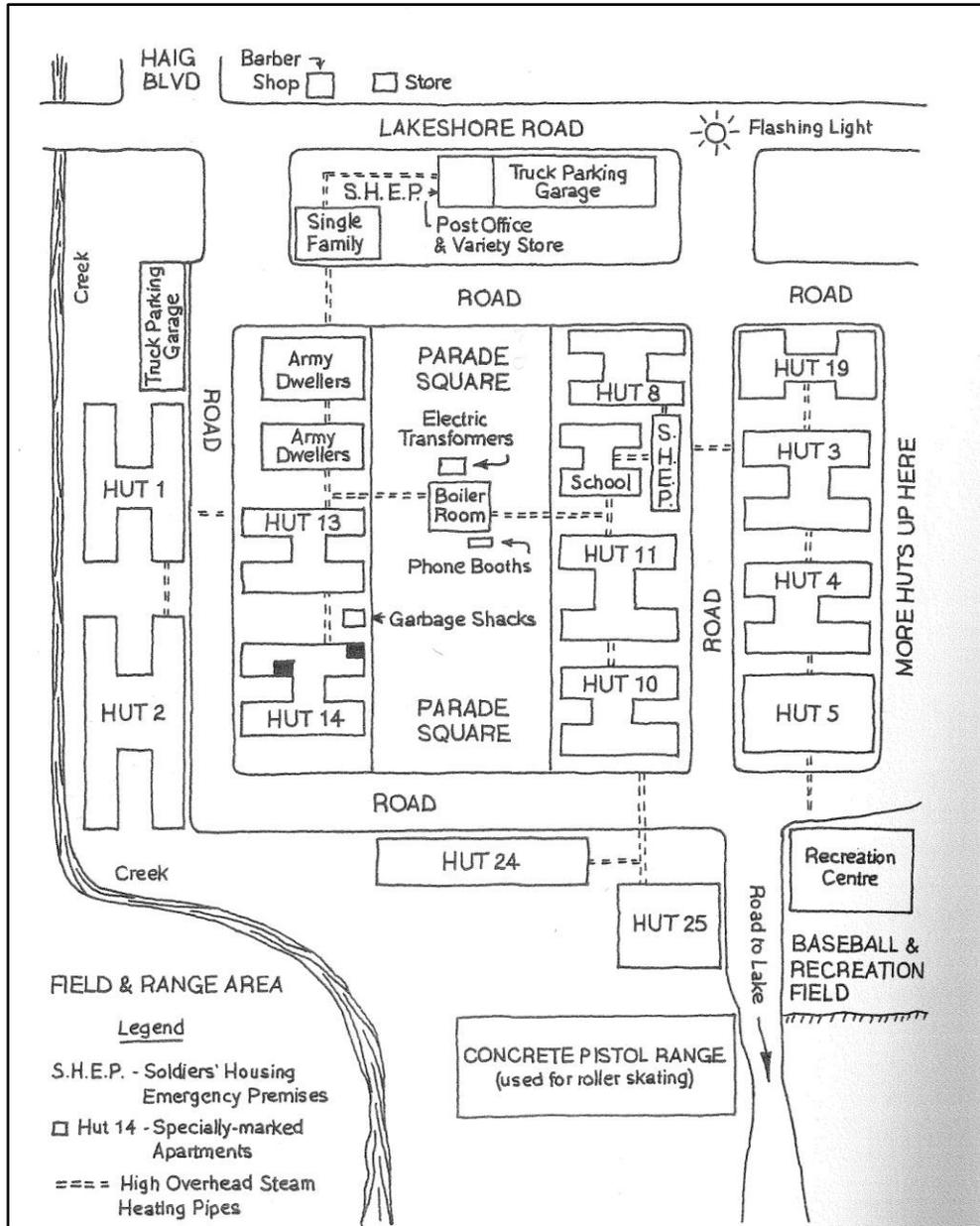


Image 12 Sketch of military training barracks (Weeks 1990:96)



Image 13 Aerial view of the Small Arms Ltd 1949 (Mississauga Library Services)

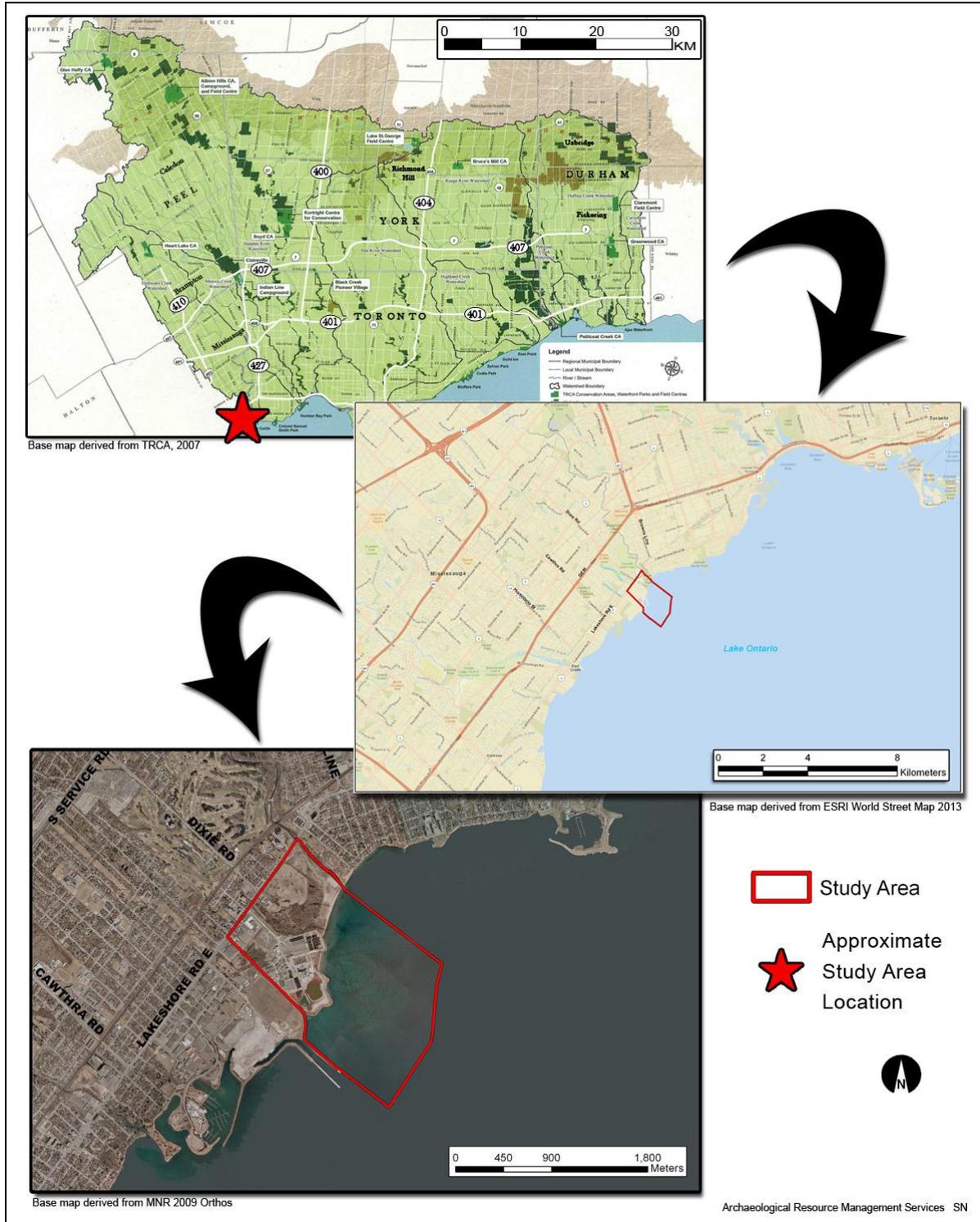


Image 14 Small Arms Limited factory, Arsenal Lands 1943-1945 (Gillespie Heritage Consulting)



Image 15 Aerial view of the mouth of the Etobicoke Creek 1972 (Mississauga Library Services)

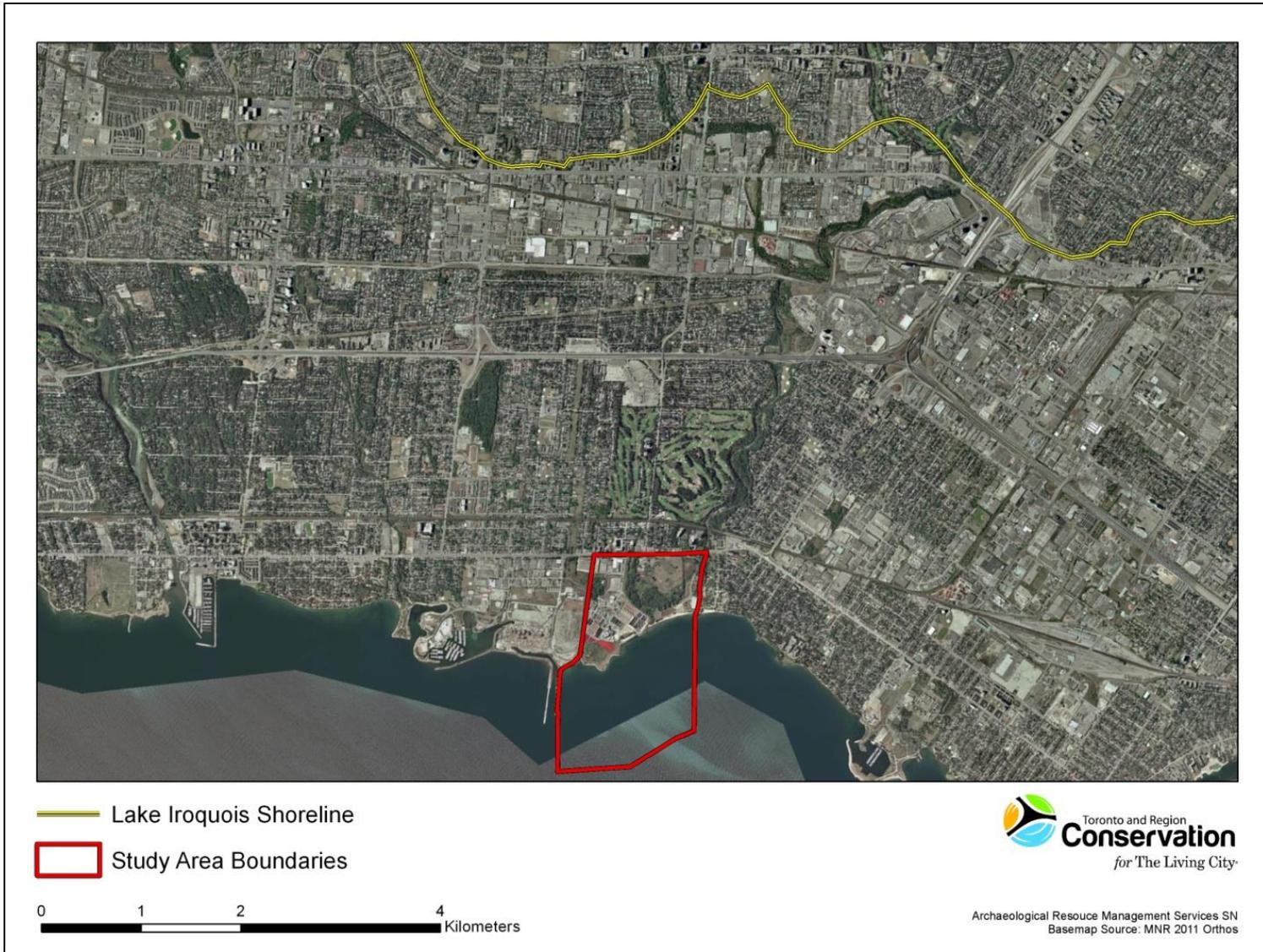
Appendix B: Maps



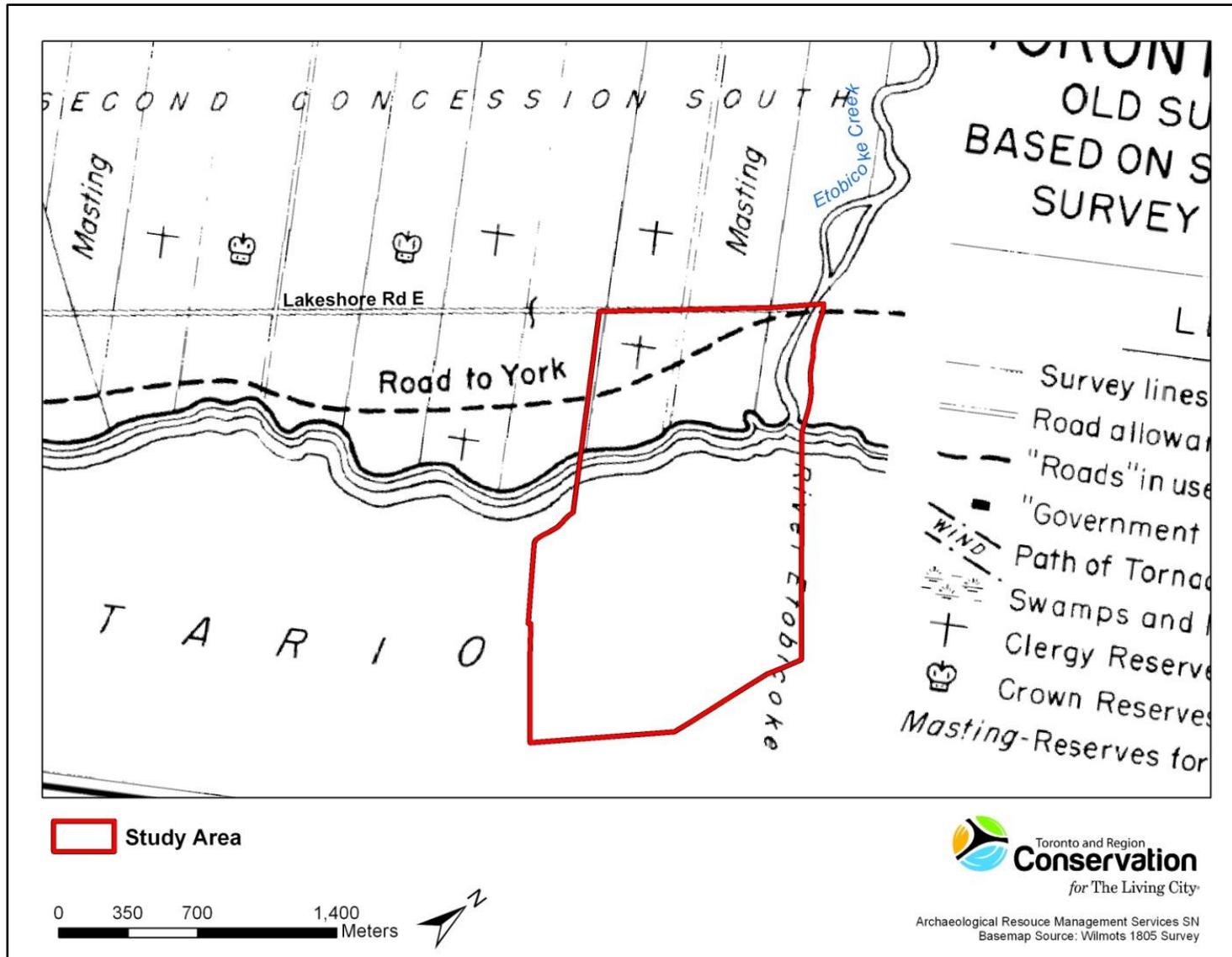
Map 1 General Study Area



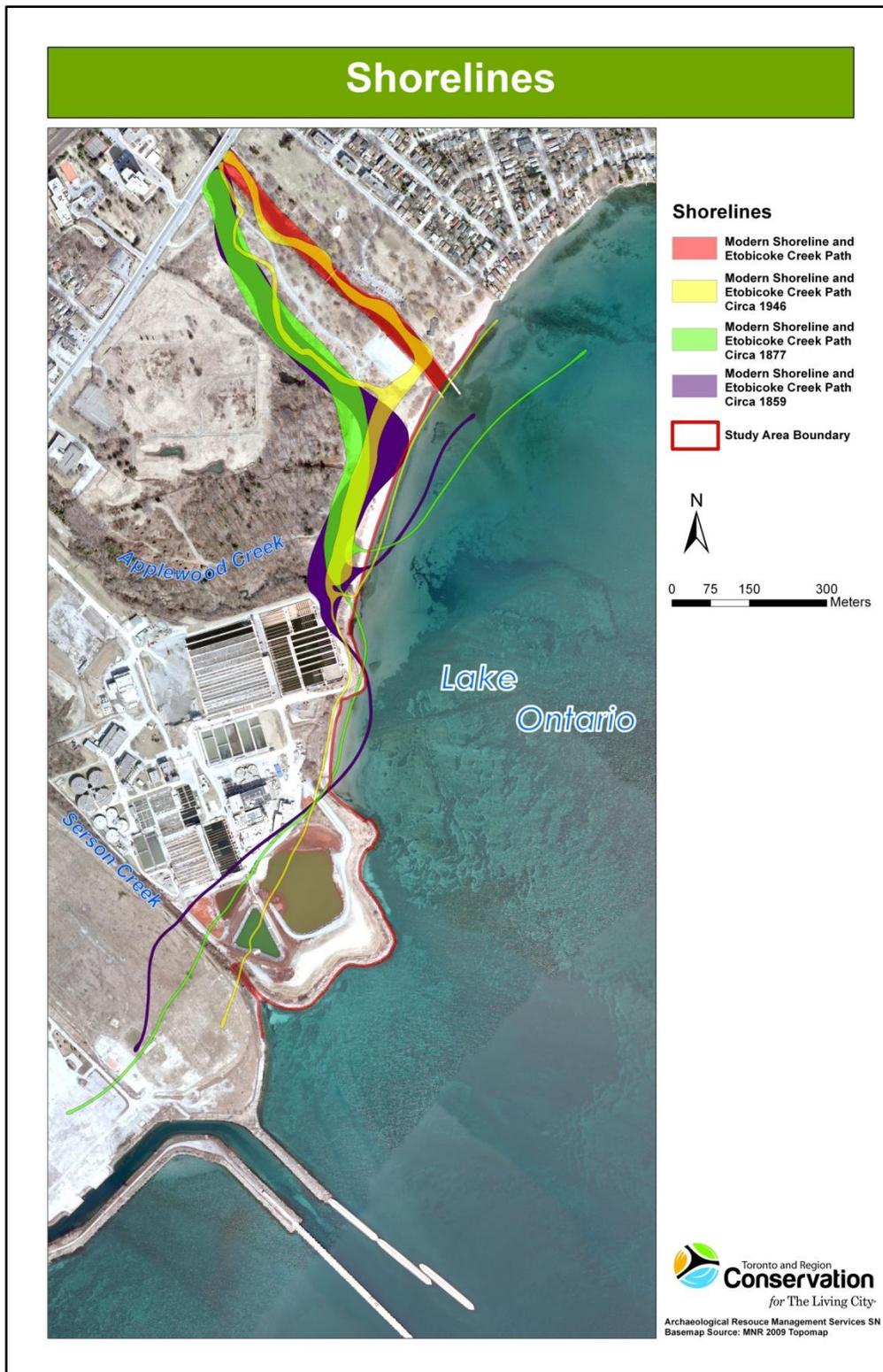
Map 2 Study Area



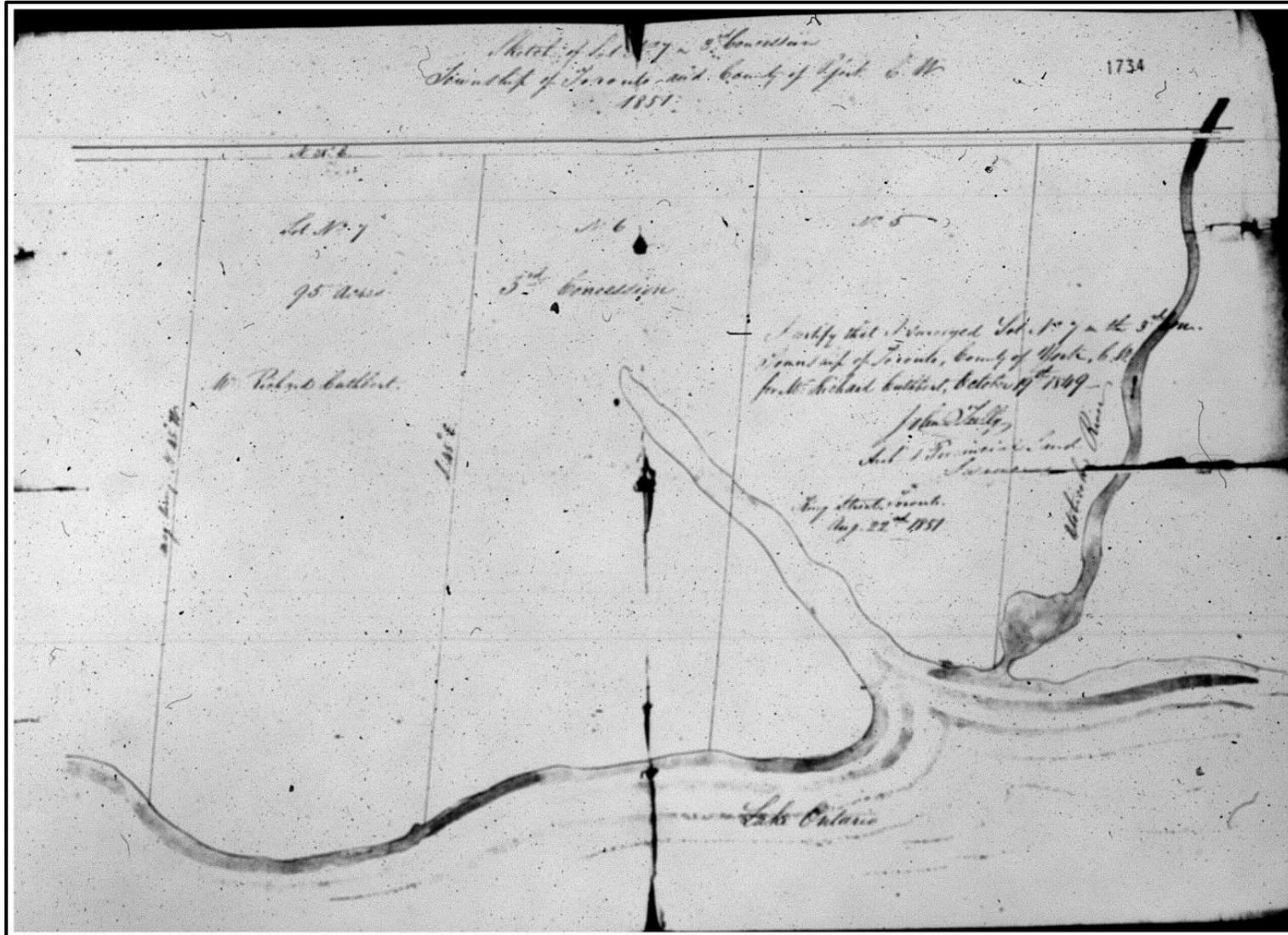
Map 3 Study Area in Relation to Glacial Lake Iroquois Shoreline



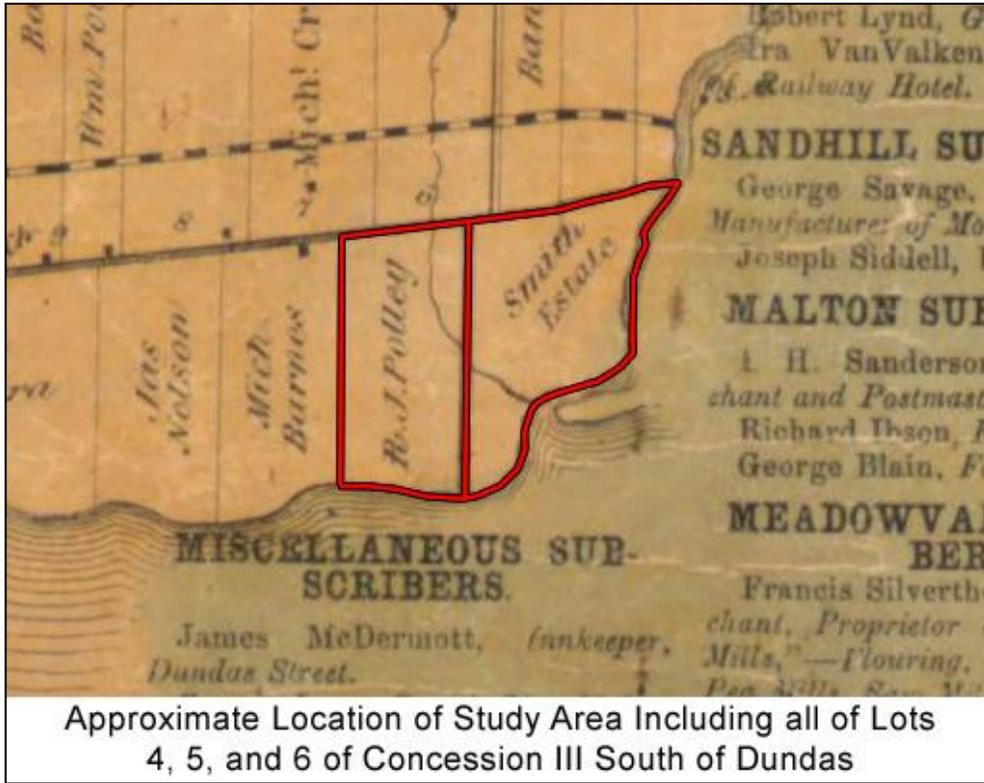
Map 4 Samuel Wilmont 1806 Sketch



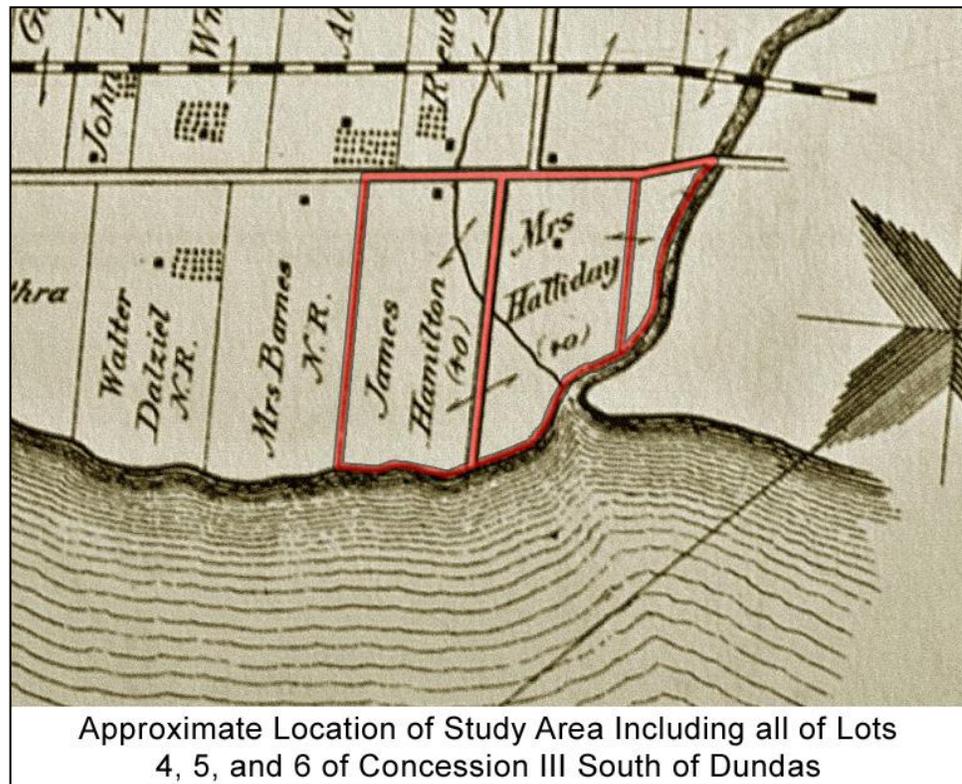
Map 5 Historic Shoreline Impacts to Study Area



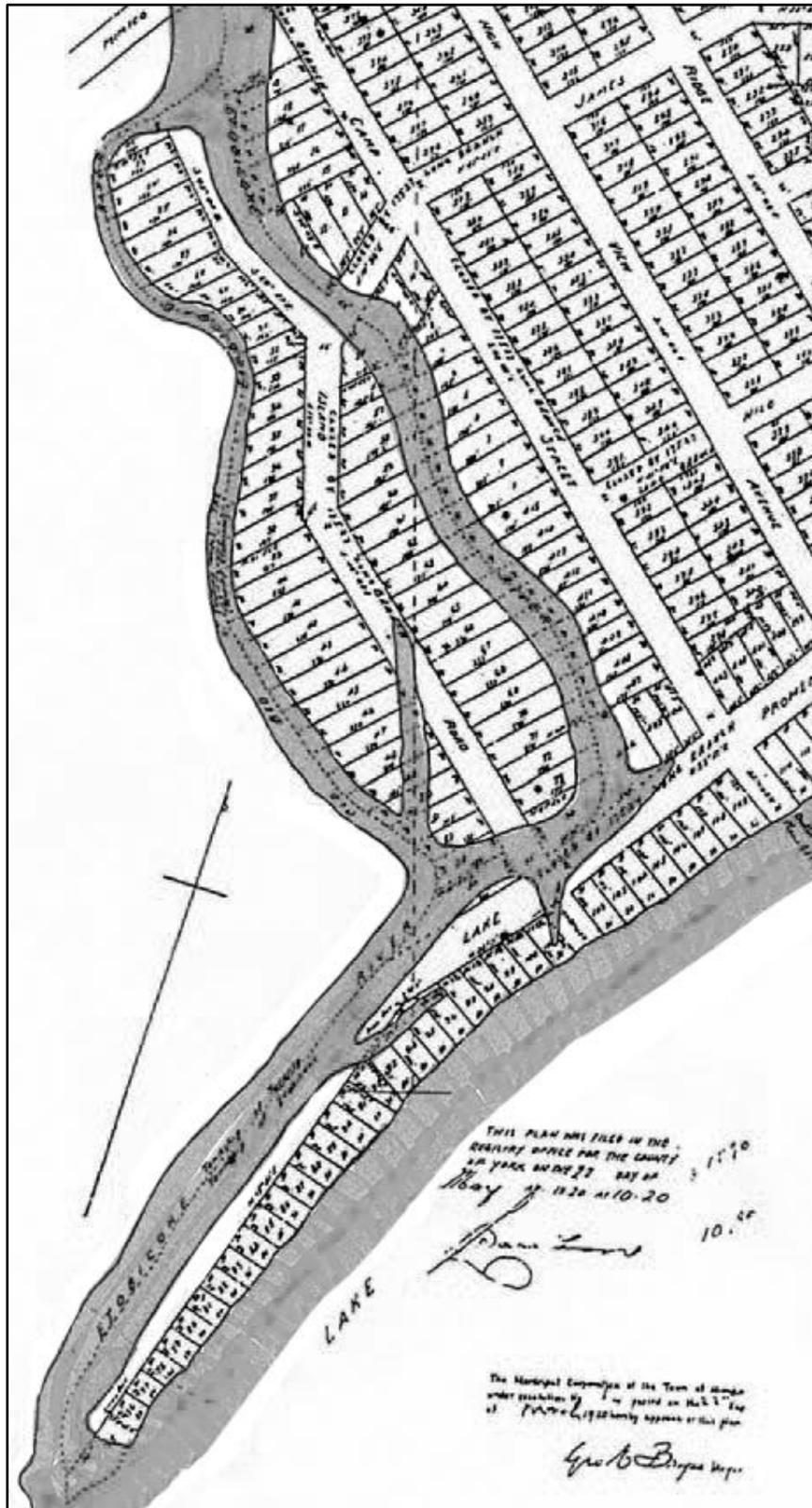
Map 6 1851 Sketch of Lots 4, 5, 6 and 7 (Peel Archives)



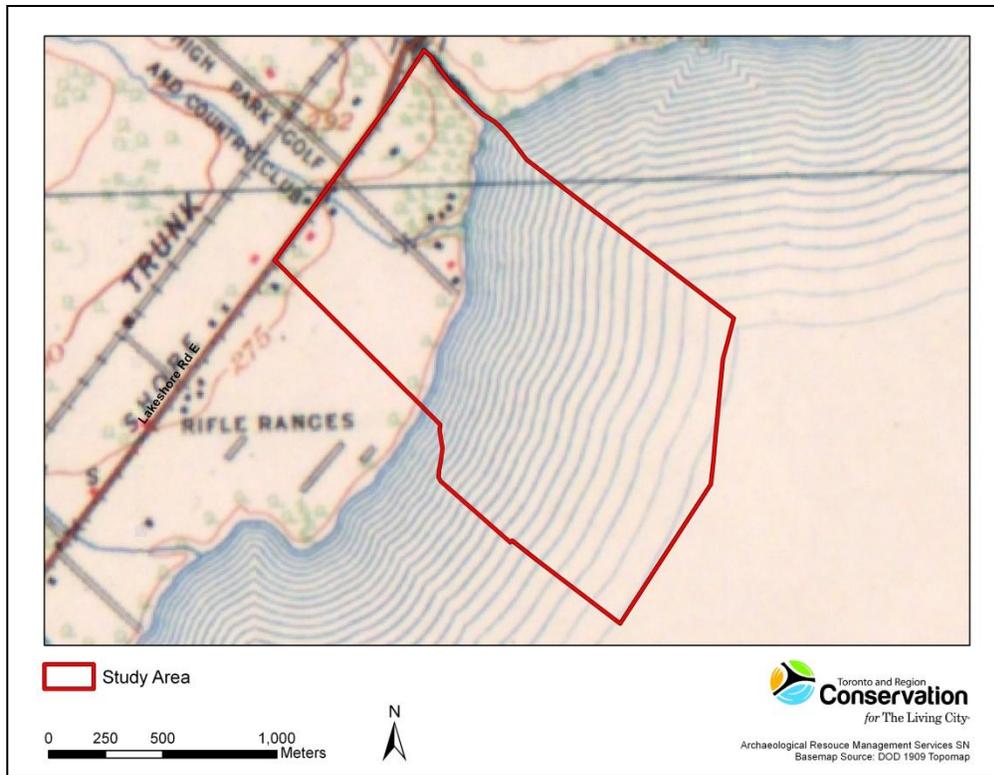
Map 7 Detail of 1859 Tremaine Map of Peel County



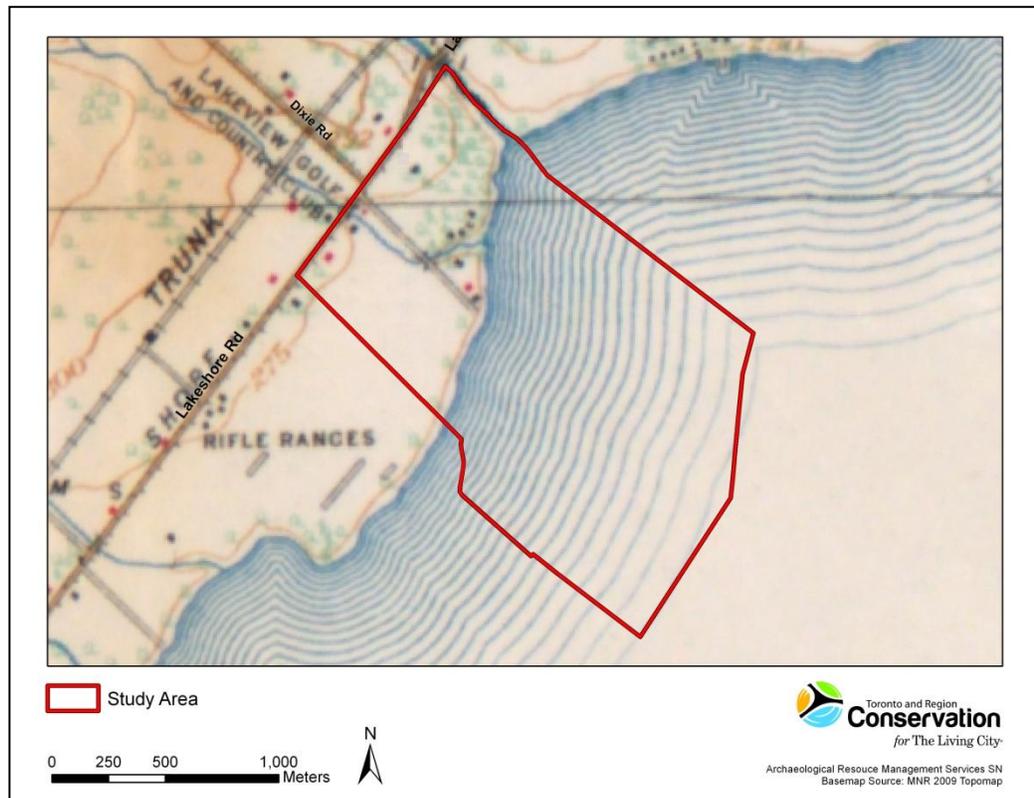
Map 8 Detail of 1877 County Miles and Co. Atlas of Peel County



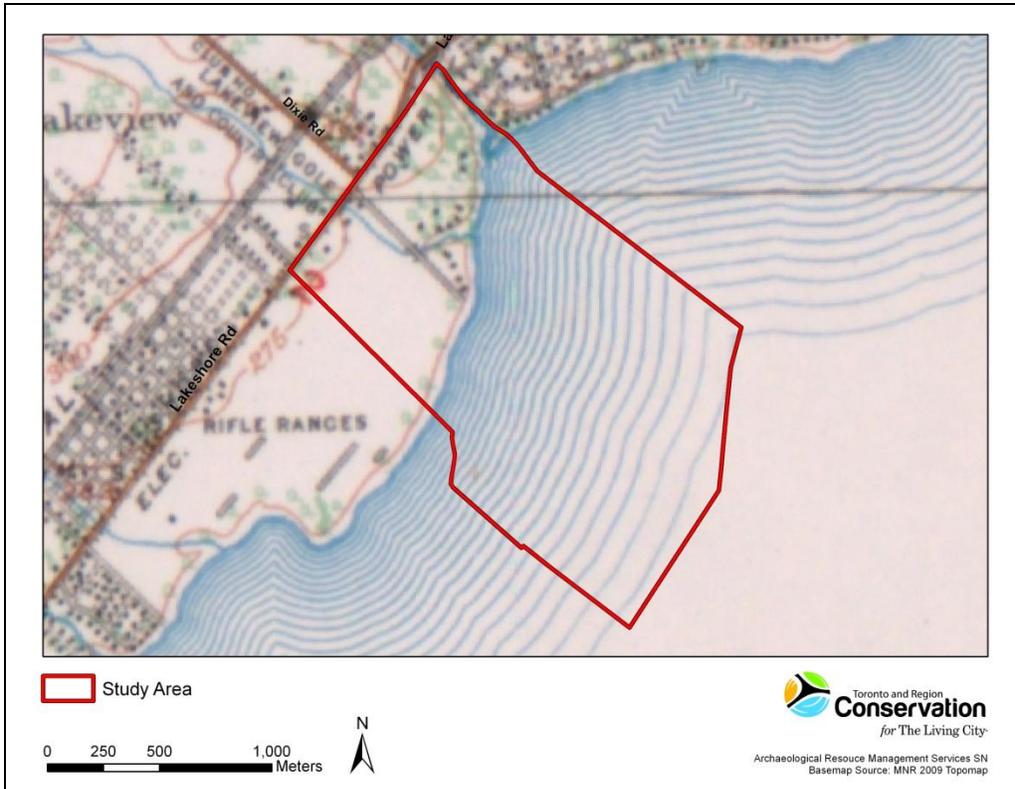
Map 9 Plan of Long Branch Subdivision 1920
(Etobicoke Valley Report 1947)



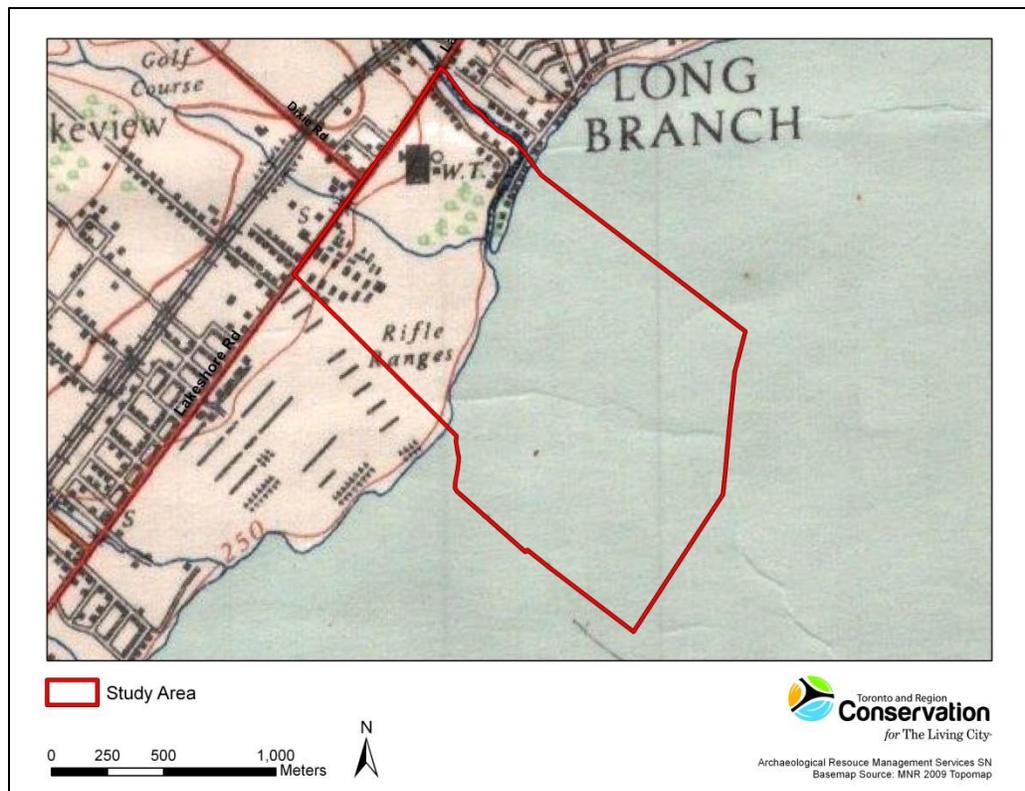
Map 10 1909 Topographic Map



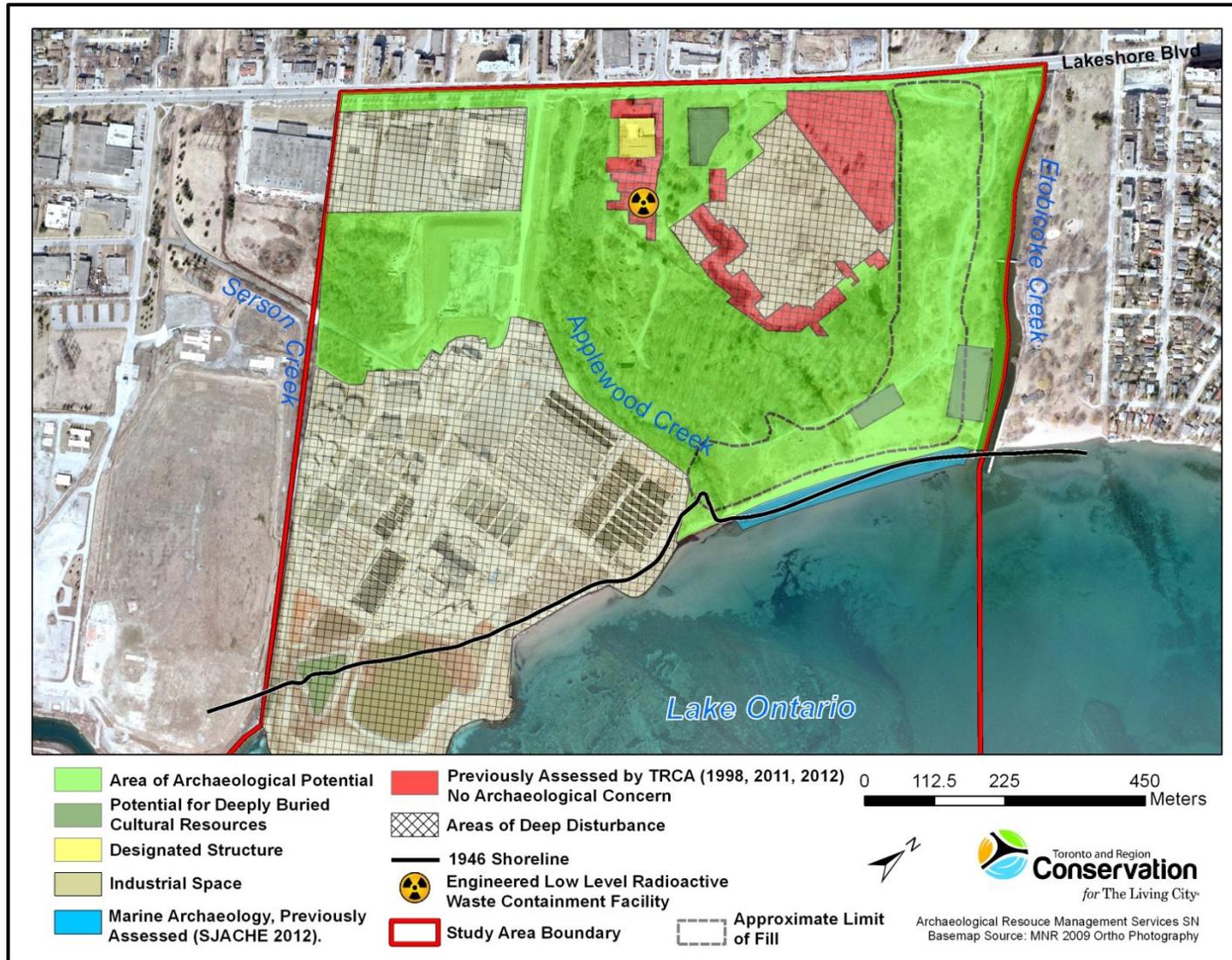
Map 11 1922 Topographic Map



Map 12 1931 Topographic Map



Map 13 1940 Topographic Map



Map 14 Archaeological Potential