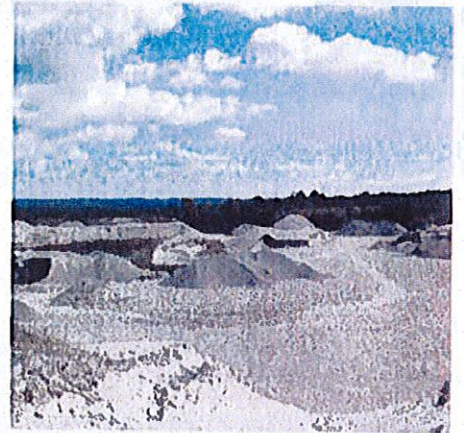
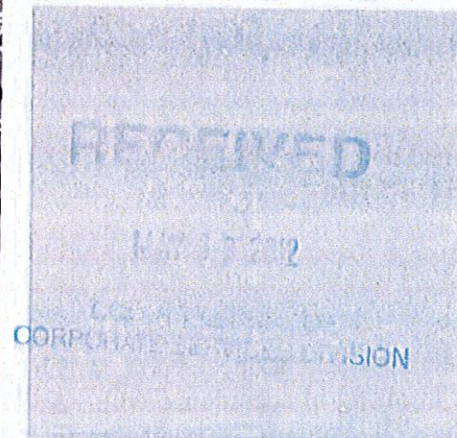
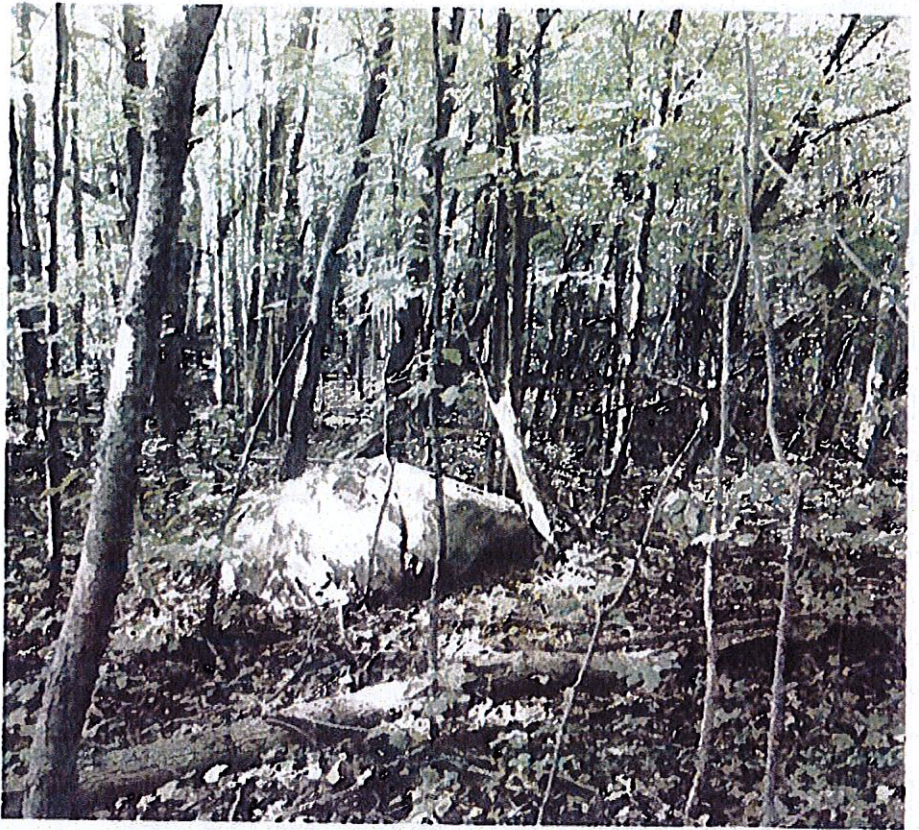


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Stage 1 and Stage 2 Archaeological Assessment
SibThorpe Pit Expansion
Lot 80, Concession 1 WPR
Geographic Township of Tiny, Simcoe County

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Ontario

June 24, 2011

Derek Paauw
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RE: Review and Acceptance into the Provincial Register of Reports: Archaeological Assessment Report Entitled, *Stage 1 and Stage 2 Archaeological Assessment Sib Thorpe Pit Expansion, Lot 80, Concession 1 WPR, Geographic Township of Tiny, Simcoe County.* Report dated May, 2011, Report Received MTC Toronto May 17, 2011.

**MCL Project Information Form Number PIF P272-124-2010
MCL RIMS Number 43AG077**

Dear Mr. Paauw

This office has reviewed the above-mentioned report, which has been submitted to this Ministry as a condition of licensing in accordance with Part VI of the Ontario Heritage Act, R.S.O. 1990, c 0.18. This review is to ensure that the licensed professional consultant archaeologist has met the terms and conditions of their archaeological licence, that archaeological sites have been identified and documented according to the 1993 technical guidelines set by the Ministry and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario.*

As a result of the Stage 1 and Stage 2 archaeological assessment in which no archaeological resources were identified, the report recommends that there are no further archaeological requirements for this project prior to development.

This Ministry concurs with the recommendations of the report that there are no further archaeological concerns for the subject property, as depicted by Figure 11 of the above titled report.

Please feel free to contact me with any concerns or questions regarding this letter.

Yours,

A Hinshelwood.

Andrew Hinshelwood
Archaeology Review Officer

cc. Archaeological Licensing Office

* In no way will the Ministry be liable for any harm, damages, costs, expenses, losses, claims or actions that may result: (a) if the Report(s) or its recommendations are discovered to be inaccurate, incomplete, misleading or fraudulent; or (b) from the issuance of this letter. Further measures may need to be taken in the event that additional artifacts or archaeological sites are identified or the Report(s) is otherwise found to be inaccurate, incomplete, misleading or fraudulent.



Stage 1 and Stage 2 Archaeological Assessment
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Geographic Township of Tiny, Simcoe County

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Stage 1 and Stage 2 Archaeological Assessment
SibThorpe Pit Expansion
Lot 80, Concession 1 WPR
Geographic Township of Tiny, Simcoe County

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Licence No. P272
CIF No. P272-124-2010
May 2011

Bringing the **past**
to the **present**
for the **future**

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- The staff at the Simcoe County Land Registry Office, Barrie.
- The staff at the University of Toronto, Robarts Library, Toronto.
- The staff at the Memorial University of Newfoundland Queens Elizabeth II Library, St. John's.
- The Geomatics Institute at Sir Sandford Fleming College Frost Campus, Lindsay.
- The staff at the National Air Photo Library, Ottawa.
- The staff at the Trent University Maps and Geospatial Resources section of the Thomas J. Bata Library, Peterborough.
- Denis Simmons, Development and Land Management Consulting Services.
- Robert von Bitter, Ontario Ministry of Tourism and Culture.

Executive Summary

Described within this report are the details of an archaeological assessment conducted on the SibThorpe Pit Expansion project area. The project area is proposed for expansion by K.J. Beamish Construction Co. Ltd. and is located in Simcoe County on Lot 80, Concession 1 WPR, Geographic Township of Tiny. Approximately 100 acres in size, the project area is bounded, in part, by Darby Road to the east, a secondary growth forest to the north, Marshall Road to the west and the existing pit and woodlots to the south. The purpose of the archaeological assessment was to determine the level of potential for extant archaeological or cultural resources within the project property. The information collected within this report is intended to identify archaeological resources and in turn inform future planning decisions regarding the study area.

As an initial requirement of land use planning and development, the Ontario Ministry of Tourism and Culture has legislated that three objectives must be met by way of a Stage 1 and Stage 2 archaeological study. These objectives include: 1) develop an inventory of all archaeological resources on the property; 2) determine the presence/absence of archaeological sites surrounding the property; and 3) recommend appropriate strategies for future assessments within the property.

The purpose of a Stage 1 assessment is to investigate the cultural land use, archaeological history and present conditions of the property. The majority of the Stage 1 process is conducted in the office and involves the examination of records such as historic settlement maps, land titles and documents, historical land use and ownership records, primary and secondary sources, and the Ministry of Tourism and Culture's archaeological sites database. The Stage 1 archaeological background study will outline the First Nations pre-contact and historic archaeological sequence as well as the Euro-Canadian historic settlement record for the area and the potential for the discovery of archaeological sites within the project area. Based on background research, the study establishes the potential for the discovery of significant archaeological sites, particularly in the immediate vicinity of historic settlement areas, lakes, rivers and streams.

A Stage 2 archaeological property survey involves the documentation of archaeological resources by collecting artifacts and mapping cultural features. Depending on the nature of the property environment, two methods may be employed in the survey: 1) pedestrian survey and 2) test pit survey. As the project area was a former agricultural field, the Stage 2 method employed during this assessment utilized a pedestrian survey strategy at 5 metre intervals after the soil was disced and sufficiently weathered.

Permission to access the area and to carry out the activities necessary for the completion of the Stage 1 and Stage 2 archaeological assessment was granted by the Denis Simmons on behalf of the property owner. Based on the results of the archaeological

assessment, the following recommendations are provided for consideration. The Ministry of Tourism and Culture is asked to review the recommendations presented in this report and issue comment.

- 1) The Stage 2 archaeological assessment did not recover any material culture during survey activities. Consequently, significant pre-contact and historic First Nations or historic Euro-Canadian archaeological sites are unlikely to be found in any undisturbed ground within the project area. Therefore, there are no significant archaeological concerns associated with the remainder of this project and it is recommended that the property be cleared of archaeological concerns.
- 2) The licensee shall hold the archaeological collections, including copies of study material and original notes generated during the course of research, in trust, unless it is transferred to an appropriate public institution as per the terms and conditions of holding a professional license.
- 3) 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.
- 4) 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.

The Stage 1 and Stage 2 archaeological assessment was conducted under the project and field direction of Derek Paauw, under professional licence P272 issued to Mr. Paauw in accordance with the Ontario Heritage Act (R.S.O. 1990). The archaeological assessment was undertaken according to the requirements of the Ontario Heritage Act (R.S.O. 1990), the Environmental Assessment Act (R.S.O. 1990), the Ontario Ministry of Culture Standards and Guidelines for Consultant Archaeologists (2010), and the Planning Act (R.S.O. 1990).

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Introduction

The Central Archaeology Group Inc. was retained by Denis Simmons, Development and Land Management Consulting Services to conduct a Stage 1 and Stage 2 archaeological assessment on Lot 80, Concession 1 WPR, Geographic Township of Tiny, Simcoe County. Comprised of approximately 100 acres, the study area is bounded, in part, by Darby Road to the east, a secondary growth forest to the north, Marshall Road to the west and the existing pit and woodlots to the south. It's westernmost extent is located approximately 9.8 kilometres east of Georgian Bay and its easternmost extent is location about 1.88 kilometres north of the Town of Waverley, 15.4 kilometres west of the City of Orillia and 4.84 kilometres north of Orr Lake. The purpose of the study is to provide a baseline level of data on known and potential cultural heritage resources within the subject property and the information collected within this report is intended to inform future planning decisions regarding the study area.

For this study, archaeological potential in this report is determined by examining the Ministry of Tourism and Culture's archaeological sites database for a radius of two kilometres around the project area, both recent and historical topographical maps, historical settlement maps, the presence of nearby commemorative plaques or monuments, reports of previous archaeological fieldwork within a two kilometre radius of the project area, recent and historical aerial photographs, geotechnical studies, title deeds and land registry documents, historical land use and ownership records and primary and secondary historical document sources.

Background research for this project was undertaken at the National Air Photo Library, the Trent University Maps and Geospatial Resources section of the Thomas J. Bata Library, the Trent University Thomas J. Bata Library, the University of Toronto Robarts Library, the Bancroft Public Library, the Ontario Land Registry Office for Victoria County in Lindsay, the Geomatics Institute at Sir Sandford Fleming College Frost Campus in Lindsay, and The Central Archaeology Group Inc. reference library. In addition, the Provincial archaeological database was also consulted in order to determine if there are registered sites within or in proximity to the subject property.

The following report is divided into seven sections. The first section provide a general overview of the project area with a brief discussion about the physical setting, including past and present geomorphology, soils, vegetation, water sources, and climate. In the second and third sections, a brief discussion of the First Nations and Euro-Canadian cultural history of the project area and surrounding region is provided, including any known archaeological sites within a two kilometre radius and a summary of past archaeological research. The fifth section examines the potential for the discovery of archaeological resources within the project area. The sixth section outlines the methods and results of the Stage 2 property survey. The seventh and final section provides a

summary of research and recommendations for future management of archaeological resources within the project boundaries.

The Stage 1 and Stage 2 archaeological assessment was undertaken in accordance with the requirements of the Ontario Heritage Act (R.S.O. 1990), the Environmental Assessment Act (R.S.O. 1990), the Archaeological Assessment Technical Guidelines (1993), the Standards and Guidelines for Consultant Archaeologists (2010) and the Planning Act (R.S.O. 1990).

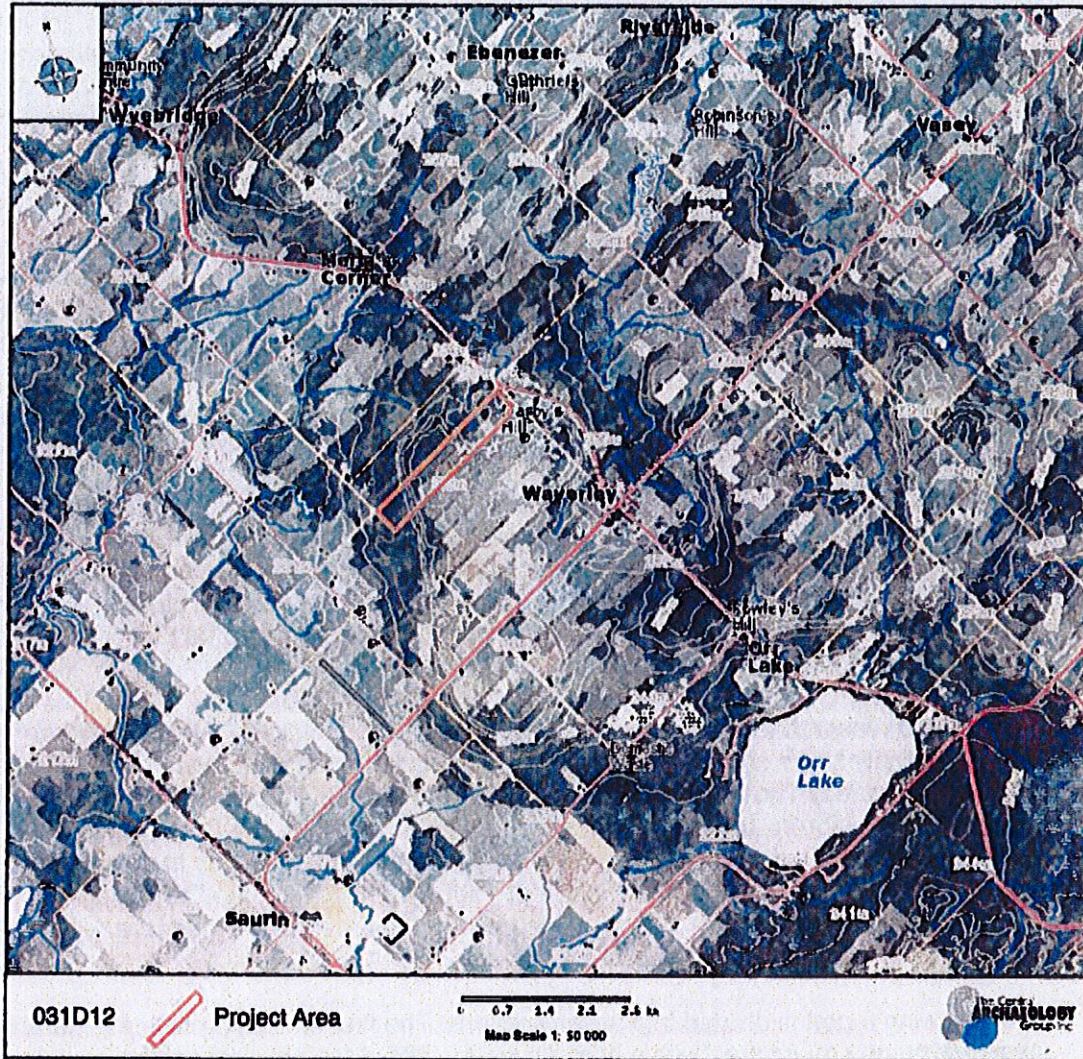


Figure 1. Location of the project area.

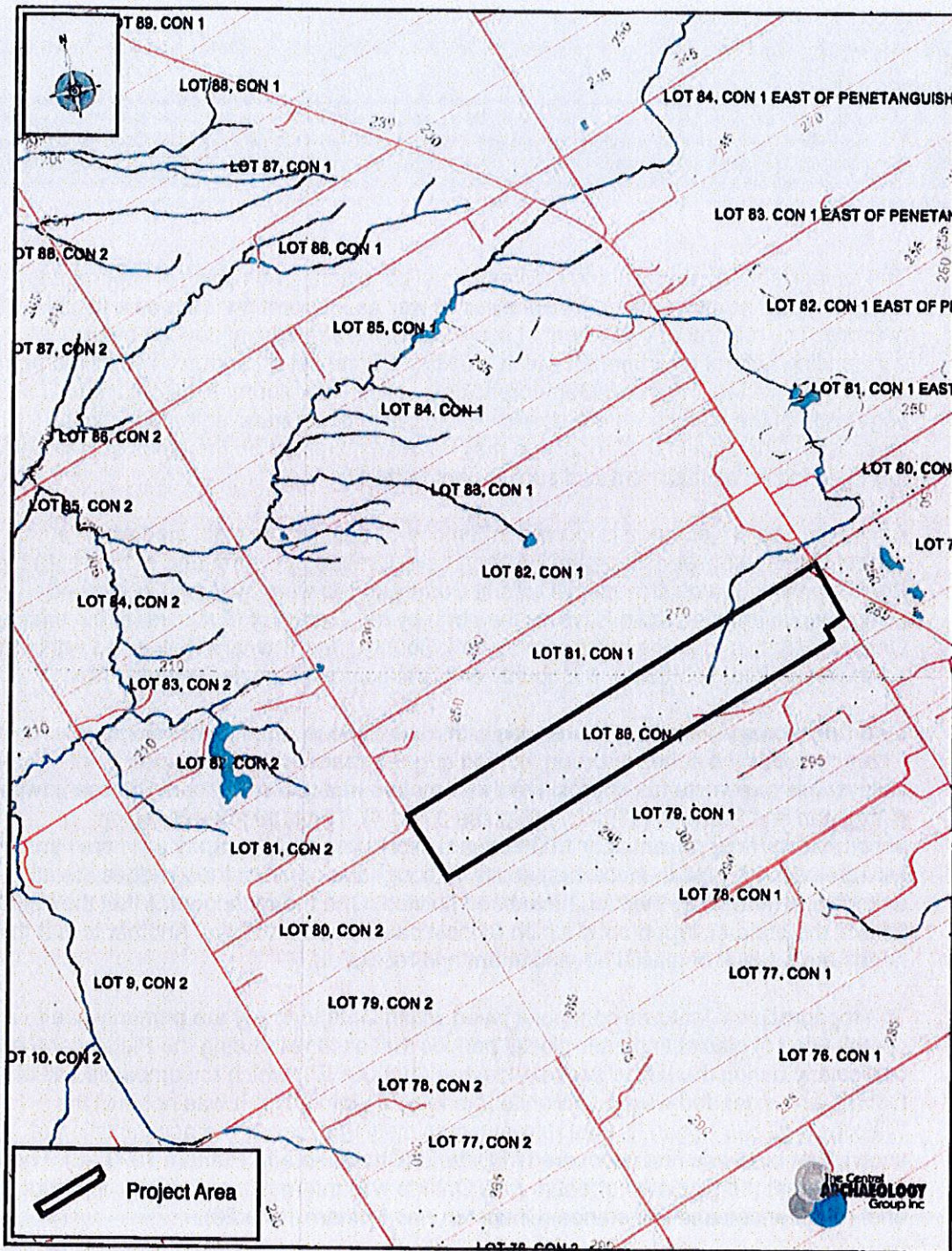


Figure 2. Project area.

Environmental Setting

The assessment of physical and environmental conditions of a region is important to analyzing past human settlement behavior as well as interpreting features and site patterns. The cultural development of every society is strongly influenced by the surrounding natural environment which provides a finite set of resources which humans use to fulfill variety of needs. Geomorphology, soils, water sources, climate, and vegetation of the study area are significant factors in understanding patterns in the landscape. Changes in the landscape may have an influence on the types of materials found during an assessment and subsequent visibility.

Location. The project area is located in Simcoe County which is situated within south-central Ontario between Georgian Bay and Lake Simcoe. It is bounded to the south by Peel County, to the southwest by Dufferin County, to the west by Grey County and Nottawasaga and Georgian Bays, to the north by the District of Muskoka, to the east by Ontario County and to the southeast by York County. Tiny Township is located within the north-westernmost portion of the county and is situated alongside Georgian Bay.

Geomorphology. The project area lies within the Simcoe Uplands physiographic region. Characterized by a series of broad, curved ridges separated by steep-sided, flat-floored valleys, this region stands approximately 61 metres above the adjacent Simcoe Lowlands (Chapman and Putnam 1966:307) (Figures 3 and 4). The total area this region encompasses is approximately 1,036 square kilometres and its sandy soils are usually well-drained, with low to moderate fertility. Although the origin of these ridges are still unknown, a number of theories have been posited. One theory suggests that the surface follows the bedrock topography which reflects paleo-stream valleys. Another is that the ridges are a result of glacial advancement and recession.

The topographical features commonly seen within Ontario today are primarily due to a combination of glacial and inter-glacial periods that occurred during the Pleistocene era, particularly during the last Wisconsin Ice Age (10,000 BP), which encompassed all of Ontario and extended west into Manitoba and south into Ohio. It was not until the Wisconsin glacier began its final retreat (when melting exceeds the accumulation of snow), that land was first uncovered in Ontario (Chapman and Putnam 1973:26). There is evidence that the glacier's retreat across Ontario was intermittent, as it was interrupted by brief re-advances and still-stands (Chapman and Putnam 1973:26).



Figure 3. Valley located at the westernmost extent of the study area.



Figure 4. Viewing northeast along the ridge.

Soils. The formation of soils is heavily influenced by its parent material, climate, vegetation, drainage and time (Leahey 1961:148). There are three soil types present within the study area: Vasey sandy loam, steep phase (Vasl-S); Sargent gravelly, sand loam (Stsl); and, Atherley clay (Ayc) (Figure 5; Table 1).

Vasey sandy loam, steep phase is a light gray, calcareous and non-calcareous sandy loam till which occurs on smooth, moderately to steeply sloping topography. The porous nature of the soil makes it susceptible to severe erosion, however, if the slopes are left with appropriate ground cover, erosion can be limited (Hoffman et al. 1962: 32). Vasey soils are included within the Brown Podzolic and Grey Brown Podzolic Great Group. Although these soils have limited agricultural use, they have been utilized for general farming such as pasture for livestock.

The second-most prevalent soil type in the study area is Sargent gravelly, sand loam. Generally located on smooth, gently sloping topography; this soil type is characterized by its stonefree nature. Derived from a parent material of pale brown calcareous outwash gravel, Sargent gravelly, sand loam has a profile characteristic of Brown Forest soils where the topsoil profile is thin and often calcareous. Also low in fertility, these soils are predominantly utilized as pasture (Hoffman et al. 1962:50).

Characteristically situated within depressions or low-lands, Atherley clay soils are also low in fertility and remain saturated for most of the year as they are very poorly drained. Typified by their profile, Atherley soils tend to develop a dark surface soil and a grey mottled subsoil layer. This is commonly found amongst soils situated within the Dark Gray Gleysolic Great Group. Although difficult to drain, if undertaken in conjunction with fertilization, Atherley soils may be used in the production of cereal crops. However, they are more commonly utilized as pasture and hay.

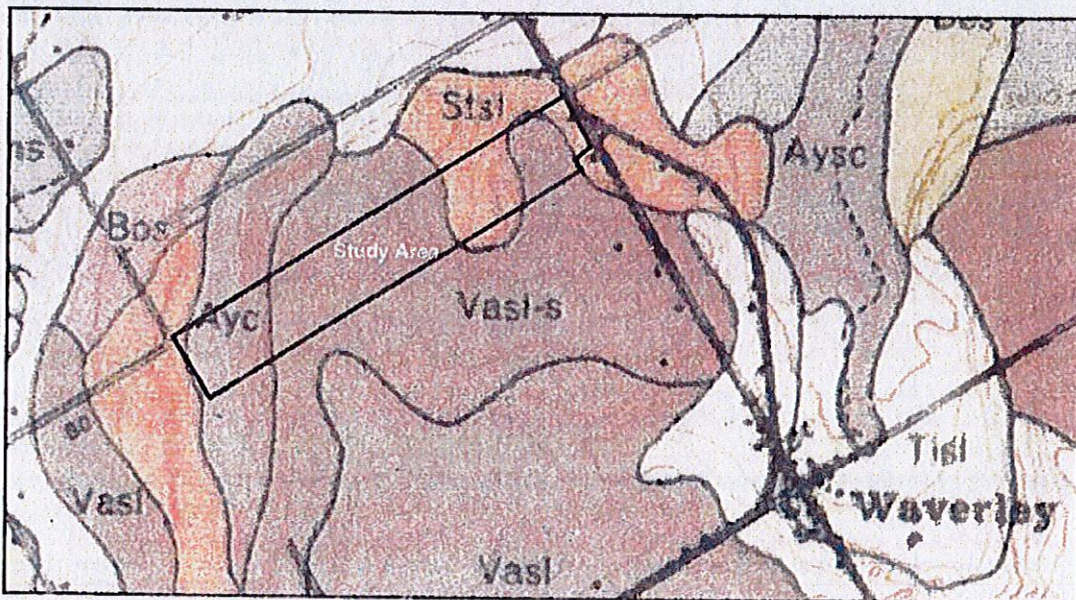


Figure 5. Soil map of the project area (Hoffman et al. 1962)).

Table 1. Soil types within the study area.

Soil Type	Drainage	Texture	Relief	Great Group
Vasey sandy loam, steep phase (Vasl-S)	good	moderate to very stoney	moderately to steeply sloping	Brown Podzolic & Grey Brown Podzolic
Sargent gravelly, sand loam (Stsl)	good	stonefree	gently sloping	Brown Forest
Atherley clay (Ayc)	poor	stonefree to very stoney	very gently sloping	Dark Gray Gleisolic

The lot to the south of the study area is currently being utilized as an aggregate pit (Figure 6). The materials currently being extracted from this area are an extension of the Vasey soil type discussed above.

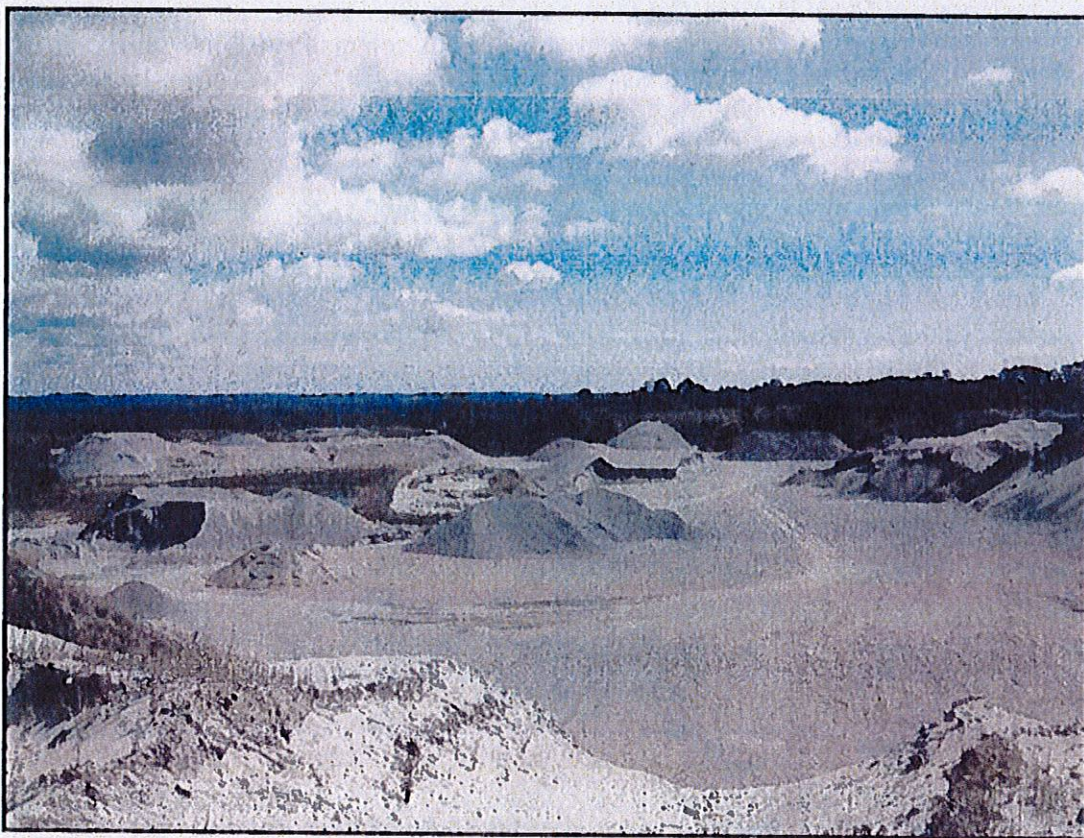


Figure 6. Aggregate pit to the south of the study area.

Historical Forest Patterns. The local distribution of a forest is strongly influenced by the bedrock, glacial deposits and soil found on the site. As the glacial ice retreated across Ontario, trees began to spread northward. Initially, species more common to tundra-like environments grew, followed by spruce and poplar woodlands. Warming temperatures encouraged coniferous growth like pine and hemlock.

The forests of this region, before it was stripped and forever altered by Euro-Canadian farmers, lumbermen and settlers, consisted of relatively dense forests interspersed with open park-like woodland. Referred to as the Southeastern Mixed Forest, it is located within the Great Lakes-St. Lawrence Forest Region, and is dominated by sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), American basswood (*Tilia americana*), yellow birch (*Betula lutea*), eastern hemlock (*Tsuga canadensis*), eastern white pine (*Pinus strobus*), red maple (*Acer rubrum*) and white ash (*Fraxinus americana*) on upland surfaces (Dean 1994:12; Kershaw 2001). Drier stretches of land commonly exhibited white spruce (*Picea glauca*), which replaced the red and white pine (*Pinus resinosa* and *Pinus strobus*). Over thin soils and on high ground, species more representative of a Boreal Forest persisted. Species common to a Boreal environment include: white spruce and black spruce (*Picea mariana*), interspersed with balsam fir (*Abies balsamea*), scrubby stands of jack pine (*Pinus banksiana*), trembling aspen (*Populus tremuloides*), red oak (*Quercus borealis*) and paper birch (*Betula papyrifera*) (Dean 1994:12).

Modern arboreal vegetation patterns reflect two centuries of logging and land clearance, and the large numbers of balsam poplar (*Populus balsamifera*), black spruce, tamarack (*Larix laricina*), eastern hemlock, eastern white pine, red pine, eastern white cedar (*Thuja occidentalis*), American elm (*Ulmus americana*), American beech, paper birch, large-toothed aspen (*Populus grandidentata*), trembling aspen, pin cherry (*Prunus pensylvanica*), staghorn sumac (*Rhus typhina*), American basswood, sugar maple, mountain maple (*Acer spicatum*), and white ash found today are the result of disruption to the natural, mature hardwood forests indigenous to the drumlinized till plains of southern Ontario (Kershaw 2001).

Ontario wildflowers such as common yarrow (*Achillea millefolium*), purple loosestrife (*Lythrum salicaria*), oxeye daisy (*Leucanthemum vulgare*) and Canada thistle (*Cirsium arvense*) were present within the area surrounding the subject property (Kershaw 2002). Grasses present included bottle-brush grass (*Hystrix patula*), sweet vernal grass (*Anthoxanthum odoratum*), foxtail (*Alopecurus ssp.*), common plantain (*Plantago major*) and crab grass (*Digitaria sanguinalis*) (Brown 1979). Shrubs included ground hemlock (*Taxus canadensis*), sweet fern (*Comptonia peregrina*) and beaked hazel (*Corylus cornuta*) (Soper and Heimburger 1994). These vegetation types are characteristically found within areas where the mature forest patterns have become disrupted by lumbering, accidental forest fires, and land clearance that began in the project area during the early nineteenth century and continues to this day.

Water Sources. Located approximately 4.9 kilometres north of Orr Lake, the project area is surrounded by a number primary, secondary and tertiary water sources in the form of lakes (i.e., Mud Lake, Little Lake), rivers, creeks and streams (i.e., Wye River, Hog Creek, Sturgeon River, McMahon Creek) and marshes and swamps (i.e., Wye Marsh, Craig's Swamp). The project area lies within the Severn River watershed. The headwaters of the

Severn River are located at the north end of Lake Couchiching and it forms part of the canal system known as the Trent-Severn waterway. Draining much of the area within Simcoe County, the Severn River watershed flows into Georgian Bay to the west.

Climate. Modern climatic variation depends almost entirely upon location and human impacts on the environment. Simcoe County, located in south-central Ontario, is heavily influenced by the modifying factor of the Great Lakes. The Great Lakes tend to add moisture to the air in the autumn and winter while at the same time protecting the region from the worst of the cold during the winter months, and during the spring and summer they act to moderate the temperature of the region. This produces an ideal environment for agricultural practices as the growing season tends to be longer and the cold months not as harsh as throughout the remainder of Canada.

Summary and Conclusions. Although the project area has been subject to some disturbance, the vegetation present prior to Euro-Canadian settlement would have been utilized by pre-contact First Nations communities for food procurement, health and healing, and spiritual purposes. For example, the inner bark of the pine tree had numerous purposes, one of which was to pound it into a paste which could be applied to ulcers, wounds, and everyday sores as a salve; the young leaves and shoots of oxeye daisy may be eaten or brewed into a tea which can be used to treat whooping cough, asthma, bronchitis, and nervous excitability; melted sap from the spruce tree was used as a plaster when setting bones; the plant heads of the common yarrow plant were made into a compress which was used to treat headaches, its leaves were chewed to assist with clotting and the roots were chewed for toothaches; infusions from the maple were used to treat tuberculosis and the inner bark of the sugar maple was used as a cough remedy and expectorant; and a compound decoction of elm bark was taken to facilitate childbirth (Angiers 1978; Mackinnon et al. 2009; Moerman 1998; Vogel 1970).

First Nations Cultural Summary

The Palaeo-Indian Period (11,500 BP to 9000 BP). The Palaeo-Indian Period represents the arrival of First Nations groups in Ontario around 11,500 years ago following the retreat of the Laurentide ice sheets that covered most of Canada and the northern United States beginning approximately 95,000 years ago. Although there is considerable debate about whether the Palaeo-Indian people were the first to cross into the Americas from Asia via Beringia, they are most likely the first culture to inhabit Ontario. The Palaeo-Indian Period is represented by two distinct cultures based on the use of different tools. The Clovis culture comprised the early Palaeo-Indian Period, whereas the Plano culture occupied the latter half of the Period.

The Clovis culture is defined by distinctive fluted chipped stone projectile points that are generally lance-shaped or lanceolate that lack notches or stems with a concave base and a grinding of the lower side edges. Although it is certain that these points were used as projectiles based on evidence of distinctive tip damage, it is unknown whether they were hafted onto long shafts and used as a thrusting spear or if they were mounted onto smaller shafts and used as hand-propelled spear or in combination with a spear-thrower.

Plano projectile points differ in that they lack the Clovis flute and they exhibit fine ripple flaking that is distinctive for the latter half of the Palaeo-Indian Period. A number of sites dating to approximately 9,000 years ago have been found along the north shore of Lake Superior and on Manitoulin Island. High quality siliceous stone quarries exploited by Plano people have also been found along the shore of Lake Huron.

The Clovis and Plano cultures likely shared a similar subsistence strategy. They hunted migrating herds of caribou (*Rangifer tarandus*) along the shores of glacial lakes that appeared as the massive ice sheets receded. They also hunted large mammals such as mammoth (*Mammuthus primigenius*) and mastadon (*Mammut americanum*). Palaeo-Indian groups likely hunted smaller mammals and fish as well, and gathered wild fruits and berries.

The Archaic Period (9000 BP to 300 BP). Solid evidence for the beginning of the Archaic Period in Ontario dates to around 4,000 years ago with the advent of the Laurentian Archaic. The early Archaic culture likely evolved from the Palaeo-Indian Period. However, there was probably an introduction of new ideas and technology as more people migrated into the region. The elaborately manufactured points representative of the Palaeo-Indian Period were abandoned in favour of cruder manufacturing techniques but with a greater variety of stone being exploited. This likely represents a change in the types of flora and fauna available for consumption. There is certainly a shift in subsistence practices by early Archaic groups from long seasonal migration movements to a focus on regionally available food sources.

The Archaic Period also represents a technological shift in the methods used in the manufacturing of stone tools with the introduction of grinding and pecking. A wide variety of axe forms are introduced indicating a shift from a ore sub-arctic environment to a temperate climate. It is also during the Archaic Period that the atlatl superseded the use of handheld thrusting spears predominately used during the Palaeo-Indian Period. Elaborately polished and decorated stone tools believed to be atlatl counterweights appear in the archaeological record. Archaic people were also producing tools and ornaments manufactured from native copper found along the north shore of Lake Superior.

Based on evidence from discarded animal bones, the Laurentian Archaic people hunted predominately large mammals, such as deer, elk, and bear. However, smaller game like the beaver was also exploited. The Laurentian Archaic people also fished and gathered shellfish and plant material. The religious beliefs during the Archaic Period can also be discerned from the burial methods practiced. This included the interment of burial goods with the deceased and sprinkling of the body with red ochre.

The Woodland Period (300 BP to Early 17th Century). The Woodland Period is generally associated with the introduction of ceramic technology. Early Woodland sites in the region surrounding the project area are scarce due to the shorter duration of the period and the low visibility of sites (Ellis et al. 1990b:78). Jackson (1980) suggests that subsistence and settlement patterns during the Early Woodland Period were similar to those of the Laurentian Archaic, but with greater emphasis on processing nuts and perhaps experimentation with plant cultivation.

The Middle Woodland Period in the region is defined by a number of burial mound sites located around Rice Lake with numerous associated middens and villages (Boyles 1897; Johnston 1968; Spence and Harper 1968; Stothers 1974). The mound sites tend to be located on promontories near river mouths and may have been used to define ancestral territory. Based on the wealth and variety of burial goods, the Middle Woodland people also had access to a wide-spread network of exotic goods, which extended as far away as Ohio and Indiana (Spence et al. 1990).

During the Late Woodland Period there was a shift in the subsistence and settlement patterns which included the occupation of seasonal hunting and fishing camps on Rice Lake, often on former Middle Woodland village sites, and larger interior longhouse villages, where early domesticated corn, beans, and squash were cultivated.

The end of the Woodland Period is well known in the region due to the discovery of a number of Huron village sites (Damkjar 1990; Ramsden 1989; Ramsden 1990; Sutton 1990). These sites seem to represent both Huron and St. Lawrence Iroquois occupation, but the exact origin of the occupants is still unknown (Sutton 1990:54; Ramsden 1990). The Huron abandoned the region as a centre of occupation sometime during the late sixteenth century and afterwards it was used as a buffer zone between the Huron and New York Iroquois.

The Huron. The Huron, or the Wendat as they called themselves, are a seventeenth-century Iroquoian-speaking group that occupied an area known as Huronia between Lake

Simcoe and Georgian Bay. however, archaeologists have also extended the "Huron" designation to include pre-contact period sites found in south-central Ontario, where subsistence and settlement patterns and similar material culture indicates cultural affiliation. Pre-contact period Huron sites dating to between 1,400 and 1,600 CE have been found along the north shore of Lake Ontario, from west of Toronto to Belleville, and to the north bounded to the east by the Trent River system and to the west by the Niagara escarpment.

The Hurons of Huronia, as encountered by the French in the 1600s, consisted of a confederacy of five nations or groups. The *Attignawantan*, who occupied the region encompassing the Penetanguishene Peninsula, appear to have been the largest group, and the *Arendarhonon*, the second largest group, occupied the eastern extent of Huronia, west of Lake Simcoe. Between these two groups lived the *Attigneenongnahac*, the *Arendaronnon* and the *Tahontaenrat*. The project area lies within *Tahontaenrat* (White Ears or Deer Tribe) territory (Figure 7).

Huronia was connected to other Iroquoian-speaking groups to the south, such as the *Neutral* and the *Tionnontate*, by an extensive network of trails. Using Jesuit chronicles, late nineteenth century settler accounts, and personal observations, in 1906 Andrew F. Hunter pieced together a map outlining the probable locations of the major trails (Figure 8). However, no trails run through or near the project area. Heidenreich (1971:156) suggests that the trails followed high ground to avoid swamps.

The Huron had readily adopted agriculture, cultivating corn, beans, squash, sunflowers and tobacco. Aside from these cultigens, the Huron gathered wild plants and berries, such as plum and raspberry. Hunting and fishing supplemented the diet. The Huron hunted such animals as the white tail deer, black bear, elk, beaver and raccoon. Common bird bones found on archaeological sites include different varieties of duck, geese, grouse and pigeons (Ramsden 1990:380). Although fish are often overlooked in the archaeological record, Trigger (2000:31) suggests that it accounted as the second most exploited subsistence resource next to agriculture. Common fish species included perch, bass, sucker and catfish.

The Huron lived in longhouses, which were elongated rectangular structures made of wood beams and bark coverings, built to house several families, related matrilineally. Although internal design was related to the number and size of families and construction methods, which varied between groups, longhouses did share similar key characteristics, such as axially aligned hearths and storage pits, sleeping compartments and storage areas along the walls and communal storage areas at either end for casks of corn and other foods.

Large-scale archaeological investigations have provided information on typical characteristics associated with Huron village sites. Some common features include multiple-row palisades encircling the village and a single longhouse located outside the defensive wall to accommodate visitors or traders (Ramsden 1988). Longhouses within the village tended to be arranged around one or more larger longhouses that were associated with different areas of the village, suggesting perhaps kin-based grouping (Warrick 1984). Village sites also tended to have several phases of expansion, where the palisades were enlarged several times over (Finlayson 1985). However, sites did not

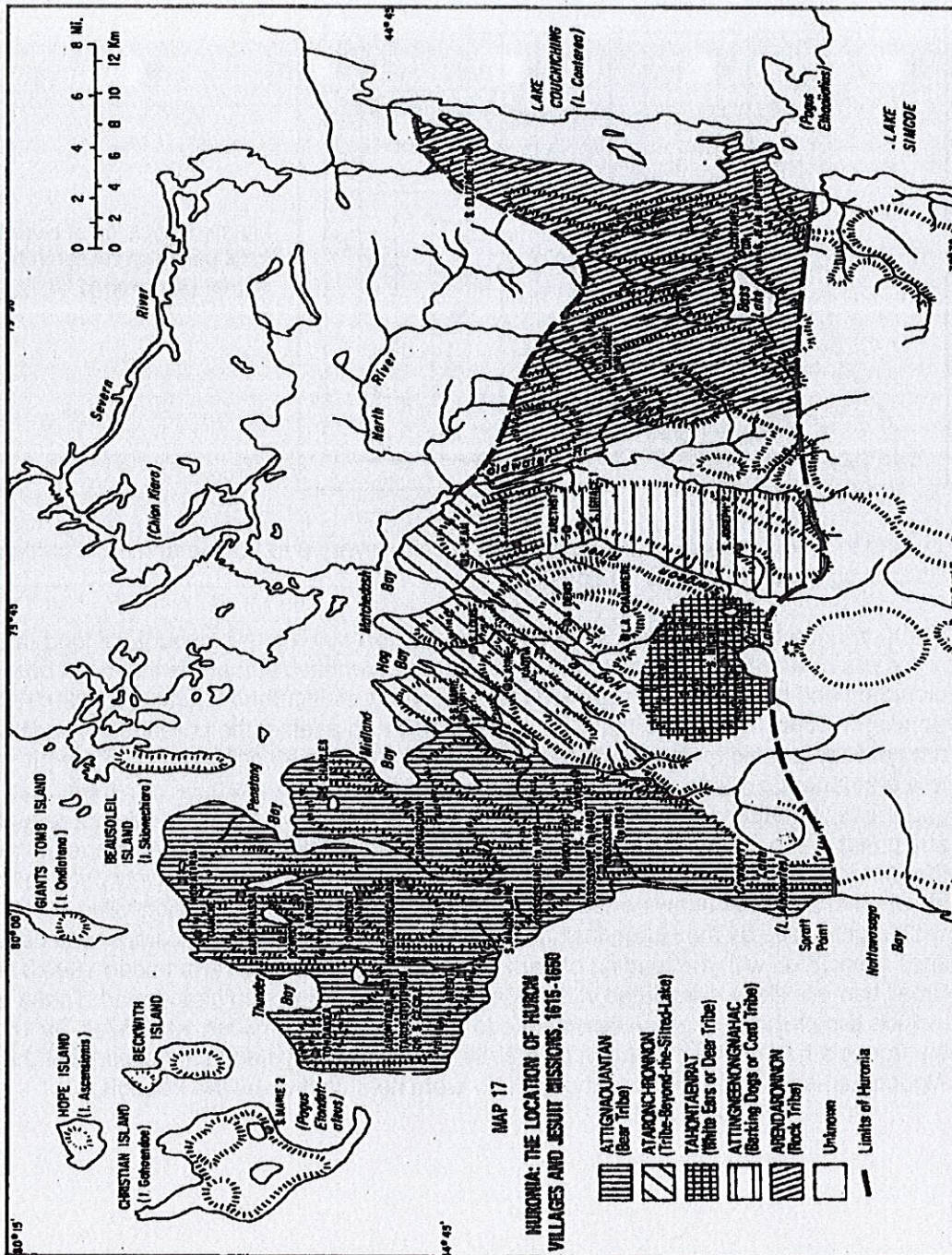


Figure 7. Boundary of Huron groups in Huronia (Heldenreich 1971:map 17).

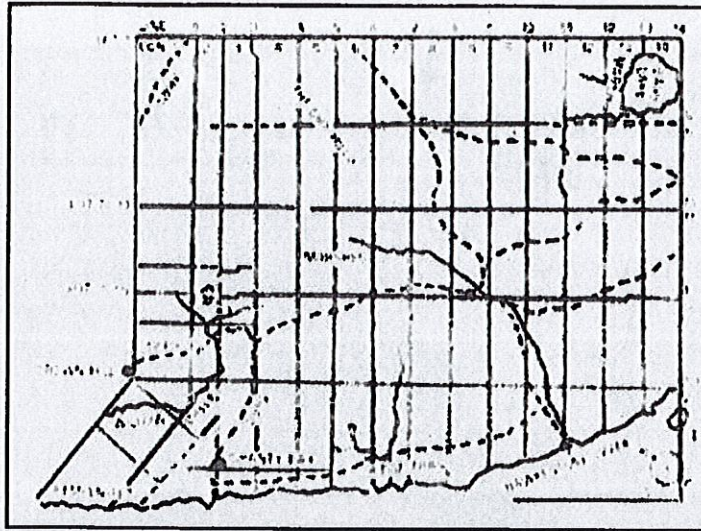


Figure 8. Location of Huron trails based on research by A.F. Hunter (McEwen 1978:1).

expand to any great size as the Huron periodically (every 8 to 30 years) moved settlement sites as soil fertility became depleted.

Huron villages tended to have large middens that contained large amounts of food refuse and discarded artifacts. Therefore, they are readily identifiable in areas that have been ploughed and often contain mounded middens when undisturbed (Ramsden 1990:373). Smaller middens also occur throughout the village and against the palisades. Village sites are typically located in areas with sandy soil that is easily defensible and in close proximity to a permanent streams. However, variation in location and preference for other geographical features is common. A visual inspection of the project area did not reveal any unnatural mounded features or the presence of large artifact scatters on the surface that would indicate the presence of a village site. Furthermore, the relatively poor soil and absence of a permanent water source would account for this finding. Non-village settlements used by the Huron include temporary hunting and fishing camps, and cabin sites associated with the tending of corn fields during the summer (Ramsden 1990:373). Small hamlets likely associated with larger village sites have also been found. These often include two or three longhouses and one to two middens (Ramsden 1990:376). By 1650, the Iroquois had driven the Huron off their territory and many fled to the security of the Algonquian-speaking groups to the north or were held captive by the Iroquois.