Stage I and Stage II
Archaeological Assessment
of the
Proposed Hilton Pit,
Lot 32, Lot 33, and Lot 34, Concession 6,
Municipality of Brighton,
County of Northumberland,
Ontario

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EXECUTIVE SUMMARY

C.R. Murphy Archaeology undertook the Stage I and Stage II Archaeological Assessment of the proposed Hilton Aggregate Pit, Lot 32, Lot 33, and Lot 34, Concession 6, Municipality of Brighton, Northumberland County, Ontario. The Hilton Pit Application boundaries involve an overall study area, including environmental setbacks, of approximately 104.9 hectares. The property consists of a rolling to dissected esker, moraine and drumlin landscape with a patchwork of small agricultural fields situated on gentle slopes, while secondary forest covers the remainder of the area (consisting mostly of steep slopes and irregular topography). The property is almost evenly divided between cultivated land and secondary forest growth.

The Stage I cultural heritage background assessment of the Hilton Pit outlines the pre-contact and historic archaeological sequence and historic settlement record of Northumberland County. Several segments of the Lake Ontario shoreline and areas inland along Rice Lake have received intensive archaeological investigation, and significant pre-contact and historic sites are recorded in the general project vicinity. Based on the proximity of significant archaeological sites, a Stage II archaeological field assessment was undertaken for the project. The Stage II investigation involved visual examination of pasture and hay fields cultivated for this assessment and the systematic excavation of hand shovel test pits of the wooded and scrub areas on the property.

The Stage II investigation of the proposed Hilton Pit was undertaken in September 2005 and April 2006, and the remains of two 19th century Euro-Canadian farmsteads were discovered. Both former farmsteads are located along road allowances on the outer edges of the proposed aggregate extraction areas. Both sites are also partially within mandatory setbacks, and avoidance of the sites is the preferred mitigation strategy of the CBM management personnel. Five mere buffer zones have also been added beyond the site limits to further insure permanent protection of these mid to late 19th century farmsteads.

Based on the results of the Hilton Pit Stage I and Stage II archaeological assessment, it is recommended that:

1) In the event that the Cumming Site located on Lot 33, northwest corner, is to be adversely affected by the Hilton Pit project, Stage III archaeological test excavations are required, and possible Stage IV archaeological salvage excavations will also be required.

2) In the event that the Storms Site located on Lot 32, northeast corner, is to be adversely affected by the Hilton Pit project, Stage III archaeological test excavations are required, and possible Stage IV archaeological salvage excavations will also be required.

3) Significant pre-contact or historic archaeological sites were not found at any other location within the currently proposed Hilton Pit project. Therefore, there are no immediate archaeological concerns associated with the remainder of this project.

4) In the event that deeply buried archaeological deposits are discovered in the course of construction activity, the Cultural Programs Branch, Ontario Ministry of Culture (MCR), should be contacted immediately (416) 314-7123.

5) In the event that human remains are encountered, the Cultural Programs Branch, MCR, and the Registrar of the Cemeteries Regulation Section, of the Ontario Ministry of Consumer and Business Services should be contacted immediately (416) 326-8404.

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1.0 INTRODUCTION

C.R. Murphy Archaeology was retained by St. Mary's Limited to undertake the Stage I and Stage II Archaeological Assessment of the proposed Hilton Pit, Lot 32, Lot 33, and Lot 34, Concession 6, Municipality of Brighton, County of Northumberland, Ontario (Figure 1). The subject property is located approximately 16.5 km north of the Lake Ontario shoreline and approximately 35 km east of Rice Lake on the Trent River system. The general project area exhibits rolling sand and gravel hill topography interspersed with the valleys of small streams. The property is situated on the drainage divide between the Lake Ontario and Trent River watersheds, with the southern half draining through intermittent tributaries to Shelter Valley Creek, then on to Lake Ontario.

The proposed Hilton Pit licence boundaries involve an overall study area, including environmental setbacks, of approximately 104.9 hectares and the area to be extracted from consists of approximately 90.4 hectares (Figure 2). The property consists of a dissected esker, moraine and drumlin landscape with a patchwork of small agricultural fields on gently sloping sections. Secondary forest is found on areas used in the past as fields and on steeply sloping or irregular topography. The property is almost evenly divided between cultivated land and secondary forest growth consisting of red oak, paper birch, hawthorne, Canadian plum, sumac, maples, black ash, lilac bushes, elms, and apple trees.

The Stage I and Stage II archaeological assessment of the Hilton Pit project within the Municipality of Brighton was undertaken in the September 2005 and April 2006. This was undertaken in order to identify any known archaeological sites and to evaluate the potential for the discovery of unrecorded archaeological remains within the study area. Outlined within this report is the prehistoric and historic archaeological sequence and historic settlement record of Northumberland County in general, and the Municipality of Brighton in detail. Several segments of the Lake Ontario shoreline and areas inland along the Trent-Severn Waterway have received intensive archaeological investigation in the past.

Two 19th century Euro-Canadian farmsteads were discovered. Both former farmsteads are located along road allowances on the outer edges of the proposed aggregate extraction areas. Both sites are also partially within mandatory setbacks, and avoidance of the sites is the preferred mitigation strategy of the CBM management personnel. Five mere buffer zones have also been added beyond the site limits to further insure permanent protection of these mid to late 19th century farmsteads.

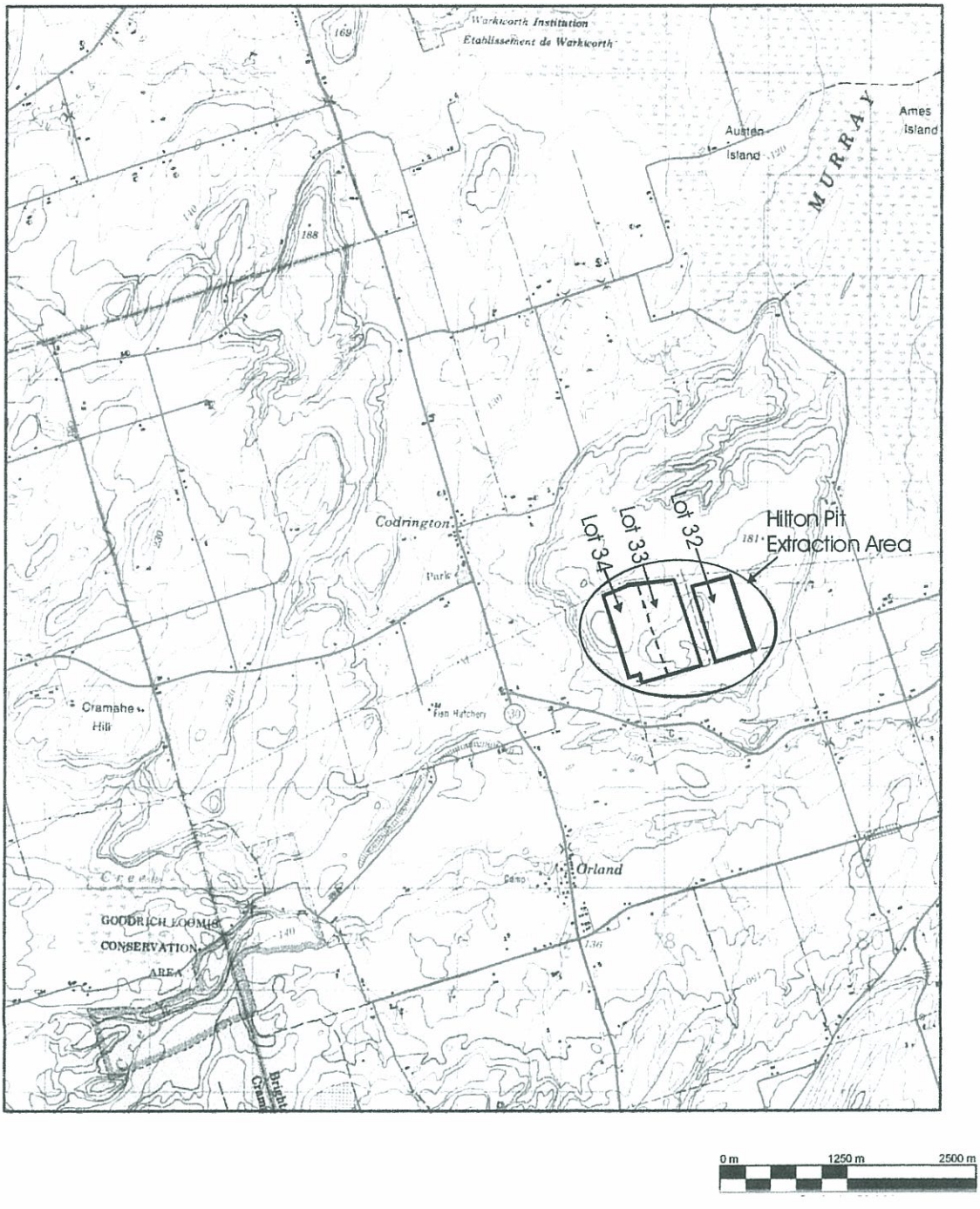


Figure 1. Location of the Proposed Hilton Pit.

Figure 2. Satellite image showing the extraction area of the Hilton Pit Project.

1.0 INTRODUCTION (cont)

The pit licence application involves undeveloped cultivated land and secondary forest, with no direct impact to existing buildings, bridges, cemeteries, or other standing sites of historical or architectural significance. Therefore, any potential impacts to heritage resources are limited to the sub-surface remains of pre-contact or historic First Nation archaeological sites and early 19th century Euro-Canadian camps and farmsteads. The Stage II archaeological field assessment of the proposed Hilton Pit project was undertaken in September 2005 and April 2006, when systematic shovel testing located two 19th century Euro-Canadian farmsteads.

Results of this investigation are documented in this report beginning with a review of the physical setting of the study area, followed by a background discussion of prehistoric and historic information that will outline any potential archaeological sites. A summary and recommendations is provided in the conclusion.

2.0 PHYSICAL SETTING

The Hilton Pit lies within the eastern portion of the South Slope physiographic region. The South Slope is the southward sloping topography below the Oak Ridges Moraine and extends from the Niagara Escarpment to the Trent River (Chapman and Putnam 1966:287). The eastern section of the slope in Northumberland County (encompassing the Municipality of Brighton) is densely covered by large drumlins pointing to the southwest. These have diverted streams diagonally down the slope with numerous gullies cut by intermittent drainage. The South Slope drumlins are formed of medium-textured glacial till overlying ground moraine and the Trenton limestone bedrock of the region (Hall and Jones 1976:114). Elevations within the project range between 180 and 204 metres A.S.L. (Above Sea Level).

This diversification of topographical features is 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 B.P.) which encompassed all of Ontario and extended to southern Ohio (Hall and Jones 1976:112). 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 1984:26). According to Chapman and Putnam (1984:26), there is evidence that the glacier's retreat as it uncovered Ontario was intermittent, with the retreat interrupted by brief readvances and stillstands. Therefore, it was during the Wisconsin glacial retreat that the landscape and topography observed today was produced. The erosion and deposition of glacial materials worked together to create the landscape of modern Ontario. These characteristics are seen in the many drumlins, eskers, interlobate moraines, rivers, lakes, spillways and ancient shorelines that are typical of modern Ontario.

2.0 PHYSICAL SETTING (cont)

The Hilton property is situated on the divide between the Lake Ontario and Trent River watersheds with the southern half draining to Shelter Valley Creek that flows southerly to Lake Ontario. The Trent River system drains the largest area of south-central Ontario and its wide valley was formed when glacial Lake Algonquin (early Lake Huron) drained southeasterly through the Kawartha Lakes to Lake Iroquois (early Lake Ontario) and on to the Rome outlet and Lake Champlain in New York State (Hough 1958:228).

Rice Lake is located approximately 35 km east of Hilton and is one of several large, shallow lakes along the Trent River system. These are found near the southern edge of the Precambrian shield and bounded by the northern border of the Oak Ridges moraine. The lakes were created and are maintained by glacial drift blocking pre-glacial river valleys. While several small lakes and various creeks and streams are found within the immediate area of Hilton, there are no sources of flowing water within the proposed pit boundaries.

The soils of Northumberland County vary considerably across the region (Figure 3), however, in general, its surface deposits are of glacial origin and the soils are deep and usually well-drained (Hall and Jones 1976:116). The main limitations to its use are due to stoniness and steep slopes (Hoffman and Acton 1974:7). The South Slope physiographic region of the interlobate moraine-located within Northumberland County contains a variety of soils, some of which have proved to be excellent through more than a century of agricultural use. These are developed upon tills which are more sandy in the east and clayey in the west while the slopes are often steeper in the east than in the west. The largest lacustrine deposits occur in the eastern part of the county, around the villages of Codrington and Wooler (Hoffman and Acton 1974:8). Geologically, Precambrian rocks form the foundations of Northumberland County, but nowhere do they appear near or above the surface (Hoffman and Acton 1974:8).

Three primary soil types are found within the project limits (Figure 4). The largest area, that which includes all the lower ground and regular topography, is classified as Colborne series. The Colborne series soils are well-drained sandy loams on high lime gravel deposits (Hoffman and Acton 1974:31). These gravels were deposited by glacial meltwaters from the receding Wisconsin glacier. The Colborne soils are classified as Gray Brown Podzolic (Luvisol) and have a very dark grayish brown surface about 4 inches thick (Hoffman and Acton 1974:31). The materials vary in size from fine sand to cobbles (rarely seen on the surface profile) (Hoffman and Acton 1974:31). These soils are generally used to produce crops such as spring grains, winter wheat, hay, pasture, and silage corn; however, they are also very suitable for orchards (Hoffman and Acton 1974:31).

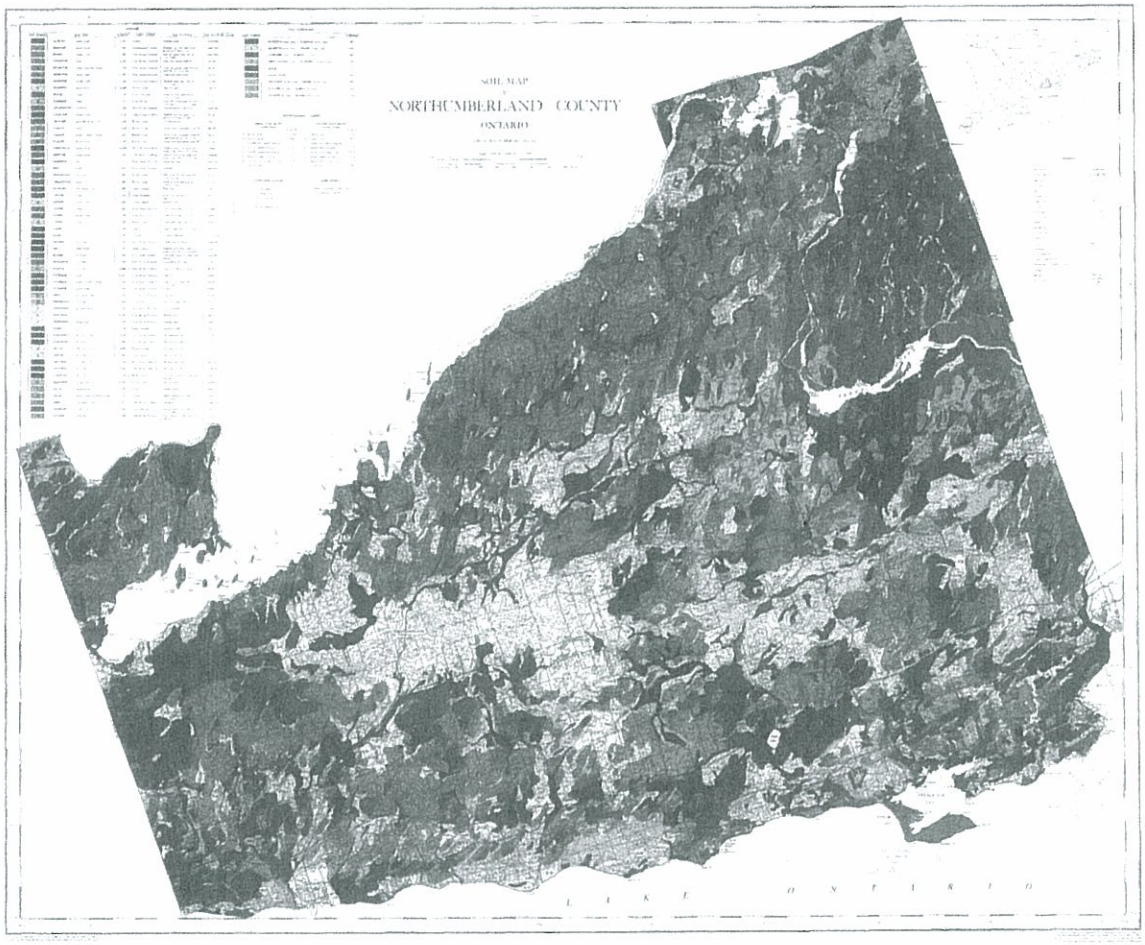
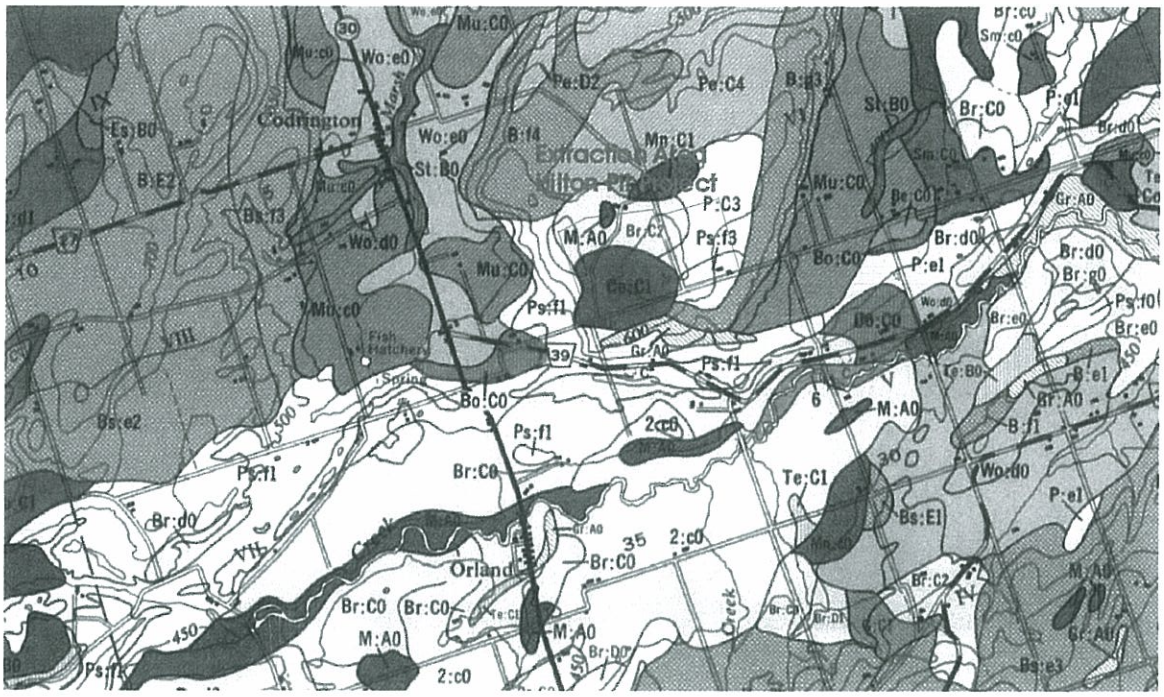


Figure 3. Soil map of Northumberland County (Hoffman and Acton 1974).



LEGEND

Co:C1 (dark brown area)- Colborne-Sandy Loam
M:A0 (dark grey area) - Muck
Br:C2 (dark yellow area) - Brighton Sand Loam
Ps:f3 (greenish yellow area) - Ponty Pool Sand
P:C3 (greenish yellow area)-Ponty Pool Gravelly Sand

Figure 4. Primary soil types found within the specified project area (Hoffman and Acton 1974).

2.0 PHYSICAL SETTING (cont)

The second primary soil type is referred to as the Pontypool series. This type is characteristic of rough topography and sandy soil materials (Chapman and Putnam 1984:168; Hoffman and Acton 1974:35). This soil is rapidly drained that also has the characteristics of Gray Brown Podzolic (Luvisol) where the surface soil is a thin, dark brown, sandy loam (Hoffman and Acton 1974:35). Pontypool soils are not fertile and therefore, have been used for pasture where beef and hogs are the main animal product (Hoffman and Acton 1974:35).

The remaining soils are from the Brighton series. This type is found in scattered areas and consists of calcareous sands deposited by of glacial outwash. They are usually of a medium grain, but can also occur as fine or coarse materials (Chapman and Putnam 1984:168; Hoffman and Acton 1974:26). The Brighton soils are characteristic of the Brown Forest (Melanie Brunisol) group where the surface is thin and a dark yellowish brown (Hoffman and Acton: 1974:26). Low water holding capacity and lack of natural fertility restrict their use for field crops, however, they have proven excellent for fruit crops, particularly apple orchards (Hoffman and Acton 1974:26).

In addition to the soils listed above, an area designated as "muck" is present within the project. These swampy areas are low lying where water has been impounded allowing the accumulation of organic materials, or muck (Hall and Jones 1976:117).

The well-drained, upland soils of the South Slope once supported large, almost pure forest stands of sugar maple (*Acer saccharaphorum*) and beech (*Quercus sp.*) (Murphy 2005:3). White pine (*Pinus strobus*), hemlock (*Tsuga sp.*), and the oaks (*Quercus sp.*) were found on the excessively drained crests of drumlins and on light, sandy soil deposits. Black cherry (*Prunus serotina*), white ash (*Fraxinus americana*), bitternut hickory (*Carya cordiformis*), butternut (*Juglanus cinerea*), and the elms (*Ulmus sp.*) were also common secondary species throughout the drumlin field. Lowland soils along stream valleys and between the drumlins were dominated by eastern white cedar (*Thuja occidentalis*), balsam fir (*Abies balsamea*), tamarack (*Larix laricina*), black ash (*Fraxinus nigra*), slippery elm (*Ulmus rubra*), and red maple (*Acer rubrum*). Modern arboreal vegetation patterns reflect two centuries of logging and land clearance, and the large numbers of red oak (*Quercus rubra*), paper birch (*Betula papyrifera*), trembling aspen (*Populus tremuloides*), hawthorne (*Crataegus douglasii*), Canadian plum (*Prunus nigra*), sumac (*Rhus sp.*), maples (*Acer sp.*), black ash (*Fraxinus nigra*), lilac bushes (*Syringa vulgaris*), elms (*Ulmus sp.*), and apple trees (*Malus pumila*) found today are the result of disruption to the natural, mature hardwood forests indigenous to the drumlinized till plains of southern Ontario.

3.0 STAGE I PRE-CONTACT BACKGROUND ASSESSMENT

Archaeological research in the middle and lower Trent Valley, especially in the area drained by Rice Lake and the Trent River, has been extensive. Rice Lake drew archaeological attention early, with the reporting of its Middle Woodland burial mound complex (Boyle 1897). Professional archaeological studies began in the area during the 1940s (Ritchie 1949), and intensified following the 1954 discovery of the Peterborough Petroglyphs north of Stony Lake (LeBlanc and Tomenchuk 1974; Sweetman 1955; Vastokas and Vastokas 1973). It also received repeated archaeological study throughout the 1960s and 1970s (Anderson 1968; Johnston 1968a). Trent University in Peterborough initiated a multi-season survey project in the 1960s to examine high potential areas throughout the Trent-Severn waterway (Hakas 1967). Intensive investigation of the late prehistoric Balsam Lake Iroquoian complex began in the 1970s when several large village settlements were partially excavated (Damkjar 1990; Ramsden 1989). Pre-contact sites have continued to be found in the general study area during Cultural Resource Management assessments.

Archaeological work in the Rice Lake area has contributed greatly to the general reconstruction of southern Ontario prehistory, with all major periods being represented to some degree. These developmental sequences can be applied directly to the region between Rice Lake and Lake Ontario and may have been occupied by a single macro band or closely related people (see Table 1 for a summary of the Southern Ontario Pre-Contact Archaeological Sequence). Several sites representing the initial stage of human occupation in Ontario, the Paleo-Indians, have been identified immediately south of Rice Lake. These are clustered along post-glacial ridges around the Plainville Valley. Paleo-Indian sites are also known, although with less frequency, on the high ground directly north of Rice Lake. Sites in both areas probably represent caribou (*Rangifer tarandus*) hunting and processing camps (Jackson 1986, 1991). Paleo-Indian sites can be expected to occur with greater frequency on the north side of Rice Lake, and further up the Trent Valley as archaeological research progresses (Ellis et al. 1990a:67, 1990b:55-56).

The Archaic period is well represented in the Rice Lake area – particularly the Late Archaic "Laurentian" Tradition (MCR 1981:39). Laurentian materials are very common on the multicomponent McIntyre Site excavated by Johnston (1984). Laurentian stage peoples occupied the Canadian biotic province transition zone between the deciduous forests of the south and boreal forests to the north. Subsistence remains and artifacts from the McIntyre site, and the settlement patterns found on other sites, generally reflect a broadening of subsistence pursuits during this period. Hunting small game, fishing and harvesting marsh and upland plants was likely undertaken by small family bands (Ellis et al. 1990a:76, 1990b:91). The Laurentian Archaic artifact complex contains large, broad bladed, chipped stone and ground slate projectile points and heavy ground stone tools. Trade connections to the north are in place at this time based on the presence of cold-hammered Lake Superior copper (Johnston 1984). The extensive use of copper includes beveled spear points, bracelets, pendants, axes, fishhooks, and knives (Kennedy 1970:59).

Table 1: Summary of Southern Ontario Pre-Contact Stages

Date	Stage	Description
A.D. 1650	Late Woodland	-Iroquoian peoples occupy all of southern Great Lakes east of Michigan, Algonquians in the north -large, palisaded longhouse villages -complex socio-political structure -subsistence economy based on cultivated plants -elaborately decorated ceramic cooking vessels and ceramic smoking pipes
A.D. 1400-A.D. 1200	Middle Late Woodland	-Iroquoian speaking peoples expand into Lake Huron basin -rapid population growth, large longhouses evidence of emerging complex socio-political structure -first evidence of bean and sunflower horticulture
A.D. 1200-A.D. 700	Early Late Woodland	-first small longhouse villages along Grand River and north of Lake Ontario of Known Iroquoian culture -first evidence of corn, squash and tobacco horticulture -well-made, patch-modeled ceramic cooking vessels -sporadic evidence of long distance trade for exotic items
A.D. 700-200 B.C.	Middle Woodland	-hunting and gathering subsistence economy -seasonal occupation of resource rich environments -band level society with well-defined territory -elaborate mortuary ritual with mound internment -extensive trade networks for exotic raw materials -elaborately decorated, coiled pottery vessels
200 B.C.-1000 B.C.	Early Woodland	-hunting and gathering subsistence economy -seasonal occupation of resource rich environments -extensive trade networks for exotic raw materials -crude pottery vessels, little decoration
1000 B.C.-7000 B.C.	Archaic	-hunting and gathering subsistence economy -seasonal occupation of resource rich environments -territorial band level society -distinctive projectiles and lithic technology -extensive use of cold-hammered copper late in stage
7000 B.C.9000 B.C.	Paleo-Indian	-first evidence of human occupation in Ontario -family groups hunting large game-woodland caribou -seasonal occupations along lakeshore environments -distinctive fluted point lithic technology

3.0 STAGE I PRE-CONTACT BACKGROUND ASSESSMENT (cont)

Early Woodland sites at Rice Lake are rarer, due in part to the shorter duration of this period and low visibility of sites (Ellis et al. 1990a:78), but include the Dawson Creek site. Based on data from Dawson Creek, Jackson (1980) suggests life-ways remained similar to the Laurentian stage, but with greater emphasis on processing nut oils and experimentation with plant cultivation.

The Middle Woodland Period is well represented by eight burial mound sites on Rice Lake, several of which have been partially excavated – ie., Serpent Mound (Johnston 1968a, 1968b; Boyle 1897), Miller Mounds (Boyle 1897), East Sugar Island Mounds (Stothers 1974), and Cameron's Point (Spence and Harper 1968). There are also numerous associated middens and villages. The mound sites tend to be located at prominent places at river mouths and shallows. Several researchers have argued this represents claims to ancestral resource territories by competing bands with ranked social structures. These mound builders also had access to a wide-spread network of exotic trade and ritual beliefs of the Hopewell Complex that originated to the south in the American States of Indiana, Ohio, and New York (Spence et al. 1990).

Settlement and subsistence appear to have shifted in the early Late Woodland Period – known locally as the "Early Iroquois Stage – Pickering Tradition" to seasonally hunting and fishing camp sites on Rice Lake (often on former Middle Woodland villages), and occupation of larger inland longhouse villages, such as the Richardson Site (Pearce 1978), where domesticated corn, beans, and squash were stored. The succeeding middle Late Woodland, or "Middle Iroquois Stage", is known from the partially excavated Wilson Village (Sutton 1990:41). Ellis et al. (1990a:84) include the Gibbs and Larmer sites on Rice Lake among Middle Iroquois villages, but Sutton (1990:45, 53) places Larmer in the Late Iroquois stage and is not certain it should be called a village. Two late Middle Iroquoian villages are known east of the Trent River and include the Payne site in Prince Edward County (Pendergast 1964; Emerson 1967), and the Lite site near Belleville (Pendergast 1972). This under-representation of Middle Iroquois sites may reflect a lack of archaeological survey in interior wetland areas, the preferred village locations, rather than an absence of a First Nation presence in the region (Sutton 1990:41).

The terminal part of the Late Woodland is well known in the upper Trent Valley, but sites of this stage appear to be absent elsewhere in the region. Late Iroquois (Huron) villages were identified in the Balsam Lake vicinity in the 19th century by the avocational archaeologist, Colonel George Laidlaw. Two of these large villages were excavated by Emerson (1954) in the 1950's – the Hardrock and Benson sites. Excavation of Huron villages continued by McMaster University in the 1970's, including the Kirche Site (Ramsden 1989), and the Coulter and Benson sites (Damkjar 1990). On the Cavan Bog to the southeast, the Bark site also has a Huron village component, as does the Fleetwood Creek II Site, although they are probably earlier than the upper Trent villages (Sutton 1990:54).

3.0 STAGE I PRE-CONTACT BACKGROUND ASSESSMENT (cont)

The latest pre-contact sites of the region appear to contain a mixture of Huron and St. Lawrence Iroquoian peoples, although their precise origins and the nature of the indigenous occupation remain contentious issues (Wright 1966:70-71; Sutton 1990:54). The events of the late 16th century were certainly in part due to the disruption of traditional trade patterns among all First Nation peoples brought about by the arrival of Europeans on the Atlantic seaboard. Segments of the St. Lawrence Iroquois population may have relocated to the west either as refugees or captives. The Lake Ontario shoreline and Trent Valley were abandoned as a foci of permanent occupation by the Huron in the late 1500's, prior to the arrival of the French explorers. It was then maintained as a "buffer zone" in the early 1600's between the Huron and New York Iroquois (Trigger 1976).

4.0 STAGE I HISTORIC BACKGROUND ASSESSMENT

The first recorded European visitor to the north shore of Lake Ontario and the Trent Valley region was Samuel de Champlain. In 1615, Champlain traveled down the Trent River from Lake Simcoe on his way to New York State with a Huron war party on a military campaign against the Oneida Iroquois (Trigger 1985:157, 180). There are indications in the historical and archaeological records that the north shore of Lake Ontario was used only as an occasional transportation corridor and a hunting-fishing territory by the Huron (Sutton 1990:3). At the time, the main travel route was the Ottawa River to the north. The main area of Huron settlement was now west and north of Lake Simcoe (Huronia). These were the areas of the French fur trade, and eventually mission colonies. In 1649-1650, the Huron villages were destroyed by the well-armed Five Nations New York Iroquois and the Huron people were either captured or dispersed (Trigger 1976).

Following the defeat of the Huron, the New York Iroquois (Mohawk, Oneida, Onondaga, Cayuga, and Seneca) occupied a series of winter hunting bases and trading settlements at the mouths of the major rivers flowing into Lake Ontario (Konrad 1981). The first settlements were probably two Cayuga villages at the northeastern end of Lake Ontario. Two French Sulpician missionaries joined these people in 1668, and established a Catholic mission at a settlement known as Kente. Kente was located at the Carrying Place, the narrows separating the western end of Prince Edward County from the Hastings County mainland. The second Cayuga settlement, Ganneious, was situated either at the mouth of the Napanee River or further south on the Bay of Quinte (Edwards 1984:10). Due to increasing tensions with the French military at Fort Frontenac (now Kingston), and declining population due to disease and warfare, the Cayuga settlements declined to the point where around 1680 the Kente mission and the villages were abandoned (Edwards 1984:17).

4.0 STAGE I HISTORIC BACKGROUND ASSESSMENT (cont)

Also during this period, the upper and middle Trent Valley acted as a buffer zone between the Algonquian speaking Ojibway and Ottawa peoples on the south edge of the Canadian Shield, and the New York Iroquois on Lake Ontario and the lower Trent. The Iroquois reportedly had a fortified village on Rice Lake (Brunger 1985:99; MCR 1981:58). By the 1690's, French supported Ojibway bands forced a southward retreat of the Iroquois (MCR 1981:58). Mississauga Ojibway bands then migrated south from Georgian Bay and established a permanent presence along the north shore of Lake Ontario and in the Trent Valley (MCR 1981:61-65). By this time, the area was of little interest to the French (Brunger 1985:99).

The construction of the French outpost of Fort Frontenac near the mouth of the Cataraqui River in 1673 resulted in a sporadic European presence at the eastern end of Lake Ontario during the 17th and 18th centuries. The main function of the fort was to store supplies intended for other interior military and trading posts. It was often abandoned when circumstances forced the retreat of the garrison. Fort Frontenac was surrendered to a British force in 1758 during the Seven Years' War, and all of New France surrendered by 1760.

The end of the French regime of Canada in 1760, brought little change to the region and British settlement along the north bank of the upper St. Lawrence River and the northern shore of Lake Ontario did not begin in earnest until 1784, when the shorelines opposite the New York State were settled by refugees of the American Revolution (Moore 1984:236). These refugees referred to as United Empire Loyalists, were exiled from the newly formed United States of America. They were caught up in a conflict that contributed greatly to the future shape of the Canadian nation.

Throughout the decade of the 1770's, citizens of the Thirteen American Colonies had to join the governing British side or a Republican rebellion of the American colonists. The crisis was largely over the question of who could best govern the flourishing Thirteen colonies. With the arrival of a French fleet, the inevitable result of the conflict was made clear by the surrender of England's General Cornwallis at Yorktown in 1781 (Moore 1984:104). The large scale evacuation of British regular soldiers, militia, magistrates, First Nation allies, royal supporters, and often anyone who refused to actively join the revolutionary movement began later that year. By the time the formal ceasefire was signed at Paris, France, in April of 1783, some fifty thousand people considered loyal subjects of King George III had lost or left their property. Over 1783, some ten thousand refugees were scattered throughout Lower Canada, awaiting supplies and transport to be relocated southwesterly in what would eventuality become Upper Canada (Moore 1984:227). General Frederick Haldimand, the Governor of Quebec, had originally intended to settle most Loyalists of European descent in the Maritimes and retain what is now Ontario for the First Nation allies, but several prominent military leaders wished to settle along the southern Great Lakes.

4.0 STAGE I HISTORIC BACKGROUND ASSESSMENT (cont)

Haldimand therefore ordered that land be purchased along the north shore of the St. Lawrence River and Lake Ontario from a single band of Mississauga Indians in October of 1783 opening the region for Loyalist settlement. (Fenton and Tooker 1978:476). Settlement along the north bank of the St. Lawrence River therefore, did not begin in earnest until 1784 when the Ontario counties opposite New York State were eventually settled by the United Empire Loyalists from the American States of Vermont, Connecticut, and New York (Moore 1984:236).

The majority of these United Empire Loyalists had been frontier farmers before the American Revolution and they were familiar with wilderness conditions, but they had lost almost everything they owned when they fled their homes in the newly formed United States. Their new government gave them a limited amount of support with the most extensive reward being in the form of free land. They granted land to the heads of households according to their military rank and extended grants to wives and children born and even the unborn.

The Loyalists brought with them the tradition of freehold land tenure, British Laws and representative government. They did not want to give up these rights by living under the Quebec Act which guaranteed the seigneurial system of landholding and denied an elected assembly to the people of that colony. Shortly after their arrival, Loyalist representatives petitioned the government to alter the system of holding land in Quebec to freehold tenure.

The resulting action that was taken by British Parliament was to develop the Canada Act, usually known as the Constitutional Act. This provided for the division of Quebec into Upper and Lower Canada. Both Upper and Lower Canada were granted an elected assembly and the freehold system of land tenure went into effect in Upper Canada (later Ontario).

In 1792, Lieutenant-Governor Sir John Graves Simcoe divided Upper Canada into 19 counties, and formed Northumberland County at that time (Murray 1997:16). The interior of Northumberland County was an unexploited frontier during the early stages of British colonization and attention did not turn to the inland concessions until the Lake Ontario fringe began to fill with settlers.

Permanent European settlement of Northumberland County proceeded roughly from south to north according to the relative productivity of soils for agriculture, and saw several waves of immigrants from the United States and the British Isles. The Township of Brighton was not initially formed during this time. It was not until 1851, by a special act of Parliament, that portions of Cramahe and Murray Townships were taken to form the new Township of Brighton (Pickford 1967:17). It is bounded on the north by Seymour, on the west by Cramahe, on the east by Murray, and on the south by Lake Ontario. In 1859, the village of Brighton was incorporated and took with it 2,600 acres (Pickford 1967:17).

4.0 STAGE I HISTORIC BACKGROUND ASSESSMENT (cont)

The region appears to have played an important part in the War of 1812. Presqu'ile provided a safe anchorage for shipping, and supplies were hauled over Carrying Place from the Bay of Quinte, to be forwarded by water to the troops at York (modern-day Toronto) (Pickford 1967:17). Peace brought development to the area; land was cleared for farming, roads were constructed, and pioneer industries were established.

The original 19th century land patent records for the lots included in the proposed Hilton pit are provided in Table 2. Land patent records reveal the general date of permanent Euro-Canadian settlement of a township and include insights into the form and character of development in the immediate area. The first patent for all 200 acres of Lot 32 of Concession 6 was granted to Jeremiah Storms on May 17, 1802. On November 14, 1804 Jeremiah sold all 200 acres to Donald MacDonnell, who on July 17, 1806 sold the land to Alexander Auldgo. Lot 32 has been bought and sold many times since May 17, 1802. All early owners of these properties were likely only interested in pine timber as superior farmland land was still available near the settled areas along the lakeshore. The light soils of this area would have produced high quality trees that were in great demand, especially by the British navy.

Table 2. Land Patent Records, Lots 32, 33, 34, Concession 6, Municipality of Brighton

Lot	Conc.	Size	Patent	Grantee	First Owner-Occupant Date
32	6	200 acres	1802	Crown	Jeremiah Storms (1802)
33	6	200 acres	1844	Julien Julien	James Cumming (1845)
34	6	200 acres	1802	Crown	Elizabeth McCrimmon (1802)

All 200 acres of Lot 33, Concession 6, Township of Brighton were registered in the name of James Cumming in 1845. However, on December 28, 1868 the Crown appropriated this land and granted the east half of 100 acres to George Angrave. On January 12, 1977, the Ontario Hydro Expropriation Plan acquired this property. On May 17, 1802 the Crown granted 200 acres of Lot 34, Concession 6, to Elizabeth McCrimmon. Elizabeth and Daniel (husband?) sold all 200 acres to Willek Casey on February 23, 1826.

According to the 1878 Historical Atlas of the Counties of Northumberland and Durham map segment of Brighton Township (Figure 5), one structure is marked at the very northeast corner of Lot 34. The Atlas also shows three structures marked on Lot 33 (Belden 1878:39). One is located within the northwest corner, and the remaining two are found in the central area of the Lot (Belden 1878:39). Lot 32 exhibits two structures, one in the northwest corner and one within the southeast corner. There is one additional structure located within the project zone, but found in Lot 31 of the Historical Atlas (Belden 1878:39). Although the atlas states that this structure is located on Lot 31 it is today located in the southeast corner of Lot 32, and therefore, will also undergo the archaeological assessment. The total number of structures located within the zone to be assessed number four, and may be found on Lots 32 and 33.

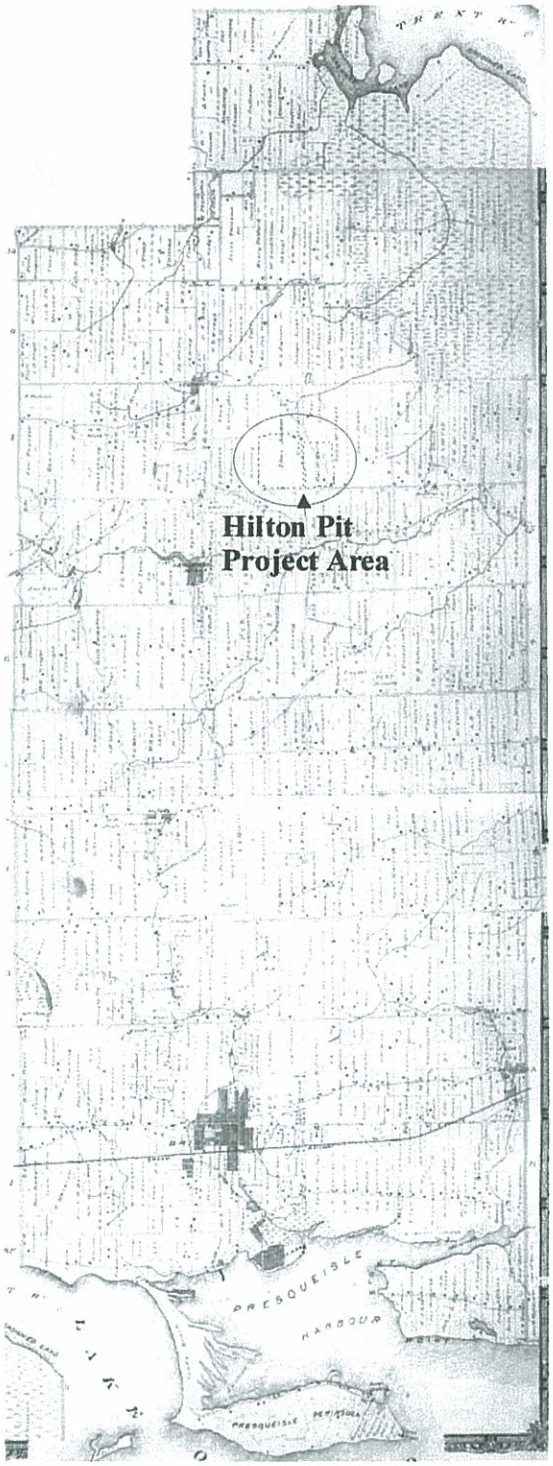


Figure 5. 1878 Historical Atlas of the Counties of Northumberland and Durham Map Segment of Brighton Township, Lots 32, 33, and 34, Concession 6 with Hilton Pit Project Area Outlined (Belden 1878:39).

4.0 STAGE I HISTORIC BACKGROUND ASSESSMENT (cont)

Throughout the 19th and 20th centuries, First Nation people maintained a presence north of Lake Ontario in the middle and upper Trent Valley. Treaty 20 gave title of the Newcastle District to the Crown in 1818, and reserves were established in 1829 for the Mississauga Ojibway at Hiawatha on Rice Lake, at Scugog Lake, Curve Lake (the junction of Chemong and Buckhorn Lakes), and on several islands in Lake Simcoe (Williams and McCue 1981:25). Sturgeon, Cameron, and Balsam Lakes were still used for hunting-fishing-gathering through the 19th and early 20th centuries by both Rice Lake and Curve Lake bands (Cole 1993:13; Vastokas and Vastokas 1973:27). The total First Nation population of Mississauga in the region about 1850 was thought to be around 1250 persons, with residential affiliation remaining fluid throughout the various reserves (Hall 1990:155). These formerly northerly Algonkian peoples did not establish long term, continuously inhabited settlements at specific reserve locations until forced to do so by Indian Agents following increasing immigration pressure and Canadian confederation in the 1850's and 1860's (Hall 1990:152).

5.0 RESULTS OF STAGE II FIELD ASSESSMENT

5.1 Stage II Archaeological Field Methodology

The Stage II archaeological field assessment of the proposed Hilton Pit involved surface examination of cultivated farm fields or hand shovel test pitting of undisturbed ground. In the Fall of 2005 and Spring of 2006, much of the new property required consisted of former pasture land specifically cultivated for the archaeological assessment. The ploughed fields, were surface assessed at a maximum 10 metre interval.

All uncultivated and undisturbed land was systematically test pitted at 5 or 10 metre grid intervals. Test pitting was accomplished by the hand excavation of shovel width test pits to undisturbed subsoil, or to an approximate depth of between 15 and 45 centimetres on disturbed soils. All test pit soil was processed through 6.0 mm mesh hand screens. Somewhat larger test pits were excavated in areas of high archaeological potential, with all test pit soil processed through portable rocker screens. A 10 metre test pit grid interval was required over most of the project.

During the Stage II assessment of the proposed Hilton Pit, two Historical sites were discovered. Both Historical sites are found on the edges of the project limits and reflect the historic settlement patterns of lot and concession surveys, and are located adjacent to the original 19th century road network. The provenience, type, and quantity of all artifacts found during the Stage II field assessment are listed in Appendix A.

5.0 RESULTS OF STAGE II FIELD ASSESSMENT (cont)

5.2 Introduction to the Cumming Site (B)

The Cumming Site is located in the centre of Lot 33, Concession 6, immediately northeast of large pond on the same lot designation and south of the hydro easement, approximately 100 metres from the proposed north extraction boundary. Intensive test pitting at 5 metre intervals and surface collection in ploughed parts produced middle to late 19th century and early 20th century historic materials (Figure 6). The majority of materials were recovered from a surface collection in the ploughed field immediately south of the visible architectural remains (Figures 7 and 8). Architectural remains include the foundation of a house, a barn, and two unidentified structures that could represent earlier residential buildings or buildings associated with farming activity (Figure 9). Historic material was also recovered from 14 test pits south of the residence producing a varied artifact assemblage that outlines the material history of a farm from the middle 19th to 20th centuries in rural Northumberland County (see Table 3).

Figure 6. Staff Member Test Pitting at the Cumming Site.

Figure 7. Area of the Cumming Site (B).

Figure 8. Architectural remains of the Cumming Site (B).

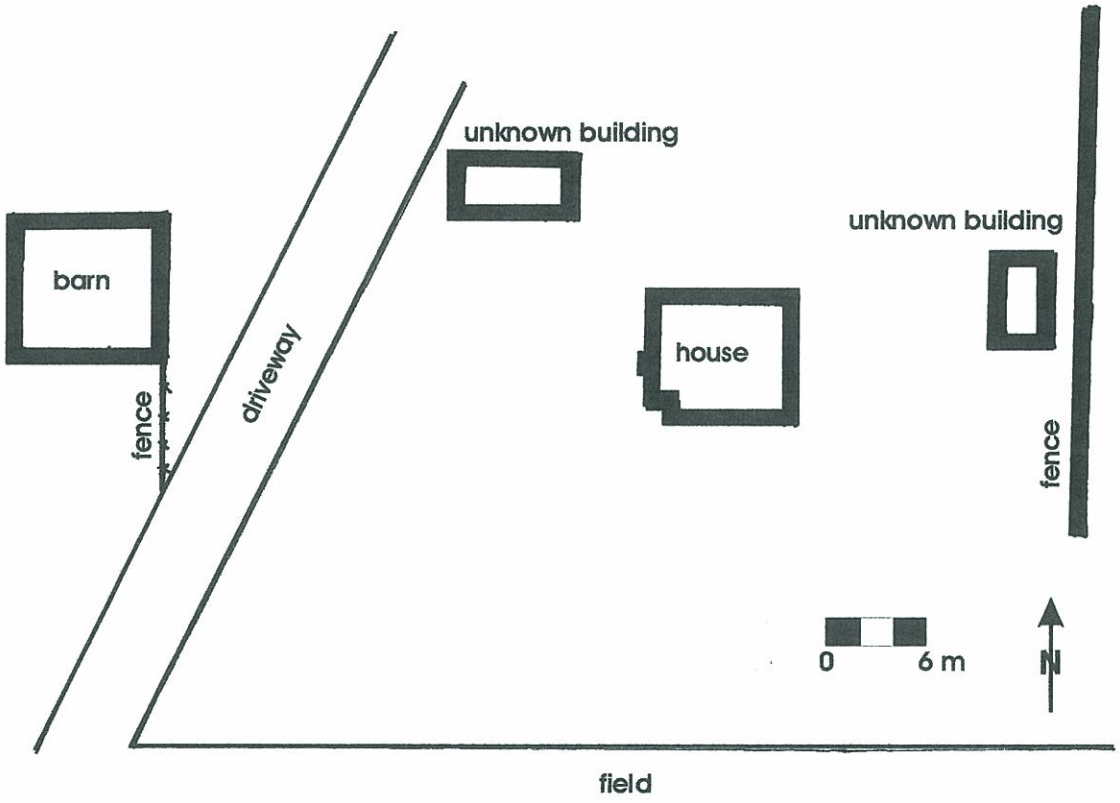


Figure 9. Map of visible architectural remains associated with the Cumming Site (B).

5.0 RESULTS OF STAGE II FIELD ASSESSMENT (cont)

5.3 Artifact Analysis of the Cumming Site (B)

This section outlines the results of the analysis performed on material recovered from the Cumming Site. Although a plethora of artifact types were recovered from test pits and surface collection, overwhelming, the largest majority of diagnostic material removed was of glass and ceramic (Appendix A). This section concentrates on those efforts and concludes with a summary of other material found (Table 4).

Besides ceramics, a large number of glass remains were recovered from the Cumming site. Glass is a common material found at Euro-Canadian sites dating to this period. Utilizing the Parks Canada Glass Glossary (Jones and Sullivan 1989) and the United States Department of the Interior, Bureau of Land Management (BLM) Historic Glass Bottle Identification and Information Website (2006) an analysis of diagnostic glass remains, primarily consisting of bottle remains, assisted in dating the Cumming site. 20 complete or broken bottles were examined. Glass bottles and jars were used for a number of purposes, from holding toiletries and medicines to liquor and condiments. Since glass manufacturers in the nineteenth and twentieth centuries used a variety of finishes for their bottles (Jones and Sullivan 1989:78), the lips and rim finishes were examined. The results of this analysis are included in Table 3. The majority of bottles found at the Cumming date to the late nineteenth to early twentieth century and consists of the Crown, Davis, Prescription, Patent, and Threaded types. Earlier forms that date back to the middle of the nineteenth century include a Davis-type and two Prescription lip bottles. 10 of the 20 bottles have a rim diameter of less than a centimetre and were probably used for patent medicine or toiletries, such as perfume. 7 of the 20 bottles have a rim diameter between 1 and 2 centimetres and were most likely used for alcoholic beverages. The remaining 3 bottles have a rim diameter of greater than 2 centimetres and were most likely used for condiments or other foodstuffs. Two fragmented clear glass stoppers and one complete glass stopper was also found at the Cumming Site (Figure 10). The glass stoppers are of the club sauce type, a variety common to the late 19th and early 20th centuries.

Table 3. Bottle Analysis from the Cumming Site.

Type	BLM description	Quantity	Period
Crown (Figure 11)	machine made crown top	2	1892 – present
Davis (Figure 12)	applied lip with collar	1	1850 – 1870s
	tool tapered lip	2	1880s – 1910s
	tool tapered lip with collar	5	1880s – 1910s
Prescription (Figure 13)	flat applied lip	2	1840s – 1880s
	tooled ring	4	1890s – 1910s
Patent (Figure 14)	flat tooled	2	1880 – 1910
Threaded (Figure 15)	threaded cap	2	1910 – present
Total		**19**	**1840s - present**

Figure 10. Glass bottle stoppers surface collected at the Cumming Site (B).

Figure 11. Crown type glass bottle tops.

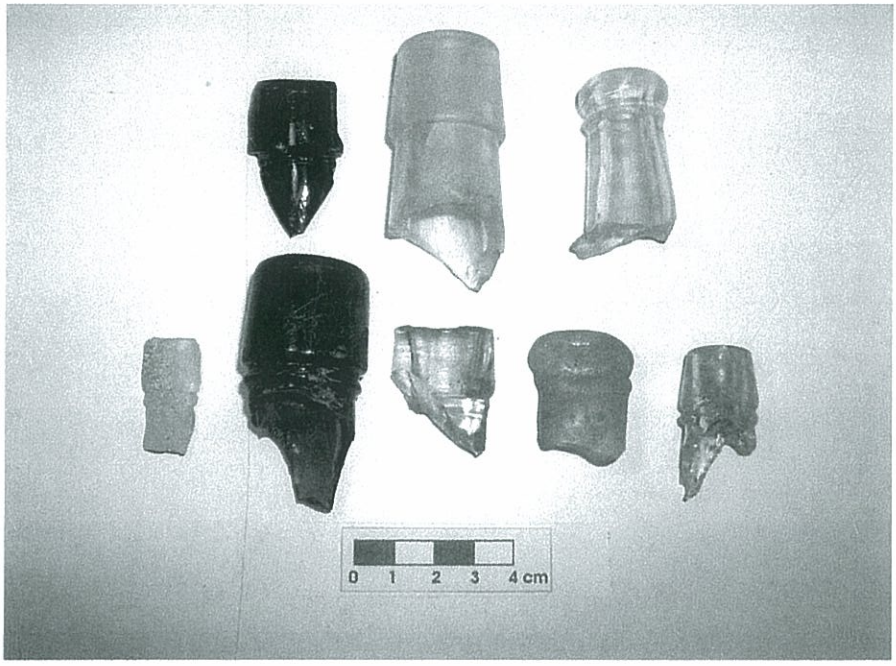


Figure 12. Davis type glass bottle tops.

Figure 13. Prescription type glass bottle tops.

Figure 14. Patent type glass bottle tops.

Figure 15. Threaded type glass bottle tops.

5.0 RESULTS OF STAGE II FIELD ASSESSMENT (cont)

Other non-diagnostic glass included the partial remains of bottles, tableware, window glass, and ornamental glass in a variety of colours. Although, blue, brown, green, and pink glass are represented in the collection, the overwhelming majority of the glass remains recovered were colourless, or possessed a slight pink or bluish tint, representative of the amount of iron oxide or manganese in the raw material, otherwise known as solarized glass. Although colourless glass is difficult to date, solarized glass appears in the last quarter of the nineteenth century and was used up until World War I (Jones and Sullivan 1989:13). A small number of opaque white and opaque blue fragments from tableware or commercial containers were also recovered (Figure 16). Interestingly, this effect was achieved through the use of bat guano and became widely used during the late nineteenth century (Jones and Sullivan 1989:14).

The presence of machine cut and wire nails also suggests that the Cumming site was occupied from the middle of the nineteenth to early twentieth centuries. Modern machine-cut nails (Figure 17) first appeared in North America in the late 1830s and remained popular until they were replaced by modern wire nails in the late nineteenth to early twentieth centuries (Diamond 2002:162). Other material recovered includes a variety of ceramic, glass, and metal household material that is often found on Euro-Canadian sites dating to this time period (Figures 18, 19, 20, and 21).

Figure 16. Opaque white glass surface collected from the Cumming Site (B).

Figure 17. Machine cut nails surface collected from the Cumming Site (B).

Figure 18. Printed ceramic surface collected from the Cumming Site (B).

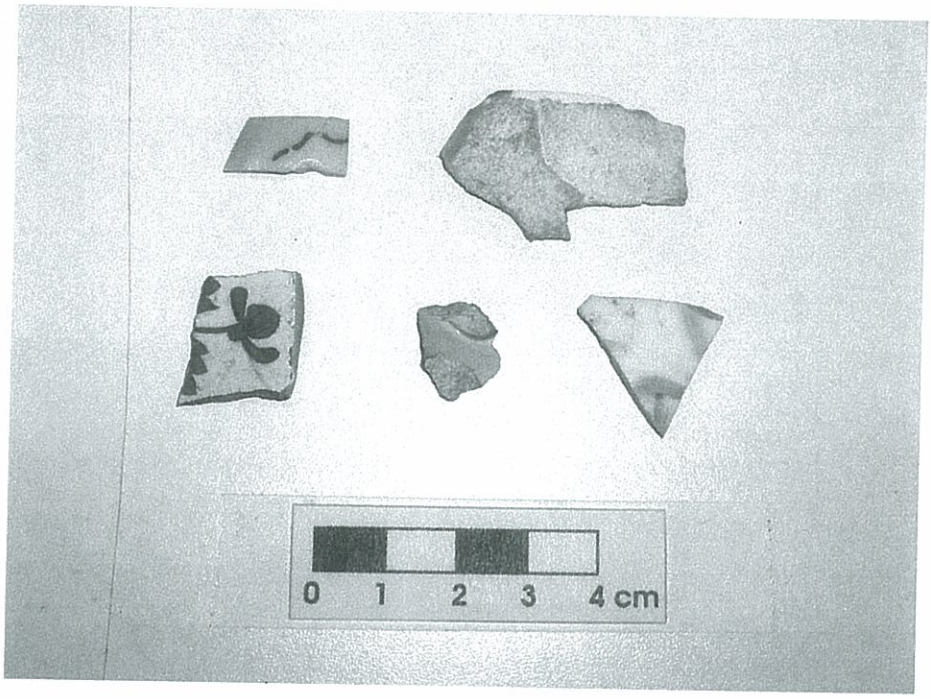


Figure 19. Painted ceramics surface collected from the Cumming Site (B).

Figure 20. Stoneware surface collected from the Cumming Site (B).

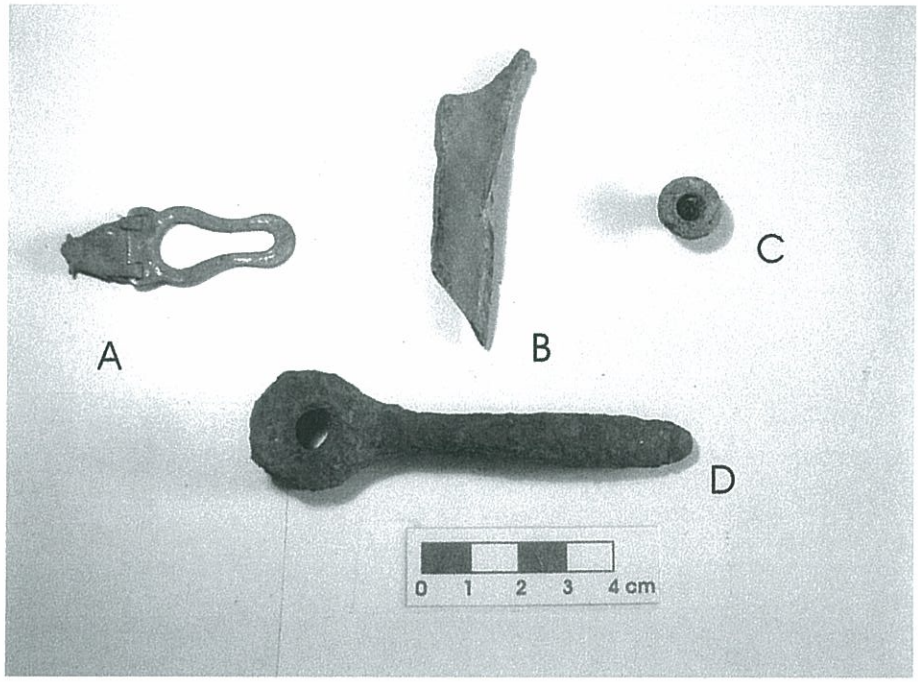


Figure 21. Metal clasp (A), faunal long bone (B), metal rivet button (C), and unidentified metal handle (D) excavated from the Cumming Site (B).

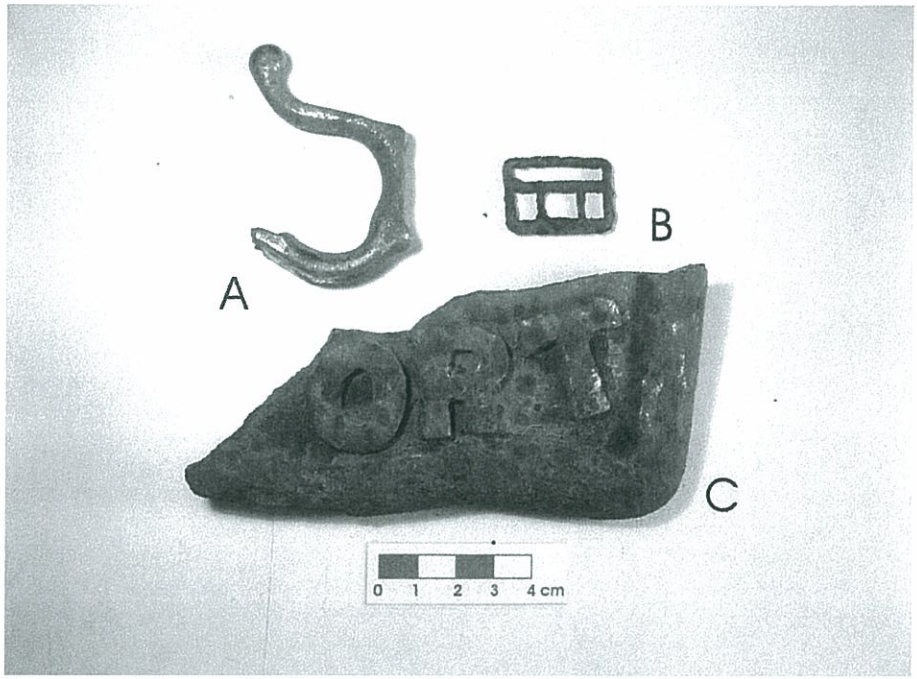


Figure 22. Metal hook (A), metal buckle (B), and metal stove fragment (C) excavated from the Cumming Site (B).

Table 4. Cumming Site Stage II Historic Artifact Summary

Class	Type	Total
Ceramic	blue printed	5
	brown printed	24
	green printed	40
	purple printed	2
	red printed	2
	blue painted	2
	brown painted	2
	polychrome painted	1
	white earthenware	2
	ironstone	389
	porcelain	30
	semi-porcelain	23
Crockery	red earthenware	1
	stoneware	19
	terracotta	2
Smoking Pipes	stem	1
Construction	red brick	16
Glass	clear glass	333
	blue glass	5
	brown glass	24
	green glass	5
	opaque glass	1
	opaque blue glass	2
	opaque white glass	23
	pink glass	1
	clear bottle glass	40
	brown bottle glass	7
	green bottle glass	6
	pink bottle glass	3
	clear glass bottle stopper	2
	brown glass bottle stopper	1
Metal	machine cut nail	16
	wire nail	8
	screw	1
	washer	1
	rivet button	1
	clasp	1
	buckle	1
Subtotal		1043

Table 3. Cumming Site Stage II Historic Artifact Summary (cont)

Class	Type	Total
	stove door fragment	1
	lead hanger	1
	strapping	1
	unidentified handle	1
	unidentified brass adornment	1
	unidentified fragment	9
Bone	bone	12
Miscellaneous	unidentified shell fragment	1
	coal	5
	slag	1
	slate board fragment	3
	unidentified slate cylinder fragment	1
Total		1080

5.4 Conclusion for the Cumming Site (B)

A large number of household material remains associated with the foundation of a house, barn, and at least two other structures suggests that the Cumming site was first occupied sometime during the middle of the nineteenth century in accordance with the information gathered from the land registry. The site was continuously occupied into the twentieth century when the property was acquired as part of a hydro easement. The Cumming site is a significant find because the variety of materials and associated architecture identifies the most intimate details of a rural Euro-Canadian family over several generations in Northumberland County.

5.5 Introduction to the Storms Site (B)

The Storms Site is located in the southeast corner of Lot 32, Concession 6, immediately north the concession road. Intensive test pitting at 5 metre intervals and surface collection produced early nineteenth century to early twentieth century historic materials (Figure 23). The majority of materials were recovered from two concentrations found around visible architectural remains (Figure 24). Architectural remains included the foundation of a house, the foundation of an earlier house, or homestead, and a barn (Figure 25). Historic material recovered from five test pits and surface collections east of the ruins of the house and homestead produced a varied artifact assemblage that outlines the material history and development of a farm from the early nineteenth to twentieth centuries in rural Southern Ontario (Appendix A) (Table 5 presents a summary of the artifacts).

Figure 23. Staff Member Test Pitting at the Storms Site.

Figure 24. Concentrations of Artifacts were found at the Storms Site (B).

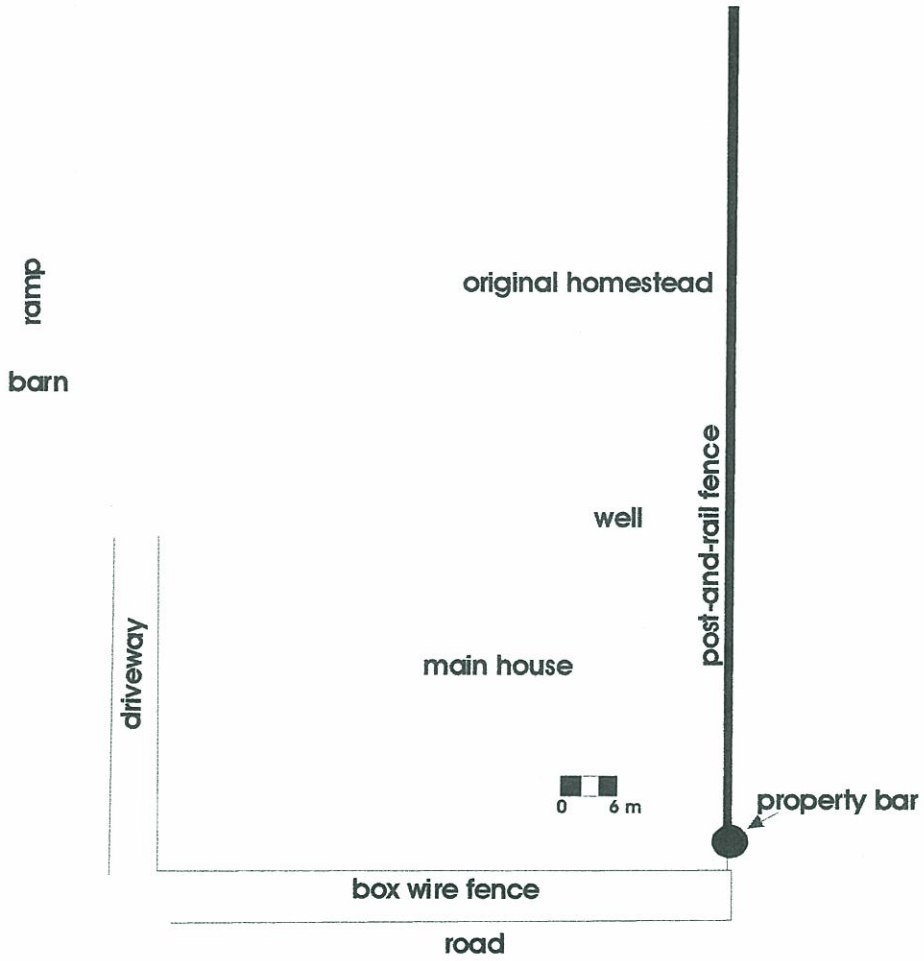


Figure 25. Map of Visible Architectural Remains Associated with the Storms Site (B).

5.0 RESULTS OF STAGE II FIELD ASSESSMENT (cont)

5.6 Artifact Analysis of the Storms Site (B)

This section outlines the results of the analysis performed on material recovered from the Storms Site. Two concentrations of material were recovered from the site. The first consists of early nineteenth artifact found around the remains of foundation north of the main house suggesting it was the first dwelling built on the property. The second concentration is located around the main house and dates from the middle nineteenth to early twentieth centuries. The largest majority of diagnostic material recovered was of ceramic. This section concentrates on those efforts and concludes with a summary of other material found.

Three types of ceramic material were found in test pits around the remains of the homestead. These consist of polychrome hand-painted pearlware (Figure 26c and d), white earthenware, and stoneware crockery (Figure 27). Hand-painted pearlware was first introduced in England around 1780; shortly thereafter it was exported to Canada until about 1840. The paint was applied by hand often in a floral motif before the vessel was glazed. The first colour to appear on such wares was cobalt blue but by 1795 brown, yellow, and green were added to the palette. By the 1830's red and black and lighter shades of blue and green could be found (Davis et al. 1987:16).

A small number of white earthenware, or tin-glazed earthenware, was found. This type of pottery dates to between 1600 and the early nineteenth century. It is commonly identified by the tendency of the lead glaze to flake off (Davis et al. 1987:17-18). Although, it is difficult to provide an exact date to the manufacture of this ware, the manufacture of plates of this type stopped in 1802.

Stoneware was the last type of ceramic material identified in this concentration. Again, it is difficult to ascertain an exact date for this type because stoneware was manufactured from 1800 and continues to be manufacture in the present. However, the stoneware recovered here resembles the Derbyshire type. This stoneware has a smooth, vitrified surface that is often grey in colour with a brown interior and exterior buff. It was often used for bottles, jars, and jugs from 1800 to 1875 and manufactured in England. Other artifacts recovered include a stem fragment from a ball clay pipe (Figure 28) and machine cut nails (Figure 29). Machine cut nails make an appearance in Canada during the 1830s and are used well into the late nineteenth century when they are replaced by wire nails (Diamond 2002:162). The early types represented at this site have a hand-made head, whereas later the heads are added by machine and appear uniform (Diamond 2002:163).

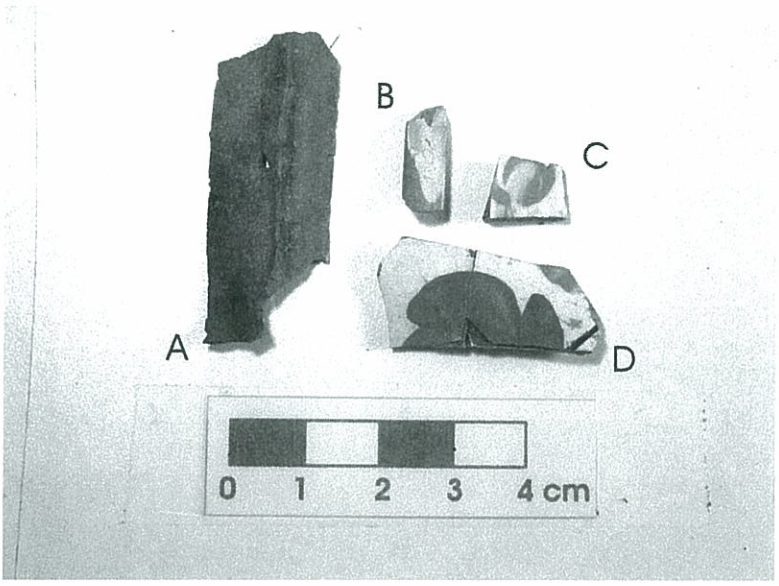


Figure 26. Unidentified Metal Fragment (A), Ball Clay Pipe Stem Fragment (B), Polychrome Painted Pearlware (C and D). All Artifacts from Test Pit 6, Storms Site (B).

Figure 27. Stoneware Pot from the Storms Site (B) Surface Collection.

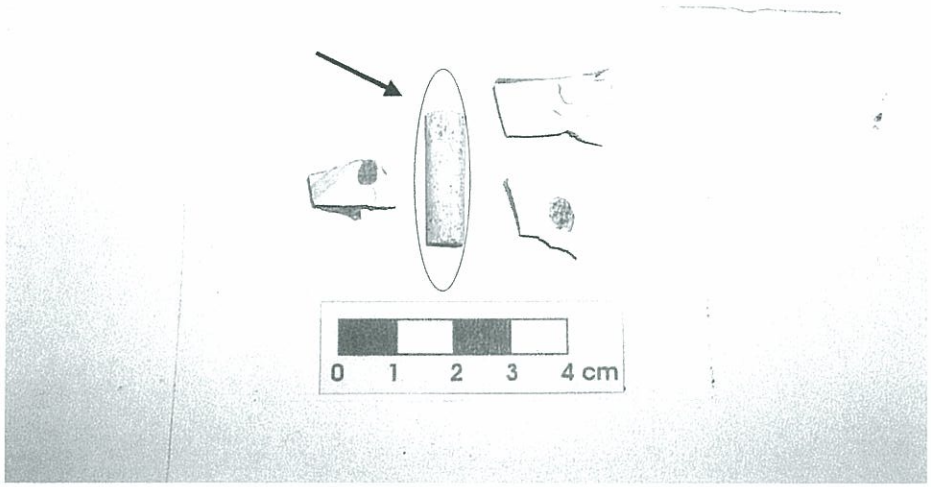


Figure 28. Ball Clay Pipe Stem Fragment (test pit 5) Excavated from the Storms Site (B).

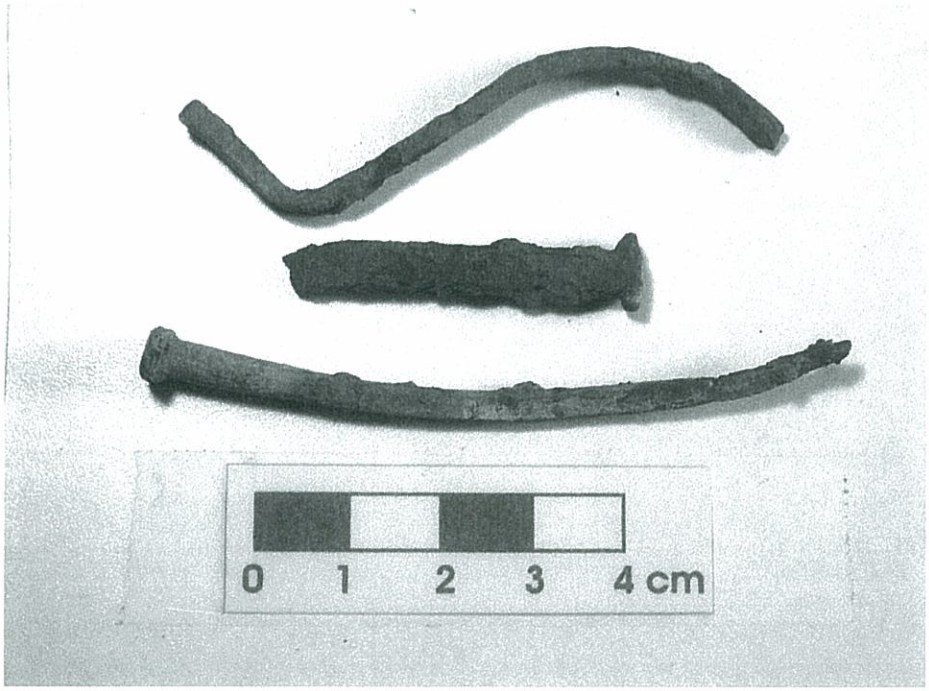


Figure 29. Machine Cut Nails (test pit 9) Excavated from the Storms Site (B).

5.0 RESULTS OF STAGE II FIELD ASSESSMENT (cont)

The artifacts recovered from the main house date from the middle nineteenth century to the early twentieth century, with the majority dating to the nineteenth century. Ceramic material recovered in this concentration includes white earthenware and Derbyshire stoneware, however, ironstone is also found. A number of glass fragments were recovered including the remains of a Davis-type bottle with a tool tapered lip, dating from the 1880s to 1910s (Figure 30). Metal artifacts include machine cuts nails, a fragment of a scythe blade (Figure 31), wire, barrel strapping, and tin can fragments. Although tin cans were first introduced en masse to the North American market around 1820, a number of innovations have allowed for the dating of such artifacts (Diamond 2002:165). The cans recovered from the Storms site posses a double side-seam, which first appeared in North America in 1888 (Diamond 2002:167). Other artifacts include the bones of a pig (Figure 32), a bone button (Figure 33), and fragments of poorly preserved leather shoes or boots (Figure 34). Based on size, male and female adult, or children's shoes are represented by the Storms site collection, including the left and right soles of a female shoe or boot. There were no more than 13 shoes found.

Figure 30. Fragment of a Davis-type Bottle Excavated from the Storms Site (B).

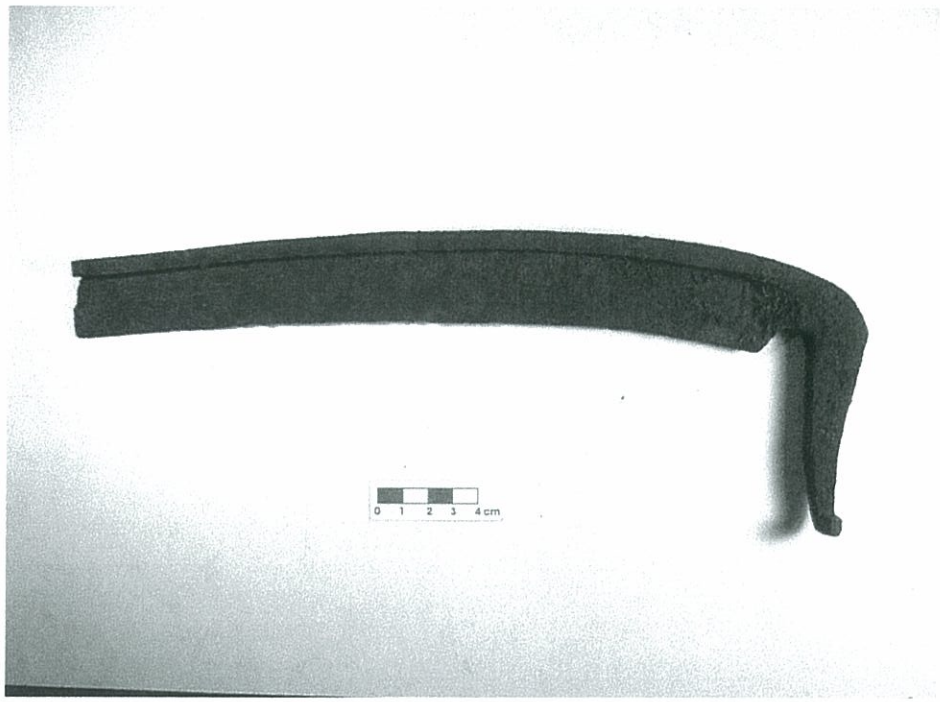


Figure 31. Scythe Blade Fragment Surface Cccollected from the Storms Site (B).

Figure 32. Pig Bones Surface Collected from the Storms Site (B).

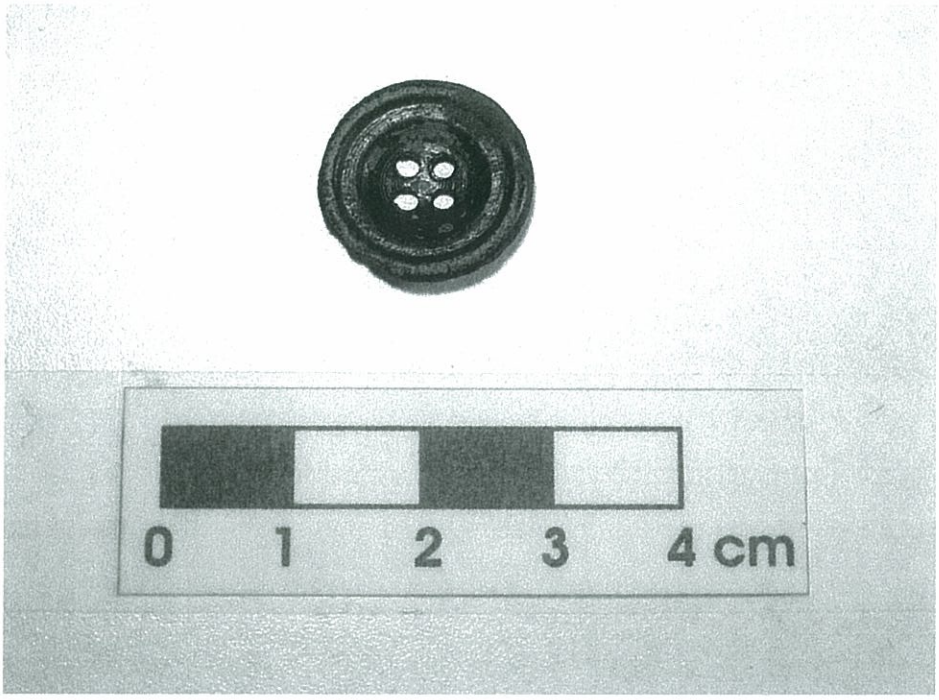


Figure 33. Bone Button Surface Collected from the Storms Site (B).

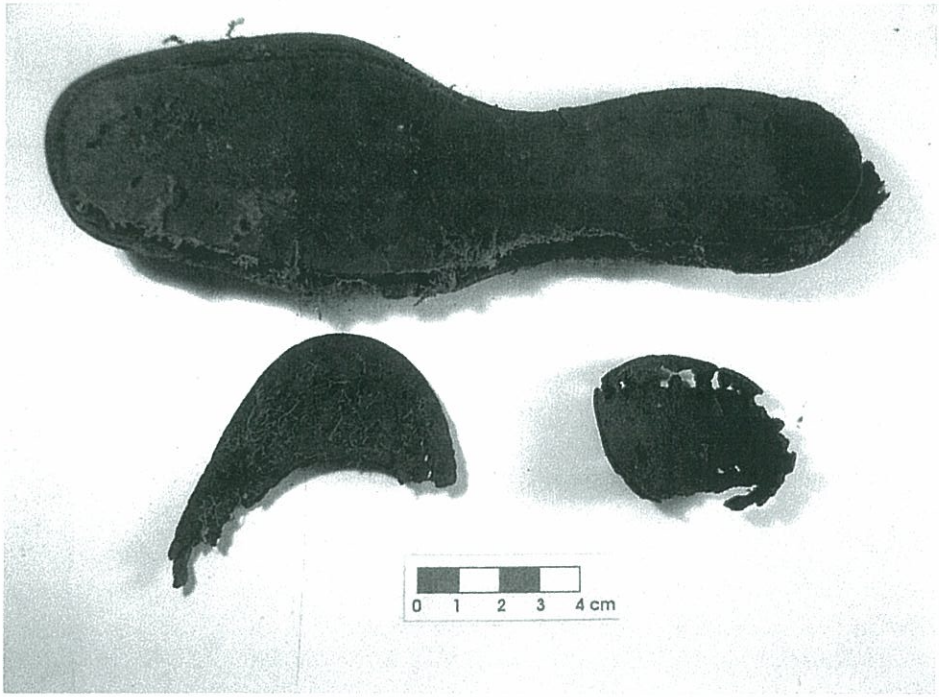


Figure 34. Fragments of Leather Shoes or Boots Surface Collected from the Storms Site (B).

5.0 RESULTS OF STAGE II FIELD ASSESSMENT (cont)

Table 5. Storms Site Stage II Historic Artifact Summary

Class	Type	Total
Ceramic	blue painted	1
	polychrome painted	2
	white earthenware	7
	ironstone	3
Crockery	stoneware	3
Smoking Pipes	stem	2
Construction	red brick	8
Glass	clear bottle glass	25
	brown bottle glass	3
	green bottle glass	5
	pink serving vessel glass	2
	clear glass	22
Metal	machine cut nail	8
	wire nail	3
	metal wire	2
	scythe fragment	1
	lid	3
	tin can	1
	tin can fragment	2
	barrel strapping	1
	unidentified fragment	13
Bone	bone	18
	bone button	1
Miscellaneous	shoe fragment	17
Total		153

5.7 Conclusion for the Storms Site (B)

A number of household and farm materials were found associated with the remains of two structures. The earliest structure dates to the early to middle nineteenth century and probably represents the original house associated with the property in accordance with the land registry. Although early material is found at the second house located to the south of the abovementioned structure, the majority of the material dates to the middle to late nineteenth century, with the likelihood of occupation into the early twentieth century. The absence of contemporaneous household materials around the earlier structure suggests it was abandoned when the inhabitants moved into the larger, later house sometime during the middle of the nineteenth century.

6.0 REPORT CONCLUSIONS AND RECOMMENDATIONS

C.R. Murphy Archaeology undertook a Stage II archaeological assessment of Lots 32, 33, and 34, Concession 6 in the Municipality of Brighton, County of Northumberland, Ontario. The Stage I cultural heritage background assessment of the Hilton Pit property outlines the pre-contact and historic archaeological record of the Municipality of Brighton and the County of Northumberland, and significant pre-contact sites are recorded in the general project vicinity. Based on the proximity of archaeological sites, a Stage II archaeological assessment was undertaken for the project. However, the absence of any sources of flowing water within the proposed extraction zone considerably reduced the potential for the discovery of significant pre-contact period archaeological sites.

Two historic archaeological sites were discovered during the Stage II investigation (Figure 35). These are two 19th century Euro-Canadian occupations. No pre-contact First Nation artifacts or sites were located within the proposed extraction zone. One site represents an early 19th century farmstead established by one of the first Euro-Canadian families into this region of Northumberland County in 1804. The second historic site reflects the developing agricultural and commercial economy of the region during the mid to late 19th century. These archaeological sites are considered significant at the provincial level, and may provide a significant addition to the understanding of the adaptations of pioneer Euro-Canadian life in the interior of Northumberland County.

Both sites are also partially within mandatory setbacks, and avoidance of the sites is the preferred mitigation strategy of the CBM management personnel. Five mere buffer zones have also been added beyond the site limits to further insure permanent protection of these mid to late 19th century farmsteads.

Based on the results of the Stage II archaeological assessment of Lots 32, 33, and 34, Concession VI in the Municipality of Brighton, Northumberland County, it is recommended that:

1) Concession VI, is to be adversely affected by gravel extraction or any other activity that may cause damage to cultural resources, Stage III archaeological test excavations are required, and possible Stage IV archaeological salvage excavation will also be required.

2) In the event that the Cumming site, located in the centre of Lot 33, Concession VI, is to be adversely affected by gravel extraction or any other activity that may cause damage to cultural resources, Stage III archaeological test excavations are required, and possible Stage IV archaeological salvage excavation will also be required.

3) Significant pre-contact or historic archaeological sites were not found at any other location within the currently proposed extraction zone. Therefore, there are no immediate archaeological concerns associated with the remainder of this project.

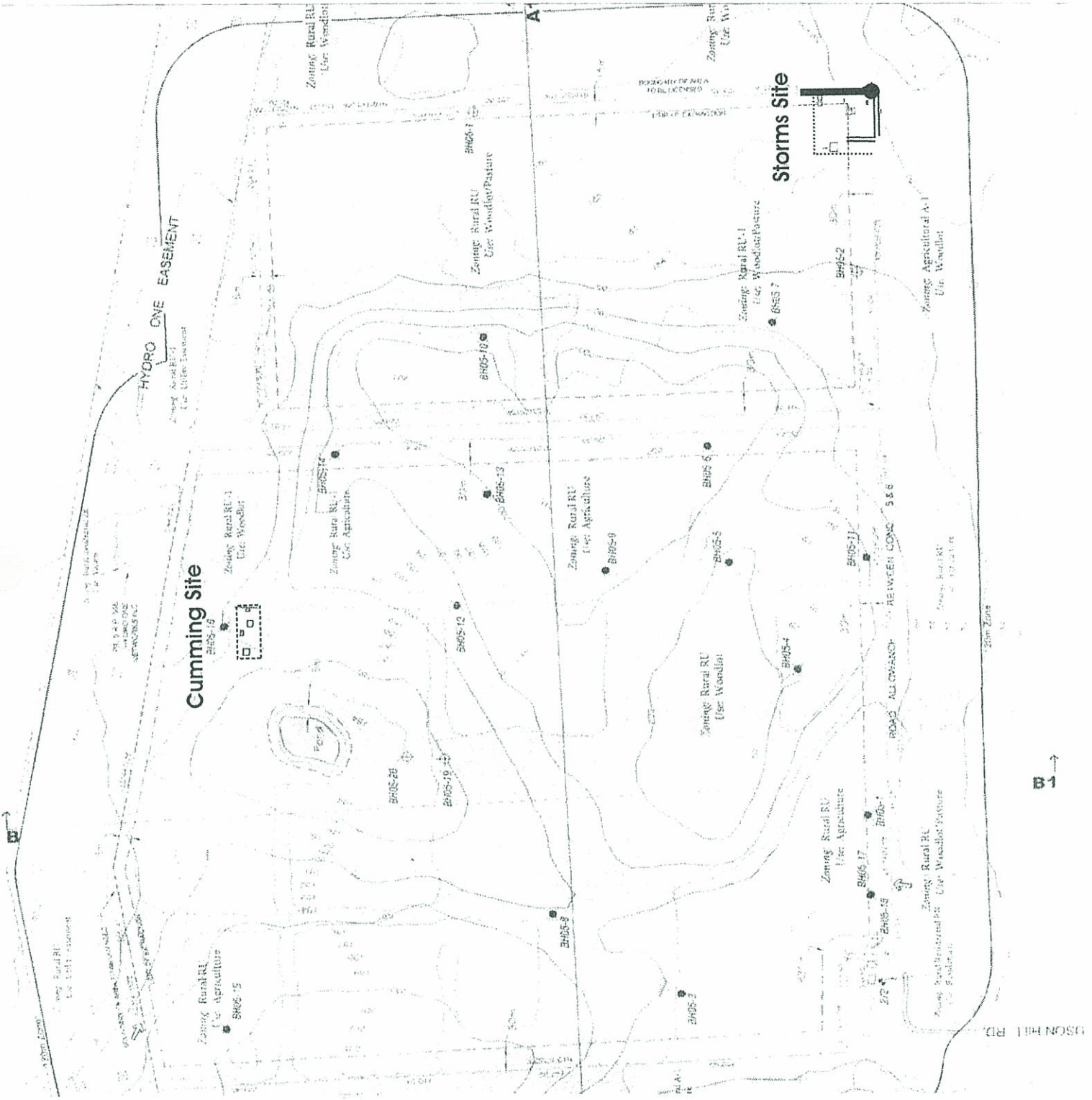


Figure 35. Two Historic Archaeological Sites (Cumming and Storms) Were Discovered During the Stage II Investigation.

4) In the event that deeply buried archaeological deposits are discovered in the course of extraction activity, the Cultural Programs Branch, Ontario Ministry of Culture (MCR), should be contacted immediately at (416) 314-7123.

5) In the event that human remains are encountered, the Cultural Programs Branch, MCR, and the Registrar of the Cemeteries Regulation Section of the Ontario Ministry of Consumer and Business Services should be contacted immediately at (416) 326-8404.

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APPENDIX A

ARTIFACT CATALOGUE

Hilton Pit

APPENDIX A

1. Cumming Site Artifact Catalogue

Test Pit	Ceramic		Glass		Metal		Other	
Surface	344	ironstone	301	clear glass	4	machine cut nail	7	bone
	35	green printed	39	clear bottle glass	1	wire nail	1	unidentified shell fragment
	24	brown printed	5	blue glass	1	buckle	4	coal
	5	blue printed	22	brown glass	1	stove door fragment	1	slag
	29	porcelain	5	green glass	1	lead hanger	1	slate board fragment
	20	semi-porcelain	6	brown bottle glass	1	washer	1	unidentified slate cylinder fragment
	2	red printed	5	green bottle glass	8	unidentified fragment		
	2	brown painted	23	opaque white glass				
	2	blue painted	2	opaque blue glass				
	2	purple printed	1	clear glass bottle stopper				
	1	polychrome painted	1	brown glass bottle stopper				
	2	terracotta						
	17	stoneware						
	1	ball clay pipe stem frag						
	1	brick						
1	2	white earthenware	1	pink bottle glass			1	bone
	1	green printed	1	brown bottle glass			1	slate board fragment
2	5	ironstone	2	clear glass	1	wire nail		
			1	pink glass				
Subtotal	**495**		**415**		**18**		**17**	