

**STAGE 1/2 ARCHAEOLOGICAL
ASSESSMENT
NORTH BEACH PROVINCIAL PARK
PLEASANT AND HUYCKS BAY
TRANSVERSE BARS
HILLIER TOWNSHIP
PRINCE EDWARD COUNTY**

HERITAGE QUEST INC.

Archaeology, Cultural Resource Management, Historic Research

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TRANSVERSE BARS

HILLIER TOWNSHIP

PRINCE EDWARD COUNTY

Prepared For: Mr. Mike Stone
Assistant Planner
Ontario Parks Southeast Region
Ministry of Natural Resources
Beachgroove Complex
51 Heakes Lane
Kingston, Ontario
K7M 9B1
Phone: 613 545-4021
Fax: 613 545-4033

Prepared By: Hugh J. Daechsel M.A.
Senior Archaeologist

Jeff Earl M.Soc.Sc.
Associate Archaeologist

743 Selkirk Road
Kingston, Ontario
K7P 1A4

Phone: 613 384-0947
Fax: 613 384-0947
Email: hjd@heritagequest.ca

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Brenda Kennett, Michael Stevenson, and Jeff Earl participated in the field investigation. Ms. Carmen Bauer completed the digital mapping and Mr. Jeff Earl researched and wrote the property history component of the study as well as completed the artifact inventory.

A special thanks to the consultants who shared with me their knowledge and experiences in the area. These include, Ken Sawyze, Laurie Jackson, Nick Adams, Carl Murphy and Phillip Wright. At the outset of the study Lisa Maracle, Lands Coordinator, Mohawks of Tyendinaga was contacted regarding the survey.

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The field work for the Stage 2 archaeological assessment was completed over a four day period from 28 September to 01 October 2004 by a crew of four. The investigation consisted primarily of the surface survey conducted in 2.5 meter intervals of the sand bars. The survey was augmented by test pitting in 5 m intervals, of selected portions the sand bars. The survey did not uncover any evidence of precontact occupation of the subject areas. A late nineteenth century to early twentieth century midden was identified in the north segment of the Pleasant Bay transverse bar and late twentieth century material noted in the both the north and southern segments of the Huycks Bay transverse bar.

It is suggested that the absence of precontact sites, a result consistent with other archaeological surveys of the area, is due largely to the dramatic geomorphological changes of the transverse bars resulting either in the erosion of archaeological remains or their burial under the present sand dunes.

Based upon the results of this investigation it is recommended:

- 1) That areas exposed by significant wind storms be investigated for potential archaeological resources and if noted be recorded and if necessary recovered by a licenced archaeologist before affected by public and or private usage of the area.
- 2) That the mainland area along the Pleasant Bay shoreline be subject to further Stage 2 investigation in advance of any proposed modifications of the landscape.

- 3) That in the event that human remains are encountered during any construction activities, both the Ministry of Culture ((416) 314-7148) and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Commercial Relations ((416) 326-8392) should be notified immediately

2.0 INTRODUCTION

Heritage Quest Inc., on behalf of Ontario Parks Ministry of Natural Resources, South Eastern Zone, undertook a Stage 1/2 Archaeological assessment of North Beach Provincial Park and Pleasant and Huycks Bay transverse bars that included part of Lot 36 Concession 3, Lots 33, 34, 35 & 36 Concession 2 and Lot 32 Concession 1 Geographic Township of North Hillier, Prince Edward County (see Figure 1). The objective of the investigation is to provide an inventory of archaeological resources within North Beach Provincial Park and the two transverse bars for Pleasant and Huycks Bays. This study focused on the identification of known archaeological sites, assessment of archaeological potential and determination of the presence of archaeological resources within the land based portion of the park.

This investigation is a component of a cultural resource assessment undertaken for both Lake on the Mountain and North Beach Provincial Parks and environs. The former investigation has been documented in a separate report (see Daechsel & Earl 2004).

The background research of the park included consultation with people knowledgeable about the area's archaeology and history, review of primary documentation including land registry records, census and assessment data, historic plans and aerial photographs. A field reconnaissance of the park and associated areas was also undertaken 14 September 2004.

This report is divided into four sections beginning with an outline of the study area including its environment, previous archaeological and historic research, cultural overview and property specific history. A review of identified sites and assessment of archaeological potential of the park is then provided followed by documentation of the methodology and results of the Stage 2 investigation. This discussion is then summarized and recommendations provided regarding the management of identified archaeological resources. A photography catalogue and photographic inventory is included as appendices.

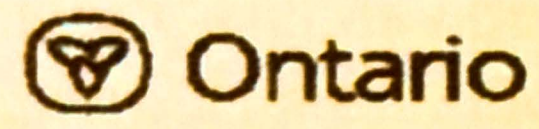
FIGURE 1. NORTH BEACH PROVINCIAL PARK AND RECOMMENDED PARK ADDITIONS



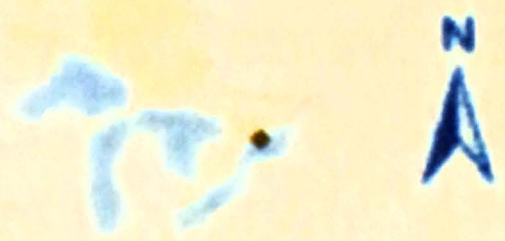
ONTARIO
PARKS

Legend

- North Beach
- Recommended Park Additions
- Road
- Lot
- Lake
- Wetland
- Stream



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Published March 2004
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3.0 STUDY AREA

North Beach, a day-use facility, covers an area of 89.4 ha, 63.2 ha of which is open water. The Pleasant Bay and Huycks Bay transverse bars make up an additional 23 ha that includes a portion of land along the north shore of Pleasant Bay. The Pleasant Bay Transverse Bar straddles Lots 33, 34, 35 and 36 Concession 2 and Huycks Bay Lot 32, Concession 1. All properties lie within the Geographic Township of North Hillier, in Prince Edward County.

3.1 Environment

North Beach Provincial Park and the Pleasant and Huycks Bay transverse bars lie within the Prince Edward Peninsula physiographic region (Chapman & Putnam 1966: 319). This area is defined as a "low plateau of limestone projecting from the eastern part of Lake Ontario..." (Ibid: 319). The area is underlain by Trenton Limestone that slopes southwestward forming an escarpment at the north and eastern ends of the County and a low shoreline at the south and western ends.

Most of the subject area falls on transverse or baymouth bars created by shore drifting of sand across the mouth of a bay (Strahler 1969: 530). In the case of Pleasant Bay the spits connect to Alexander Island. Once vegetated the sand dunes are stable although a severe storm could easily change the dynamics of the dunes resulting in their reactivation. An examination of the 1878 historical atlas indicates that the North Beach Transverse bar has been relatively stable, although the positioning of the outlet channel may have varied. Changes are more significant for the Pleasant Bay Transverse Bar where the north half of the spit was considerably thinner with a channel at its junction with Alexander Island. Presently that same area has in-filled considerably with the outlet channel presently on the south half of the bar. The Huycks Bay bar has changed little over the past 130 years.

The North Beach Provincial park property consists primarily of Eastport sand deposits. The entrance to the park and the southern tip along the "mainland" is made up of Ameliasburg clay loam a stone soil associated with undulating to rolling topography (Richards & Morwick 1948). Richards and Morwick have classified the north half of the Pleasant Bay transverse bar as muck identified as a layer of decomposed material 30 to 90 cm in thickness. The field testing of this area suggests that soils may be more accurately characterized as sand and water-worn gravel with marsh areas along the eastern shoreline and on the north side of Pleasant Bay. The mainland sections included within the study area consist of Ameliasburg clay loam. The south half of the Pleasant Bay Transverse Bar consisted of sand, rather than the muck noted in the soil survey. Huycks Bay transverse bar consisted of marsh and sand deposits according to Richards and Morwick (1948) with again Ameliasburg clay loam forming the southern end of the bar. Testing suggests that most of this bar consisted of sand and sand with water worn gravel.

The entire Prince Edward County lies within the Huron-Ontario sub-region of the Great Lakes-St. Lawrence Forest region (Rowe 1977:93). Forests in this area include Sugar Maple and Beech along with Basswood, white and red ashes, Yellow Birch, red maple and red, white and bur oaks. Blue-beech, Silver maple, slippery and rock elms are found in wetter areas. Coniferous trees include Eastern Hemlock, Eastern White Pine and Balsam Fire with Eastern White Cedar

common in swampy depressions and former fields. Where vegetated the dunes included prairie grasses, poplars and cedars. Some eastern White Pine was noted on the north half of the Pleasant Bay Transverse Bar.

The study area drains directly into Lake Ontario.

3.2 Previous Research

There are a number of published and unpublished historical references to Hillier Township and the area of North Beach. These include **Belden's Illustrated Historical Atlas of the Counties of Hastings and Prince Edward** (1878) and general histories of Prince Edward County, David Taylor **Historic Prince Edward** (1994), Nick and Helma Mika's **The Settlement of Prince Edward County** (1984), Creig and Mika's **The Splendor of Prince Edward County** (1991), Tom Cruickshank's and Peter Stokes' seminal work on buildings in Prince Edward County **The Settler's Dream A Pictorial History of the Older Buildings of Prince Edward County** (1984). Taylor Ashton's **On The Edge of History Dorland's Creek and the Mills** (1996) offers a more detailed review of Hillier Township and Dorland Creek at the east end of Pleasant Bay.

Prince Edward County has drawn varying degrees of archaeological attention over the past 150 years. References to archaeological sites in the County date to the mid nineteenth century (Walbridge 1860). Avocational archaeologists collected artifacts from the county through the id twentieth century.

William A. Ritchie (1949) and James Pendergast were the first archaeologists to more systematically investigate the County in the late 1940's and 1950's, identifying a series of Late Woodland sites in the southern and eastern portion of the County. Both Pendergast (1964a) and Norman Emerson (1967), University of Toronto, were involved in the excavation of the Payne site a Huron village occupation located approximately 6 kilometers northeast of Wellington. Pendergast's work also resulted in the identification of the Waupoos Site, a Late Woodland occupation located on the mainland northeast of Waupoos. At this time the Reverend Bowen Squire (1958, 1960) was also active in the area identifying a number of sites in Ameliasburgh Township and excavating a sample of these in his search for the eighteenth century mission Kente.

Gary Forma (1972) conducted a series of investigations in the Tweed District for the Ministry of Natural Resources including Lake on the Mountain and North Beach Provincial Parks. Paul Sweetman (1973) and Ken Swayze (1973) were involved in a number of surveys in the County in the early 1970's. Swayze's work has resulted in the identification of over 100 sites in Prince Edward County including identification of an unconfirmed site in the village of Wellington along the shore of Lake Ontario (Swayze 1976). Work focused in the Sandbanks and Outlet areas in the late 1970's with an investigation the Ontario Ministry of Culture (Wright & Englebert 1979) and excavation of the Lakeshore Lodge site by Sheryl Smith (1981).



Plate 1. Lake Ontario side of North Beach looking south from north end.



Plate 2. North Bay side (east side) of North Beach looking south.



Plate 3. North half of Pleasant Bay transverse bar looking north from Alexander Island



Plate 4. Huycks Bay outlet channel looking southwest.

More recently Swayze undertook an investigation of a trailer park area on Pleasant Bay (Swayze personal communication 1998). Following up on Swayze's earlier investigations Mima Kapches, Royal Ontario Museum, (1984a, 1984b) undertook a series of surveys in the area of Hallowell and Ameliasburgh Townships.

Other studies include Gary Foster's (1983) survey of pipeline corridors from Picton to Wellington. Archaeological investigations in the Wellington area include a survey by Northeastern Associates (1996) of the Lake Breeze subdivision and a Stage 1/2 investigation of Wellington Bay Estates subdivision by Heritage Quest Inc. (Daechsel 1998) both failing to identify any archaeological resources. Investigations have been also undertaken at Isaiah Tubbs Resort on West Lake (Daechsel 1999c, 2000) and at Cherry Valley (Daechsel 1988). Carl Murphy undertook an assessment of the Glenora Ferry crossing (Murphy personal communication 2004).

Other archaeological studies in the region include a field school on Waupoos Island (Daechsel 1999a) and a Stage 1 investigation of the Mountain View CFB Trenton facility (Daechsel 1992, 1999b).

3.3 Cultural Overview

Despite the degree of archaeological work undertaken to date in Prince Edward County our understanding of the area's history remains very incomplete. Human occupation of the region began approximately 10,000 B.P. (before present) with the advent of the Palaeo-Indian Period. These early populations consisted of small mobile groups relying principally on caribou and other mammals for their subsistence. Evidence of Palaeo-Indian occupation has been identified in neighbouring Northumberland and Lennox and Addington Counties. A quartz fluted point has been reported from the Lake of the Mountain area (Mima Kapches personal communication 1992).

The subsequent Archaic period (9,000 – 2,800 B.P.) is initially characterized by the adaptation of small mobile hunter gatherer groups to more temperate climates which provided a broader range of food resources. Artifact assemblages of these populations include ground stone tools, believed to have been used in the working of wood and a general reduction in the size of projectile points. By the end of this period populations have increased substantially over the preceding Palaeo-Indian occupation and trade networks spanning much of northeastern North America have developed.

There are a number of reported Archaic finds in Prince Edward County including materials from an assemblage collected in the village of Wellington. However, none of these sites has been systematically investigated.

The Woodland Period (2,800 B.P. – 400 B.P.) is distinguished from earlier Archaic populations by the introduction of ceramics and subsequently by the use of domesticated plants including corn, beans and squash. Through the early and mid portion of this period trade networks extending through much of North America flourished with populations continuing to hunt and gather. By about 1,100 B.P. domesticated plants were introduced to the area in a transition

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period known as the Sandbanks Tradition. The type site for this Tradition, Lakeshore Lodge, is approximately 10 kilometers southeast of the study area.

Prince Edward County is part of the Huron homeland. The Payne site, a Huron village, is located 6 kilometres northeast of Wellington. Additional Huron components have been identified to the south in Cherry Valley and at Waupoos (Pendergast 1964b).

Early European contact in the study region prompted a number of shifts in the distribution of aboriginal populations. The Huron had left the area of Prince Edward County by the time of Champlain's arrival to the region in 1615. Following the dispersal of the Huron in 1649 by the Five Nations, the Cayuga occupied the north shore of Lake Ontario. This occupation included a mission village situated near Carrying Place. This mission site, known as Kente, is thought to have been located in the Lake Consecon area northwest of the study area (Squire 1958, 1960).

The mission of Kente was short lived and the Cayuga were forced to abandon the north shore of Lake Ontario having been displaced by the Mississauga who occupied the region through the eighteenth and a portion of the nineteenth century. Grape Island is the site of an early nineteenth century Mississauga settlement and mission that, after a brief occupation, was moved to the present day reserve of Alderville in the Rice Lake area.

3.4 Property History

North Beach Provincial Park and the two sandbars within the study area lie on parts of several lots in three separate concessions within the township of Hillier, though the sandbars themselves have apparently always been Crown land, having not been included in the surrounding land patents. From the various nineteenth century plans and twentieth century aerial photographs, it is apparent that the outlets through the sandbars have shifted over time. Unless otherwise noted, all of the information below was found in land registry records.

North Beach Provincial Park lies on part of Lot 36 of Concession III. Two patents for Lot 36 were issued in 1811: the southern part to James Dorland (as part of a package including parts of Lots 34 and 35), and the northern part to Simeon Morey. Neither of these included the sandbar across North Bay. The northern part was sold to Robert Young Jr. in 1814, who assigned it to Joseph Young the following year. The southern part was sold to Eleakin Corey in 1817; there are a number of confusing transactions in the land registry records after this point, though much of the southern half of the property appeared to remain in the hands of the Corey family through the middle of the nineteenth century. The Elmore maps of 1835 and 1836 show that a road had been constructed through the southern part of the lot leading to "Corys Wharf" on the lake; further roads or trails traversed the sandbars across all three bays, though North Bay was then known as "Youngs Lake" (Figures 2 and 3 NAC NMC 21614 and NAC NMC 21628). The 1863 Tremayne map of Prince Edward County shows two houses owned by Abner Corey and Col. James Pierson on "Pierson's Point" at the end of the road through the southern part of the lot. No wharf is depicted in this location, though Pierson and his son Joseph had earlier used the location of Corey's wharf to construct and launch several schooners. Pierson is also shown as

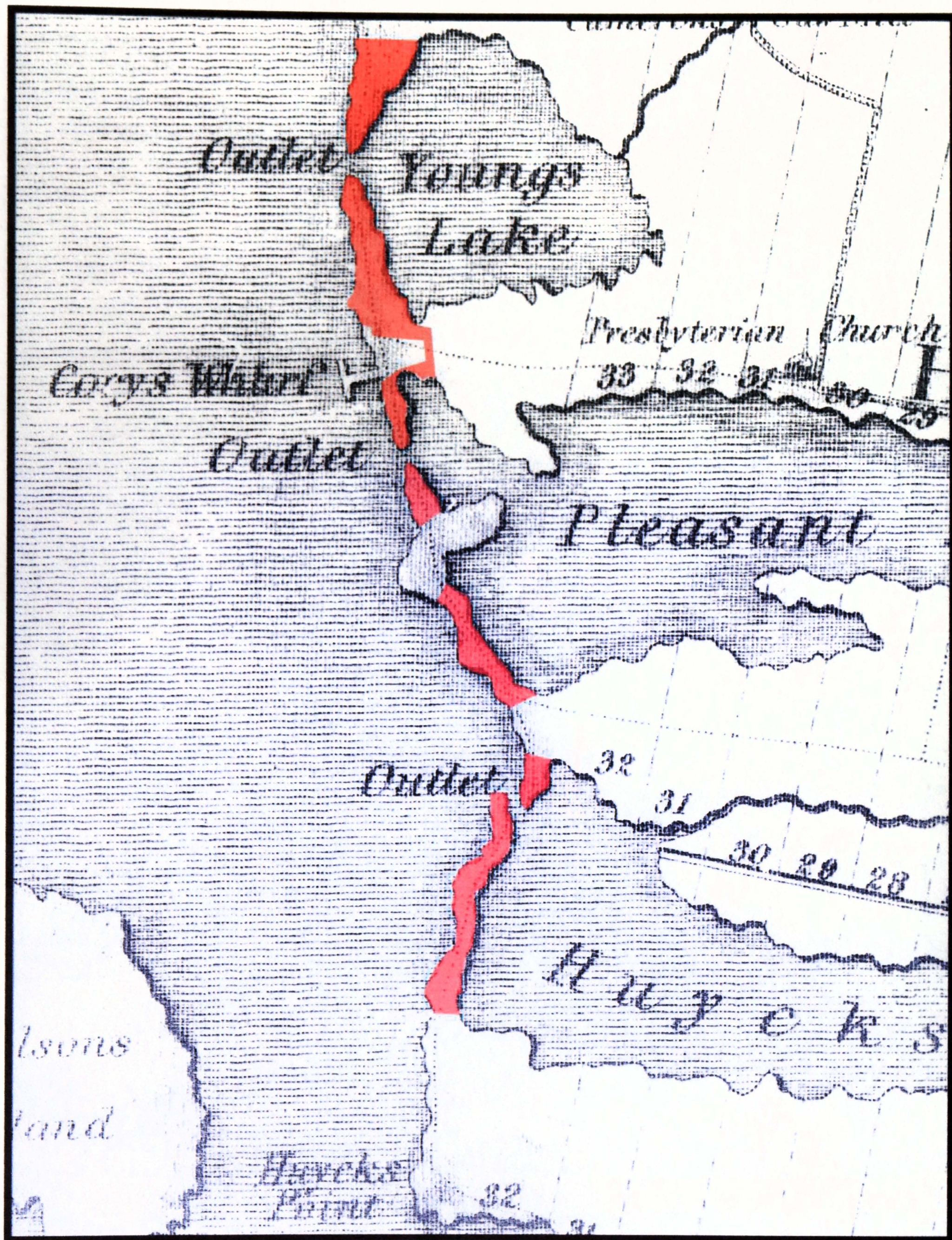


Figure 2. Section of Elmore's map of the District of Prince Edward, 1835.
(NAC NMC 21628).

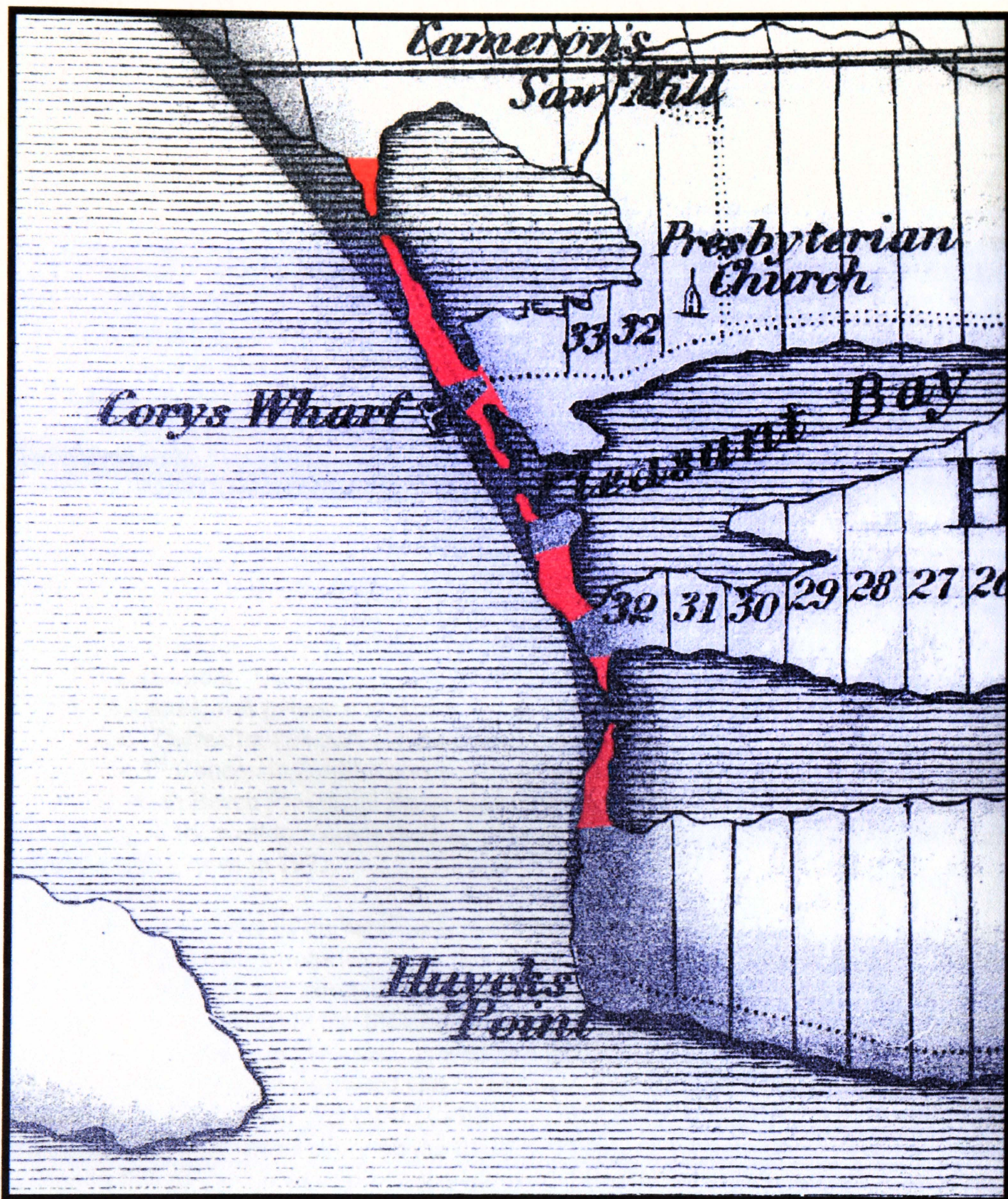


Figure 3. Section of Elmore's map of the Midland and Prince Edward Districts, 1836.
(NAC NMC 21614).

owning the northern part of Lot 36, though there was no record of this in the land registry documents. By this date the name of the northernmost bay had been changed to the more familiar "North Bay" (Figure 4; NAC NMC 19020-1; Taylor Ashton, 1996: 149-150). The 1878 Belden historical atlas of Prince Edward County shows the same two houses at "Pierson's Point" at the south end of the lot, one owned by James Pierson and the other by the Corey family (Figure 5; Belden, 1878: 46). David P. Corey sold the south part of Lot 36 to Reuben Young in 1888, who in turn sold it to Reuben Charles Young in 1895. The property was acquired by Horace Thompson in 1910. James Pierson's house on the point and possibly Abner Corey's house to the east are visible in a 1949 aerial photograph taken of the area, together with a large barn and several smaller outbuildings to the south of the access road (Plate 5 NAPL A11866-164). By 1951 the property had come into the possession of Geraldine Skratt; a 1962 aerial photograph depicts a similar arrangement of buildings to those shown in 1949, with the exception of a large building on the north side of the access road (Plate 6; NAPL A17835-27 and 28). Mrs. Skratt granted the point to Pleasant Bay Bible Conference Grounds Inc. (PBBCGI) in 1964 as part of a 140 acre parcel including part of the 2nd Concession, reserving a right-of-way to Bryden Alexander along a road to the 'island' in the centre of the sandbar across Pleasant Bay. The PBBCGI sold part of Lot 36 to the Crown in 1966 to provide access to the proposed North Beach Provincial Park from the road to the point. Presently several cottages, cabins and outbuildings are extant on the site, together with the Pierson house on the point and the large barn to the south of the access road. The Corey house appears to have been removed.

The sandbar across the northern half of the mouth of Pleasant Bay lies on parts of Lots 35 and 36 in the 2nd Concession. The northern parts of these lots, together with the northern part of Lot 34 a total of 108 acres, was patented to Abner Corey in 1861, who had obviously been farming it much earlier. Thereafter this part of his property went through the same changes in ownership as Lot 36 in the 3rd Concession until it was acquired by the PBBCGI in 1964. A strip opposite the entrance to North Beach Provincial Park extending from the road to the shore of Pleasant Bay and widening to the west to include the shoreline of Pleasant Bay to the sandbar to the south was acquired by the Crown in 1973.

The 'island' in the centre of the sandbar across Pleasant Bay was not formally patented until 1964, thus all land transactions involving this property were accomplished through quit claim deeds. A one-and-one-half storey frame house had been erected on the 'island' by James Carleton by 1861, as listed in the 1861 census of Hillier Township. The census also lists his wife and daughter as residing in the house, as well as a hired labourer. Carleton owned c. 65 acres at the time, of which 55 were cultivated and 10 left wild; he kept two steers, two milk cows, two horses, eight sheep and two pigs (NAC C-1069). The Tremayne map of 1863 confirms James Carleton as the owner of the house on the 'island' (Figure 4; NAC NMC 19020-1); the Belden atlas shows that the occupant of the house was a De Long in 1878 (Figure 5; Belden, 1878: 46). These are the earliest indications of settlement on this property. The Belden plan also depicts a road to the property along the sandbar to the south and a second road along the same sandbar towards Con I Lot 33. The 'island' changed hands from John Bryant to Elizabeth Doremo in 1894; it was sold again in 1902 to John G. Williams. The property came into the possession of Walter Thompson in 1905, who sold it to William Wallace Alexander in 1920. The 'island' remained in the Alexander family for 68 years, passing to Andrew Alexander in 1927 and then to Bryden Alexander in 1938. The 1949 aerial photograph shows a structure (the house) in the

centre of the property and two other buildings (barns?) near the southern edge, though the condition of all three structures cannot be determined (Plate 5; NAPL A-11866-164). The patent for the 'island' (a total of 59.401 acres) was issued in Bryden's name in 1964; a plan surveyed in 1962 shows the house as 'ruins' and indicates that by that time road access appears to have been shifted to the northern sandbar (Plate 6; NAPL A17835-27 and 28). The property was sold by Hilda Alexander to 772611 Ontario Inc. in 1988. Thereafter it passed to other holding companies and has recently been scheduled for development. Apart from some uneven ground in the location of the house, no traces of the nineteenth century farm buildings remain. There has been some recent rock excavation in the south-west corner of the 'island.'

The sandbar across Huyck's Bay lies in Lot 33, Concession I (described in the land registry office as the 'land west of Lot 32'). As with the 'island,' this property had a relatively late patent date. The 1863 Tremayne map, the earliest historical evidence for settlement on this lot, shows a house belonging to Susanah Huycke (spelling of Huyck varies in the historic records) to the south of the road to the end of the point between Huyck's Bay and Lake Ontario, though the building may have been on Lot 32 (Figure 4; NAC NMC 19020-1). The 1878 Belden atlas shows a G. DeLong in the same location (Figure 5; Belden, 1878: 46). Lot 33, consisting of a mere sixteen acres, was officially patented to the Hamilton Providential and Loan Society in 1886, who immediately sold it to William Wiggans. The property remained in the Wiggans family until 1918/19, when it was sold to Wilmot Davis. Davis later split the lot, selling nine acres consisting of the south and west parts to Carrie Lambe in 1923 and the remaining seven acres adjacent to the Huyck's Bay sandbar to Percy Smith in 1924. The 1949 aerial photograph shows no development on the lot, much of which appears to have been left as bush. The farmstead to the east had been removed by this time (Plate 5; NAPL A11866-164). Smith sold his parcel to Edward Johnston Miller in 1955, who sold it to Sidney Pellow in 1956. Pellow sold the northern 5.91 acres of his property to Kenneth Douglas in 1959; Douglas sold it to Roy Turner in 1966. The 1962 aerial photograph again shows no development on this or the adjacent lot (Plate 6; NAPL A17835-27 and 28). Olive Turner sold the parcel to Mary Margaret Brebner in 1981.

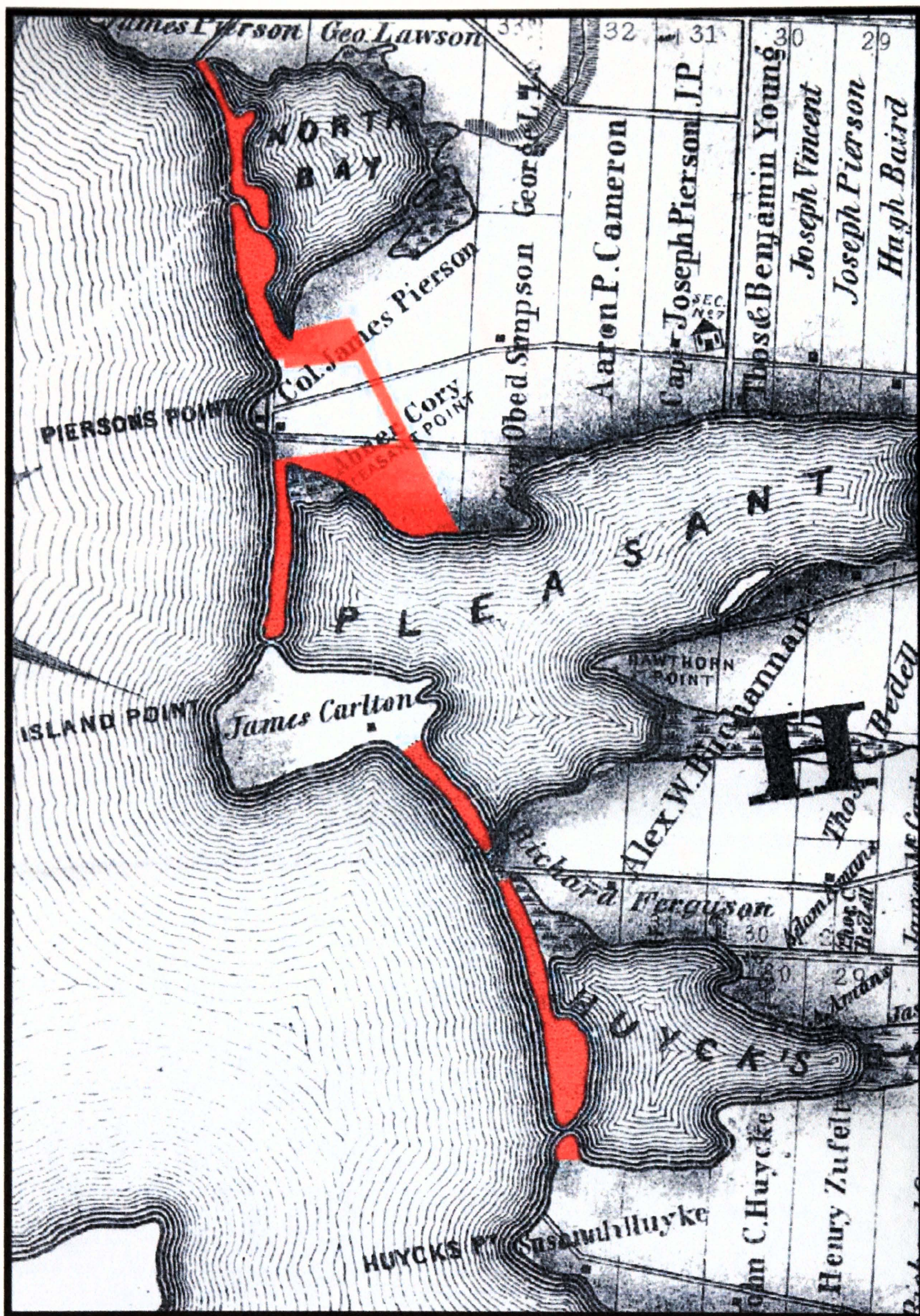


Figure 4. Section of Tremayne's map of the County of Prince Edward, 1863.
Study area in red. (NAC NMC 19020-1)

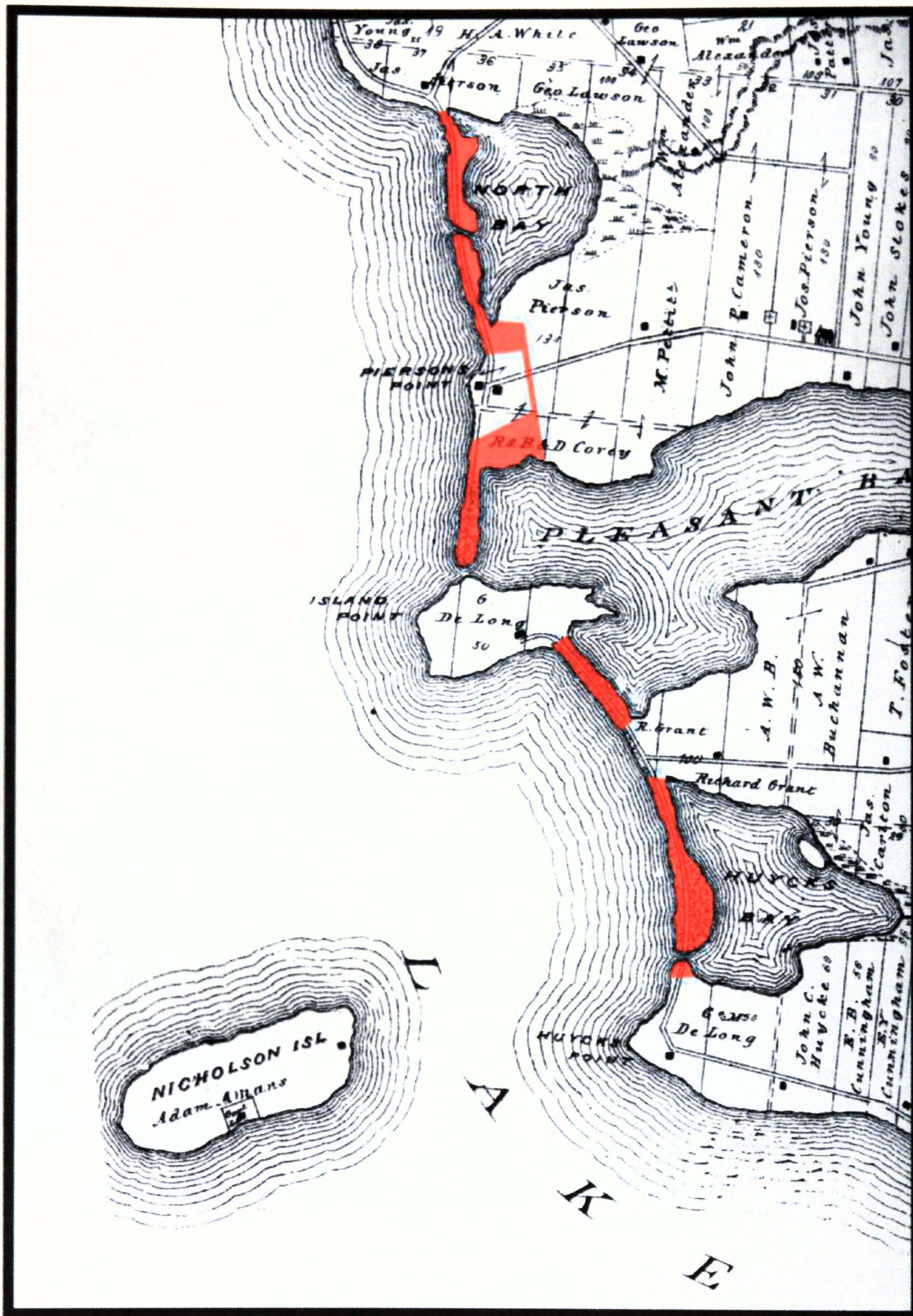


Figure 5. Section of Belden's map of Hillier Township, 1878. (Belden, 1878: 46)



Plate 5. Aerial photograph of the study area, 1949. (NAPL A11866-164)

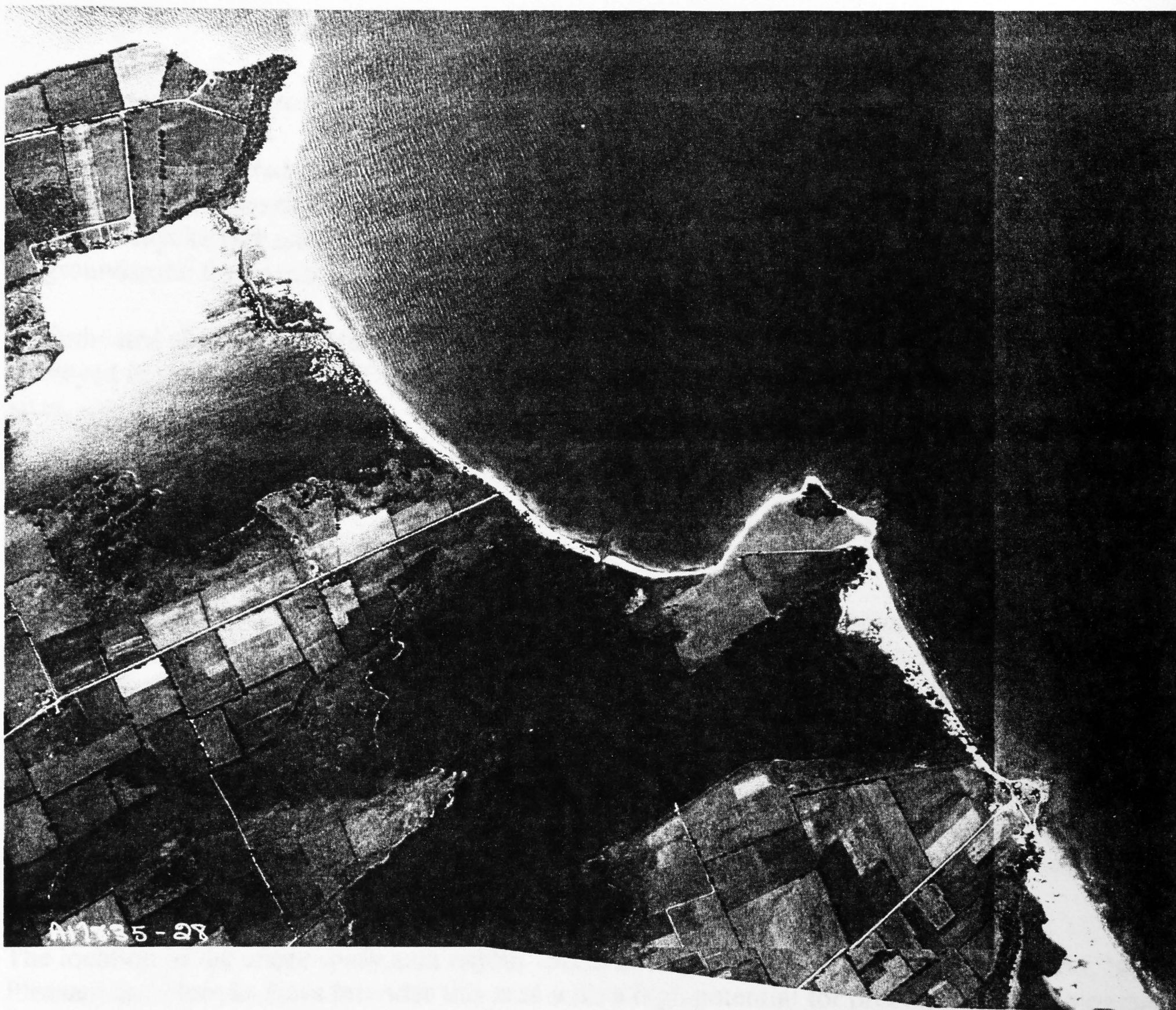


Plate 6. Aerial photograph of the study area, 1962. (NAPL A17835-27 and 28)

4.0 ARCHAEOLOGICAL SITES AND POTENTIAL

4.1 Archaeological Sites

There are no registered archaeological sites on any of the transverse bars. Ken Swayze registered AlGi-8 based upon information provided by an informant on the peninsula of land between Huycks Bay and Pleasant Bay. The assemblage from this site included 10 to 12 pieces of groundstone fragments in poor condition (Swayze, personal communication 2004).

As indicated above North Beach and the Pleasant Bay and Huycks Bay transverse bars were surveyed in the summer of 1972 by Gary Forma. Forma did not identify any material from these sites.

4.2 Archaeological Potential

Precontact Resources

A number of factors are employed in determining archaeological site potential. Criteria for prehistoric or precontact archaeological sites are focused on physiographic variables that include distance from the nearest source of water, the nature of the nearest source/body of water, distinguishing features in the landscape (e.g. ridges, knolls, eskers, wetlands), and the types of soils found within the area of assessment. Also considered in determining archaeological potential are known archaeological sites within or in the vicinity of the study area. Historic research provides the basis for determining historic archaeological site potential. Land registry records, assessment roles, census, historic maps and aerial photographic evidence and a site inspection of the study area all assist in determining historic archaeological potential.

The location of the entire study area within 150 m of major bodies of water, Lake Ontario, North, Pleasant and Huycks Bays provides this area with a high potential for precontact archaeological resources. The identification of precontact sites in areas of similar environment such as Sandbanks Provincial Park and along Pleasant Bay also supports an assessment of moderate to high archaeological potential for the North Beach Provincial Park, Pleasant Bay and Huycks Bay transverse bars.

Historic Resources

The sandbars do not appear to have been developed in any way, though they were possibly quarried over time or used for fishing. Traces of the roads may remain, though this is unlikely.

5.0 METHODOLOGY AND RESULTS OF FIELD ASSESSMENT

5.1 Methodology

The Stage 2 assessment involved the hand excavation of test pits at either five or ten metre intervals within areas identified as having archaeological potential. Wherever possible, test pits were excavated to sterile subsoil or bedrock. All backdirt was screened through 6 mm mesh and all test pits were backfilled. A general field log was maintained throughout the investigation.

All recovered artifacts were bagged according to test pit number. Following completion of the field assessment all recovered artifacts were cleaned and inventoried (see Appendix 2).

The investigation was recorded using digital photography. The photography included general shots of the areas investigated and detailed views of representative test pits and any features encountered. A photography catalogue is included in appendix 1.

North Beach Provincial Park and the adjacent sandbars presented an unique problem for conventional Stage 2 testing. Most of these areas consisted of sandy soils that are constantly shifting through wind and water erosion. This severely limited the value of test pitting, given that most extant archaeological resources are by now probably deeply buried or have been completely eroded. As an alternative a detailed surface survey of the sandbars for material that may have eroded out, with some test pitting in areas where the landscape changes have been less dynamic was followed. The survey was undertaken in transects at intervals of 2.5 m with all areas where artifacts and/or features were found plotted using GPS with some test pitting completed in the vicinity to determine more accurately the nature and extent of the resource.

Given the available resources and the more tightly defined surface survey interval than initially proposed and apart from the questionable value gained from a test pit survey, it is recognized that complete coverage of North Beach Provincial Park and adjacent areas with the conventional 5 m grid was beyond the resources available for the study.

The North Beach Provincial Park survey was broken into three separate areas: North Beach Provincial Park, Pleasant Bay Transverse Bar and Huycks Bay Transverse Bar. Each of these areas were divided into operations. Within each operation, test pits were identified by a grid coordinate reference point. The grid was oriented along a baseline established at the outset of the investigation. The position of the grid and positive test pits and surface features was recorded using GPS accurate to within 7 m.

Existing facilities within each park such as roadways, parking lots, washroom hut pads, etc. were not tested. It should be noted, however, that where these facilities have been created with minimal subsurface disturbance or through the addition of fill material, significant archaeological resources may remain extant beneath them. These resources would not be identified during the present assessment.

North Beach Archaeological Survey

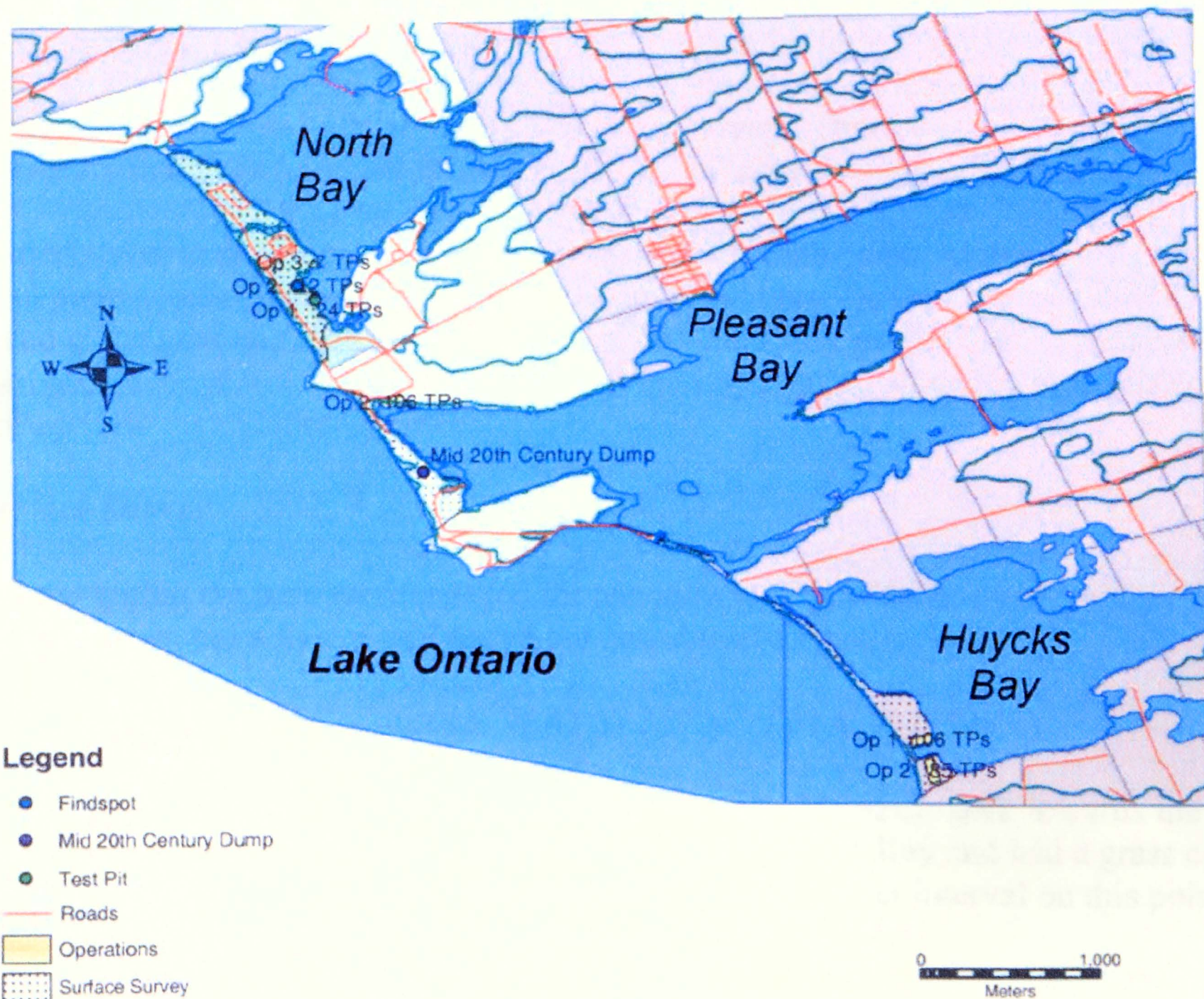


Figure 6. Overview of North Beach archaeological survey.

The field work was completed over a four day period from 28th September to 1st October 2004. Weather conditions were ideal with clear skies and temperatures that ranged between 15 and 20° Celsius.

5.2 Results

5.2.1 North Beach Provincial Park

Surface Survey

Over 80 % of the surface area of North Beach Provincial was surface surveyed in 2.5 m intervals. Surface visibility ranged from 100 % along the beaches to 40% within the vegetated areas (Plate 5). Blowouts, which have the greatest potential for revealing deeply buried archaeological resources had a surface visibility of 80 to 100% (Plate 6). No artifacts or features of archaeological interest were noted in the surface survey. There was a scatter of more contemporary materials (e.g. soft drink tabs) but by in large the park was sterile.

Vegetation cover in the park is greatest at the north and south ends. At the north end the cover included poplar, cedar, brush, various grasses and Poison Ivy. A similar cover was noted at the south end at the park entrance. Disturbances noted in the park included the compacted parking surfaces and paved roadway access as well as slope stabilization along the channels connecting North Beach Bay with Lake Ontario.

Subsurface Survey

Three areas within the park were selected for test pitting. Each of these were assigned a separate operation number and a five m grid paced out and shovel tested.

Operation 1 (N0 W0 GPS Coordinates W 43 57 329 N 77 31 427) (Plate 7)

This operation was located on a small point along the east side of the park towards the south end (see Figure 7). This point juts into a small embayment of North Bay and had a grass cover and some poplar. A total of 24 test pits were excavated in a five meter interval on this point revealing nothing but sand under the veneer of vegetation.

Operation 2 (Find Spot GPS Coordinates W 43 57 418 N 77 31 453) (Plate 8)

Northwest approximately 60 m there was located what was initially thought to have been remains of Indian corn¹. This was later determined more likely to have been a dried out piece of pine cone. The area is located along the east side of the transverse bar. A total of 12 test pits were excavated in a five m grid around the find spot. The testing failed to provide any indication of archaeological resources in this area.

¹ Remains of Indian Corn along with abandoned hearths and net sinkers have been observed at the Outlet in an area temporarily uncovered in a wind storm (Phillip Wright, per. com. 2004).



Figure 7. North Bay Provincial Park Archaeological Survey.

Operation 3

Operation 3 consisted of the portion of the park on a small point that extends into North Bay from the east shoreline. The point is north of Operation 1 and northeast of Operation 2 (see Figure 3). This area, having been surface surveyed, was chosen for sub surface testing as it was regarded as having very high potential for precontact archaeological sites. Seven test pits were



Plate 7. Vegetated area within North Beach Provincial Park looking northeast.



Plate 8. Blow out in southern half of North Beach Provincial Park looking southwest.



Plate 9. Operation 1, North Beach Provincial Park, looking east.



Plate 10. Operation 2, find spot, North Beach Provincial Park, looking east.

excavated in five m intervals. Like Operations 1 and 2 the testing failed to produce anything of archaeological interest.

5.2.2 Pleasant Bay Transverse Bar

The Pleasant Bay Transverse Bar consisted of three segments. These consist of; 1) the bar connecting the mainland at the north end with Alexander Island, 2) the bar that extends from the south end of Alexander Island and 3) by the bar south of the channel connecting Pleasant Bay with Lake Ontario. Operations were identified for either areas test pitted and/or from which artifacts were recovered within each of the segments.

Segment 1 (Alexander Island to North Mainland)

This segment of the Pleasant Bay Transverse Bar includes the area of the bar between the north main land and Alexander Island and that portion of the mainland part of Crown land on Lot 34, Concession 2, Geographic Township of North Hillier. The transverse bar portion is bounded on the north by the mainland, the south by Alexander Island, the west by Lake Ontario and on the east by Pleasant Bay. The mainland segment is bounded on the south by Pleasant Bay the transverse bar and on the east and west by a diagonal line extending from the southwest corner almost to the intersection of Concession Road 2 and the eastern boundary of Lot 34, which is also the eastern boundary of the study area.

The transverse bar portion ranged between 80 and 200 m in width. A sand beach, 20 to 30 meters in width, extended along the Lake Ontario shoreline while much of the land mass on the Pleasant Bay side consisted of wetland. Approximately one third of the area was covered in vegetation that included cedar, poplar and various grasses.

Operation 1

The transverse bar was surface surveyed in intervals of 2.5 m. Between 30 and 60 transects were walked on the bar. A small early twentieth century dump was noted in the central portion of the bar, identified as Operation 1. Material sampled from this deposit, which was eroding out of the side of a blow out, included ceramics (7), glass (14) and ferrous materials (11- all cut nails) (see Appendix 2 for inventory). The ceramics consisted of vitrified white earthenware (5) and pieces of soft pace porcelain saucer and a red course earthenware flower pot. The glass assemblage included a mould blown flask fragment, a machine made jar and closure as well as nine pieces of an Owen's machine made panel bottle. The GPS coordinates for this deposit were W 43 56 793 and N 77 31 101. Given the recent date of this deposit it was not regarded as archaeologically significant. The material may have been dumped by residents of Alexander Island.

No other features and/or artifacts of archaeological interest were noted in the surface survey.



Figure 8. Pleasant Bay transverse bar north end archaeological survey.

Operation 2

An area that was bounded on the north by a lane way extending from Concession 2, on the south by Pleasant Bay and the west by the north end of the surface surveyed areas as identified as Operation 2 and test pitted in 5 m intervals. Once cleared this area has since overgrown with a very thick cover of brush and smaller trees making testing very difficult. The southern end of this area consisted of wetlands.



Plate 11. West side of north end of Pleasant Bay transverse bar looking north from south end.



Plate 12. Early twentieth century midden eroding from bank looking east.

A total of 106 test pits were excavated in five meter interval over an area of 85 by 35 m. Test pits, excavated between 20 and 30 cm in depth, revealed a compact brown silty loam and stone soil which further hampered efforts to cover the area.

There remain areas of the Crown property, the boundaries of that could not be easily identified, which could not be covered in the time available to complete the survey. These include an additional 60 to 70 m along the shoreline and the open portions of the property north of the laneway. The later portion should, when surveyed, be ploughed and permitted to weather for a surface survey.

The test pits failed to produce anything of archaeological interest.

Segment 2 (North end of bar from Alexander Island to South Mainland)

Segment 2 consisted of the north half of the south transverse bar which lay between Alexander Island, which is its northern boundary and the south mainland. The bar is bounded on the west by Lake Ontario and on the east by Pleasant Bay. A channel through the transverse bar, connecting Lake Ontario with Pleasant Bay marks the southern boundary of this segment. Averaging less than 30 m in width and extending just under 200 m in length this bar consisted entirely of water worn cobbles and sand and included a roadway from Alexander Island that terminated at the channel.

This area was surface surveyed in intervals of 2.5 m. Nothing of archaeological interest was identified in this assessment.

Segment 3 (South end of bar from Alexander Island to South Mainland)

This section extended 300 m northward from the southern shore of Pleasant Bay. Averaging 50 m in width this segment was bordered on the west by Lake Ontario, on the east by Pleasant Bay and the north by the Pleasant Bay outlet channel into Lake Ontario.

This area included a sand and cobble beach 15 to 20 m in width. There was some vegetation cover on the central and along the eastern sides of the transverse bar. There was a wetland shoreline along the Pleasant Bay side.

This transverse bar segment was surface surveyed in interval of 2.5 meters. Nothing of archaeological interest was identified in this assessment.

5.2.3 Huycks Bay Transverse Bar

The Huycks Bay transverse bar extends 1,150 meters from its north end at the mainland (Lot 33 Concession 2, North Hillier Township) to its south end at Lot 32, Concession 1, Geographic Township of North Hillier. This area was divided into two segments divided by the access channel between Lake Ontario and Huycks Bay.



Figure 9. Pleasant Bay transverse bar segment 2, Huycks Bay transverse bar

Segment 1 (North Mainland to south channel)

The north segment consisted of a narrow (less than 40 m in width) bar that connected with a larger land mass (180 meters in width) at the south end. The west shoreline featured a sand and cobble beach 15 to 20 m in width. The east half of the bar was covered in vegetation as well as much of the larger land mass at the south end. Vegetation included popular and cedars with a variety of grasses. There was no top soil in the vegetated areas.



Plate 13. Segment 1, Operation 1 Huycks Bay looking north from south end.



Plate 14. Segment 1, Operation 1 Huycks Bay tent platform.

The segment was surface surveyed in intervals of 2.5 m. At the south end, overlooking the access channel there was noted a slightly raised platform oriented along a southwest/northeast axis. The raised area (GPS coordinates W43 55 928 N77 29 624) measured 3 x 3 m. It was test pitted as part of Operation 1. The testing produced a green garbage bag and beer bottle caps, evidence of a possible camp and/or duck blind site.

Operation 1

The southern end of Segment 1 was identified as Operation 1 and a five m grid established paralleling the access channel. A total of 103 test pits were excavated in this operation which covered an area 35 m by 80 m. The GPS coordinates for N0 W0, situated in the southwest corner of the grid, was W43 55 924 N 77 29 603. The test pits revealed, for the most part, sand to sand and stone (water worn) soils. A single test pit (N20 W55) excavated to 50 cm revealed some stratigraphy that included a sod (5 to 10 cm in thickness) over a light to brown sand (25 cm in thickness). This deposit rested on a dark brown to grey sand that may have been a buried soil horizon, 5 to 10 cm in thickness. The dark sand lay on a tan to light tan sand.

Clinker was noted in one of the test pits and brick fragments in another. No other artifacts or any other indication of past human activity was noted in the subsurface testing.

Segment 2

Segment 2 extended 180 m from the south mainland shoreline. Save for the narrow sand bar forming the south side of the channel between Huycks Bay and Lake Ontario, this segment averaged 80 meters in width. There was a cobble and sand beach along the western edge of the bar with much of the remainder of the landform covered intermittently with vegetation consisting of poplars, cedars and a variety of grasses.

The point was surface surveyed in 2.5 m intervals. This survey was further augmented by sub-surface testing a portion of the vegetated areas. The surface survey failed to provide any evidence of archaeological resources.

Operation 2

This operation consisted of the portion of segment 2 that was test pitted. It covered an area of 70 by 25 meters extending from the northeast corner which was identified as N0 E0 (GPS coordinates W 43 55 895 N77 29 557). A total of 85 test pits were excavated. The testing revealed sand with no stratigraphy. One of the test pits, S40 E0, produced circa 1970's refuse that included a coke can. These artifacts, not considered of archaeological interest, were not retained.

No other indication of past human activity on the property was identified.

5.3 Interpretation

The ideal locational features of the surveyed areas, in particular the proximity to large bodies of water (Lake Ontario, North, Pleasant and Huycks Bays) as well as the over all density of precontact archaeological sites in Prince Edward County including areas of similar environments (e.g. Sandbanks Provincial Park), provided for an assessment of the entire study area as having high archaeological potential for precontact archaeological sites. Given these high expectations the results of the field investigation were discouraging.

The field investigation produced only evidence of twentieth century historic activity on the property. There was no indication of precontact First Nation use of the area.

The survey results are, however, consistent with previous surveys both within and in the vicinity of the study area. These include Forma's investigation of North Beach in the early 1970's and more recently of Ken Sawyze's assessment of the trailer park east of the North Beach Provincial Park (Swayze personal communication 2004) and Laurie Jackson's survey of Alexander Island (Pleasant Bay) (Jackson personal communication 2004). None of these investigations resulted in the identification of precontact archaeological sites.

A review of the available historic documentation provides some clues regarding the stability of the transverse bars, which may have precluded identification of sites. The 1836 Elmore map (see Figure 3) documents access channels to North Bay, Pleasant Bay and Huycks Bay in locations that differ from present day channels. The North Bay channel is situated closer to the north end of the bar than present while the Pleasant Bay access channel cuts through the north half of the bar rather than the south. Similarly the Huycks Bay access channel is further north of the present day location. Although considerable caution has to be made regarding the accuracy of the land mass shown in these early maps there are some notable differences in the mass of the bars in particular for Pleasant Bay where the northern half is narrower, and the southern half considerably wider than present.

Tremayne's 1863 map of the area shows land masses for most of the bars resembling present day conditions with the exception of the north segment of the Pleasant Bay bar where the channel is identified between the bar and Alexander Island (see Figure 4). There are no appreciable changes in the location of the channels or land masses of the transverse bars between the Tremayne's map and that included in the 1878 Belden Atlas (see Figure 5). By 1949, however, the location of the Pleasant Bay and Huycks Bay access channels has moved to the present day situation (see Plate 5). Also the land pass along the north segment of the Pleasant Bay bar has also extended considerably. Available aerial photographs from 1949 to present show the transverse bars as relatively unchanging land forms.

Assuming the earlier maps are correct in their depiction of the transverse bar and access channels it is evident that some of the study area has experienced considerable change over the past 170 years. It is unclear whether the present day configuration of the bars is a product of Euro Canadian activity, in particular the deforestation of surrounding areas, or a function of the natural geomorphological processes that affect the creation of the transverse bars. Given these changes it could very well be that any precontact occupation sites would have long ago been eroded from

the bars. However, observations of precontact features on the Sandbanks bars in the 1970's (Phillip Wright personal communication 2004) indicates there remains the possibility that precontact sites still exist, deeply buried under the dunes of those portions of the bars that have remained stable through the nineteenth and twentieth centuries.

As a consequence it is recommended that following a major wind storm that newly exposed areas along the sand bars be examined for archaeological resources.

6.0 SUMMARY AND RECOMMENDATIONS

Heritage Quest Inc. undertook on behalf of the Ministry of Natural Resources a Stage 1/2 archaeological assessment of North Beach Provincial Park and the Crown land consisting of the Pleasant and Huycks Bay transverse bars. These properties are located on part of Lot 36 Concession 3, Lots 33, 34, 35 & 36 Concession 2 and Lot 32 Concession 1 Geographic Township of North Hillier, Prince Edward County. The objectives of the investigation were to: 1) document any known archaeological sites within or in the vicinity of the study area; 2) identify archaeological potential and 3) assess, by field survey, whether there are archaeological resources in the subject areas.

The study area is part of the Prince Edward Peninsula physiographic region that in the western edge consists of level to undulating topography underlain by a limestone plateau that slopes from east to west. Most of the study area consisted of transverse bars or bay mouth bars created by shoreline drifting across the bay mouths.

Precontact occupation of Prince Edward County dates from 10,000 B.P. Current archaeological evidence indicates continuous use of the peninsula by precontact populations over the past 4,000 years. The first permanent settlement of Prince Edward County by Euro Canadians dates to the end of the eighteenth century with the arrival of the United Empire Loyalists.

While most of the subject area has remained with the crown since surveyed in 1785 patents to the surrounding properties were issued in 1811, 1865 and 1964 (Alexander Island). By the mid nineteenth century the mainland between North Bay and Pleasant Bay, Alexander Island and land along the south side of Huycks Bay were settled.

The field work for the Stage 2 archaeological assessment was completed over a four day period from 28 September to 01 October 2004 by a crew of four. The investigation consisted primarily of the surface survey of the sand bars in 2.5 meter. Some test pits were excavated in 5 m intervals on portions of the sand bars and along a segment of the north shore of Pleasant Bay. No evidence of precontact occupation was identified in any of areas surveyed. A late nineteenth century early twentieth century midden was noted in the north segment of the Pleasant Bay transverse bar and late twentieth century material was identified in the both the north and southern segments of the Huycks Bay transverse bar.

The absence of precontact sites, a result consistent with other archaeological surveys of the area, is due largely to the geomorphological changes the transverse bars experienced over their lifetime resulting either in the erosion of archaeological remains or their being are deeply buried under the present sand dunes.

Based upon the results of this investigation it is recommended:

- 1) That areas exposed by significant wind storms be investigated for potential archaeological resources and if noted be recorded and if necessary recovered by a licenced archaeologist before affected by public and or private usage of the area.

- 2) That the mainland area along the Pleasant Bay shoreline be subject to further Stage 2 investigation in advance of any proposed modifications of the landscape.
- 3) That in the event that human remains are encountered during any construction activities, both the Ministry of Culture ((416) 314-7148) and the Registrar or Deputy Registrar of the Cemeteries Regulation Unit of the Ministry of Consumer and Commercial Relations ((416) 326-8392) should be notified immediately

Borden, R. & Co.

1878: Illustrated Historical Atlas of the Counties of Hastings and Prince Edward, Ontario. Belleville, Reprinted by Mills Publishing Co.

Carwell, E. Dr.

1970: Land Capability for Wildlife, Vegetates Canada Land Inventory Project. 1:250,000.

Chapman, L.J. and P.F. Palmer

1966: The Physiography of Southern Ontario. Toronto, University of Toronto Press.

Crawford, Douglas A.

2000: County Connects A History of the Counting Industry in Prince Edward County. Picton, County Magazine Publishing Ltd.

Cruikshank, Tom & Peter John Stoken

1984: The Settler's Dream A Pictorial History of the Older Brantford Region and County. Corporation of the County of Prince Edward, Picton.

Darbysh, Hugh J.

1988: An Archaeological Assessment of the proposed the Outlet, Ashland Township, Prince Edward County prepared for Ray and Nina Cummings by Foundation.

1992: Heritage Background Study of Cassville prepared for Department of National Defence Foundation.

1997: Stage 1 & 2 Archaeological Assessment of Wellington, Hallowell Township, prepared for Amey Graham & Associates.

1999a: Recording of Rock Outcrops Oct 1 of John Connolly High School Centre County Region on the with Ministry of CIL.

1999b: Stage 2 Archaeological Assessment of Cassville & Amherstburg Township prepared for Jacques & Vernet Ltd.

7.0 REFERENCES

Adams, Nick

- 1997: **An Archaeological Assessment of Part of the Proposed Daimier Retirement Parks Limited Development –Part Lots 201/101 Registered Plan # 8. Village of Wellington, County of Prince Edward (13T-96502).** Consultants report prepared by Adams Heritage Consultants.

Belden H. & Co.

- 1878: **Illustrated Historical Atlas of the Counties of Hastings and Prince Edward County, Ontario.** Belleville, Reprinted by Mika Publishing Co.

Caswell, E.D.

- 1970: **Land Capability for Wildlife, Ungulates** Canada Land Inventory Picton 30N 1:250,000.

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

- 1966: **The Physiography of Southern Ontario.** Toronto, University of Toronto Press.

Crawford, Douglas A.

- 2000: **County Cannery A History of the Canning Industry In Prince Edward County.** Picton, County Magazine Printshop Ltd.

Cruikshank, Tom & Peter John Stokes

- 1984: **The Settler's Dream A Pictorial History of the Older Buildings of Prince Edward County.** Corporation of the County of Prince Edward, Picton, Ontario.

Daechsel, Hugh J.

- 1988: **An Archaeological Assessment of the proposed Motel and Cottage Development at the Outlet, Athol Township, Prince Edward County, Ontario.** Consultants report prepared for Ray and Nina Cummings by the Cataraqui Archaeological Research Foundation.
- 1992: **Heritage Background Study of Canadian Forces Base Trenton.** Consultants report prepared for Department of National Defence by the Cataraqui Archaeological Research Foundation.
- 1997: **Stage 1 & 2 Archaeological Assessment of Wellington Bay Estates Subdivision Town of Wellington, Hallowell Township, Prince Edward County.** Consultants report prepared for Ainley Graham & Associates Ltd. by Heritage Quest Inc.
- 1999a: **Recording of Rock Configuration Lot 2 Waupoos Island Prince Edward County St. John Catholic High School Perth Ontario Archaeological Field School.** Conservation Report on file with Ministry of Citizenship, Culture and Recreation, Toronto.
- 1999b: **Stage 1 Archaeological Assessment of Proposed Parachute Drop Site Lots 65-70, Concession 4, Ameiliasburgh Township, Prince Edward County.** Consultants report prepared for Jacques Whitford Ltd. by Heritage Quest Inc.

- 1999c: **Archaeological Recovery of Human Remains and Assessment of Archaeological Potential Isaiah Tubbs Resort Lot 7, Concession South Side of West Lake Township of Hallowell, Prince Edward County.** Consultants report prepared for Isaiah Tubbs Resort by Heritage Quest Inc.
- Daechsel, Hugh J. and Jeff Earl
 2004: **Stage 1/2 Archaeological Assessment Lake on the Mountain Provincial Park North Marysburg Township, Prince Edward County.** Consultants report prepared for Ministry of Natural Resources by Heritage Quest Inc.
- Emerson, J. Norman
 1967: "The Payne Site: an Iroquoian manifestation in Prince Edward County", In **Contributions to Anthropology V: Archaeology and Physical Anthropology.** National Museum of Canada, Bulletin 206, Ottawa, Department of the Secretary of State, pp. 126-257.
- Esler, Jim
 1993: **Archaeological Survey of Prince Edward County- September – November 1993.** Conservation Report.
- Forma, G.
 n.d.: **Outlet and Sandbanks archaeology** M.S. on file, Ontario Ministry of Natural Resources, Napanee.
- Foster, G.
 1983: **Report on an Archaeological Field Survey, Northern and Central Gas Corporation Limited.** Consultants report.
- Gilchrist, Gill
 n.d **Isaiah Tubbs of Prince Edward County.** Fragments of History Series No. 2.
- Hoffman, D.W.
 1966: **Soil Capability for Agriculture, Canada Land Inventory Picton 30N 1:250,000.**
- Johnson, B.C.
 1971: **Land Capability for Wildlife – Waterfowl Canada Land Inventory Picton 30N 1:250,000.**
- Kapches, Mima
 1984a: **Prince Edward County Project 1983** Conservation Report.
 1984b: **Prince Edward County Project 1984** Conservation Report
- Merrill, Helen
 1912: "Indian Pottery of Prince Edward County" In **Annual Archaeological Report 1912 Part of Appendix to the Report of the Minister of Education, Ontario.** Toronto, L.K. Cameron, pp. 75-82.

Mika, Nick & Helma

1984: **The Settlement of Prince Edward County**, Belleville, Mika Publishing Co.

Northeastern Archaeological Associates

1996: **Stage 1 and 2 Assessment of Lake Breeze Subdivision, Lot 2, Concession 1, Hillier Township (Town of Wellington), Prince Edward County, Ontario**. Consultants report.

Pendergast, James F.

1964a: "The Payne Site", In **Contributions to Anthropology 1961-62 Part 1**, national Museum of Canada Bulletin No. 193, Ottawa, Department of the Secretary of State pp. 1- 27.

1964b: "The Waupoos Site An Iroquoian Camp in Prince Edward County", In **Pennsylvania Archaeologist**, Vol. 34, No. 2: 69-87.

Richards N.R. & F.F. Morwick

1948: **Soil Survey of Prince Edward County**. Report No. 10, of the Ontario Soil Survey, Experimental Farms Service, Dominion Department of Agriculture and the Ontario Agricultural College

Ritchie, William A.

1949: **An archaeological survey of the Trent Waterway in Ontario Canada**. Researchers and Transactions of the New York State Archaeological Association, Vol. 12, No. 1, Rochester.

Smith, Sheryl A.

1981: **The Lakeshore Lodge site (AlGh-32): A multi-component Woodland fishing station in Sandbanks Provincial Park**. Manuscript on file, Ontario Ministry of Citizenship and Culture, Toronto.

Squire, B.P. Rev.

1958: "The Squire site, Consecon", In **Ontario Archaeology**, No. 4, pp. 4-17.

1960: "The rediscovery of the Kente Mission" from new pages of prehistory, ed. By J. Norman Emerson, In **Ontario History**, Vol. 52, No. 1, pp. 56-60.

Strahler, Arthur N.

1969: **Physical Geography** New York, John Wiley & Sons Inc.

Swayze, Ken

1973: **Archaeological Research in Prince Edward County** Manuscript on file, Ontario Ministry of Culture and Communications, Toronto.

1976: **Inventory of Prince Edward County**, Conservation Archaeology report, Toronto, Ministry of Culture and Communications, Toronto.

Sweetman, Paul

1973: **A preliminary report on archaeological survey of Prince Edward County from July-December 1972.** Manuscript on file, Ontario Ministry of Culture and Communications, Toronto.

Taylor, David

1994: **Historic Prince Edward.** Prince Edward Historical Society.

2004: **The Lake On The Mountain-Glenora Community** The First 228 Years. Printcraft, Picton.

Taylor Ashton, E.D.

1996 **On the Edge of History: Dorland's Creek and the Mills.** Ottawa: Hermitage Publishing Corporation.

Wallbridge, Thomas Campbell

1860: "On some ancient mounds upon the shores of the Bay of Quinte", In **The Canadian Journal**, No. 29, pp. 409-483.

Wright, Phillip J. & Peter Englebert

1979: **Archaeological investigations of Sandbanks and Outlet Provincial Parks.** Conservation Archaeology Report, Ontario Ministry of Culture and Communications.

Plans from the National Archives of Canada (NAC):

NMC 19020-1	Tremayne's Map of the County of Prince Edward, Upper Canada, 1863.
NMC 21614	Map of the Midland and Prince Edward Districts by P. Elmore, 1836.
NMC 21628	Map of the District of Prince Edward by P. Elmore, 1835.

Photographs from the National Air Photo Library (NAPL):

A11866-164	1949
A17835-27	1962
A17835-28	1962

APPENDIX 1 Photography Catalogue

Camera: Canon Power Shot G3

Catalogue No.	Description	Date	Phot.	Dir.
HQ04-39 D054	North Beach from north end.	04-09-28	HJD	S
HQ04-39 D055	North Beach from north end.	04-09-28	HJD	S
HQ04-39 D056	North Beach Blow out in the south end of the park.	04-09-28	HJD	W
HQ04-39 D057	North Beach Dune at south end of the park.	04-09-28	HJD	NW
HQ04-39 D058	North Beach, vegetation covered sand bar.	04-09-29	HJD	NE
HQ04-39 D059	North Beach Brenda and Mike surface surveying. From W 43 57.398 N	04-09-29	HJD	N
HQ04-39 D060	North Beach East beach along North Bay.	04-09-29	HJD	S
HQ04-39 D061	North Beach North end along east shoreline.	04-09-29	HJD	N
HQ04-39 D062	North Beach along east shore.	04-09-29	HJD	N
HQ04-39 D063	North Beach blow out area. From W 43 57.601 N77 31.	04-09-29	HJD	SW
HQ04-39 D064	North Bay from North Beach.	04-09-29	HJD	NE
HQ04-39 D065	North Bay from North Beach.	04-09-29	HJD	E
HQ04-39 D066	North Beach south end of east side looking on North	04-09-29	HJD	S
HQ04-39 D067	North Beach south end of east side looking on North	04-09-29	HJD	SE
HQ04-39 D068	North Bay from North Beach.	04-09-29	HJD	SE
HQ04-39 D069	Possible site on east side of North Beach.	04-09-29	HJD	SE
HQ04-39 D070	Possible site on east side of North Beach.	04-09-29	HJD	E
HQ04-39 D071	Operation 1 North Beach.	04-09-29	HJD	NE
HQ04-39 D072	Operation 1 North Beach.	04-09-29	HJD	E
HQ04-39 D073	West side, north half of Pleasant Bay transverse bar.	04-09-29	HJD	N
HQ04-39 D074	North end of north half of Pleasant Bay transverse bar	04-09-29	HJD	S
HQ04-39 D075	South half, north end of Pleasant Bay transverse bar.	04-09-29	HJD	SE
HQ04-39 D076	Surface survey of south half, north end of Pleasant Bay	04-09-29	HJD	SE
HQ04-39 D077	South half, south end of Pleasant Bay transverse bar.	04-09-29	HJD	SE
HQ04-39 D078	Geese in Pleasant Bay.	04-09-29	HJD	E
HQ04-39 D079	Geese in Pleasant Bay.	04-09-29	HJD	E
HQ04-39 D080	Channel opening between Pleasant Bay and Lake Ontario.	04-09-29	HJD	SW
HQ04-39 D081	Channel opening between Pleasant Bay and Lake Ontario.	04-09-29	HJD	SE
HQ04-39 D082	North end of south half of Pleasant Bay transverse bar	04-09-29	HJD	N
HQ04-39 D083	North half of Pleasant Bay sand bar-late nineteenth cent.	04-09-30	HJD	E
HQ04-39 D084	North half of Pleasant Bay sand bar-late nineteenth cent	04-09-30	HJD	E
HQ04-39 D085	North half of Pleasant Bay sand bar - depression – blow out.	04-09-30	HJD	NNE
HQ04-39 D086	North half of Pleasant Bay sand bar - depression – blow out	04-09-30	HJD	NE
HQ04-39 D087	North half of Pleasant Bay sand bar - vegetated interi	04-09-30	HJD	SE
HQ04-39 D088	North half of Pleasant Bay sand bar - vegetated interi	04-09-30	HJD	SE
HQ04-39 D089	Pleasant Bay from east side of north half of Pleasant	04-09-30	HJD	E
HQ04-39 D090	Pleasant Bay from east side of north half of Pleasant	04-09-30	HJD	SE
HQ04-39 D091	Pleasant Bay from east side of north half of Pleasant	04-09-30	HJD	NE
HQ04-39 D092	Pleasant Bay north end interior of sand bar.	04-09-30	HJD	NW
HQ04-39 D093	Operation 2, testing of mainland. From W 45 57.022 N	04-09-30	HJD	E
HQ04-39 D094	Operation 2, testing of mainland.	04-09-30	HJD	W
HQ04-39 D095	South half of south end of Pleasant Bay sand bar.	04-09-30	HJD	S
HQ04-39 D096	Pleasant Bay channel.	04-09-30	HJD	E
HQ04-39 D097	Huycks Bay Operation 1, testing of south end of north half	04-10-01	HJD	E
HQ04-39 D098	Huycks Bay Operation 1, testing of south end of north half	04-10-01	HJD	SE
HQ04-39 D099	Huycks Bay Operation 1, testing of south end of north half	04-10-01	HJD	N
HQ04-39 D100	Huycks Bay channel towards Lake Ontario.	04-10-01	HJD	SW
HQ04-39 D101	Huycks Bay north end of south half.	04-10-01	HJD	SW
HQ04-39 D102	Huycks Bay north end of south half.	04-10-01	HJD	S
HQ04-39 D103	Huycks Bay Feature 1, tent platform?	04-10-01	HJD	W

Catalogue No.	Description	Date	Phot.	Dir.
HQ04-39 D104	Feature 1, Huycks Bay - tent platform?	04-10-01	HJD	NW
HQ04-39 D105	South half of Huycks Bay sand bar.	04-10-01	HJD	N
HQ04-39 D106	South half of Huycks Bay sand bar.	04-10-01	HJD	NE
HQ04-39 D107	Huycks Bay Operation 2.	04-10-01	HJD	S
HQ04-39 D108	Huycks Bay Operation 2.	04-10-01	HJD	S

APPENDIX 2: Artifact Inventory

Site	Op	#	Material	Class	Group	Object	Datable Attribute	Ware	Comments
NBPP		10	Flora	Faunal/Floral	Floral	Not Specified	Unidentifiable		corn cobb;1 item
PBSB	1	1	Ferrous	Architectural	Other Fasteners	Spike	Wrought		18.5cm;rosehead
PBSB	1	1	Ceramic	Activities	Agriculture/Garden	Flower Pot	CEW, red unglazed	CEW	large vessel;smooth exterior
PBSB	1	1	Ceramic	Foodways	Ceramic Tableware	Saucer	SP Porcelain, other decor	POR	moulded design around rim;scalloped edge
PBSB	1	1	Ceramic	Foodways	Ceramic Tableware	Plate, Soup	VEW, transfer printed	VWE	turquoise transfer print;floral;moulded;scalloped edge
PBSB	1	1	Ceramic	Foodways	Ceramic Tableware	Tableware	VEW, plain	VWE	small sherd
PBSB	1	1	Ceramic	Foodways	Ceramic Tableware	Hollowware	VEW, transfer printed	VWE	red transfer print;floral design
PBSB	1	2	Ceramic	Foodways	Ceramic Tableware	Saucer	VEW, plain	VWE	1 vessel;green transfer print mark"SEMI-PO[RCELAIN]/...AND
M..."									
PBSB	1	1	Glass	Medical/Hygiene	Pharm. Containers	Panel Bottle	Machine made		colourless
PBSB	1	1	Glass	Architectural	Window Glass	Plate Glass	Unidentifiable		ridged;very thick
PBSB	1	1	Glass	Foodways	Glass Bev. Containers	Flask	Mould blown		amber;embossed"...D" on base
PBSB	1	1	Glass	Foodways	Glass Stor. Containers	Jar	Machine made		solarized
PBSB	1	1	Glass	Foodways	Glass Stor. Containers	Closure	Machine made		sealer;colourless;embossed crown
PBSB	1	9	Glass	Medical/Hygiene	Pharm. Containers	Panel Bottle	Owen's machine made		light green;1 vessel;embossed"440"on base
PBSB	1	2	Ferrous	Architectural	Nails	Nail	Cut		partial;lath nails
PBSB	1	2	Ferrous	Architectural	Nails	Nail	Cut		4cm;machine made heads;lath nails
PBSB	1	3	Ferrous	Architectural	Nails	Nail	Cut		partial;machine made heads;lath nails
PBSB	1	1	Ferrous	Architectural	Nails	Nail	Cut		partial;machine made head
PBSB	1	1	Ferrous	Architectural	Nails	Nail	Cut		partial
PBSB	1	1	Ferrous	Architectural	Nails	Nail	Cut		8.5cm;machine made head
PBSB	1	1	Ferrous	Architectural	Nails	Nail	Cut with handmade head		10cm;rosehead

Abbreviations:

#	Frequency
Bev.	Beverage
CEW	Coarse earthenware
NBPP	North Beach Provincial Park
Op	Operation
PBSB	Pleasant Bay Sandbar
Pharm.	Pharmaceutical
POR	Porcelain
SP	Soft-paste porcelain
Stor.	Storage
VEW or VWE	Vitrified white earthenware