



HRM Future Growth Node: Mic Mac Mall Lands

Archaeological Resource Impact Assessment

Heritage Research Permit A2022NS201

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Category C

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Project No.: 22-063.1

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Cover: 1972 air photo showing construction of Mic Mac Mall (north to the top).

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EXECUTIVE SUMMARY

In November 2022, Davis MacIntyre & Associates Limited was contracted by Rank Inc. to conduct an archaeological assessment of lands surrounding Mic Mac Mall in Dartmouth, HRM. The assessment included a historic background study, reconnaissance, and predictive modelling in order to determine the potential for archaeological resources in the impact area and to provide recommendations for further mitigation, if necessary.

The historic background indicates that Mi'kmaq and their ancestors have had a long-standing and intensive tradition of land use and occupancy throughout the Halifax/Dartmouth region since time immemorial. They took advantage of well-established travel routes via the lakes and rivers, particularly along the Shubenacadie waterway, to travel between the coastal and interior regions and had encampments along these waterways, as the archaeological record attests to.

In the historic period, the first known Euro-Canadian settlers obtained grants near the study area soon after the founding of Dartmouth in 1750. Though sparse Acadian use of the Dartmouth area is known, documentation is illusive. Occupation of the study area did not occur in earnest until the mid 19th century. Crichton Avenue was occupied historically by the African Nova Scotian community beginning in the early to mid 19th century. “The Avenue” and its nearby settlement, “The Extension” as they were known, were focussed around Crichton Avenue where a close knit community included a church and cemetery. The remains of the latter (and possibly the former) were disturbed when apartments were constructed in the 1970s on the west side of Mic Mac Boulevard. Historic maps and air photos suggest that the majority of historic settlement was located immediately west of the study area, though some vestiges may have extended into the study area. Historic maps suggest that by the mid-20th century, the study area was cleared fields, likely a part of Keeler’s farm.

The archaeological reconnaissance indicated that a significant amount of infilling has likely occurred throughout much of the study area, though some excavation likely occurred near the north end of the study area. A few very small areas of potentially undisturbed ground remain along the west side of the study area and at the southwest corner of the main entrance to the parking lot off Mic Mac Boulevard. Significant in-ground infrastructure is present throughout the study area and it is likely that some of this, particularly the catch basins and manholes, may have extended into natural (pre-infilling) levels. However, the potential remains for undisturbed soils throughout the study area. The greatest potential for intact archaeological resources exists along the west side of the study area between the rear of the mall building and Mic Mac Boulevard, as well as along the south end of the study area between the mall and Mic Mac Boulevard where historic land use is documented.

The study area has been identified as low potential for archaeological resources related to L'nuk land use. However, the potential exists for historic period archaeological resources, particularly those related to the 19th century Black settlement that has been documented in the vicinity. The majority of the study area appears to have been cleared fields prior to development of the Mic Mac Mall in the 1970s, though extensive settlement is known just beyond the western and southern margins which may have extended into the study area. Based on the results of this assessment, the most likely areas to encounter intact archaeological resources are located along the west and south sides of the study area where minimal disturbance and/or significant infilling has occurred. Therefore, should these areas be expected to be impacted by ground disturbance below the level of modern fill, it is recommended that they be monitored by a qualified archaeologist in order to ensure that no intact archaeological resources are impacted.

In the event that archaeological resources are encountered at any point during ground disturbance and an archaeologist is not present, it is required that any ground-disturbing activity be halted immediately and the Coordinator of Special Places (902-424-6475) be contacted regarding a suitable method of mitigation. Should the impact area be modified to expand beyond the currently understood range, a qualified archaeologist should be consulted to evaluate whether further archaeological assessment may be required.

1.0 INTRODUCTION

In November 2022, Davis MacIntyre & Associates Limited was contracted by Rank Inc. to conduct an archaeological assessment of lands surrounding Mic Mac Mall in Dartmouth, HRM. The assessment included a historic background study, reconnaissance, and predictive modelling in order to determine the potential for archaeological resources in the impact area and to provide recommendations for further mitigation, if necessary.

The current assessment was conducted under Category C (Archaeological Resource Impact Assessment) Heritage Research Permit A2022NS201 issued by the Department of Communities, Culture, Tourism and Heritage. This report conforms to the standards required by the Culture and Heritage Development Division under the Special Places Protection Act (*R.S., c. 438, s. 1*).

2.0 STUDY AREA

The study area includes the lands currently occupied by the Mic Mac Mall in Dartmouth (Figure 2.0-1). As part of Halifax Regional Municipality's (HRM) Regional Centre Secondary Municipal Planning Strategy, the Mic Mac Mall Lands have been identified as a Future Growth Node, allowing building additions in excess of 1,000m², wherein a master neighborhood planning program shall be developed in order to prepare a site-specific development agreement for the Future Growth Node (Figure 2.0-2). As part of this neighborhood planning exercise, HRM requires a land suitability assessment that includes an assessment of real and potential archaeological resources within the study area.

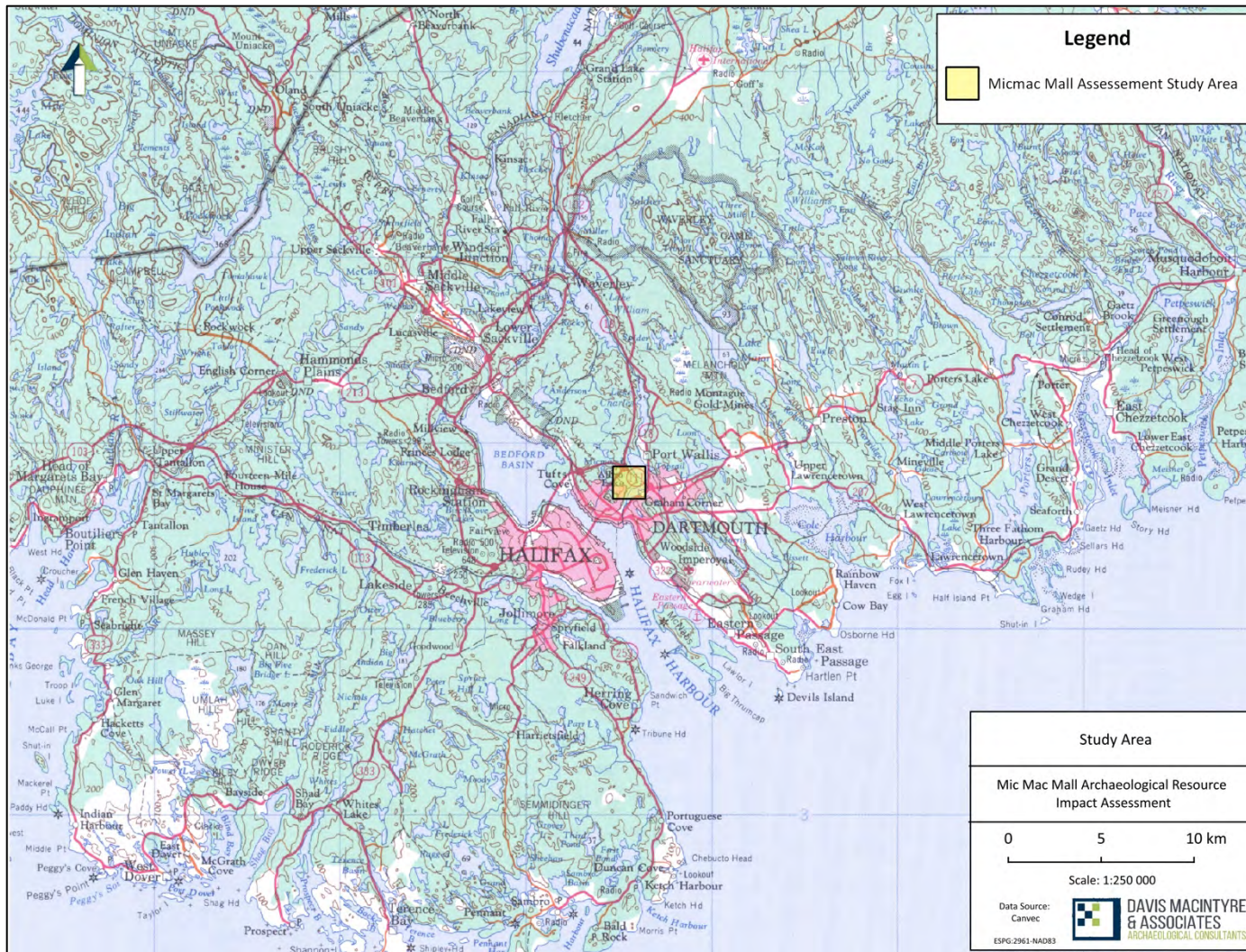


Figure 2.0-1: Location of the Mic Mac Mall study area.



Figure 2.0-2: Satellite view of the lands included in the study area, shown in red (courtesy WM Fares Architects).

2.1 Paleoecology

Understanding the changing ecology of the early Holocene is paramount to understanding the archaeological record and the course of human history in our region from its beginnings. Processes associated with glacial advance and retreat have made a lasting impression on our province. During the most recent ice age, Atlantic Canada lay beneath the kilometre thick Laurentide Ice Sheet, which at the last glacial maximum (24 ka BP) extended its reach across the continental shelf to ocean depths of 800m.¹ The modern landscape bears the scars and relics of the Wisconsin glacialiation, in the form of drumlins, moraines, glacial erratics, lakes and drainage systems.

Deglaciation in the northeastern United States and the Atlantic Provinces began in earnest by 20 ka BP. Significant ice streams, draining vast areas of the Laurentide Ice Sheet, delivered large volumes of ice to the ocean and it was along these ice streams that calving occurred. The opening of the Gulf of Saint Lawrence in 14 ka BP accelerated this process, and calving ice margins eventually isolated a Newfoundland ice cap.² Glaciers were largely land-bound by 13 ka, and reduction continued through melting and climatic conditions rather than calving. In the wake of retreating glaciers, a mixed spruce woodland consisting of sedge, spruce, birch, and pine migrated northwards into Nova Scotia and created an environment suitable for large herds of migratory caribou. It is believed Sa'qiwe'k L'nu'k bands followed these herds into the region by at least 10,900 BP.³

Deglaciation was not a unilinear process, as climate variables caused glaciers to retreat at different rates at different times. The Younger Dryas Cooling event took place between 10,900 and 10,600 BP (or 12,900 – 11,600 cal BP) and had a profound effect on vegetation.⁴ Land-bound glaciers reactivated and the advance of forested regions was reversed, with areas of open shrub tundra expanding southwards. A rapid warming period followed the Younger Dryas, and with it, the environment changed again to a more closed, mixed deciduous forest of oak and pine.⁵ Unburdened by the Laurentide Ice Sheet, the continental crust rebounded in isostatic uplift, resulting in a drop of relative sea level. At the same time, large volumes of water held in glacial ice was released back to the oceans, resulting in eustatic change. The pace of eustatic change was initially rapid, following a low sea level stand of -65m at 11.3-11.7 ka BP. Sea level rise slowed after 11 ka BP and was outpaced by isostatic change. By about 9.5 ka BP, the pace of land rise diminished and sea levels again began to overtake exposed shores in most areas.⁶

¹ Fader 2005, 2; Lothrop et al. 2011, 549.

² Shaw et al. 2006, 2069, 2072.

³ Ellis 2004, 244; Newby et al. 2005, 151.

⁴ Fader 2005, 5; Lothrop et al. 2011, 550.

⁵ Newby et al. 2005, 151; Deal et al. 2006, 256.

⁶ Shaw et al. 2002a, 1867; Fader 2005, 2.

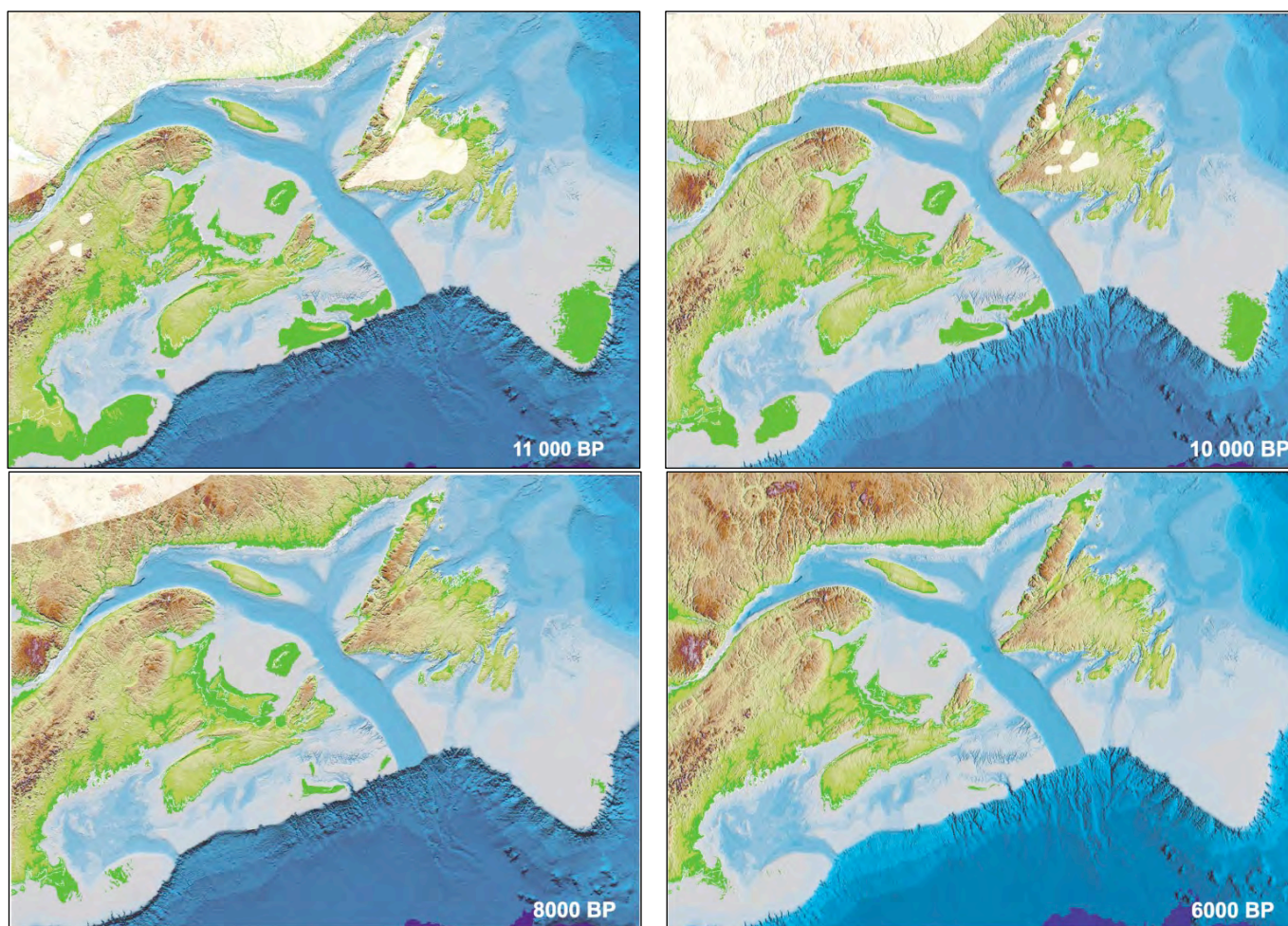


Figure 2.1-1: Palaeogeography of Maine and the Atlantic Provinces, depicting how emergent landforms on the continental shelf were gradually submerged.⁷

⁷ From Shaw et al. 2002

Glacial isostasy and eustasy changed habitable coastlines over the millennia following deglaciation (Figure 2.1-1). Significant landforms, subaerially exposed through isostatic uplift were subsequently submerged by rising seas. Seafloors now at 60m depth in the Bay of Fundy, for instance, would have been above sea level.⁸ Local conditions varied, as sedimentation near George's Island indicates that the Halifax Harbour emerged sometime between 8,400 BP to 7,000 BP, functioning as a low-productivity estuarine environment, before submerging again after 7,000 BP.⁹ Sea level at this point is thought to be somewhere higher than -25 m below its present level. Intact ancient shorelines are elusive. Most have been reclaimed by the sea or reshaped by powerful erosional forces. However, areas like the Bedford Basin and Bras d'Or Lakes as well as certain interior riverine locations retain relatively intact paleoshores.¹⁰ Evidence of human occupation from submerged sites has been found offshore. Artifacts like ridged ulus have turned up as unexpected catches of scallop draggers in the Bay of Fundy, Gulf of Maine, and off the coast of Prince Edward Island.¹¹

More generally, by 6 ka BP, the geographical setting of the Atlantic region nearly matched conditions today. The inundation of the Northumberland Strait finally isolated what is now Prince Edward Island from the mainland as sea levels continued to rise, reaching within 5m of their present depth off the Atlantic coast by 3,000.¹²

2.2 Natural Environment

The study area is located within the Eastern Shore Beaches Natural Theme Region (#833) (Figure 2.2-1). This unit follows the meandering shore along headlands and long inlets from Halifax to Owls Head near Clam Harbour. Greywacke is the dominant bedrock, with bands of slate running in folds parallel to the coast. Lakes surrounding Dartmouth in this region, such as Morris Lake and Bissett Lake, are notable for their high turbidity and significant levels of nutrients. Freshwater wetlands on the inland portion of this region are usually associated with lakes or small streams, while tidal marshes are common along the coast. Soils in this region include quartzite-derived and well-drained Halifax gravelly sandy loams, as well as Danesville soil, peat, Rockland soil, and poorly drained Aspotogan soil. The Eastern Passage area also includes areas of fine sandy clay loams from the Hantsport group of soils.¹³

Along the coast, forests include white spruce, balsam fir, maple, and birch. Farther inland the forest transitions into spruce, fir, and pine, with some pure stands of white spruce found on old field and on drumlins. Several locations including Cole Harbour

⁸ Fader 2005, 5.

⁹ Edgecomb et al. 1999, 814.

¹⁰ Shaw et al. 2009, 24.

¹¹ Fader 2005, 6.

¹² Shaw et al. 2002b, 1872.

¹³ Davis and Browne 1996, 199.

provide waterfowl with habitat for both migration and winter residences. Significant populations of black duck and Canada goose use the area as a stopover during migration, and the former species also breeds along this coast. Birds that overwinter here include soldeneeye and scaup, while great blue heron, osprey, piping plover, and bald eagle all find various nesting locations in this region. white sucker, shiners, sticklebacks, perch, banded killifish and brook trout are the predominant freshwater fishes.¹⁴

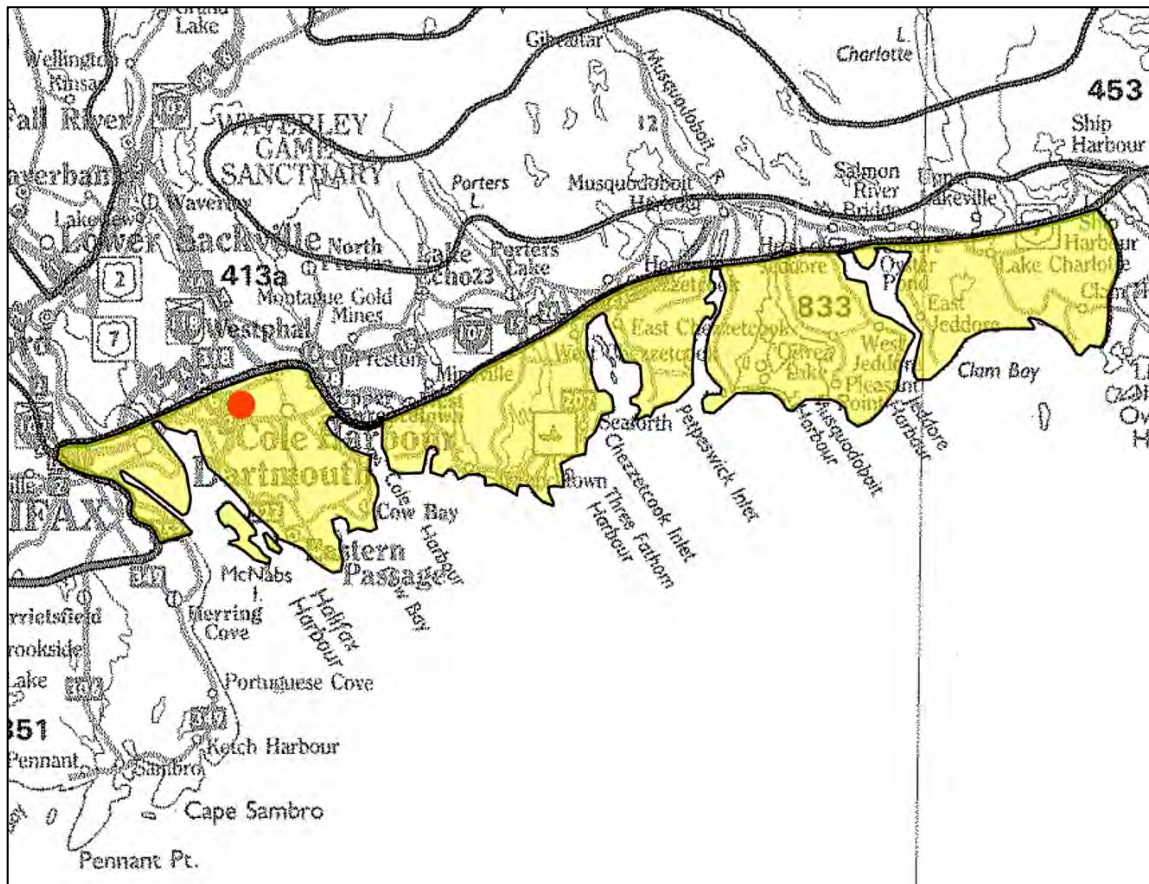


Figure 2.2-1: A map showing the Eastern Shore Beaches Natural Theme Region (#833) in relation to the approximate study area (red).¹⁵

¹⁴ Davis and Browne 1996, 199.

¹⁵ After Davis and Browne 1996.

3.0 METHODOLOGY

A historic background study was conducted by Davis MacIntyre & Associates Limited in November 2022. Historic maps and manuscripts and published literature were consulted from the Nova Scotia Archives as well as the HRM Archives and other online sources. LiDAR and air photos were also examined. Maritime Archaeological Resource Inventory, a database of known archaeological resources in the Maritime region, was searched in an effort to understand prior archaeological research and known archaeological resources neighbouring the study area. Staff at the Archaeology Research Division of Kwiłmu'kw Maw-klusuaqn (KMKNO-ARD) were contacted as part of this assessment in order to elicit information regarding past and traditional land use in the study area. Finally, a reconnaissance of the study area was conducted.

3.1 Maritime Archaeological Resource Inventory

The Maritime Archaeological Resource Inventory was accessed on 21 November 2022 in order to determine if known archaeological sites or resources exist within or near the study area. A parameter radius of 5 kilometres from the study area was applied, which encompasses downtown Dartmouth and a portion of downtown Halifax.

The closest known archaeological sites to the study area are located within 1.5 kilometres and include a late Archaic general activity site on the shores of Lake Micmac (BeCv-07), an isolated Paleo chalcedony fluted point preform found within fill from a nearby source (BeCv-14), and 19th century Mi'kmaw petroglyphs near Millers Mountain (BeCv-17). Slightly further afield at Lake Charles, an isolated find spot consisting of a grooved axe dating to the lake Archaic period is known (BeCv-08). Two blocked end tubular pipes and a large point, possibly Adena grave goods from the Woodland period were found in Dartmouth, although the exact location is unknown, possibly in the vicinity of Admiralty Place (BeCv-02). In addition to sites with designated Borden numbers, a single quartz flake was found in a disturbed context during archaeological testing at nearby Birch Cove Park in 2021. It has been assigned accession number 2022.1.1.

Several historic features related to the Shubenacadie Canal and related industrial activities such as the Starr Manufacturing facilities are found at Lake Micmac and along Prince Albert Street near the outlet of the canal into the harbour (BdCv-06, BdCv-18 and BeCv-30). Late 18th to early 19th century house foundations are recorded on the east side of Lake Loon (BeCv-21). Additionally, human remains were found in 1894 during the construction of a manse for St. James Presbyterian Church (BeCv-01).

Other historic period features have been found along the Dartmouth waterfront, including remains of the first railway bridge over the harbour at Tufts Cove, several historic features at Shannon Park, a brick foundation at the end of Ferguson Road, a late

18th to early 20th century midden at the end of Jamieson Street, the remains of wharf cribwork at the end of Maitland Street, a late 19th century midden within Dartmouth Marine Slips, and a 19th century midden at the end of Old Ferry Road.

The lack of archaeological data for the immediate area of the Mic Mac Mall likely reflects a lack of extensive archaeological survey rather than an absence of archaeological sites. This is compounded by poor site preservation and visibility due to historic land development as well as steadily rising sea-levels and over the last several thousand years and modern environmental factors which influence geomorphological change.

3.2 Historic Background

3.2.1 L'nuk Settlement During the Precontact and Historic Periods

Spatially and geographically, L'nuk land use throughout Mi'kma'ki is not considered in the same sense that settler occupation is recorded in historic times. Colonialism has had a significant impact on Mi'kmaw lifeways but prior to European contact, the Mi'kmaq and their ancestors had a very dynamic relationship with the land which was reflected in their language, legends, songs, dances, and oral tradition. The landscape was viewed as "sentient, ever-changing, and in a continual process of becoming".¹⁶ Therefore, the euro-centric view of the land as discrete and definitive land parcels does not reflect the Mi'kmaw world view and references to site-specific pre-contact land use from the first-hand perspective of the Mi'kmaq (through oral tradition) are difficult to ascertain. However, historic references by Europeans do exist, although they must be carefully considered due to their inherent bias, and Mi'kmaw land use and occupation is reflected in the archaeological record.

Nova Scotia has been home to the Mi'kmaq and their ancestors for at least 13,000 years. A legacy of experience built over millennia shaped cultural beliefs and practices, creating an intimate relationship between populations and the land itself. The complexity of this history, culturally and ecologically, is still being explored.

The earliest period is Sagiwe'k L'nuk (the Ancient People) or the Paleo period (13,000 - 9,000 cal BP). The changing ecology following deglaciation allowed the entrance of large herds of migratory caribou into Nova Scotia, followed by Paleo groups from the south.¹⁷ Currently, the Debert/Belmont Sites provide the only significant evidence of Paleo settlement in the province. Commonly believed to be big-game hunters, research is now aimed at exploring the diverse subsistence patterns that may have supported

¹⁶ Sable and Francis 2012, 18.

¹⁷ Newby et al. 2005, 151.

populations, and what adaptations were made when the environment shifted once again in the early Holocene.¹⁸

Succeeding the Saqiwe'k L'nuk is the Mu Awsami Kejikawe'k L'nuk (the Not so Recent People) or the Archaic Period (9,000-3,000 cal BP). This time saw a reorientation to a more maritime subsistence, with settlement pivoting more towards coastal areas, lakes, and bountiful riverine resources.¹⁹ Remnants of these sites along the coast have largely been engulfed by rising seas or battered by wind and wave, though interior sites are increasingly being discovered.²⁰ Ground stone tools, specialized for woodworking, appear at this time and may have been used to create dug-out canoes. Numerous traditions and distinct technologies have been documented throughout Maine and the Atlantic provinces. A growing catalogue of exotic cultural components demonstrates that groups within Nova Scotia were engaged in spheres of interaction spanning hundreds of kilometers. Unfortunately, a lack of formally excavated sites within Nova Scotia still obscures the degree to which these traditions were present.

By the Kejikawe'k L'nuk (the Recent People) or Woodland/Ceramic period (3,000-550 cal BP), the Mi'kmaq were a maritime people, with known sites concentrating along coastal shorelines and navigable watercourses.²¹ Migration of ideas and people introduced new worldviews and technologies from groups originating in places like northern New England and the Great Lakes area, to local populations, including the earliest ceramic forms. Harvesting of marine molluscs and shellfish appears in this period, and substantial shell-middens have gifted archaeologists with well-preserved records of these past lives.²² Fish weirs populating the province's rivers and streams speak to the importance of migrating fish species to Mi'kmaq life. Terrestrial hunting and foraging were practiced with varying degrees of intensity depending on seasonality and region. A generally stable cultural form is believed to have developed by 2,000 cal BP, forming the way of life first encountered by Europeans arriving on our shores.²³

¹⁸ Lothrop et al. 2011, 562.

¹⁹ Tuck 1975.

²⁰ Deal et al. 2006.

²¹ Davis 1993, 100.

²² Davis 2005, 18.

²³ Wicken 2004, 26.

Table 1: Mi'kmaw/Archaeological Cultural Periods.²⁴

Mi'kmaw Period	Archaeological Period	Years (C ¹⁴ Uncalibrated)	Calendar Years (Calibrated)
Saqiwe'k L'nuk (the Ancient People)	Paleo <i>Early/Middle</i> <i>Late</i>	11,500 – 9,000 BP <i>11,500 – 10,000 BP</i> <i>10,000 – ~9,000 BP</i>	13,000 – 9,000 cal BP <i>13,000 – 11,600 cal BP</i> <i>11,600 – 9,000 cal BP</i>
Mu Awsami Kejikawe'k L'nuk (the Not so Recent People)	Archaic <i>Early/Middle</i> <i>Late/Transitional</i>	9,000 – 3,000 BP <i>9,000 – 5,000 BP</i> <i>5,000 – 2,500 BP</i>	9,500 – 3000 cal BP <i>9500 – 5,500 cal BP</i> <i>5,500 – 3,000 cal BP</i>
Kejikawe'k L'nuk (the Recent People)	Woodland/Ceramic <i>Early</i> <i>Middle</i> <i>Late</i>	3,000 – 500 BP <i>3,000 – 2,400 BP</i> <i>2,400 – 1,700 BP</i> <i>1,700 – 500 BP</i>	3,000 – 550 cal BP <i>3,000 – 2200 cal BP</i> <i>2,200 – 1,300 cal BP</i> <i>1,300 – 550 cal BP</i>
Kiskukewe'k L'nuk (Today's People)	Protohistoric Historic/Modern	500 BP – 350 BP 500 BP - present	550 – 350 cal BP 350 cal BP - present

Mi'kmaw life was substantially altered in the Kiskukewe'k L'nuk (Today's People) or Contact Period (500 BP- Present). Trade and European settlement introduced change and upheaval to the traditional way of Mi'kmaw life. Mobile hunting and gathering still defined Mi'kmaw life, with identity residing within family households.²⁵ Trading posts and fishing villages became intersections of European and Mi'kmaq interaction, affecting traditional seasonal rounds and access to land. The hunting of fur-bearing mammals intensified to satisfy the mutual exchange of skins for European goods.²⁶ It is not accurate, however, to say that Mi'kmaq *adopted* European goods and culture, but rather *adapted* to it. The Mi'kmaq remained an influential social and political force forming a triadic narrative of contention with the English and French in the 18th century. However, disease, conflict, and alienation from the land wreaked a ruinous effect on the Mi'kmaq by the 19th century, pushing people to the margins of colonial society.²⁷

The Mi'kmaq inhabited the territory known as Mi'kma'ki or Megumaage, which included all of Nova Scotia including Cape Breton, Prince Edward Island, New Brunswick (north of the Saint John River), the Gaspé region of Quebec, part of Aroostook County in northern Maine and southwestern Newfoundland (Figure 3.2-1).

²⁴ Lewis 2006b; Confederacy of Mainland Mi'kmaq 2007, 3; Davis 2011, 22; Betts and Hyrnick 2021, 19.

²⁵ Wicken 2004, 30.

²⁶ Whitehead 1993, 89.

²⁷ Reid 2009.

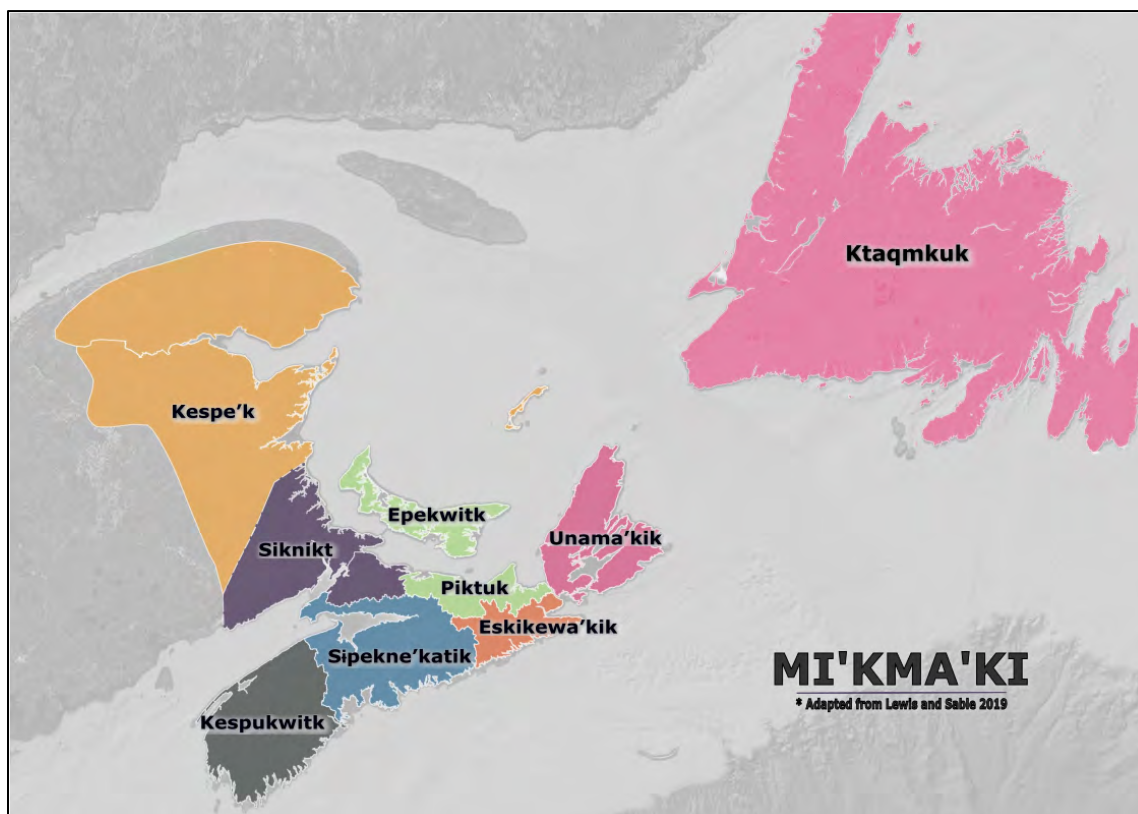


Figure 3.2-1: Map of the Mi'kmaq districts.²⁸

The cultural significance of the study area to the Mi'kmaq and their ancestors is recorded in the Mi'kmaq language. The Mi'kmaq language, inseparable from Mi'kma'ki, is embedded with knowledge of the land and a unique way of understanding the world, reflected in both oral traditions and place names.²⁹ Eastern Passage is located in the traditional district of Sipekne'katik meaning "ground nut place". The name "Banook" appears to be a corruption of the Mi'kmaq name for Lake Banook - Panuk, which means "at the opening". Mi'kmaq names are known for many other places in the Halifax-Dartmouth area, including Punamu'kwati'jk (Dartmouth, meaning "at the tomcod place") and Kjiptuk (Halifax Harbour, meaning "the great harbour").³⁰

Archaeological evidence supports a precontact occupation of the Halifax/Dartmouth/Eastern Shore area and the surrounding landscape by the Mi'kmaq and their ancestors for several millennia. The Mi'kmaq and their ancestors would have harvested marine

²⁸ Adapted from Lewis and Sable 2019. Some traditional territory overlap exists in western New Brunswick and Northern Maine with the Wolastoqiyik. Boundaries in these regions are more historically fluid. Boundaries within modern day Nova Scotia may have also been more fluid during periods of landscape and climactic changes.

²⁹ Sable and Francis 2012, 26.

³⁰ Ta'n Weji-sqalia'tiek – Mi'kmaq Place.

birds and animals at the coast, gone to interior rivers and lakes for seasonal migrations of fish, eel, and opportunities to hunt larger game animals. Plants were also harvested from different interior and coastal environments. Movement from the coast to the interior may have followed a generalized winter-interior, summer-coastal migration round suggested by ethnohistoric sources.³¹ However, mobility across Mi'kma'ki was likely more complex.³² Use of rivers and long inlets allowed more fluid movement between coastal and interior camps.³³ Movement between the coast and interior may have been dependant on weather and availability of valued resources, as suggested by other sites found throughout Nova Scotia.³⁴

According to Hoffman, there were three or four summer villages in the Sipekne'katik territory, located at Shubenacadie, Truro, Tatamagouche, and at or near Halifax, though none are recorded in early historic documents due to the relative absence of French activity in these areas in the 17th century. The earliest documented suggestion of a village in this territory is on the Stewiacke River in 1692. By 1752, the French missionary Father Gaulin had established a mission at Shubenacadie. The settlement at Salmon River near Truro is suggested in early sources and clearly documented later while a settlement at Tatamagouche is known to have existed by the latter half of the 18th century. Several villages are known in the vicinity of Halifax and at Halifax itself, Diéreville reported having met three Indian chiefs in the Harbour. Other villages are reported at Beaver Bank and at Grand Lake on the Shubenacadie system.³⁵

According to Joe Cope in 1924, the first Dartmouth Lake (Banook) was known as Wedge-it-doo-ek meaning "Lake belonging to Wedge-it-doo". Wedge-it-do was a Mi'kmaw man who died at the age of 113 years old and whose camping ground was located about halfway up the eastern side of Lake Banook in the early 19th century.³⁶

Harry Piers noted that Gorham Paul's wife lived at Red Bridge in Dartmouth, though she was known as Mohawk, not Mi'kmaq.³⁷ In 1870, Mi'kmaq living at Shubenacadie were known to spend the summer at Dartmouth Lake or Tufts Cove.³⁸ Lewie Newell (Louis Noel) and Peter Joe Cope were both from Red Bridge, Dartmouth.³⁹ Jerry Lonecloud also lived at Red Bridge for a year in the late 19th century.⁴⁰

³¹ Hoffman 1955, 153–4.

³² Wicken 1994, 63.

³³ Lewis 2006a, 58.

³⁴ Sheldon 1988, 134.

³⁵ Hoffman 1955, 553–536.

³⁶ Piers 2003, 30.

³⁷ Piers 2003, 109.

³⁸ Piers 2003, 158.

³⁹ Piers 2003, 26.

⁴⁰ Piers 2003, 113.

In 1873, Charles Hallock states that at “the Dartmouth Lakes, six miles from Halifax, are trout, and Indian villages of primitive bark...”.⁴¹

Local historian John Martin recorded the presence of “rows of wigwams along the side of Silver’s Hill from the present MicMac Club to Graham’s cross roads”.⁴² He also describes a second encampment at the Second Red Bridge, located across Lake Micmac at Miller Mountain, and other camps near Pleasant and Erskine Streets. Hills on the side of Lake Banook and Lake Micmac were the “most favourable camp sites” and coves like Hoogainnny Cove (at the end of Sinclair Street, directly west across the lake from study area) and Carter’s Pond were also occupied by the Mi’kmaq. Mi’kmaq continued camping at the junction of Highway 7 and 18 until the 1880s and at the Second Red Bridge by the early 20th century.⁴³ Of nearby Graham’s Corner, Martin says “A wide area of this vicinity was long used as a camping ground of Indians. The small house seen at the forks was constructed from two old shacks formerly occupied by MicMac families on the location of the large residence in the photo”.⁴⁴

In the April 1899 edition of the Atlantic Weekly, Martin recounts an old resident’s accounts of life in Dartmouth during the 1830’s. The resident recounts that young men would gather above Sullivan’s Pond to “watch the Indians go through their war dances, jigs, etc., in all the paint, feathers and style of a more remote period”.⁴⁵

Martin also states that in June 1845, a visit to Mi’kmaq camps at Lake Banook was described in the *Acadian Recorder*. Unfortunately, this account could not be located in the June issues for 1845 and the year or month provided by Martin may have been reported in error. According to Martin, the camps were visible from “The Brae”, where Mr. Crichton’s house was located (this estate was located on the southeast side of Lake Banook and the house was in the vicinity of Cleveland Crescent). This suggests the camps were in the south end of Lake Banook. Martin quotes the newspaper as follows:

*[The camps were] on the facing side of two rising grounds, and the intermediate valley between had its occasional rude domicile. In one wigwam, men were preparing wicker work for their baskets. In another, women were busy plying porcupine quills which, in various and gorgeous dyes, they were fashioning into fanciful and graceful figures [...].*⁴⁶

The route through the Dartmouth Lakes was an important transportation route from Shubenacadie Grand Lake to Halifax Harbour and around 1831-1835, two Mi’kmaq were documented using this route to travel onward to St. John, New Brunswick. They

⁴¹ Hallock 1873, 120–1.

⁴² Martin 1957, 276.

⁴³ Jones 2018.

⁴⁴ Martin 1957, 493.

⁴⁵ Martin 1957, 241.

⁴⁶ Martin 1957, 286–7.

were said to have left Dartmouth in a birchbark canoe and travelled down the Dartmouth Lakes and through the Shubenacadie waterway to the Minas Basin.⁴⁷

The Archaeological Research Division at Kwikw'umkw Maw-klusuaqn Negotiation Office (KMKNO-ARD) was contacted on 10 November 2022 to inquire whether past or traditional Mi'kmaw land use is known in or near the study area. A response was received on 23 November. While traditional use information is confidential, it has been taken into consideration during the completion of this assessment.

In addition to information already presented, KMKNO provided a reference to a 1779 account by Reverend Jacob Bailey who arrived in Halifax in 1779. Bailey noted several Mi'kmaw canoes coasting along the harbour and “landing on the margin of a little bay, or climbing up the stupendous precipices”.⁴⁸ An entry from 1750 referred to Mi'kmaw summer camps along in several bays along the harbour, including one at Sandy Cove, near Woodside, which was situated “near McMinn’s (or McMain’s) brickyard” which was located near the present-day site of the NSCC Waterfront Campus and Nova Scotia Hospital.⁴⁹ The Mi'kmaq name for Sandy Cove is Tkipowik meaning “there is a spring there”.⁵⁰ Former NS Museum curator Harry Piers also noted a spring in the same location which was known to the Mi'kmaq as Kobowick. According to Piers, the Mi'kmaq sometimes camped at the mouth of a nearby brook.⁵¹

3.2.2 Historic Period Settlement

Although the presence of a few Acadians in Dartmouth is known in association with the Mi'kmaq, a more substantial European presence in the area is not recorded until 1749 when the English settlement of Halifax was founded on the peninsula in the harbour.⁵² The earliest known European to settle on the Dartmouth side of Halifax Harbour was Major Ezekiel Gilman, who erected a sawmill “by the large cove on the opposite side of the harbour. At the time three streams emptied into the cove from a nearby lake. The middle stream was called Sawmill River.”⁵³ It is not clear in this account whether or not this stream represents the mouth of what would be the Shubenacadie Canal. However, one author notes that this first mill was on the east bank of the Canal, where the Dartmouth Scrapyard would later reside.⁵⁴

⁴⁷ Piers 2003, 95.

⁴⁸ Bartlett 1853, 154–5.

⁴⁹ Martin 1957, 110.

⁵⁰ Piers 2003.

⁵¹ Piers 2003, 63.

⁵² Raddall 2007, 1.

⁵³ Chapman 2001, 22.

⁵⁴ Martin 1957, 38.

Gilman was the original grantee of much of the southern portion of Lake Banook, having received this grant sometime between his arrival in Halifax in 1749 and before his death on January 4th, 1755. The land that encompasses the present-day site of Mic Mac Mall was first granted to James Quinn and eight others on June 8, 1763 and included 800 acres, with the agreement that they would improve or cultivate the entirety of the land within 30 years of the date of the grant (Figure 3.2-5). It was also stipulated that each of the grantees must build “on their Respective Shares a House at Least Eighteen feet Square, on or Before the last day of June” of 1765.⁵⁵

By the summer of 1756, Governor Cornwallis noted that Gilman was managing the sawmill poorly, and that no clapboards or shingles were yet being made. In July 1750, the Major gave the mill up to Capt. William Clapham. By early September, a fresh group of settlers had arrived on the *Alderney*, which sailed from Plymouth and carried 340 English, Swiss, and German passengers. These new arrivals were the inhabitants of the planned town lots of Dartmouth, located adjacent to the sawmill and bounded by present-day North Street, Alderney Drive, Dundas Street, and the Halifax Harbour.⁵⁶ For several years afterwards the Mi’kmaw population, as allies of the French and enemies of the English, continued to attack the settlement, and numbers of casualties continued to rise on both sides. Settlers began to trickle away from Dartmouth, reaching a mere 39 persons by 1766.⁵⁷

⁵⁵ Bulkeley 1787; Chapman 2001, 27.

⁵⁶ Chapman 2001, 27.

⁵⁷ Chapman 2001, 32.



Figure 3.2-2: The lands originally granted to James Quinn and others.⁵⁸ The approximate location of the study area in blue.

Dartmouth businesses and residences continued to cluster around the downtown core and around Dartmouth Cove for several generations. Eighteenth and early 19th century historic maps generally depict the shoreline area of Dartmouth and do not extend to the study area at Lake Banook and Lake Micmac.

In 1784, the farm of the late Major Gilman was put up for auction. The 210-acre plot was sold for £90 to James Creighton. Creighton, a wealthy merchant, came to Halifax with Cornwallis' first settlers when he was 16, and was the largest land holder in Dartmouth until his death in 1813. He owned several hundred acres obtained by both grant and purchase near the original Dartmouth town plot (Figure 3.2-3).⁵⁹ Creighton hosted the Duke of Kent on the western side of the lake as it was his favorite hunting grounds.⁶⁰ Before his death, Creighton deeded 200 acres on the western side of Lake Banook in trust to his newly born grandson John Crichton in 1810 (Figure 3.2-4).⁶¹ Sometime prior to 1784, the property on the northwest side of Lake Banook that was originally granted to Quinn and others was either sold or escheated as it was included in the lands held by Creighton.

⁵⁸ Department of Lands and Forests 1954.

⁵⁹ Martin 1957, 94.

⁶⁰ Martin 1957, 221.

⁶¹ Martin 1957, 117.



Figure 3.2-3: Part of a map of Property along the 1st Dartmouth Lake showing Creighton's (Crichton) lot on the northwest side of Lake Banook near the outlet to Lake Micmac.⁶²

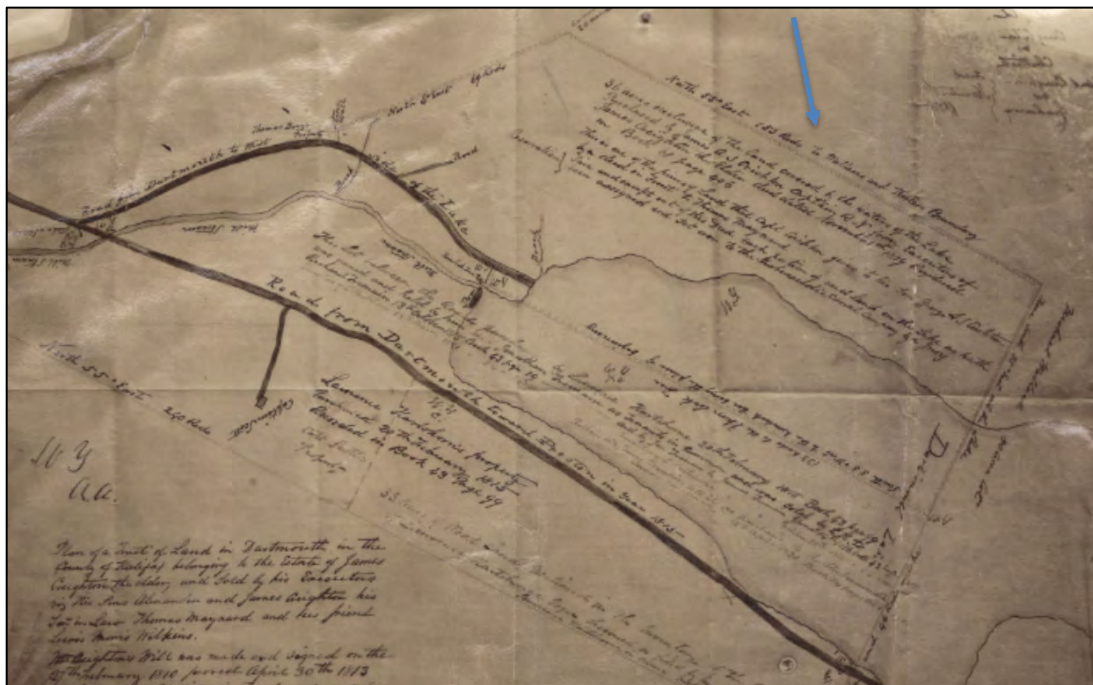


Figure 3.2-4: Tract of land in Dartmouth in the County of Halifax belonging to the estate of James Creighton, the elder and sold by his executors.⁶³ The land is situated on the northwest side of Lake Banook and fully encompasses the land originally granted to Quinn and others.

⁶² Anon 1853.

⁶³ Anon 1877.

The Nantucket Whalers, having sailed into the harbour to resettle in Dartmouth in 1786, continued the work of building up the shores of Dartmouth Cove, this time to support the whaling industry. In addition to a wharf, warehouses, and workshops, they constructed a spermaceti candle factory. Houses for some 40 families were built in the area around the former meeting house at the northeast corner of King and Queen Streets, once known as Quakertown.⁶⁴ Though they were relocated to Wales in 1791, their wharves, warehouses and homes still stood along the cove's shores and were eventually reused by other residents.⁶⁵

By that same year, 1791, new waves of Loyalist settlers had somewhat bolstered Dartmouth's population, and a two-storey gristmill was established at Dartmouth Cove by Lawrence Hartshorne and Jonathan Tremain. The mill's dam was once near the Portland Street bridge over what would become the end of the Shubenacadie Canal.⁶⁶ In 1796, Hartshorne and Tremain provided flour to Halifax residents at a reduced price when provisions were scarce. As the supplier of flour to the British army and navy for Nova Scotia, Newfoundland, Bermuda, and the West Indies, the gristmill was the largest and most profitable in the province.⁶⁷ Still, by 1809 only 19 dwelling houses were recorded in Dartmouth.⁶⁸

The Shubenacadie Canal, transecting Nova Scotia by running between the Minas Basin and Dartmouth, began construction in July 1826 after years of debate. The stream at Dartmouth Cove was chosen as the ideal outlet due to its sheltered position. Nearly half a million dollars were poured into the project.⁶⁹ A series of locks was created, and after 1860 an inclined plane leading upwards from Dartmouth Cove enabled vessels to travel up and down an embankment too steep for locks alone. Lake Banook was dammed and water levels were raised by several metres. However, completion of the Canal did not yield the prosperity that was expected. Superior railway systems and other methods of transportation made the Canal obsolete almost as soon as it was ready for use.

One of the earliest detailed maps of the study area is A.F. Church's 1866 map of Halifax City. The area around Lake Banook and Lake Micmac appears as a more sparsely settled area in comparison to downtown Dartmouth. Three families of Tines are shown near the study area, the closest being T. Tines on the north shore of the narrows between the two lakes (Figure 3.2-5).

⁶⁴ Martin 1957, 39.

⁶⁵ Chapman 2001, 56.

⁶⁶ Martin 1957, 35.

⁶⁷ Chapman 2001, 39.

⁶⁸ Fergusson 1967, 155.

⁶⁹ Martin 1957, 39.



Figure 3.2-5: Part of Ambrose F. Church's 1865 map of Halifax City depicting the study area (red).⁷⁰

Hopkins' 1878 map of the Town of Dartmouth provides more details depicting one of George A. S. Crichton's multiple structures, along what is now modern-day Crichton Avenue, just outside the study area (Figure 3.2-6).⁷¹ In about 1932, "The Brea" burnt to the ground. Up until that time, very few homes were located on the hill on the western side of Lake Banook.⁷² The Hopkins map also shows the most detail of the shoreline of Lake Banook.

⁷⁰ Church 1865.

⁷¹ Hopkins 1878.

⁷² Martin 1957:221.



Figure 3.2-7: Part of Hopkins' 1886 map of Halifax and Dartmouth showing the area around Lake Banook and Lake Micmac, with the location of "The Avenue" (labelled as "Black Settlement") near the study area (red).⁷⁹ A Mi'kmaq settlement is also shown on the east side of Lake Micmac near Red Bridge Pond.

The Avenue extended from the terminus of Crichton Avenue across the present-day Highway 111 to the area known as "The Extension". Oral tradition states that the land was originally owned by Smiths, who may have been enslaved, and who subdivided the property and sold it.⁸⁰ Settlers came from downtown Dartmouth as well as from more distant Black settlements to take up residence at The Avenue. By 1926, there were 82 people living here – approximately 12 families but earlier city directories indicate that there were a small number of Black families living here in 1869/70 and in the 1897/98 directory, the settlement was referred to as Tynesville.⁸¹ The Tines families shown on A. F. Church's map were likely Black, attesting to a fledgling Black settlement here at least as early as 1865.

Community elders recall that in the 1920s, the area was surrounded by woods and the area was relatively isolated. A pathway lead from The Avenue out to Keeler's Farm, owned by a white family, which was located at the end of The Extension. In 1947, the road through the settlement was widened.⁸²

⁷⁹ Hopkins 1886.

⁸⁰ Sehatzadeh 1998, 35.

⁸¹ Sehatzadeh 1998, 37.

⁸² Sehatzadeh 1998, 39–40.



Figure 3.2-8: 238 Crichton Avenue, part of “the Avenue”, photographed in the 1940s during road work.⁸³ The house still stands today.

The first Black Baptist Church in Dartmouth was located at The Avenue near the corner of Crichton Avenue and Micmac Blvd and a cemetery was located nearby. The land for the first church was purchased by Jacob Allen, Richard Preston and James Slaughter from Henry Keeler in 1827.⁸⁴ The first church was burned by arsonists in 1865 and was later replaced by a second church in a new location.⁸⁵ In 1976, during development of a townhouse complex, Kings Arms Apartments, human remains from the cemetery were uncovered and those that were not disturbed by construction were removed to the cemetery across the road from Victoria Road United Baptist Church in downtown Dartmouth. The second Colored Meeting House, as it was known, was destroyed by fire in 1896.⁸⁶

The community had a number of common wells that could be used by anyone in the community but some families also had their own well. The road that ran through the settlement was not maintained by the city and it began as a narrow pathway. There was no school in the settlement so children attended schools in nearby parts of Dartmouth with white students, where they were often subjected to racism and marginalization.⁸⁷

⁸³ Dartmouth Planning and Development Department 2020.

⁸⁴ Registry of Deeds 1827.

⁸⁵ Foster.

⁸⁶ Sehatzadeh 1998, 40.

⁸⁷ Sehatzadeh 1998, 48–53.

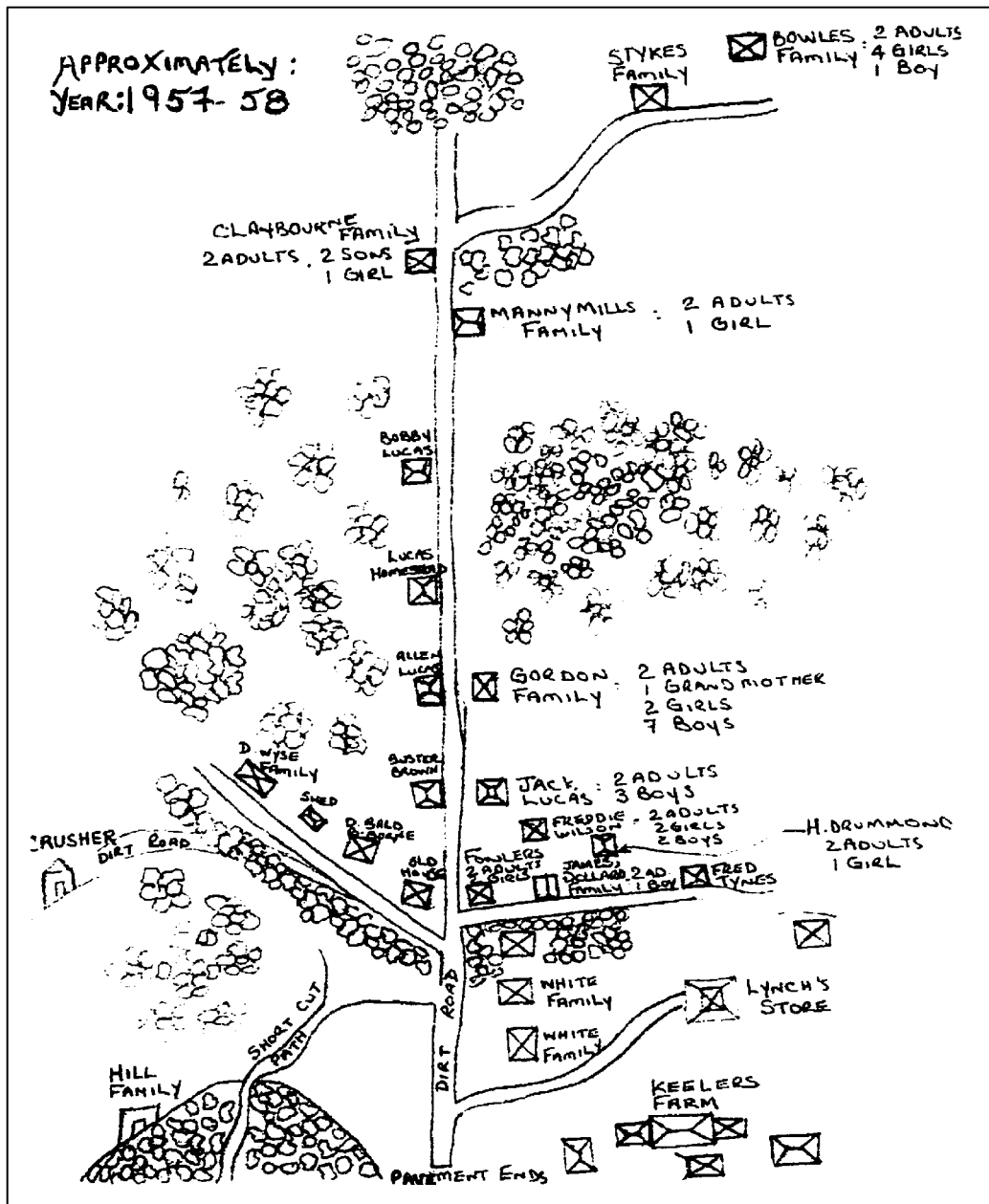


Figure 3.2-9: Sketch of The Avenue as it was remembered in the late 1950s by community elders Susan Hewitt and Michael Lewis (1998).⁸⁸

By the 1950s, the population of The Avenue grew to 134 people or approximately 23 families.⁸⁹ New houses continued to be built in the settlement in the late 1940s and settlement spread to The Extension as well, where three very impoverished white families were also settled. In the '30s, the town built a stone crusher in The Avenue and

⁸⁸ Sehatzadeh 1998, 153.

⁸⁹ Sehatzadeh 1998, 57.

in the '40s, the town dump was relocated to The Avenue.⁹⁰ It was not until the 1980s that city services like sewerage, water and improved roads were brought to the settlement and by that time, most of the Black settlers had been replaced with white settlers who were taking up residence in nearby Crichton Park.⁹¹

By the mid '70s, the last generation of Black settlers left The Avenue and only a few of the previous generation remained. The stone crusher was removed in 1964 and the town dump was closed by 1970. In the 1970s, Mic Mac Mall was built, as was a block of apartment townhouses at the eastern edge of The Avenue. The City of Dartmouth expropriated the lands surrounding the Crichton Avenue Extension during the late 1960's to expand the circumferential highway. By the 1970's the last generation born in The Avenue out-migrated and much of the land was sold to developers save for a few elders that remained in the community.⁹²

By the time of the 1908 Geological Survey of Canada map, the settlement of The Avenue is clearly depicted southwest of the study area. The water levels of Lake Banook are illustrated as higher than Hopkin's 1878 map (Figure 3.2-10). No structures are depicted within the study area.

⁹⁰ Sehatzadeh 1998, 59–61.

⁹¹ Sehatzadeh 1998, 64.

⁹² Sehatzadeh 1998, 97–8.



Figure 3.2-10: The 1908 GSC map of the study area showing the location of The Avenue with the approximate location of the study area shown in red.⁹³

Historic air photos of the study area offer a snapshot of the changes the study area went through in the roughly 60 years that past from the earliest available photo in 1931 to the last decade of the 20th century. In 1931, the study area appears much as fields surrounded by forests (Figure 3.2-11). The road through The Avenue can be clearly seen running along the same alignment as the present-day courses of Crichton Avenue and Horizon Court, which was then a long continuous road that ran northward toward Keeler's Farm, which then appears to have been abandoned. There are no discernable buildings in the study area, though road do run around what were likely Keeler's fields. Most significantly, several roads and buildings can be seen near the present-day junction of Crichton Avenue and Micmac Boulevard (now approximately the location of Kings Wood Apartments) which are related to the Black settlement.

There was not a great deal of change in the surrounding area in the 1947 air photo (Figure 3.2-12). The settlement was still clearly visible, though what was likely the town dump can be seen to the west of the study area, and likely the stone crusher further to the south of that. Some development was also underway to the north of the study area, including along the shore of Lake Micmac, which may have been related to increased settlement of The Extension.

⁹³ Faribault 1908.

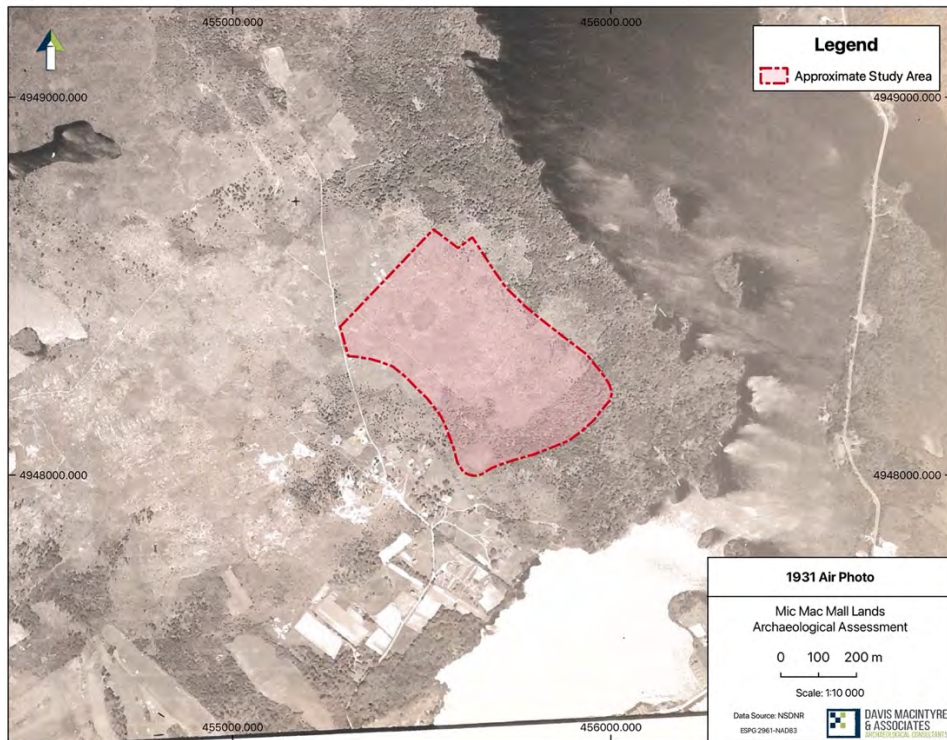


Figure 3.2-11: Georeferenced 1931 air photo with the location of the study area overlaid.⁹⁴

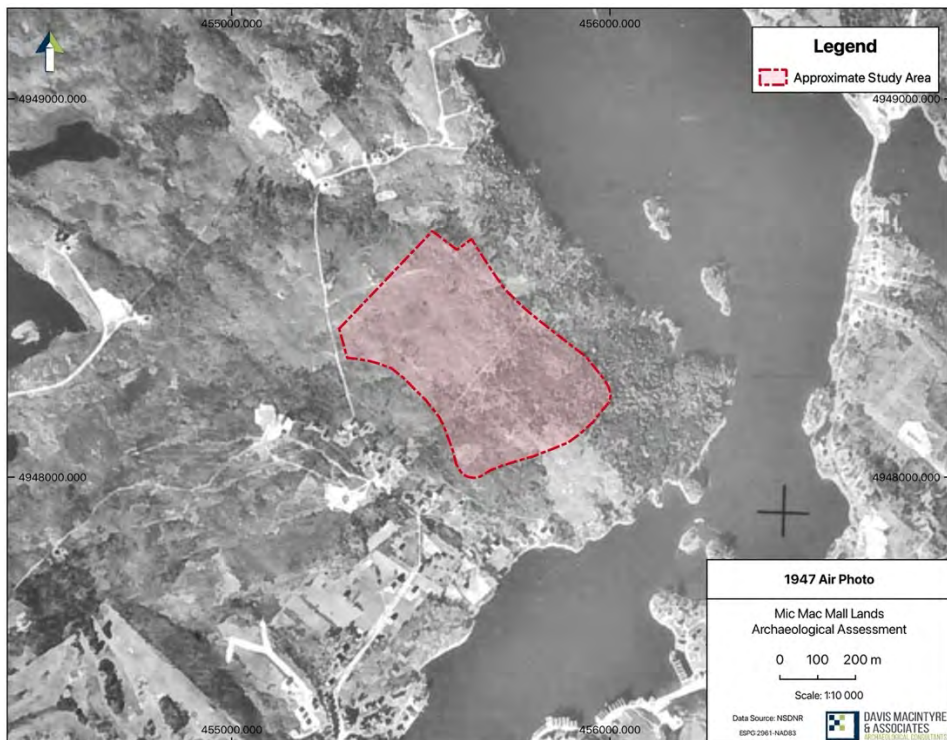


Figure 3.2-12: Georeferenced 1947 air photo with the location of the study area overlaid.⁹⁵

⁹⁴ National Air Photo Library 1931.

⁹⁵ National Air Photo Library 1947.

The study area and surrounds underwent few changes for the 25 years. By 1974, the Mic Mac Mall was under construction, with expansion getting underway to the north as well, in the present-day location of the annex (Chapters Indigo). The land that was the former town dump is now transected by the extension of Micmac Boulevard and by 1991, it became the location of sports fields. While many of the residents of The Avenue had moved on, there is increased residential development in the nearby vicinity throughout the 1970s and '80s and by 1992, the study area looked much as it does today.

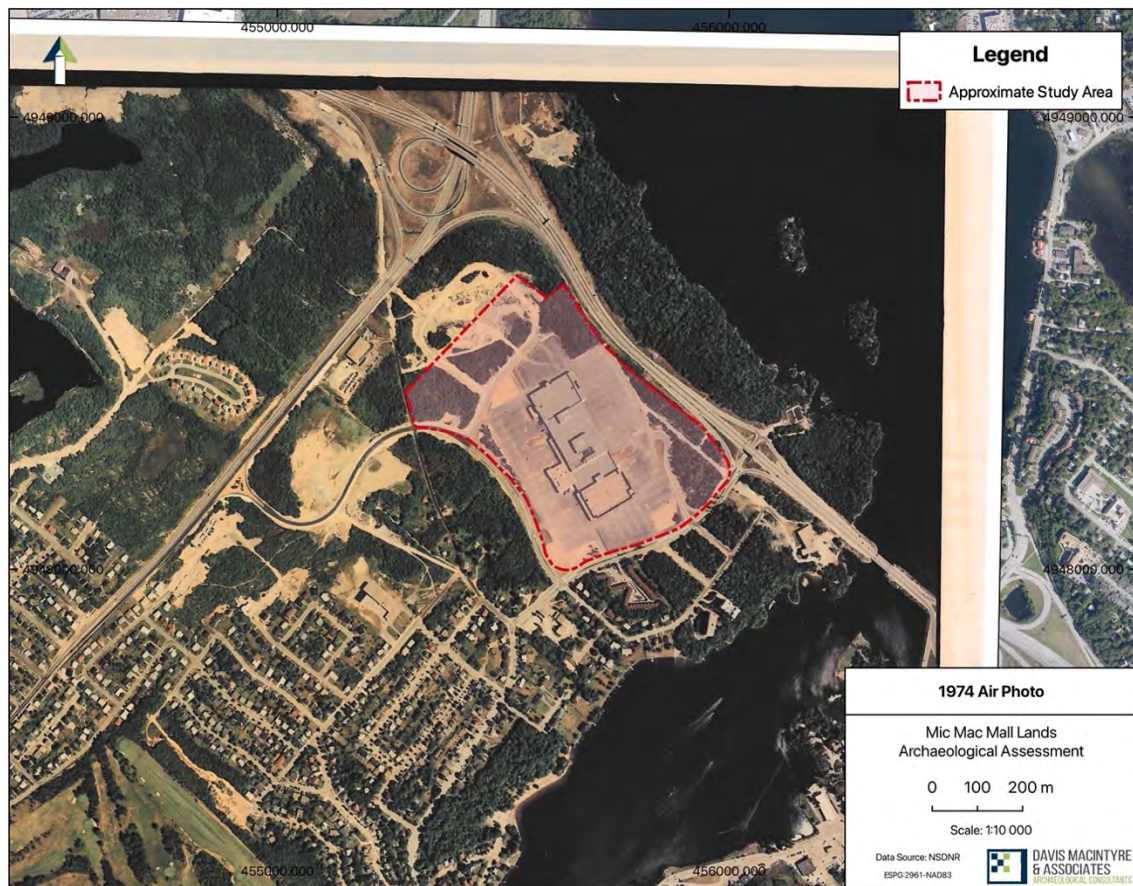


Figure 3.2-13: Georeferenced 1974 air photo with the location of the study area overlaid.⁹⁶

In 1972, during planning to construct the mall, the Dartmouth Lakes Advisory Board expressed concerns about plans to discharge the water into the lake by way of building a rock filled dam across a cove in the lake, as well as an artificial channel between the outfall and the lake. This would necessitate dredging the cove at regular intervals. Instead, the Nova Scotia Water Resources Commission requested that the developers, MacCulloch & Company Limited, install a settling tank in the storm runoff line, a 7-foot

⁹⁶ National Air Photo Library 1974.

diameter pipe that would discharge into Lake Micmac just north of the interchange between Highway 111 and Mic Mac Boulevard. It was proposed that the tank be 82 feet by 82 feet and 10 feet deep, to be installed “at the point of outfall well above the lake”.⁹⁷ No plans of the settling tank could be located, but it is visible on air photos in 1974 and 1982 just northeast of the interchange on the shore of Lake Micmac at the present-day location of civic #s 10 and 14 Lakemist Court (Figure 3.2-13 and Figure 3.2-14).



Figure 3.2-14: Georeferenced 1982 air photo with the location of the study area overlaid.⁹⁸

Site servicing plans located in the Halifax Municipal Archives show the locations and depths of water and sewer infrastructure. In general, catch basins, manholes and hydrants were designed to be excavated to a depth of 6 to 7 feet (Figure 3.2-13, Figure 3.2-14).

⁹⁷ Rowe 1972; Steele 1972.

⁹⁸ National Air Photo Library 1982.

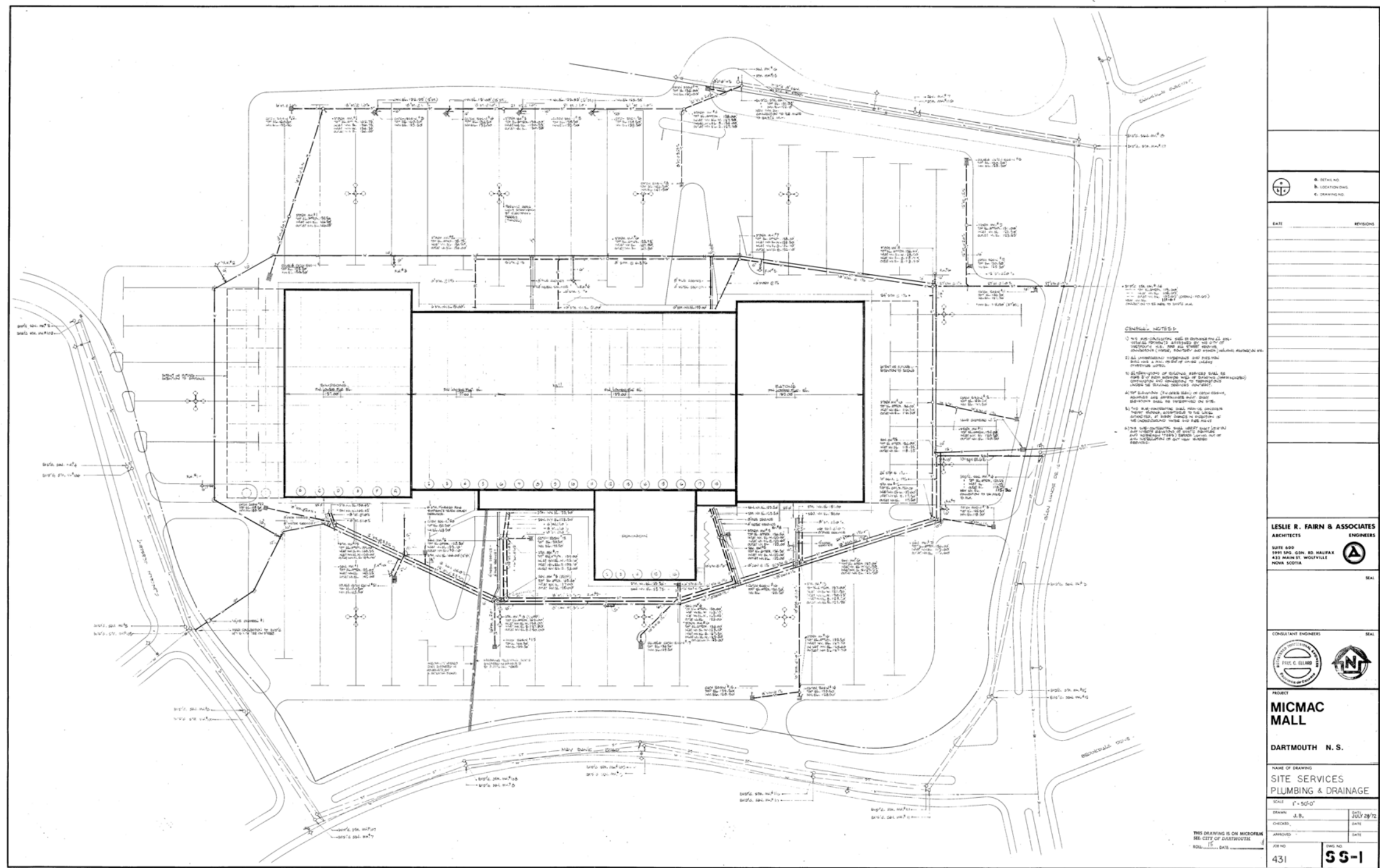


Figure 3.2-15: 1972 plan of plumbing and drainage services for construction of Mic Mac Mall.⁹⁹

⁹⁹ Leslie R. Fairn & Associates.

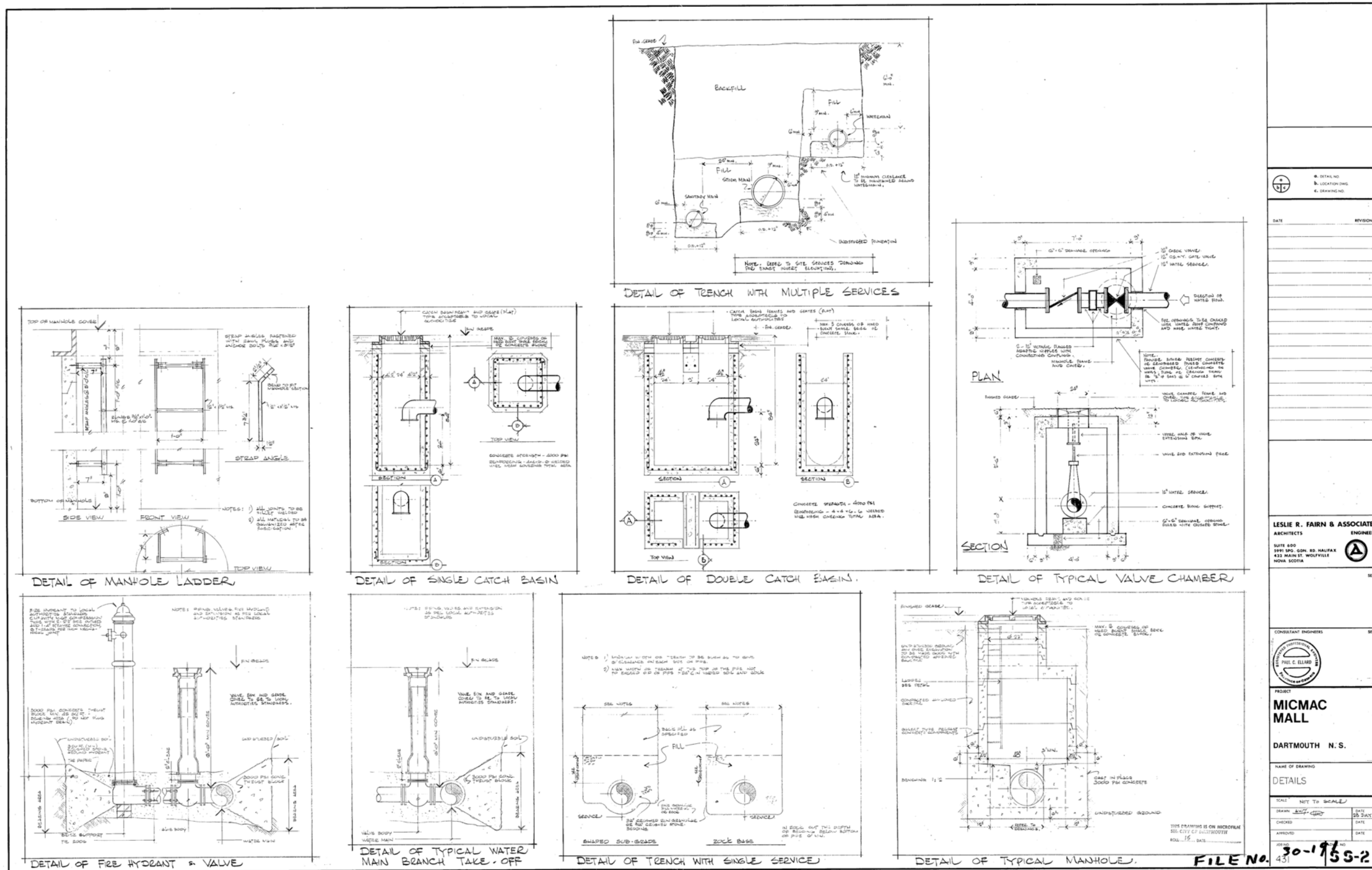


Figure 3.2-16: 1972 details of plumbing and drainage services for construction of Mic Mac Mall.¹⁰⁰

3.3 Predictive Modeling

Predicting the occurrence of L'nuk heritage resources during the Late Pleistocene to the Holocene is a complicated task. Understanding localized geomorphological factors that influenced this rapidly evolving landscape and how the landscape may have been utilized by the ancestors is paramount for the prediction of potential site locations. Often, face value modern visual interpretations of these landscapes are not sufficient. This may lead to unintentionally overlooked resources for this expansive time period.¹⁰¹ However, human movement is seldom tied solely to resource collection and to the ease of passage between resource collection areas. Exchange networks, familial histories, traditions, and ceremonial practices are also important factors to consider when seeking the relationships of past peoples and a given landscape.¹⁰² Nevertheless, the prediction of past resource collection areas and travel corridors, such as the evolution of individual watercourses, can help narrow down potential activity areas. Difficulty in predicting landscape use for a specific study area is also compounded by the lack of localized geomorphological, climactic, and archaeological research. Historic anthropogenic landscape alterations further complicate desktop models. This is additionally muddled by innumerable unknown factors. However, broader regional trends and statistical modeling may offer insight into how the landscape may have been utilized as it evolved, thus, predicting the occurrence of previously unknown resources with greater accuracy and efficiency.

The earliest known occupation of the Maritime Peninsula occurred just before, and roughly overlapping with, the Younger Dryas cooling event that occurred from ~11,000 ¹⁴C to 10,000 BP (13,000 to 11,600 cal BP). During this time glaciers residing in the Highlands of Nova Scotia were reinvigorated, blocking several river systems near these areas with sediments and ice. New glacial lakes and outflows were formed (See Section 2.1).¹⁰³ The Minas Basin Glacier was reactivated and blocked the outlet to the Shubenacadie drainage system with an ice and clay dam. At around 10.6 ¹⁴Cka, this caused the Shubenacadie River and its tributaries to overflow their banks resulting in the flooding of low-lying areas in the Shubenacadie, Musquodoboit and Stewiacke River valleys under 30m. This massive lake, coined Glacial Lake Shubenacadie II, the second such lake flooding the region, essentially bisected the province for the duration of its existence. New outflows were created through the Dartmouth lakes into Dartmouth Cove and near Gibraltar Rock in Musquodoboit Harbour.¹⁰⁴ The Dartmouth outlet flowed into the remnants of the Ancient Sackville River north of Georges Island towards the sea, which at the time, was located at approximately -65m below modern levels, with sea level raising rapidly, and then less quickly after 11 ka.¹⁰⁵ The landscape

¹⁰¹ Suttie et al. 2007.

¹⁰² Lacroix 2015, 31.

¹⁰³ Stea 2011.

¹⁰⁴ Stea and R.J. Mott 1989.

¹⁰⁵ Shaw et al. 2002a, 1867.

eventually rebounded, and ice dammed lakes breached as glaciers retreated as the climate again warmed. These once flooded regions emerged as bogs and fens. Relative sea level reached approximately -40 m below modern levels by 10,000 BP.¹⁰⁶

This significant environmental change of the period would have drastically altered how the landscape could have been utilized by early Palaeo peoples. Several regions had been restricted by flooding and ice, while at the same time, areas above these flooded regions could have been more lucrative for subsistence and mobility. Strandlines surrounding active and former glacial lakes are known activity areas throughout the Palaeo period.¹⁰⁷ The study area is in close proximity to the former glacial lake bounds and a Palaeo find site.¹⁰⁸ Strandlines that could represent potential Palaeo activity areas may be found just to the east and southeast of the study area (Figure 3.3-1).

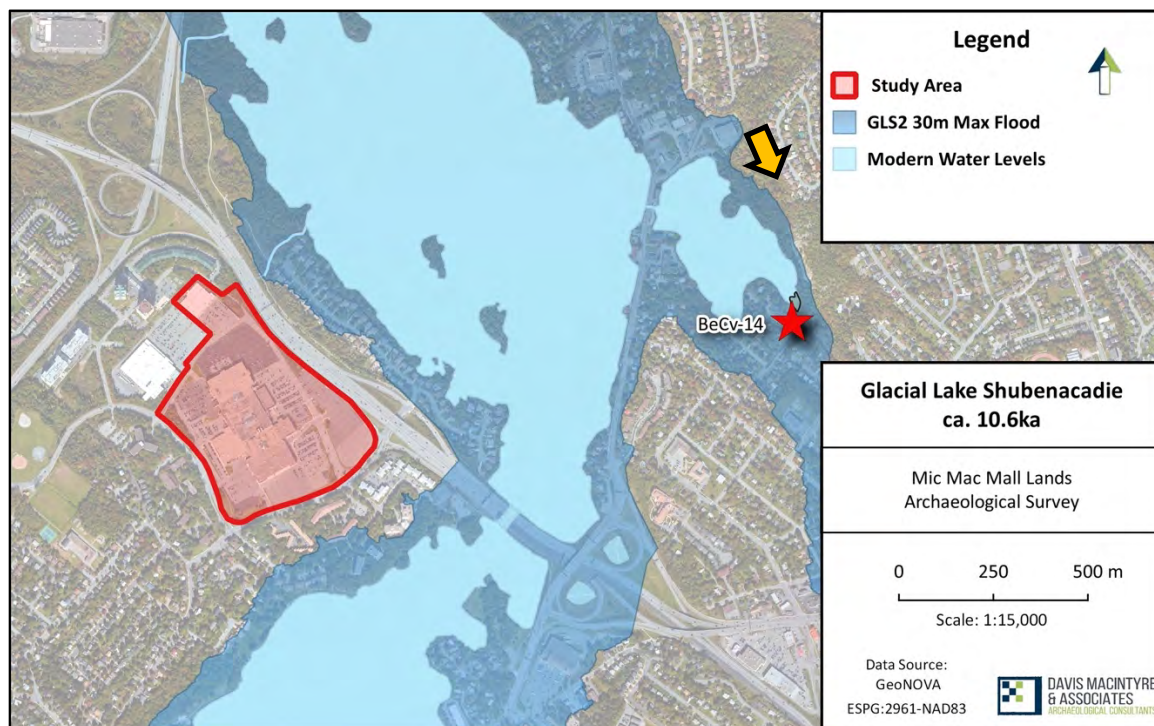


Figure 3.3-1: A map depicting the maximum 30m flood extent of Glacial Lake Shubenacadie 2 ca. 10.6ka in relation to the study area.¹⁰⁹ Note the location of BeCv-14 find location versus the suspected fill removal site (yellow arrow) in relation to the approximate palaeoshoreline of GLS2.

¹⁰⁶ Fader and Miller 2008.

¹⁰⁷ Dickinson and Jeandron 1999; Boyd 2007.

¹⁰⁸ Stea and Mott 1998; McKillop 2019.

¹⁰⁹ Stea and Mott 1998; McKillop 2019.

Archaeological evidence for mobility patterns southward beyond the Debert/ Belmont site into the interior of Nova Scotia is supported by isolated finds of fluted points recovered from approximately 1km east of the study area at Miller Mountain in Dartmouth, and further south at Medford, Sable River and Yarmouth.¹¹⁰ Later Palaeo period artifacts postdating the glacial lakes have been found further inland along the Lower Mersey and at Gaspereau Lake.¹¹¹ Evidence of continuing occupation spanning the Late Palaeo to the Transitional Archaic Period in the region, though sparse, have been found in private collections that are generally attributed to the southwest Nova area.

Predictive modeling for the early Holocene Archaic Period presents a unique set of challenges for archaeologists. Over this approximately 3,000-year period post deglaciation, riverine systems and coastlines of the Maritime Peninsula experienced a series of dramatic changes influenced by numerous factors including localized isostatic rebound, lake formation and collapse, changes in relative sea levels, and rapid sediment depositions.¹¹² Recent studies, following examples from Northern Maine suggest that during the period between 9,000 BP and 7,000 BP, river systems in the region were largely unstable, with near continual gradation and reworking due to accelerated sea level rise. Often, inland archaeological sites from this period are masked by deep aggraded deposits of alluvium. The small fraction of isolated finds representing this period are likely “dislodged” by a multitude of natural and unnatural disturbances.¹¹³ Submerged palaeoshores and ancient channels have been mapped at nearby Lake Banook indicating significant water fluctuations in the Dartmouth Lakes throughout the postglacial period.¹¹⁴ By 6,000 BP, sea levels had largely stabilized, rising approximately 0.36 m/100 years.¹¹⁵ The last remaining lake in Halifax Harbour, Lake Bedford, transitioned from freshwater to marine as the waters raised over the shallow sill at The Narrows around 5,700 BP.¹¹⁶ By 5,000 to 4,000 BP, the lake and river systems in Nova Scotia largely stabilized coinciding with the latter half of the Late Archaic Period.¹¹⁷ By 3,000 BP, Halifax Harbour had resembled its current conditions with its shoreline residing less than 5m from modern levels.¹¹⁸

The general location of Woodland to Historic period occupation sites along the river systems and coastlines of Nova Scotia are largely predictable owing, in part, to river stabilization and the characteristic slow predictable sea level rise of this period. Yet, the increasing pace of mid-20th century sea level rise has left near coastal sites from this

¹¹⁰ Davis and Christianson 1988., Betts et al. 2018.

¹¹¹ Pentz 2008, 167.

¹¹² Murphy 1998, 93.

¹¹³ Murphy 1998, 93.

¹¹⁴ Webster et al. 2015.

¹¹⁵ Baechler 2017, 394.

¹¹⁶ Fader and Miller 2008.

¹¹⁷ Shaw et al. 2002c, 143.

¹¹⁸ Fader and Miller 2008, 6.

period vulnerable to rapid erosion and loss. Sea level rise and increasing storm severity will undoubtedly affect upstream watercourse alignments and sediment depositions, especially in low lying areas, in the years to come with upper limits of SLR projections at 1.3m over the next 100 years.¹¹⁹ This process has submerged known L’nuk cultural resources first recorded in the early 20th century and has undoubtedly caused the erosion of numerous unknown sites along coastlines and river systems within recent memory. Modern development activities within the HRM, including the construction of the Shubenacadie Canal System, has also effectively masked the former cultural landscape. Watercourse alteration and development in this area has increased the likelihood of encountering cultural resources out of their original depositional context. Though potentially displaced, these resources continue to hold significant cultural value to the Mi’kmaw and require great care and consideration. These resources enrich the evolutionary story of the cultural landscape of greater Kijipuktuk.

Understanding the geomorphological changes of shorelines and individual river systems is paramount in the prediction of L’nuk cultural resource potential due to the strong connections between Mi’kmaw, waterways, and bodies of water.¹²⁰ Yet, modeling landscape change and its subsequent landscape usage is a challenge that is often limited to the amount of prior localized geological and archaeological research. Historic alterations can further complicate these interpretations. However, the use of ground-truthed archeological potential buffers can be used to statistically highlight areas to inform interpretations in the field for archaeological potential when previous research is unavailable. Following the model required to be used for archaeological consulting by New Brunswick Archaeological Services (developed from the Sevogle River Test Plot),¹²¹ a 50-metre high and an 80-metre moderate L’nuk archaeological potential buffer was created for the study area using the Nova Scotia Topographic DataBase - Water Features layer (Figure 3.3-2).

Of the 14 sites attributed solely to L’nuk occupation recorded within 15-kilometre radius of the study area, 12 sites lie within these predictive buffers providing an accuracy rate of 86% using the Sevogle model. It is important to note that many of these sites were recorded before the implication of handheld GPS. Their locations may rely solely on memory and human transcription; therefore, they may not be exact. Site locations are recorded within the MARI database as a single coordinate, therefore, recorded site locations are reflective of overall mobility trends. It should also be noted that the sites recorded within urban HRM that lie outside potential buffers may be due to historic watercourse alteration or these sites are related to non-watercourse-based movement.

¹¹⁹ Forbes et al. 2009.

¹²⁰ Thwaites 1896; Cook 2007, xxiii.

¹²¹ Archaeological Services 2012.

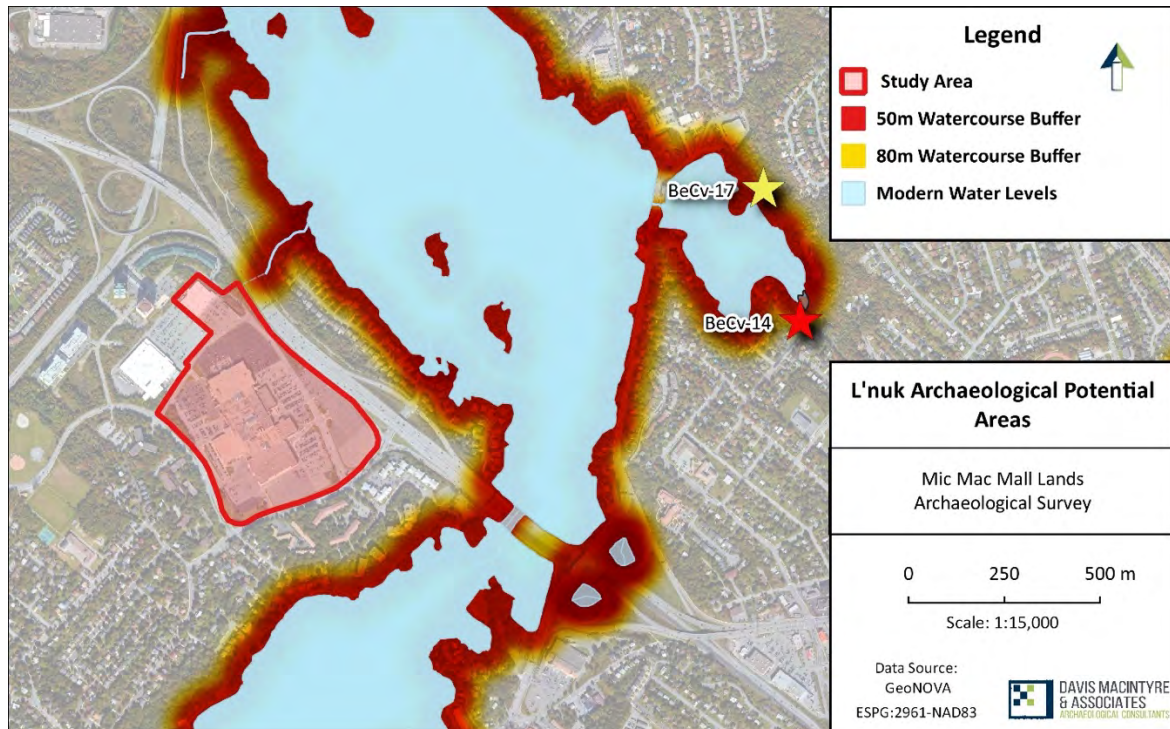


Figure 3.3-1: The study area with L'nuk activity potential buffers.

3.4 Field Reconnaissance

A field reconnaissance was conducted by April MacIntyre on November 29, 2022 under partly cloudy skies and sub-zero temperatures. The field reconnaissance consisted of a pedestrian survey of all accessible exterior areas of the property. GPS tracklogs were collected and photographs were taken (Figure 3.4-1).

The reconnaissance began in PID 00100446 (the existing mall) on the east central side of the mall parking lot (near entrance 3) in the early morning hours prior to opening hours so as to avoid the bulk of parked vehicles and traffic. The reconnaissance proceeded northward around the mall building in the parking lot to the north side of the Hudson Bay north entrance. Following that, the reconnaissance moved to the southeast parking lot of PID 00100446 and proceeding around the south side of the mall and then northward between the mall and Mic Mac Boulevard, including the Halifax Transit terminal and treed areas to the north and south. From there, the reconnaissance moved to PID 00616946 – a slender parcel on the north side of the study area beside the Irving corporate headquarters' parking lot – and then on to PID 40173676 (currently Chapters). The final area runs along the slope between the mall parking lot and Highway 111 southward to include PID 40173684 and 40173692, an area frequently used for overflow parking at the southeast end of the study area.

Attention was paid to underground services which indicates previous disturbance, evidence of subsidence or heave that may indicate potential buried archaeological features, as well as level of infilling and/or excavation and areas of potential original/undisturbed soils (Plate 1). GPS waypoints of most underground civil infrastructure were collected in order to gain a general perspective of previous disturbance throughout the study area (Figure 3.4-2). Several water valves were noted throughout the study area, for which GPS waypoints were not collected. Likewise, several sprinkler systems were noted along the building indicating the presence of associated underground infrastructure and similarly, GPS waypoints were not collected for these.

In general, the parking area on the north, east and south sides of the existing mall indicate a significant amount of infilling while the west side of the study area appears to be nearer to the original grade. Along the east side, the grade change is between three and five meters. At the southeast corner of the study area, a concrete retaining wall runs along the north side of Mic Mac Boulevard (Plate 2). On the west side of the main entrance to the mall property off Mic Mac Boulevard, a small triangular treed area was noted (Plate 3). Although some debris including large rocks and concrete litter this area, it appears to be relatively undisturbed and is one of the few areas within the study area that has not been significantly altered. This area lies below a steep slope where the parking lot rises approximately 3 meters to the northwest (Plate 4). West of here, proceeding along the north side of Mic Mac Boulevard, the land is characterized by a landscaped lawn paralleling the road which rises steeply by two to four meters to the south-facing parking lot. The slope here is covered in rose bushes (Plate 5).

Along the west side, the landscaped lawn continues along the east edge of Mic Mac Boulevard for 145 meters, being interrupted by a driveway on the southwest side. The elevation change here is minimal and the grade continues northward through the transit terminal (Plate 6 and Plate 7). Northward beyond the transit terminal, a narrow strip of forested ground runs along the east edge of Mic Mac Boulevard (Plate 8). This area gradually slopes northward and, although it is littered with rock that has been pushed up during grading for the adjacent parking lot the east, it is relatively undisturbed (Plate 9). On the west side of the building near a loading area (loading dock 2), a natural gas pipeline runs underground and connect to the building (Plate 10). Further north, between the west entrance to the Bay and mall entrance 1, propane tanks were noted in the parking lot (Plate 11).



Figure 3.4-1: GPS Track logs collected during the reconnaissance.

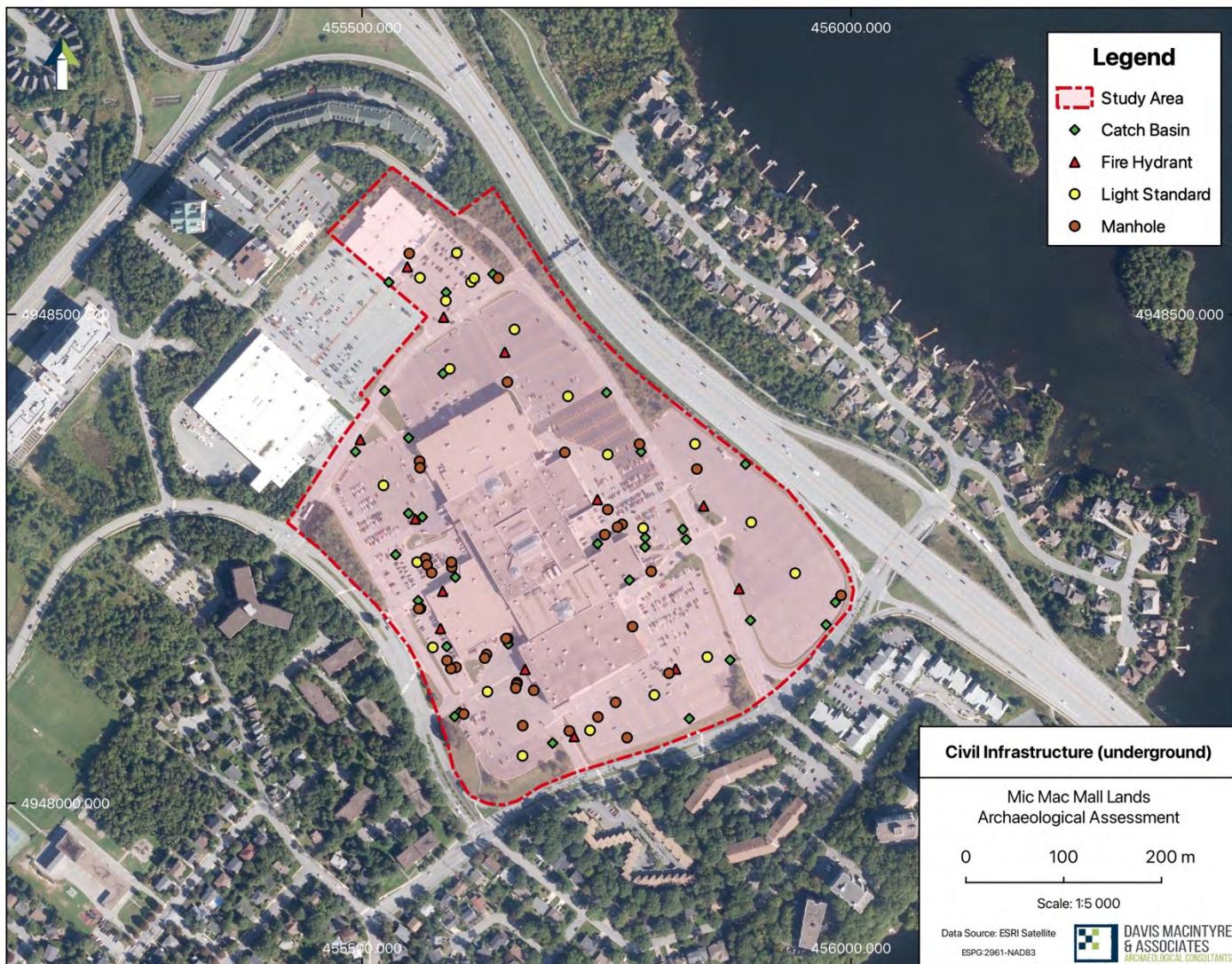


Figure 3.4-2: GPS waypoints collected during the reconnaissance, indicating the approximate locations of underground infrastructure.

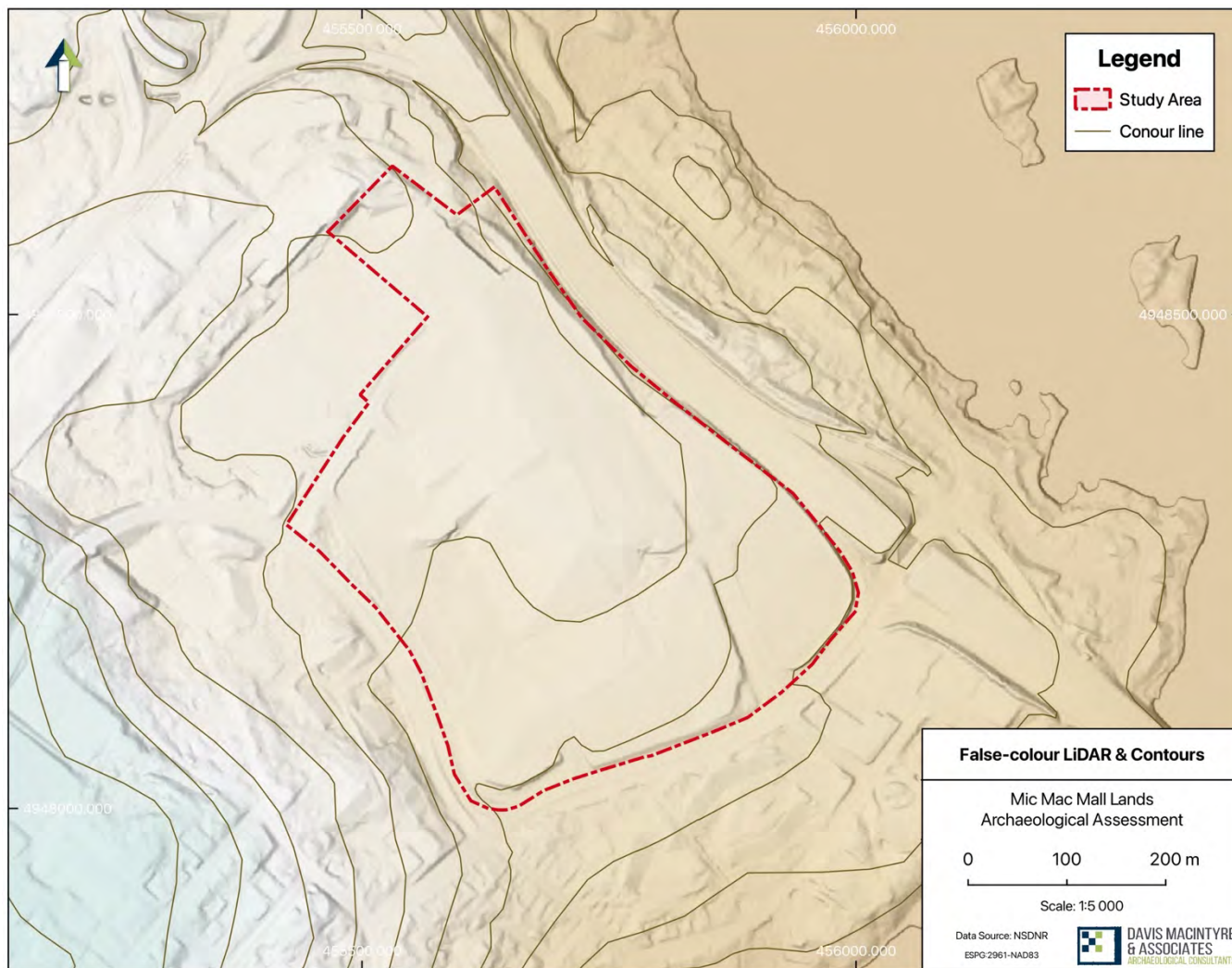


Figure 3.4-3: False-color LiDAR with topographic contour lines showing grade changes throughout the study area.

Along the north edge of PID 40173676 (at the rear of the Chapters building), the land slopes upward by 3 meters to a more natural grade, indicating that the parcel in question (and the adjacent Irving property to the west) have been excavated out and levelled (Plate 12). This is clearly evident on LiDAR mapping (Figure 3.4-3). A modern trail runs out to Horizon Court (Plate 13). Southeast, beyond Chapters, the land drops dramatically to the east by 5 meters and the parking lot is faced with stone forming a retaining wall that faces Horizon Court (Plate 14 and Plate 15). Between Horizon Court and Highway 111, the land is rugged and slopes dramatically, being significantly altered by construction of the road and the Highway (Plate 16). This slope continues southward until it reaches the parking lot at the southeast end of the study area (PID 40173684 and 40173692) (Plate 17).

4.0 RESULTS AND DISCUSSION

The historic background indicates that Mi'kmaq and their ancestors have had a long-standing and intensive tradition of land use and occupancy throughout the Halifax/Dartmouth region since time immemorial. They took advantage of well-established travel routes via the lakes and rivers, particularly along the Shubenacadie waterway, to travel between the coastal and interior regions and had encampments along these waterways, as the archaeological record attests to.

In the historic period, the first known Euro-Canadian settlers obtained grants near the study area soon after the founding of Dartmouth in 1750. Though sparse Acadian use of the Dartmouth area is known, documentation is illusive. Occupation of the study area did not occur in earnest until the mid 19th century. Crichton Avenue was occupied historically by the African Nova Scotian community beginning in the early to mid 19th century. “The Avenue” and its nearby settlement, “The Extension” as they were known, were focussed around Crichton Avenue where a close knit community included a church and cemetery. The remains of the latter (and possibly the former) were disturbed when apartments were constructed in the 1970s on the west side of Mic Mac Boulevard. Historic maps and air photos suggest that the majority of settlement was located immediately west of the study area, though some vestiges may have extended into the study area. Historic maps suggest that by the mid-20th century, the study area was cleared fields, likely a part of Keeler’s farm.

The archaeological reconnaissance indicated that a significant amount of infilling has likely occurred throughout much of the study area, though some excavation likely occurred near the north end of the study area. A few very small areas of potentially undisturbed ground remain along the west side of the study area and at the southwest corner of the main entrance to the parking lot off Mic Mac Boulevard. Significant in-ground infrastructure is present throughout the study area and it is likely that some of this, particularly the catch basins and manholes, may have extended into natural (pre-

infilling) levels. However, the potential remains for undisturbed soils throughout the study area. The greatest potential for intact archaeological resources exists along the west side of the study area between the rear of the mall building and Mic Mac Boulevard, as well as along the south end of the study area between the mall and Mic Mac Boulevard where historic land use is documented (Figure 4.0-1).

5.0 RECOMMENDATIONS AND CONCLUSIONS

Based on the results of this assessment, the most likely areas to encounter intact archaeological resources are located along the west and south sides of the study area where minimal disturbance and/or significant infilling has occurred. The area has been identified as low potential for archaeological resources related to L'nuk land use. However, the potential exists for historic period archaeological resources, particularly those related to the 19th century Black settlement that has been documented in the vicinity. The majority of the study area appears to have been cleared fields prior to development of the Mic Mac Mall in the 1970s, though extensive settlement is known just beyond the western and southern margins which may have extended into the study area. Therefore, should these areas be expected to be impacted by ground disturbance below the level of modern fill, it is recommended that they be monitored by a qualified archaeologist in order to ensure that no intact archaeological resources are impacted.

In the event that archaeological resources are encountered at any point during ground disturbance and an archaeologist is not present, it is required that any ground-disturbing activity be halted immediately and the Coordinator of Special Places (902-424-6475) be contacted regarding a suitable method of mitigation. Should the impact area be modified to expand beyond the currently understood range, a qualified archaeologist should be consulted to evaluate whether further archaeological assessment may be required.

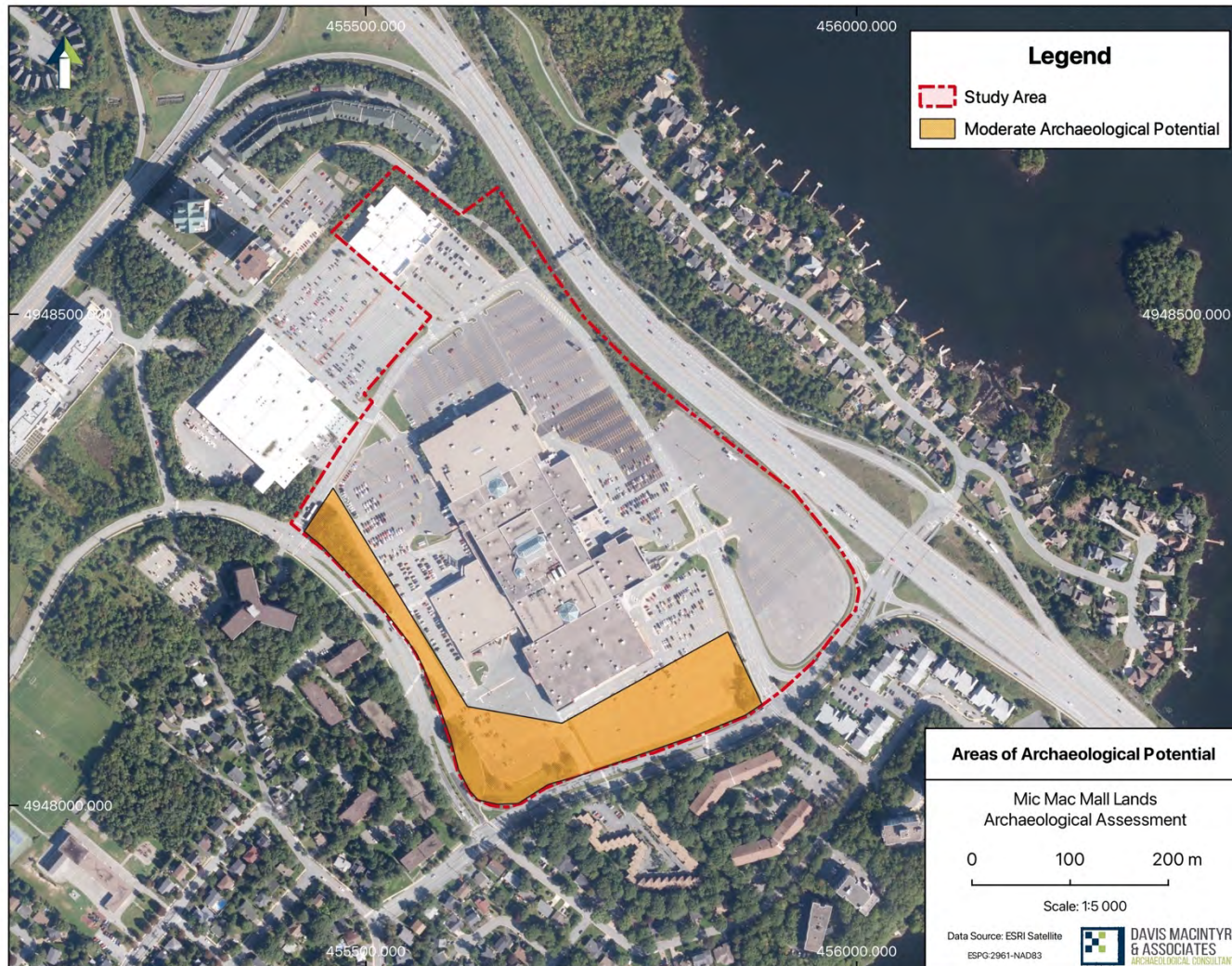


Figure 4.0-1: Areas of archaeological potential identified through the archaeological assessment.

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PLATES



Plate 1: Looking north over the east parking lot near the east entrance to the Bay, showing a catch basin in the foreground, fire hydrant in the distance at right, as well as a light standard.



Plate 2: Looking east along the north side of Mic Mac Boulevard along the concrete retaining wall at the southeast end of the study area, which depict the level of infilling for the parking lot.



Plate 3: Small triangle of treed land on the west side of the main entrance off Mic Mac Boulevard which appears to be largely undisturbed, looking west.



Plate 4: The slope along the north side of Mic Mac Boulevard just west of the main parking lot entrance, looking west.



Plate 5: The elevation change between the landscaped lawn along the north side of Mic Mac Boulevard and the parking lot at the southwest end of the study area, looking west. Kings Arms Apartments, which were built over the Avenue's cemetery and church can be seen in the distance at right.



Plate 6: The southwest corner of the study area looking north along the east side of Mic Mac Boulevard at a landscaped area with minimal grade change.



Plate 7: The west side of the study area along the east side of Mic Mac Boulevard, looking north, where the grade change is minimal.



Plate 8: Looking north to the tree area immediately north of the Halifax Transit terminal. Mic Mac Boulevard is seen at right.



Plate 9: Looking north through the treed area between the lane to the transit terminal (to right of frame) and Mic Mac Boulevard (to left of frame).



Plate 10: Looking north along the rear, or west side of the mall. The transit terminal can be seen to the left and natural gas connections can be seen on the right.



Plate 11: Looking north along the rear, or west, side of the mall at above-ground propane tanks. Note the elevation change between the parking lot in the foreground and that in the rear.



Plate 12: Looking northeast along the rear of the Chapters building showing the elevation change between the more natural grade at left and what has presumably been excavated out at the north edge of the study area.



Plate 13: The gravel pathway between Chapters and Horizon Court.



Plate 14: Looking north along the edge of the Chapters parking lot at a stone retaining wall.



Plate 15: The treed area between Chapters' parking lot and Horizon Court looking north and showing the stone retaining wall and the sloping area.



Plate 16: The dramatic slope between Horizon Court and Highway 111, looking south.



Plate 17: The parking lot at the southeast end of the study area, looking north.

APPENDIX A: HERITAGE RESEARCH PERMIT



Heritage Research Permit (Archaeology)

Special Places Protection Act 1989

(Original becomes Permit when approved by
Communities, Culture and Heritage)

Office Use Only
Permit Number:

A2022NS201

Greyed out fields will be made publically available. Please choose your project name accordingly	
Surname MacIntyre	First Name April
Project Name Mic Mac Mall Lands Assessment	
Name of Organization	
Representing (if applicable)	
Permit Start Date 24 November 2022	Permit End Date 31 December 2022
General Location: Micmac Boulevard, Dartmouth, NS	
Specific Location: (cite Borden numbers and UTM designations where appropriate and as described separately in accordance with the attached Project Description. Please refer to the appropriate Archaeological Heritage Research Permit Guidelines for the appropriate Project Description format)	
Permit Category: Please choose one	
☐ Category A – Archaeological Reconnaissance	
☐ Category B – Archaeological Research	
☒ Category C – Archaeological Resource Impact Assessment	
☒ I certify that I am familiar with the provisions of the <i>Special Places Protection Act</i> of Nova Scotia and that I have read, understand and will abide by the terms and conditions listed in the Heritage Research Permit Guidelines for the above noted category.	
Signature of applicant	Date 10 November 2022
Approved by Executive Director	Date 11/23/22