

City of Barrie

Stage 1 Archaeological Assessment

Allandale Train Station Lands

Part of Lots 8 and 9, Concession XIV

Historic Township of Innisfil, Former Town of Allandale,
City of Barrie, Simcoe County, Ontario

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PIF Number: **P123-0342-2017**

Related CIF's and PIF's:

CIF: 2001-057-001, CIF 2001-057-004,

PIF: P018-058-2004, P058-580-2009, P058-767-2011, P058-901-2012, P158-0015-2016, P128-0129-2016.

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February 22, 2018

Revised Report

Project Number: 60537565

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Revision #	Date	Revised By:	Revision Description
1	01/26/2018	Malcolm Horne	MTCS Review of the Archaeological Assessment Report

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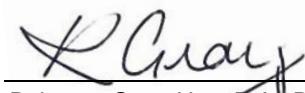
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Executive Summary

AECOM was retained by the City of Barrie to conduct a Stage 1 Archaeological Assessment (AA) for the Allandale Train Station Lands located at 24 Essa Road, approximately 1.5 km south of downtown Barrie, along the City's waterfront. The study area is bound to the north by Lakeshore Drive, to the west by Tiffin Street / Essa Road and to the south by the Allandale Waterfront GO Station and Gowan Street. It is 3.7 hectares in size and is comprised of the historic Allandale Train Station buildings, a residential / commercial structure in the northwest corner, manicured lawns, paved roads and some overgrown scrub areas associated with what was once a lawn bowling facility in the western portion of the property.

The Allandale Train Station Lands, as currently defined, have been subject to seven previous archaeological studies in the past 16 years, which have included all phases of assessment (Stages 1 - 4). The results of these various studies indicate that despite approximately 150 years of railway related disturbance occurring on the property, there still remains the potential for identifying intact archaeological deposits. The Middle Iroquoian Allandale site (BcGw-69) for example, which dates to ca. A.D. 1300-1350, was found beneath numerous layers of artificial fill by A.F.B.Y Archaeological and Heritage Consultants in 2001. A significant portion of the site was excavated later that year and cleared of further archaeological concern. During that excavation the portion of a stone building foundation associated with one of the earlier 19th century train stations was also exposed and documented.

All but one of the previous archaeological assessments that have been conducted on the subject property have identified the potential for finding intact archaeological remains and have therefore recommended additional archaeological work. While these past assessments conformed to "best practices" at the time of their completion, there remain unresolved issues to be addressed. Specifically, to determine what is the actual archaeological potential of the portions of the property that are beyond the limits of the Allandale site (BcGw-69), and whether or not there is the potential to encounter human remains on the subject property.

This report provides the rationale, methods and results of the Stage 1 AA for the Allandale Train Station Lands. Background research was completed in order to detail the archaeological and land use history of the study area and evaluate its archaeological potential. This included a review of documentary sources, historic maps, GIS data for subsurface utilities/boreholes, satellite imagery and previous assessments. In addition, AECOM conducted a Stage 1 field review of the study area on April 18, 2017 in order to gain first-hand knowledge of local disturbance / construction features that might not be visible on project mapping.

The results of the Stage 1 assessment indicate that, despite the deep and extensive ground disturbance and numerous in-filling episodes that have taken place on the Allandale Station Lands over the last century and a half, there still remains the potential for the presence of intact archaeological deposits. This is based on the presence of the previously documented Allandale Station site (BcGw-69), the amount of fill in some sections of the property (which help preserve deeply buried deposits) and that some sections of the study area have not been systematically tested.

Given the results of this assessment, and in consultation with MTCS, AECOM makes the following recommendations:

- 1) Stage 2 test pit survey at 5m intervals consistent with *Section 2.17, Survey in Deeply Buried Conditions* of the *MTCS Standards and Guidelines for Consultant Archaeologists (2011)* should be completed for the entirety of the subject property (areas shaded green and pink in **Figure 13**). This will be done to determine where fill is distributed across the property and where natural soils occur

- 2) For those areas containing deep stratigraphy and visible presence of cultural stratigraphic layers (positive test pits), 1m² test units excavated at 10 metre intervals will be used to establish the depth of the deposits and stratigraphic composition. The 10 metre spacing is consistent with MTCS standards where there is the expectation that Stage 4 assessment will be required. The test units should be excavated at least 5cm into subsoil or to a depth of 1 to 1.2m (the maximum depth safely achievable in a 1m² unit). The depth and extent of the test units must be recorded as accurately as possible (i.e., to the centimeter) in order to ensure that ongoing concerns for the archaeological site can be carefully managed. In addition, geotextile fabric should be placed at the bottom of all test units to provide a physical boundary between excavated and non-excavated depths. All test units should be backfilled immediately following investigation. If subsoil is not reached in these test units, no construction disturbance can take place below these depths without the presence of a licenced archaeological consultant to monitor construction in accordance with the *Section 2.1.7., Standard 4 of the Standards and Guidelines*, or these areas are subsequently cleared by Stage 4 excavation."
- 3) Where units are greater than 1 to 1.2 m deep, mechanical trenching will be employed to verify stratigraphy and depth. Trenches will connect the Stage 3 units that have already been excavated to provide a clearer stratigraphic picture. This can only be done in limited areas where fill layers have been clearly identified and will not be used in areas where human remains have been encountered previously. If natural or cultural soils or strata are identified, mechanical trenching must stop and hand excavation must be used. The trenches will be excavated in 10 cm layers and content will be placed on tarp for screening. The mechanical trenching will be done in accordance with the *Section 2.1.7., Standard 3 of the Standards and Guidelines*. The test trenches should be excavated to at least 5cm into subsoil or to a maximum depth that is safely achievable in a 1 to 1.5m wide trench. The depth and extent of the test trenches must be recorded as accurately as possible (i.e., to the centimeter) in order to ensure that ongoing concerns for the archaeological site can be carefully managed. All test trenches should be backfilled immediately following investigation. If subsoil is not reached in these test trenches, no construction disturbance can take place below these depths without the presence of a licenced archaeological consultant to monitor construction in accordance with the *Section 2.1.7., Standard 4 of the Standards and Guidelines*, or these areas are subsequently cleared by Stage 4 excavation."
- 4) All Stage 2/3 Archaeological Assessment artifact documentation and analysis will follow the *Standards and Guidelines for Consultant Archaeologists (MTCS 2011)*.
- 5) All faunal remains recovered from the Stage 2/3 assessment must be retained and their location within the test pit / test unit be documented accordingly. This faunal material must be analyzed by a human osteologist prior to any Stage 2/3 mechanical trenching to ensure that no human remains will be unnecessarily disturbed or damaged. Any human remains encountered will be analyzed by a human osteologist and the handling and care of the remains must be done in a respectful way (with input from the engaged Indigenous communities), and should adhere to the *Funeral, Burial and Cremation Services Act* and *Sections 174-184 of Regulation 30/11*. It is recommended that the human osteologist assigned to this project have a minimum of a Master's Degree in Bioarchaeology with a focus on human osteology and/or human skeletal biology. Experience should include at least two years of experience in the direct handling and analysis of human remains and, specifically, the analysis of highly fragmentary human remains. Knowledge of the ethics and protocols regarding handling remains is a must as well as experience in implementing culturally specific excavation and handling protocols for mitigating First Nation ancestral burials. Experience in the process of human remains excavation is preferred. Expertise should also include a working knowledge of the *Standards and Guidelines for Consultant Archaeologists (MTCS 2011)* as it pertains to overall site excavation and Ontario archaeological practices."
- 6) All Stage 2 and 3 work must be done with the engagement with First Nation groups that have an interest in the area thereby conforming to 'best practices' and the MTCS 2011 Bulletin *Engaging in Aboriginal Communities in Archaeology*.
- 7) It is understood that the Ontario Heritage Trust protects the Allandale Train Station buildings with a heritage conservation easement agreement (identified as Part 3 & 4 in the R51-Plan (**Supplemental Documentation: Figure 3**)). As such, the OHT must be consulted prior to undertaking any Stage 2/3 assessment within the easement property.
- 8) In areas that are visibly disturbed (shaded red in **Figure 13**), Stage 2 archaeological monitoring must be conducted by a licenced consultant archaeologist during future construction / land altering activities as per *Section 2.1.7 Survey in deeply buried conditions, Standards 4 and 5 of the Standards and Guidelines*.

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Supplementary Documentation (Under a Separate Cover)

Figure 1: Previous Archaeological Assessments on the Subject Property
Figure 2: Late Woodland Sites within 3 km of the Study Area
Figure 3: R-Plan provided by the Ontario Heritage Trust showing the protective easement surrounding the Allandale Station buildings (identified as Part 3 & 4)

1. PROJECT BACKGROUND

Development Context

AECOM was retained by the City of Barrie to conduct a Stage 1 Archaeological Assessment (AA) for the Allandale Train Station Lands located at 24 Essa Road on Lots 8 and 9, Concession 14 (formerly of Innisfil Township), approximately 1.5 km south of downtown Barrie, along the City's waterfront. The study area is bound to the north by Lakeshore Drive, to the west by Tiffin Street / Essa Road and to the south by the Allandale Waterfront GO Station and Gowan Street. The 3.7 hectare study area includes the extant Allandale Train Station buildings, parking lot, two access roads, manicured lawns and some overgrown scrub areas associated with what was once a lawn bowling facility in the western portion of the property.

The objective of this Stage 1 archaeological assessment is to provide information about the property's geography, history, previous archaeological fieldwork and current land conditions in order to evaluate the study areas archaeological potential and make recommendations for Stage 2 assessment. The Allandale Train Station Lands, as currently defined, have been subject to seven previous archaeological studies in the past 16 years, which have included all phases of assessment (Stages 1-4). The results of these various studies indicate that despite approximately 150 years of railway related disturbance occurring on the property, there still remains the potential for identifying intact archaeological deposits.

While these past assessments conformed to "best practices" at the time of their completion, there remain unresolved issues to be addressed. Specifically, to determine what is the actual archaeological potential of the portions of the property that are beyond the limits of the Allandale Station Site (BcGw-69), and whether or not there is the potential to encounter human remains on the subject property. This assessment is being completed as a part of a due diligence exercise by the City of Barrie.

The Stage 1 AA was completed under the project direction of Adria Grant [Licence #P131] (AECOM) and archaeological licence of Glenn Kearsley [licence #P123] (AECOM). Work was completed in accordance with the provisions of the Ontario Heritage Act (2005) and with the Ontario's Ministry of Tourism, Culture and Sport's Standards and Guidelines for Consultant Archaeologists (2011). Permission to access the property to conduct all required archaeological fieldwork was granted by the City of Barrie. No limits were placed on this access. This report provides the results of the Stage 1 AA and provides several recommendations.

Historical Context

1.1.1 Pre-Contact Period Overview of Southern Ontario

Although glaciers retreated from southern Ontario some 13,000 years ago, the massive weight of these ice sheets left the earth's crust compressed, lowering the area below sea level and allowing sea water to flow inland forming the Champlain Sea in what is now the St. Lawrence and Ottawa River valleys. Over the next 2,000 years, the Champlain Sea gradually receded as the earth's crust rebounded, eventually permitting the first inhabitants to move into the region 11,000 radio-carbon dated years ago. The barrier presented by the Champlain Sea explains why sites of Ontario's first occupants, Paleo-Indians, (ca. 11,000 – 9500 B.P.) are largely absent from that area.

Instead, Paleo-Indian sites in the larger region are concentrated in central and southwestern Ontario. Paleo-Indians were widely scattered, nomadic groups that occupied the sub-tundra-like environment that prevailed in southern Ontario at the end of the Pleistocene Era. Past research indicates that these groups likely followed big game (such as Caribou) across the landscape, preferring to camp on high ground, immediately adjacent to water sources, such as glacial lakes or spillways, where smaller game and plant foods would have been harvested. Relatively large fluted projectile points are the hallmark of the Paleo-Indian toolkit. In Simcoe County, Lake Huron / Georgian Bay were much larger than their current size, and inundated the low-lying areas surrounding Lake Simcoe like Barrie, Cookstown and Alliston. The first people in this region likely migrated north from the southern warmer climates when both Lake Erie and Lake Ontario were much smaller (Munson & Jamieson 2013: 26).

The subsequent Archaic period (9,500 B.P. to 2,800 B.P.) is characterized by a warming climate and a temperate forest environment which was crisscrossed by streams and rivers and surrounded by large fresh water lakes that would have supported many species of fish, shorebirds and mammals. Small hunting and gathering bands (20-50 people) utilized the lake shores during the spring and summer months, then broke into smaller family groups and moved inland for the fall and winter to hunt and trap. Archaic period tool assemblages consisted of both chipped and ground/polished stone implements indicating that a wider variety of activities, such as fishing, woodworking and food preparation/grinding, were now taking place.

The Archaic period is followed by the Woodland period (ca. 2800 B.P. to 350 B.P.) which is subdivided into three phases. The Early Woodland period (ca. 2800 – 2400 B.P.) is characterized by the introduction of pottery for storage and an increase in regional trade networks. Trading of exotic goods, such as obsidian, silver, copper and sea shells persists into the Middle Woodland period (ca. 2400 B.P. to 1100 B.P.) when horticulture was introduced to Ontario. The adoption of food production brought on a more sedentary lifestyle in seasonal villages, and more elaborate burial ceremonies – including the construction of large, earthen mounds. The Late Woodland period (ca. 1100 – 350 B.P.) is marked by the establishment of palisaded villages (often containing dozens of longhouse structures), intensified horticulture and an increase in regional warfare.

Numerous Late Woodland have been identified by archaeologists in and around the Barrie area including several within close proximity to the Allandale Station Lands (see **Figure 2** in the Supplementary Documentation). These village / hamlet sites were often linked by well-established trail networks that were documented by early historian Andrew F. Hunter. In his late 19th / early 20th century research into the Late Woodland sites in the area, Hunter stated that “the remains of Huron [Wendat] villages have been found at intervals along these trails; stone implements, iron tomahawks and knives and other relics of the seventeenth century, have also been picked up in abundance near them” (1888; 104). Information about the location of these trails was largely derived from original settlers of the area who made use of them prior to the construction of existing and historic roadways (Hunter, 1888; 105). The most notable trail found in the general vicinity of the study area is called the “trail to the Neutrals” or the “Neutral Trail” which ran north to south through Vespra Township and crossed along the head of Kempenfelt Bay (Hunter, 1907; 46). This route was located just west of current day Lakeshore Drive in Barrie and followed the sandy ridges of Kempenfelt Bay through this otherwise low marshy area (Hunter, 1907; 46).

1.1.2 Post-Contact/Historical Overview

The County of Simcoe was named after Lieutenant Governor John Graves Simcoe, the first Lieutenant Governor of Upper Canada from 1791-1796 (Armstrong 1930:265). Innisfil Township was one of 19 townships within Simcoe County, and was first surveyed in 1822. The name ‘Innisfil’ is taken from the word Innisfail, a poetical name for Ireland from which some of its earliest inhabitants emigrated (Armstrong 1930: 141). It encompassed a total area of 27,782.9 hectares and was bounded to the north by Kempenfelt Bay, to the east by Lake Simcoe, to the west by Essa Township and to the south by West Gwillimbury Township (Beldon 1881:14). During the period of early settlement, the landscape consisted of rolling topography and productive forests interspersed by numerous cedar

swamps that were subsequently drained and cleared. Soil was mostly clay-loam and provided good farming land for these early pioneers.

Unlike surrounding townships, Innisfil seemed to be settled north-south with the earliest residents populating the area adjacent to Kempenfelt Bay (present day Big Bay Point). The first saw mill in the township was built here in 1823 with a grist mill appearing 12 years later. With the opening of the Penetanguishene Road (modern day Yonge Street) in 1825, the settlement of the Township began to rise slowly with most residents undertaking agricultural pursuits. By 1842 the population of Innisfil was 762 with 1865.2 ha in cultivation. In 1850 the population had doubled (1,807) with 50% more land being farmed along with post offices, churches and stores (Beldon 1881:14). There were several settlements in the Township by the second half of the 19th century, including Allandale, Belle Ewart, Henry's Corner's (now Thornton), and Perry's Corners (now Cookstown). With the arrival of the Ontario, Simcoe, and Huron Railway (later the Hamilton and Northwestern Railway) in 1853, the link between Lake Ontario (at York) in the south and Lake Huron to the north was complete. Additional settlers continued to arrive and by 1880, the Township boasted a population of 5,500 with 4.05 ha cleared for every person. Barrie was the largest of the historic settlements with a population of 6,000 in 1895.

Prior to the establishment of Allandale (originally called Barrie Depot) the area was largely uninhabited by Euro-Canadians. Once the Ontario, Simcoe and Lake Huron Union Railroad Company decided on this location for a station, a railway construction camp was established. In the fall of 1852 a crew was hired to cut the trees from John Warnica's property several kilometres to the south in order to clear an area for the station and railroad tracks. This was completed in the spring of 1853 (Cotton 2004: 29) and soon the small settlement was formed. Allandale was first established by settlers such as John Boon, Collingwood Harris, Nathaniel King, Bernard Sheridan, William Hammill and Thomas McMahon (Rudachyk et. al, 2005: 94). The OS&HU rail lines within the Town of Allandale arrived in 1853 and from that point on, the economic stability of the town was largely dependent on the prosperity of the railway (Rudachyk et. al, 2005: 94). A large portion of the goods transported by the OS&HU Railroad and the Simcoe and Muskoka Junction Railway (extending from Barrie through Orillia and Gravenhurst) was timber in the 1860s and 1870s (Rudachyk et. al, 2005: 94). An additional rail line from the Hamilton & North Western Railway was incorporated into the Allandale Train Station Lands study area in 1877 as an extension from Innisfil Township, northwest across Essa Road to Vespra Street where it turned northeast toward Bayfield Street (Rudachyk et. al, 2005: 95). This arching pathway is similar to route of the existing Highway 400.

The largest influence on the Allandale Train Station lands however, was during the era of the Grand Trunk Railway (G.T.R) which was incorporated in 1852 (Rudachyk et. al, 2005: 95). Once the GTR absorbed most of the smaller railway companies in the 1880's, Allandale became a flagship for the GTR's national line (Rudachyk et. al, 2005: 95).

1.1.3 Site Specific History of Land Use and Archival Research

Land use history of the Allandale Train Station Lands on Lots 8 and 9, Concession 14 (formerly of Innisfil Township) has been thoroughly documented several times in many previous reports and publications (A. Hunter 1907; AFBY 2000, 20011a&b; New Directions, 2004; and AMICK 2010, 2011 and 2013). A brief summary of this research is provided here.

The first publication written about the Allandale Train Station Lands was by the aforementioned Andrew F. Hunter in 1907 in his *"Huron Village Sites; Being an Appendix to the Report of the Minister of Education for the Year 1906"*. In it he describes several ossuaries in Vespra Township and more specifically three that were historically documented close to the town line separating Vespra and Innisfil Townships. He describes the location of these ossuaries as being "on or near the trail to the Neutrals" (Hunter, 1907: 46) which, as noted above, was located just

west of present day Lakeshore Drive on the western-most shore of Kempenfelt Bay. Below is his description of the ossuary relating to the Allandale Train Station Lands:

"No. 53. The village site here was on the north side of the Vespra- Innisfil town line, near the house of the late A. Miscampbell, which faced the bay shore. So far as I have been able to ascertain, it was confined to about quarter of an acre on the northerly or Vespra side of the town line. At this site, the late John Boon of Allandale found many pottery fragments, clay pipes, stone axes and chisels in considerable numbers. There were no iron relics observed on the site itself, although he once found an iron tomahawk some 450 yards to the west of the site, near the former Episcopal Church on the town line. The trail to the Neutrals from this Huron [Wendat] country had to pass this way, on account of the swampy ground which occupied most of the flat all the way from here to the Nottawasaga River. The trail would naturally pass along the sand beach at the head of the bay, as the first settlers did for many years after their arrival. While there was an important site at the northwest corner of the bay, with a well-filled graveyard beside it, (No. 52), this site at the southwest corner of the bay was also an important one, at a distance of scarcely a mile from the last one, and having an equally well-filled burial ground. On the Innisfil side of the town line, near the shore of Kempenfeldt Bay, and also near the camps described by Mr. Boon, there was discovered a large ossuary in the year 1846. Mr. Boon owned the land on which it was situated, at the time of this discovery. The diameter of the pit was 20 feet, according to Mr. Boon, or it had a total sinkage of that amount, and it contained many skeletons. In the case of this bone pit, as in nearly all others, there has been the usual variety of estimates ranging from 100 to 1,000 [individuals].... No relics, except bones, were in the pit. Round about, crowded into holes, were some single skeletons; and there were also a few ossuaries of the smaller kind, at least two being verified by the evidence I have been able to gather. The rediscovery of human bones in 1884, and again in 1889, probably belonged to the deposits in the smaller ossuaries. This southwest corner of the bay was a point of departure in the important Indian treaty of 1818, and as such it became a landmark of more than usual importance in modern times, as well as in the times of the Huron [Wendat]. The line surveyed from this point divides a series of townships all the way to Lake Huron, or within a few miles of it, there being no less than nine townships located on each side of the line" (Huron Village Sites, A.F Hunter, 1907 Page 55-56).

Additionally, a newspaper article from the Barrie Examiner 1926 recounts an interview with High Constable Joseph Rogers, the former Barrie Police Chief from 1853-1888. Joseph Rogers was a Barrie resident from approximately 1851-1852 to 1930 and would therefore have been present for the original Allandale Train Station construction in 1853 as well as for all of the incarnations, including the existing station that was built in 1905 (AFBY 2001a; 5). The majority of the article documents his recollections on several events that he witnessed over the years. One of which includes his statement "There are few people who stand on the station platform at Allandale and know they are standing right over one of the greatest Indian Burial places known in Ontario" (Barrie Examiner, 1926). Unfortunately additional details about this statement remain unknown as it was written in the very last paragraph of his recollections with no additional context or information relevant to the location of the potential burials being recorded. The complete Barrie Examiner interview, was conducted in 1926 when Major Joseph Rogers was 94 years old. He refers to the Allandale Station platform in the present tense suggesting it is that of the current structure (1905 - present). Unfortunately, none of the Fire Insurance Plans from the early 1900's (1907, 1910 and 1917) illustrate the location of the station platform. Several photos from that era however, illustrate the platform extending the entire length of all three structures and along both the north and south sides of the buildings covering a relatively large area between the buildings and the track (**Historic Images, Image 7, 9 and 10**). It is also possible, given the anecdotal nature of the article, that Mr. Rogers was referring to the railway lands in general rather than the area specifically covered by the platform.

The study area itself has a long history of use with the railway. The Simcoe and Huron Railway was the first in Allandale in 1853 and later amalgamated into the Grand Trunk Railway and finally the Canada National Railway. There have been four manifestations of the Allandale Train Station building, as previously mentioned. The first train station building was purported to be a wooden station-house. AFBY Heritage consultants completed a background assessment of the property and lands associated with the Allandale Train Station and it was their conclusion that the original Allandale wooden station house was built in and around 1853 and may have been located closer to the intersection of Gowan Street and Bayview Drive than the current location (AFBY, 2001). Additional research completed by the Barrie LACAC in *The Growth of Barrie* created a map of the train station in the 1850s using information gathered from maps, registered plans, pamphlets and directories. The results of their research can be found in the Historical Maps and Fire Plans section of this report (**Map 1 and Figure 5**).

The second station was erected in 1863 and was a brick building that was located in the general vicinity of the current buildings (**Historic Images 1 and 2**). A section of the 1863 foundation was exposed and documented during AFBY's Stage 4 assessment in 2001. Around 1872, this station was torn down and another, larger one was built to the south of the 1863 (and current station) location. It was in use until 1894 when it was burned to the ground in a railyard fire (Barrie Northern Advance, 1904). Subsequently a refreshment building was built (**Historic Image 3**) over the foundation of the 1863 Allandale Station (AFBY, 2001a) that included two buildings. The eastern building of this set became incorporated into the existing building that was built in 1905. Prior to the final incarnation of the Allandale Train Station constructed in 1905, the notorious flood of 1896 occurred on the lands (**Historic Image 4, 5, and 6**) which were responsible for destroying many of the rail yards and station buildings as well likely a large portion of any underlying intact archaeological remains prior to this event (Simcoe County Archives, access 2017, AFBY 2001a). AFBY Heritage Consultations outlines this event as follows,

"Extensive areas of the railway yards and station buildings were washed away as were large sections the track-bed along the shoreline between Allandale and Barrie. Entire rail cars sank into gullies opened by the torrential flooding. Erosion from the flooding required large amounts of fill to be used in order to restore the rail yards. It was shortly after this devastating event that plans for a new, fourth, station house were announced. However, by this time the Allandale station had become the hub of a railway system which included five major track lines. As such, the Grand Trunk Railway decided that the new station should be a "flag ship" for the line. Planning for this station began in 1897 but it was not until 1904 that construction finally commenced" (AFBY, 2001a).

The Allandale Train station in its current form opened in June of 1905 and expanded to at least 10 structures by the 1920s (AFBY, 2001a) including a locomotive servicing facility (machine shop, roundhouse, coaling tower etc) and a new station complex (The Townsend Group, Unknown Year). These structures include many that have since been torn down or reallocated for other use (i.e., South Shore Centre on the north east portion of Lot 9, Concession XIV and a roundhouse that no longer stands in its original location (City of Barrie, 1907)).

Part of the Allandale Train Station Lands study area also includes the property historically associated with the Allandale Lawn Bowling Club (circa. 1902 - 2000). The residents of Barrie suffered from a lack of permanent venues for the purpose of lawn bowling and tennis and the lands adjacent to the Allandale Train Station lands proved ideal for this purpose (Rudachyk et. al, 2005: 187). Today the lawn bowling facility is overgrown with shrubs and saplings with the remains of the playing pitches still visible due to the presence of the low-lying end boards and the light fixtures.

Additionally, extensive land formation changes have occurred for the purposes of development up to present day. The shoreline of Kempenfelt Bay was redesigned and filled to allow for the construction of present day Lakeshore Drive in 1987 (**Historic Images, Image 14**) as well as several other developments of shoreline and commercial construction.

The Allandale Train Station Lands study area is located within the northern section of Lots 8 and 9, Concession XIV in Innisfil Township. These lots border the southeastern township line of Vespra and the southwestern edge of Kempenfelt Bay on Lake Simcoe. The entire Allandale Train Station building is located on Lot 8, Concession XIV; however a large portion of the rail line is located on Lot 9, Concession XIV in Innisfil Township. For the purposes of this report we will be focussing on the property assessment history of Lot 8 and Lot 9, Concession XIV below.

1.1.3.1 Lot 8, Concession XIV Archival Research

The 1871 Hogg's Map (Hogg's, 1871) shows the section of land associated with the current Allandale Train Station Lands as being occupied and owned by the family name of Baldwin. This section is approximately 1/6 of the 200 acre lot in the northern portion. Additionally a section of the Northern Railway of Canada, in use from 1865, is shown running through the property. On the 1881 Historic Atlas Map of the Township of Innisfil the portion of the lot where the Allandale Train Station Lands study area is located has no owner, however the northern portion was subdivided into smaller lots associated with the Town of Allandale. There are also prominent railway station buildings associated with what is depicted as the Northern Railway (**Section 8: Figures 5-10**). Lot 8, Concession XIV North 1/3 had been subdivided into six lots of varying size, all situated north of the rail line. The southern 2/3 of the lot is blank with no named owner on the atlas map (Belden 1881). The following **Table 1** outlines the occupancy and Bargain and Sale history of the lot in question.

Table 1: Lot 8, Concession XIV Archival Research

Instrument	Date	From	To	Comments
Patent	1823	Crown	George Buckender	200 acres
B&S	1824	George Buckender	William W. Baldwin	North ½ 100 acres for £50
Will	1842	William W. Baldwin	Robert Baldwin	North ½ 100 acres
B&S	1842	Robert Baldwin	William A. Baldwin	North ½ 100 acres for £325
Plan Register	February 19, 1855	William A. Baldwin	Allandale	Plan 29
B&S	1863	Corporation of Innisfil	Northern Railway of Canada	"that part of old Bradford Road included in Station Grounds"
B&S	1864	William Baldwin and Wife	Northern Railroad of Canada	Unknown
B&S	1864	William D. Ardaugh and Wife	Northern Railroad of Canada	Unknown

Beautiful Barrie: The City and Its People, an Illustrated History of Barrie, Ontario describes this lot as a key property in the Allandale Station Lands development (Rudachyk et. al, 2005, page 94). It states,

"A key property in Concession 14 was lot 8, owned since 1824 by William W. Baldwin of Spadina (at York). His son, the Honourable Robert Baldwin, took possession in 1842 and sold to his brother, William Augustus Baldwin, in June 1848. On October 11, 1853, the first train reached Lot 8 where the village of Allandale would develop. A three acre parcel of Lot 7 was bought in April 1854 from Jacob Jacobs of Newmarket. The following February, William A. Baldwin registered a plan of subdivision called Allandale (Plan 29), and a month later sold

about six acres to the railway company for five shillings. It was during that time that a small, wooden station was erected near what would become Gowan Street." (Rudachyk et.al, 2005)

Most of the railway tracks associated with the Allandale Train Station Lands is located on Lot 9, Concession XIV, outlined below.

1.1.3.2 Lot 9, Concession XIV Archival Research

The 1871 Hogg's Map shows Lot 9, Concession XIV as only having a section of the Northern Railway of Canada, in use from 1865, as well as the Town of Allandale on its northern half. There is no named occupant on this lot and concession on this map (Hogg's, 1871). On the 1881 historic atlas map of the Township of Innisfil the portion of the lot where the Allandale Train Station Lands study area is located was the northern half. Lot 9, Concession XIV was subdivided into smaller parcels of land associated with the Town of Allandale. Its northern border was the shores of Kempenfelt Bay and two rail lines ran in a general east to west direction in this portion of the lot. No specific owner of the property is outlined on the historic atlas map, however the Northern Railway and H & N.W.R railway are clearly outlined. The following **Table 2** outlines the occupancy and Bargain and Sale history of the lot in question.

Table 2: Lot 9, Concession XIV Archival Research

Instrument	Date	From	To	Comments
Patent	1833	Crown	William Sibbald	81 acres, north part of Lot 9
B&S	1835	William Sibbald	David Edgar	81 acres
B&S	1838	David Edgar	David Simcoe Edgar	81 acres
Deed Poll	1838	Sherriff of Home District	Thomas Milburn	100 acres
B&S	1854	Thomas Milburn	David Morow	1/5 of an acre
B&S	1854	Thomas Milburn	Benjamin Walker Smith	Called lots 1,2,3,4,5,&6 north of Gowan Street and lots 6 to 10 north of Cumberland Street.
B&S	1854	Thomas Milburn	Charles Robertson	Sold 1 rood and 24 perch, Lot 9 north of Gowan Street.
B&S	1854	Thomas Milburn	James Johnstone	Lots 10 and 11 south of Gowan Street and Lot 15 North of Cumberland Street.
B&S	1854	Thomas Milburn	William Williamson	Lots 7 and 19 south of Gowan Street
B&S	1854	William Williamson	O.S. and H. Railroad Company	3 acres, 1 rood and 16 perch
B&S	1854	Thomas Milburn	Matilda Milburn	Part of lot 11 south of Gowan Street
B&S	1854	Thomas Milburn	Mary Jan Milburn	Part of lot 11 south of Gowan Street
B&S	1854	Thomas Milburn	William Wood Milburn	1 rood, 10 perch and south part of lot 10, north of Gowan Street
B&S	1854	Thomas Milburn	Robert Coulter	Two fifths of Lot 14 north of Cumberland and 8 south of Gowan Street

Instrument	Date	From	To	Comments
B&S	1855	David Morrow	Joseph Cain	Lot 13 North of Cumberland
	1855	James Johnson	Thomas Milburn	Lot 10 and 11 south of Gowan Street and lot 15 north of Cumberland.
B&S	1856	Thomas Milburn	Edmund Lally	1 rood, 12 perch and Lot 20 south of Gowan Street and east 2/3 of lot 26 north of Cumberland Street
B&S	1856	Thomas Milburn	John Maulson	North part of said lot bounded north by Kempenfelt Bay, easterly by Water Street, south by O.S.H.R.R and Gowan Street, west by east margin of creek running to bay.
B&S	1857	Thomas Milburn	Samuel Milburn	The unsold village lots on north part. Lots 2, 10-17 south of Gowan, 7, 9, 15-25 north of Cumberland. Lots 1-16 and 18-25 south of Cumberland, 1-24 south of Brunel, 1-16 and 18-25 north of Brunel, 1-21 north and all south of Thomas, 1 and 3-14 west of Reid Street, except as therein.
B&S	1859	John Moulson	James and John Miller (merchants)	North part of said lot bounded north by Kempenfelt Bay, easterly by Water Street, south by O.S.H.R.R and Gowan Street, west by east margin of creek running to bay.
B&S	1866	Samuel Milburn	Thomas Milburn	40 acres
B&S	1872	James John Miller	Northern Railway Company	Part of reserve east of Creek Milburn's Plan. 3 acres
B&S	1872	John Ross	Northern Railway Company	Part of reserve east of creek and north of railway.
B&S	1872	Joseph Milburn et. al.	The Northern Railway Company	The Station Grounds and the Reserve on Milburn's Plan.
Grant	1869	Tax deed	Sherriff of the County of Simcoe Warden and Treasurer	Westerly two acres of block north of Gowan Street
Grant – Sheriff Deed	1871	Sherriff of the County of Simcoe	John Ross	Reserve west of Water Street. Lots 16-24 inclusive south Flemming Street (Plan not filed for these lots) un file W.C. Little and J. Millburn in all 153/5 acres .
B&S	1872	James John Miller	Northern Railroad	Part of Reserve east of Creek, Millburn's Plan 3.
B&S	1872	John Ross	Northern Railway Company	Part of Reserve east of Creek and north of railway
B&S	1872	Joseph Milburn et al. and Jane Miller and widow of late Thomas Milburn	Northern Railway Company	Sold station grounds and the Reserve Milburn Plan.
B&S	1872	Joseph Thomas Milburn Executors of the Will of	Northern Railway Company	Station grounds and Reserve Milburn Plan.

Instrument	Date	From	To	Comments
		Thomas Milburn		
B&S	1895	Corporation of Innisfil	Northern Railway and Hamilton and Northwestern Rail Company	Part of Penetanguishene Road north of the Northern Railway and Water Street.

Archaeological Context

1.1.4 Physiography of the Site Area

The Allandale Station Lands study area is located within a narrow band of the Simcoe Lowlands physiographic region of southern Ontario which is surrounded by Simcoe Uplands physiographic region to the south. The Simcoe Lowland region is composed of lowlands bordering Georgian Bay and Lake Simcoe, and covers an area approximately 1,700 square kilometers. The lowlands are naturally divided by the Simcoe Uplands into two areas; the Nottawasaga Basin and the Lake Simcoe Basin (Chapman and Putnam 1984: 177).

The Lowlands are characterized by sandy outwash plains with extensive areas of marsh and wetlands, particularly in the region south of Lake Simcoe. Here, vegetation includes silver maple, black ash, speckled alder, and various swamp conifers. Marshes of cattails, sedges, rushes and northern wild rice flank the Lake Simcoe shoreline (Wake 1997:96). These areas represent rich aquatic wetlands with numerous fish and waterfowl species that would have been attractive resources for both pre-contact Aboriginal and Euro-Canadian occupants of the area.

In the eastern portion of the Lowlands lies the Simcoe Basin at an elevation of ca. 220-260m above sea level. Within this area are abundant sandy beaches along the western shore of Lake Simcoe. A relatively flat clay plain, interrupted by outcrops of limestone, glacial hills and patches of sand and gravel, occupies the southern part of Orillia Township (Chapman and Putnam 1984: 181-182). This clay plain extends northward to the exposed Precambrian rocks of the Canadian Shield beyond.

Overall, the presence of elevated topography, glacial shorelines and sandy, well-drained soil in the Simcoe Lowlands indicates that this region has high archaeological potential. The south Barrie section of the Simcoe Lowlands physiographic region occupies the circumference of Lake Simcoe and additionally stretches from Kempenfelt Bay to Georgian Bay along the south east portion of Lake Huron. These lands historically were full of elm, ash, maple and cedar (Chapman and Putnam, 1984). The favourable soils and proximity to the lake made the area ideal for agriculture. However as urban sprawl took over farm land disappeared, and gravels from ancient beaches have been excavated for construction.

The Simcoe Upland region is composed of a series of broad, rolling, till plains which are separated by flat-floored valleys. The till plains are surrounded by relic shorelines indicating they were once islands within glacial Lake Algonquin. In total, the Simcoe Uplands occupy approximately 1,000 square kilometers (Chapman and Putnam 1984: 183). The original vegetation in the uplands area consisted of white pine and hardwoods such as sugar maple and beech, as well as yellow birch, hemlock and basswood. Much of white pine groves however, were cleared during the lumbering period (Chapman and Putnam 1984: 183). The soil within the Simcoe Uplands is comprised mainly of the Vasey Series which consist of stony, well drained sandy loam soils that are characteristic of areas where steep and complex slopes prevail (Chapman and Putnam 1984: 183). Topography ranges from relatively flat to steeply sloped with some ponds and marsh / wetlands scattered throughout.

1.1.5 Previous Archaeological Research

In Ontario, information concerning archaeological sites is stored in the Ontario Archaeological Sites Database (OASD) maintained by the MTCS. This database contains archaeological registered sites within the Borden system. Under the Borden system, Canada has been divided into grid blocks based on longitude and latitude. A Borden block is approximately 13 km east to west, and approximately 18.5 km north to south. Each Borden block is referred to by a four letter designation and sites located within the block are numbered sequentially as they are found. The study area is situated within the *BcGw* Borden block.

Background research and a site record search on the MTCS database indicate that there are 17 additional archaeological sites within 3 km of the study area. The Allandale Train Station Site (BbGw-69) is located within the project area (MTCS 2017). **See Table 3 below for details.**

Table 3: Registered Archaeological Sites within 3 km of the Study Area

Borden	Site Name	Cultural Affiliation	Site Type/ Feature	Researcher(s)	Comments
BcGw-93	Site 1	Woodland, Late	Other: Euro-Canadian, Iroquoian	Andrew Murray (2013)	9 ceramic sherds, 2 flakes from 6 shovel test pits across 135 metres by 10 metre area. Further work recommended.
BcGw-73	Stapleton	Paleo-Indian	Paleo-Indian habitation site.	Jim Wilson (2004)	2381 artifacts observed in a 35m by 35m area including debitage, projectile points, flaked tools, rough stone lithics, faunal remains and a recent button. No Further work recommended.
**BcGw-69	Allandale Train Station	Huron-Wendat	Village Site with 3 possible Ossuaries	AFBY (2001), New Directions (2004), AMICK(2013)	Human Remains and ossuary location a concern. Further work recommended.
BcGw-64	Fowler	Paleo-Indian, Late		Philip Woodley (1998)	Lithic scatter 15m by 20m of 1 projectile point, 1 narrow end scraper (both Onondaga chert) in an excavation of 18 1m ² test squares. Excavation of 152 1m ² squares totaled 2,105 flakes, 245 greywacke flakes, 2 hammerstones, 3 channel flakes, 8 UFL, 8 Unifaces, 3 scrapers, 1 narrow end scraper, 2 gravers, 1 denticulate, 2 wedges, 8 bifaces, 11 projectile Holocomb point fragments. Further work required.
BcGw-63	Standing Tree	Paleo-Indian, Early	Campsite	Philip Woodley (1998)	2 channel flakes on surface. 71 flakes from 9 units. Immediate area around site stripped of topsoil prior to assessment. No further work is recommended
BcGw-62		Post-Contact	Homestead	Philip Woodley (1998)	Small light scatter of Euro-Canadian material. Surface sample was collected & 3, 1m ² squares excavated. No further work recommended
BcGw-61	Asparagus	Woodland, Middle	Short term occupation	Philip Woodley (1998)	Small ceramic concentration 3mx2m. Short term occupation. Stage 4 completed. No further work recommended.
BcGw-36	Pern	Archaic, Early	Findspot	Ronald Williamson (1989)	Findspot located near Beaver Creek. One Nettling point fragment of Onondaga Chert – with 3-4 serrations per centimetre. No further CHVI.
BcGw-29	Birch	Post-Contact, Pre-Contact	Cabin	Ronald Williamson (1990)	Very low density. Main concentration of material covers about 800m ² . Two loci of cultural material. 1989/90: 4 features excavated, post moulds identified, and 58 artifacts collected (incl. ceramic rim, 3 rim fragments) over 50mx50m area 1985: Intensive surface collection and mapping with transit. 1989/90: Controlled surface collection, removal of topsoil, excavation of subsurface features, flotation samples taken Site recorded as Grimpen and incorrectly bordenized by BcGw-35 in 1989 report. No further work recommended
BcGw-28	Little 2	Woodland, Late	Village	Gary Warrick (1985), Paul Lennox (1985)	Very high artifact density especially in concentration of black soil - unploughed portion of site in forested area to n. Artifacts occur just under litter mat in forest. Site 0.5 ha. Site yielded more cultural material in 1985 surface collection than 1984 collection - may have been deeper ploughed in spring of 1985. (Warrick 1985). Site record form not yet received from Lennox.
BcGw-22	Sunnidale Park	Woodland, Late	Middleport	Jamie Hunter (1977)	Unknown
BcGw-21	Cundles Creek 1	Woodland, Late	Middleport Hamlet	Jamie Hunter (1977)	Unknown
BcGw-20	Cundles Creek 2	Post-Contact	Earthwork	Hunter (1977)	The site is most unusual; it contains mortared stone work covered by extensive dirt mound like fill. It could be related to the Nine Mile Portage route (Hunter 1977). 1812-Contemporary
BcGw-18	Barrie	Woodland, Late	Pickering/Uren Village, Longhouse, Midden	Rick Sutton (1999)	1991: 1 house and 1 large midden located from 22 1 m units. Remaining extent of site is .28 ha, compared to the .56 ha described by Hunter in 1977. This is due to construction that has reduced size in half. Thought to be Uren village. Features and post moulds recorded: Partially destroyed by sewer construction. Priority rating, very important! (Hunter 1977). 1991: In good condition, further work recommended
BcGw-17	Bennett	Archaic	Campsite	Jamie Hunter (1977)	Unknown
BcGv-9	Tollendale Creek	Archaic, Late, Paleo-Indian, Woodland, Early, Woodland, Late	Aboriginal, Huron-Wendat Campsite	Michael Henry (1997)	42 Onondaga flakes in a 60 m X 60 m area. Ceramic scatter, 66 pieces in a 40 m X 30 m area. Multi-component. 1997: 1 projectile point, 1 scraper, 1 utilized flake, 6 chipping detritus, 1 celt fragment, 1 abrader fragment. Probably destroyed by subdivision.
BcGv-7	Huronia Road	Woodland, Late	Hamlet, campsite/cabin	J. Hunter (1977)	6 ceramic sherds, 1 pipe stem, 1 Ground Stone flake, 5 chipping detritus. Rumour that the site will be developed in the next few years (Warrick 1987).
BcGv-13	Painswick	Woodland, Late	Unknown	Jamie Hunter (1977)	The site, now completely destroyed.

** All information in the above table was extracted from the Ontario Archaeological Sites Database (MTCS, 2017).

There have been 11 known archaeological studies completed on or within 50m of the study area. They are outlined in **Table 4: Overview of Previous Assessments of the Allandale Train Station Property** below.

Table 4: Overview of Previous Assessments of the Allandale Train Station Property

Year	Consulting Firm/Archaeologist	Archaeological Assessment (AA) Stage	Results	Recommendations	Area Assessed (ha/acres/m ²)
1907	Andrew F. Hunter	Though not an official study of the Allandale Station Lands, Hunter is the first to publish information regarding the potential for archaeological remains on the property	"On the Innisfil side of the town line, near the shore of Kempenfeldt Bay, and also near the camps described by Mr. Boon, there was discovered a large ossuary in the year 1846. Mr. Boon owned the land on which it was situated, at the time of this discovery. The diameter of the pit was 20 feet, according to Mr. Boon, or it had a total sinkage of that amount, and it contained many skeletons. The rediscovery of human bones in 1884, and again in 1889, probably belonged to the deposits in the smaller ossuaries" (Hunter, 1907, 56) *200-300 persons associated with the ossuaries.	Unknown	0.10 ha (¼ acre)
2000	AFBY Archaeological and Heritage Consultants	Archaeological Literature Review and Assessment Recommendations Regarding Allandale Railway Station Site (BcGw-69) (*similar to a Stage 1 Archaeological Assessment)	Subject property exhibits high potential for presence of significant archaeological resources.	Overlying fill should be removed to allow shovel test pit survey of underlying soils. Any construction activities involving alteration of soil or fill beyond assessed area(s) should be monitored by a licensed archaeologist. Discovery of archaeological or human remains would require standard protocols for notification of authorities and further assessment.	Not explicitly stated.
2001a	AFBY Archaeological and Heritage Consultants	Stage 3 Archaeological Assessment (CIF# 2001-057-001)	Indicates that fill overburden ranges from 50 – 200 cm due to original grade of land plus over a century of development activities. Lake Simcoe waterfront was originally immediately in front of station. Stage 2 test pit survey at 3-5 metre intervals was conducted after removal of fill in an area south of the extant station buildings only; units were excavated to sterile subsoil and screened through 5 mm mesh; large quantities of Iroquoian ceramics and fish bone were encountered in several test pits and a large feature that had been impacted by the original station foundation. Stage 3 assessment consisted of 18 one-metre test units excavated over positive test pits; 1,283 artifacts were recovered, including 854 ceramic sherds (dated ca. AD 1300) and 315 faunal bones, mostly fish; 9 subsurface features were identified within 5 of the test units; one small row of post moulds was noted.	Stage 4 mitigation through salvage excavation by hand of the Allandale site (BcGw-69). Monitoring by a licensed archaeologist of fill removal in remaining areas affected by development activities, given potential for discovery of an ossuary	0.5 ha
2001b	AFBY Archaeological and Heritage Consultants	Stage 4 Archaeological Mitigation (CIF# 2001-057-004)	Damage during thunderstorm flood event in 1896 led to construction of current station, completed in 1905. At least 10 structures and five major track lines on property by 1920s. Bore hole studies show up to 5 m of fill on property. Gradall and hand excavation used to remove fill overburden in areas of Stage 3 artifact discoveries. 59 Stage 4 units were excavated and screened, totaling 76 square metres. 16,700 artifacts, including >10,000 faunal elements (none identified as human bone), were recovered. One intact subsurface feature, a slope midden, was encountered as well as several post moulds. Initial Stage 4 conclusion stated that the site was a small seasonal cabin, however faunal analysis completed by Laurentian University in 2016 showed that the site was occupied year round.	Although archaeological integrity of site is described as poor, potential artifact and information yield is described as high. Although deemed to be unlikely, the potential persists for the discovery of human remains in deeply buried deposits. Heritage value is deemed to be high Portion of the site comprising 1863 stone foundation should be cleared of further heritage concerns. Archaeological monitoring to be carried out during fill removal on remainder of property due to possibility of encountering ossuaries or human burials. Area of the Barrie Lawn Bowling Club should be subjected to archaeological testing/monitoring. Area of site subjected to Stages 3 and 4 excavations should be cleared of further archaeological concern.	0.0094 ha (94 m ²)
2004	New Directions Archaeology Ltd.	Stage 1 Archaeological Assessment (PIF# P018-058-2004)	Assesses archaeological potential of 5 candidate GO railway station and layover sites in the City of Barrie, including part of the Allandale Station lands. Ontario Archaeological Sites Database request yielded no record of archaeological sites within the subject property or on the immediately adjacent property (i.e. the Allandale Site (BcGw-69)), although numerous Iroquoian and other sites were noted within 2 kilometres. Visual inspection determined that 3 of the 5 sites were completely disturbed and thus retained no further archaeological potential.	No further work was recommended for 3 of the 5 sites, including the site which comprised part of the Allandale Station lands.	Unknown

Year	Consulting Firm/Archaeologist	Archaeological Assessment (AA) Stage	Results	Recommendations	Area Assessed (ha/acres/m ²)
2010	AMICK Consultants Limited	Stage 1 Archaeological Assessment (PIF# P058-580-2009)	<ul style="list-style-type: none"> • reviews AFBY report • provides overlays of buildings indicated on various historical maps and plans • provides thorough analysis of archaeological potential 	<p>Lands not previously assessed and cleared (by AFBY) retain archaeological potential and should not be subject to grade altering activities until further Stage 2 assessment and clearance of archaeological concerns by MTCS.</p> <p>Fill-capped areas must be assessed by Gradall (or equivalent) stripping at no more than 10 m intervals.</p> <p>Areas with residual archaeological deposits will require Stage 3 assessment and possibly Stage 4 mitigation.</p> <p>Comprehensive stripping of native topsoil will be required to ensure there are no undiscovered human burials.</p> <p>Modifications to the extant structures requiring below-grade alterations should be subject to pre-clearance by an archaeologist.</p>	3.34 ha
2011	AMICK Consultants Limited (Not Accepted by MTCS as of May 2017)	Stage 3 Archaeological Assessment (specific to the human remains found) (PIF# P058-767-2011)	<p>Describes results of investigation of discovery of human remains carried out under the authority of the Registrar of Cemeteries</p> <p>Remains of at least two individuals were found damaged and in secondary deposits</p> <p>No associated archaeological materials or features were encountered</p> <p>Discovery of a shovel-shaped incisor suggests probable First Nations association.</p>	<p>Although the known human remains were recovered from crawl space, "the disturbed soil in this area may yet contain further concentrations of human remains or isolated bones or bone fragments".</p> <p>Recommends that investigation "be continued until all re-grading of soil in the crawl space has been completed and the area is capped with concrete."</p>	0.1 acres
2013	AMICK Consultants Limited (Not Accepted by MTCS as of May 2017)	Stage 3 Archaeological Assessment (PIF # P058-901-2012)	<p>Additional remains found along south side of "Office Building" foundation (outside of crawl space where previous discovery occurred) as well as on the SW side of the colonnaded walkway</p> <p>Monitoring of utility trenches.</p> <p>Methodology devised in consultation with City of Barrie project engineers, Jim Sherratt, MTCS, and Michael D'Mello, Registrar of Cemeteries.</p> <p>653 bones identified as human were recovered from 18 localities adjacent to extant buildings.</p>	<p>"No further investigations are recommended for the crawl space of the "Office Building", nor for the outside area of the foundation opposite the locus of discovery in the crawl space."</p> <p>"... it is recommended that the area of previous archaeological investigations [by AFBY] be excavated mechanically and all dirt be screened through a 6 mm sieve to recover the bone fragments from this area."</p> <p>Additional block excavation north of the covered walkway to establish limits and nature of human bone concentrations in this area.</p> <p>All unassessed portions of property, including under buildings without full basements and areas capped by asphalt or concrete pavement, should be excavated and monitored under the supervision of a licensed bioarchaeologist.</p>	134 m ²
2016	A.M Archaeologist	Stage 1 Archaeological Assessment (PIF# P158-0015-2016)	<p>The detailed documentary research, site visit, and geo-technical study indicates that there may be archaeological potential remaining below the disturbed fill cap across all of the Barrie Military Heritage Park Stage 1 archaeological assessment study area (Map 9). A Stage 2 test pit assessment of the disturbed fill is not required as it would be an ineffective method of identifying archaeological remains. However, an archaeological assessment strategy should be developed for any construction activity that may have impacts within 50-cm of underlying the soil horizon. This may include the retaining walls for the symbolic trenches, but the exact location, size, and depth is not known at the time of the production of this report.</p>	<p>There may be deeply buried intact soil horizons with archaeological potential across the Barrie Military Heritage Park study area. Any proposed impacts within 50-cm of the underlying the soil horizon should be preceded by archaeological assessment by a licensed archaeologist. This assessment should involve the following strategy laid out in <i>Section 2.1.7 Survey in deeply buried conditions of the Standards and Guidelines for Consultant Archaeologists</i> and described above in <i>Section 3.2 Conclusions</i> and illustrated in Map 9 (MTCS 2011: 36-38). This would include the mechanical excavation of test trenches at 10-metre intervals across potentially impacted areas. The purpose of this mechanical excavation is to obtain sections and clear profiles of those areas, document any archaeology features present and recover artifacts.</p> <p>The background research and visual inspection of the Barrie Military Heritage Park study area has determined that there is 1.4 to 6.7 metres of intensively and extensively disturbed fill relating to the twentieth-century railway development and does not have potential for archaeological remains. However, due to the proximity to the Allandale Train Station site, BcGw-69, where human remains were recovered from disturbed context partial monitoring of excavations is recommended.</p>	4.2 ha
2017	ASI	Stage 1-2 Archaeological Assessment (PIF# P128-0129-2016)	<p>The Stage 2 Archaeological Assessment fieldwork was initiated on May 10, 2016 in accordance with the Ontario Heritage Act and the S & G. The entire West Berm Study Area was subject to a thorough program of Stage 2 test pit survey, test unit excavation, mechanical trenching, and archaeological monitoring over the course of seven months. No archaeological resources or intact topsoil deposits were identified during the Stage 2 investigations.</p>	<p>The Stage 2 Study Area for the West Berm area of the Barrie Layover Facility does not require further archaeological assessment;</p> <p>Should the proposed work extend beyond the current Study Area, then further archaeological assessments must be conducted to determine the archaeological potential of the surrounding lands.</p>	0.2 ha
2017	AECOM	Stage 1 Archaeological Assessment (PIF# P387-0342-2017)	TBD in ANALYSIS AND CONCLUSIONS Section of this Report.	TBD in RECOMMENDATIONS Section of this Report.	3.34 ha

Of the 11 assessments done within 50m of the project area, six have been completed within the Allandale Station lands.

An Archaeological Literature Review was carried out prior to the implementation of the current *Standards and Guidelines for Consultant Archaeologists* (MTCS, 2011) by AFBY Heritage Consultants in 2000 that contained background information about the subject property and adjacent Lots and Concessions. It was entitled "*Archaeological Literature Review and Assessment Recommendations Regarding Allandale Railway Station Site*" (AFBY, 2000) and concluded that the subject property study area exhibits high potential for the presence of significant archaeological resources. This report recommended that overlying fill should be removed to allow shovel test pit survey of underlying soils, any construction activities involving alteration of soil or fill beyond assessed area(s) should be monitored by a licensed archaeologist and discovery of archaeological or human remains would require standard protocols for notification of authorities and further assessment (AFBY, 2000).

In 2001, AFBY Heritage Consultants completed a Stage 2 – 3 AA for the area proposed for the location of the New V.R. television station. This assessment concluded that fill overburden ranged in depth from 50-200cm in some areas due to past infilling episodes, construction and demolition associated with the railway use of the property. Therefore, the assessment involved the mechanical removal of artificial fill over the area to be impacted by construction (**Supplementary Documentation: Figure 1**). During the monitoring of the fill removal, a portion of the 1863 Allandale Station foundation was exposed and documented. Once these fill layers were removed the exposed area was test pitted in hopes of identifying natural soil deposits that may contain archaeological materials. A number of test pits were positive producing pre-contact Aboriginal artifacts including pieces of pottery and chipped stone tool fragments. The Stage 2 assessment was followed by the Stage 3 hand excavation of 18 one metre square test units in order to determine the size of this deeply buried site. The 1,283 Aboriginal artifacts recovered dated to the Middle Iroquoian period (A.D. 1300-1350) and came from a soil layer containing a midden deposit, nine features and a small row of post moulds indicating some type of structure had occupied the site. This site was registered as The Allandale Train Station site (BcGw-69) and it was recommended that Stage 4 excavations, mitigation and monitoring of fill removal for the entire study area of 0.5 ha be conducted prior to construction.

The Stage 4 excavation conducted by AFBY Heritage Consultants was also concluded in 2001 (**Supplementary Documentation: Figure 1**). A total of 16,700 artifacts including greater than 10,000 faunal elements (none of which were identified as human in nature), were recovered. The summation of this study concluded that severe and deep disturbance has occurred across the entire study area due to several factors; 150 years of railway use of the property, a large thunderstorm flood in 1896 that washed out much of the existing underlying soils, the construction of 10 structures and five major track lines on the property by 1920, and bore hole studies that demonstrate up to 5 metres of fill in some areas (AFBY 2001b). In addition, it was determined that the southern portion of the Allandale Station Lands were originally low and wet, therefore requiring large scale infilling prior to the railway development. AFBY's project area was cleared of further archaeological concerns but it was recommended that surrounding areas (including the former Barrie / Allandale Lawn Bowling Club) undergo Stage 2 AA's should any ground disturbing activities occur (AFBY, 2001b).

Following the previous studies, AMICK Consultants Ltd. conducted a Stage 1 AA in 2010 entitled "*Stage 1 Archaeological Background Research of the Allandale Station Lands. Part of Lot 8 & 9, Concession 14 (Geographic Township of Innisfil), City of Barrie. MCL# P058-580-2009*" This study was completed for the parcel of land associated with the Allandale Train Station site (BcGw-69) and corresponding Allandale Train Station Lands for the City of Barrie. This study reiterates much of the findings set out by AFBY in previous years and added the following information: an overlay of approximate building locations indicated on various historical maps and plans and a thorough analysis of archaeological potential. This report recommended Stage 2 assessment on any lands not cleared by AFBY in 2001 and included a total of 3.34 hectares (AMICK, 2010).

AMICK Consultants Limited conducted the Stage 3 investigations within the Allandale Train Station lands and reported on these studies in two separate reports which have not yet been accepted by MTCS as of June, 2017. For the purposes of this report they are referenced for their fieldwork methods only. The first report describes accidental discovery and the systematic removal of human remains from the crawl space below the "Office Building", the western most structure of the extant railway buildings. During the lowering of the crawlspace floor, a number of human bones were encountered by the construction crew. Work was stopped and AMICK was contacted by the City of Barrie to investigate the crawl space and remove all human remains within it. It was determined that the bones were likely from the surrounding area, and were in soil used to backfill the building foundation (**Supplementary Documentation: Figure 1**). This report recommended that "investigations be continued until all re-grading of soil in the crawl space has been completed and the area is capped with concrete" and that a licensed archaeologist be on site for all soil disturbing activities (AMICK, 2011: PIF# P058-767-2011).

The second stage 3 report by AMICK (2013) describes the results of the 2011/2012 Stage 3 assessment of human remains discovered as a result of trenching on the southwest side of the colonnaded walkway, and along the southwest side of the "Office Building" foundation wall opposite the initial discovery of human remains inside the crawl space in 2011 (**Supplementary Documentation: Figure 1**). Mechanical trenching and test unit excavation were undertaken to determine the extent of the bone densities. AMICK recommended that all unassessed portions of the property be subject to excavation and monitored by a bioarchaeologist. Additionally, they recommended that the area previously excavated by AFBY Heritage Consultants be excavated mechanically and all dirt be screened to recover additional potential bone fragments from the area (AMICK, 2013: PIF# P058-901-2012). Although this report has not yet been accepted by MTCS as of June, 2017, it is the professional opinion of AECOM that a more detailed approach to further archaeological work must be formulated with input / consultation from MTCS and interested First Nation communities.

1.1.5.1 Summary of Engagement of the Registrar of Burial Sites at the Ministry of Government and Consumer Services

Since human remains had been previously identified on the Allandale Station property (as noted above), Dr. Jennifer Morgan, bioarchaeology specialist for the AECOM archaeology team, contacted the Registrar of Burial Sites, War Graves, Abandoned Cemeteries, and Cemetery Closures (Registrar of Burial Sites), Ms. Nancy Watkins on June 15, 2017. This communication was initiated in order to receive clarification regarding the status of the investigation and, specifically, the status of the Declaration (Section 98- R.S.O 2002, c. 33, s.96, revised 2006, c. 34, Sched. D,s. 66) and the Site Disposition Agreement (Section 99 - R.S.O 2002, c. 33, s.99, revised 2006, c. 34, Sched. D,s. 66) for the Allandale burial site.

A response from Ms. Nancy Watkins was received on June 15, 2017 indicating that the Ministry of Government and Consumer Services (MGCS) has opened two burial files related to the investigation of the Allandale burial site(s). File 1 pertains to the burial site discovered on July 4, 2011 in the crawl space of the Office Building and File 2 pertains to the burial site discovered on September 27, 2011 during the installation of underground services. Dr. Morgan was informed that a Declaration has not yet been issued for either file as the Registrar has not received sufficient information regarding the origin of the sites – specifically the boundaries of the burial sites and the cultural affinity of the remains. Based on this communication, it was made clear that a Declaration has not been made and the investigation remains open. In subsequent communications, Ms. Watkins indicated that it was the opinion of the Registrar that AECOMs investigation is part of a continuation of the original burial site investigation order issued in 2011 and that any discovery of additional human remains during further Stage 2, 3 or 4 assessments falls under the ongoing investigation. As such, the previous work conducted to date has satisfied Section 94 of the *FBCSA* (R.S.O. 2002, c. 33, s. 94) and neither the local police nor coroner was required to be notified by AECOM. Should intact burials, including individuals or concentrations of individuals, be identified during the course of AECOMs archaeological investigations of the Allandale Site, the area will no longer be considered a disturbed burial site and alternative mitigation strategies must be developed in consultation with First Nations communities and the Registrar

of Burials. A complete record of communications with the Registrar of Burials is provided in the **Supplemental Documentation**.

1.1.5.2 Summary of Engagement of the Ontario Heritage Trust

It is understood that the Ontario Heritage Trust protects the Allandale Train Station buildings with a heritage conservation easement agreement (identified as Part 3 & 4 in the R51-Plan (**Supplemental Documentation; Figure 3**)). The easement surrounds the buildings and is intended on preserving the structures and their adjacent landscapes from physical alterations. OHT representatives Kiki Aravopoulos and Dena Doroszenko informed AECOM that prior to conducting any Stage 2/3 fieldwork within the protective easement, an Alteration Request Form must be submitted outlining the details of the proposed fieldwork and the mitigative measures that would be done to minimize impacts to the grounds within the easement. AECOM completed the ARF and it was approved by OHT for the Stage 2/3 fieldwork. AECOM has also provided the OHT with drafts of the Stage 1 report and will continue to engage with OHT members during the subsequent stages of investigation. A complete record of communications with the OHT is provided in the **Supplemental Documentation**.

1.1.6 Determination of Archaeological Potential

Archaeological potential is established by determining the likelihood that archaeological resources may be present on a subject property. Criteria commonly used by the MTCS (2011) to determine areas of archaeological potential include:

- Proximity to previously identified archaeological sites;
- Distance to various types of water sources;
- Soil texture and drainage;
- Glacial geomorphology, elevated topography and the general topographic variability of the area;
- Resource areas including food or medicinal plants, scarce raw materials and early Euro-Canadian industry;
- Areas of early Euro- Canadian settlement and early transportation routes;
- Properties listed on municipal register of properties designated under the Ontario Heritage Act;
- Properties that local histories or informants have identified with possible archaeological sites, historical events, activities or occupants; and
- Historic landmarks or sites.

Distance to modern or ancient water sources is generally accepted as the most important element for past human settlement patterns and when considered alone may result in a determination of archaeological potential. In addition any combination of two or more of the criteria listed above, such as well drained soils or topographic variability, may indicate archaeological potential.

Certain features indicate that archaeological potential has been removed, such as land that has been subject to extensive and intensive deep land alterations that have severely damaged the integrity of any archaeological resources. This includes landscaping that involves grading below the topsoil level, building footprints, quarrying and sewage and infrastructure development (MTCS 2011).

The evaluation of archaeological potential during the Stage 1 background research determined that there was potential for pre-contact and contact period Aboriginal archaeological resources, based on topography and soil conditions, proximity to potable water and the presence of the Allandale Station site (BcGw-69). There is also potential for Euro-Canadian archaeological resources based on the early settlement of the area, the past use of the property since the mid-19th century as exemplified by the 1863 station foundation exposed in previous excavations.

1.1.7 Allandale Train Station Lands: Mitigation, Construction Impacts and Borehole Results

There have been well documented mitigation and construction impacts to the study area since the extant train station was built in 1905 which in turn affect the disturbance level in this area. They are as follows:

Archaeological Mitigation Impacts

Two archaeological consulting firms have conducted studies previously within the current study area. These archaeological firms are AFBY and AMICK Consultants Ltd. The result depth and extent of disturbance within the study area from these firms are outlined below.

AFBY

During the Stage 3 conducted by AFBY, 18 1m² test units were excavated across the southern portion of the study area, south of the train station buildings. Some of these units reached depths of 140cm. AFBY describes several layers of fill, ranging from heavy gravel fill, to different variations of sand composition with only portion of layer 8 of 9 as being artifact bearing (AFBY, 2001; 20). During their Stage 4 Assessment that same year (2001), AFBY used a gradall excavation method due to the presence of three factors: abundance of fill across the property relating to the station's history, original topography of the property prior to modification of the railway and actual area of intact deposits (AFBY, 2001; 26-28). Where heavy machinery was not easily used or where natural and feature soil layers were present, hand excavation was used to remove overburden. A total of 59 1m² units were excavated across a 72m² area in the southern portion of the current study area during AFBY's Stage 4 mitigation study. Depth of these units and mechanical excavation is not mentioned in their report. The results and limits of excavation of AFBY's Stage 3-4 study are illustrated in **Figure 1** of the **Supplementary Documentation**.

AMICK Consultants Limited

The Stage 3 Archaeological Assessment (P058-901-2012) conducted by AMICK Consultants Limited in 2012 has not been filed in the Register to date by the Ministry of Tourism, Culture and Sport, however, the depths of their excavations are required knowledge for future excavations and they are outlined below.

Initially AMICK conducted investigations within the crawl space of the Office Building on the Allandale Train Station Lands site. This investigation was kept to within the Office Building Limits and consisted of hand and shovel excavation which was screen through 6mm mesh. An ultimate depth of excavation was not outlined in this report, however it is stated that the screened soil was kept within the crawl space limits and redistributed to create a flat surface. This was to ensure that a concrete cap could be poured and the soils would be protected from further disturbance.

In 2011 trenching was conducted around the perimeter of the Allandale Train Station buildings along the south west side for service installation. All soil that was excavated from these trenches were screened through 6mm mesh. The trench area was 20m parallel along the southwest side of the walkway between the Dining Hall and Passenger Station buildings within the study area. The trench was 100cm deep and 60cm wide. Afterward, in 2013, AMICK conducted additional Stage 3 investigations around the perimeter of the Allandale Station Lands buildings. Their unit sizes were 2m² as opposed to the traditional 1m² that is more common of Stage 3 AA. This was due to the potential for depths to exceed 1m and the requirement for adequate maneuverability within the test unit at depths greater than 1m. Test units were placed around the covered walkway and on the south west side of the Office Building. Additional 1m² test units were place along the south west wall of the Office Building. All units were hand dug to a depth of approximately 67-133 cm, however one unit used a backhoe and was excavated to a depth of 194cm. There were 9 total 1m² test units excavated. One 2m² test unit was excavated adjacent to the south west

wall of the Office Building. AMICK describes stratigraphy across the site area as follows: "The depth of fill across the property fluctuates to a great degree ranging from only 10 centimetres in Test Pit 11 to 335 centimetres in Borehole 1. In one case, Test Pit 10, a 10 centimetre layer of topsoil was encountered buried beneath the fill layer at a depth of 230 centimetres" (AMICK, 2014; 35). Soil profiles provided in their reports confirms what AFBY's findings, including a layer of gravel near the surface and multiple layers and lenses of fill deposits throughout. They also outline that human remains were found within the fill layers immediately adjacent to the station buildings, including the soil used to fill the area of previous archaeological investigations.

Subsurface Utility Systems

There are three occurrences of deeply buried systems within the Allandale Train Station lands study area which include a sanitary pipe system, storm water linear feature system and water main system (**Figure 11**) (City of Barrie, GIS data provided April 2017). The sanitary pipe system runs in a northwest to southeast direction across the northern portion of the study area with one line running perpendicular (north to south) at the eastern edge of the study area. The storm water linear feature system crosses the study area at four points; one along the western access road to the Allandale GO Station, one between the Dining Hall and Office building of the Allandale Train Station building complex, two on the eastern side of the Passenger Building of the Allandale Train Station building complex and one along the eastern access road to the Allandale Go Station. Finally there are three instances of a water main running underneath the study area limits; two in a west to east direction from the northwestern most limit, one of which extends southeasterly until the southern limit of the study area, centrally located. The third water main is north to south in direction and is located alongside the eastern access road to the Allandale Go Station. All GIS utility mapping was accessed from the City of Barrie in April of 2017.

Borehole Data

Since 2010, a total of 13 boreholes (BH) were conducted within the Allandale Train Station Lands study area by three separate consultant engineering firms; Golder Associates (2010), Terraprobe Inc., (2010), and Peto MacCallum Ltd., (2011 and 2013). The following **Table 5** describes the boreholes in detail and indicates depth of fill in different areas of the study area. **Figure 12** for a map of the borehole locations.

Table 5: Borehole Fill Results on the Allandale Train Station Lands Study Area

Borehole Number	Depth of Fill (Metres)	Fill Description	Consulting Firm Source	Surface Elevation (Metres)	Date Work Completed
1	3.3	Loose, black to brown, fine sand, some gravel, trace silt (FILL)	Golder Associates	224.09	7-Jan-10
2	2.4	Compact, black to dark brown, fine sand, some gravel, trace silt, oxidation staining (FILL)	Golder Associates	224.3	7-Jan-10
3	2.4	Compact, black to dark brown, fine sand, some gravel, trace silt, oxidation staining (FILL)	Golder Associates	223.73	7-Jan-10
4	0.6	Frozen, black to dark brown, fine sand, some gravel (FILL)	Golder Associates	225.18	8-Jan-10

Borehole Number	Depth of Fill (Metres)	Fill Description	Consulting Firm Source	Surface Elevation (Metres)	Date Work Completed
5	1.8	Loose, black to dark brown, fine sand, some gravel (FILL)	Golder Associates	223.45	8-Jan-10
6	0.7	50mm Asphalt, 150mm Sand and Gravel, some silt, Brown Compact Moist, Silty Sand, fine (FILL)	Terraprobe Inc..	224.9	20-Apr-10
7	0.7	150mm - Sand and Gravel, some silt, FILL, Brown Compact and Moist Sand, fine some silt, trace organics (FILL)	Terraprobe Inc..	224.5	20-Apr-10
8	1.4	200mm Sand&Gravel, Fill Black to Dark Brown Compact to Loose Moist, Sand, some gravel, trace coal, (FILL)	Terraprobe Inc..	224.3	20-Apr-10
9	0.15	Topsoil; Dark brown, silty sand, trace gravel, moist/frozen	Peto MacCallum Ltd Consulting Engineers.	224.2	31-Jan-13
	2.75	Fill: Brown, sand, some gravel, trace to some silt, moist			
10	0.2	Topsoil: dark brown, sand, some gravel, some silt, moist/frozen	Peto MacCallum Ltd Consulting Engineers.	224.3	31-Jan-13
	2.7	Fill: Brown, sand, trace to some gravel, trace to some silt, moist to wet			
11	0.25	Topsoil: dark brown, sand, some gravel, some silt, moist/frozen	Peto MacCallum Ltd Consulting Engineers.	224.5	31-Jan-13
	2.9	Fill: Brown, sand, some gravel, trace silt, moist, Silty Sand, some gravel layer			
12	2.5	Fill: Dark brown sand, trace to some silt, trace gravel, moist with layer of black cinders	Peto MacCallum Ltd Consulting Engineers.	223.7	15-Aug-11
13	4.8	Fill: Dark brown to light brown, sand, trace to some silt, trace gravel, damp to wet. Black layer, button, pieces of wood at 3.2 metres	Peto MacCallum Ltd Consulting Engineers.	222.3	15-Aug-11

As can be seen above, the minimum fill depth from all boreholes across the study area is 0.6m below surface level and the maximum fill depth is 4.8m below surface level. Most of the borehole data describes the fill layer as being comprised of black to dark brown fine sand fill with some gravel, some silt and in some cases oxidation staining or

charcoal. One such borehole (BH13) analysis describes a “black layer with a button and pieces of wood at 3.2 metres” (Peto MacCallum Ltd., 2011) which indicates some debris other than organic material is still present within the study area. Overall, the borehole data confirms a wide range of fill depths and disturbance episodes across the entire study throughout time. However, natural horizons due occur at varying depths.

Additional Construction Impacts

In addition to the aforementioned borehole and subsurface utility work, the site area has been subject to construction for the Allandale GO Train Station along the southern border of the property. Much of the rail line construction followed the general route of original rail lines from the 19th and 20th centuries for this project. There are three instances of road construction. The first access road is positioned 18m to the west of the Allandale Train Station building and runs in a north to south direction from Lakeshore Drive/Tiffin Street south toward GO bus driveway. The second access road is positioned 168m east of the Allandale Train Station and extends in a north to south orientation from Lakeshore Drive toward the GO bus driveway. The third road is the longest and connects the two other access roads. It extends from Essa Road to the west all the way to the second access road in the east side of the property. This road is situated on the south side of the study area, south of the Lawn Bowling Club area and all buildings associated with the Allandale Train Station Lands. Since the depth of these construction impacts is not known, Stage 2 archaeological monitoring will be required if additional construction / land altering is planned for these areas in the future (**Figure 13**).

2. STAGE 1 PROPERTY ASSESSMENT

In order to evaluate the archaeological potential found within the Allandale Train Station Lands study area, the Stage 1 AA consisted of the analysis of documentary sources, historic maps, aerial photographs, detailed mapping and satellite imagery. Much of this information was provided by the City of Barrie GIS department and the Simcoe County Archives. In order to gain first-hand knowledge of the property, document modern disturbances and to confirm whether or not features of archaeological potential, perhaps not visible on mapping, were present within the study area, AECOM conducted a Stage 1 field review of the Allandale Train Station Lands on April 18, 2017 under the field direction of Rebecca Gray [R452]. The field review was carried out as outlined in *Section 1.2* of the *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011). As stated in Section 1.2 the property was systematically inspected, and was sufficient to report on all parts of the project area. Weather conditions during this time were sunny with some clouds and an unseasonably warm average temperature of 15 degrees Celsius. There was no snow cover at the time of the field review and ground visibility was excellent. The property was photo-documented which is illustrated in **Images 1-39** as well as **Figure 13**.

The study area lies approximately 60m south of Kempenfelt Bay on Lake Simcoe, of which an estimated 30 to 45m of this distance is manufactured shore line from a restructuring project in 1987. Based on an early survey map of the area (Registered Plan 358 from circa. 1873) (**Figures 5-10, 13 and 14**), the original shoreline and associated top of bank were located immediately north of the existing station buildings. This indicates that these buildings (built in 1905) and the previous station built in 1863 (**Historic Images 1 and 2**) were located on natural ground above the top of bank rather than on artificial fill. The rail line that passed to the north of the station buildings however would have been built largely on an early episode of artificial fill used to shore up the top of bank (**Historic Images 7 and 9**). Based on their Stage 4 excavations to the south of the station buildings, AFBY states that this portion of the property was originally low and wet and had to be infilled during the early stages of railway construction. This suggests that there was a natural 'spit' of land between Kempenfelt Bay and the low, wet areas to the south and west on which the 1863 and 1905 station buildings were constructed.

Existing conditions of the site area include manicured lawn surrounding the historic Allandale Train Station buildings (recently renovated) in the centre, the aforementioned access road in the western portion that allows access to the current Allandale GO Train Station located on the southern quarter of the study area (**Images 1-10**). To the west of the access road there is an area of overgrowth that was once the lawn bowling club (**Images 12-25**). On the eastern side of the study area, there is an additional access road that links the Allandale Go Station to Lakeshore Drive and a smaller portion of manicured lawn (**Images 29-35**). Ground disturbance has been quite extensive in this study area through the installation of underground service utilities (See **Figure 11**), historic rail line tracks and the numerous Allandale Train Station outbuildings that have been constructed and since been torn down (**Figures 5-10**). **Table 6** depicts the results of the Stage 1 Field Review.

Table 6: Results of the Stage 1 Field Review

Survey Method	Hectares	%
Areas Requiring Monitoring if Deeply Disturbed During Future Construction (areas of disturbance that are shaded red in Figure 13)	1.16	29.14
Stage 2 Archaeological Assessment Required (all other areas in Figure 13)	2.54	63.76
Total:	3.7	100

Note: Areas requiring monitoring if deeply disturbed during future construction include areas that are currently occupied by a building structure, roadway and/or parking lot and railway. These areas still remain high in potential for archaeological resources given that AMICK's 2011 and 2013 studies produced human remains in areas previously thought of as disturbed from building footprints.

Table 7: Inventory of the Documentary Record

Photographs	Maps	Field Notes
39	1	1 page of Field notes, 1 page of photo log

Despite the disturbances present in the study area from past utility installation, infilling episodes, landscaping / grading and building and access road construction, all areas still contain archaeological potential for deeply buried resources. Therefore, the lands within the subject property will require either Stage 2 assessment (as per *Section 2.1.7, Standards 1-3 Survey in deeply buried conditions*) or Stage 2 monitoring during construction (as per *Section 2.1.7, Standards 4 and 5*). This is due to the knowledge that human remains have been documented within the crawl space of the railway station and other archaeological remains within very close proximity to that building, as well as the background research indicating continued archaeological potential exists in these areas of disturbance.

3. ANALYSIS AND CONCLUSIONS

In 2017, AECOM was retained by the City of Barrie to conduct a Stage 1 AA for the Allandale Train Station Lands as part of due diligence requirements. The objective of this AA is to identify if there is any archaeological potential within the study area.

The results of the Stage 1 AA indicate that the majority of the study area has been largely disturbed by numerous infilling episodes, previous construction / demolition occurrences and the installation of subsurface utilities as confirmed and documented by previous archaeological assessments and data provided by the City of Barrie. There remains however, the potential for intact soil deposits. This is based on the presence of the previously documented Allandale site (BcGw-69) on the property, the amount of fill in some sections of the property (which help preserve deeply buried deposits) and that some sections of the study area have not been systematically tested. Additionally, given the age of some of the previous work (AFBY, 2000 – 2001) and the fact that the two Stage 3 reports by AMICK (2011, 2012) had not been accepted by MTCS at the time of writing, additional Stage 2 and 3 archaeological assessments will be required for the majority of the study area.

The goals of the Stage 2 and 3 Archaeological Assessments for the Allandale Station Lands will be:

- 1) Determine the nature of the complex stratigraphy across the site (*i.e.* where is there fill deposited and where do natural soil layers occur).
- 2) Identify areas where intact deposits remain below the various fill layers present across the property.
- 3) Identify the age and associations of the various soil layers across the site. This will require a strategy that involves testing both by hand and using machinery.

Due to the complex and sensitive nature of this project AECOM sent the proposed Stage 2/3 field methods to MTCS on March 24, 2017 for review and a request for advice / input. Archaeological Team Lead Kathryn Bryant responded on March 31, 2017 by adding several suggestions to the proposed field methods (see **Supplementary Documentation** for full correspondence). MTCS comments included:

- 1) As part of the Stage 1, you will need to take a close look at all previous assessments to ensure that they meet the current standards. A detailed analysis and summary of this work is needed to determine whether

or not any areas are in fact “cleared of archaeological concern”. If it’s not clear exactly what was done or if it doesn’t meet current standards, then some areas may need to be reassessed, as part of your Stage 2/3.

- 2) Your Stage 1 report should include detailed mapping of previous fieldwork on the property and the locations where human remains were previously found, as well as a detailed reconstruction of what has been done and where. Some other things to consider are the results of any geotechnical investigations, and whether the human remains recovered so far are from a particular type of fill or not.
- 3) The Stage 2/3 strategy generally looks good, again keeping in mind that areas marked on Figure 2 as “cleared of archaeological concern” might actually require additional test pit survey if the previous assessment did not fully meet the current standards. You might also want to consider having an expert in identifying human remains on site or at least on call at all times during the Stage 2/3 work.

These field methods were revised and then circulated to the City of Barrie, the Huron-Wendat First Nation and the Williams Treaty First Nations for review, with acceptance from all parties.

4. RECOMMENDATIONS

Given the results of this assessment, and in consultation with MTCS, AECOM makes the following recommendations:

- 1) Stage 2 test pit survey at 5m intervals consistent with *Section 2.17, Survey in Deeply Buried Conditions* of the *MTCS Standards and Guidelines for Consultant Archaeologists (2011)* should be completed for the entirety of the subject property (areas shaded green and pink in **Figure 13**). This will be done to determine where fill is distributed across the property and where natural soils occur
- 2) For those areas containing deep stratigraphy and visible presence of cultural stratigraphic layers (positive test pits), 1m² test units excavated at 10 metre intervals will be used to establish the depth of the deposits and stratigraphic composition. The 10 metre spacing is consistent with MTCS standards where there is the expectation that Stage 4 assessment will be required. The test units should be excavated at least 5cm into subsoil or to a depth of 1 to 1.2m (the maximum depth safely achievable in a 1m² unit). The depth and extent of the test units must be recorded as accurately as possible (i.e., to the centimeter) in order to ensure that ongoing concerns for the archaeological site can be carefully managed. In addition, geotextile fabric should be placed at the bottom of all test units to provide a physical boundary between excavated and non-excavated depths. All test units should be backfilled immediately following investigation. If subsoil is not reached in these test units, no construction disturbance can take place below these depths without the presence of a licenced archaeological consultant to monitor construction in accordance with the *Section 2.1.7, Standard 4 of the Standards and Guidelines*, or these areas are subsequently cleared by Stage 4 excavation.”
- 3) Where units are greater than 1 to 1.2 m deep, mechanical trenching will be employed to verify stratigraphy and depth. Trenches will connect the Stage 3 units that have already been excavated to provide a clearer stratigraphic picture. This can only be done in limited areas where fill layers have been clearly identified and will not be used in areas where human remains have been encountered previously. If natural or cultural soils or strata are identified, mechanical trenching must stop and hand excavation must be used. The trenches will be excavated in 10 cm layers and content will be placed on tarp for screening. The mechanical trenching will be done in accordance with the *Section 2.1.7, Standard 3 of the Standards and Guidelines*. The test trenches should be excavated to at least 5cm into subsoil or to a maximum depth that is safely achievable in a 1 to 1.5m wide trench. The depth and extent of the test trenches must be recorded as accurately as possible (i.e., to the centimeter) in order to ensure that ongoing concerns for the archaeological site can be carefully managed. All test trenches should be backfilled immediately following investigation. If subsoil is not reached in these test trenches, no construction disturbance can take place below these depths without the presence of a licenced archaeological consultant to monitor construction in accordance with the *Section 2.1.7, Standard 4 of the Standards and Guidelines*, or these areas are subsequently cleared by Stage 4 excavation.”

- 4) All Stage 2/3 Archaeological Assessment artifact documentation and analysis will follow the *Standards and Guidelines for Consultant Archaeologists (MTCS 2011)*.
- 5) All faunal remains recovered from the Stage 2/3 assessment must be retained and their location within the test pit / test unit be documented accordingly. This faunal material must be analyzed by a human osteologist prior to any Stage 2/3 mechanical trenching to ensure that no human remains will be unnecessarily disturbed or damaged. Any human remains encountered will be analyzed by a human osteologist and the handling and care of the remains must be done in a respectful way (with input from the engaged Indigenous communities), and should adhere to the *Funeral, Burial and Cremation Services Act* and *Sections 174-184 of Regulation 30/11*. It is recommended that the human osteologist assigned to this project have a minimum of a Master's Degree in Bioarchaeology with a focus on human osteology and/or human skeletal biology. Experience should include at least two years of experience in the direct handling and analysis of human remains and, specifically, the analysis of highly fragmentary human remains. Knowledge of the ethics and protocols regarding handling remains is a must as well as experience in implementing culturally specific excavation and handling protocols for mitigating First Nation ancestral burials. Experience in the process of human remains excavation is preferred. Expertise should also include a working knowledge of the *Standards and Guidelines for Consultant Archaeologists (MTCS 2011)* as it pertains to overall site excavation and Ontario archaeological practices.”
- 6) All Stage 2 and 3 work must be done with the engagement with First Nation groups that have an interest in the area thereby conforming to ‘best practices’ and the MTCS 2011 Bulletin *Engaging in Aboriginal Communities in Archaeology*.
- 7) It is understood that the Ontario Heritage Trust protects the Allandale Train Station buildings with a heritage conservation easement agreement (identified as Part 3 & 4 in the R51-Plan (**Supplemental Documentation: Figure 3**)). As such, the OHT must be consulted prior to undertaking any Stage 2/3 assessment within the easement property.
- 8) In areas that are visibly disturbed (shaded red in **Figure 13**), Stage 2 archaeological monitoring must be conducted by a licenced consultant archaeologist during future construction / land altering activities as per *Section 2.1.7 Survey in deeply buried conditions, Standards 4 and 5* of the *Standards and Guidelines*.

The above recommendation is subject to Ministry of Tourism, Culture and Sport approval, and it is an offence to alter any archaeological site without MTCS concurrence. No grading or other activities that may result in the destruction or disturbance of an archaeological site are permitted until notice of Ministry of Tourism, Culture and Sport approval has been received.

5. ADVICE ON COMPLIANCE WITH LEGISLATION

- a) This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licencing in accordance with Part IV of the Ontario Heritage Act, R.S.O. 1990, c 0.18. The report is reviewed to ensure that it complies with the standards and guidelines that are issued by the Minister, and that the archaeological fieldwork and report recommendations ensure the conservation, protection and preservation of the cultural heritage of Ontario. When all matters relating to archaeological sites within the project area of a development proposal have been addressed to the satisfaction of the Ministry of Tourism, Culture and Sport a letter will be issued by the Ministry stating that there are no further concerns with regard to alterations to archaeological sites by the proposed development.
- b) It is an offence under Sections 48 and 69 of the Ontario Heritage Act for any party other than a licensed archaeologist to make any alteration to a known archaeological site or to remove any artifact or other physical evidence of past human use or activity from the site, until such a time as a licensed archaeologist has completed archaeological fieldwork on the site, submitted a report to the Minister stating that the site has no further cultural heritage value or interest, and the report has been filed in the Ontario Public Register of Archaeological Reports referred to in Section 65.1 of the Ontario Heritage Act.
- c) Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the Ontario Heritage Act. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the Ontario Heritage Act.
- d) The Cemeteries Act, R.S.O. 1990, c.C.4 and the Funeral, Burial and Cremation Services Act, 2002, S.O. 2002, c.33 (when proclaimed in force) require that any person discovering human remains must notify the police or coroner and the Registrar of Cemeteries at the Ministry of Consumer Services.
- e) Archaeological sites recommended for further archaeological fieldwork or protection remain subject to Section 48 (1) of the Ontario Heritage Act and may not be altered, or have artifacts removed from them, except by a person holding an archaeological licence.

Documentation related to the archaeological assessment of this project will be curated by AECOM until such a time that arrangements for their ultimate transfer to Her Majesty the Queen in right of Ontario, or other public institution, can be made to the satisfaction of the project owner, the Ontario Ministry of Tourism, Culture and Sport, or any other legitimate interest groups.

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7. IMAGES

Stage 1 Property Assessment



Image 1: View of sidewalk on western edge of Allandale Train Station study area, view south.



Image 2: View of breezeway and "Passenger Station" building of Allandale Train Station study area, view east.



Image 3: View of sidewalk on western edge of Allandale Train Station study area, view north.



Image 4: View of area previously excavated by AMICK and AFBY, view south east.



Image 5: View of ground disturbance and hydro box on south western corner of "G.T.R. Office" building, view north east.



Image 6: View of fire hydrant and ground disturbance in north western corner of study area, view north, north east.



Image 7: Overview of northern edge of study area with Lakeshore Drive on the left and Allandale Train Station study area on the right, view east.



Image 8: View of Allandale Train Station site (BcGw-69) from northwestern corner of study area, view south east.



Image 9: View of platform on northern edge of Allandale Train Station, view south east.



Image 10: Showing disturbance along southern edge of study area with "Dining Hall" Building in background, view east.



Image 11: View of "G.T.R. Office" and "Dining Hall" buildings, showing grading disturbance to the left, view north.



Image 12: Overview of eastern edge of Lawn Bowling Club area, view west.



Image 13: Overview of eastern edge of Lawn Bowling Club area, view west, north west.



Image 14: Retaining wall on the southern edge of the Lawn Bowling Club, view north west.



Image 15: Retaining wall on the southern edge of the Lawn Bowling Club and bus terminal access road, view west toward Essa Road.



Image 16: View of retaining wall along southern edge of Lawn Bowling Club with overgrown manicured lawn in the background, view north east.



Image 17: View of Lawn Bowling Club area showing overgrowth and general disrepair, view north.



Image 18: Overview of Lawn Bowling Club area showing ground disturbance and Essa Road in the background, view north west.



Image 19: Overview of the Lawn Bowling Club area, showing previously manicured lawn overgrowth, view east.



Image 20: Overview of the Lawn Bowling Club area, showing previously manicured lawn overgrowth, view east.



Image 21: View of eastern quarter of Lawn Bowling Club area, view east, north east.



Image 22: View of eastern quarter of Lawn Bowling Club area, view south.



Image 23: View of eastern quarter of Lawn Bowling Club area, view west.



Image 24: View of eastern quarter of Lawn Bowling Club area with historic YMCA building in the background, view north.



Image 25: Close up view of the retaining wall associated with Lawn Bowling Club area, approximately 1m tall. View north east.



Image 26: View of AFBY study area from access road to Allandale GO Station, view north west.



Image 27: View of AFBY study area from access road to Allandale GO Station, view north.



Image 28: View of AFBY study area from access road to Allandale GO Station, north east.



Image 29: View of AFBY study area from access road to Allandale GO Station, view north.



Image 30: View of AFBY study area from access road to Allandale GO Station, view north.



Image 31: Overview of eastern portion of study area from Allandale GO access road, view north east.



Image 32: Overview of eastern portion of study area from Allandale GO access road and showing ground disturbance and grading, view north west.



Image 33: Overview of eastern portion of study area from Allandale GO access road showing ground disturbance and grading, view north east.



Image 34: Overview of eastern portion of study area, showing grading and ground disturbance, view west.



Image 35: Overview of eastern portion of study area, showing grading and ground disturbance, view west.



Image 36: Showing grading in eastern portion of study area from sidewalk on Lakeshore Drive, view south west.



Image 37: Showing Allandale Train Station "Passenger Station" Building from sidewalk on Lakeshore Drive, view south



Image 38: Showing Allandale Train Station "Dining Hall" building from sidewalk on Lakeshore Drive, view south west.



Image 39: Showing Allandale Train Station "G.T.R. Office" building from sidewalk on Lakeshore Drive, view south west.

Historic Images

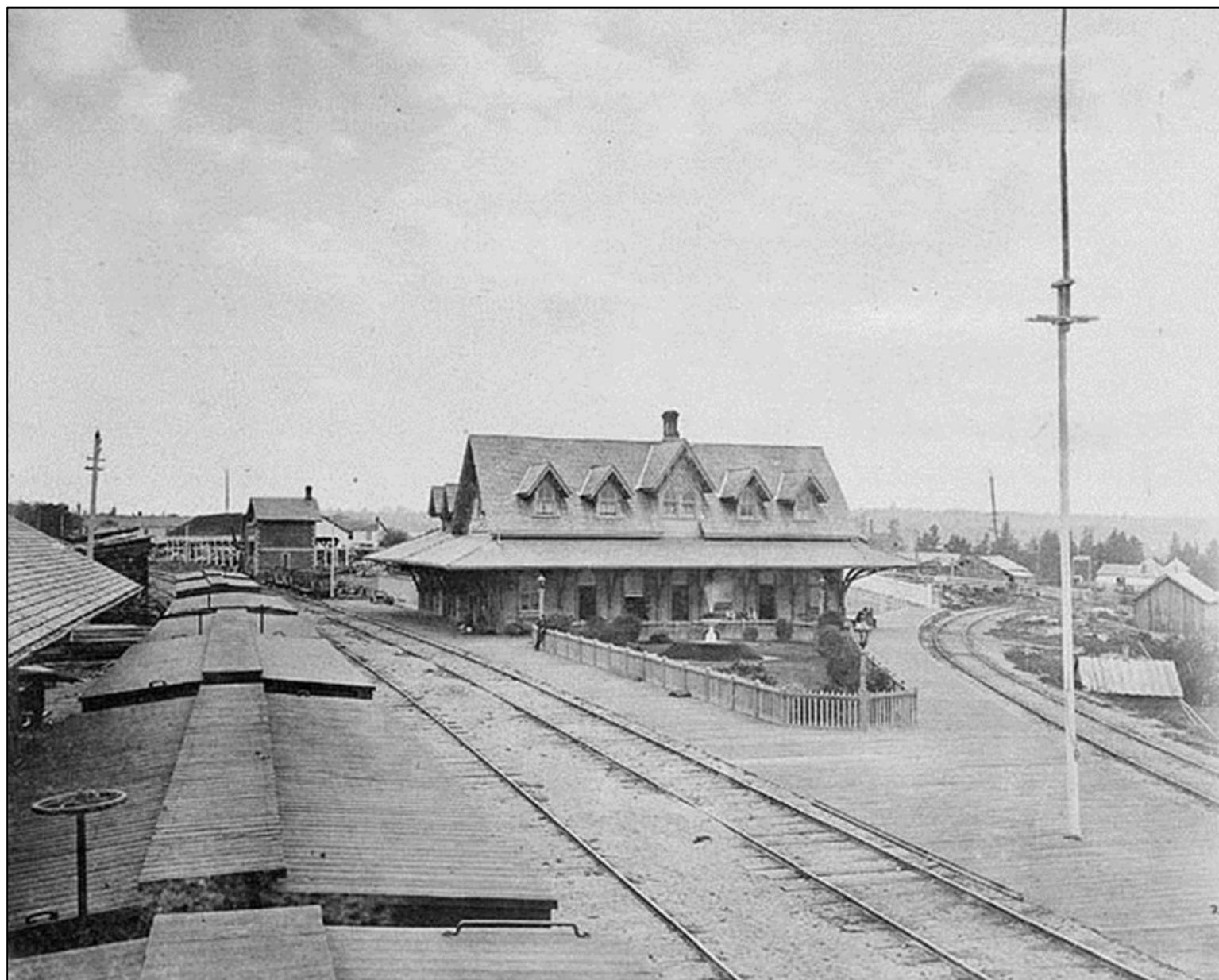


Image 1: Northern Railway of Canada Station (1863) (Accessed from www.collectionscanada.gc.ca/ac-bac, 2017), view west.



Image 2: The first brick station “Allandale Train Station” (1863) designed by Cumberland and Storm (Accessed from www.barrarchive.ca, 2017), view north west.



Image 3: Allandale, Third Station ("Refreshment Building"). 1894-1905. The Division administrative building behind was subsequently incorporated into the fourth station. The Cumberland monument was originally on the other side of this building (Accessed from www.railwaypages.com, 2017), view west.



Image 4: Looking south west towards the third Allandale Train Station after the washout (right). Used between 1894-1905 (Accessed from www.barriearchive.ca, 2017).



Image 5: Looking south west from the third Allandale Train Station (right) following the washout. The Grand Trunk Railroad owned and operated the Allandale Train Station at this time (1896) (Accessed from www.barriearchive.ca, 2017).



Image 6: Looking east following the washout at the third Allandale Train Station (1896) (Accessed from www.barriearchive.ca, 2017)



Image 7: Allandale fourth station 1905-current day. Photo from 1916. The lines to Barrie (the original "Barrie Switch") curve to the right (Accessed from www.railwaypages.com, 2017), view west.

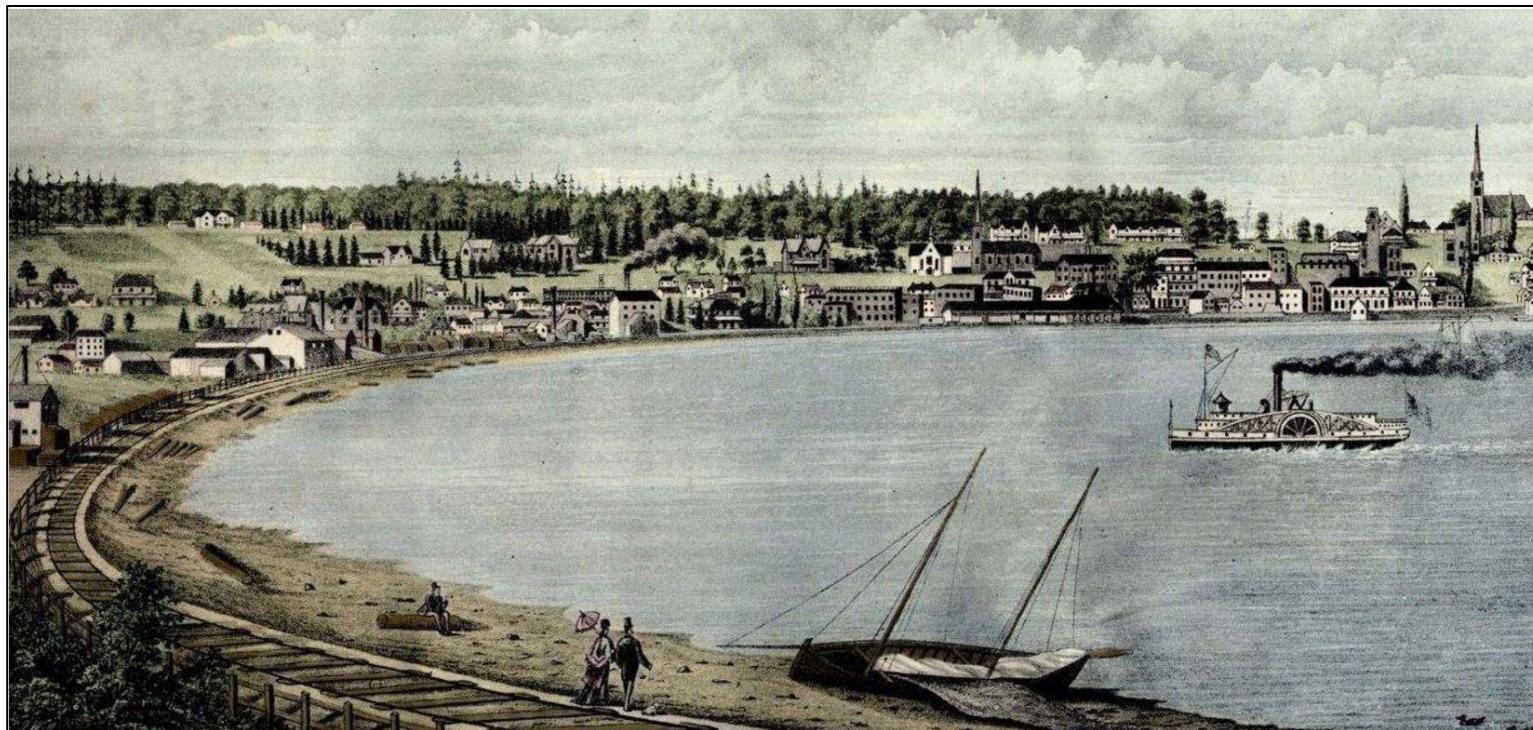


Image 8: Cartographer's image of Kempenfelt Bay from general location of Allandale Train Station (1875) (Accessed from www.barriearchive.ca, 2017), view north.



Image 9: A postcard showing the Allandale Train Station when operated by the Grand Trunk Railroad as the G.T.R. Depot (1905) (Accessed from www.bariarchive.ca, 2017), view west.



Image 10: Postcard showing Grand Trunk Railway Station, currently known as the Allandale Train Station (1908) (www.bARRIEARCHIVE.ca), view south.



AERIAL VIEW OF KEMPFELT BAY AND BARRIE, ONTARIO, CANADA

Image 11: View of Lakeshore prior to development (1950) (Accessed from www.bariarchive.ca, 2017)



Image 12: Looking towards the Canadian National Railroad water tower from the Barrie Lawn Bowling Club on Essa Road (1960), (accessed from www.barriearchive.ca, 2017), view north east.



Image 13: Allandale/Barrie, ON - #Steam Engine #6060 "Bullet-Nose Betty" at the Allandale Station, June 26, 1980 (P. Newman). (Accessed 2017 from www.railpictures.ca)



Image 14: 1987 image of fill for Lakeshore drive extension over Allandale Rail Yard (Accessed from www.barriearchive.ca, 2017), view east.

Aerial Photographs



Image 1: Aerial Image showing Allandale Train Station in middle left portion (1947) (Accessed from www.barriearchive.ca, 2017)



Image 2: Aerial View showing downtown Allandale, Train Station and Fair Grounds (July, 1968) (Accessed from www.barriearchive.ca, 2017)

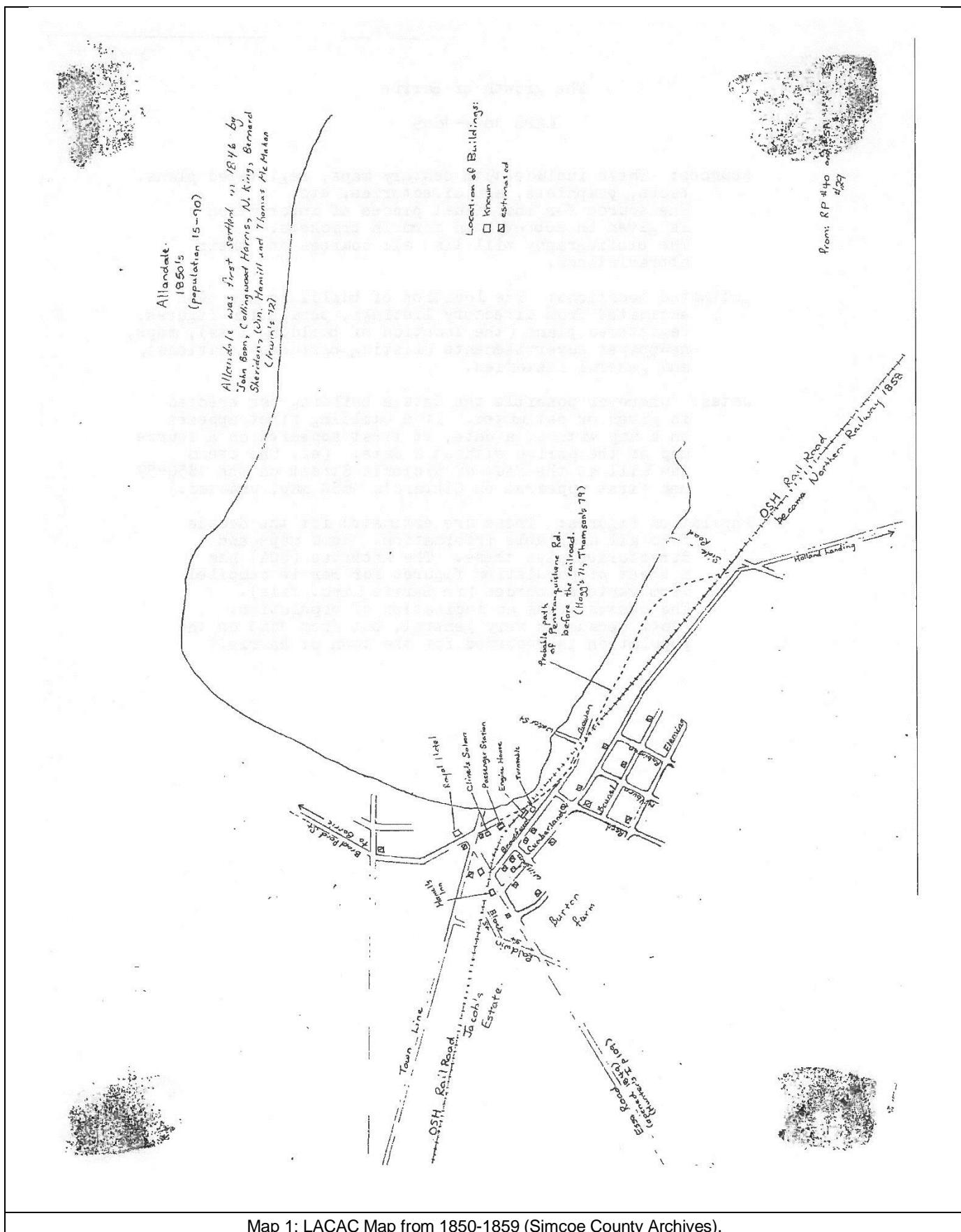


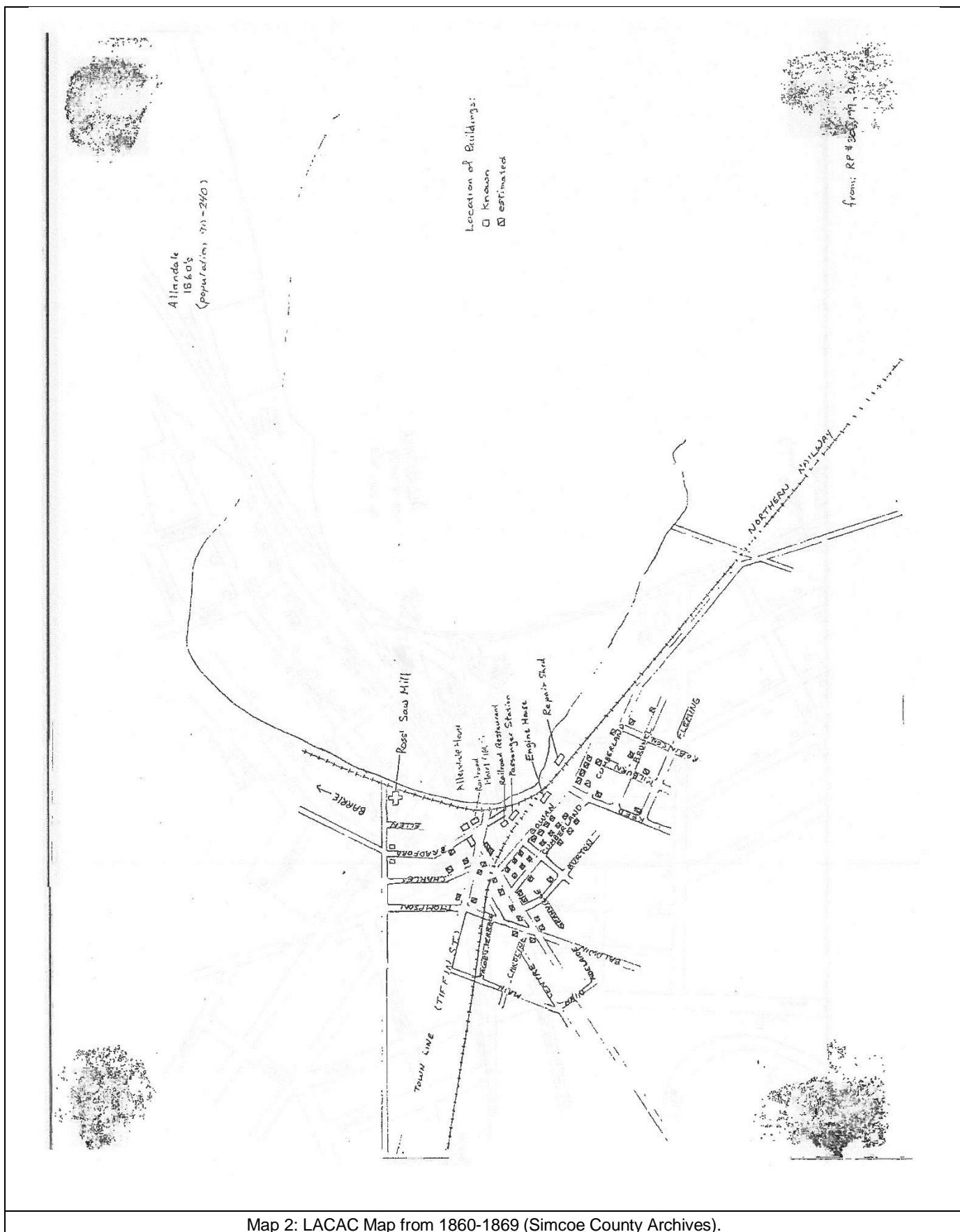
Image 3: Aerial looking South East over Allandale, showing infilled shoreline and lawn bowling area (1961) (Accessed from www.barriearchive.ca, 2017)



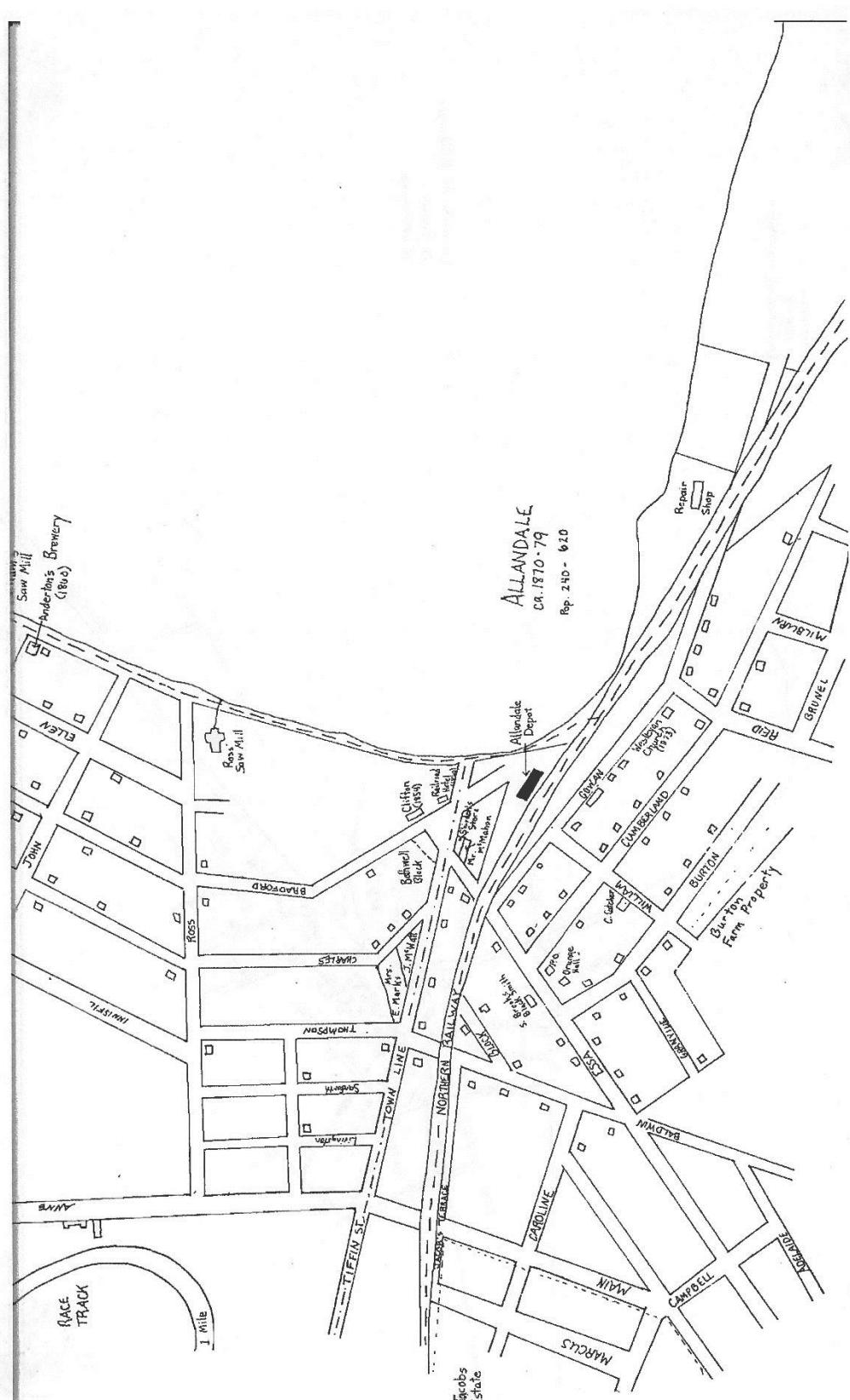
Image 4: Aerial view looking at Kempenfelt Bay and the Allandale Train Station (2016) (accessed from www.barriearchive.ca, 2017)

Historic Maps and Fire Plans

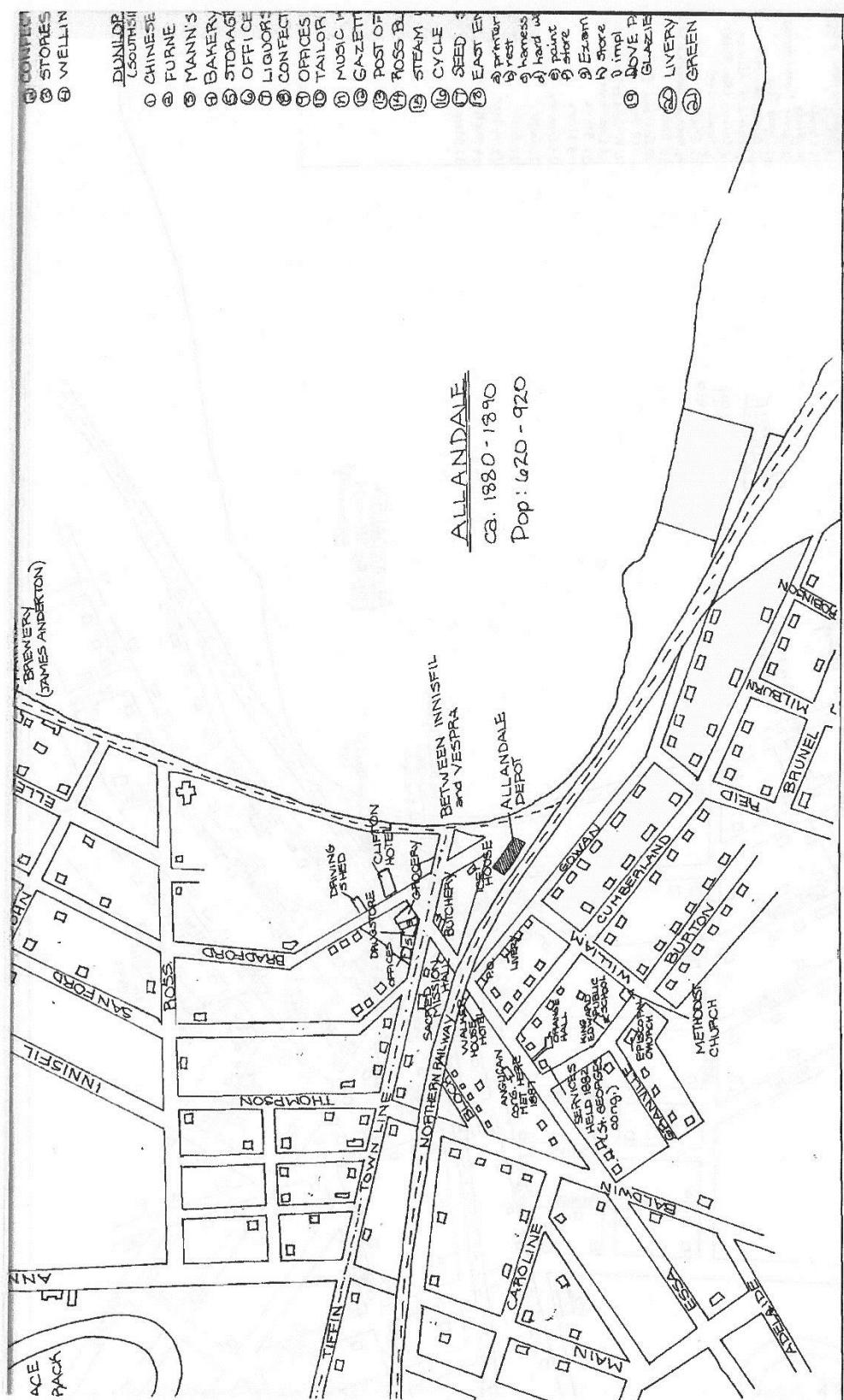




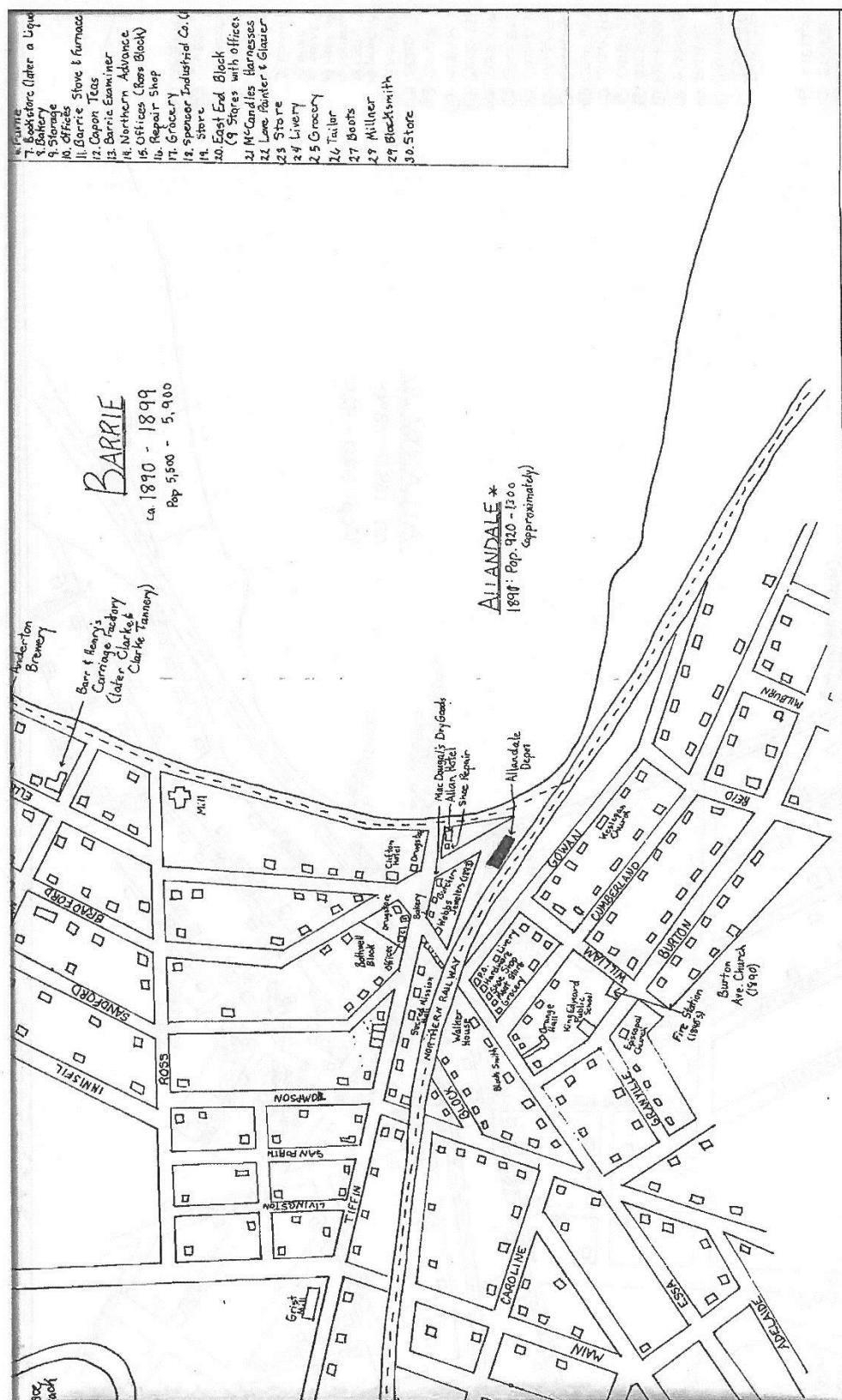
Map 2: LACAC Map from 1860-1869 (Simcoe County Archives).



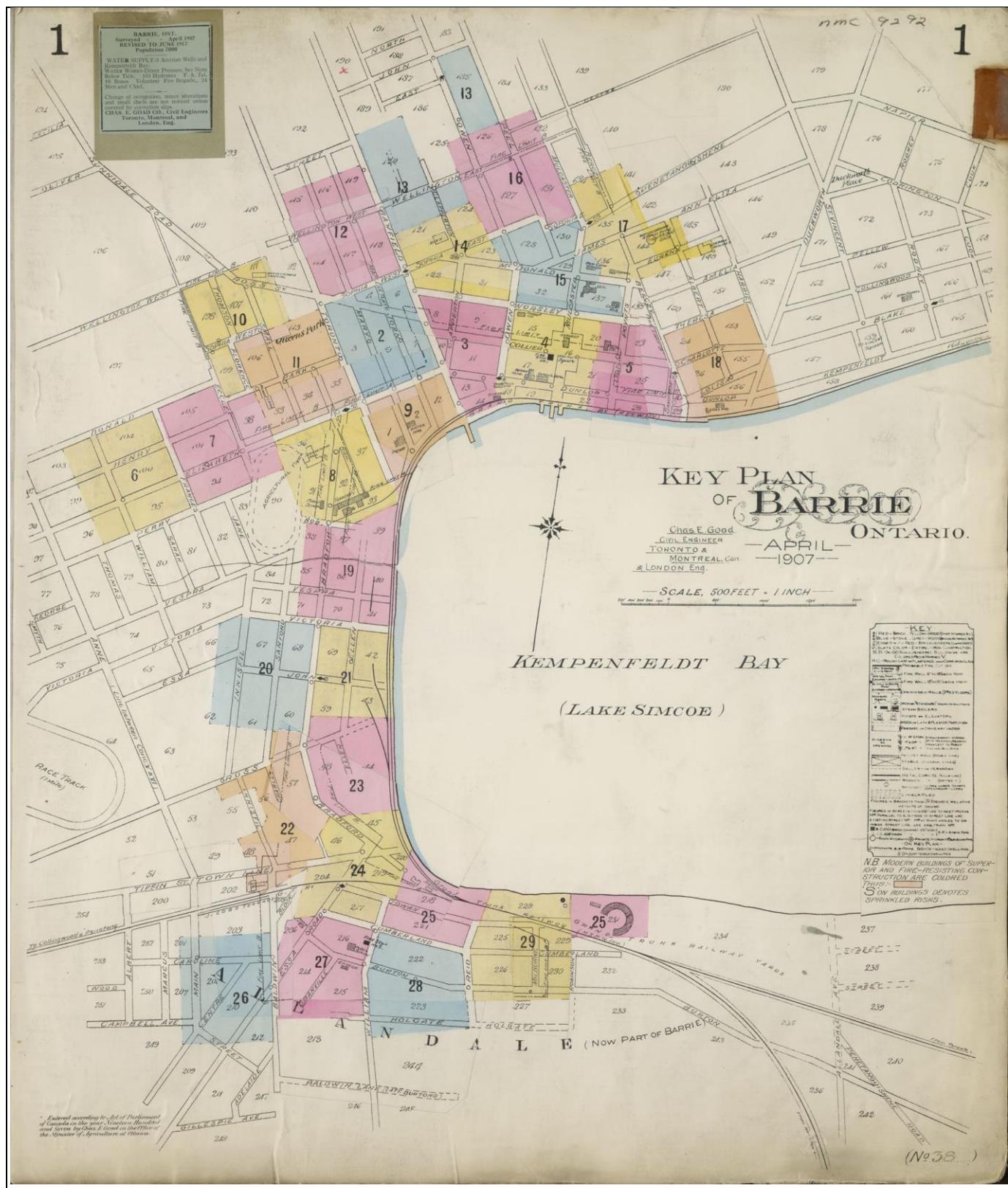
Map 3: LACAC Map from 1870-1879 (Simcoe County Archives).



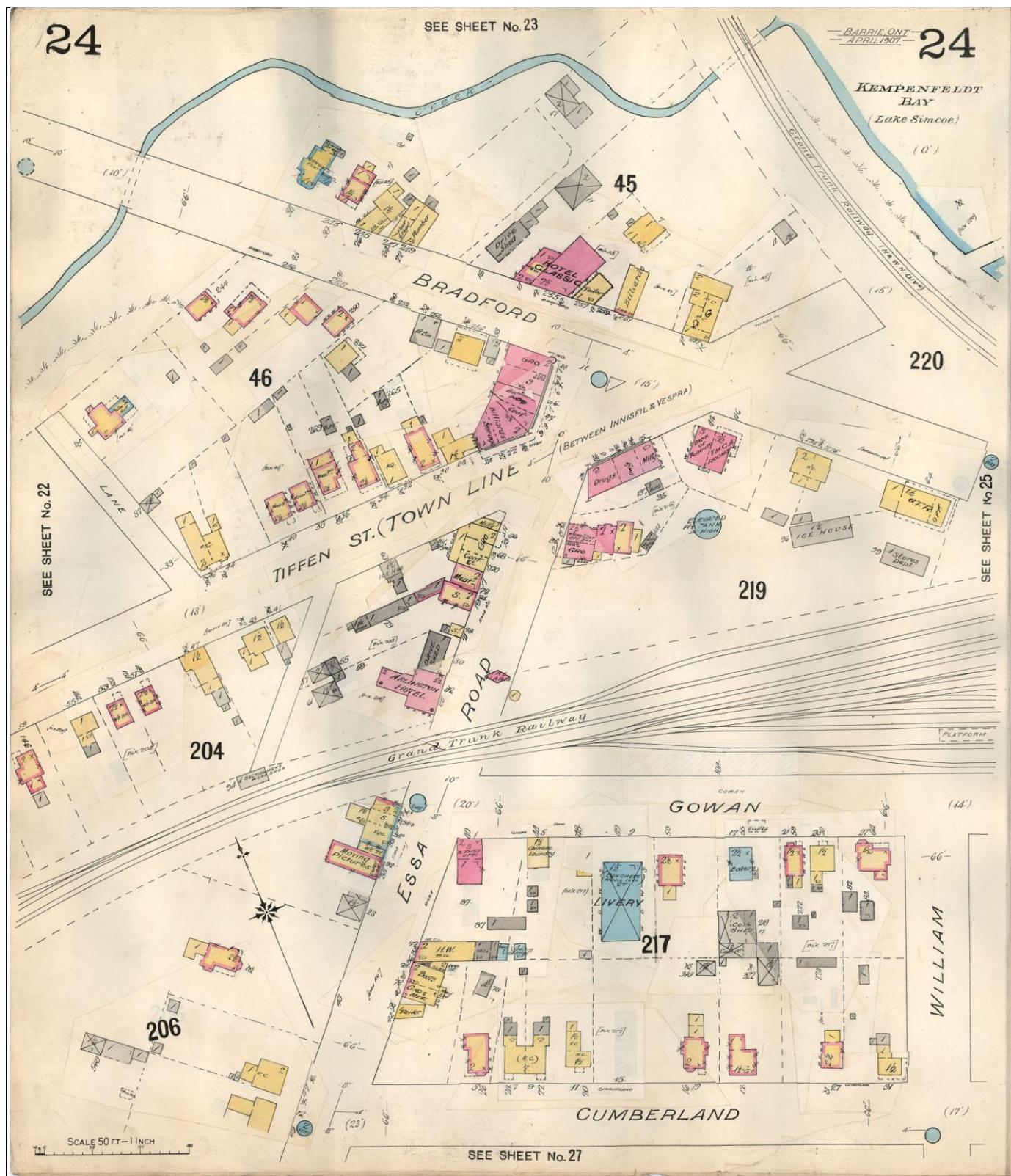
Map 4: LACAC Map from 1880-1889 (Simcoe County Archives).



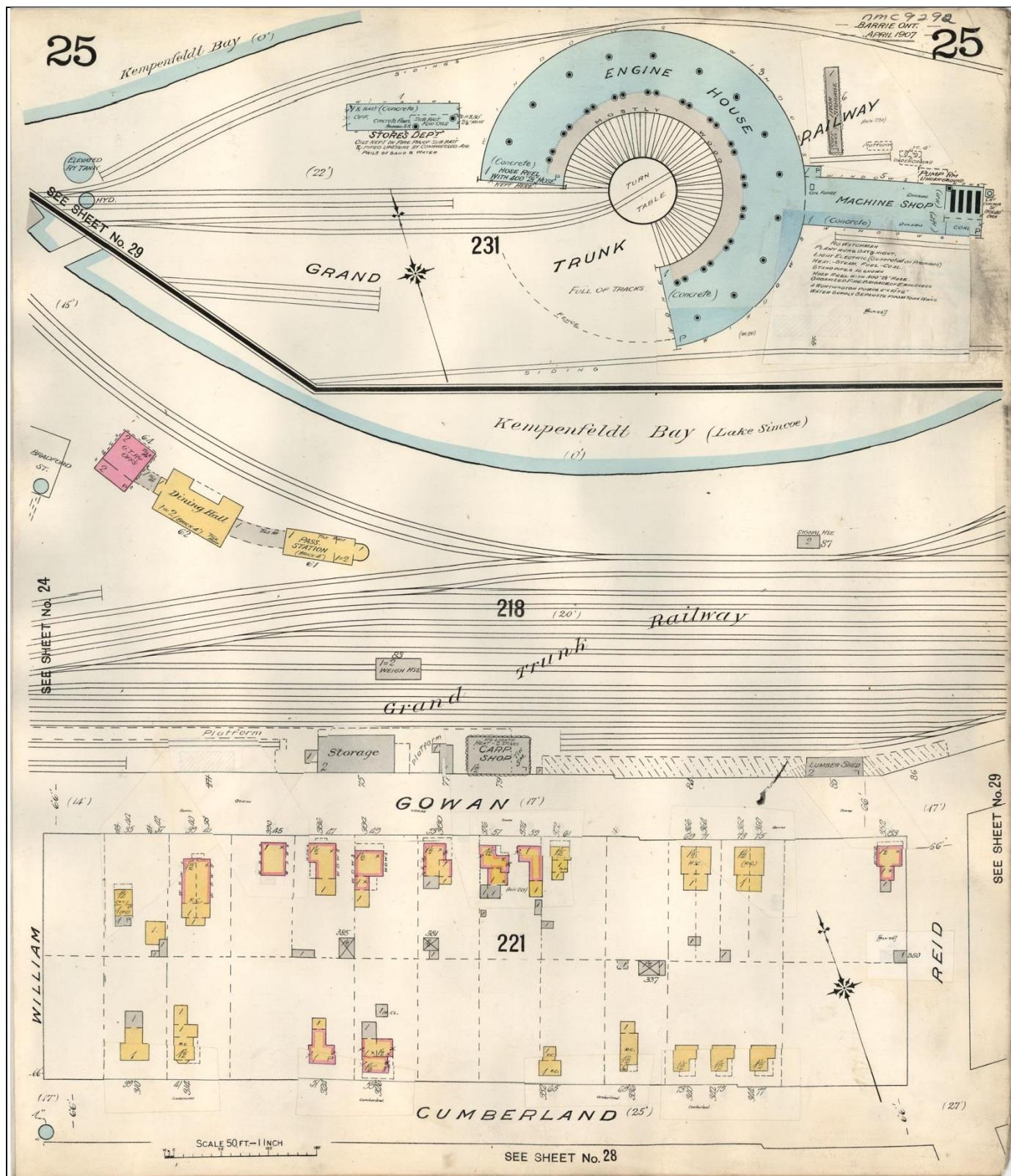
Map 5: LACAC Map from 1890-1899 (Simcoe County Archives).



Map 6: Key Plan of Barrie Ontario, April 1907 (Accessed from The City of Barrie) Overall Plan



Map 7: Key Plan of Barrie Ontario, April 1907 (Accessed from The City of Barrie) Plan 24, Sheet No. 23



Map 8: Key Plan of Barrie Ontario, April 1907 (Accessed from The City of Barrie) Plan 25, Sheet No. 28

8. FIGURES



Figure 1: Study Area Location Map



Figure 2: City of Barrie, Allandale Train Station Lands Study Area

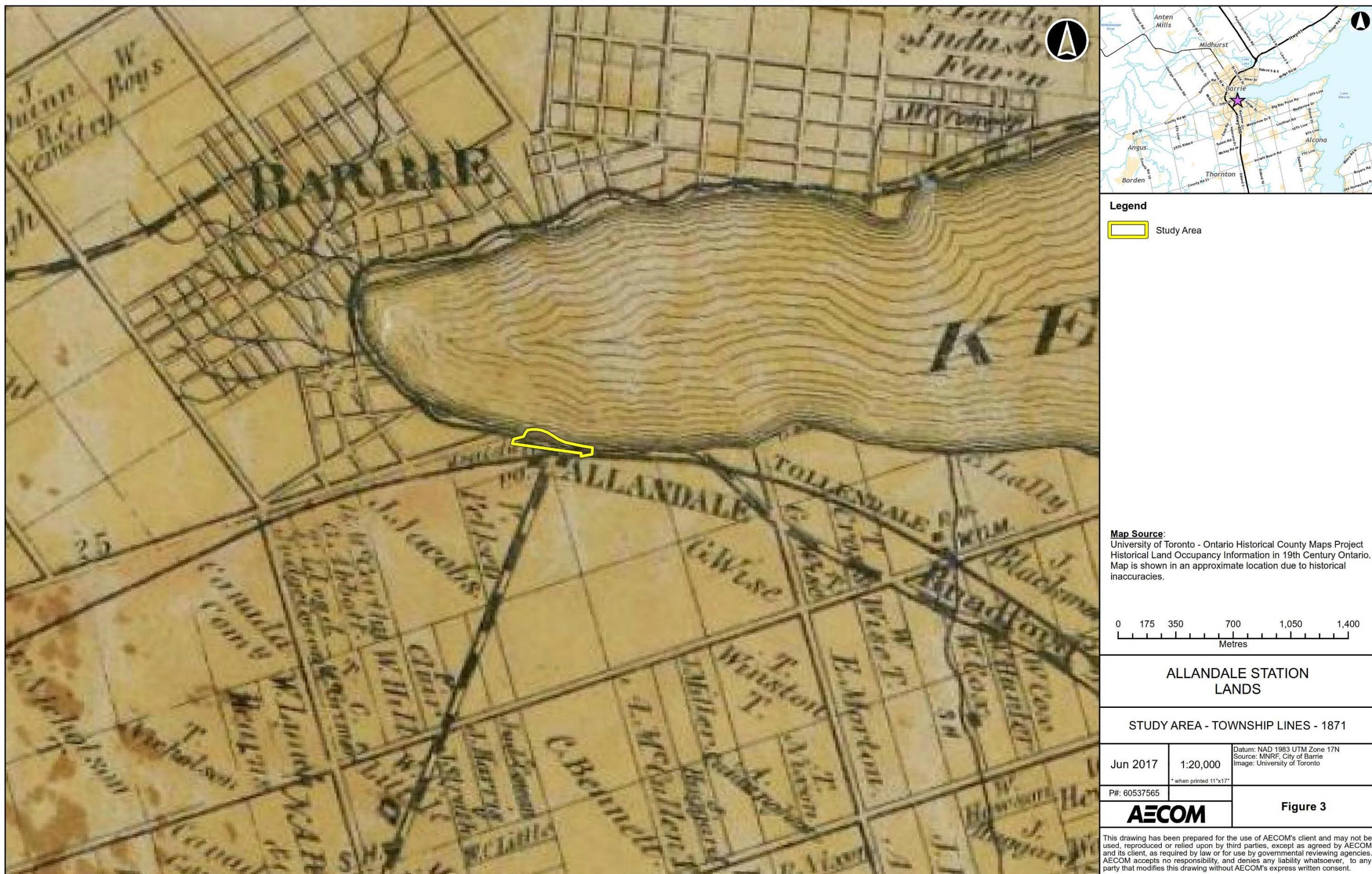


Figure 3: Allandale Train Station Lands Study Area on Innisfil Township and Vespra Township 1860 Tremaine Maps

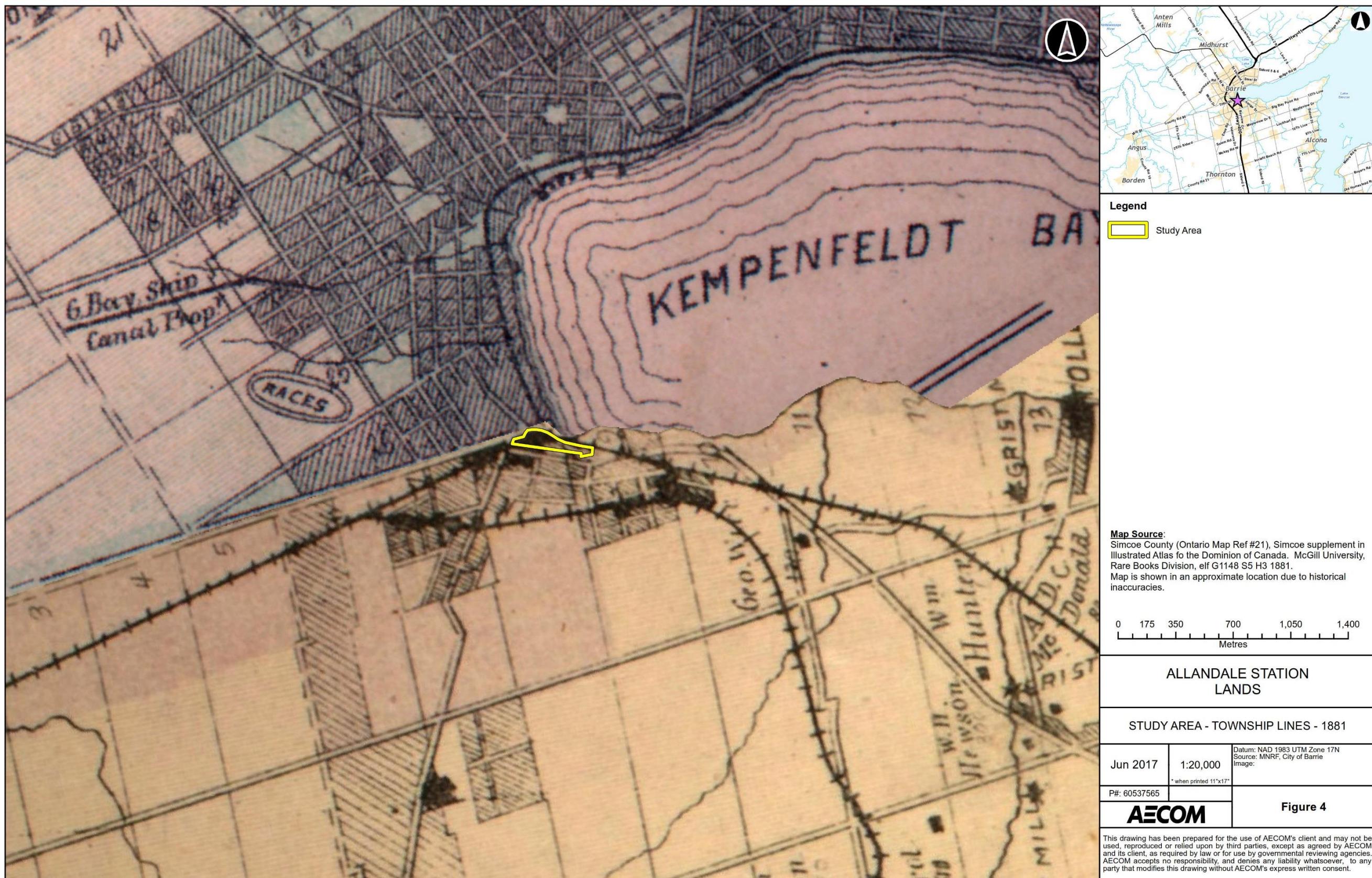


Figure 4: Allandale Train Station Lands Study Area on Innisfil Township and Vespra Township 1878 Historic Atlas Maps

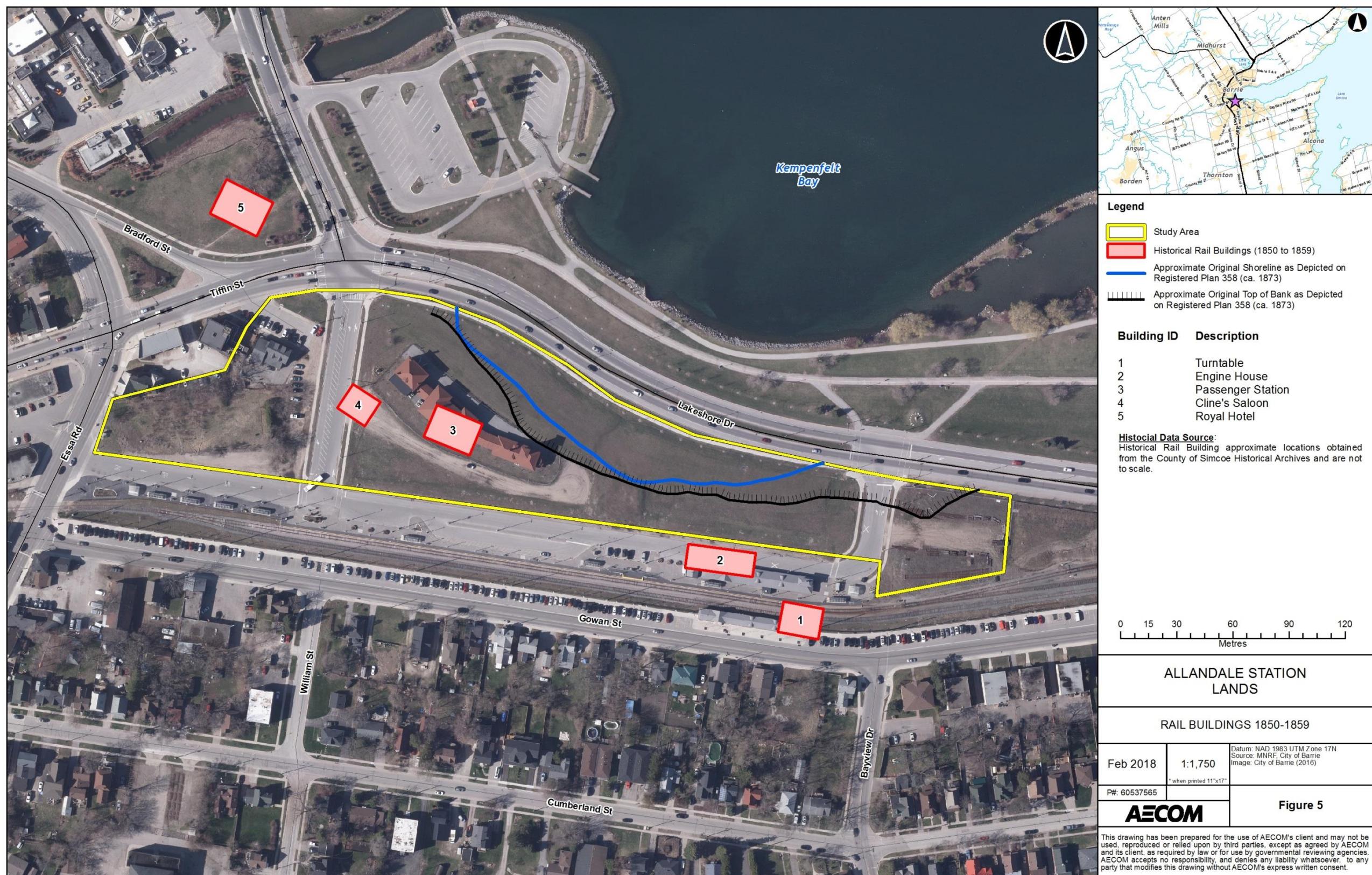


Figure 5: LACAC Map Overlay Showing Rail Buildings 1850-1859



Figure 6: LACAC Map Overlay Showing Rail Buildings 1860-1869



Figure 7: LACAC Map Overlay Showing Rail Buildings 1870-1879



Figure 8: LACAC Map Overlay Showing Rail Buildings 1880-1889

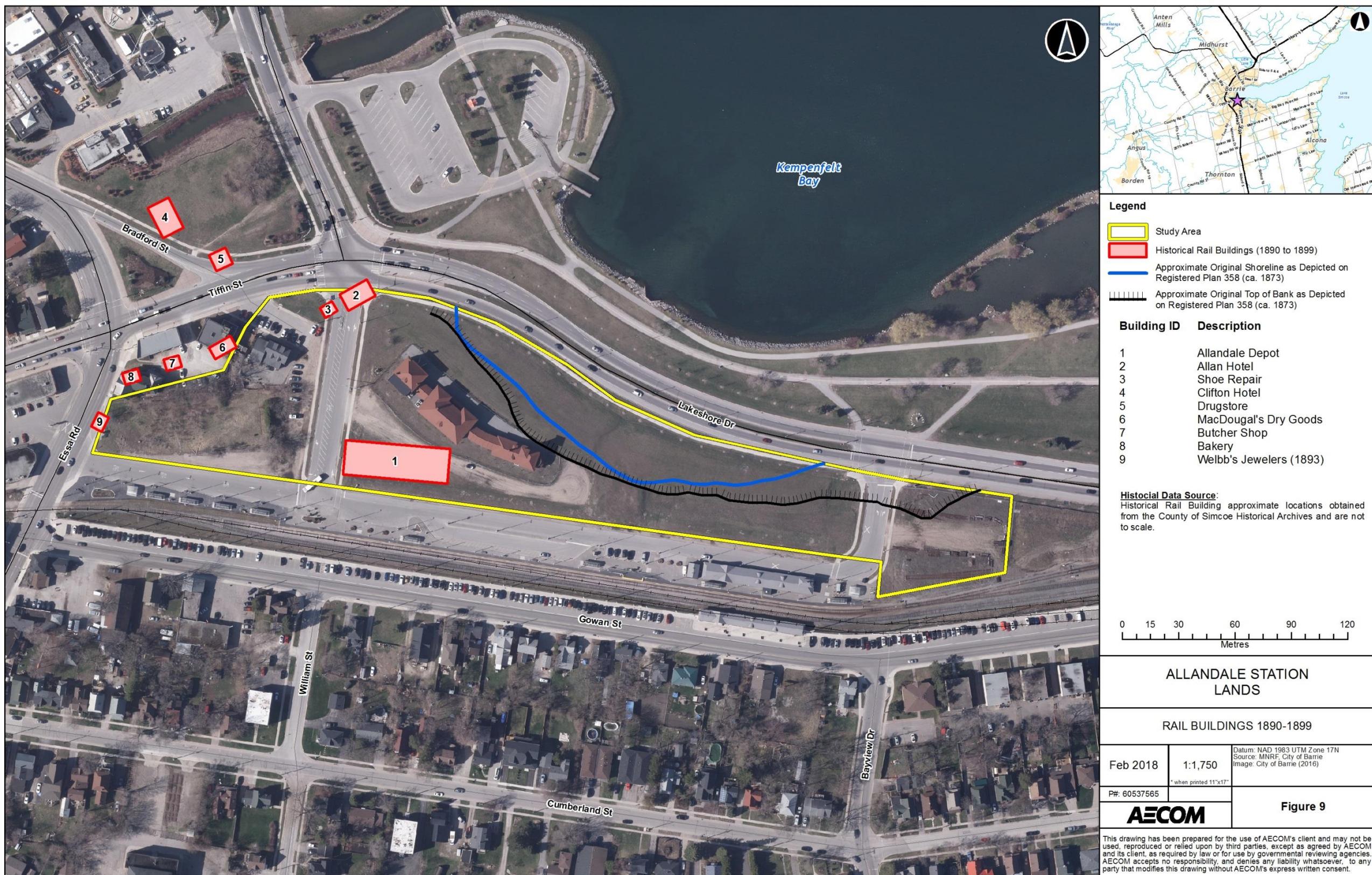


Figure 9: LACAC Map Overlay Showing Rail Buildings 1890-1899

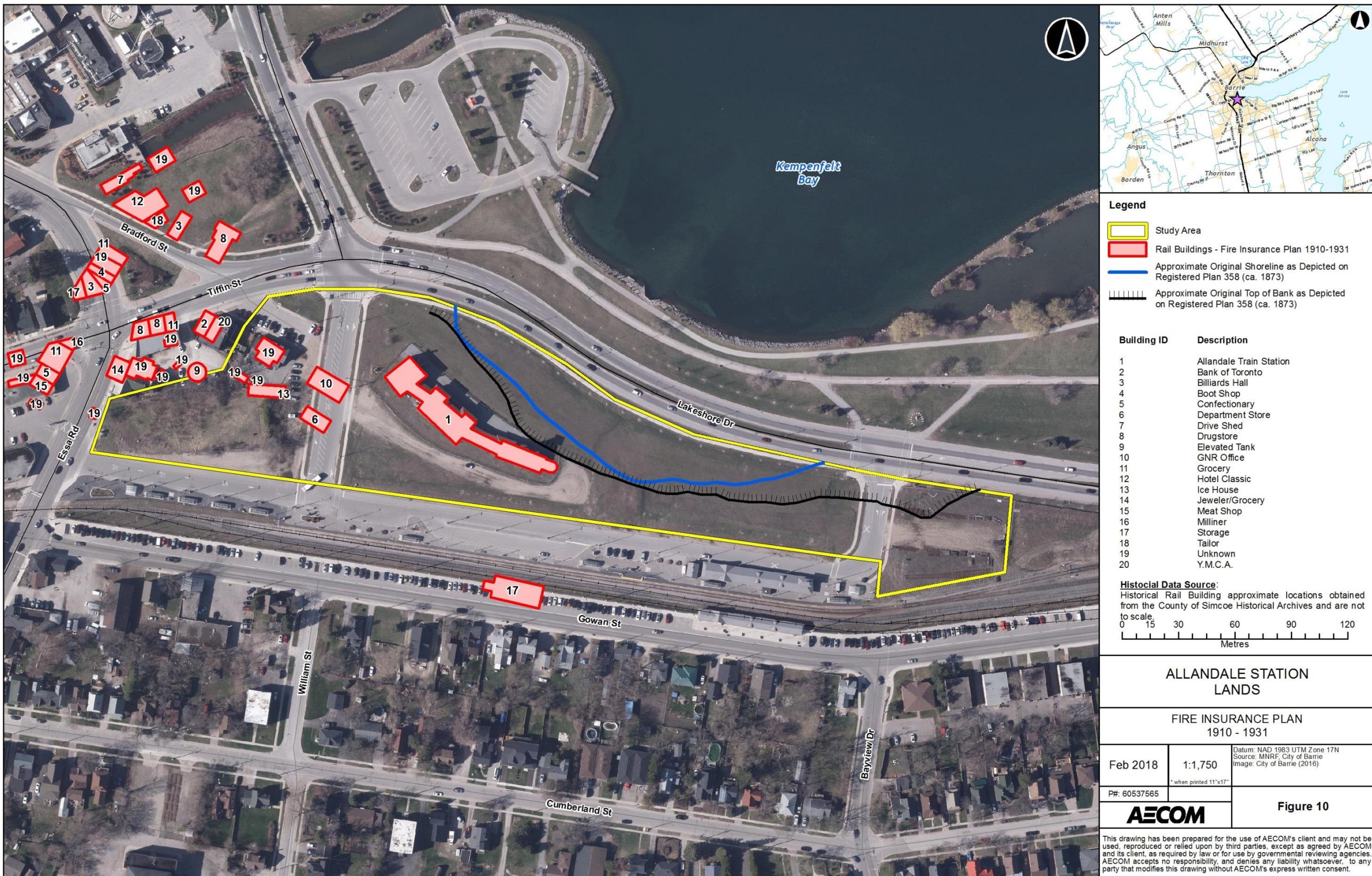


Figure 10: Fire Insurance Plan Overlay 1910-1931

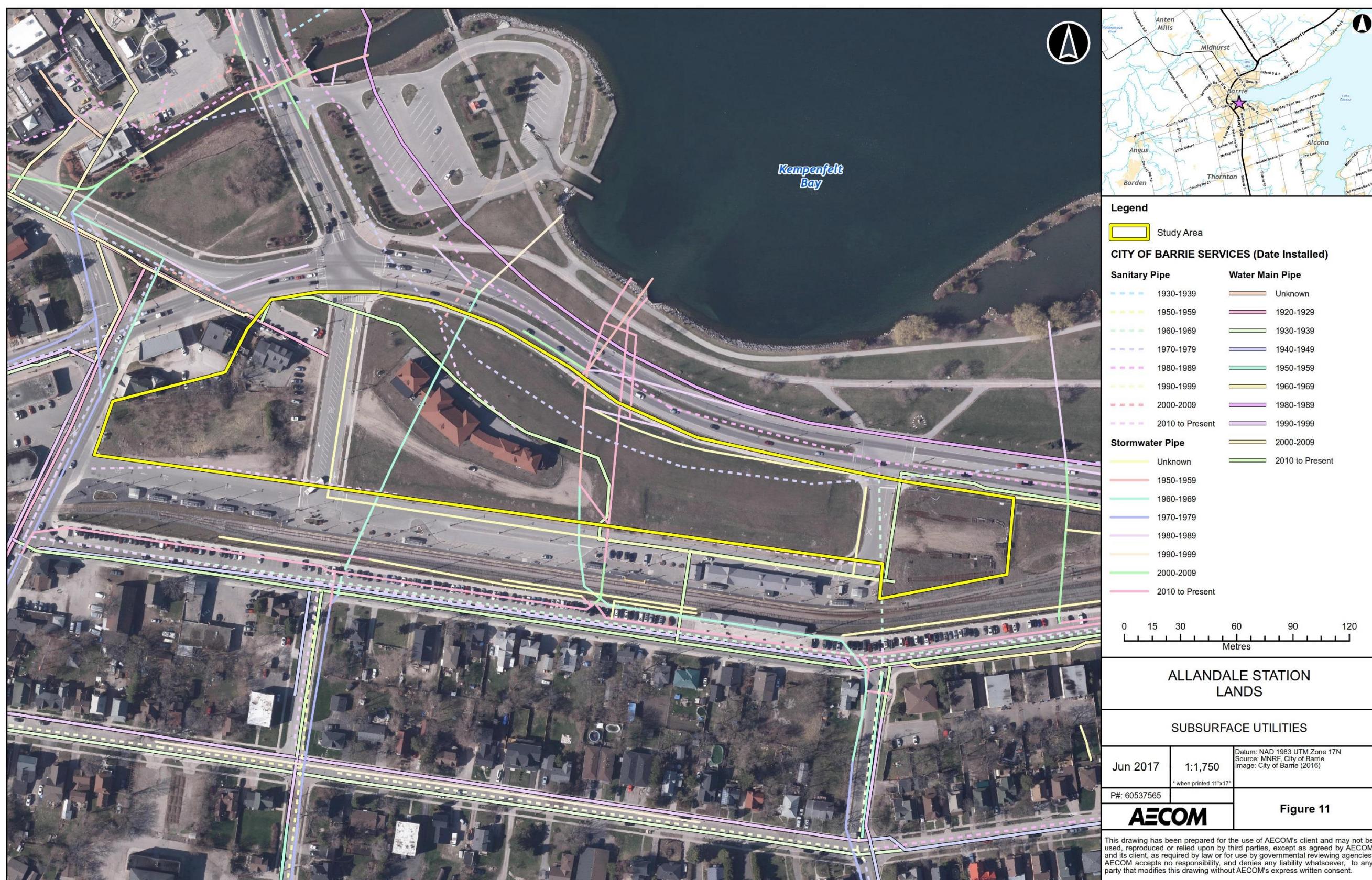


Figure 11: Subsurface Utilities of the Allandale Station Lands



Figure 12: Borehole Location Map of the Allandale Station Lands

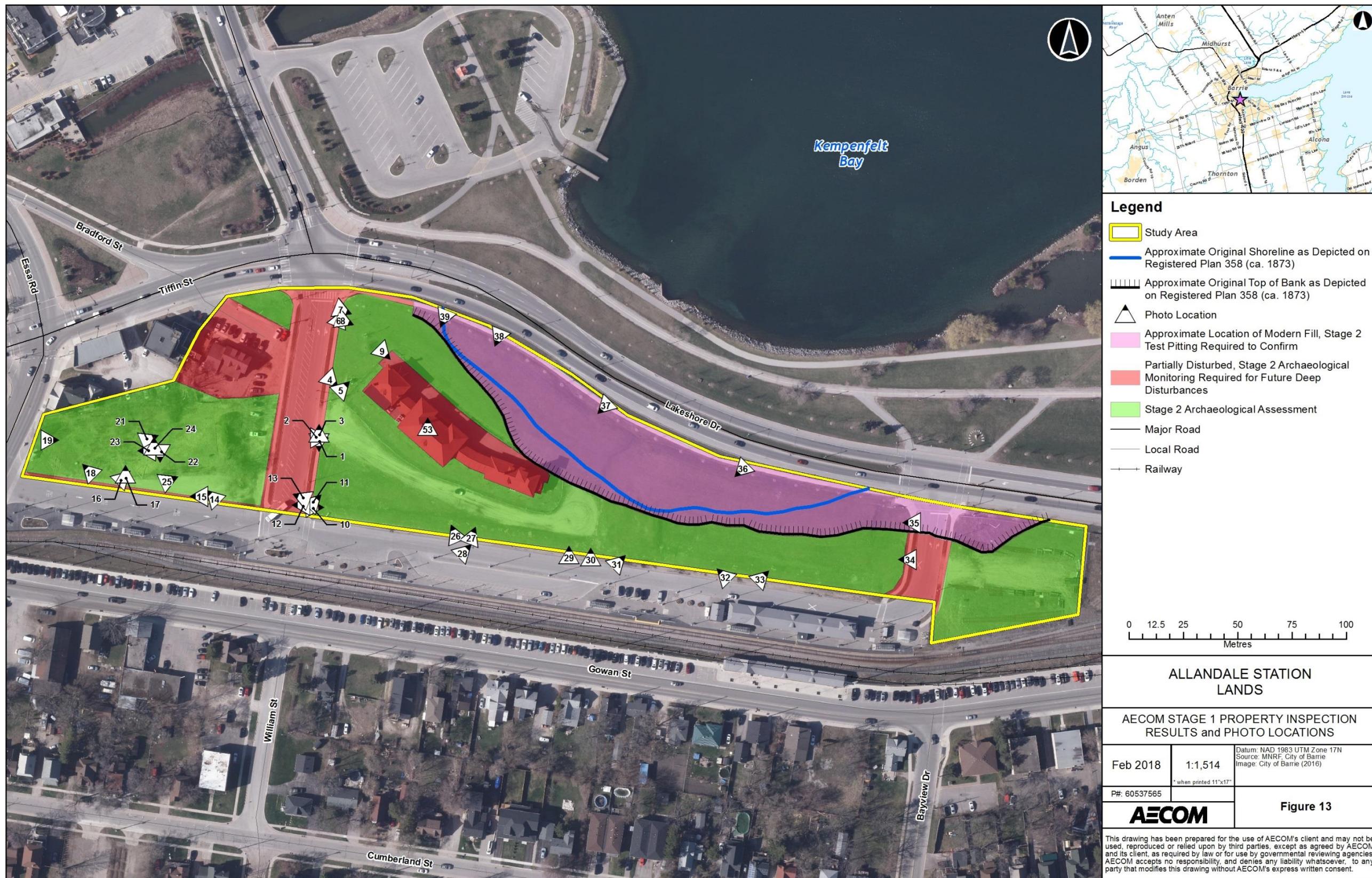


Figure 13: AECOM Stage 1 Property Inspection Results with Photo Locations

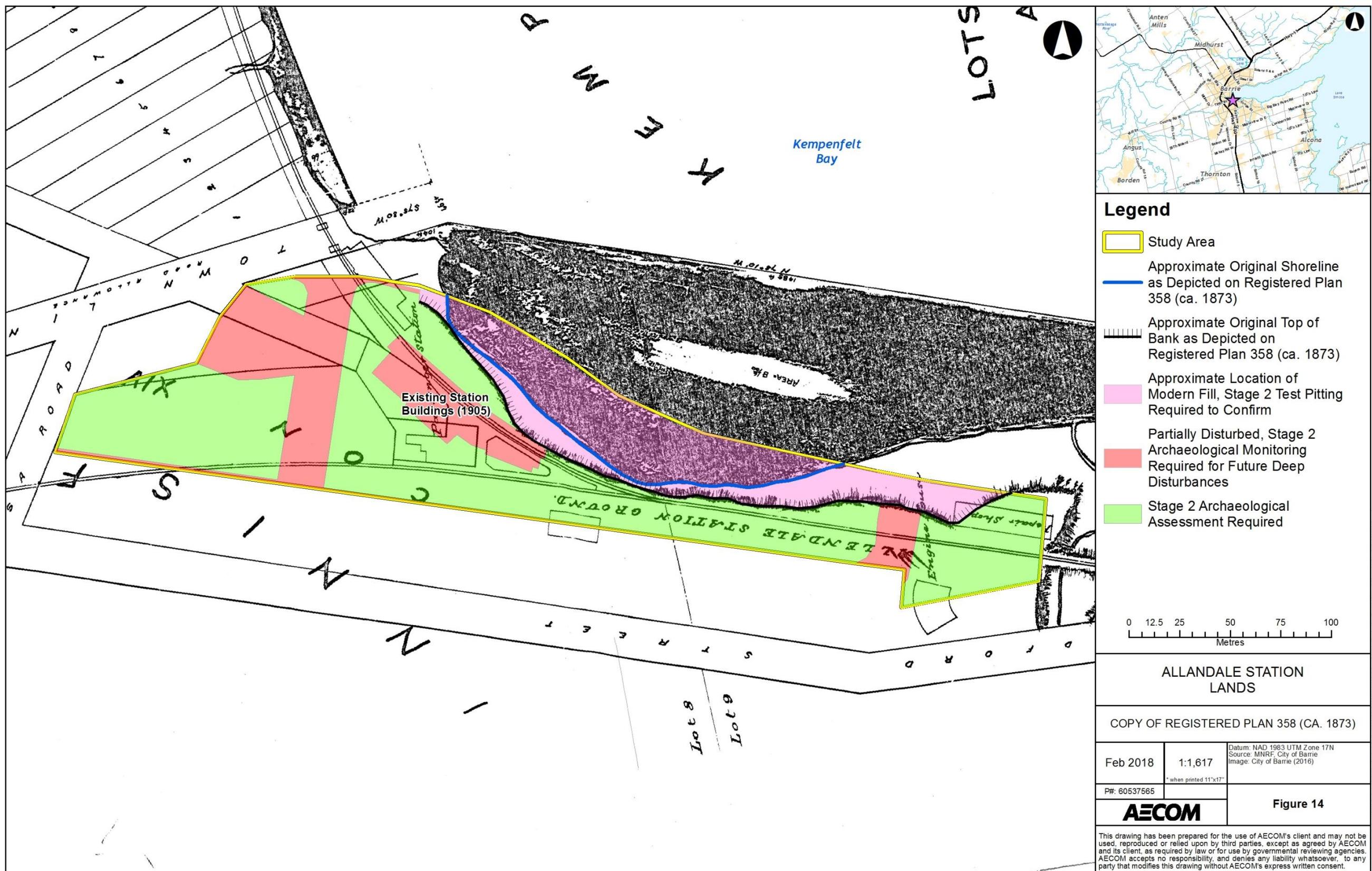


Figure 14: Allandale Station Lands Study Area Overlaid on a Copy of Registered Plane #358 (circa. 1873)

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As a fully integrated firm, we connect knowledge and experience across our global network of experts to help clients solve their most complex challenges.

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