

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT
FOR BLOCK 211 OF THE WINDMILL ZIBI
CHAUDIÈRE EAST DEVELOPMENT
CHAUDIÈRE ISLAND
PART LOT 40, CONCESSION A
OTTAWA FRONT
GEOGRAPHIC TOWNSHIP OF NEPEAN
NOW IN THE CITY OF OTTAWA, ONTARIO**



Past Recovery
Archaeological Services Inc.

**STAGE 2 ARCHAEOLOGICAL ASSESSMENT
FOR BLOCK 211 OF THE WINDMILL ZIBI
CHAUDIÈRE EAST DEVELOPMENT,
CHAUDIÈRE ISLAND,
PART LOT 40, CONCESSION A,
OTTAWA FRONT,
GEOGRAPHIC TOWNSHIP OF NEPEAN,
NOW IN THE CITY OF OTTAWA, ONTARIO**

Prepared for: Taryn Glancy, P. ENG., LEED GA
Project Manager - Infrastructure
Zibi.ca
6 Booth St (Albert Island)
Ottawa, Ontario K1R 6K8

Phone: 613-219-2722
Email: TGlancy@zibi.ca

Re: *Planning Act, Site Plan Control*

Prepared by: Jeff Earl, M.Soc.Sc.
Principal
Past Recovery Archaeological Services Inc.
4534 Bolingbroke Road, R.R. #3
Maberly, Ontario K0H 2B0

Phone: 613-267-7028
Email: pras@pastrecovery.com

PRAS Project No.: PR19-018

Licensee: Adam Pollock, Licence P336
Senior Staff Archaeologist
Past Recovery Archaeological Services Inc.

P.I.F. No.: P336-0251-2019

Date: May 24th, 2019

Original Report

ACKNOWLEDGEMENTS

Ms. Taryn Glancy, P. ENG., LEED GA, Project Manager – Infrastructure, Zibi.ca, Mr. Project Coordinator, Windmill Development Group Ltd., and Mr. Paul Black, planner, FoTenn, all provided logistical support and/or permission to access the property.

Crete-Ryan Construction provided back-hoe services.

PROJECT PERSONNEL

Project Manager	Jeff Earl, M.Soc.Sc. (P031)
Licence Holder/Field Director	Adam Pollock, M.A. (P336)
Stage 2 Field Crew	Jeff Earl Peter Sattelberger (P111) Gabby Belyea, M.A. Peter Stranberg Liam Bowman
Draughting	Stephanie Cleland, Jeff Earl
Report Writing	Jeff Earl
Report Review	Brenda Kennett, M.A. (P030)

EXECUTIVE SUMMARY

Past Recovery Archaeological Services Inc. was retained by Zibi.ca on behalf of Windmill Dream Ontario Holdings LP to undertake a Stage 2 archaeological assessment for Block 211 of the Zibi Chaudière East Development on the former Domtar Inc. lands on Chaudière Island in the Ottawa River between the cities of Ottawa and Gatineau (see Maps 1 and 2). The islands were never part of the formal townships laid out on either side of the river, though some land transactions for Chaudière Island have been listed under Lot 40, Concession A, Ottawa Front, in the geographic Township of Nepean, now in the City of Ottawa. This assessment follows recommendations made in a previous Stage 1 archaeological assessment of Albert and Chaudière Islands (Past Recovery 2014).

The objectives of the Stage 2 assessment were to document all archaeological resources within the study area and to determine if there were archaeological deposits requiring further assessment. Given that the property consisted of an urban brownfield setting with an expectation of deep fill and industrial waste deposits, the Stage 2 assessment was conducted by means of mechanical test trenches. A total of three trenches were excavated and recorded across the unobstructed part of the study area exhibiting archaeological potential. No archaeological resources of sufficient cultural heritage value or interest to warrant further excavation in the form of a Stage 3 site-specific archaeological assessment were found.

On the basis of the results of the Stage 2 property survey discussed above, it is recommended that:

- 1) As the Stage 2 property survey did not result in the identification of any archaeological sites requiring further assessment or mitigation prior to development, no further archaeological assessment of the current Zibi Chaudière East Block 211 study area is required;

- 2) Should planning associated with the proposed Zibi Chaudière East Block 211 development result in the identification of additional areas beyond the Block 211 boundary as defined in Map 2 to be impacted through soil disturbances or other alterations, further Stage 2 to 4 archaeological assessment may be required. It should be noted that impacts include all aspects of the proposed development, including temporary property needs (i.e. access roads, staging/lay down areas, associated works, etc.);
- 3) Any future Stage 2 archaeological assessment should be undertaken by a licensed consultant archaeologist, in compliance with *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).

The reader is also referred to Section 5.0 below to ensure compliance with relevant provincial legislation and regulations that may relate to this project.

TABLE OF CONTENTS

	Page No.
Acknowledgements	ii
Project Personnel	ii
Executive Summary	iii
List of Images	vii
List of Maps	ix
List of Tables	ix
1.0 Introduction	1
2.0 Project Context	2
2.1 Property Description	2
2.2 Development Context	2
2.3 Access Permission	2
3.0 Summary of the Previous Stage 1 Archaeological Assessment	3
3.1 Historical Context	3
3.2 Archaeological Context	7
3.2.1 Previous Archaeological Research	7
3.2.2 Registered Archaeological Sites in the Vicinity of the Study Area	8
3.2.3 Built Heritage and Heritage Plaques	8
3.2.3 Environment	8
3.3 Analysis and Conclusions	12
3.3.1 Archaeological Potential	12
3.3.2 Previous Stage 1 Recommendations	13
4.0 Stage 2 Archaeological Assessment	14
4.1 Fieldwork Methods	14
4.2 Results	16
4.3 Analysis and Conclusions	19
4.4 Stage 2 Recommendations	21
5.0 Advice on Compliance with Legislation	23
6.0 Limitations and Closure	24
7.0 References	25
8.0 Maps	29
9.0 Images	45

TABLE OF CONTENTS (continued)

	Page No.
APPENDIX 1: Photographic Catalogue	66
APPENDIX 2: Glossary of Archaeological Terms	68

LIST OF IMAGES

Image No.	Page No.
1 The Perley & Pattee sawmill and other buildings on Chaudière Island c. 1858 in a lithograph by Stent & Laver, looking east	45
2 The Union Bridge with the J.R. Booth sawmill on the right and the toll house near the end of the bridge between 1867 and 1870, looking south	46
3 Barges being loaded from lumber piles on Chaudière Island with the J.R. Booth wharf, the Union Bridge and part of J.R. Booth's sawmill in the background in 1872, looking west	47
4 Segment of the Brosius bird's-eye view of Ottawa showing the study area in 1876, looking southeast	48
5 The J.R. Booth pulp mill on Chaudière Island c. 1909, looking north-northwest along Bridge Street	49
6 The J.R. Booth sulphite pulp and board mills on Chaudière Island in 1911, looking south-southeast	49
7 The J.R. Booth ground wood pulp mill on Chaudière Island with the sulphite pulp mill in the background in 1913, looking north-northwest	50
8 J.R. Booth's mills on Chaudière Island from E.B. Eddy's mill pre-1919, looking southwest	50
9 Oblique aerial photograph showing the study area, 1929	51
10 Oblique aerial photograph showing Chaudière Island, 1950, looking northwest	51
11 View of the location of the recently removed west end of the former box factory, facing northwest	52
12 View of the location of the recently removed west end of the former box factory, facing north-northwest	52
13 View of the location of the recently removed west end of the former box factory, facing southeast	53
14 View of the location of the recently removed west end of the former box factory, facing south	53
15 View of the western end of the recently removed section of the former box factory showing an in situ concrete wall, facing west-southwest	54
16 View of the west half of the study area showing piled fill and on-site trailers, facing north-northwest	54
17 View of the west half of the study area showing piled fill, facing southeast	55
18 View of the north end of the study area showing piled fill and barriers next to steep slope and the recent manhole excavation, facing east-northeast	55
19 View of the recent manhole excavation along the north edge of the study area, facing north-northwest	56
20 View of the relatively undisturbed north end of the study area, facing east-northeast	56

LIST OF IMAGES (continued)

Image No.	Page No.
21 Staff monitoring the mechanical excavation of Trench 1B, facing south-southeast	57
22 Staff recording the initial excavation of Trench 1A, facing northwest	57
23 View of the location of Trench 1A, facing northwest	58
24 Trench 1A: west profile	59
25 West profile of Trench 1A, facing northwest	60
26 East profile of Trench 1A, facing east-northeast	60
27 Trench 1B: west profile	61
28 Initial west profile of Trench 1B showing the Lot 2 debris layer, facing west-southwest	62
29 View of Trench 1B showing the concrete wall, facing south	62
30 East profile of Trench 1B, facing north	63
31 View of the location of Trench 1C, facing north-northeast	63
32 Trench 1C: north profile	64
33 North profile of Trench 1C, facing northwest	65

LIST OF MAPS

Map No.	Page No.
1 Location of the study area	29
2 Recent satellite imagery (2018) depicting the Zibi Chaudière East Block 211 study area	30
3 Concept plan showing the proposed new structures within Block 211 of the Zibi Chaudière East development	31
4 Segment of the 1851 survey plan of the islands at the Chaudière Falls showing the study area	32
5 Segment of an 1861 plan of the City of Ottawa showing the study area	33
6 Plan of Chaudière Island in 1867 showing the approximate study area	34
7 Segment of the 1878 fire insurance plan of Ottawa showing the study area	35
8 Segment of the 1895 revised to 1898 fire insurance plan of Ottawa showing the study area	36
9 Segment of the 1912 fire insurance plan of Ottawa showing the study area	37
10 Segment of the 1912 revised to 1922 fire insurance plan of Ottawa showing the study area	38
11 Segment of the 1956 fire insurance plan of Ottawa showing the study area	39
12 Segment of a 1:1,250 topographic map of Ottawa showing the study area	40
13 Former sulphite pulp mill and board mill basement plan	41
14 Recent satellite imagery (2018) depicting archaeological potential within the Zibi Chaudière East Block 211 study area	42
15. Site plan showing test trench locations and Stage 2 field testing methods	43
16. Locations and orientations of photographs taken during the Stage 2 field survey and referenced within Section 4.0 of this report	44

LIST OF TABLES

Table No.	Page No.
1 Listing of registered archaeological sites within a 1 km radius of the centre of the study area	9
2 Listing of registered archaeological sites within a 1 km radius of the centre of the study area not in the Provincial Database	11
3 Inventory of the Stage 2 documentary record	16
4 Lots assigned to Trench 1A	17
5 Lots assigned to Trench 1B	18
6 Lots assigned to Trench 1C	19

1.0 INTRODUCTION

Past Recovery Archaeological Services Inc. (Past Recovery) was retained by Zibi.ca on behalf of Windmill Dream Ontario Holdings LP (Windmill) to undertake a Stage 2 archaeological assessment for Block 211 of the Zibi Chaudière East Development on the former Domtar Inc. lands on Chaudière Island in the Ottawa River between the cities of Ottawa and Gatineau (Maps 1 and 2). The islands were never part of the formal townships laid out on either side of the river, though some land transactions for Chaudière Island have been listed under Lot 40, Concession A, Ottawa Front, in the geographic Township of Nepean, now in the City of Ottawa. This assessment follows recommendations made in a previous Stage 1 archaeological assessment of Albert and Chaudière Islands (Past Recovery 2014).

The objectives of the Stage 2 archaeological assessment were as follows:

- To document all archaeological resources on the property;
- To determine whether the property contained archaeological resources requiring further assessment; and,
- In the event that an archaeological site requiring further assessment was discovered, to recommend appropriate Stage 3 assessment strategies.

2.0 PROJECT CONTEXT

This section of the report provides the context for the archaeological work undertaken, including a description of the study area, the related legislation or directives triggering the assessment, and the confirmation of permission to access the property.

2.1 Property Description

The study area consists of a 0.45 ha (1.1 acre) parcel of land on Chaudière Island within the City of Ottawa (see Maps 1 and 2). Chaudière Island is located on the Ottawa River, between the cities of Ottawa and Gatineau, on the south side the Chaudière Falls and thus within the Province of Ontario. As stated above, the islands in the Ottawa River in this location were not included in the surrounding townships on either the Upper or Lower Canada side. A few late nineteenth century transactions involving Chaudière Island, likely related to the acquisition of former public land, do appear in the land registry abstract for Lot 40, Concession A, Ottawa Front, of the geographic Township of Nepean. The island was formally surveyed in 1851, registered as subdivision plan No. 10 in the Carleton County (now Ottawa) land registry office. The study area for Block 211 of the project currently contains a mixture of open ground, former parking lot and the foot-prints of recently demolished twentieth century industrial buildings.

2.2 Development Context

Ownership of Chaudière Island is currently divided between Public Works & Government Services Canada, the Ontario Ministry of Natural Resources, the City of Ottawa, the National Capital Commission and Windmill/Zibi.ca. The last is the current project proponent and has recently purchased the former Domtar Inc. lands. Part of the northern shoreline of Chaudière Island has also been leased to Hydro Quebec. The result is an interweaving pattern of ownership resulting in a puzzle of intermeshed jurisdictions. Windmill/Zibi.ca wishes to redevelop the Domtar Inc. lands into a mixed residential and commercial site. The concept plan for the Block 211 study area indicates the development will include the construction of several new multi-storey buildings (Map 3). The Stage 2 archaeological assessment is being completed in accordance with the *Planning Act* and with the recommendations laid out in the Stage 1 archaeological assessment of Chaudière and Albert Islands (Past Recovery 2014), which determined that a portion of the Block 211 study area retained archaeological potential and thus required Stage 2 testing in advance of any soil disturbances. Approval authority for the project rests with the City of Ottawa planning department.

2.3 Access Permission

Permission to access the study area and complete all aspects of the archaeological assessment, including excavation, photography and the collection of any artifacts encountered, was granted by the project proponent.

3.0 SUMMARY OF THE PREVIOUS STAGE 1 ARCHAEOLOGICAL ASSESSMENT

This section of the report contains a summary of the previous Stage 1 archaeological assessment. This information is included to provide both historical and archaeological contexts for an interpretation of the results of the present study. For more information, the reader is encouraged to consult the full Stage 1 archaeological assessment report (Past Recovery 2014).

3.1 Historical Context

This section of the Stage 1 report included an overview of human settlement in the region with the intention of providing a context for the evaluation of known and potential archaeological sites, as well as a review of property-specific detailed archival research presenting a record of land use history as an aid to determining archaeological potential. *Only information of direct relevance to Block 211 of the Zibi Chaudière East Development study area will be reproduced here.* Again, for a complete account of the broader island and all references from primary sources, the reader is encouraged to consult the full Stage 1 assessment report (Past Recovery 2014).

Indigenous occupation of southern Ontario began approximately 11,000 years ago with the arrival of groups referred to by archaeologists as Palaeo-Indians. Most archaeological evidence for the Palaeo-Indian period has been found in south-western and south-central Ontario at sites located on the former shorelines of glacial Lake Algonquin. Indigenous settlement of eastern Ontario was late in comparison to these other parts of the province as a result of the high water levels of the St. Lawrence Marine Embayment of the post-glacial Champlain Sea (Hough 1958:204). The Ottawa Valley remained very much on the fringe of occupation at this time. The ridges and old shorelines of the Champlain Sea and the Ottawa River channels would be the most likely areas to find evidence of Palaeo-Indian occupation. A number of lithic sites that may date to the Late Palaeo-Indian or Early Archaic period have been reported for the Ottawa area (eg. Swayze 2005; Swayze and McGhee 2011).

Later Archaic and Woodland Period sites are known for the general study area, indicating an active use of the Ottawa river system by Indigenous peoples, with hints of more permanent occupation of the area. Throughout much of this period the Chaudière Falls was a significant spiritual site, and parts of the Quebec shoreline and probably the Richmond Landing area were used as convenient stop-over sites for those travelling up or down river having to portage around the rapids. The islands themselves were likely inaccessible through this period given their rugged shorelines and the rapidly moving water around them throughout much of the year. The use of portage routes around the falls was continued into the post-Contact period by local Algonquin populations, followed by early European explorers. In the wake of Champlain's travels in the early seventeenth century, the Ottawa River became the principal route to the interior for explorers, missionaries, and fur traders. Throughout the seventeenth and eighteenth

centuries this route remained an important link in the French fur trade. At the beginning of the nineteenth century there was an economic shift from the fur trade to the lumber industry as the Napoleonic blockades increased European demand for quality pine.

Settlement in the Ottawa area was not actively encouraged by the colonial government until the late eighteenth century. To this end, in 1793, two years after the division of the Province of Québec into Upper and Lower Canada, the Deputy Surveyor, John Stegmann, was asked to undertake an initial survey of four townships (Gloucester, North Gower, Osgoode, and Nepean) on both sides of the Rideau River near its junction with the Ottawa River. The islands in the river were not included in this survey, and in the early nineteenth century were reserved for government purposes, with the intention that at some point a canal would be constructed to by-pass the falls. A series of bridges across the islands connecting the growing development at Bytown through the LeBreton Flats to the settlement of Hull on the north shore of the river were completed in 1828, though the main bridge across the falls collapsed in 1836. A timber slide was installed along the south side of Chaudière Island in 1832. A toll house was the first permanent building to be erected on the island following the construction of the Union Suspension Bridge in 1843.

The islands were finally opened up for industrial development after 1849 when the Province of Canada, acting as an agent for the Crown, purchased the land fronting the Chaudière Falls and following a formal survey in 1851 began leasing hydraulic and building lots. Most of Block 211 lay within a public area set aside as 'Union Square' which straddled both sides of Bridge (Booth) Street, and on the east side extended between Head Street to the south and the Bridge Reserve to the north, and included an inlet in the northern shoreline of the island (Map 4). The eastern end extended into Reserved Lot 7 (retained by the government for public purposes) to the east of the inlet. The opening up of the islands achieved the desired result, launching an explosive growth in the lumber industry and mill construction at the Chaudière, on the islands and on both shores of the river. The economic opportunities offered by the flourishing timber trade encouraged a further wave of immigration to the area. This in turn created a demand for housing, both for the mill workers and the industrialists who owned the mills. Three large sawmill complexes were established on Chaudière Island during the 1850s, operated by A.H. Baldwin (begun c. 1853 but moved to a new location and greatly expanded in 1866/67), Perley & Pattee (1857) and J.R. Booth (1858).

The Baldwin and Perley & Pattee sawmills are depicted in a c. 1858 Stent & Laver lithograph of Ottawa sketched from the northwest, together with other structures that had been erected on Chaudière Island by that time (Image 1).¹ The study area, as with

¹ The second building to the rear of the Perley & Pattee sawmill was likely their stone workshop seen in later illustrations - it is uncertain whether or not the initial J.R. Booth sawmill had been erected by this time, though it seems unlikely.

most of the centre of the northern half of Chaudière Island, remained open and was being used for piling lumber - an activity which would continue in this area into the early twentieth century. Apart from a complex of buildings along the south shore, the remainder of the east end of the island was undeveloped - no additional wharves or landing areas appear to have been constructed by this time.

By 1861 a simple single track tramway had been opened extending south from the Perley & Pattee sawmill west of Bridge (Booth) Street into the open yard and connecting with an east-west running track bisecting the island (Map 5). At the east end this led to a wharf covering the eastern tip of the island, which had obviously been constructed over the previous two years to facilitate loading barges as the output of the sawmill increased. Three structures had been erected along the tram line on the eastern half of the island, though their function is not labelled, that furthest to the west lying within the study area.

Chaudière Island appears to have been resurveyed in 1867 to re-establish the individual lot boundaries. The resulting plan provides a detailed glimpse of the structures present at that time, all of which are labelled as to their function (Map 6). The only structure illustrated to the north of the Head Street right-of-way on the eastern half of the island, however, was a combined shed/stable constructed against the western edge of the steep inlet just southeast of the Union Bridge reserve. The early tram system and associated outbuildings were not shown.

Two detailed illustrations were published in 1876, providing a clear indication of the development on Chaudière Island by this time. The first of these was a detailed plan of the periphery of the island and the various hydraulic improvements surrounding it. The original J.R. Booth sawmill had been replaced with a much larger structure which extended into the Union Bridge reserve. A small stable and another outbuilding had been erected along a new north-south running reserve wall. The gates and toll house were still present, along with a small outbuilding to the north, but a note indicates that part of the eastern half of the reserve had been leased to J.R. Booth and the remainder was being occupied by him, likely to pile lumber. Wharves had been constructed along the north-eastern side of the island, with those closest to the bridge being used to load lumber onto barges by J.R. Booth and the remainder by Perley & Pattee, who were occupying government reserved land at both ends of the island (Images 2 and 3).

The second 1876 illustration is a 'bird's-eye' view of Ottawa taken from a similar angle to the c. 1858 Stent & Laver lithograph (Image 4; see Image 1). This shows very little unused space on Chaudière Island, with all undeveloped land containing stacked lumber piles. The Union Bridge, toll house, outbuilding and the gates to the Union Bridge reserve are shown, but the land immediately to the east contained lumber piles and ramps down to wharves used to load barges. The central part of the island was covered with piled lumber. Though not shown on the 1876 plan, a stable/stores

building had been erected opposite the end of Chaudière Street amidst the lumber piles, and the natural gully appears to have been filled in to create more piling room.

A fire insurance plan produced in 1878 provides more details regarding the development of the island up to that point (Map 7). Several one storey outbuildings lay scattered around the extensive Perley & Pattee and J.R. Booth piling yards to the north of Head Street. The tram system through the Perley & Pattee yards had become quite extensive by this time, with numerous junctions and double lines. The stable opposite Chaudière Street on the eastern half of the island appears to have been enlarged and another long shed had been erected along the southeast edge.

A partial fire insurance plan originally produced in 1888, but with patches showing alterations dating to at least 1891, shows that significant alterations had taken place within the study area. Though the eastern end of Chaudière Island is cut off on this plan, the stables in the northeast quadrant of Chaudière Island had been expanded to the north and a drive shed attached to the southwest corner. As there was no patch, this alteration had been completed by 1888. A small shed had also been added in the vicinity next to Bridge Street, though this structure was on a patch and thus likely post-dated 1888.

The Union suspension bridge was found to be too narrow to accommodate the increased flow of traffic through the Chaudière area, and thus a contract was awarded in 1888 to replace it with a steel truss bridge. The new bridge was completed in 1889, constructed around the existing suspension bridge so as not to disrupt communication (Ken Desson & Associates 1982 Vol. 1 No. C:21). William Perley died in 1891, and George Pattee appears to have lost interest in continuing with the lumber business. He sold the Perley & Pattee mill to J.R. Booth in 1891 and the firm was dissolved in 1893 (Lee 2006:141). Booth's large new sawmill was destroyed by fire in June of 1894, believed to have been set by an arsonist. The employees were able to save the former Perley & Pattee sawmill, and thus lumber production was able to continue despite the loss (Trinell 1998:28). The 1895 fire insurance plan of Ottawa, with patches updated to 1898, shows the extensive stable complex within the study area, as well as surrounding sheds and outbuildings, though these structures appear to have only had minor alterations over this period (Map 8). The southern part of the study area had been acquired by J.A. Parr, with J.R. Booth continuing to use the northern part.

On April 26, 1900, a large portion of Ottawa and Hull was destroyed by a devastating fire. The fire left the Chaudière area, LeBreton Flats, Rochesterville, and Sherwood south to Dow's Lake in smouldering ruins, having burned a swath nearly half a mile wide, covering more than 70 city blocks (Bond 1984:89). Remarkably the Union Bridge and J.R. Booth's mills on Chaudière Island were spared, thanks to the mill employees who fought back the fire even as their homes were consumed. All of the other structures within the study area, including the steel bridges linking Chaudière and Albert Islands with LeBreton Flats, were destroyed.

J.R. Booth formally acquired part of Union Square, officially closed by City of Ottawa By-Law 2511, in 1905, though it had been used for lumber piling for decades. By 1912 he had erected a new one to six storey reinforced concrete sulphite paper mill and cardboard mill to the east of Bridge (Booth) Street, north of the Head Street right-of-way (Map 9; Images 5 to 7). The area around the bridge in the location of the former loading dock appears to have been raised at this time, creating a level storage area next to the road. The Union Bridge was replaced in 1919 by a new, stronger truss bridge (Ken Desson & Associates 1982 Vol. 1 C 21). All of the J.R. Booth holdings on Chaudière Island were transferred to the reorganized J.R. Booth Ltd. in 1921. A one-storey frame 'wood room' had been added to the north side of the sulphite pulp mill by 1919 (Map 10; Images 8 and 9).

All of the J.R. Booth Ltd. premises were sold to the E.B. Eddy Company in 1946. The entire property can be seen in an oblique aerial photograph taken in 1950, which shows few evident changes (Image 10). The final available fire insurance plan, published in 1956, indicates that the one-storey wooden addition along the north side of the sulphite pulp mill had been removed (Map 11). Chaudière Street and Head Street were formally closed by City of Ottawa By-Law 316-60 in 1960. The west end of the sulphite pulp mill was demolished between 1965 and 1968, and the resulting vacant space adapted for employee parking (Map 12). The E.B. Eddy Co. site was purchased by Domtar Inc. in 1998 and then closed in 2007.

3.2 Archaeological Context

This section of the Stage 1 report described the archaeological context of the study area and, combined with the historical context outlined above, provided the necessary information to assess the archaeological potential of the property.

3.2.1 Previous Archaeological Research

Following the initiation of environmental assessments on the LeBreton Flats in the early 1990s and a direct appeal to the NCC at the on-set of soil remediation by archaeologist Hugh Daechsel regarding the potential destruction of significant archaeological resources, numerous archaeological assessments have been completed within the LeBreton Flats North sector lands (north of the aqueduct), and a few have been focussed on the islands to the south of the Chaudière Falls. Brief summaries of these reports were included in the Stage 1 archaeological assessment (Past Recovery 2014).

Only two archaeological assessments are known to have been conducted on Chaudière Island. In 2006 Ken Swayze was retained by Domtar Inc. to undertake a Stage 1 archaeological assessment of Chaudière Island and a Stage 2 assessment of part of the northern shoreline (Swayze 2006). Nothing of archaeological significance was found. Following the completion of the Stage 1 assessment for the current project, Stage 2 testing was undertaken in Phase 1 of the Zibi Chaudière West development, to the

south and east of the area tested in 2006 (Past Recovery 2015). Again, nothing of archaeological significance was found.

3.2.2 Registered Archaeological Sites in the Vicinity of the Study Area

In order to acquire an updated listing of all nearby archaeological sites that have been registered with the Ontario Ministry of Tourism, Culture and Sport from that given in the Stage 1 report, a search of the Ontario Archaeological Sites Database was undertaken as part of the current project. Table 1 shows all registered archaeological sites occurring within a 1 km radius of the study area, on the Ontario side of the provincial border. It is important to note that a number of archaeological sites for which Borden Numbers have been requested from the database administrator have yet to appear in the database as registered archaeological sites as their Archaeological Site Record (ASR) forms have not been submitted to the province. For this reason, a second table listing archaeological sites known to Past Recovery for which no ASR form has yet been filed is provided below (Table 2).

There are no known archaeological sites located on Chaudière Island.

3.2.3 Built Heritage and Heritage Plaques

In order to augment the archival research discussed above, the Stage 1 archaeological assessment included a search of available listings of recognized (eg. listed or designated) built heritage features to assist with the evaluation of the archaeological potential of the study area. Lists of built heritage created and maintained by the NCC, the City of Ottawa, the Ontario Ministry of Tourism, Culture and Sport, and the Federal Heritage Building Review Office (FHBRO) were consulted for information pertaining to recognized built heritage structures located within the study area.

It was determined that none of the existing buildings on Chaudière Island had been listed in the City or Provincial databases, though all of the former J.R Booth/E.B. Eddy/Domtar standing structures have recently been assessed by FHBRO (Clerk and Dufresne 2010). Consultation with the FHBRO list of designated buildings, however, indicated that none had yet been awarded a federal heritage designation. There were also no heritage plaques noted within the study area.

3.2.3 Environment

Chaudière Island lies within the Ottawa River, anchoring the south end of Chaudière Falls. The study area forms part of the Ottawa Valley Clay Plains physiographic region (Chapman and Putnam 1984: 113). This region is characterized by clay plains that are interrupted by ridges of rock or sand. The upper section of the region, lying above

Table 1. Listing of Registered Archaeological Sites within a 1 km Radius of the Centre of the Study Area.

Site Name	Borden Number	Cultural Affiliation	Site Type	Date Range	Status
Parliament Hill	BiFw-12	Euro-Canadian	institutional	1820s to present	Further assessment recommended
Old Supreme Court Building	BiFw-35	Euro-Canadian	institutional	late 19 th to early 20 th century	No further concerns*
Fournier's Dry Goods Store	BiFw-36	Euro-Canadian	commercial	mid- to late 19 th century	No further concerns*
Britannia Hotel	BiFw-37	Euro-Canadian	commercial	mid-19 th to early 20 th century	No further concerns*
Carriage Way	BiFw-38	Euro-Canadian	carriageway	early to mid-19 th century	No further concerns
Enright	BiFw-44	Euro-Canadian	commercial	mid-19 th to early 20 th century	Further assessment recommended
McGillvray	BiFw-45	Euro-Canadian	commercial	mid-19 th to early 20 th century	Further assessment recommended
Fournier	BiFw-46	Euro-Canadian	commercial	mid-19 th to early 20 th century	Further assessment recommended
Pratt	BiFw-47	Euro-Canadian	commercial	mid-19 th to early 20 th century	Further assessment recommended
Seaton	BiFw-48	Euro-Canadian	commercial	mid-19 th to early 20 th century	Further assessment recommended
Carriage Way 2	BiFw-51	Euro-Canadian	carriageway	mid-19 th to early 20 th century	Further assessment recommended
Workman	BiFw-52	Euro-Canadian	commercial	mid-19 th to early 20 th century	Further assessment recommended
Firth Tavern	BiFw-53	Euro-Canadian	commercial	c.1819-1860s	No further concerns*
James Skead Estate	BiFw-54	Euro-Canadian	residential	mid- to late 19 th century	No further concerns
Aubrey Row House	BiFw-55	Euro-Canadian	residential	1890s	No further concerns
Cathcart Square	BiFw-62	Euro-Canadian	commercial	1870-1900	No further concerns*

Site Name	Borden Number	Cultural Affiliation	Site Type	Date Range	Status
Levi Young House (Lloyd Street Site)	BiFw-63	Euro-Canadian	residential and industrial	1870s-1900 (Residence) & 1901-1960s (Foundry)	No further concerns*
Inlet Bridge Site	BiFw-65	Euro-Canadian	intake and headworks for Ottawa waterworks	late 19 th to early 20 th century	Further assessment recommended
LeBreton Railyards	BiFw-66	Euro-Canadian	transportation	late 19 th to early 20 th century	No further concerns*
Passenger Depot	BiFw-67	Euro-Canadian	transportation	1880s to 1900	No further concerns*
LeBreton Flats East	BiFw-68	Euro-Canadian	residential and commercial	late 19 th to early 20 th century	No further concerns*
Old Booth Street	BiFw-70	Euro-Canadian	residential and commercial	late 19 th to early 20 th century	No further concerns*
Waterworks Yard Shed	BiFw-72	Euro-Canadian	municipal	c.1901 - 1960s	No further concerns*
McGinnis House	BiFw-73	Euro-Canadian	residential	1870-1964	No further concerns*
Meat Juice (13 and 15 Ottawa Street)	BiFw-78	Euro-Canadian	residential	1870-1900	No further concerns*
LeBreton 2002	BiFw-79		community		
Victoria Island 1	BiFw-87	Euro-Canadian	wharf; recreational	1970s	No further concerns
Broad Street Hotels	BiFw-89	Euro-Canadian	commercial	late 19 th century	No further concerns
Canada Central Railway Station	BiFw-93	Euro-Canadian	transportation	1870 to c.1880	No further concerns
Rideau Hall Visitor Centre	BiFw-96	Euro-Canadian	residential	c.1830s to late 19 th century	Further work recommended
Western Methodist Church	BiFw-166	Euro-Canadian	Institutional - religious	1873 to 1960s	Further work recommended
West End Hotel	BiFw-167	Euro-Canadian	commercial	mid-19 th to early 20 th century	Further work recommended
Nos. 541-549 Albert Street outbuildings	BiFw-168	Euro-Canadian	residential	mid-19 th to early 20 th century	Further work recommended
Nos. 555-561 Albert Street outbuildings	BiFw-169	Euro-Canadian	residential	mid-19 th to early 20 th century	Further work recommended

Site Name	Borden Number	Cultural Affiliation	Site Type	Date Range	Status
Barrack Hill Cemetery	BiFw-171	Euro-Canadian	cemetery	early to mid-19 th century	Further work recommended
Charles Pinhey Estate	BiFw-173	Euro-Canadian	residential	mid- to late 19 th century	No further concerns
	BiFw-174	Euro-Canadian	residential	mid- to late 19 th century	No further concerns
1883 CPR Roundhouse	BiFw-178	Euro-Canadian	railway	1883-1910s	No further concerns
1871 St. Lawrence & Ottawa Railway Turntable	BiFw-179	Euro-Canadian	railway	1871-1883	No further concerns
Nos. 526-538 Albert Street	BiFw-182	Euro-Canadian	residential	mid-19 th to mid-20 th century	Further work recommended

* While the Ontario Archaeological Sites Database does not provide designations in this category for these sites," staff at Past Recovery are aware of more recent archaeological mitigations resulting in the up-dated status information provided in this table.

Table 2. Listing of Registered Archaeological Sites within a 1 km Radius of the Centre of the Study Area Not in the Provincial Database.

Site Name	Borden Number	Cultural Affiliation	Site Type	Date Range	Status
E. P. Hall Grocery	BiFw-57	Euro-Canadian	commercial	late 19 th century	No further concerns
Occidental Hotel	BiFw-58	Euro-Canadian	commercial	mid- to late 19 th century	No further concerns
Ahern/Perley House	BiFw-59	Euro-Canadian	residential	mid- to late 19 th century	No further concerns
Tin Smith	BiFw-60	Euro-Canadian	commercial	mid- to late 19 th century	No further concerns
Ste. Famille Separate School	BiFw-88	Euro-Canadian	institutional and residential	mid-19 th century to 1960s	No further concerns
Broad Street CPR Union Station	BiFw-99	Euro-Canadian	transportation	c.1900 to c.1933	No further concerns

Ottawa along the river, is a broad valley with rocky Laurentian uplands rising on either side. On the Ontario shore, the slope of the bedrock is more gradual, though some prominent scarps are present.

Surficial geological mapping of the Ottawa region conducted in the 1970s identified the Chaudière Islands as part of the Ottawa Formation of Palaeozoic bedrock (MacDonald 1979; Richards 1982: Map 1506A). The Ottawa River has eroded the limestone sides of the islands, particularly next to the Chaudière Falls, leaving steep rocky shelves in several areas, with shallow soil development on level and outcrop surfaces sustaining forest cover.

Soil mapping of Carleton County, conducted in the 1940s (Hills et. al. 1944) and the 1980s (Schut and Wilson 1987), does not include the study area as it was within the urbanized core of Ottawa. Soils mapped slightly upstream to the west over identical surficial geological deposits, however, were identified as Farmington loam, a neutral to alkaline flaggy sandy loam, fine sandy loam, loamy fine sand, or loamy sand undifferentiated drift material over Paleozoic limestone or dolomite bedrock, with bedrock typically lying within 10 to 50 centimetres of the surface (Schut and Wilson 1987:Map Sheet 3). The results of the numerous environmental and archaeological assessments on the adjacent islands and LeBreton Flats have indicated that although in many areas the pre-development soil profiles that may have existed have been all but obliterated by subsequent activity, pockets of this material survive in places, usually below extensive fill deposits. It can be inferred that given the similar land use history on Chaudière Island it is likely that pockets of original soil material survive amidst larger areas of development disturbance.

The study area lies within the Upper St. Lawrence sub-region of the Great Lakes - St. Lawrence Forest Region (Rowe 1972). This region is characterized by a mix of coniferous and deciduous tree species. Typically, these forests include sugar maple, beech, red maple, yellow birch, basswood, white ash, large tooth aspen, and red and burr oaks. On shallower soils, conifers are more common including eastern white pine, eastern hemlock, white spruce, and balsam fir. Much of the original forest growth had been cleared by c. 1858, with the remainder removed by 1861.

3.3 Analysis and Conclusions

3.3.1 Archaeological Potential

The Block 211 study area was determined to have pre-Contact archaeological potential based on its proximity to the Ottawa River and Chaudière Falls (Map 14). It was also determined to have post-Contact archaeological potential based on the well-documented history of land-use on the island by Euro-Canadians beginning in the 1820s with the construction of the initial bridges from the mainland by Colonel By (Past

Recovery 2014). It was recognized, however, from a series of historical map overlays that much of the area had been deeply disturbed by the construction and demolition of the former sulphite paper mill (which had a basement level) and the installation of underground utility lines and service tunnels.

3.3.2 Previous Stage 1 Recommendations

It was recommended that a Stage 2 archaeological assessment be conducted in all areas determined to retain archaeological potential by a licensed archaeologist prior to any below grade construction disturbance. Given that potential archaeological resources in the study area were likely to be situated within a deeply buried urban brownfield context, it was also recommended that the Stage 2 archaeological assessment strategy should consist of the excavation of test trenches by backhoe or mini-hoe (Past Recovery 2014).

4.0 STAGE 2 ARCHAEOLOGICAL ASSESSMENT

This section of the report describes the methods and results of the Stage 2 property survey, conducted in order to determine whether the subject property contained significant archaeological resources.

4.1 Fieldwork Methods

The Stage 2 archaeological fieldwork was completed over the course of one day (May 2nd, 2019) with a crew of five people. Fieldwork was conducted according to the archaeological fieldwork standards outlined in *Standards and Guidelines for Consultant Archaeologists* (MCTS 2011). Weather and lighting conditions were good with overcast skies providing good visibility, ideal conditions for the identification, documentation and, where appropriate, recovery of archaeological resources.

The limits of the subject property were determined using maps of the Block 211 property provided by Zibi.ca, which were superimposed on a recent (2018) satellite image for use in the field. As the initial map provided for the study area (which also included the study area for geotechnical investigation) extended to the north of but did not cover all of Block 211, the complete foot-print of Block 211 as depicted on additional mapping provided was added to the study area, resulting in the 0.45 ha parcel depicted on Map 2. Using this map, Past Recovery staff were able to ensure full coverage of the property. The testable area within this parcel was, however, substantially reduced by both known and on-site obstructions, as well as areas previously determined to retain no archaeological potential (Map 15). The still extant portion of the former sulphide pulp mill shown in the 2018 satellite image had recently been demolished (Images 11 to 15). This part of the building had a basement, indicating that no archaeological potential remained in this area; thus the foot-print was excluded from Stage 2 testing. Similarly, the foot-print of the portion of the sulphide pulp mill removed between 1965 and 1968 was also determined to retain no archaeological potential and was therefore not tested.

Additional mapping obtained prior to field testing indicated that there were a series of large service tunnels formerly connected to the south end of the pulp mill, effectively eliminating any remaining archaeological potential along the extreme southern edge of the study area. The northern edge of the property had been barricaded as unsafe given the steep slope and the dangerous height of the Ottawa River at the time the assessment was completed. Along the western edge of the parcel in the former parking area, two office trailers had been stationed parallel to Booth Street and the eastern side (most recently consisting of overgrown trees and vegetation) had been used to stockpile a considerable quantity of excavated material (Images 16 and 17). In addition, a number of large concrete manhole sections had been placed towards the centre of the northern section of the study area (Image 18). Finally, a large excavation had been opened adjacent to and including the northwest corner of the parcel, in preparation for the

installation of the manhole sections and resulting in the piled material across the east side of the former parking area (Image 19). Thus much of the Block 211 study area either retained no archaeological potential or could not be tested given on-site obstacles. Nevertheless there were sections that retained potential and were accessible, including the central part of the former parking area and the eastern half of the section to the north of the recently demolished part of the former pulp mill (Image 20; see Images 16 to 18).

Given that the property had been extensively developed over the preceding 150 years and was currently an urban brownfield, the Stage 2 testing consisted of mechanically excavated slit trenches placed strategically across the site, in order to determine whether there were any archaeological deposits surviving in minimally disturbed locations. Five test trenches had originally been planned for Block 211, but given the obstacles described above this number was reduced to three (see Map 15). Grid north was established parallel to Booth Street to facilitate the description of soil profiles in the test trenches, which were all excavated either parallel or perpendicular to this road.

All test trenches were carefully excavated using a back-hoe with a smooth-edged ditching bucket, removing a few centimetres of material at a time under the supervision of a licenced archaeologist (Image 21). The trenches varied slightly in length and width as a result of the material and any obstacles encountered, but generally were the length of the reach of the backhoe arm and the width of the ditching bucket. The entire study area was assigned Operation 1, with each trench given a sub-operation letter in the order of excavation. Different soil layers identified during excavation were each assigned a lot number in the order of appearance and any artifacts noted were collected and assigned to the appropriate soil layer. Upon the completion of the initial stage of excavation (reaching a depth of 1.2 m), one of the revealed long soil profiles was cleaned and recorded through photography and measured drawings at 1:20 scale (Image 22). Excavation was then continued in all three trenches until bedrock or an obstacle preventing further soil removal was encountered, with any additional recording undertaken from ground level without entering the trench. All soil stratigraphy, any evidence of disturbance and any cultural features were noted, and each test trench was plotted on a site map. After recording activities had been completed, each trench was immediately back-filled for site safety reasons and compacted using the back-hoe bucket.

Field activities were recorded through field notes, scale drawings and digital photographs. A catalogue of the material generated during the Stage 2 property survey is included below in Table 3. The complete photographic catalogue is included as Appendix 1, and the locations and orientations of all photographs used in this report are shown on Map 16. As per the *Terms and Conditions for Archaeological Licences* in Ontario, curation of all records generated during the Stage 2 archaeological assessment

is being provided by Past Recovery Archaeological Services Inc. pending the identification of a suitable repository.

Table 3. Inventory of the Stage 2 Documentary Record.

Type of Document	Description	Number of Records	Location
Photographs	Digital photographs documenting the Stage 2 property survey	79 photographs	On Past Recovery computer network - file PR19-018
Field Notes	Notes on the Stage 2 test trench survey	2 pages	Past Recovery office - file PR19-018
Field Drawings	Test trench profile drawings and field site map	4 pages	Past Recovery office - file PR19-018

4.2 Results

A total of three mechanically excavated trenches were placed across the study area (see Map 15). All three indicated that even within the locations determined to retain archaeological potential there was extensive disturbance and deep fill deposits across the property. No intact clearly nineteenth century or earlier occupation surfaces were observed.

Trench 1A

Trench 1A was located in the northwest corner of the study area and measured 4.3 m (north-south) by 1.1 m (east-west; Image 23; see Map 15). This trench was positioned to avoid the large open excavation for the manhole, the trailers and the excavated dirt piles.

The soil stratigraphy in Trench 1A consisted of numerous layers of material, most of which were fairly level across the unit (Images 24 and 25; Table 4). The trench had been capped by two layers of grey gravel (Lots 1A1 and 1A2), differentiated by colour and having a combined thickness of 30 cm to 40 cm. These lay above a 4 cm to 10 cm thick deposit of dark orange/brown sandy clay mixed with gravel (Lot 1A3), followed by two similar fill deposits containing gravel, larger rocks and pieces of asphalt (Lots 1A4 and 1A6) surrounding a thin (2 cm to 4 cm) layer of light orange/brown sand confined to the north end of the trench (Lot 1A5). These three fill deposits had a combined thickness of 30 cm to 45 cm. Below Lot 1A6 was a 2 cm to 8 cm thick layer of light brown sandy loam (Lot 1A7) which did not extend to the south end of the unit, and lay above an extensive fill deposit containing demolition material including gravel, cobbles,

angled rocks, red bricks, wood fragments, asphalt and pieces and pieces of reinforced concrete (Lot 1A8). The latter deposit measured up to 20 cm in thickness along the west side of the unit, but expanded to at least 60 cm on the east side. Below this was a c. 20 cm thick deposit of pale yellow sand (Lot 9) that rested on a 2 cm to 20 cm thick (widening from north to south) layer of brown sandy loam with occasional cobbles, fragments of red brick and pieces of asphalt (Lot 10). Beneath this was a c. 6 cm thick stratum of orange sand (Lot 11), which rested on a 30 cm thick deposit of black furnace waste containing clinker and coal, as well as fist-sized rocks (Lot 12). This lay above a deposit of compact large grey gravel pieces which appeared to overlie bedrock (Lot 13). Excavation was halted at this point. No artifacts were found during the excavation of Trench 1A.

Table 4. Lots assigned to Trench 1A.

Lot	Nature	Deposit Type	Colour	Compaction	Inclusions	# Art.
1	Modern surface	Gravel and clay	Light grey	Moderate	-	0
2	Modern surface	Gravel and clay	Dark grey	Moderate	-	0
3	Levelling fill	Sandy clay	Dark orange/ brown	Moderate	Gravel	0
4	Levelling fill	Clay	Light grey	Moderate	Rocks, asphalt	0
5	Levelling fill	Sand	Light orange/ brown	Loose	-	0
6	Levelling fill	Clay	Dark grey	Moderate	Gravel, rocks, asphalt	0
7	Levelling fill	Sandy loam	Light brown	Moderate	-	0
8	Demolition layer/ Levelling fill	Clay	Brown	Moderate	Gravel, cobbles, red brick, asphalt, wood, concrete, mortar	0
9	Demolition layer/ Levelling fill	Sand	Pale yellow	Loose	Cobbles, red brick, asphalt	0
10	Demolition layer/ Levelling fill	Sandy loam	Brown	Moderate	Red brick, asphalt, cobbles	0
11	Levelling fill	Sand	Orange	Loose	-	0
12	Levelling fill	Furnace waste	Black	Moderate	Coal, clinker, ferrous concretions	0
13	Broken bedrock	Gravel	Grey	Moderate to compact	-	0

Trench 1B

Trench 1B was located to the south of Trench 1A, positioned between the trailers and the excavated dirt piles but to the north of the known location of the former pulp mill (see Image 21; see Map 15). The trench measured c. 4 m (north-south) by 1.2 m (east-west).

The soil stratigraphy in Trench 1B consisted mostly of fill and demolition deposits (Image 27; Table 5). As with Trench 1A, this unit had been capped by up to 20 cm of grey gravel forming of the current parking surface (Lot 1). Below this was a very thick (90 cm to 130 cm, thickening from east to west) layer of loose yellow/brown sand and brown sandy clay containing demolition debris including mortar, red brick, concrete, asphalt, rocks, large boulders, textile and wood pieces (Lot 2; Image 28). Along the western edge of the trench, this material lay above a concrete foundation encountered at 1.4 m below grade (Lot 5; Image 29). The eastern side of the foundation was exposed to where it had been cut into the bedrock at c. 2.2 m below grade. It had a bevelled upper edge and measured 1.8 m in length before either ending or turning to the west at both the north and south ends. The foundation thus appeared more likely to be a plinth or pedestal than a foundation wall. Elsewhere in the trench the demolition material lay above a c. 30 cm thick deposit of black industrial furnace waste containing coal, clinker, ash and ferrous metal concretions (Lot 3; Image 30). This lay above a dark brown to red/brown silty clay with rocks, wood fragments and occasional wooden beams (Lot 4) that continued to bedrock, encountered at 2.2 m below grade. No artifacts were found during the excavation of Trench 1B.

Table 5. Lots assigned to Trench 1B.

Lot	Nature	Deposit Type	Colour	Compaction	Inclusions	# Art.
1	Modern surface	Gravel	Grey	Moderate	-	0
2	Demolition fill	Sand and sandy clay	Yellow/brown and brown	Loose	Asphalt, rocks, red brick, mortar, boulders, concrete	0
3	Levelling fill	Furnace waste	Black and red/brown	Compact to moderate	Clinker, coal, ferrous concretions	0
4	Levelling fill/Possible occupation layer	Silty clay	Dark brown to red/brown	Moderate	Rocks, wood	0
5	Concrete foundation	-	-	-	-	0

Trench 1C

Trench 1C was located in the northeast quarter of the study area, 4 m west of the remaining former pulp mill building. Unlike the other two trenches, this unit was excavated in an east-west direction and measured 2.9 m (east-west) by 1.1 m (north-south; Image 31; see Map 15).

The soil stratigraphy in Trench 1C consisted initially of 18 cm of mixed brown sand and sandy loam with pieces of broken concrete and occasional red brick fragments (Lot 1), followed by 8 cm to 16 cm of dark brown sandy loam with small pieces of shale and pebbles (Lot 2; Images 32 and 33; Table 6). Below this in the east half of the trench was a 4 cm to 6 cm thick layer of yellow/brown sand with occasional cobbles (Lot 3) overlying an up to 20 cm thick deposit of grey/brown gravel and sandy loam (Lot 4).

At the west end of the unit Lot 4 lay above a stratum of dark grey shale, but this quickly petered out 1 m to the east. All of the layers below covered the entire trench. These included 8 cm to 20 cm of light grey pebbly gravel (Lot 6), over 12 cm to 20 cm of dark grey shale (Lot 7). Below Lot 7 were several demolition/fill deposits consisting in turn of c. 20 cm of mottled brown and light brown sand with rocks, red brick pieces and broken concrete (Lot 8), 20 cm to 25 cm of brown sandy loam with red brick fragments, limestone rocks with mortar attached, mortar and furnace ash (Lot 9), and 10 cm of light brown sand with cobbles and red brick fragments (Lot 10). Beneath Lot 10 was a c. 8 cm layer of dark brown sandy loam containing red brick pieces and mortar patches (Lot 11), which overlay at least 40 cm of olive clay with large pieces of broken bedrock (Lot 12). Excavation was halted at that point as voids in the clay/rock matrix indicated that the deposit continued extensively, likely to bedrock. No artifacts were found during the excavation of Trench 1C.

Table 6. Lots assigned to Trench 1C.

Lot	Nature	Deposit Type	Colour	Compaction	Inclusions	# Art.
1	Recent demolition material	Sand and sandy loam	Brown	Moderate to loose	Concrete, red brick	0
2	Modern surface	Sandy loam	Dark brown	Moderate	Shale, pebbles	0
3	Levelling fill	Sand	Yellow/brown	Loose	Cobbles	0
4	Levelling fill	Gravel and sandy loam	Grey/brown	Moderate to loose	-	0
5	Levelling fill	Shale	Dark grey	Moderate to loose	-	0
6	Levelling fill	Gravel	Light grey	Moderate to loose	Pebbles	0
7	Levelling fill	Shale	Dark grey	Moderate to loose	-	0
8	Demolition layer/ Levelling fill	Sand	Mottled brown and light brown	Moderate	Red brick, concrete, cobbles, mortar, rocks	0
9	Demolition layer/ Levelling fill	Sandy loam	Brown	Moderate to loose	Red brick, mortar, furnace ash, rocks, limestone blocks with mortar	0
10	Demolition layer/ Levelling fill	Sand	Light brown	Loose	Cobbles, red brick	0
11	Possible occupation layer	Sandy loam	Dark brown	Moderate	Red brick, mortar	0
12	Fill	Clay	Olive	Moderate to compact	Broken bedrock	0

4.3 Analysis and Conclusions

The sequence of events which resulted in the soil stratigraphy present in the study area is difficult to determine given that many of the layers were too deep to examine *in situ* and that there were no artifacts found to aid with dating information. It was clearly

evident, however, that there had been extensive land alterations across the accessible sections of the property retaining archaeological potential, which had resulted in deep fill deposits even where there had been no documented structures. As such, even though the number of test trenches had been reduced from five to three as a result of obstacles present on the site, it was felt that the collected information was sufficient to determine the cultural heritage value or interest of the soil deposits remaining within the Block 211 study area.

What can be stated regarding the phasing and sequencing of the soil deposits has been determined from a review of the development of this part of Chaudière Island over the second half of the nineteenth century and continuing through the twentieth (see Section 3.1 above and also the Stage 1 report - Past Recovery 2014). Visual records such as the sequence of nineteenth and twentieth century fire insurance plans and twentieth century aerial photographs in particular have been invaluable to any interpretation.

The uppermost soil deposits in Trenches 1A and 1B were the modern parking surface (Lots 1A1, 1A2 and 1B1); the west and north sides of Block 211 appear to have been used sporadically for this purpose following the removal of the west end of the former sulphite pulp mill between 1965 and 1968, including during the current redevelopment of the site. The high gravel content in some of the lower soil deposits in Trench 1A (Lots 1A3 to 1A6), as well as pieces of broken asphalt, suggest that they also were related to parking in this area over the past fifty years, as does the gravel and shale content in Trench 1C (Lots 1C4 to 1C7). Aerial photography taken in 1976 shows cars parked all through this area (City of Ottawa's geoOttawa web application).

As stated above, the west end of the former sulphite pulp mill was removed between 1965 and 1968. This was a substantial concrete building as recorded in both early twentieth century photographs and fire insurance plans, ranging in height from two storeys immediately adjacent to Booth Street to between three and six storeys further to the east (see Maps 9 to 11 and Images 5 to 10). The extensive demolition layers in Trenches 1A (Lots 1A8 to 1A10) and 1B (Lot 1B2) were likely added at the time this part of the building was removed, and appear to have contained material from this structure. The concrete sulphite pulp mill had been erected by 1912, and while Trench 1B lay outside of the foot-print of the building, the concrete pedestal exposed in the west profile (Lot 1B5) was most likely contemporary, perhaps erected to support one of the large acid vats depicted on the 1912 and later fire insurance plans (see Maps 9 to 11). This was the only feature encountered in the three test trenches.

It appears that another extensive leveling event occurred during or following the construction of the sulphide pulp mill, in particular significantly raising the height of the former loading dock next to the Union Bridge, as can be seen in early twentieth century images (compare, for example, Image 2 with Image 8). This effectively created a level area around the mill. It is likely that the furnace waste deposits (Lots 1A12 and

1B3), which from the content had been procured from a local foundry, date to this period, as well as the broken rock at the base of Trench 1A (Lot 1A13).

The dating of the lower layers containing demolition material in Trench 1C is uncertain, though perhaps given that Lot 1C8 contained pieces of concrete it may have been contemporary with the pre-1968 demolition/leveling event. The lower deposits (Lots 1C9 and 1C10) appear to have been earlier, containing red brick, limestone and mortar demolition material. A large one-storey frame 'wood room' was erected over this area prior to 1922 and removed between 1948 and 1956 (see Maps 10 and 11). It is possible that these layers were related to this structure – white and black coal-fired furnace ash was a common waste deposit in the first half of the twentieth century.

Lot 1C11 had the appearance of an occupation surface, probably in use through the first two decades of the twentieth century prior to the erection of the 'wood room.' The extensive fill deposit below it (Lot 1C12) was therefore likely related to the raising of this part of the island, including the former loading dock, to create a surface level with the surrounding area. Less likely, this deposit may have been related to filling the natural inlet in the northern shoreline of the island in the 1870s to create more lumber piling space, though the inlet appears to have been further to the west. If this was the case, then the occupation surface above it would have begun in this period.

There was no clear 1900 fire horizon in any of the test trenches. Throughout the second half of the nineteenth century, the study area was used for piling lumber and contained large stables, other temporary sheds and tram lines. The high wood content in Lot 1B4 may indicate that this deposit was part of the nineteenth century lumber yard; however it did not contain the extensive wood chips seen in the test units excavated during the Phase 1 development which clearly retained nineteenth century piling yard remains (Past Recovery 2015). It is more likely, therefore, that the deposit in Trench 1B was related to the same filling episode as the furnace waste above it.

Thus there were no clear nineteenth century deposits, structures or artifact concentrations found within the Block 211 study area considered to be of sufficient cultural heritage value or interest to warrant further excavation in the form of a Stage 3 site-specific archaeological assessment. Further, none of the archaeological deposits encountered met criteria established by the Ontario Ministry of Tourism, Culture and Sport (MTCS) for registration with the Ontario Archaeological Sites Database.

4.4 Stage 2 Recommendations

On the basis of the results of the Stage 2 property survey discussed above, it is recommended that:

- 1) As the Stage 2 property survey did not result in the identification of any archaeological sites requiring further assessment or mitigation prior to

development, no further archaeological assessment of the current Zibi Chaudière East Block 211 study area is required;

- 2) Should planning associated with the proposed Zibi Chaudière East Block 211 development result in the identification of additional areas beyond the Block 211 boundary as defined in Map 2 to be impacted through soil disturbances or other alterations, further Stage 2 to 4 archaeological assessment may be required. It should be noted that impacts include all aspects of the proposed development, including temporary property needs (i.e. access roads, staging/lay down areas, associated works, etc.);
- 3) Any future Stage 2 archaeological assessment should be undertaken by a licensed consultant archaeologist, in compliance with *Standards and Guidelines for Consultant Archaeologists* (MTCS 2011).

The reader is also referred to Section 5.0 below to ensure compliance with relevant provincial legislation and regulations that may relate to this project.

5.0 ADVICE ON COMPLIANCE WITH LEGISLATION

In order to ensure compliance with provincial legislation, the reader is advised of the following:

- 1) This report is submitted to the Minister of Tourism, Culture and Sport as a condition of licensing in accordance with Part VI 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.
- 2) 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 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*.
- 3) Should previously undocumented archaeological resources be discovered, they may be a new archaeological site and therefore subject to Section 48 (1) of the *Ontario Heritage Act*. The proponent or person discovering the archaeological resources must cease alteration of the site immediately and engage a licensed consultant archaeologist to carry out archaeological fieldwork, in compliance with Section 48 (1) of the *Ontario Heritage Act*.
- 4) 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.
- 5) 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.

6.0 LIMITATIONS AND CLOSURE

Past Recovery Archaeological Services Inc. has prepared this report in a manner consistent with that level of care and skill ordinarily exercised by members of the archaeological profession currently practicing under similar conditions in the jurisdiction in which the services are provided, subject to the time limits and physical constraints applicable to this report. No other warranty, expressed or implied, is made.

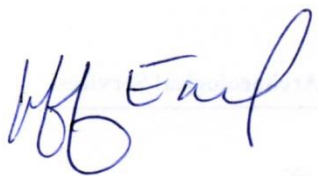
This report has been prepared for the specific site, design objective, developments and purpose prescribed in the client proposal and subsequent agreed upon changes to the contract. The factual data, interpretations and recommendations pertain to a specific project as described in this report and are not applicable to any other project or site location.

Unless otherwise stated, the suggestions, recommendations and opinions given in this report are intended only for the guidance of the client in the design of the specific project.

Special risks occur whenever archaeological investigations are applied to identify subsurface conditions and even a comprehensive investigation, sample and testing program may fail to detect all or certain archaeological resources. The sampling strategies in this study comply with those identified in the Ministry of Tourism, Culture and Sport's *Standards and Guidelines for Consultant Archaeologists* (2011).

The documentation related to this archaeological assessment will be curated by Past Recovery Archaeological Services Inc. until such a time that arrangements for their ultimate transfer to an approved and suitable repository can be made to the satisfaction of the project owner(s), the Ontario Ministry of Tourism, Culture and Sport and any other legitimate interest group.

We trust that this report meets your current needs. If you have any questions or if we may be of further assistance, please do not hesitate to contact the undersigned.



Jeff Earl, M.Soc.Sc.
Principal
Past Recovery Archaeological Services Inc.

7.0 REFERENCES

Bond, Courtney C.J.

1984 **Where Rivers Meet: An Illustrated History of Ottawa.** Windsor Publications Ltd., Ottawa.

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

1984 **The Physiography of Southern Ontario.** 3rd edition. Ontario Geological Survey, Special Volume 2. Ministry of Natural Resources, Toronto.

Clerk, Nathalie and Judith Dufresne

2010 **Seize bâtiments, complexe industriel des Chaudières, Gatineau (secteur Hull), Québec et Ottawa, Ontario.** Reports 09-125 and 09-126, on file, Federal Heritage Building Review Office, Ottawa.

Hough, J.L.

1958 **Geology of the Great Lakes.** University of Illinois Press, Urbana.

Ken Desson & Associates

1982 **Industrial Archaeology of the Chaudiere** (23 Volumes). Manuscript prepared for the National Capital Commission.

Lee, David

2006 **Lumber Kings and Shantymen: Logging and Lumbering in the Ottawa Valley.** James Lorimer & Company Ltd., Toronto.

MacDonald, G.

1979 **Generalized Bedrock Geology, Ottawa-Hull, Ontario and Quebec.** Geological Survey of Canada Map 1508A. 1:125,000 scale. Geological compilation by G. MacDonald, 1967; modified by J. E. Harrison 1976 based on earlier published material.

Ministry of Tourism, Culture, and Sport (MTCS)

2011 **Standards and Guidelines for Consultant Archaeologists.** Prepared by staff with the Culture Programs Unit, Programs and Services Branch, Culture Division, Ministry of Tourism and Culture, Toronto.

Past Recovery Archaeological Services Inc. (Past Recovery)

2015 **Stage 2 Archaeological Assessment for Phase 1 of the Windmill Zibi Chaudière West Development, Chaudière Island, Part Lot 40, Concession A, Ottawa Front, Geographic Township of Nepean, now in the City of Ottawa, Ontario.** Report on file, Ministry of Tourism, Culture and Sport, Toronto.

Past Recovery (continued)

2014 **Stage 1 Archaeological Assessment of Chaudière and Albert Islands, Part Lot 40, Concession A, Ottawa Front, Geographic Township of Nepean, Former County of Carleton, Now in the City of Ottawa, Ontario.** Report on file, Ministry of Tourism, Culture and Sport, Toronto.

Richards, S. H.

1982 **Surficial Geology, Ottawa, Ontario.** Geological Survey of Canada, Map 1506A. 1:50,000 scale.

Rowe, J.S.

1972 **Forest Regions of Canada.** Canadian Forestry Service Publication no. 1300. Information Canada, Publishing Division, Ottawa.

Schut, L. W. and E. A. Wilson

1987 **The Soils of the Regional Municipality of Ottawa-Carleton (excluding the Ottawa Urban Fringe).** Two Volumes. Ontario Institute of Pedology Report No. 58.

Swayze, Ken

2006 **A Stage 1 & 2 Archaeological Assessment of the Proposed Domtar Inc. Hydroelectric Project on Chaudière Island, City of Ottawa.** Report on file, Ministry of Tourism, Culture & Sport, Toronto.

2005 **Stage 1 & 2 Archaeological Assessment of the Broughton Lands, Part of Lot 5, Concession 1, March Township, City of Ottawa.** Report prepared for Novatech Engineering Consultants, Ottawa.

Swayze, Ken and Robert McGhee

2011 *The Heritage Hills Site and Early Postglacial Occupation of the Ottawa Valley.* **Archaeology of Eastern North America** 39:131-152.

Trinnell, John Ross

1998 **J.R. Booth: The Life and Times of an Ottawa Lumber King.** TreeHouse Publishing, Ottawa.

PRIMARY SOURCES

City of Ottawa Archives (COA):

Underwriter's Bureau Fire Insurance Plan of Ottawa, 1956/1963, sheets 101 and 102

Library and Archives Canada (LAC):

National Map Collection (NMC):

- NMC 9883 Goad's Fire Insurance Plan of Ottawa, 1912, sheets 103 and 104
NMC 10731 Goad's Fire Insurance plan of Ottawa, 1878, sheets 3 and 4
NMC 10837 Goad's Fire Insurance Plan of Ottawa, 1912 revised to 1922, sheets 103 and 104
NMC 13793 Goad's Fire Insurance Plan of Ottawa, 1901, sheets 103 and 104
NMC 19605 Plan showing Chaudière and Albert Islands, 1876
NMC 21081 Bird's-eye view of Ottawa, 1876
NMC 22401 *Plan of the Chaudiere Islands, Bytown*, 1852
NMC 32999 Goad's Fire Insurance Plan of Ottawa, 1888, revised to the 1890s, sheets 45 and 106
NMC 33002 Goad's Fire Insurance Plan of Ottawa, 1895 revised to 1898, sheets 106 and 107
NMC 43168 *Plan of Chaudiere Island in the River Ottawa as surveyed into lots in accordance with the patents*, 1867
NMC 79974 *Tracing from the large plan of the city of Ottawa, shewing the lots required for wheel house and reservoir for the water works*, 1861

Photograph and Art Collection:

C-002812
e010934866-v8
PA-009205
PA-010631
PA-012500
PA-012635

McCord Museum Notman Collection:

I-78912

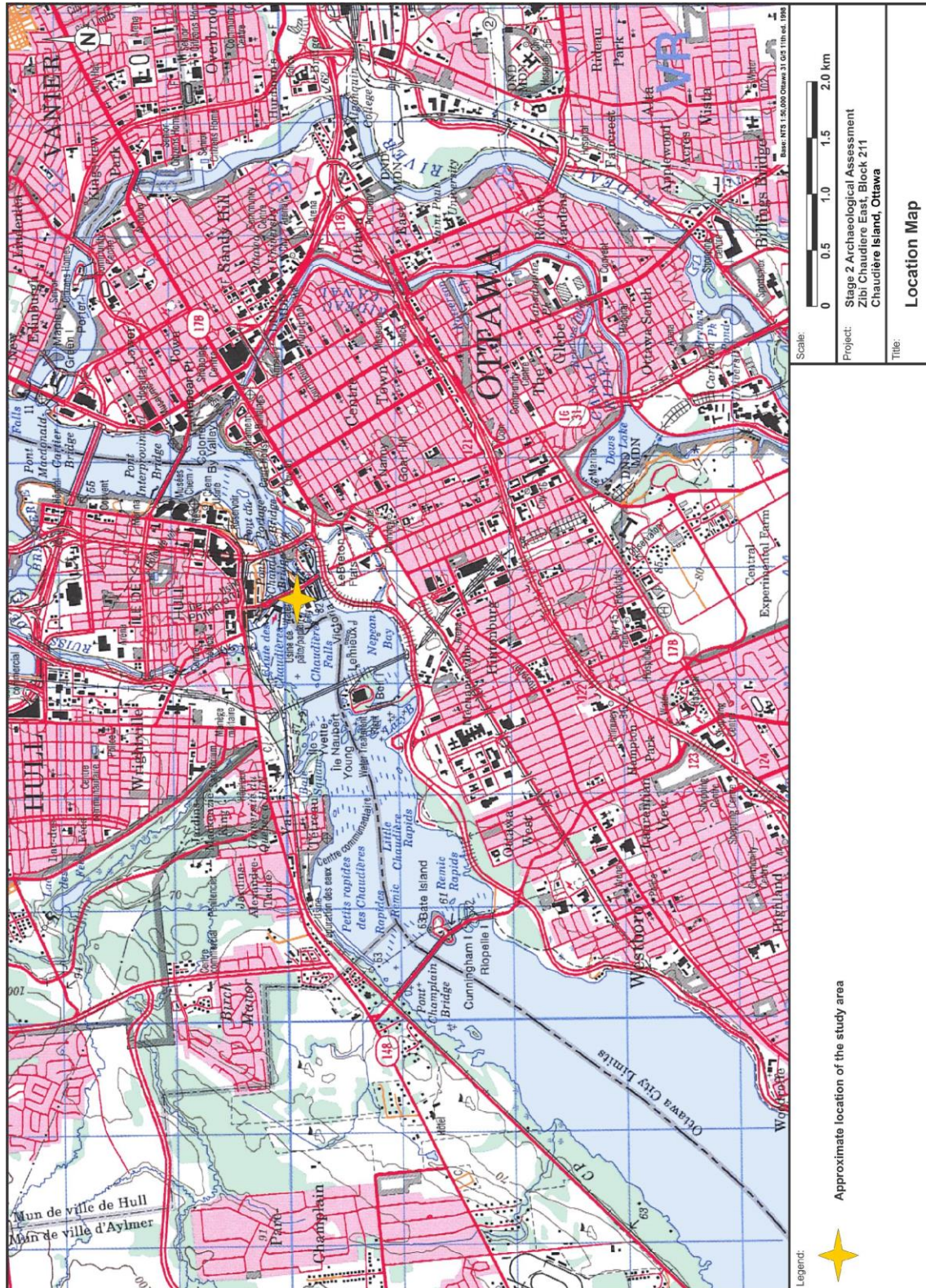
National Capital Commission (NCC):

NCC XIII-0-02, 966 1950 oblique aerial photograph

WEBSITES

[http:// workershistorymuseum.ca/workers-history-behind-toilet-paper](http://workershistorymuseum.ca/workers-history-behind-toilet-paper)

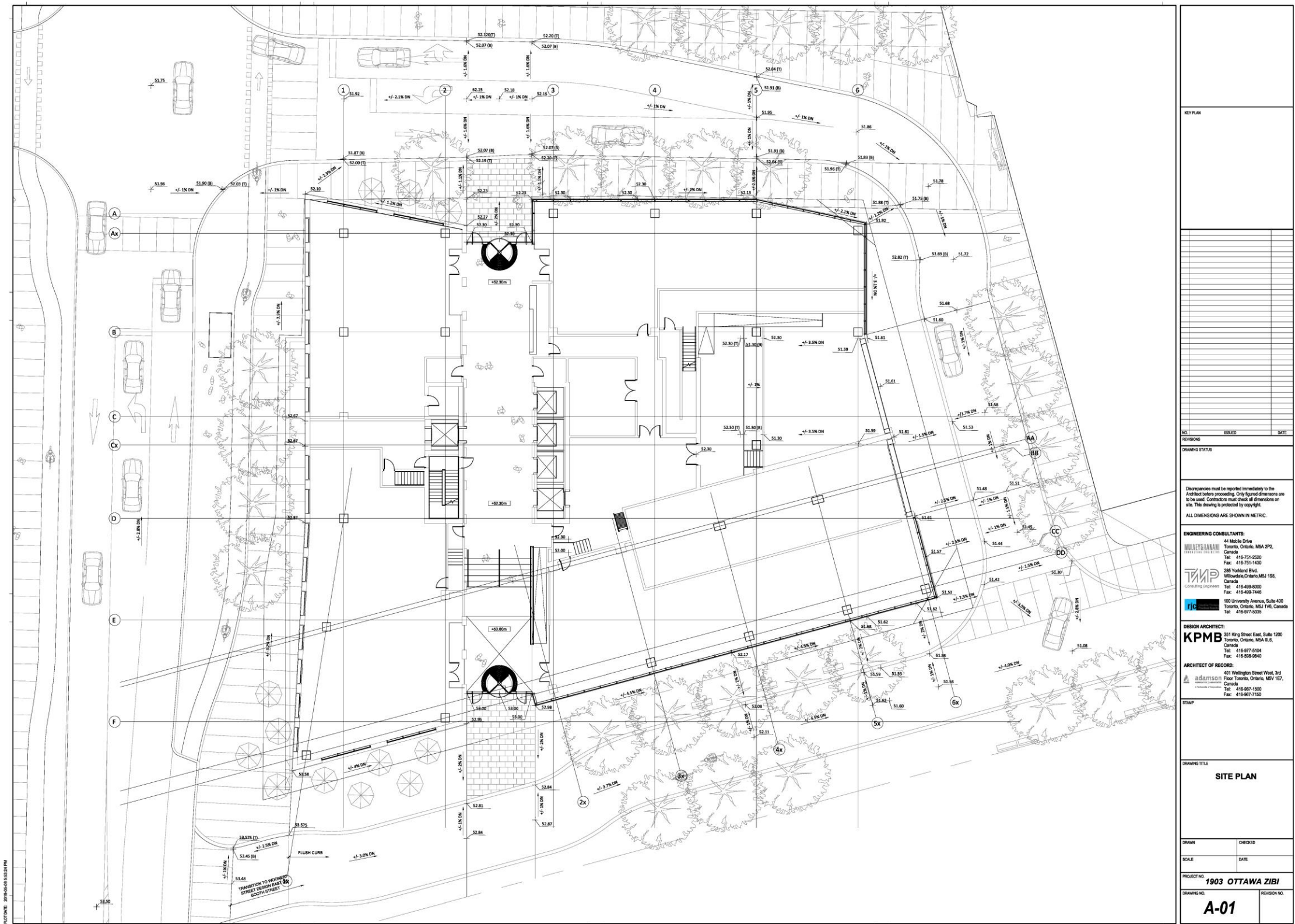
8.0 MAPS



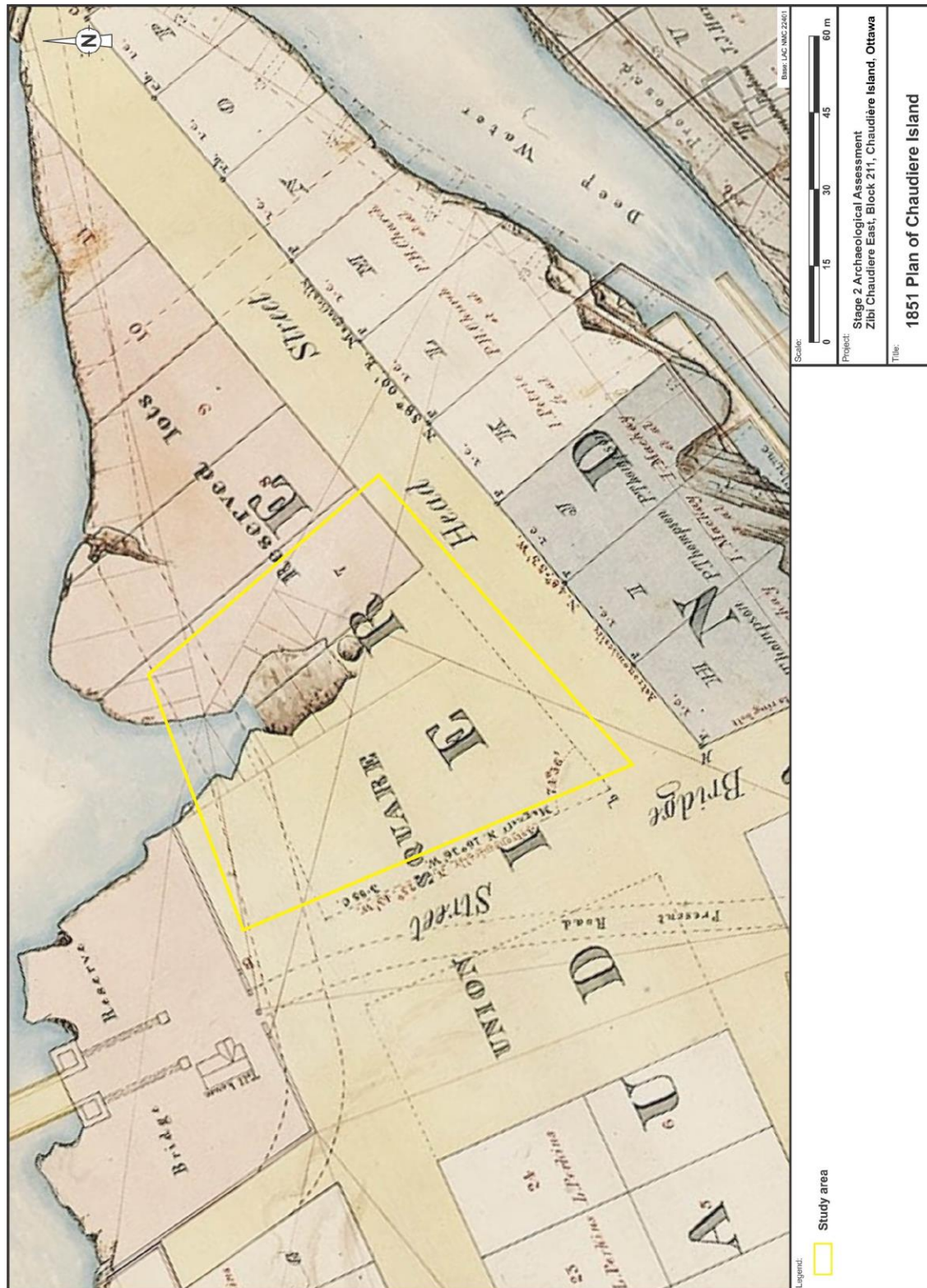
Map 1. Location of the study area.



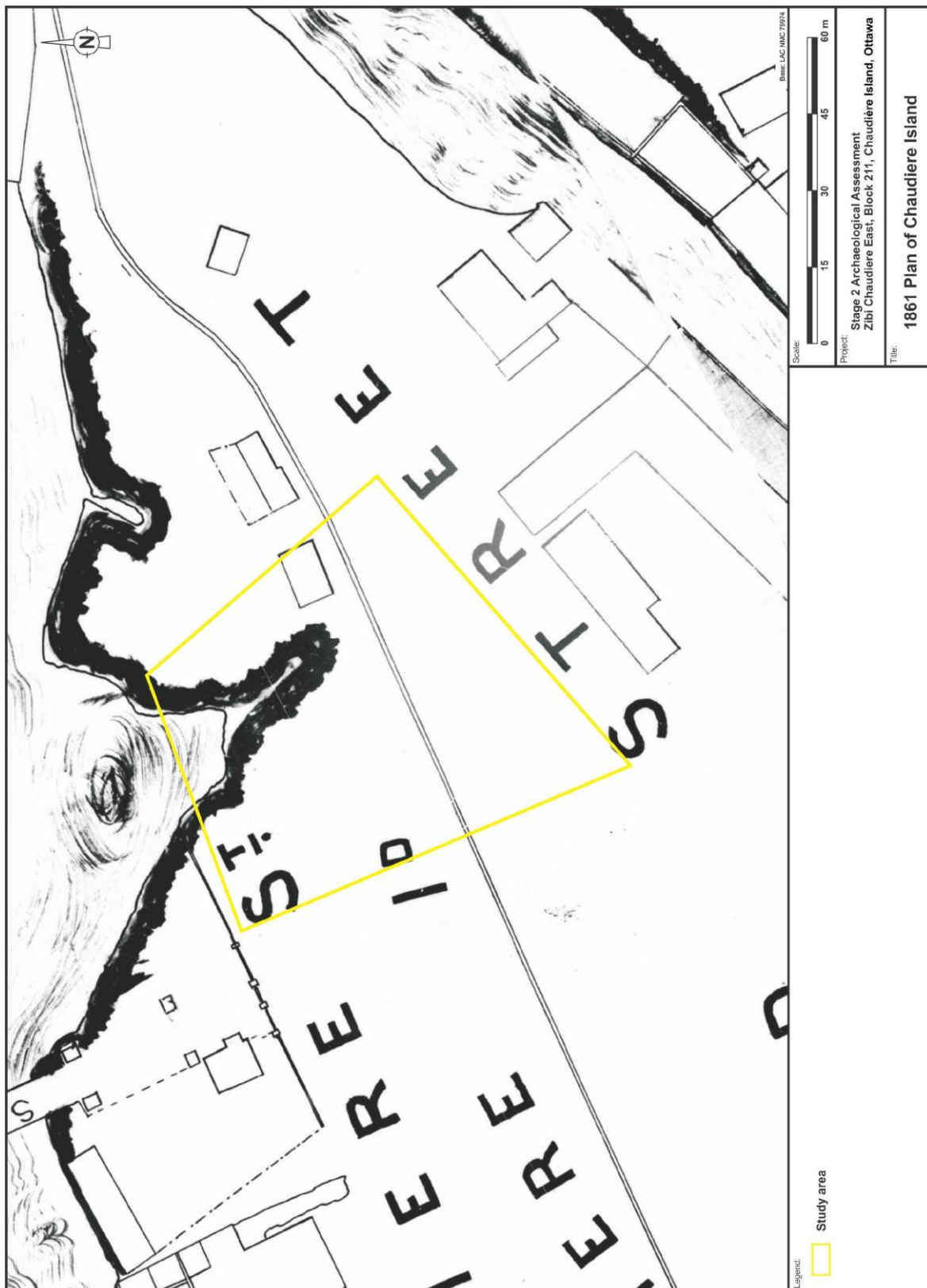
Map 2. Recent satellite imagery (2018) depicting the Zibi Chaudière East Block 211 study area.



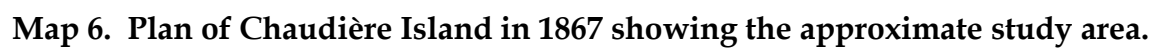
Map 3. Concept plan showing the proposed new structures within Block 211 of the Zibi Chaudière East development. (Zibi.ca)

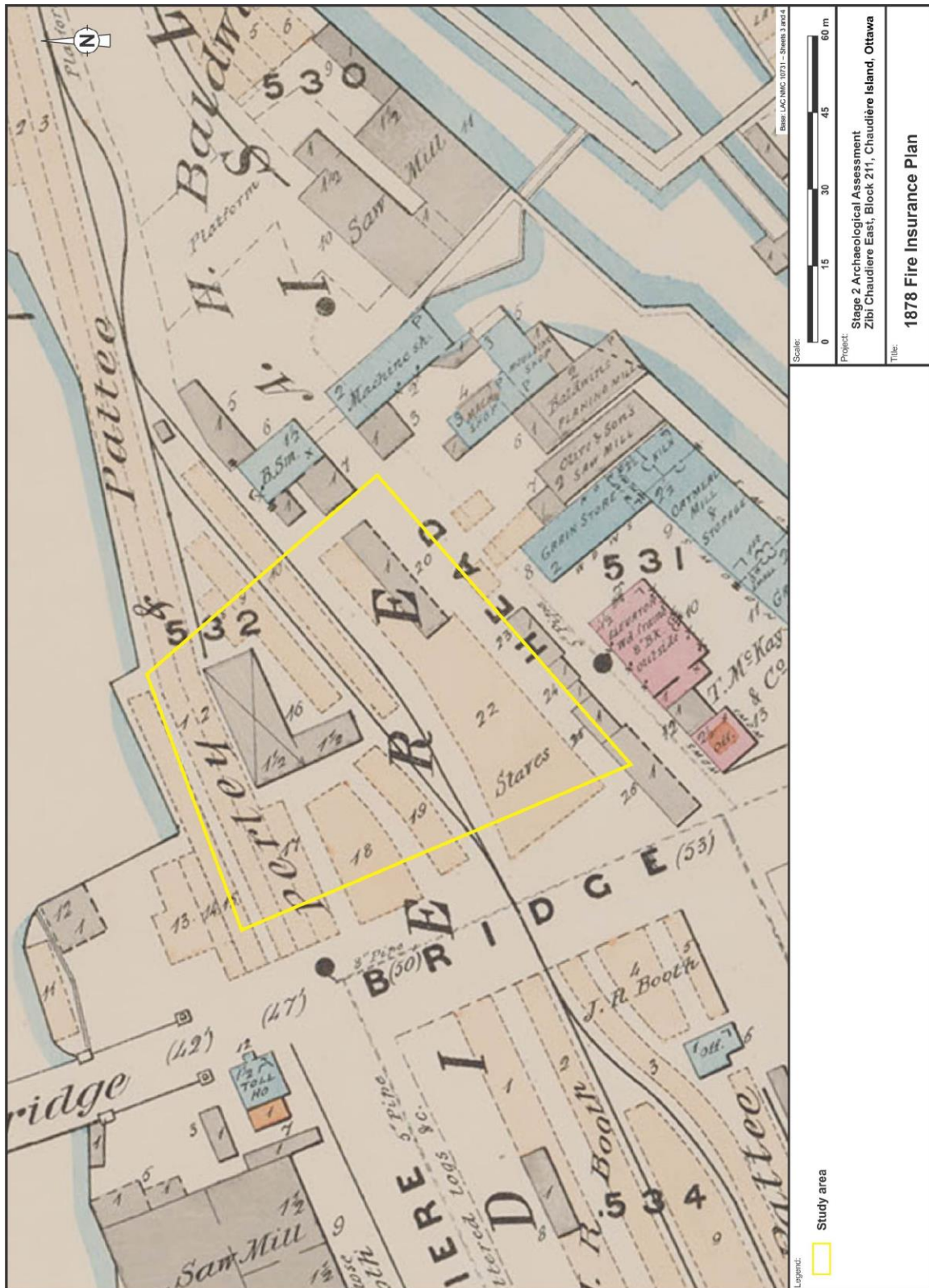


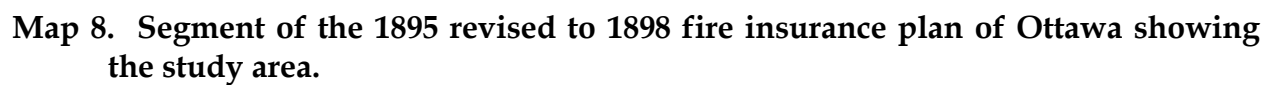
Map 4. Segment of the 1851 survey plan of the islands at the Chaudière Falls showing the study area.

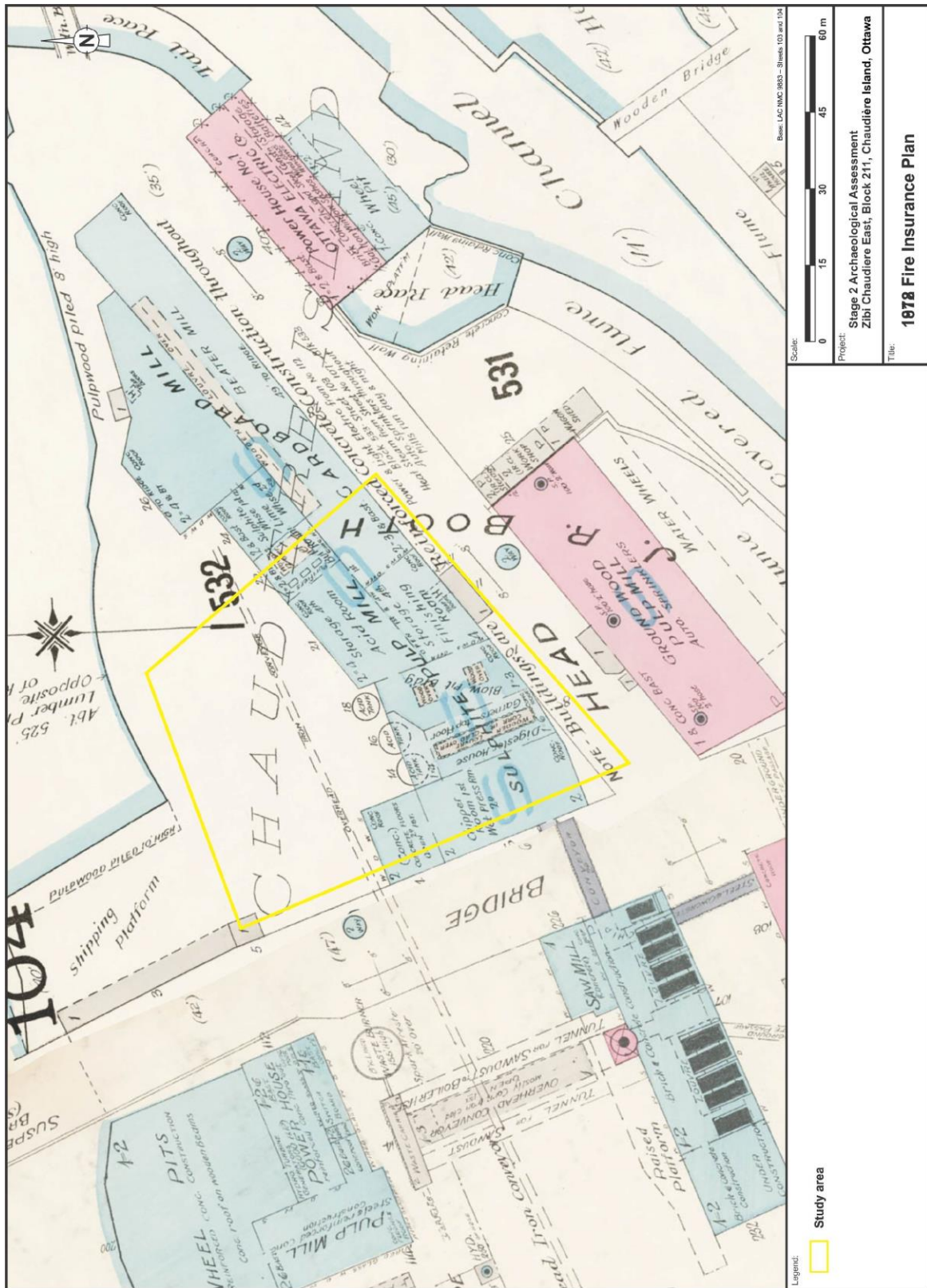


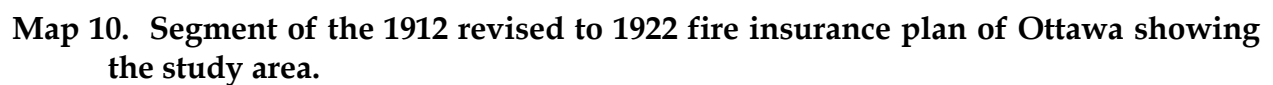
Map 5. Segment of an 1861 plan of the City of Ottawa showing the study area.



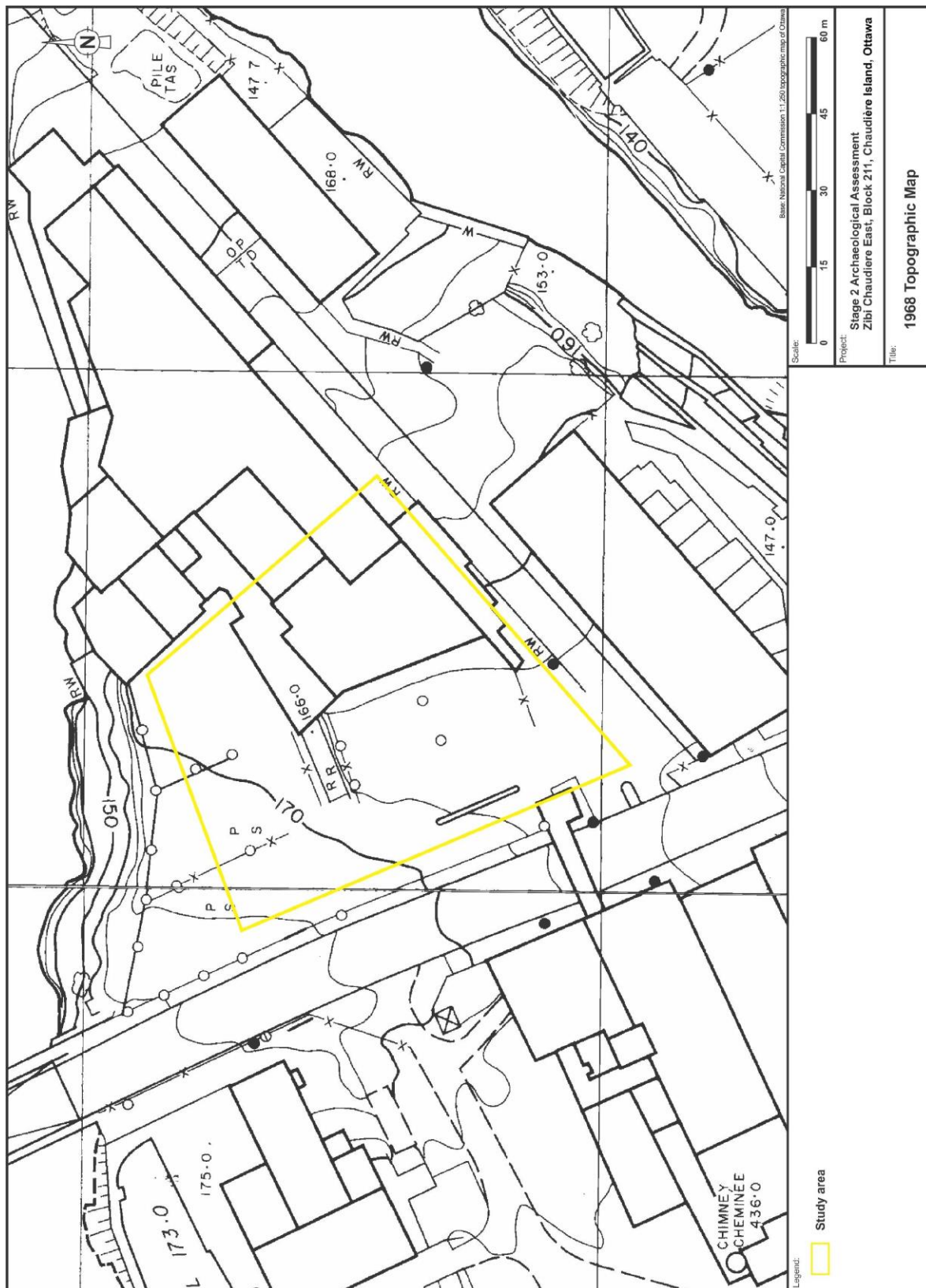




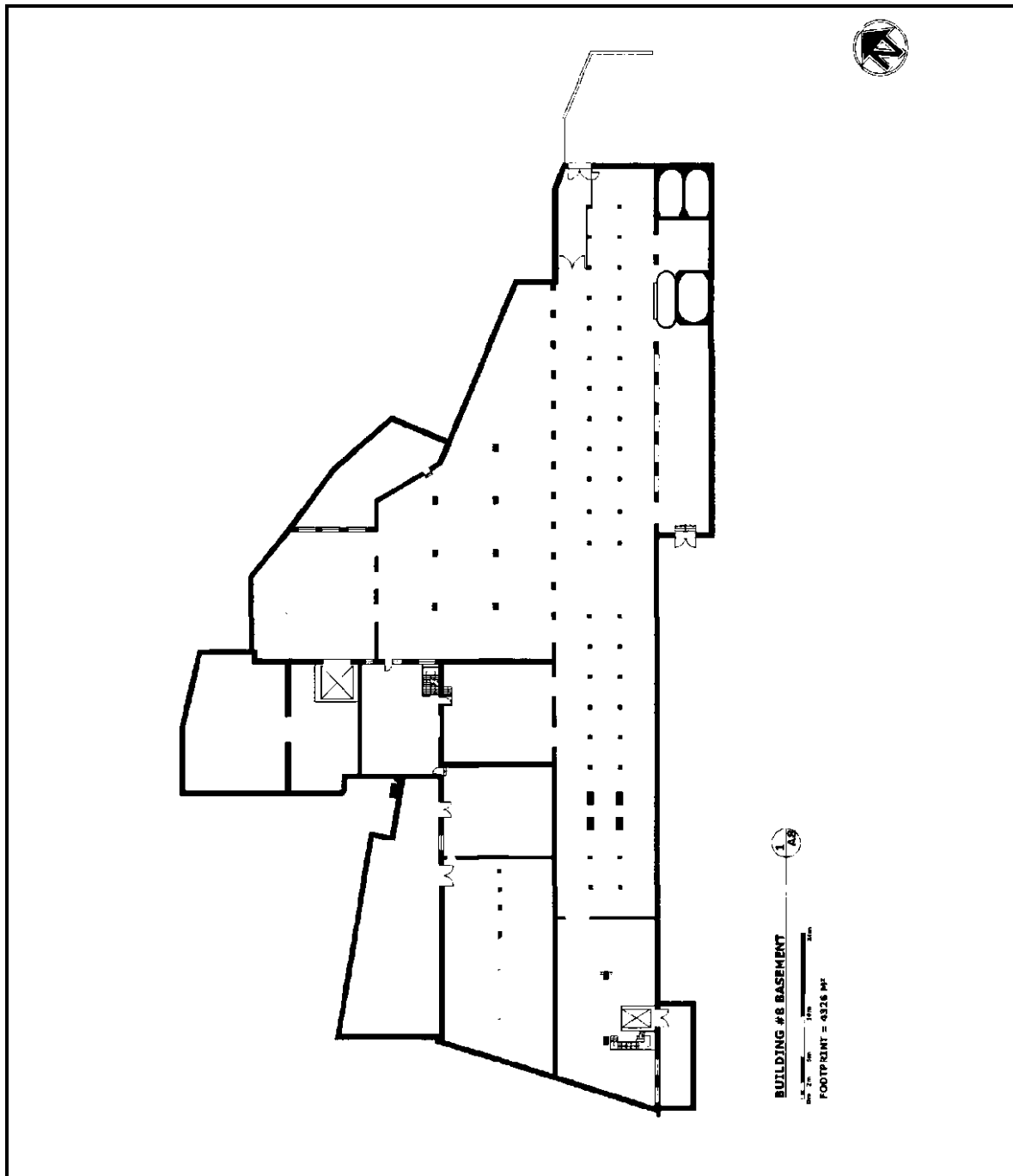








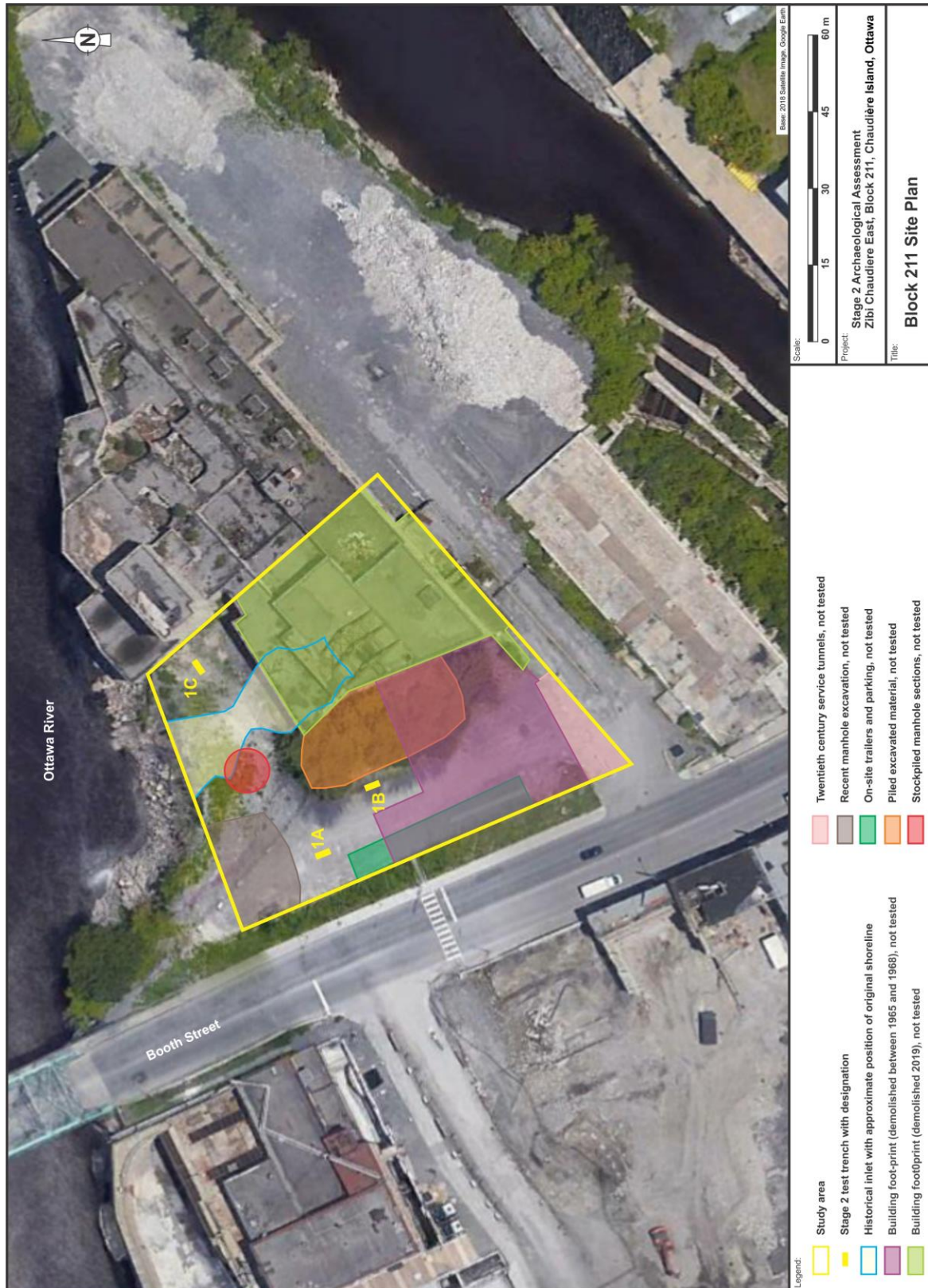
Map 12. Segment of a 1:1,250 topographic map of Ottawa showing the study area.



Map 13. Former sulphite pulp mill and board mill basement plan. (Clerk and Dufresne 2010:Figure 236)



Map 14. Recent satellite imagery (2018) depicting archaeological potential within the Zibi Chaudière East Block 211 study area. This plan has been modified from the full archaeological potential map in the Stage 1 report (Past Recovery 2014:167).



Map 15. Site plan showing test trench locations and Stage 2 field testing methods.



9.0 IMAGES



Image 1. The Perley & Pattee sawmill and other buildings on Chaudière Island c. 1858 in a lithograph by Stent & Laver, looking east. (LAC C-002812) The study area contains a few stacked lumber piles, a foreshadowing of its use through the remainder of the nineteenth century.



Image 2. The Union Bridge with the J.R. Booth sawmill on the right and the toll house near the end of the bridge between 1867 and 1870, looking south. (LAC PA-012500) The loading dock is evident next to the east side of the bridge, with stacked lumber on higher ground to the south.



Image 3. Barges being loaded from lumber piles on Chaudière Island with the J.R. Booth wharf, the Union Bridge and part of J.R. Booth's sawmill in the background in 1872, looking west. (McCord Museum Notman Collection I-78912)



Image 4. Segment of the Brosius bird's-eye view of Ottawa showing the study area in 1876, looking southeast. (LAC NMC 21081) The stable within the study area can be seen opposite Chaudière Street.



Image 5. The J.R. Booth pulp mill on Chaudière Island c. 1909, looking north-northwest along Bridge Street. (LAC e010934866-v8) The Head Street intersection is on the right, with the west end of the new sulphite pulp mill extending to the Bridge (Booth) Street right-of-way.



Image 6. The J.R. Booth sulphite pulp and board mills on Chaudière Island in 1911, looking south-southeast. (LAC PA-009205) Note the piled pulp bales in front of the mill.

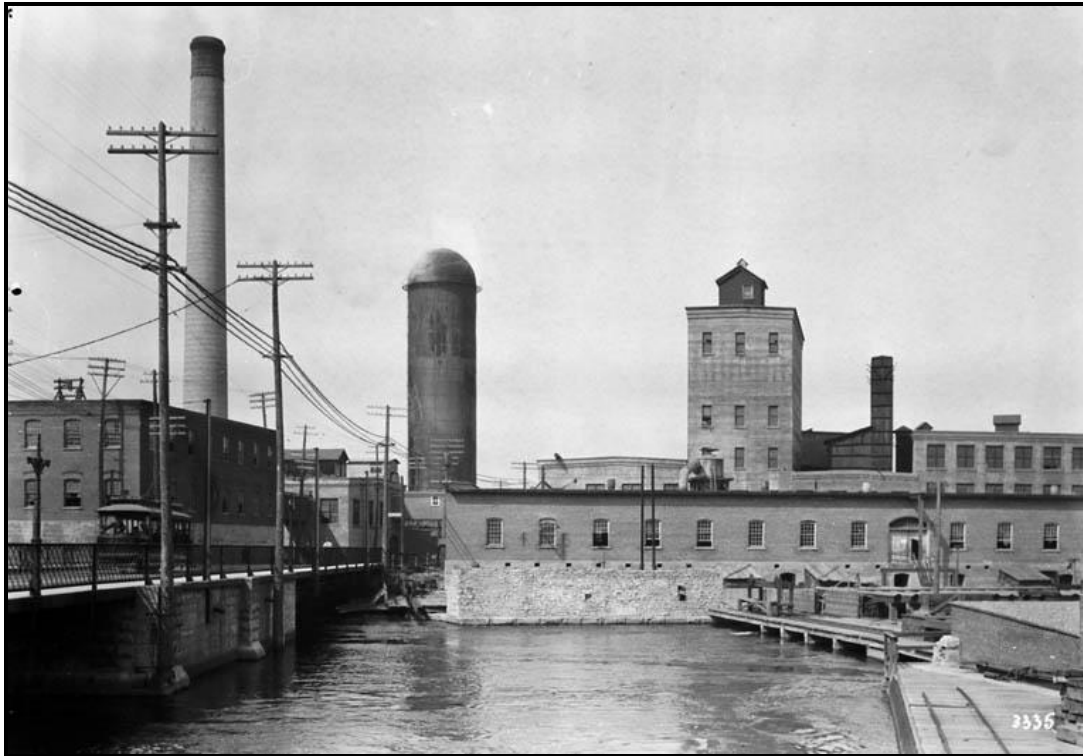


Image 7. The J.R. Booth ground wood pulp mill on Chaudière Island with the sulphite pulp mill in the background in 1913, looking north-northwest. (LAC PA-010631)

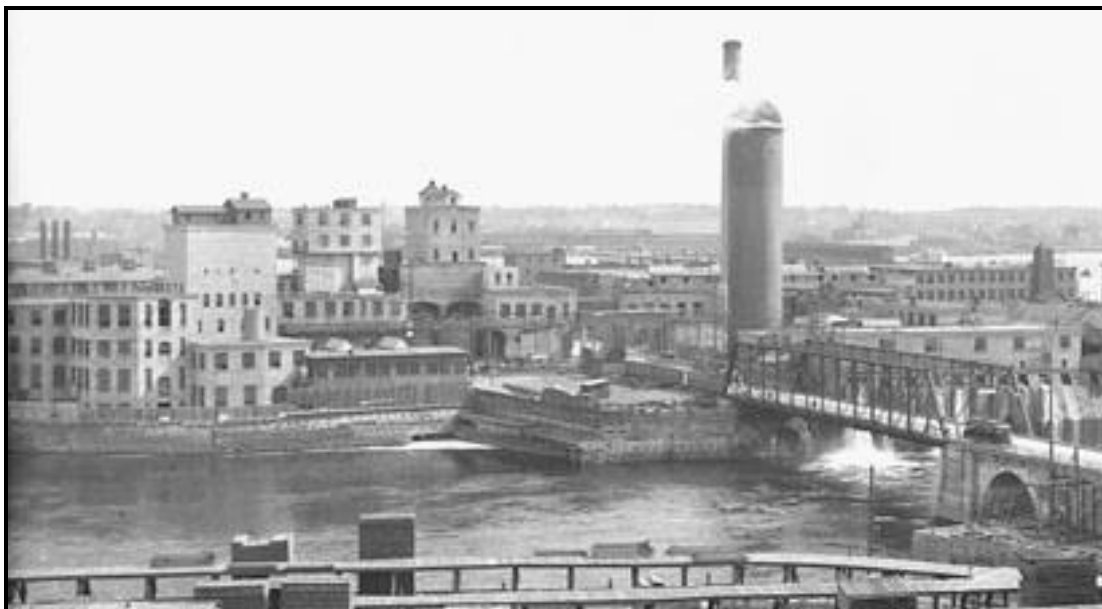


Image 8. J.R. Booth's mills on Chaudière Island from E.B. Eddy's mill pre-1919, looking southwest. (LAC PA-012635) Note the heightened loading dock near the bridge and the added 'wood room.'



Image 9. Oblique aerial photograph showing the study area, 1929. (E.B. Eddy collection; [http:// workershistorymuseum.ca/workers-history-behind-toilet-paper](http://workershistorymuseum.ca/workers-history-behind-toilet-paper))



Image 10. Oblique aerial photograph showing Chaudière Island, 1950, looking northwest. (NCC XIII-0-02, 966)



Image 11. View of the location of the recently removed west end of the former box factory, facing northwest. (PR19-018D001)



Image 12. View of the location of the recently removed west end of the former box factory, facing north-northwest. (PR19-018D044)

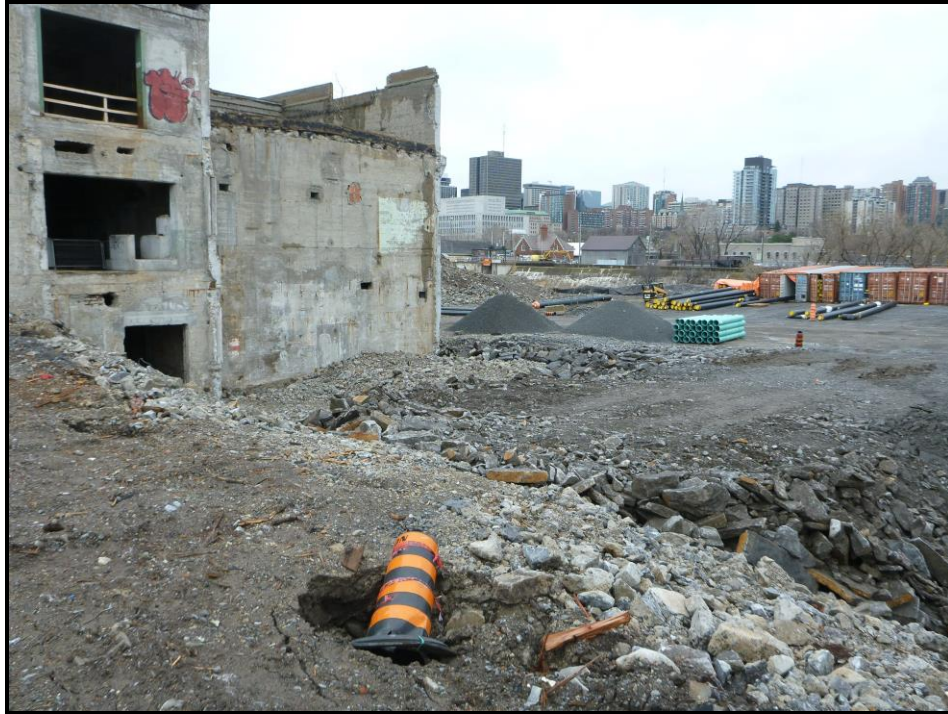


Image 13. View of the location of the recently removed west end of the former box factory, facing southeast. (PR19-018D036)



Image 14. View of the location of the recently removed west end of the former box factory, facing south. (PR19-018D037)



Image 15. View of the western end of the recently removed section of the former box factory showing an in situ concrete wall, facing west-southwest. (PR19-018D039)



Image 16. View of the west half of the study area showing piled fill and on-site trailers, facing north-northwest. (PR19-018D006)



Image 17. View of the west half of the study area showing piled fill, facing southeast. (PR19-018D010)



Image 18. View of the north end of the study area showing piled fill and barriers next to steep slope and the recent manhole excavation, facing east-northeast. (PR19-018D013)



Image 19. View of the recent manhole excavation along the north edge of the study area, facing north-northwest. (PR19-018D016)



Image 20. View of the relatively undisturbed north end of the study area, facing east-northeast. (PR19-018D033)



Image 21. Staff monitoring the mechanical excavation of Trench 1B, facing south-southeast. (PR19-018D031)



Image 22. Staff recording the initial excavation of Trench 1A, facing northwest. (PR19-018D030)



Image 23. View of the location of Trench 1A, facing northwest. (PR19-018D051)

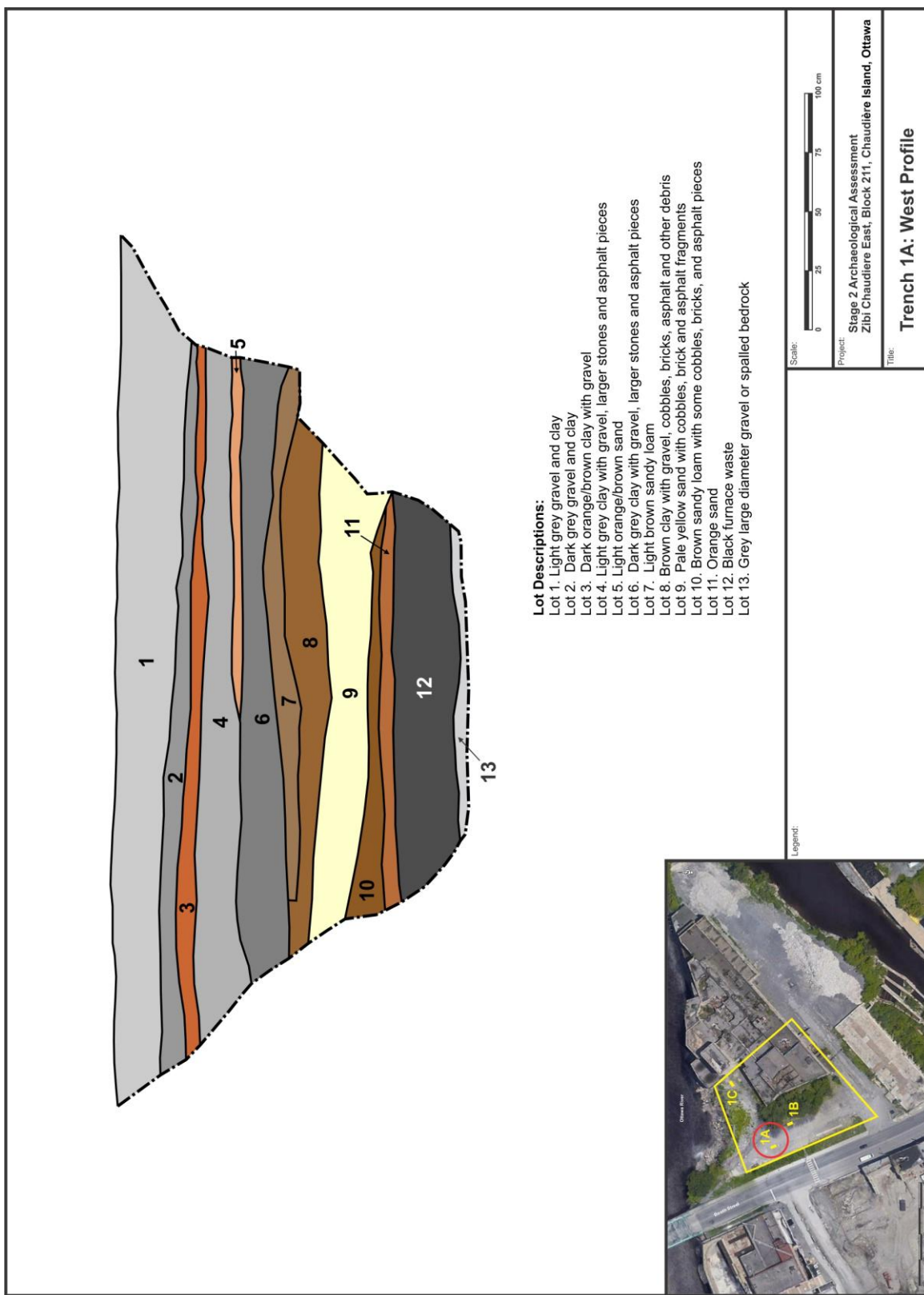


Image 24. Trench 1A: west profile.



Image 25. West profile of Trench 1A, facing northwest. (PR19-018D068)



Image 26. East profile of Trench 1A, facing east-northeast. (PR19-018D073)

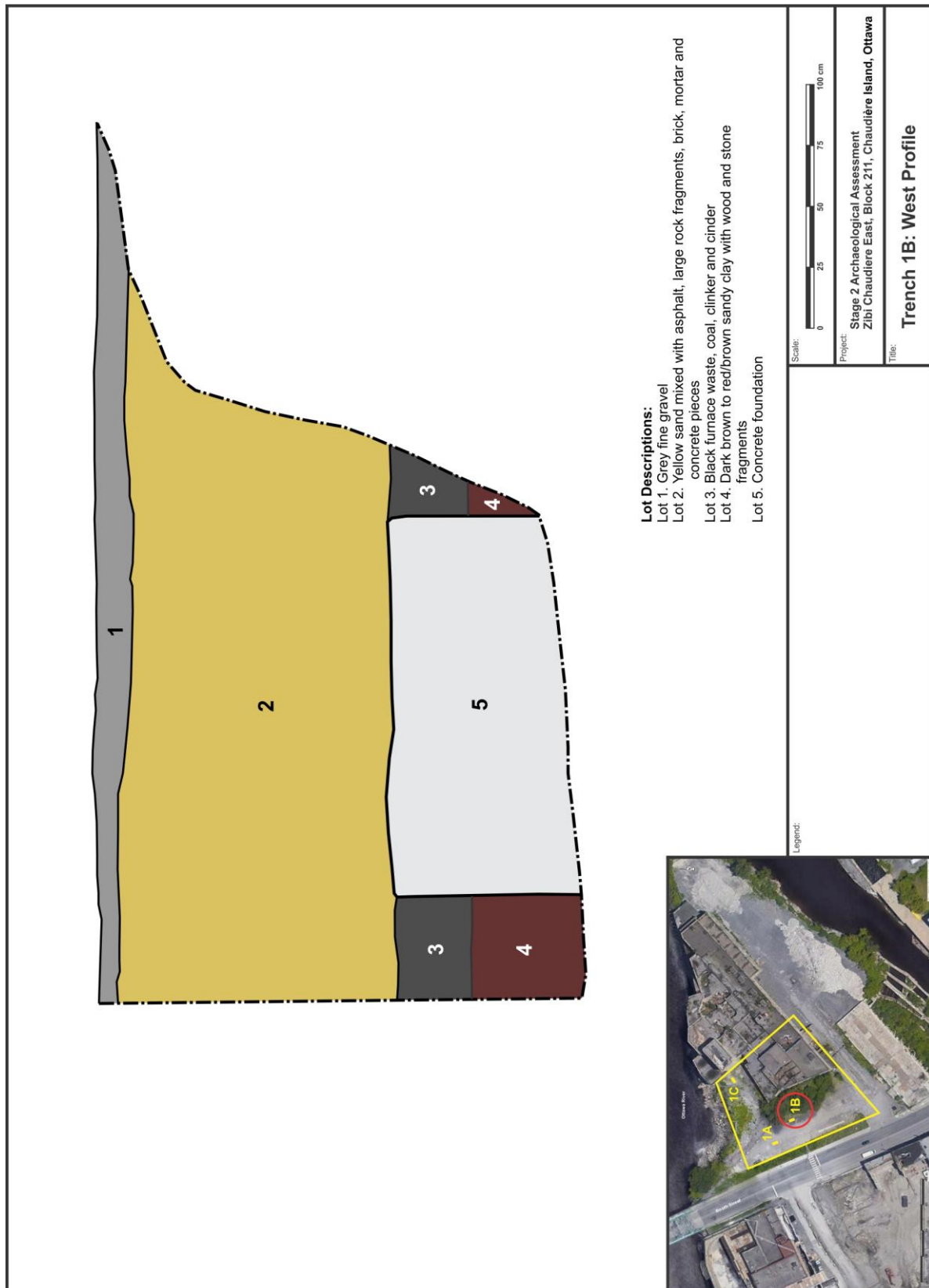


Image 27. Trench 1B: west profile.



Image 28. Initial west profile of Trench 1B showing the Lot 2 debris layer, facing west-southwest. (PR19-018D052)



Image 29. View of Trench 1B showing the concrete wall, facing south. (PR19-018D062)



Image 30. East profile of Trench 1B, facing north. (PR19-018D078)



Image 31. View of the location of Trench 1C, facing north-northeast. (PR19-018D058)



Image 32. Trench 1C: north profile.



Image 33. North profile of Trench 1C, facing northwest. (PR19-018D076)

APPENDIX 1: Photographic Catalogue

Camera: Panasonic Lumix DMC-TS3 – 12.1 Megapixels

Catalogue #	Description	Direction
PR19-018D001	Block 211 study area showing the demolished box factory	NW
PR19-018D002	Block 211 study area showing the demolished box factory	NW
PR19-018D003	Block 211 study area showing the demolished box factory	NNW
PR19-018D004	Block 211 study area showing the demolished box factory	NNW
PR19-018D005	Block 211 study area showing the demolished box factory	NNW
PR19-018D006	Block 211 study area showing piled fill	NNW
PR19-018D007	Block 211 study area showing piled fill	NNW
PR19-018D008	Block 211 study area showing piled fill	NNW
PR19-018D009	Block 211 study area showing piled fill	SE
PR19-018D010	Block 211 study area showing piled fill	SE
PR19-018D011	Block 211 study area showing piled fill	SE
PR19-018D012	Block 211 study area showing piled fill	SE
PR19-018D013	Block 211 study area showing piled fill	ENE
PR19-018D014	Block 211 study area showing piled fill	ENE
PR19-018D015	Manhole excavation at the north end of the study area	NNW
PR19-018D016	Manhole excavation at the north end of the study area	NNW
PR19-018D017	Manhole excavation at the north end of the study area	NNW
PR19-018D018	Block 211 study area showing piled fill	S
PR19-018D019	Block 211 study area showing piled fill	S
PR19-018D020	Block 211 study area showing piled fill and the demolished box factory	SSE
PR19-018D021	Block 211 study area showing piled fill and the demolished box factory	SSE
PR19-018D022	Block 211 study area to the north of the demolished box factory	ENE
PR19-018D023	Block 211 study area to the north of the demolished box factory	ENE
PR19-018D024	Test trench 1A during excavation	NNW
PR19-018D025	Test trench 1A during excavation	NNW
PR19-018D026	Test trench 1A during excavation	NNW
PR19-018D027	Test trench 1A during excavation	NNW
PR19-018D028	Block 211 study area showing the demolished box factory	N
PR19-018D029	Block 211 study area showing the demolished box factory	N
PR19-018D030	Crew recording Test trench 1A	NW
PR19-018D031	Test trench 1B during excavation	SSE
PR19-018D032	Test trench 1B during excavation	SSE
PR19-018D033	Block 211 study area to the north of the demolished box factory	ENE
PR19-018D034	Block 211 study area to the north of the demolished box factory	ENE
PR19-018D035	Block 211 study area showing the demolished box factory	SE
PR19-018D036	Block 211 study area showing the demolished box factory	SE
PR19-018D037	Block 211 study area showing the demolished box factory	S
PR19-018D038	Block 211 study area showing the demolished box factory	S
PR19-018D039	Block 211 study area showing the demolished box factory	WSW

Catalogue #	Description	Direction
PR19-018D040	Block 211 study area showing the demolished box factory	WSW
PR19-018D041	Block 211 study area showing the demolished box factory	NW
PR19-018D042	Block 211 study area showing the demolished box factory	NW
PR19-018D043	Block 211 study area showing the demolished box factory	NNW
PR19-018D044	Block 211 study area showing the demolished box factory	NNW
PR19-018D045	Test trench 1B during excavation	SE
PR19-018D046	Test trench 1B during excavation	SE
PR19-018D047	Test trench 1A initial west profile	WSW
PR19-018D048	Test trench 1A initial west profile	WSW
PR19-018D049	Test trench 1A initial west profile	WSW
PR19-018D050	Test trench 1A initial west profile	NW
PR19-018D051	Test trench 1A initial west profile	NW
PR19-018D052	Test trench 1B initial west profile	WSW
PR19-018D053	Test trench 1B initial west profile	WSW
PR19-018D054	Test trench 1B initial west profile	WSW
PR19-018D055	Test trench 1C initial north profile	NNW
PR19-018D056	Test trench 1C initial north profile	NNW
PR19-018D057	Overview of Test trench 1C	NNE
PR19-018D058	Overview of Test trench 1C	NNE
PR19-018D059	Test trench 1A completed west profile	WSW
PR19-018D060	Test trench 1A completed west profile	WSW
PR19-018D061	Overview of completed Test trench 1B	S
PR19-018D062	Overview of completed Test trench 1B	S
PR19-018D063	Overview of completed Test trench 1B	N
PR19-018D064	Overview of completed Test trench 1B	N
PR19-018D065	Overview of completed Test trench 1B	NNW
PR19-018D066	Overview of completed Test trench 1B	NNW
PR19-018D067	Overview of completed Test trench 1B	NW
PR19-018D068	Test trench 1A completed west profile	NW
PR19-018D069	Test trench 1A completed west profile	NW
PR19-018D070	Test trench 1A completed west profile	S
PR19-018D071	Test trench 1A completed west profile	S
PR19-018D072	Test trench 1A completed east profile	ENE
PR19-018D073	Test trench 1A completed east profile	ENE
PR19-018D074	Test trench 1C completed north profile	NNW
PR19-018D075	Test trench 1C completed north profile	NNW
PR19-018D076	Test trench 1C completed north profile	NW
PR19-018D077	Test trench 1C completed north profile	NW
PR19-018D078	Test trench 1B completed east profile	N
PR19-018D079	Test trench 1B completed east profile	N

APPENDIX 2: Glossary of Archaeological Terms

Archaeology:

The study of human past by excavation of cultural material.

Archaeological Sites:

The physical remains of any building, structure, cultural feature, object, human event or activity which, because of the passage of time, are on or below the surface of the land or water.

Archaic:

A term used by archaeologists to designate a distinctive cultural period dating between 8000 and 1000 B.C. in eastern North America. The period is divided into Early (8000 to 6000 B.C.), Middle (6000 to 2500 B.C.) and Late (2500 to 1000 B.C.). It is characterized by hunting, gathering and fishing.

Artifact:

An object manufactured, modified or used by humans.

B.P.:

Before Present. Often used for archaeological dates instead of B.C. or A.D. Present is taken to be 1951, the date from which radiocarbon assays are calculated.

Backdirt:

The soil excavated from an archaeological site. It is usually removed by shovel or trowel and then screened to ensure maximum recovery of artifacts.

Chert:

A type of silica rich stone often used for making chipped stone tools. A number of chert sources are known from southern Ontario. These sources include outcrops and nodules.

Contact Period:

The period of initial contact between Native and European populations. In Ontario, this generally corresponds to the seventeenth and eighteen centuries depending on the specific area.

Cultural Resource / Heritage Resource:

Any resource (archaeological, historical, architectural, artifactual, archival) that pertains to the development of our cultural past.

Cultural Heritage Landscapes:

Cultural heritage landscapes are groups of features made by people. The arrangement of features illustrate noteworthy relationships between people and their surrounding environment. They can provide information necessary to preserve, interpret or reinforce the understanding of important historical settings and changes to past patterns of land use. Cultural landscapes include neighbourhoods, townscape and farmscapes.

Diagnostic:

An artifact, decorative technique or feature that is distinctive of a particular culture or time period.

Disturbed:

In an archaeological context, this term is used when the cultural deposit of a certain time period has been intruded upon by a later occupation.

Excavation:

The uncovering or extraction of cultural remains by digging.

Feature:

This term is used to designate modifications to the physical environment by human activity. Archaeological features include the remains of buildings or walls, storage pits, hearths, post moulds and artifact concentrations.

Flake:

A thin piece of stone (usually chert, chalcedony, etc.) detached during the manufacture of a chipped stone tool. A flake can also be modified into another artifact form such as a scraper.

Fluted:

A lanceolate shaped projectile point with a central channel extending from the base approximately one third of the way up the blade. One of the most diagnostic Palaeo-Indian artifacts.

Lithic:

Stone. Lithic artifacts would include projectile points, scrapers, ground stone adzes, gun flints, etc.

Lot:

The smallest provenience designation used to locate an artifact or feature.

Midden:

An archaeological term for a garbage dump.

Mitigation:

To reduce the severity of development impact on an archaeological or other heritage resource through preservation or excavation. The process for minimizing the adverse impacts of an undertaking on identified cultural heritage resources within an affected area of a development project.

Multicomponent:

An archaeological site which has seen repeated occupation over a period of time. Ideally, each occupation layer is separated by a sterile soil deposit that accumulated during a period when the site was not occupied. In other cases, later occupations will be directly on top of earlier ones or will even intrude upon them.

Operation:

The primary division of an archaeological site serving as part of the provenience system. The operation usually represents a culturally or geographically significant unit within the site area.

Paleo-Indian:

The earliest human occupation of Ontario designated by archaeologists. The period dates between 9000 and 8000 B.C. and is characterized by small mobile groups of hunter-gatherers.

Profile:

The profile is the soil stratigraphy that shows up in the cross-section of an archaeological excavation. Profiles are important in understanding the relationship between different occupations of a site.

Projectile Point:

A point used to tip a projectile such as an arrow, spear or harpoon. Projectile points may be made of stone (either chipped or ground), bone, ivory, antler or metal.

Provenience:

Place of origin. In archaeology this refers to the location where an artifact or feature was found. This may be a general location or a very specific horizontal and vertical point.

Salvage:

To rescue an archaeological site or heritage resource from development impact through excavation or recording.

Stratigraphy:

The sequence of layers in an archaeological site. The stratigraphy usually includes natural soil deposits and cultural deposits.

Sub-operation:

A division of an operation unit in the provenience system.

Survey:

To examine the extent and nature of a potential site area. Survey may include surface examination of ploughed or eroded areas and sub-surface testing.

Test Pit:

A small pit, usually excavated by hand, used to determine the stratigraphy and presence of cultural material. Test pits are often used to survey a property and are usually spaced on a grid system.

Woodland:

The most recent major division in the pre-Contact cultural sequence of Ontario. The Woodland period dates from 1000 B.C. to A.D. 1550. The period is characterized by the introduction of ceramics and the beginning of agriculture in southern Ontario. The period is further divided into Early (1000 B.C. to A.D. 0), Middle (A.D. 0 to A.D. 900) and Late (A.D. 900 to A.D.1550).