

HALIFAX REGIONAL MUNICIPALITY

ARCHAEOLOGICAL ASSESSMENT
HALIFAX SEWAGE TREATMENT PLANT
PROPERTY
HALIFAX, NOVA SCOTIA

ARCHAEOLOGICAL IMPACT ASSESSMENT
FINAL REPORT

Submitted to:
Halifax Regional Municipality
and the
Nova Scotia Museum

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**ARCHAEOLOGICAL ASSESSMENT OF
THE HALIFAX SEWAGE TREATMENT SITE PROPERTY
Halifax, Nova Scotia**

**Heritage Research Permit A2002NS22
Final Report**

1.0 INTRODUCTION

In June 2002, Cultural Resource Management (CRM) Group was retained by the Halifax Harbour Solutions Project (HHSP) of the Halifax Regional Municipality (HRM) to undertake an archaeological impact assessment of the proposed Halifax Sewage Treatment Plant (STP) property on the Halifax waterfront (*Plate 1; Figure 1*). The assessment was designed to identify and test areas of archaeological potential within the property. The fieldwork was conducted during the second week of July under the terms of Heritage Research Permit A2002NS22 issued by the Nova Scotia Museum to W. Bruce Stewart, CRM Group President and Senior Consultant. Field assistance was provided by staff archaeologist Mike Sanders and crew members Danny Dyke, Jonathan Kyte and Dan Rafuse. Volunteer assistance was provided by Dan Rafuse, Jeff Turner, Kathryn Stewart and Carolyn Tucker.

This interim report has been prepared by CRM Group for review by the Nova Scotia Museum and HRM. Its purpose is to convey the preliminary results of the research and fieldwork, and to recommend a strategy for the management of archaeological resources on the property in light of the proposed plans for redevelopment.

2.0 STUDY AREA

The Halifax STP property is located on the Halifax waterfront midway between the 1749 town site and the Naval Yard. It is bounded on the east by Upper Water Street, on the north by Cornwallis Street, on the west by Barrington Street and on the south by a Nova Scotia Power Incorporated property (*Figure 2*).

The Halifax Harbour Solutions Project of the HRM proposes to redevelop the property as the site of a sewage treatment plant as part of the overall plan to clean-up Halifax Harbour. According to the current plan, development would necessitate the realignment of Upper Water Street closer to the harbour and a redesign of the Upper Water Street/Cornwallis Street intersection. The entire property bounded by the realigned Upper Water Street, Cornwallis Street and Barrington Street would be impacted by the development. The archaeological assessment carried out by CRM Group focussed on the property as it falls within the existing street boundaries.

There are currently no standing structures within the property (*Plate 1*). Following demolition of the last commercial buildings along Barrington Street, the southern half of the property was graded to smooth the slope extending from Barrington down to Upper Water. Remnants of the former commercial buildings can be seen in the form of concrete slabs and wall fragments running along Upper Water Street.

3.0 METHODOLOGY

3.1 Background Research

The initial evaluation of archaeological potential was conducted by CRM Group in 1999 as part of a Phase I Environmental Site Assessment undertaken by ADI Limited (***Report on Phase I Environmental Site Assessment Proposed Sewage Treatment Plant Site: Land Bounded by Barrington, Cornwallis and Upper Water Streets Halifax, Nova Scotia***).

During the 1999 archaeological screening study, CRM Group staff conducted a review of historical settlement and development within the proposed Halifax STP property to evaluate archaeological resource potential. The goal was to reconstruct a general land use history for properties that would be directly impacted by the project and identify the potential for development related impacts upon significant archaeological resources. The background study included a review of relevant documentation available at the Public Archives of Nova Scotia, the Maritime Command Museum, the Nova Scotia Land Information Centre, the Nova Scotia Museum and the Department of Natural Resources Library. Research focussed on land grant records, legal survey records and historic maps, as well as local and regional histories. Topographic maps and aerial photographs, both current and historic, were also used in the archaeological evaluation of project impacts.

As part of the current work plan, CRM Group reviewed the results of the previous screening and evaluated the impact that 20th century development had on the property. Additional research was conducted at the Provincial Archives of Nova Scotia, the Department of Natural Resources Library and the Provincial Crown Lands Records Office. Once the evaluation was complete, the program of intrusive testing was designed to target areas with the greatest likelihood to have retained archaeological integrity.

3.2 Archaeological Field Assessment

The goal of the archaeological field assessment was to identify any extant cultural heritage resources which could be impacted by the proposed development, and design strategies for the mitigation of impacts to those resources. During the field assessment, CRM Group archaeologists investigated potential resources identified as a result of the screening study, as well as features and deposits identified through direct observation on site. The assessment used a combination of field techniques including visual assessment, mechanical excavation and manual excavation to identify and investigate cultural resources within the study area (***Plates, 2, 3 & 4***).

Prior to initiating any excavation on the site, CRM Group staff conducted a site reconnaissance to identify evidence of structural features observable on the ground surface and mark out the

position of historically identified structures. The positioning of these past structures was then used to determine the placement of test trenches.

All excavations were carefully monitored for evidence of intact cultural deposits and/or structural features associated with the precontact or historic occupation/exploitation of the property. When resources were encountered, mechanical excavation was suspended while the discovery was investigated further. If considered culturally significant, excavation of the deposit and/or feature proceeded by hand.

The location of all trenches and pertinent observations made during the assessment were recorded through field notes, soil profiles, site plans and photographs. Artifacts recovered during the assessment were retained for analysis and processed according to standards set by the Nova Scotia Museum.

4.0 RESULTS

4.1 Background Research

Prior to the founding of Halifax, the subject area was at the very edge of the harbour known to the Mi'kmaq and the Acadians as “Chebucto” (**Figure 3**). A small stream, originating near today's Citadel Hill, flowed to the harbour through the middle of the property (DesBarres 1777; Blascowitz & Castleman 1784) (**Figure 4**), making the area particularly appealing for Native settlement.

When the British settlement of Halifax was begun in the summer of 1749, the subject area was included in the initial forest clearing, but not within the limits of the fortified enclosure established to protect the developing town (Harris 1749; Jefferys 1750; Harris 1750) (**Figure 3**). The northern edge of that enclosure was located in the vicinity of today's Scotia Square. Although the subject area was physically and psychologically out-of-town, it probably appealed to settlers travelling along the Water Street shoreline to and from Colonel John Gorham's Ranger encampment, near the foot of present-day North Street. In 1750, the entire hillside below today's Brunswick Street and northward to North Street was surveyed, subdivided and largely allotted in the creation of Halifax's “North Suburb”. A map drawn in that year (Rocque) shows the study area already defined as a block and subdivided into six rectangular lots. One of the lots is even shown to have had a standing building and an associated wharf - the only wharf depicted on the Halifax waterfront in 1750. Its label “Ives Wharfe” suggests that this lot may have belonged to Colonel Benjamin Ives, later the namesake for Fort Ives on McNabs Island.

A detailed map of Halifax published in 1777 (DesBarres) (**Figure 4**) shows the subject area clearly framed by the establishment of Upper Water Street, Lockman Street (now Barrington), Cornwallis Street, and Proctors Lane. Unlike the surrounding blocks, the subject area appears extensively developed. Numerous buildings are shown erected along Upper Water Street on the relatively low and flat ground at the east end of the lots. Directly opposite, on the harbour side of the street, structures labeled “Barnet's Wharf” and “Proctor's Wharf” identify two of the property owners.

Other maps drawn late in the eighteenth century and early in the nineteenth show that the development of the subject area continued to progress rapidly, despite the fact that the southward extension of Lockman Street was not maintained beyond Cornwallis Street (Blaskowitz & Castleman 1784; anonymous c. 1800 & 1826; Torbell 1830; Belcher c. 1841). By 1830 (Torbell) wharves and buildings on either side of Upper Water Street near the south end of the subject area were home to the Cunard shipping enterprise, one of the most successful businesses in the

history of the province. Cunard Shipping and its affiliated businesses occupied the southern quarter of the subject area for nearly a century (Goad 1911).

By the mid 1860s Lockman Street was advanced at least two lots south of Cornwallis Street, providing access to new subdivisions and buildings near the northwest corner of subject property (Fuller c. 1851; Church 1865) (**Figure 5**). One of the businessmen who was attracted by the new developments was J.J. Scriven, a baker who was formerly located at 109 Grafton Street (Hutchinson 1863). Scriven purchased a large property slightly north of the Cunard lot where he established the Halifax Steam Bakery (**Figure 6**). The bakery, with the temporary addition of a biscuit factory, remained active on the site until the 1950s, when it was operated by Johnson's Limited (McAlpine 1869; Goad 1889; Underwriters Survey Bureau Ltd. 1951) (**Figures 8 & 9**).

The earliest map showing the precise locations of buildings within the subject area is an 1878 Fire Insurance Plan (Hopkins) (**Figure 6**). An interesting comparison can be made with Ruger's Bird's Eye View of Halifax (**Figure 7**) published the following year. Cunard & Co. and J.J. Scriven & Son are the only businesses labelled on the plan, but the city directory published the following year (McAlpine 1879) indicates that many more businesses existed within the subject area at the time. Tables 1 through 3 reproduce the relevant occupant listings from the 1879 directory. The lists are organized by street address (see **Figure 6** for street numbers and building placement). A quick examination reveals a great diversity of land uses - the kind of diversity one would expect to have been on-site even in the eighteenth century. **Table 1** indicates that, by 1879, the lots along Upper Water Street were almost completely developed as part of the waterfront business district. The listing in **Table 2** shows the Barrington Street lots to be only partially developed and largely residential, perhaps reflecting the newness of this section of street (extended fully to merge with Lockman Street at Cornwallis Street in 1877). **Table 3** shows that the lots along Cornwallis Street were almost completely occupied by residences. The directory indicates that all of the Proctor Lane lots were vacant in 1879. Cornwallis Lane, extending south from Cornwallis Street between Barrington and Upper Water, is not given a listing in the directory.

Table 1: *Upper Water Street Occupants in 1879, from Proctors Lane to Cornwallis Street (McAlpine 1879)*

Street No.	Vacant Lot	Residence	Business
250	Vacant		
252	Vacant		
254		Thomas Power	

Street No.	Vacant Lot	Residence	Business
			S. Cunard & Co. coal yard
258	Vacant		
260	Vacant		
262		Charles Nelson, Cunard overseer	
264		Andrew Davidson, telegraph operator	Western Union telegraph office
266			Thomas O'Donnell, tailor & press shop
268			Donald McLeod, grocery
270		unoccupied house	
272			Phillip Doyle, liquors
272r			John A. Bennett, cordial manufactory
274			J.J. Scriven & Son, bakery
276			J.J. Scriven & Son, bakery
278		John Conway, labourer & Alice Deagan, widow of Lawrence & Eliza Stoney, widow of John	Boarding house?
280			Nathaniel King, barbershop
282			Thomas Ward, liquors
284			Thomas Ward, liquors
286		Catherine Welsh, widow of Patrick	
288		John Ronkey, seaman	
290			Mrs. Margaret Wood, liquors
290r		Henry Now, fisherman & Joseph Naubrigger, labourer & Mary Lawlor, widow of James	Boarding house?
292			H. Elliott, second hand goods
294			H. Elliott, second hand goods
296		John O'Malley, milkman	
298			Thomas Palmer, variety
300			Richard Cruit, cobbler shop

Street No.	Vacant Lot	Residence	Business
302		Ann Fay, widow of Jeremiah & Nicholas Ferne, labourer	Boarding house?
304			House & shop unoccupied
306			House & shop unoccupied
308			Catherine McGilfory, variety
310		Alexander Nelson, seaman	
312			Joseph Estano, plumbing shop
314		Martin Kenealy, seaman	
316			William Forde, liquors
318			William Forde, liquors
320		Joseph C. Ashwood, sea captain	
322		Thomas Leahy, labourer	
324			Edward O'Brien, liquors
326			Edward O'Brien, liquors

Table 2: *Barrington Street Occupants in 1879, from Proctors Lane to Cornwallis Street (McAlpine 1879)*

Street No.	Vacant Lot	Residence	Business
357	Vacant		
359			S. Cunard & Co., coal depot
361			S. Cunard & Co., coal depot
363		Charles E. Nelson, stevedore	
365	Vacant		
367	Vacant		
369	Vacant		
371	Vacant		
373	Vacant		
375	Vacant		

Street No.	Vacant Lot	Residence	Business
377	Vacant		
379	Vacant		
381	Vacant		
383			J.J. Scriven & Son, bakery
385		Allen MacLean, storeman	
387			Unoccupied shop
389		John Barrett, labourer & Thomas Power, labourer & Michael Ryan, labourer & Michael Ring, labourer	Boarding house?
391	Vacant		
393	Vacant		
395	Vacant		
397	Vacant		
399	Vacant		
401	Vacant		
403	Vacant		
405	Vacant		
407	Vacant		
409	Vacant		
411	Vacant		
413		Robert Greenwood, checker	
415			Patrick Godfrey, liquors
417			Isaac Murphy, grocery
419			Isaac Murphy, grocery
421		Sarah Bennett, widow of Henry	
423		Robert H. Johnstone, waiter & Robert H. Johnstone, sea captain	
425		John Larriscey, labourer, HMD	
425		Ann Ryan, widow of Patrick & Daniel H. Campbell, clerk	

Street No.	Vacant Lot	Residence	Business
427			William Swaine, tobacco shop
429		Frederick Kallis, seaman	
431		Andrew Hillman, shipwright	
433			Mrs. A. Wambolt, second hand goods
435		Ellen Cormack, widow of John	
437			Thomas O'Malley, grocery, liquors
439			Thomas O'Malley, grocery, liquors

Table 3: *Cornwallis Street Occupants in 1879, from Upper Water Street to Barrington Street (McAlpine 1879)*

Street No.	Vacant Lot	Residence	Business
2		Patrick Devereaux, engineer & Edward Hatter, stevedore & William Miller, HMS Argus & John Lannan	Edward O'Brien, liquors, boarding house?
4		William Ready, labourer & Edward Rent, labourer	
6		Patrick Murphy, plasterer	
8		James Garde, carpenter & James Fudge, pensioner & William Murphy, mariner	Boarding house?
10			Richard Costlow, provisions
Cornwallis Lane			
12		Thomas Murphy, sea captain & Osmond Saffrey, mate	
14		William Cabel, sea captain	
16			Thomas O'Malley, grocery

Subsequent insurance maps and aerial photographs show that, in the years since 1879, the subject area has been altered considerably by the cycle of demolition and reconstruction (Goad 1889, 1895, 1899, 1911 and 1914; Pickings 1918; Photo 3525-72, 1931, Underwriters Survey Bureau Ltd. 1951; Photo 18351-88, 1966; Photo 97001-232, 1997) (**Figures 8 & 9**). Included in the sequence of buildings that have come and gone from the subject area are Quinn's ginger ale

factory and St. Patrick's Hall on Barrington Street and the European Hotel, the Allan House Hotel, the Victoria Hotel, W.W. Howell's general machine shop, Pilkington Brothers Limited's glass warehouse and D.A.C. Cummings Limited offices on Upper Water Street (**Figure 9**). Urban renewal in the 1960s resulted in extensive demolition of the buildings within the study area. The last remaining buildings, the Metro Turning Point building at 2155 Barrington Street and the former service station occupied by Tilden at 2173 Barrington were demolished by HRM in 2001. In conjunction with the demolition, the area immediately adjacent to Barrington Street was filled and graded to create a more gradual slope between Barrington and Upper Water Street.

As a consequence of undertaking the initial historical screening of the property, it was recognized that archaeological testing and additional archival research would be required to determine what archaeological resources may have survived the modern developmental impacts.

4.2 Field Assessment

The field component of the archaeological assessment was conducted during the second and third weeks of July (July 8 - 16), 2002. During the course of the field assessment, CRM Group archaeologists supervised the mechanical excavation of eight trenches of various lengths located strategically across the property, conducted manual excavation to expose and clean features identified in the trenches, and documented the features and stratigraphy revealed in each of the trenches (**Plates 1, 2, 3 & 4**).

TEST TRENCHES

During the course of the field assessment, eight test trenches were strategically located to evaluate the archaeological resource potential within the proposed STP property. The following trench by trench discussion outlines the rationale for positioning each of the test trenches, synthesizes the results and presents conclusions. Unless otherwise specified, the trenches averaged 120 cm in width. Elevations are expressed in metric as metres above sea level (MASL). Mechanical excavation was carried out by a rubber-tired back-hoe operated by Bruce Nagler of G & R Kelly Enterprises Ltd.

Trench 1

Trench 1 lay in the southwest quadrant of the property, running roughly parallel to Upper Water Street. The trench was positioned to assess the archaeological potential at the historic interface between buildings and backyards along Upper Water Street (**Figure 10**). The southern end of Trench 1 was positioned 5 metres north of the southern property boundary and inset 16 metres from the curb-edge of the street. The trench, ranging in width between 1.1 metres and 2.0 metres, extended northward a distance of 70 metres. The northern terminus of the trench was inset approximately 13.7 metres from the curb-edge. The ground surface through which the trench was

excavated was devoid of vegetation and surface structural remains due to recent demolition and regrading on the STP property. In general the trench was excavated to a depth of about 1.20 metres, but the depth varied as necessary to accommodate shallow structures and explore deeper features.

Excavation of the trench on Monday, July 8, and the subsequent cleaning of the trench, yielded evidence of 16 discrete features reflecting various stages of Euro-Canadian development within the property (*Plate 5; Figure 11*). The following discussion of the features found in Trench 1 follows a rough progression from south to north along the length of the trench.

Feature 1

The initial passes made by the back-hoe bucket revealed the presence of a poured concrete pad in the very southern end of Trench 1 at an average depth of 35 cm BS (3.81 MASL). The exposed surface of the pad extended east, south and west beyond the limits of the trench. The northern edge of the concrete pad, measuring 8.69 metres north of the property line, rests upon a concrete footing wall. The pad is 11.5 cm thick at the northern edge. The footing wall varies from 22 cm to 48 cm in height due to irregularities in the underlying ground surface (subsoil and bedrock). Two vertical indentations, evidence of 2x4 wooden forming and a sewer or drain pipe, were noted on the northern face of the footing wall. The footing wall lies in a builders' trench evident in the east wall of the trench. No artifacts were recovered in association with Feature 1.

An examination of the 1951 Fire Insurance Plan indicated that the concrete slab was associated with a mid-twentieth century commercial complex located at 260 to 264 Upper Water Street. In 1951, the complex housed Pilkington Brothers Limited glass warehouse. As will be seen in the discussion of features exposed in Trench 1, concrete structural elements identified as Features 2, 4 and 5 were associated with the same commercial complex.

Feature 2

Feature 2, located 14.35 to 15.44 metres north of the property boundary, is an east/west oriented concrete footing wall. From an examination of the wall, it is evident that the wall was poured in at least two sections. While the south face of the wall represents a single vertical plain, the scars left by the board forms indicate a joint in the wall. The joint is mirrored in the north face of the wall and corresponds to a change in thickness, elevation and height: the eastern portion of the wall is 110 cm thick, 20 cm BS (3.68 MASL) and 30 cm in height, while the western section is 92.5 cm thick, 35 cm BS (3.83 MASL) and 77 cm in height. The base of the footing wall is irregular as both sections were poured directly onto subsoil.

The surface of Feature 2 forms part of a concrete slab (Feature 4) which extends from Feature 2 (14.35 m north) to another concrete footing wall (Feature 5) located between 28.48 metres and

29.40 metres north of the property boundary. Immediately north of and parallel to the wall and below the concrete slab (Feature 4) were a 5 inch ceramic drain tile and two iron water pipes placed in a shallow builders' trench.

No artifacts were recovered in association with Feature 2.

The concrete footing wall is part of a mid-twentieth century commercial complex located at 260 to 264 Upper Water Street. Also associated with the complex were Features 1, 4 and 5. According to the 1951 Fire Insurance Plan, the complex housed Pilkington Brothers Limited glass warehouse.

Feature 3

Feature 3 is an ironstone drain oriented west to east which carried ground water and surface run-off from the rear yards along Upper Water Street down slope toward the harbour (**Plate 6; Figure 12**). The drain consists of two parallel walls built of 6 to 8 courses of ironstone slabs creating a spillway which was, in turn, surmounted by north-south oriented capstones. The drain was built in a trench excavated approximately 120 cm into undisturbed subsoil. Wooden planks form the bottom of the spillway, which was sealed beneath an 18 cm thick layer of black sludge or silt. Visual examination within the channel indicated that the drain was collapsed to the west of the trench and silted up to the east. On average, the spillway is 75 cm in width and 76 cm in height. The centre of the spillway lies approximately 16.20 metres north on the property boundary. The overall feature, including builders' trench, is approximately 2.20 metres wide.

Within the section of drain exposed in Trench 1, a change in the orientation of the capstones was observed. Closer examination of the feature indicated that the change in orientation represented a modification to the drain which accommodated the placement of a secondary drain feeding into the main drain from the north. The secondary drain was represented by the remains of a wooden plank found overlying the north wall of the spillway which lead into the opening created by the gap in capstones over the main drain.

No artifacts were found in association with Feature 3.

Examination of historic mapping for the study area suggest that the drain follows the approximate alignment of a property line which, in the late 1870s, formed the northern boundary of the Cunard & Co. coal yards.

Feature 4

Feature 4 is a concrete pad which extends from 14.35 metres to 29.40 metres north along Trench 1. The 12 cm thick pad is supported at its southern and northern extremities by concrete footing

walls (Features 2 and 5). The pad was poured directly on a thin, level surface of black coal ash and clinkers which may have been intentionally deposited to smooth out the underlying layer of masonry rubble and coarse gravel. Unlike the concrete pad (Feature 1) exposed at the very southern end of the trench, this pad was easily removed by the back-hoe during the course of excavation, providing the opportunity to investigate underlying features and deposits.

As indicated previously, the concrete slab is a shop floor within the mid-twentieth century commercial complex which operated at 260 to 264 Upper Water Street. Also associated with the complex were Features 1, 2 and 5.

Feature 5

Feature 5 is an east-west oriented concrete footing wall which supported Feature 4, the concrete floor slab discussed above. Feature 5 is the northern counterpart to the concrete footing wall identified as Feature 2. Like Feature 2, this footing wall also reflects two part construction. The eastern section of the wall is 92 cm (3 feet) in width and was buried approximately 45 cm BS (3.62 MASL). The western section of the wall narrows to 61 cm (2 feet) in width and reflects a minor (<10 cm) increase in surface elevation. The juncture of the two sections of concrete footing wall correspond very closely with similar characteristics noted in Feature 2. Excavation of the trench exposed the footing wall to a depth of 112 cm BS. Due to the limited depth of the overall excavation, the base of the footing wall was not exposed. Examination of the trench profile revealed unconsolidated fill to the south of the footing wall and a narrow builders' trench (maximum width of 27 cm) excavated in sterile subsoil to the north. The builders' trench was backfilled with redeposited subsoil. No artifacts were recovered in association with Feature 5.

The wall crosses Trench 1 between 28.48 metres and 29.40 metres north. The position of the wall relative to other features identified on the 1951 Fire Insurance Plan roughly corresponds with the north wall and boundary of the Pilkington Brothers complex.

Features 6, 7 & 8

Between approximately 34 metres and 38.7 metres north, the back-hoe exposed a complex mix of ironstone foundation walls and other architectural features (*Plate 7; Figure 13*). For ease of description and interpretation, the features (Features 6, 7 & 8) will be addressed together.

The complex of features was initially observed when the back-hoe exposed an ironstone foundation wall (Feature 6) running east-west across the trench (37.53 to 38.25 metres north). The exposed section of wall (Feature 6) is 71 cm wide and made up of 7 courses of ironstone (87 cm) laid in mortar. The bottom of the wall was not exposed. The wall was built within a builders' trench excavated into undisturbed subsoil. The trench extends approximately 48 cm south of the wall itself and was backfilled with rubble and redeposited subsoil.

Close examination of the trench's eastern profile, revealed that Feature 6 was directly associated with two north-south oriented walls which aligned almost perfectly with the eastern edge of Trench 1. At the eastern edge of the excavation trench, the wall (Feature 6) turns abruptly north at right angles, creating a 45 cm long section of well constructed ironstone wall (Feature 8). The northern edge of the wall abuts another wall (Feature 10) which will be discussed in the following section. This short section of wall extends from just 10 cm BS (4.33 MASL) to a depth of over 130 cm BS. The full depth of the foundation is not known since the bottom of the wall was not exposed during the assessment. Examination of the corner formed by the two walls (Features 6 & 8) clearly revealed the integrated construction, suggesting that the walls were built at the same time.

Extending south from Feature 6 for a distance of approximately 3.41 metres (37.45 metres to 34.04 metres north) was another ironstone wall (Feature 7). This southern extension consisted of two to three courses of dry-laid angular ironstone and rounded field stone built directly on undisturbed subsoil. It was noted that the wall abutted Feature 6 rather than being interlocked in construction. The surface of Feature 7, lying approximately 16 cm BS (3.90 MASL), was surmounted by a 3 cm to 5 cm thick layer of mortar.

Features 6, 7 and 8 are interpreted as components of a single structure. Feature 8 is interpreted as the northwest corner of a masonry structure which faced onto Upper Water Street. Feature 6 is believed to represent a contemporary extension built onto the rear of the structure. Feature 7 is interpreted as an interior footing wall needed to support a wooden sill joining the front and rear sections of the structure.

Initial examination of the late nineteenth and twentieth century Fire Insurance Plans suggests that Features 6, 7 and 8 represent the 3 to 3½ story masonry structure located at 266 and 268 Upper Water Street. While construction and demolition dates have not yet been ascertained for the building, it is depicted on the earliest (1878) and most recent (1951) Fire Insurance Plans consulted. It is interesting to note that a number of the Fire Insurance Plans actually depict the jog or off-set alignment within the north wall of 268 Upper Water Street and the adjacent building which appears to have forced the change in alignment. On the few Fire Insurance Plans which identify building use, the structure is identified as either a hotel or a dwelling. In McAlpine's 1879 City Directory, 266 and 268 Upper Water Street are identified respectively as Thomas O'Donnell's tailor and press shop, and Donald McLeod's grocery.

Feature 9

Feature 9 is a 2.36 metre wide utility trench running east-west across Trench 1 between 42.0 metres and 44.36 metres north. The trench was backfilled with two distinct gravel deposits: the lower layer consists of coarse gravel; and, the upper layer consists of fine gravel. Buried partially

within the layer of fine gravel (30 cm to 50 cm BS) is a copper pipe housed in plastic weeping tile. Excavation of the utility trench destroyed a section of an ironstone wall (Feature 10) which ran north from the northwest corner of 266 & 268 Upper Water Street (Feature 8). See discussion of next cluster of features.

During a review of ADI Limited's *Geotechnical Investigation Proposed Sewage Treatment Plant Site Barrington, Cornwallis and Upper Water Streets, Halifax, Nova Scotia (Drawing I)*, it was noted that the sewer connection between 2155 Barrington (former site of Metro Turning Point) and the trunk line ran west to east across the property in the immediate vicinity of Feature 9. It is anticipated that the coarse gravel which extended below the bottom of Trench 1 marked the location of the buried sewer line.

Features 10 & 11

Like the previous cluster of features (Features 6, 7, & 8), Features 10 and 11 are interpreted as belonging to a single structure and as such, will be discussed together (*Figure 14*). As in the case of the previous structure, the structure evidenced by Features 10 and 11 was first recognized as the back-hoe exposed an ironstone wall (Feature 11) running across the width of Trench 1 (*Plate 8*). Manual clean up of the wall revealed the presence of an adjoining north-south oriented wall (Feature 10). The characteristics of Feature 10 were further illuminated during the clearing and documentation of Features 6 and 8, immediately to the south.

Feature 11 is made up of a short (49 cm) section of ironstone wall interrupted by a brick lined opening for a fireplace. The 60 cm to 65 cm thick ironstone wall was encountered at an average of 65 cm BS (3.80 MASL). The fireplace is made up of a brick lined fire-box and a flue. The framing masonry of the fireplace opening (represented only by the east cheek) flared south toward the interior of the structure, thus facilitating fire tending and directing the heat into the building rather than into the chimney. The fire-box was lined with brick. The cheek was lined with a double wall of bricks laid flat and end-to-end in a stretcher-stretcher pattern. The back of the fire-box was lined with a single thickness of bricks laid on edge length-wise to create a header-header pattern. The northern ends of the bricks were flush with the north face of the wall (Feature 11). The full width of the fireplace was not determined, but it exceeded the 63 cm width exposed in Trench 1. Extending north from the fireplace was the flue opening measuring 23 cm north-south by at least 53 cm east-west. The sides of the flue were angled to match the angle and alignment of the fireplace cheeks. The flue was framed by mortared slabs of ironstone making up the chimney.

Adjacent to the eastern baulk of Trench 1, the wall (Feature 11) turns at right angles to run south along the edge of the trench. This north-south oriented section of ironstone wall (Feature 10)

extends south from the north face of Feature 11 for a distance of approximately 8.45 metres (47.15 metres to 38.7 metres north). The upper surface of the wall, truncated during demolition, lay between 8 cm and 14 cm BS (4.40 and 4.34 MASL). The bottom of the wall was not exposed. As discussed above (Feature 9), a central portion of the wall was destroyed during the excavation of a utility trench (Feature 9). Approximately 3.30 metres south of the utility trench, the wall ends abruptly as it butts up against the northwest corner (Feature 8) of the structure at 268 Upper Water Street. The north-south alignment of Feature 10 is inset to the east of Feature 8 by approximately 10 cm. Construction of the wall (Feature 10) utilized a mix of materials, including ironstone, quartzite and brick. In general, construction of the northern section of Feature 10 appears to be somewhat rough when compared with the southern section of the wall and the adjacent sections of Features 8 and 6.

As currently understood, Features 10 and 11 represent the juncture between two buildings: one which fronted onto Upper Water Street; and the other which was located immediately to the west. Feature 10 may have been a common wall, shared between the two structures. Feature 11 with its fireplace would have served the rear or more westerly building.

A review of nineteenth and twentieth century Fire Insurance Plans indicate that the remains are those of a building complex that occupied 270 and 272 Upper Water Street. Facing onto the street was a 2½ story masonry structure. Adjoining it to the west was a 2 story masonry structure. When function was identified on the plans, the complex was variously identified as a tobacconist's shop (1889) and the European Hotel (1895 -1914). McAlpine's City Directory (1879) identifies 270 Upper Water as an unoccupied residence. 272 Upper Water housed Phillip Doyle's liquor business while 272 r(rear) Upper Water was the site of John A. Bennett's cordial manufactory.

Features 12, 13, 14 & 15

A fourth complex of features was identified within Trench 1 between approximately 50 metres and 60.99 metres north of the property boundary. Included within the complex are a concrete pad (Feature 12), interior (Feature 13) and exterior (Feature 15) ironstone walls and a brick baking oven (Feature 14) (**Plates 9 & 10; Figure 15**).

The first evidence of the structure was revealed when the back-hoe encountered the south end of the concrete pad (Feature 12). The pad filled the width of the trench (1.2 metres) and extended a total length of 3.62 metres (50.08 metres to 53.70 metres north). The smooth surface of the pad, situated approximately 40 cm BS (4.09 MASL), bears evidence of the black, green, reddish brown and white linoleum tiles which had at one time covered the entire surface. Inspection of the southern edge of the slab suggests that it rests on a roughly laid pad of ironstone rubble. However, it is possible that the 'rubble' is actually a badly impacted ironstone footing wall. Also

along the southern edge of the slab is an alignment of hollow flue tiles laid on a concrete footing. The purpose of this feature, set approximately 13 cm below the surface of the slab, is not known. The northern edge of the slab is framed by an east-west oriented cinder block wall which rests on a lower concrete slab, the surface of which is approximately 74 cm below (3.33 MASL) the upper slab. The lower slab extends north from the concrete wall a distance of approximately 63 cm beyond the cinder block wall. The wall survived demolition at a height of approximately 60 cm (three cinder blocks) or 13 cm below the surface of the upper slab. Exposed along the eastern baulk of the trench was a second section of the cinder block wall. It extended north to the limits of the lower slab where it terminated in a straight vertical face. The function of the lower slab and cinder block walls is not known.

Also extending north from the cinder block wall but along the west baulk of the trench was a substantial ironstone wall (Feature 13). The remains of the wall extend north some 6.5 metres (53.92 metres to 60.42 metres north) from the concrete slab to butt against an east-west oriented ironstone foundation wall (Feature 15). It appears that the southern end of the wall had been modified to accommodate the construction of the concrete slab and cinder block wall, while the northern end was built to butt up against an exterior wall (Feature 15). Due to its position relative to the edge of the trench, the width of the wall could not be determined. The wall survived demolition to a maximum height of 4.37 MASL (maximum exposed face of wall was 1.25 metres), just below the overlying ground surface. Trench excavation did not extend deep enough to expose the base of the wall. A portion of the wall between 56.20 metres and 60.52 north appears to have been partially demolished or modified to accommodate the construction of a brick and rubble feature designated as Feature 14 (*Plate 10*). As the fill material encountered within the overall basement feature was clearly modern (20th century), no artifacts were retained.

The brick and rubble feature designated as Feature 14 extended approximately 4.2 metres (56.20 metres to 60.40 metres north) along the western baulk of Trench 1. The feature appears to be made up of at least two components: the western portion of a brick arch which protrudes eastward into the trench (59.15 metres to 60.40 metres north); and, several sections of sloping brickwork which may represent a chimney (59.15 metres to 56.20 metres north). The brick arch rests on an ironstone footing wall (Feature 13) from which it curves eastward 16 cm in a rise of 41 cm. The arch survived demolition and subsequent grading of the site to an absolute elevation of 4.13 MASL or approximately 60 cm BS. The possible chimney feature is also built upon the modified surface of Feature 13 but inset to the west by approximately 45 cm from the western face of the footing wall (Feature 13). A horizontal cast iron pipe projecting eastward from the northern edge of the possible chimney feature aligns with a vertical section of pipe projecting from the un-excavated rubble fill which formed the bottom of the trench. It is assumed that the missing section of pipe (a right-angle elbow) had been accidentally removed by the back-hoe during excavation of the trench.

Feature 15, an east-west oriented wall located at the northern end of Features 13 and 14 is considered to represent the northern boundary of the structure which encompassed Features 12, 13, and 14. The well constructed ironstone wall is 59 cm wide (60.40 metres to 60.99 metres north) and is preserved to a height of approximately 4.25 MASL or approximately 50 cm BS.

Based on the general position and configuration of the structure when compared with late nineteenth and twentieth century Fire Insurance Plans, it would appear that Features 12, 13, 14 and 15 represent structural remains of the J.J. Scriven & Son's bakery complex which in 1878 occupied buildings at 274 and 276 Upper Water Street and 383 Barrington Street. McAlpine's 1879 City Directory carries an advertisement for J.J. Scriven's Halifax Steam Bakery at 274 Upper Water Street. Scriven's bakery continued to operate at that location until the mid 1890s when various buildings within the complex were labelled as 'ruins' and 'old and dilapidated' (1895). The main structure facing onto Upper Water Street (274 and 276 Upper Water Street) changed little through the late nineteenth and first half of the twentieth centuries, although the configuration of rear additions went through various modifications. The structure was still represented on the 1951 Fire Insurance Plan.

In the context of a steam bakery, the associated brick and masonry features (Feature 14) found within Trench 1 may represent an oven and associated chimney or possibly part of the steam plant which would have heated ovens located elsewhere in the complex.

Feature 16

The final feature encountered within Trench 1 was an east-west orientated ironstone wall built immediately adjacent to the north wall of the bakery (Feature 15). The wall is 54 cm in width (60.99 metres to 61.53 metres north) and buried by rubble and fill to a depth of approximately 115 cm BS (3.35 MASL). The basement of the associated building was backfilled upon demolition with masonry, brick and concrete rubble in a dark brown loam matrix. The artifacts included within the fill deposit were modern (mid to late twentieth century). No artifacts were retained.

The wall is interpreted as the southern wall of the structure which occupied 278 & 280 Upper Water Street. According to the available Fire Insurance Plans, the building served as a barbershop (280 Upper Water in 1890), the Allan House Hotel (1899 & 1914) and finally as shops for a plumber and a tinsmith (1951).

Trench 2

Trench 2, centrally situated within the study area, was oriented north-south, roughly parallel to Upper Water Street (**Figure 10**). The trench was positioned to assess the extent of disturbance caused by the unauthorized mechanical excavation of the area by a bottle collector in the spring

of 2002 (**Plate 11**). The trench followed the eastern edge of a north-south oriented masonry wall which protrudes slightly above the ground surface (**Plate 12**). The east face of the wall lies approximately 39.95 metres east of the Barrington Street curb. The 1.5 to 2.0 metre wide trench ran south from the northern edge of the disturbance for a distance of 5.0 metres. The maximum depth of excavation was 2.2 metres BS.

Examination of the soil profile exposed during excavation of the trench yielded evidence of two distinct fill deposits. The upper 1.5 metres of the profile was comprised of angular ironstone slabs and large blocks of brick masonry in a light brown sandy silt matrix. Initial examination of the artifacts recovered from this deposit appear to reflect a mid to late nineteenth century date range. Underlying this deposit was another layer of demolition rubble including masonry, brick and wood imbedded in a dark brown sandy loam matrix. Extending to the full depth of excavation (2.2 metres BS), the deposit yielded artifacts which dated to the mid twentieth century. The apparent reverse stratigraphy suggested by the older material recovered from the upper demolition layer points to the complexity of demolition, deposition and general disturbance on an intensively occupied urban site. From the compact nature of the fill deposits excavated in Trench 2, it would appear that the destructive impacts of the rogue excavator in this specific area of the property were limited to a shallow scaping of the surface.

Feature 1

The north-south oriented ironstone wall which formed the western edge of the trench was the only feature encountered within Trench 2. The wall extends from just above grade (4.715 MASL to beyond the 2.2 metre depth of the trench (5.79 MASL).

Given its position within the property, the wall (Feature 1) should fall within the rear limits of the properties identified as 296 and 298 Upper Water Street. The late nineteenth and twentieth century Fire Insurance Plans indicate that the structure located at 296 and 298 Upper Water Street served as a dry goods store in 1889 and was gone by 1899. A decade later, the lot was redeveloped for light industrial use. For the next 50+ years, the property was the site of a general machine shop operated by several different proprietors. The association of the wall is not known but the use of ironstone for construction rather than cement, suggests a nineteenth century date.

Trench 3

Trench 3 was positioned slightly to the east of Trench 2 but on a skewed (northeast-southwest) orientation. Like Trench 2, the trench was intended to assess the impacts of illicit excavations on the site. The north end of the trench was situated approximately 3 metres east of Trench 2. The completed trench was 1.20 to 2.0 metres in width and 8 metres in length. The maximum depth reached was 1.8 metres BS (7.47 MASL).

Examination of the stratigraphy exposed along the edge of the trench indicated that the entire profile represented a single fill episode. The deposit consisted of demolition rubble including angular ironstone slabs and large pieces of brick masonry in a light brown sandy silt matrix. Examination of the artifact assemblage indicated that it contained a wide range of materials from the mid-nineteenth century to the present. This mix of materials is consistent with the relatively recent demolition of the machine shop complex.

Trench 4

Trench 4 was centrally situated within the study area, although closer to Upper Water Street than Barrington (***Plate 13; Figure 10***). The trench, oriented east-west and thus perpendicular to Upper Water Street, followed the line of a ridge which ran east toward the shoreline. This area was selected for investigation in an effort to determine the origin for a concentration of early to mid nineteenth century artifacts observed scattered about the freshly disturbed ground surface. The eastern end of the trench was situated approximately 15.25 metres west of Upper Water Street (inside face of curb) and 68.0 metres south of Cornwallis. The trench extended 14.0 metres west at an average width of 1.5 metres and a maximum depth of 30 cm BS. Following the initial mechanical excavation of the trench, hand excavation was used to investigate the two dark soil features recognized in the tan subsoil (***Plate 14***). It should be noted that bedrock was exposed along the southern edge of the trench between 15.8 metres and 18.15 metres west of Upper Water Street, just below (< 20 cm) the ground surface (approximately 6.13 MASL).

Feature 1

Feature 1 is a squarish area of dark brown to black organic silt exposed along the north face of the trench between 17.90 metres and 21.20 metres west of Upper Water Street. Within the silt matrix were pieces of ironstone rubble and an abundance of nineteenth century domestic artifacts. The presence of a few examples of mid-to-late twentieth century artifacts indicates a degree of disturbance in what is otherwise a nineteenth century context. It is believed that the surface of this feature was impacted in the spring of 2002 by unauthorized mechanical excavation, as soil was scraped from this area to backfill and conceal the illegal excavation.

Feature 2

Feature 2 is an irregularly shaped depression or pit filled with dark brown to black silt with inclusions of ash, bricks and an abundance of early to late nineteenth century domestic artifacts. Portions of the feature extend across the full width of the trench. Along the northern edge, the feature extends from 23.45 metres and 28.15 metres west of Upper Water Street. Along the southern edge, the feature extends between 24.45 metres and 25.95 metres west. The presence of a few examples of mid-to-late twentieth century artifacts suggest that this feature was also impacted by the illegal excavation conducted on site in the spring of 2002.

Features 1 and 2 are both interpreted as privy pits associated with structures fronting onto Upper Water Street. Only the upper level of the features were investigated during the course of the assessment. From the general position of the features, they would appear to fall within the rear yard of the property designated alternatively as 292 and 294 or 294 and 296 Upper Water Street. The available Fire Insurance Plans indicate that the same building was on the property between 1879 and 1951 and served as a hardware store (1889), a variety store (1895 & 1899), part of the Victoria Hotel (1914) and as a residence (1951).

Trench 5

Trench 5 is a north-south oriented trench extending south from the middle of Trench 4 toward the northern end of Trench 1 (*Plate 15; Figure 10*). Lying roughly parallel to Upper Water Street, Trench 5 is approximately 20.15 metres west of the inner face of the curb of Upper Water Street. The trench was positioned to establish the southern limit of the soil features and artifact scatter evident in Trench 4 and to extend test excavation toward the northern end of Trench 1. The trench ran approximately 12 metres south from Trench 4 at an average width of 1.1 metres. The northern $\frac{3}{4}$ of the trench simply scraped the surface to expose undisturbed sterile subsoil, the southern flank of the ridge followed by Trench 4. In the southern $\frac{1}{4}$ of the trench, excavation exposed structural remains and modern fill deposits within former basement cavities.

Feature 1

Feature 1 is a 90 cm wide ironstone wall running east-west across the trench between 9.4 metres to 10.3 metres south of Trench 4. The wall consists of a 60 cm wide masonry wall set on a footing which extends a further 30 cm south of the wall. It is unlikely that the footing extends beyond the wall to the north, since the wall appears to have been built directly abutting an un-excavated embankment of undisturbed subsoil. To the south, the footing and wall are overlain by a thick deposit of ash fill containing an abundance of 1950s era artifacts. No material was retained.

Feature 2

Feature 2 is a 52 cm wide ironstone wall running east-west across Trench 5 between 11.13 metres and 11.65 metres south of Trench 4. The wall is overlain by the same deposit of ash fill which overlies Feature 1.

Given the position of the ironstone walls relative to other fixed features on the property, it would appear that they represent structures along the boundary between lots 290 (Feature 2) and 292 (Feature 1) Upper Water Street. While there is some confusion in the numbering system along this particular section of Upper Water Street, the late nineteenth and twentieth century Fire Insurance Plans indicate the structures at 290 and 292 Upper Water served a variety of functions including a saloon and variety store (1895 & 1899), a hotel and residence (1911), a hotel (1914) and a private residence (1951) respectively.

Trench 6

Trench 6 lay in the northwest quadrant of the study area, running roughly parallel to Cornwallis Street (**Figure 10**). The trench was positioned to cross-section Cornwallis Lane and assess the archaeological potential of the yard areas behind the structures facing onto Cornwallis Street (**Plate 16**). The 24 metre long trench was situated approximately 28.0 metres south of Cornwallis Street (measured from the inside face of the curb). Excavation commenced on the east side of Cornwallis Lane and extended westward to stop 10 metres short of the Barrington Street curb. The 1.10 metre to 1.30 metre wide trench was excavated to sterile subsoil in all but the very ends of the trench. Subsoil was encountered at depths ranging from 55 cm to 90 cm BS (9.17 MASL and 9.71 MASL). At the eastern end of the trench, the sterile subsoil continued to slope steadily down toward the harbour while the surface deposits had been built up to level and extend the ground surface in the area of Cornwallis Lane. Immediately east of the trench and the alignment of Cornwallis Lane, the ground surface dropped dramatically (approximately 3 metres) to level off again to form the northeast quadrant of the property. At the western end of the trench, the level of sterile subsoil again dropped dramatically, this time as a result of excavation for a house foundation built along Barrington Street. No remains of the foundation were encountered.

Throughout the length of the trench, ill-defined pockets of domestic refuse were encountered during trenching but attempts to identify discrete privy or refuse pit features were unsuccessful. It appears that the trench just skirted the edge of various features and that the actual features were located somewhat beyond the bounds of the trench. The two distinct features that were identified related to Cornwallis Lane (Feature 1) and a more recent disturbance (Feature 2).

Feature 1

Feature 1 consists of successive layers of fill material laid down to create a level surface for Cornwallis Lane. These historic surfaces were evident in the trench profile between 32.60 metres and 29.40 metres east of Barrington Street. The sequence of surfacing materials starting with the lowest/earliest overlying sterile subsoil followed by their average thickness was as follows: dark gray sandy silt (8 cm); tan clay (8 cm); purplish cinder (8 cm); and, tan clay with ironstone inclusions (20 cm). The upper road surface was obscured by a 20 cm layer of black loam with cinder inclusions. Along the eastern edge of Cornwallis Lane, the road deposits become thin and drop in elevation as they follow the underlying slope. However, the western edge of Cornwallis Lane has been destroyed by the recent excavation of a trench or pit (Feature 2).

Feature 2

Feature 2 was a back-filled pit or trench approximately 1.6 metres wide (28.0 metres to 29.56 metres east of Barrington Street) with almost vertical sides. Examination of the trench profile

indicates that the feature was excavated from the current ground surface to sterile subsoil, a depth of approximately 60 cm. The complete absence of sod development at the surface of this feature indicates that excavation and back-filling of the pit occurred very recently. It is possible that the pit is the product of an unauthorized excavation conducted by a bottle collector. Similar pits, open and back-filled, are evident within the wooded sections of the property.

A search of available mapping for the property lead to the closer examination of detailed (1:10 000 scale) mapping of Halifax produced in the mid-1980s. The mapping indicated that Trench 6 fell within the alignment of a driveway which provided access to one of the last remaining structures along this section of Barrington Street. Ongoing confusion over the street numbers makes it difficult to use a single civic address for the property. In 1878 the structure is identified as 427 & 429 Barrington, in 1889 through 1895 it is identified simply as 427, in 1899 it is 759 Barrington (reflecting an overall reallocation of civic addresses along Barrington), in 1914 it was identified as 429 Barrington and in 1951 it was 759 Barrington. To further complicate the situation, none of these numbers fit with the current numbering system along Barrington Street. A review of available Fire Insurance Plans indicates that throughout its history, the property maintained clear access through the rear yard to Cornwallis Lane. The presence of a driveway/parking lot at the rear of the structure explains the presence of a 10 cm thick gravel layer just below the sod through much of the profile and may also explain the absence of significant structural and pit features.

Trench 7

Trench 7 lay in the northeast quadrant of the property, running parallel to Upper Water Street (***Plate 17; Figure 10***). The trench was excavated to assess archaeological potential within the open grassy area near the intersection of Cornwallis and Upper Water streets. Positioned 17 metres west of Upper Water Street (inside face of curb), the trench ran between 52.3 metres and 32.3 metres south from the original alignment of Cornwallis Street. The trench averaged 110 cm in width and ranged in depth between 60 and 150 cm.

Excavation of the trench yielded evidence of extensive disturbance in the northeast quadrant of the property (***Plate 18***). The stratigraphy as revealed in the Trench 7 profile was relatively simple with a dark brown loam fill material extending from sod to undisturbed sterile subsoil. The fill material contained a mix of mid-to-late twentieth century garbage which included plastic grocery bags and Styrofoam coffee cups. The fill material also included some construction rubble, but in relatively low concentrations and primarily in the northern end of the trench. Sterile subsoil was exposed throughout most of the trench at depths ranging from 100 cm BS to just below the sod. Bedrock was encountered at the south end of the trench at a depth of 109 cm BS (3.94 MASL) and approximately 38.5 metres south of Cornwallis at 173 cm BS (4.47 MASL).

Feature 1

Feature 1 is an east-west oriented ironstone pad or wall capped with mortar found lying between 46.0 metres and 48.2 metres south of Cornwallis. The 2.20 metres wide feature was encountered at a depth of approximately 140 cm BS (4.01 MASL). Examination of the west profile of Trench 7 indicated that the pad or wall was built within a builders' trench excavated into undisturbed subsoil. No artifacts were recovered in association with the feature.

Given the position of the masonry wall relative to Cornwallis Street, it would appear that the wall falls in close proximity to the boundary between 302 and 304 Upper Water Street. The late nineteenth and twentieth century Fire Insurance Plans indicate the presence of a structure to the rear of 302 Upper Water Street between 1878 and 1951. Plans dated 1889, 1895, 1899 and 1911 identify the building as a bakery complete with ovens. By 1951, it is identified as a residence.

Trench 8

Trench 8 is also located in the northeast quadrant of the property, lying parallel to Upper Water Street and Trench 7 (**Plate 18; Figure 10**). Like Trench 7, Trench 8 was excavated to assess archaeological potential within the open grassy area near the intersection of Cornwallis and Upper Water streets. Positioned 23.0 metres west of Upper Water Street (inside face of curb), the trench ran between 52.3 metres and 32.3 metres south from the original alignment of Cornwallis Street. The trench averaged 110 cm in width and ranged in depth between 60 and 240 cm.

Trench 8 stratigraphy is similar to that identified in the Trench 7 profile discussed previously. Immediately under the sod was a single deposit of dark brown loam fill material extending to undisturbed sterile subsoil. The fill material contained the same mix of mid-to-late twentieth century garbage which included plastic grocery bags and Styrofoam coffee cups. Building rubble was present in somewhat higher concentrations. Sterile subsoil was exposed throughout most of the trench at depths ranging from 130 cm BS to just below the sod (38.50 metres south). Bedrock was encountered approximately 40.5 metres south of Cornwallis at 140 cm BS (4.80 MASL). There are a number of parallels between the stratigraphy of Trench 7 and that of Trench 8. Bedrock was exposed in both trenches at approximately 38.5 to 40.5 metres south of Cornwallis. In both trenches, the sterile subsoil rises in elevation to lie just below the sod in the area of the bedrock. Just north of the bedrock, the sterile subsoil drops away dramatically and the dark brown loam deposit extends down to more than 150 cm BS. Finally, the ironstone wall (Feature 1) evident in Trench 7 also has its counterpart in Trench 8 (Feature 2).

Feature 1

Feature 1 is a concrete wall which just protrudes into the trench from the west between 47.9 metres and 48.5 metres south of Cornwallis. The portion of wall exposed in the trench runs from the northeast to southwest for a distance of approximately 50 cm, then forms a 45° angle to run

directly west for an undetermined distance. Both the wing and the main body of the wall are 20 cm in thickness. The 'top' of the wall was encountered at approximately 40 cm BS (501 MASL) and extended down more than a metre before disappearing into the un-excavated subsoil. No artifacts were recovered in association with Feature 1.

Feature 2

Feature 2 is a 100 cm wide alignment of ironstone slabs which runs east from the eastern end of Feature 1 between 47.2 metres and 48.2 metres south of Cornwallis. The feature was encountered at the bottom of the trench, approximately 140 cm BS (4.08 MASL). As only the tops of the slabs were exposed, it is not known whether the stones are mortared together or dry laid. The feature follows the alignment of Feature 1 in Trench 7, located 6 metres to the east.

The locations of Features 1 and 2 correspond with the masonry wall (Feature 1) identified in Trench 7 as falling in the general area of the boundary between the properties at 302 and 304 Upper Water Street. The late nineteenth and twentieth century Fire Insurance Plans indicate the presence of a structure to the rear of 302 Upper Water Street between 1878 and 1951. Plans dated 1889, 1895, 1899 and 1911 identify the building as a bakery complete with ovens. By 1951, it is identified as a residence.

5.0 CONCLUSIONS AND RECOMMENDATIONS

In preparation for the redevelopment of the proposed Halifax STP site, CRM Group was retained by HHSP/HRM to conduct an archaeological impact assessment of the property. The impact assessment identified significant archaeological resources relating to the early to mid-nineteenth century development and occupation of lots within the study area. In order to summarize the results of the assessment, the property will be discussed in terms of quadrants.

Southeast Quadrant

The southeast quadrant fronts onto Upper Water Street and extends north from the southern boundary of the study area to include the southern end of Trench 5, a distance of approximately 90 metres. The western boundary is more difficult to define, as the property boundaries between the Upper Water Street lots and the Barrington Street lots were irregular. In addition, the potential degree of disturbance increases as one moves west across the property. For discussion purposes, therefore, the boundary will be set at 30 metres west of Upper Water Street at the southern and northern ends of the quadrant.

Within the southeast quadrant, excavation of Trenches 1 and 5 revealed a series of nineteenth and twentieth century features which relate to the residential, commercial and light industrial development along Upper Water Street. Further excavation would certainly provide greater access to those resources and facilitate broader characterization of life in early Halifax. Although no eighteenth century features were identified during the assessment, the presence of various buried soil layers along the length of the trench, suggests that such resources could still lay buried within this quadrant of the property.

Southwest Quadrant

The southwest quadrant fronts onto Barrington Street and extends approximately 90 metres north from the NSPI property boundary. It is bounded on the east by the southeast quadrant. This creates an area that is roughly 20 metres wide along the southern boundary and 30 metres wide at the northern boundary.

No trenches were excavated in southwest quadrant due to the significant slope that dominates the entire area and the low expectation of finding intact archaeological remains. The area has been heavily impacted by twentieth century development (construction of the former Metro Turning Point site and the former Irving service station) and further impacted by the 2001 demolition of the remaining buildings and grading of the slope to stabilize the embankment.

Northeast Quadrant

The northeast quadrant fronts onto Upper Water Street and extends north from the 90 metre mark to the old alignment of Cornwallis Street. The western boundary is tentatively set as the alignment of Cornwallis Lane, which aligns well with the boundary between the southeast and southwest quadrants. The old alignment of Cornwallis Street is utilized to accommodate the ultimate realignment of Upper Water Street and the Upper Water/Cornwallis intersection.

During the assessment, archaeological potential was evaluated through the excavation of Trenches 2, 3, 4, 5, 7 and 8 (**Figure 10**). Trenches 2, 3, 7 and 8 revealed areas of extensive disturbance and recent demolition/deposition. Despite the disturbance and destruction, there are significant areas of archaeological integrity and high potential that have apparently survived the ravages of redevelopment and the curiosity of bottle collectors. Historical research indicates that various structures were located in this quadrant of the property during the eighteenth and early nineteenth centuries. In addition to the privy features identified immediately north of Trench 4, it is anticipated that area excavation would identify a number of intact features throughout the wooded section of the northeast quadrant.

Northwest Quadrant

The northwest quadrant is bounded by Barrington Street on the west and Cornwallis on the north. The quadrant extends roughly 85 metres south of Cornwallis and east to the alignment of Cornwallis Lane.

Assessment of the quadrant included the excavation of Trench 6 and the visual inspection of the ground surface for evidence of buried resources. Trench 6 yielded tentative evidence of pits and other features just outside of its alignment. Examination of the embankment running along the east side of Cornwallis Lane yielded evidence of numerous illicit test excavations undertaken by bottle collectors. The scattered artifacts that littered the surface in these areas point to a rich mix of early nineteenth century and later materials. It should be noted that a small number of eighteenth century ceramics (tin glazed earthenware, scratch-blue stoneware and Rhenish stoneware) have also been recovered which further point to the survival of eighteenth century resources on site. Finally, structural remains were identified within the wooded portion of the quadrant which warrant investigation and documentation prior to redevelopment of the property.

Recommendations

Based on the results of the archaeological impact assessment, CRM Group makes the following recommendations:

1. Given that a variety of nineteenth century structures were encountered during the excavation of Trenches 1 and 5, and that the presence of buried soil horizons held the

- potential for yielding even earlier remains, it is recommended that the quadrant be subjected to a major program of archaeological excavation in order to expose, document and interpret the archaeological record.
2. Given that the southwest quadrant has been extensively modified by twentieth century development and the recent demolition of several buildings, it is recommended that no active mitigation be undertaken within the quadrant. Recognizing the potential for encountering deeply buried deposits even within the context of the southwest quadrant, it is recommended that the area be monitored by a qualified archaeologist when construction related excavation takes place.
 3. Given that excavation within the northeast quadrant of the property yielded evidence of both intact resources and heavy disturbance, it is recommended that a program of archaeological mitigation be designed to address those areas of potential, specifically the area of the ridge (Trench 4) and northward within the wooded slope adjoining Cornwallis Lane. Recognizing the potential for encountering deeply buried deposits even in the context of the areas that have been heavily disturbed, it is recommended that all other areas be monitored by a qualified archaeologist when construction related excavation takes place.
 4. Given the archaeological resource potential evident from the investigation of Trench 6 and the examination of features and deposits observed on the ground surface, it is recommended that the northwest quadrant be subjected to a major program of archaeological excavation in order to expose, document and interpret the archaeological record.
 5. In the event that archaeological deposits or human remains are encountered during development anywhere on the property, all work in the associated area(s) should be halted and immediate contact should be made with the Nova Scotia Museum.

6.0 REFERENCES CITED

NRL = Natural Resources Library, Halifax
PANS = Public Archives of Nova Scotia, Halifax
PCLRC = Provincial Crown Lands Record Centre, Halifax

anonymous

c. 1800 Untitled map of Halifax Harbour. PANS.

1826 Chart of Part of the Coast of Nova Scotia from Documents in the Hydrographical Office of the Admiralty. On display at the Maritime Command Museum.

Belcher, C.

c. 1841 Plan of the City of Halifax, Nova Scotia. PANS.

Blaskowitz, Charles and Henry Castleman

1784 A Plan of the Peninsula upon which the Town of Halifax is Situated, Shewing the Harbour, the Naval-Yard, and the Several Works Constructed for Their Defence. As seen in *The Mapmaker's Eye: Nova Scotia through Early Maps* by Joan Dawson. Nimbus Publishing & The Nova Scotia Museum: Halifax, 1988: 87.

Church, Ambrose F.

1865 Topographical Township Map of Halifax County, Nova Scotia. A.F. Church & Co.: Halifax.

DesBarres, J.F.W.

1777 The Harbour of Halifax, 1777. From *Atlantic Neptune*. As seen in *The Mapmaker's Eye: Nova Scotia through Early Maps* by Joan Dawson. Nimbus Publishing & The Nova Scotia Museum: Halifax, 1988: 31.

Fuller, E.C.

c. 1851 Plan of the City of Halifax. As seen in *Downstream: An Historical Reflection of the Halifax Water Supply System, in Celebration of 50 Years of Stewardship by the Halifax Water Commission; 1945-1995*. Halifax Water Commission: Halifax.

Goad, Charles E.

- 1889 Halifax, Nova Scotia [1895 insurance plan revised to 1889]. Charles E. Goad: Montreal. PANS Reel 959, Sheets 13 and 14.
- 1895 Insurance Plan, City of Halifax, Nova Scotia, Survey May 1895. PANS Reel 959, Sheets 13 and 14.
- 1899 Insurance Plan, City of Halifax, Nova Scotia, Survey May 1895, Revised to March 1899. PANS Reel 959, Sheets 13 and 14.
- 1911 Insurance Plan, City of Halifax, Nova Scotia, Survey May 1895, Revised to October 1911. PANS Reel 959, Sheets 13 and 14.
- 1914 Insurance Plan of Halifax, Nova Scotia. PANS Reel 959, Sheets 13 and 14.

Harris, Moses

- 1749 A Plan of Chebucto Harbour with the Town of Hallefax, by Moses Harris Surveyor. As seen in *The Mapmaker's Eye: Nova Scotia through Early Maps* by Joan Dawson. Nimbus Publishing & The Nova Scotia Museum: Halifax, 1988: 113.
- 1750 A Plan of the Harbour of Chebucto and Town of Halifax, 1750. From *Gentleman's Magazine*. As seen in *The Mapmaker's Eye: Nova Scotia through Early Maps* by Joan Dawson. Nimbus Publishing & The Nova Scotia Museum: Halifax, 1988: 114.

Hopkins, H.W.

- 1878 City Atlas of Halifax, Nova Scotia. Provincial Surveying and Publishing Company: Halifax. PANS Reel 958, Sheet C.

Hutchinson, Luke

- 1863 *The Halifax, Nova Scotia Business Directory for 1863*. Luke Hutchinson: Halifax. PANS Reel 3367.

Jefferys, Thomas

- 1750 A Plan of Halifax Survey'd by M. Harris. As seen in *The Mapmaker's Eye: Nova Scotia through Early Maps* by Joan Dawson. Nimbus Publishing & The Nova Scotia Museum: Halifax, 1988: 26.

McAlpine, David

1869 *McAlpine's Nova Scotia Directory for 1868-69.* David McAlpine:
Halifax. PANS Reel 9676.

1879 *McAlpine's Halifax City Directory for 1878-79.* David McAlpine:
Halifax. PANS Reel 3398.

1889 *McAlpine's Halifax City Directory for 1888-89.* David McAlpine & Co.:
Halifax. PANS Reel 9708.

Pickings, H.B.

1918 City of Halifax Assessment Plan. PANS Reel 960, page 37.

Rocque, Jean

1750 Carte du Havre de Chibucto avec le Plan de la Ville de Halifax sur la
Coste de L'Accadia ou Nova Scotia, Latitude 44.31. On display at the
Maritime Command Museum.

Torbell, T.M.

1830 Plan of the North Suburbs, Town of Halifax. PANS Halifax Subdivision
Plan, File C.

Underwriters Survey Bureau Limited

1951 Insurance Plan of the City of Halifax, Nova Scotia. Plan dated November
1914, Revised to November 1951. PANS Reel 962, Sheets 13 and 14.

APPENDIX A

SITE PHOTOGRAPHS



PLATE 1: Overhead View of the Halifax STP Property. Looking Northeast.



PLATE 2: Mechanical Excavation of Trench 1. Looking North.



PLATE 3: Clearing of Loose Rubble in Trench 5. Looking South.



PLATE 4: Manual Excavation of Trench 4. Looking South.



PLATE 5: General View of Features Exposed in Trench 1. Looking North.



PLATE 6: Detail of Ironstone Drain (T-1/F-3) Crossing Trench 1. Looking West.



PLATE 7: Relationship of Masonry Walls (T1/F6, 7 & 8) in Central Section of Trench 1. Looking Southeast.



PLATE 8: Masonry Walls and Fireplace (T1/F10 & 11) Exposed in Trench 1. Looking West.



PLATE 9: General View of Features Related to Scriven & Son's Bakery (T1/F12, 13,14 & 15) within Trench 1. Looking North.



PLATE 10: Detail of Masonry Features Related to Scriven & Son's Bakery (T1/F13, 14 & 15) within Trench 1. Looking Northwest.



PLATE 11: Mechanical Excavation of Trench 2. Looking Northwest.



PLATE 12: Masonry Wall (T2/F1) Exposed along Western Edge of Trench 2. Looking Northwest.



PLATE 13: Manual Excavation of Features
Exposed in Trench 2.
Looking East.



PLATE 14: Dark Stains Indicating
the Presence of
Features (T4/F1 & 2) in
Trench 4.
Looking East.



PLATE 15: Excavation of Trench 5. Note Subsoil at Surface in North End of Trench. Looking South.



PLATE 16: Mechanical Excavation of Trench 6: Cornwallis Lane to Barrington Street. Looking West.



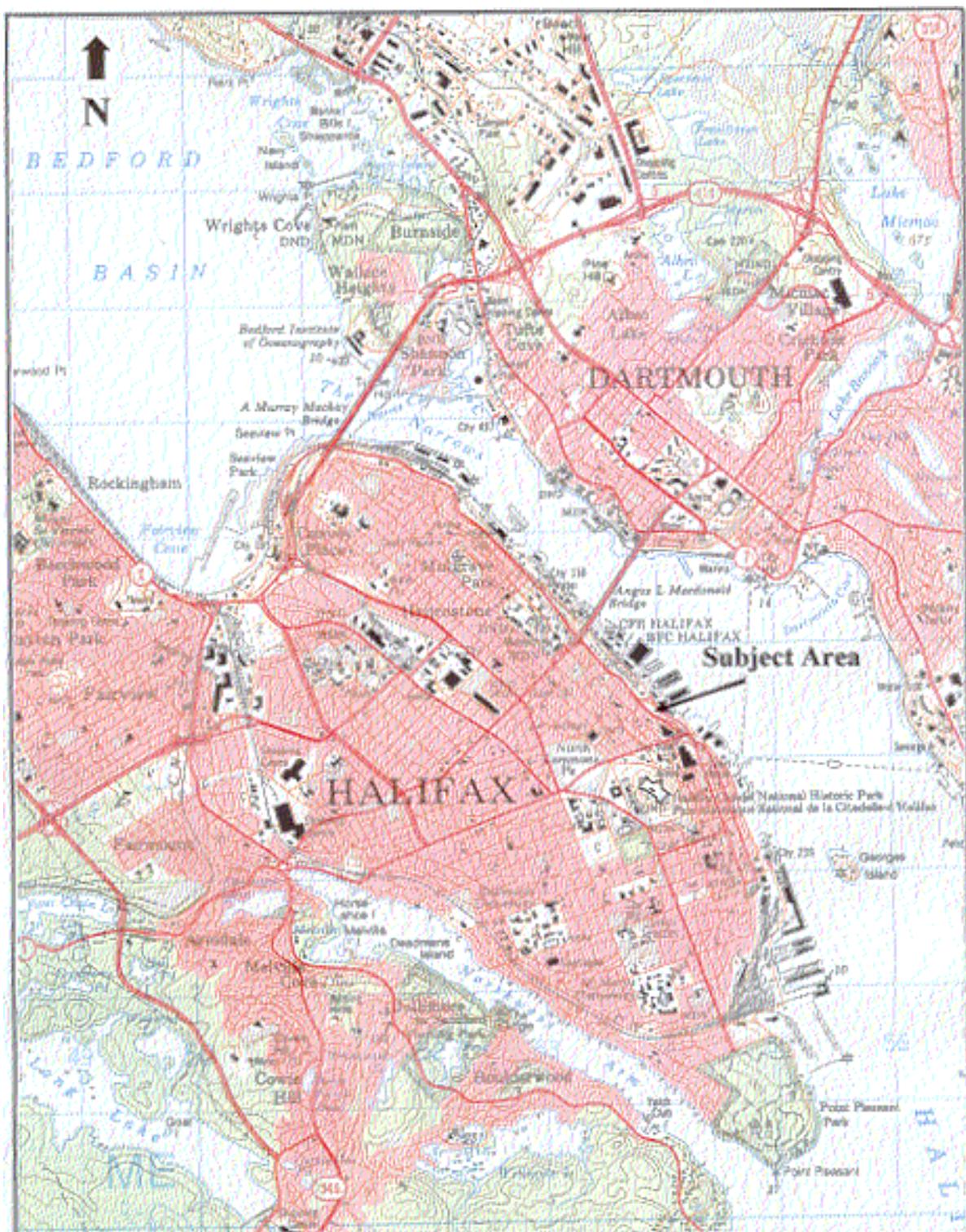
PLATE 17: Mechanical Excavation of Trench 7, NE Quadrant of Property.
Looking Southeast.



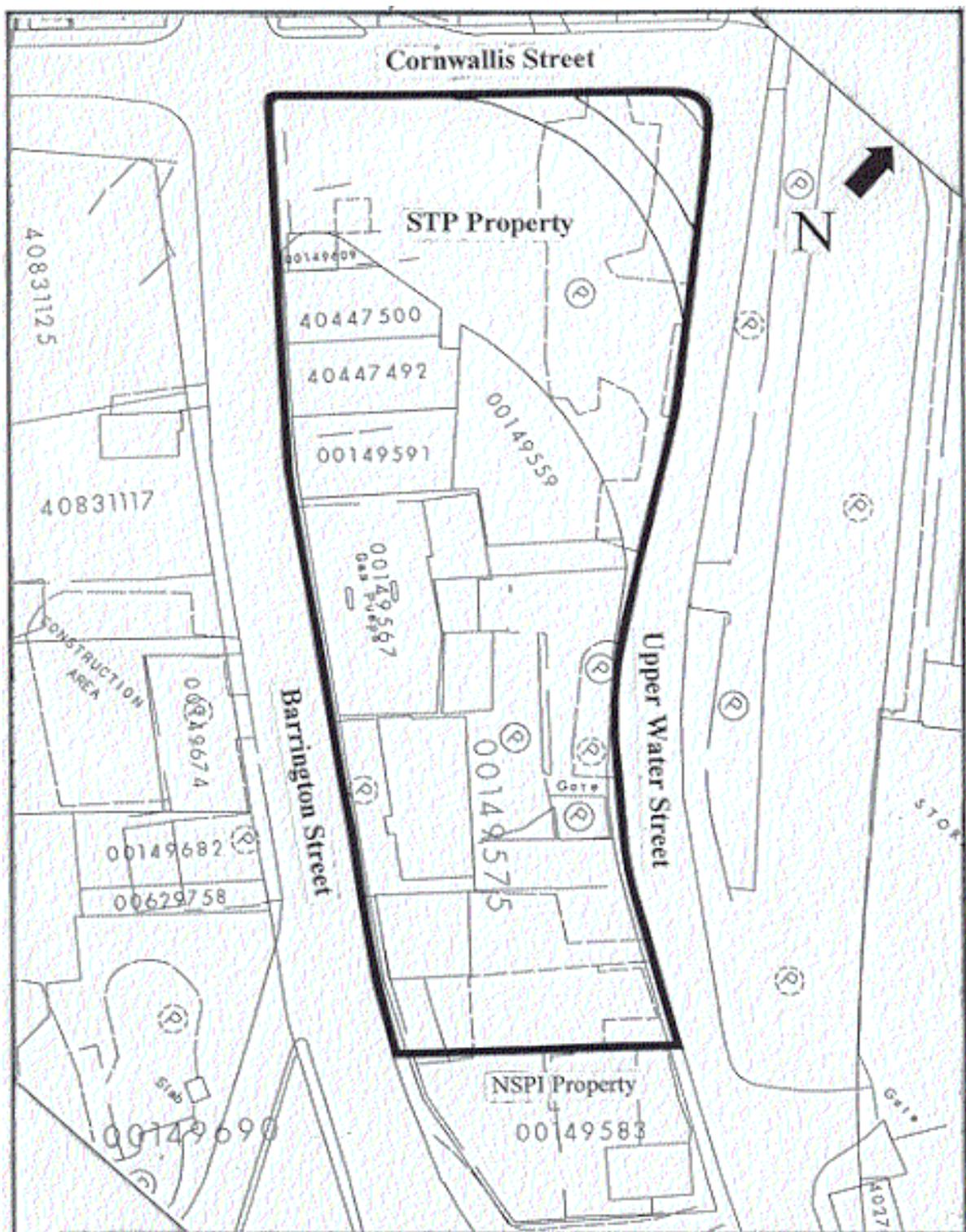
PLATE 18: Documentation of Trenches 7 and 8, NE Quadrant of Property.
Looking South.

APPENDIX B

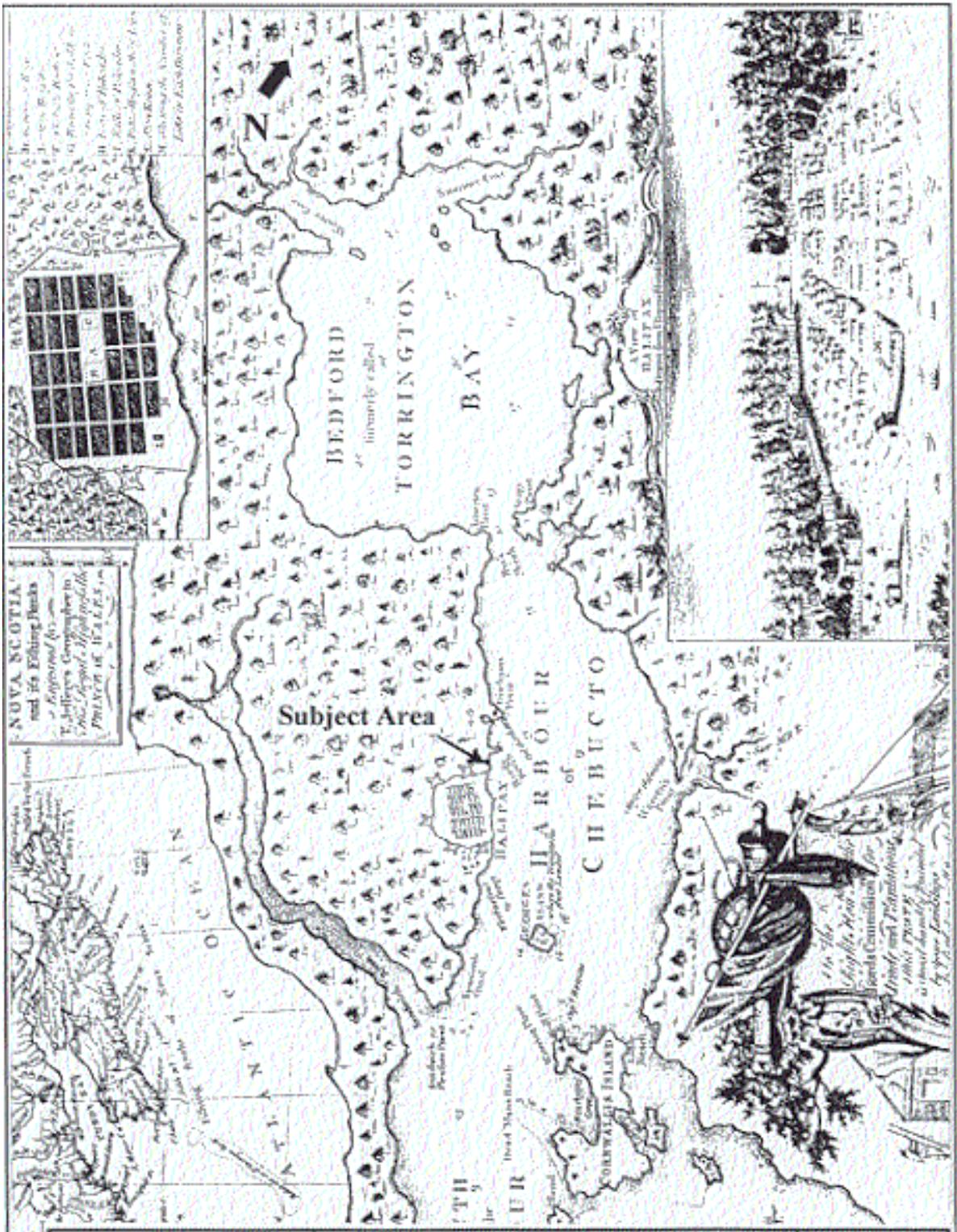
FIGURES



	<p>LOCATION OF STP PROPERTY</p>	<p><i>Figure 1</i></p>
	<p>ARCHAEOLOGICAL ASSESSMENT HALIFAX STP PROPERTY</p>	<p>July 2002</p>
	<p>HALIFAX REGIONAL MUNICIPALITY</p>	<p>Scale 1:50 000</p>



	<p>HALIFAX STP PROPERTY</p>	<p>Figure 2</p>
	<p>ARCHAEOLOGICAL ASSESSMENT HALIFAX STP PROPERTY HALIFAX REGIONAL MUNICIPALITY</p>	<p>July 2002</p>
		<p>Scale 1:1000</p>



	SUBJECT AREA IN 1750 (Jefferys)	Figure 3
	ARCHAEOLOGICAL ASSESSMENT HALIFAX STP PROPERTY HALIFAX REGIONAL MUNICIPALITY	July 2002 Not to scale



SUBJECT AREA IN 1777 (DesBarres)

Figure 4

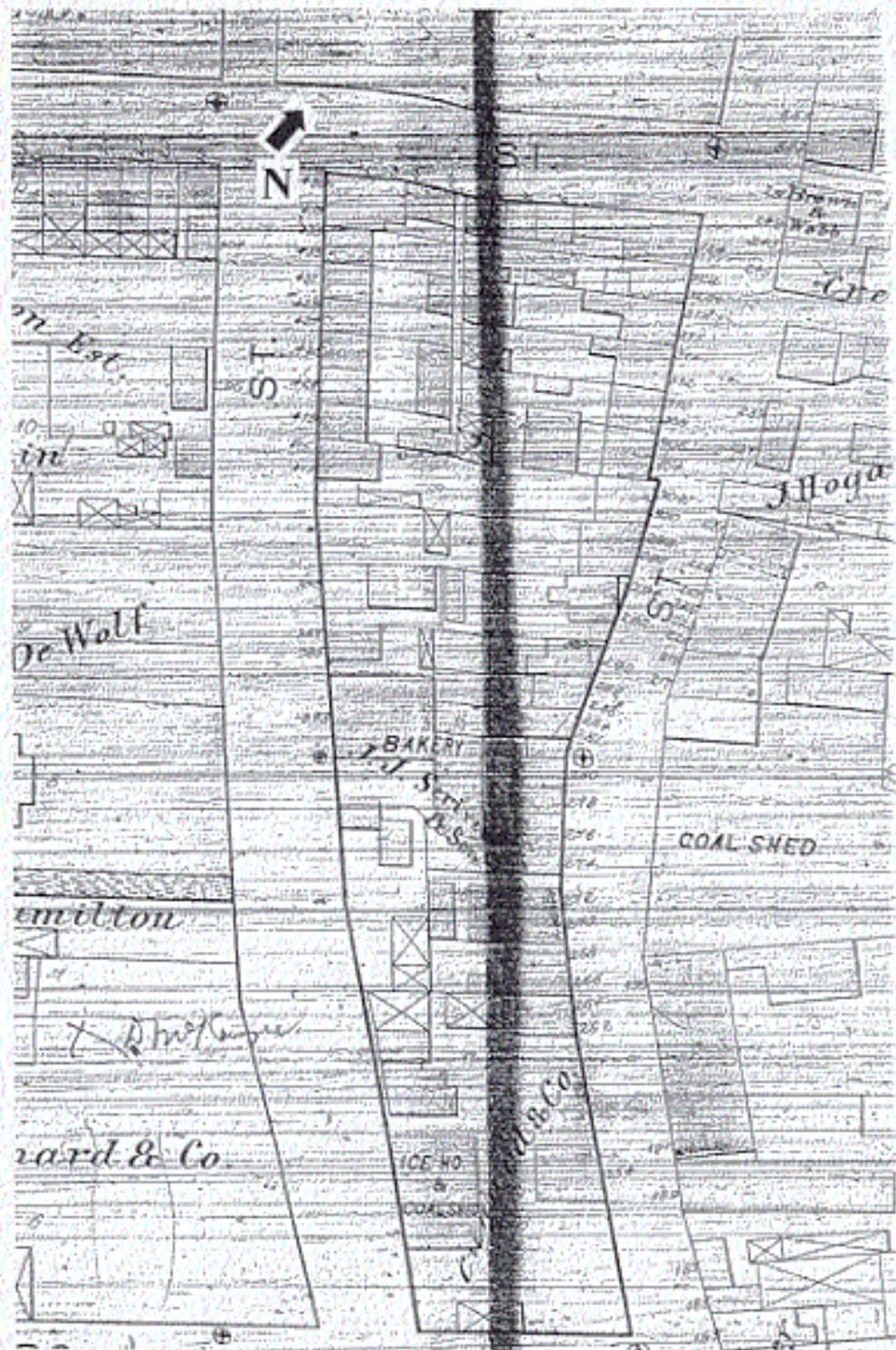
ARCHAEOLOGICAL ASSESSMENT
 HALIFAX STP PROPERTY
 HALIFAX REGIONAL MUNICIPALITY

July 2002

Not to
 scale



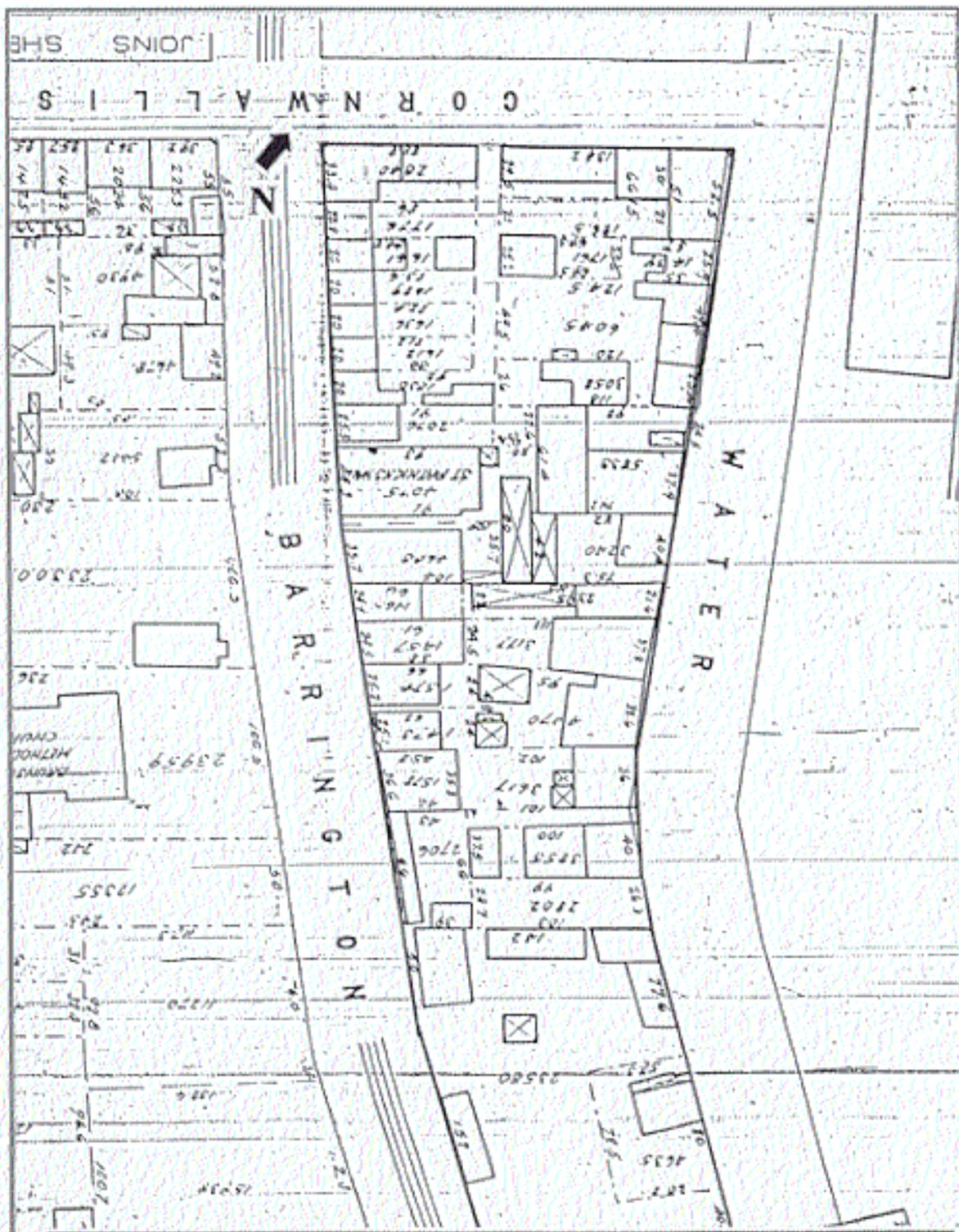
	<p>SUBJECT AREA IN 1865 (Church)</p>	<p>Figure 5</p>
	<p>ARCHAEOLOGICAL ASSESSMENT HALIFAX STP PROPERTY HALIFAX REGIONAL MUNICIPALITY</p>	<p>July 2002</p>
		<p>Not to scale</p>



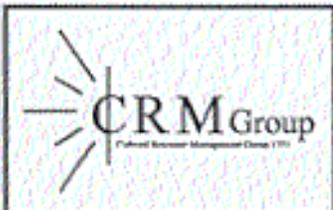
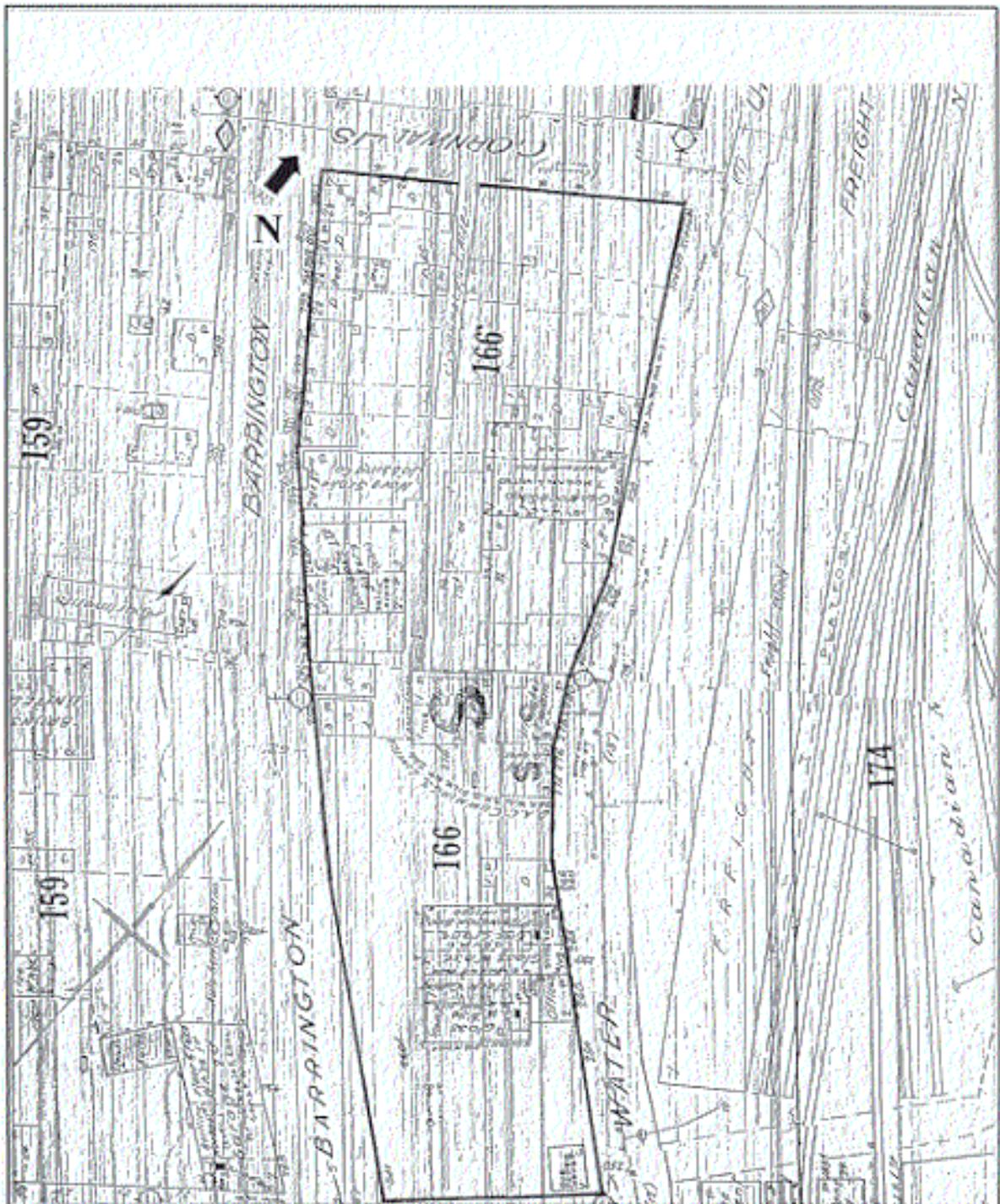
	SUBJECT AREA IN 1878 (Hopkins)	Figure 6
	ARCHAEOLOGICAL ASSESSMENT HALIFAX STP PROPERTY HALIFAX REGIONAL MUNICIPALITY	July 2002
		Not to scale



	<i>SUBJECT AREA IN 1879 (Ruger)</i>	<i>Figure 7</i>
	ARCHAEOLOGICAL ASSESSMENT HALIFAX STP PROPERTY HALIFAX REGIONAL MUNICIPALITY	<i>July 2002</i>
		<i>Not to scale</i>



	SUBJECT AREA IN 1918 (Pickings)	Figure 8
	ARCHAEOLOGICAL ASSESSMENT HALIFAX STP PROPERTY HALIFAX REGIONAL MUNICIPALITY	July 2002
		Not to scale



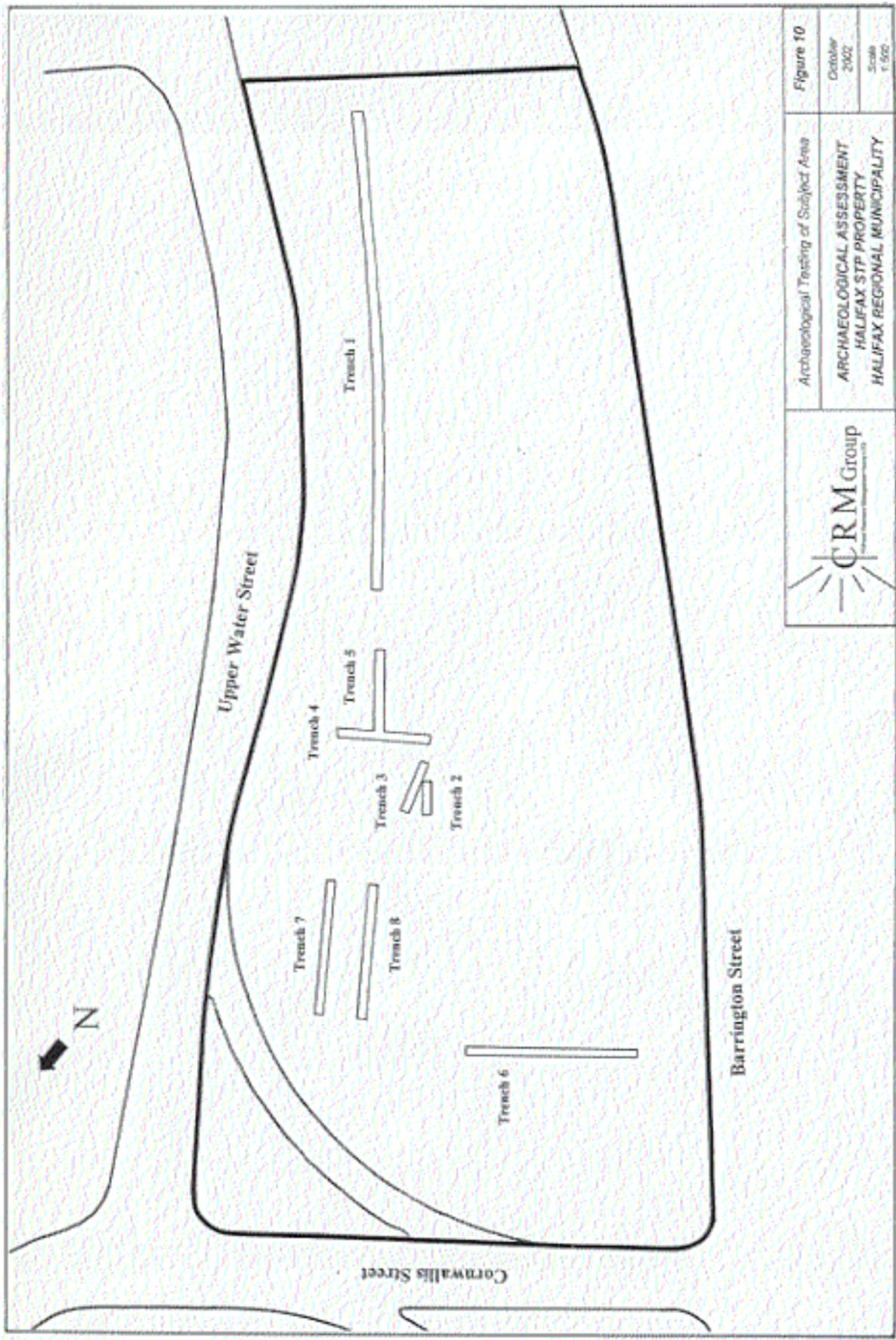
SUBJECT AREA IN 1951 (USBL)

Figure 9

ARCHAEOLOGICAL ASSESSMENT
 HALIFAX STP PROPERTY
 HALIFAX REGIONAL MUNICIPALITY

July 2002

Not to scale



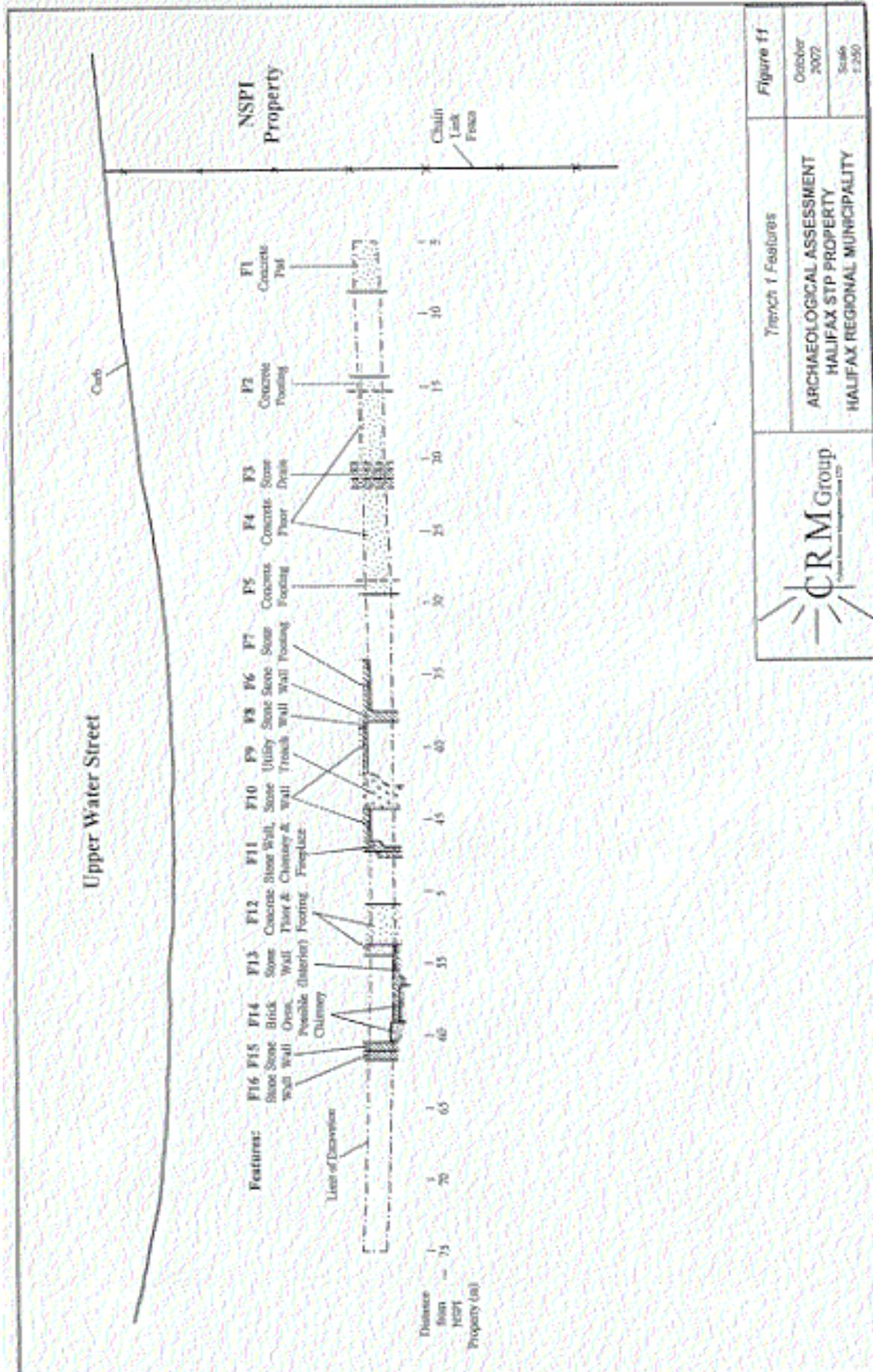


Figure 11

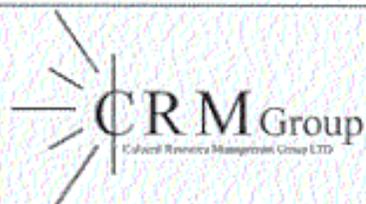
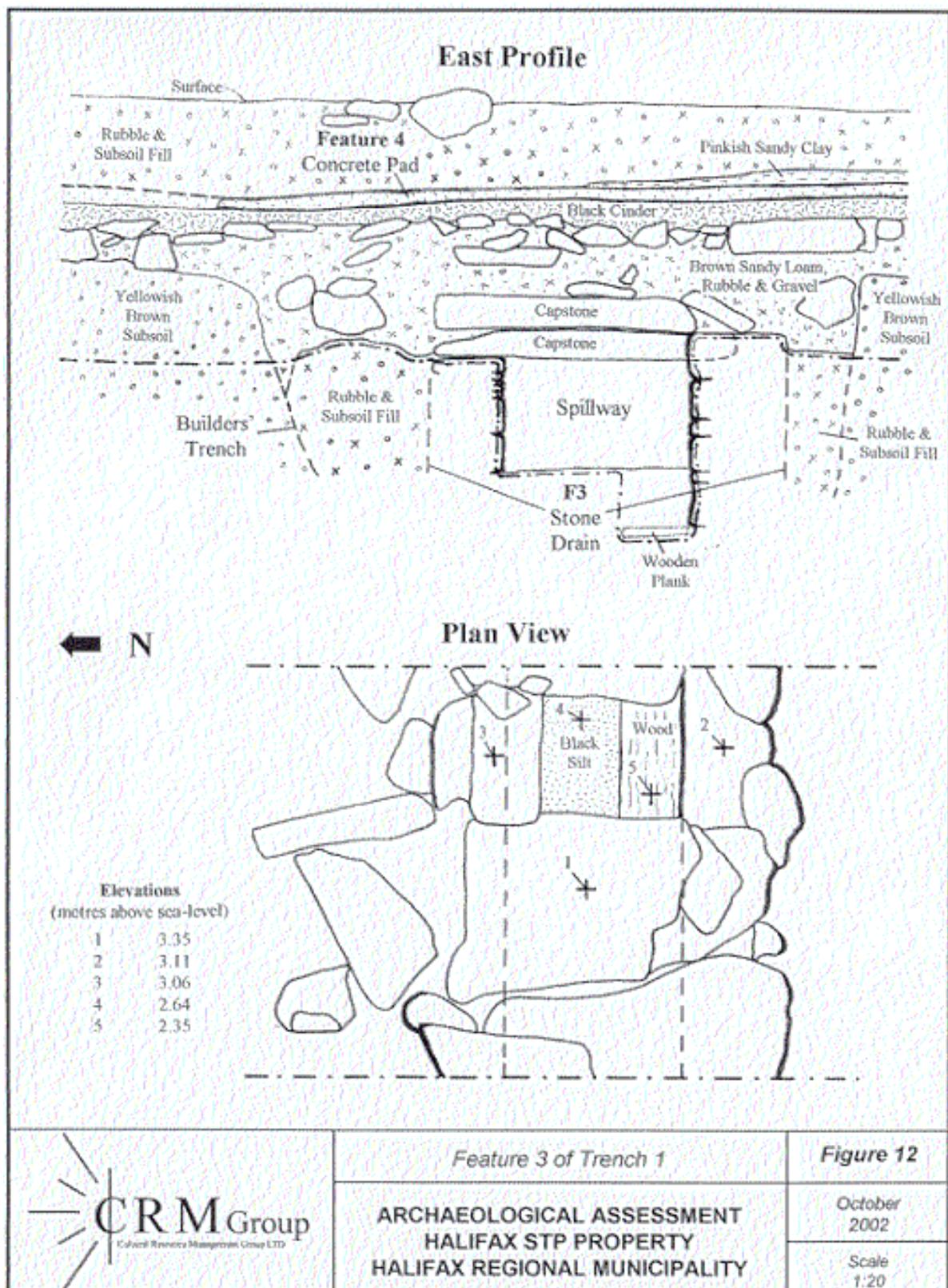
Trench 1 Features

ARCHAEOLOGICAL ASSESSMENT
HALIFAX STP PROPERTY
HALIFAX REGIONAL MUNICIPALITY

CRM Group
CONSULTING & RESEARCH INC.

October 2002

Scale 1:250



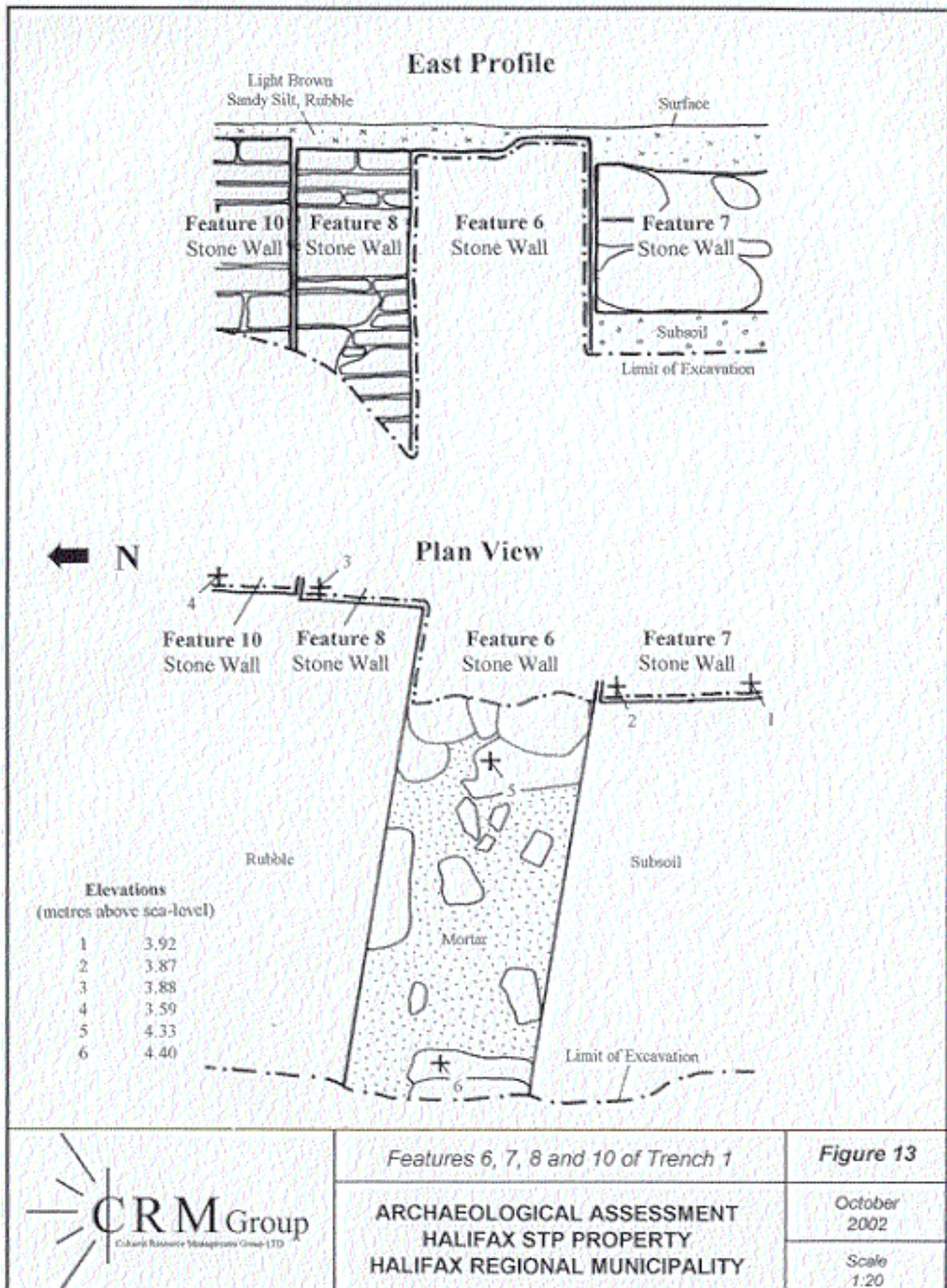
Feature 3 of Trench 1

Figure 12

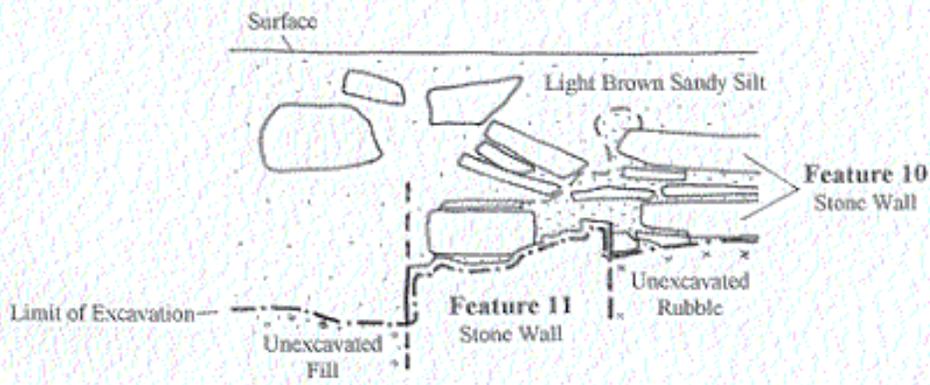
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HALIFAX STP PROPERTY
HALIFAX REGIONAL MUNICIPALITY**

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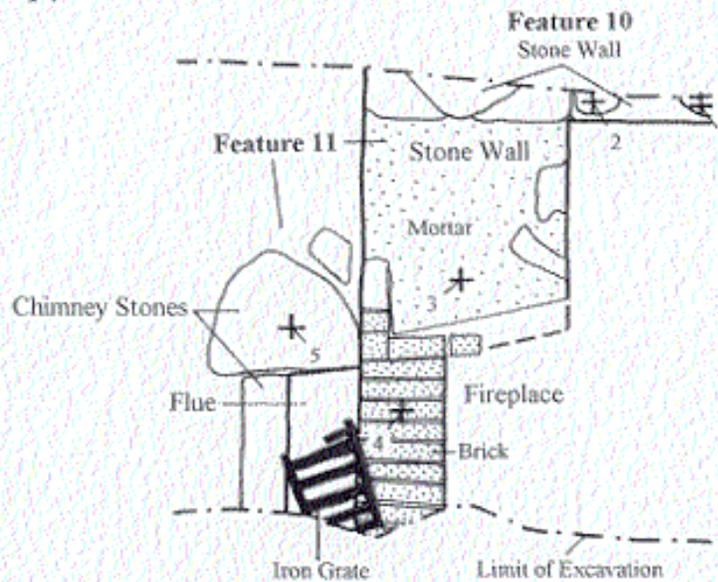
Scale
1:20



East Profile



Plan View



Elevations (metres above sea-level)	
1	4.40
2	4.34
3	3.80
4	3.70
5	3.62



Features 10 and 11 of Trench 1

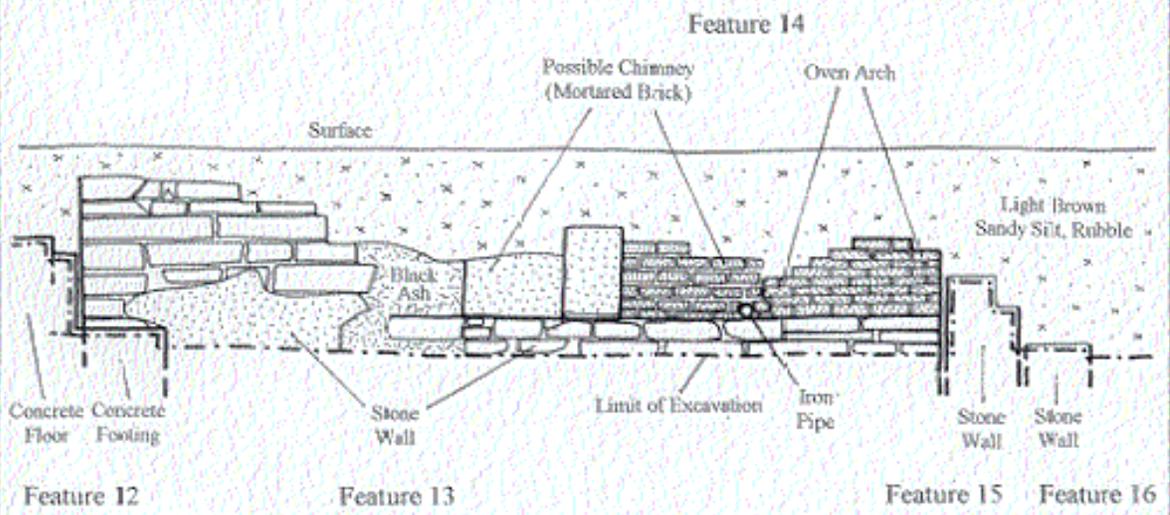
Figure 14

ARCHAEOLOGICAL ASSESSMENT
HALIFAX STP PROPERTY
HALIFAX REGIONAL MUNICIPALITY

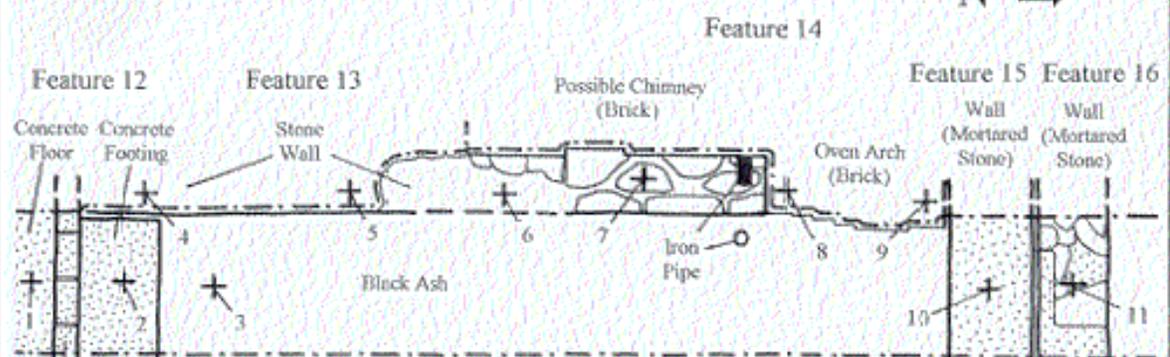
October
2002

Scale
1:20

West Profile



Plan View



Limit of Excavation		Elevations (metres above sea-level)	
1	4.09	5	3.73
2	3.33	6	3.64
3	3.20	7	3.36
4	4.37	8	4.09
		9	4.13
		10	3.39
		11	3.35



Features 12, 13, 14 and 15 of Trench 1

Figure 15

ARCHAEOLOGICAL ASSESSMENT
HALIFAX STP PROPERTY
HALIFAX REGIONAL MUNICIPALITY

October
2002

Scale
1:50