

**BENGAL LANCERS NEW RIDING PADDOCK:
ARCHAEOLOGICAL RESOURCE IMPACT ASSESSMENT**

Heritage Research Permit A2006NS37



2006

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**BENGAL LANCERS NEW RIDING PADDOCK:
ARCHAEOLOGICAL RESOURCE IMPACT ASSESSMENT**

**Heritage Research Permit A2006NS37
Category C**

Davis Archaeological Consultants Limited

Principal Investigator: April D. MacIntyre
Report Compiled by: April D. MacIntyre, Heather MacLeod-Leslie & Stephen Davis

Cover: Various artifacts collected from the development area.

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EXECUTIVE SUMMARY

Davis Archaeological Consultants Limited was contracted by CBCL Limited Consulting Engineers to conduct an archaeological resource impact assessment of the Bengal Lancers New Riding Paddock in Halifax in May 2006. The purpose of the assessment was to monitor the mechanical excavation of those areas believed to be of archaeological potential. A previous assessment by Powell (2003) indicated that the southwest end of this area was the site of a late nineteenth century city dump which may have extended throughout the current development zone.

During the current archaeological assessment, a deposit of late nineteenth century refuse was encountered throughout the development area but appeared to be heavily disturbed. The primary deposit was located through an archaeological test pit to the north of the temporary riding paddock but proved to be located below the level of excavation warranted for this development and, therefore, was not disturbed with the exception of this test pit. A sample of artifacts was collected from the secondary deposit and catalogued in the Nova Scotia Museum's Museum Information Management System (MIMSLite) (Appendix C). A late nineteenth or early twentieth century concrete foundation was also encountered on the west side of the stables which extends beneath the temporary riding paddock through to the Nova Scotia Museum of Natural History parking lot. Due to the recent origin of this structure, it is not believed to be of elevated archaeological significance.

1.0 INTRODUCTION

Davis Archaeological Consultants Limited conducted archaeological monitoring of the excavation for the new Bengal Lancers Riding Paddock between Summer Street and Bell Road in Halifax. Previous archival research and monitoring of excavation related to the expansion of the Nova Scotia Museum of Natural History parking lot on Summer Street in 2002 revealed that this area was the site of a late nineteenth to early twentieth century city dumping ground. The parking lot excavation was monitored by Stephen Powell of the Nova Scotia Museum and reported under Heritage Research Permit A2002NS39.¹

Excavation was conducted in several phases in which monitoring was carried out during those phases when there was potential to impact on stable archaeological resources. Archaeological assessment began during excavation for the construction of the access road off Summer Street leading to the rear of the Lancers' stables on 29 May 2006 and resumed until 26 July 2006. This work was monitored by a single archaeologist. April MacIntyre monitored the work between 29 May and 01 June and from 25 and 26 July. Excavation between 19 and 21 July was monitored by Heather MacLeod-Leslie.

The current archaeological assessment was conducted under Category C Heritage Research Permit A2006NS37 (Appendix A).

2.0 DEVELOPMENT AREA

The development area is limited to those localized areas of impact shown in Figure 2.0-1, particularly the excavation of the access road from Summer Street leading eastward to the rear of the stables, the grading of the area between the Nova Scotia Museum of Natural History parking lot and the stables and to the north of the temporary paddock, and the excavation of the electrical trenches around the perimeter of the Nova Scotia Museum of Natural History parking lot. Other disturbance activities which were not monitored included the excavation of the electrical trench on the north side of the concrete walkway north of the Wanderer's Ground (Summer Street end), the grading of the Nova Scotia Museum of Natural History parking lot and installations of catch basins, and the excavation of the wheelchair access ramp on the west side of the Nova Scotia Museum of Natural History parking lot. These activities did not impact on stable archaeological deposits.

¹ Powell, 2003.

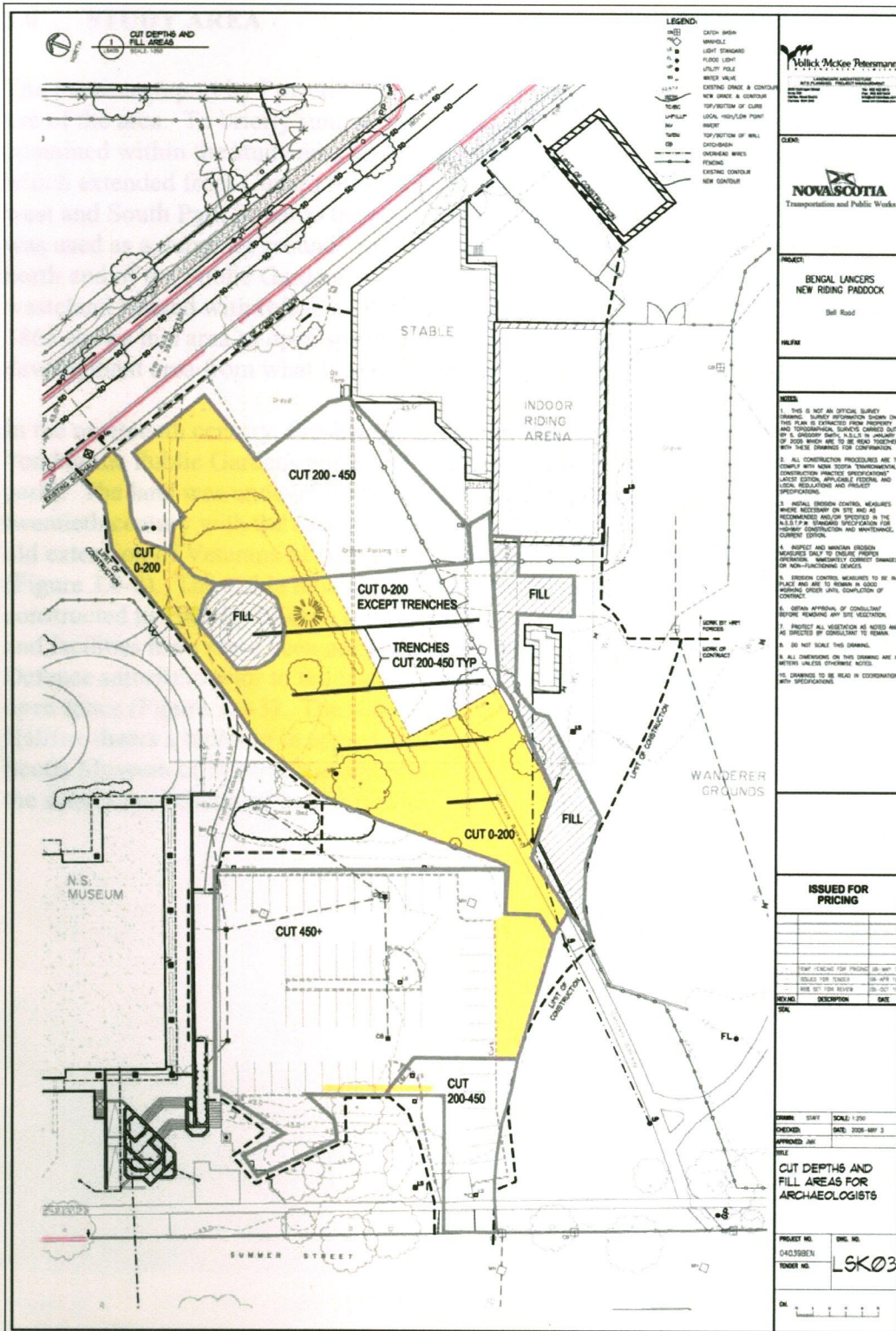


Figure 2.0-1: Cut depths and fill areas within the development area. The excavation of those areas highlighted in yellow was monitored by an archaeologist (base map courtesy Vollick McKee Petersmann & Associates Limited).

3.0 STUDY AREA

The previous report by Powell (2003) contains a detailed reconstruction of the past land use of the area. To briefly summarize, in the early to mid nineteenth century, the land contained within the study area formed the southern end of the former north commons which extended from Cunard Street to South Street and lying between Robie Street to the west and South Park Street to the east. The commons were open space, much of which was used as a dumping ground. Mid nineteenth century accounts describe the area on the north end of the Public Gardens, including the Wanderer's Ground, as a swampy wasteland littered with refuse of every sort. Ambrose F. Church's map of Halifax in 1865 shows this area as open space with a roadway extending eastward through the development area from what is now Veterans Memorial Lane (Figure 3.0-1).

In the nineteenth century, Freshwater Brook ran through this city block between Griffin's Pond in the Public Gardens and Egg Pond at the north commons (now the skateboard park). The land was undeveloped throughout the nineteenth century and much of the twentieth century with the exception of one building on the corner of Bell Road and the old extension of Veterans Memorial Lane or what was then the east end of Jubilee Road (Figure 3.0-2). The stable now occupied by the Bengal Lancers on Bell Road was constructed in 1908 by George Low to accommodate horses in the city and new buildings and facilities have since been added. A map surveyed by the Department of Militia Defence sometime prior to the Halifax Explosion again shows the development area as open space (Figure 3.0-3). The stables are not shown. The 1957 topographic map of Halifax shows a building in approximately the same location as the present-day Nova Scotia Museum of Natural History, which was constructed in the late 1960s, as well as the stables now occupied by the Bengal Lancers (Figure 3.0-4).

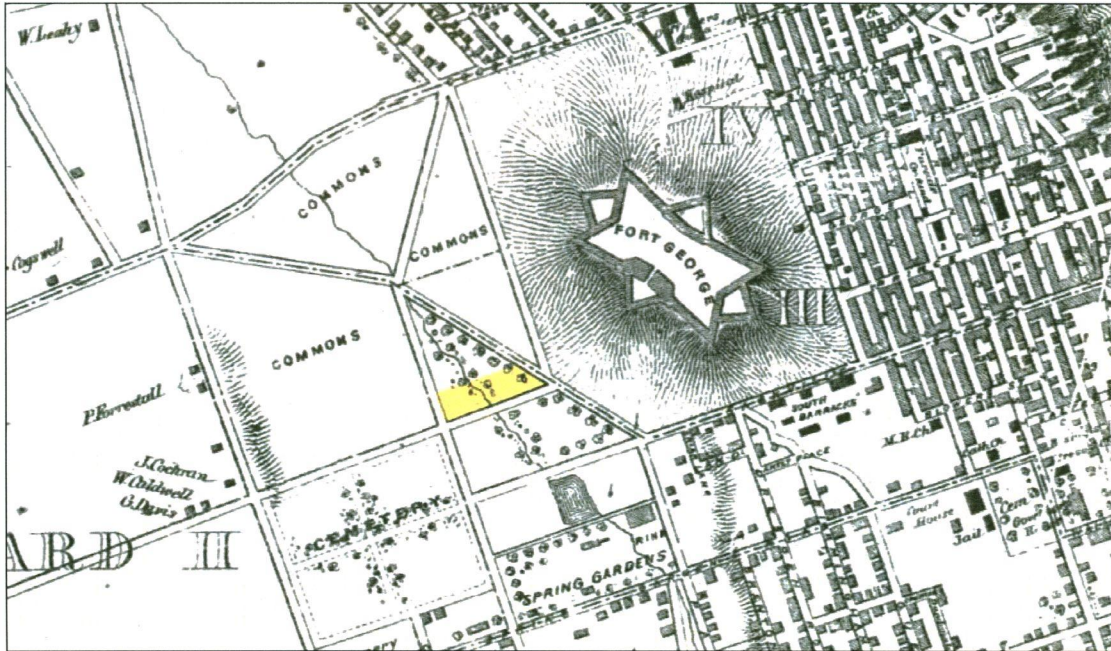


Figure 3.0-1: Ambrose F. Church's map of Halifax in 1865.² The development area is highlighted in yellow.

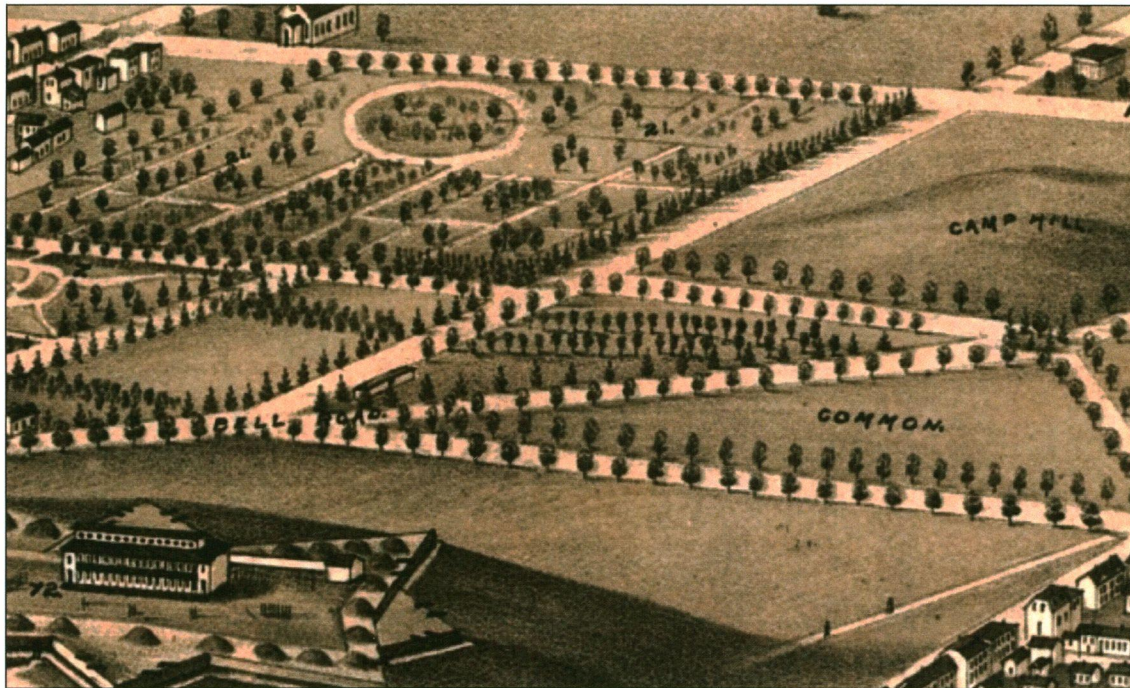


Figure 3.0-2: 1879 Panoramic view of Halifax showing a long building at the corner of Bell Road and the east end of Jubilee Road.³

² Church, 1865.

³ Ruger, 1879.



Figure 3.0-3: Department of Militia and Defence map of Halifax.⁴ Although the map was published in 1918, it shows the city as it was before the Halifax Explosion. The development area is highlighted in yellow.



Figure 3.0-4: 1957 Topographical Map of Halifax showing buildings within the development area.⁵

⁴ Survey Division, Department of Militia and Defence, 1919.

⁵ National Topographic Series, 1957.

4.0 METHODOLOGY

Archaeological monitoring was required at all times when there was potential to impact on cultural resources. Monitoring of excavation took place between 29 May and 01 June and was conducted by DAC's vice-president, April MacIntyre. During this time, the access road off Summer Street was excavated to a depth of approximately 0.66 m below the surface, which impacted on cultural soil. The easternmost extremity of this access road on the south side of the concrete walkway was graded to a shallow depth and filled. No cultural soils were impacted in this area and recent gravel fill could be seen in the north bank of the excavation zone.

Between 19 and 21 July, the area to the north of the temporary paddock in the area of the circular landscaping depression was excavated to a depth of approximately 0.20 metres and graded for the future construction of buildings in this area. The circular landscaping depression was in-filled with material from this grading. Two archaeological test pits were excavated mechanically to determine the depth of a known nineteenth century refuse deposit in this area. This work was monitored by archaeologist Heather MacLeod-Leslie. This work revealed a soil deposit created by the use of this area as a parking lot for Halifax City Field Workers in the mid twentieth century as well as a redeposited nineteenth century city refuse deposit above the parking lot. Two archaeological test pits were excavated mechanically near the Bell Road entrance to the current asphalt walkway to determine the depth of the primary refuse deposit. A stratigraphic profile of test pit #2 was sketched and recorded.

On 25 July, the grassed area to the northwest of the existing stable bordering on Bell Road was graded to a depth of approximately 0.23 metres and was monitored by April MacIntyre. A large maple tree on the west side of the indoor riding arena was also removed as well as the wooden fence posts and the soil graded. The large portion of the concrete footing which was discovered on the north side of the paddock was also encountered on the west side of the paddock. In an effort to determine its age, function, and depth below surface, an archaeological test pit was excavated mechanically to the base of the footing and then infilled. No archaeological materials were collected from this feature.

Finally, on 26 July, electrical trenches were excavated along the west, north, and east edges of the Nova Scotia Museum of Natural History parking lot. These trenches were approximately 0.61 centimetres wide by 0.61 centimetres deep. Only the west trench was monitored during construction as the east edge of the Nova Scotia Museum of Natural History parking lot had previously been excavated and filled with crushed stone and the north edge would have been impacted by construction of the museum building itself in the late 1960s.

Additional areas which were excavated did not require archaeological monitoring as the soil consisted of modern fill or previously disturbed matrix. Standard recording practices were employed during all phases of the assessment, including field note documentation (Appendix B), photographic recording, and soil profile drawing as well as collection and

cataloguing of artifacts in the Nova Scotia Museum's Museum Information Management (MIMSLite) Database (Appendix C).

5.0 RESOURCE INVENTORY

During monitoring of the access road excavation, a late nineteenth to twentieth century refuse deposit was encountered at approximately 0.18 m below the surface. The deposit was excavated to a depth of 0.66 m below the surface, much of which appears to have been previously impacted (Plate 1). This cultural layer was composed of pockets of dark brown to black loam and intermittent purple and black ash containing ceramics and bottles dating the last quarter of the nineteenth century and into the twentieth century (ironstone, Maritime redware, white refined earthenware, coarse stoneware, milk glass, and machine made bottles). A sample of diagnostic artifacts was collected and catalogued (BdCv-36:13-32) from a cultural soil lot believed to be a secondary refuse deposit. Interspersed among the pockets of historic cultural soil were localized patches of clean crushed stone fill and loamy brown fill. At the east end of the excavation area, near the southeast corner of the Nova Scotia Museum of Natural History parking lot were a buried plastic milk carton, screw-top bottles, and a mud-flap from a large vehicle (boom truck or multi-axle vehicle), indicating that this area was recently disturbed and filled. Along the south face of the parking lot curb, a 0.43 metre-wide trench had been recently excavated and filled with crushed stone, likely during the 2002 parking lot extension (Plate 2).

Sod removal and excavation to the north of the temporary riding paddock uncovered deposits created by the use of the area as a parking lot for the Halifax City Field Workers, in the mid-twentieth century. This deposit occurred anywhere from 0.17 to 0.35 metres below the surface. The variation in depth seems due to infilling activity for the purpose of landscaping around the present Museum, to its east and northeast. In these areas the top stratum of sandy landscaping soil is upwards of 0.35 metres thick, below which the parking lot deposit (a black, hard packed, gravelly and oily deposit) is found (Plate 3). Immediately east of the Nova Scotia Museum of Natural History parking lot, where the current and new walkways are located, the Halifax City Field parking lot deposit occurs closer to the surface (approximately 0.17 to 0.20 metres below the surface). This is likely due to lesser amounts of landscaping materials.

To the immediate north of the temporary paddock (between it and the current asphalt walkway) a deposit of nineteenth century refuse is present above the level of the Halifax City Field parking lot deposit (Plate 4). This may be due to a redepositing activity of the material in the course of construction of the Nova Scotia Museum of Natural History, work that admittedly impacted the original city dump. This deposit, largely on the southern edge of the circular landscaping depression, is at approximately 0.30 metres below the surface. A single complete bottle was collected from the secondary refuse deposit (BdCv-36:33).

A test pit (test pit #2), dug near the Bell Road entrance to the current asphalt walkway, exhibits a primary refuse deposit at approximately 0.66 metres below the surface (Plate 5). The variation in depth of the refuse deposit here, with the above mentioned refuse deposits on the southern edge of the circular landscaping depression and east of the Nova Scotia Museum of Natural History parking lot lends credence to the suggestion that the latter are secondary deposits of the refuse materials.

A concrete footing was encountered and breached at approximately 41.5 metres south of the southwestern end of the new walkway (Plate 6). This feature was recorded and photographed before moving on.

Excavation to the northwest of the stables did not impact on cultural soils. The shallow depth of excavation (approximately 0.23 metres below the surface) revealed orange sandy modern landscaping fill above the secondary refuse deposit which consisted of medium brown sandy loam or black and purple mottled ashy deposits (Plate 7). Only the top of this deposit was exposed. A complete glass inkwell was collected from the midden deposit on the north side of the temporary paddock (BdCv-36:34). On the west side of the temporary paddock, the concrete footing encountered to the north was also unearthed. The north and south exterior walls as well as an interior partition wall oriented roughly north-south were unearthed and cleaned around using a shovel. The walls were 0.61 metres in width (Plate 8). A test pit was excavated to the bottom of the structure on the east side of the partition wall. The partition wall was shown to extend to a depth of 20 metres and the structure had a concrete floor. Late nineteenth and early twentieth century building materials and services were encountered in this test pit including cut granite blocks approximately 0.15 metres in width by 0.30 metres in length and 0.15 metres in depth, red bricks (some mortared), red coarse earthenware drainage tiles, and coarse earthenware pipes, lead pipes, wood, and a complete Oland's beer bottle as well as refined white earthenwares. The north and south walls of this structure are shown on the development area map provided by Vollick McKee Petersmann & Associated Limited (Figure 2.0-1) and extends eastward to the northwest and southwest corners of the stables. The R. Fraser Construction foreman indicated that a 2-foot or 0.61-metre-high concrete footing, believed to be an extension of this structure, was also encountered under the Nova Scotia Museum of Natural History parking lot. The structure was left largely in tact, although small breaches were expected along the north and south walls for excavation of drainage trenches beneath the temporary paddock. The excavation of these trenches was not monitored by an archaeologist.

Excavation of the electrical trench on the west edge of the museum parking lot revealed a black ashy matrix related to secondary deposition of the nineteenth century dump material above natural till. The cultural soil extended approximately 0.60 metres below the surface below and to the south of the existing grassed area where the pay parking metre is located (Plate 9). A sample of diagnostic artifacts was collected from the secondary refuse deposit (BdCv-36:35-36). On the north side of this grassed area, modern fill consisting of crushed gravel was encountered to a depth of 0.50 metres below the surface. Beneath this, the top of the secondary refuse deposit was just being

skimmed. A complete stoneware bottle was also collected from a disturbed deposit at the southeast corner of the parking lot during trenching (BdCv-36:37).

6.0 RESOURCE EVALUATION

In several areas throughout the development zone, a deposit of nineteenth century materials was encountered. A test pit to the north of the temporary paddock showed that this deposit, consisting primarily of black and purple mottled ash and medium brown loam, lies above the mid twentieth century parking lot used by Halifax City Field Workers and is, therefore, associated with a secondary refuse deposit resulting from disturbance. This disturbance is likely associated with the construction of the Nova Scotia Museum of Natural History building and related landscaping which occurred prior to the introduction of the Special Places Protection Act (R.S., c. 438, s.1.). With the exception of the excavation of an archaeological test pit near the Bell Road entrance to the current asphalt walkway, the work performed by R. Fraser Construction between 29 May and 26 July 2006 appears not to have impacted the original city dump.

Summary

The concrete footing beneath the temporary paddock appears to be of late nineteenth or early twentieth century origin although it could not be located with any certainty on historic maps. This feature is not believed to be of elevated archaeological significance due to its apparent late origin.

7.0 CONCLUSIONS AND RECOMMENDATIONS

No significant archaeological resources were encountered during the excavation monitored by Davis Archaeological Consultants Limited at the Bengal Lancers Riding Paddock, with the exception of a localized portion of the known nineteenth century city dump at the northeast end of the development area. This deposit was located during a test pit excavation at the request of DAC Ltd. in order to determine the depth of the primary deposit. Throughout the development zone, late nineteenth century midden materials were encountered in disturbed contexts, in many cases, located above mid-twentieth century deposits. This disturbance was likely the result of earlier excavation and grading of this property for construction of the Nova Scotia Museum of Natural History building in the late 1960s or from earlier use of the property by the Halifax City Field Workers. A representative sample of artifacts was collected from the development zone which have been processed and catalogued for curation by the Nova Scotia Museum.

It is our professional opinion that no recommendations for further mitigation are warranted for this development. However, should further development be carried out in those areas not monitored by an archaeologist during this or previous projects, it is

recommended that those areas be assessed by a qualified archaeologist prior to development in order to determine the archaeological potential of those areas.

8.0 REFERENCES CITED

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

National Topographic Series. 1957. Canada Sheet, Halifax, 11/D12 East Half.

Powell, Stephen. 2003. *Heritage Research Permit Report: A2002NS39, Nova Scotia Museum of Natural History Parking Lot Expansion*. Manuscript on file, Nova Scotia Museum.

Ruger, A. 1879. *Panoramic view of the city of Halifax, Nova Scotia*.

Survey Division, Department of Militia and Defence 1918, No. 133a.

PLATES

Plate 2: Modern grey
concrete curb at
road, looking



Plate 1: Redeposited refuse materials (dark soil matrix) excavated during construction of the access road from Summer Street north of the Wanderer's Grounds, looking east.

Plate 2: Modern gravel fill under concrete curb at north edge of access road, looking east.





Plate 3: Soil stratigraphy on the north side of the temporary riding paddock. The uppermost strata consists of modern landscaping fill below which is a deposit resulting from use of this area as a parking lot by Halifax City Field Workers in the mid-twentieth century.



Plate 4: Top of the redeposited refuse (dark soil matrix) to the north of the temporary paddock, looking south southwest.



Plate 5: Test pit # 2 showing the primary refuse deposit north of the existing concrete walkway from Bell Road. The depth of the top of the deposit is 0.66 metres below the surface.



Plate 6: Concrete footing south of the new walkway from Bell Road, looking west northwest.



Plate 7: Top of the secondary refuse deposit to the northwest of the stables, looking northwest.



Plate 8: Exterior south wall (background) and interior partition wall (right) of the concrete footing to the west of the temporary paddock, looking south.



Plate 9: East wall profile of the electrical trench excavated along the west side of the Nova Scotia Museum parking lot. The uppermost lot consists of modern landscaping fill (sand) beneath which is crushed gravel over the secondary refuse deposit.

**APPENDIX A:
HERITAGE RESEARCH PERMIT A2006NS37**



Nova Scotia Museum
Special Places Protection Act,
R.S.N.S. 1989

Application for
**Heritage
Research Permit**
(Archaeology)

Permit No. A2006NS37

(Original becomes Permit when approved
by the Executive Director of the Nova
Scotia Museum)

The undersigned April MacIntyre
of c/o 6519 Oak Street, Halifax, NS B3L 1H6
representing (institution) Davis Archaeological Consultants Limited

hereby applies for a permit under Section 8 of the Special Places Protection Act to carry out archaeological investigations during the period:

from 9 May 2006 to 31 December 2006
at Bengal Lancers Horse Paddock
general location Bell Road, Halifax

specific location(s) (cite Borden numbers and UTM designations where appropriate)

and as described separately in accordance with the attached Project Description. Please refer to the appropriate Archaeological Heritage Research Permit Guidelines for the appropriate Project Description format.

I certify that I am familiar with the provisions of the Special Places Protection Act of Nova Scotia, and that I will abide by the terms and conditions listed in the Heritage Research Permit Guidelines for the category (check one).

- Category A - Archaeological Reconnaissance
- Category B - Archaeological Research
- Category C - Archaeological Resource Impact Assessment

Signature of applicant April MacIntyre Date May 5/06

Approved: Executive Director Bee Neal Date May 9/06

**APPENDIX B:
FIELD NOTES**

Bengal Lancers Paddock, Summer Street, Halifax*April MacIntyre**R. Fraser Construction**Paul Fraser – project manager**Rick Gooding – on site supervisor**Ken Richards – TPW project manager**James McKee – planning*29 May 2006

11:30 On site meeting to plan a schedule of excavation. Crew is beginning to remove sod at west end of study area adjacent to NS Museum parking lot for the construction of an access road. Soil matrix under sod is clean fill (recent) consisting of medium brown sandy loam to a depth of approximately 10 cm below surface (B.S.), then orange/brown sandy loam. Nothing cultural so far.

Excavator is a John Deere 110 with 3' wide toothed bucket.

Expected depth of excavation for the access road is 18". Cultural deposit is at approximately 12" below surface by lunch. There is a small area (approx. 10 cm x 15 cm) of black organic soil seen on downslope just beside curb of NSM parking. Alerted team that this was of interest if it is to be disturbed, but it is likely below the excavation grade.

James McKee indicated that he was present when the utility pole to the southeast was put in a few years back and bottles were seen in the bottom of the excavation pit but they were not collected.

Ken Richards to e-mail me a schedule of excavation activity tomorrow morning. The areas of greatest concern appear to be this access road and the trenching for electrical conduit to the south, running parallel to the north edge of the concrete walkway. If this measure is too costly, above ground poles will be used instead, in which case I will not likely be needed for monitoring. An area to the northeast between the NSM building and the Lancers stables is also sensitive. This area will be excavated for the laying of foundations. Also drainage trenches to be excavated to the southwest of this that will require monitoring.

30 May 2006

Checking in on Bengal Lancers site this morning on my way into lab. No progress since yesterday at noon. Rick Gooding indicated that they need consultation with James McKee regarding excavation grade for the access road. Expecting to go down as far as 3' in some areas, which I will need to be on site for. Waiting on site meeting with J. McKee.

At approximately 16 cm B.S., dark brown to black organic soil is showing up in two spots along the curb adjacent to NSM parking. Ironstone (ceramic), black glass, and coarse stoneware showing up at the surface of this black soil.

Area on southeast side of concrete walkway between stable and Wanderer's Grounds is recent soil and gravel fill (clean). Soil is approximately 15 cm deep. Crushed gravel is exposed in excavated bank to a depth of at least 45 cm.

Brief visit from Steve Powell. He instructed me to collect a representative sample of artifacts from the cultural soil lot for dating purposes.

Left site at 10:10. Awaiting call from Rick when excavation is to resume.

Returned at 1:00 to monitor deeper excavation of access road. More black/dark brown soil showing up. This is likely disturbance from recent landscaping of the perimeter. Fine grey sand and dense brown clay along the proposed face of south curb. Near the centre, there is medium brown clay and gravel, again associated with a filling episode.

Patches of gravel fill at the east end adjacent to the concrete walkway. At west end, patches of gravel fill with modern refuse (clear and lime green bottle glass, red brick and asphalt).

By 2:00 crew began digging to the necessary grade (33" below datum at west end up to 3' near east end). Soil is patchy black organic with cultural material and earlier grey/brown sandy fill with crushed stone and slate (very little cultural material in this latter matrix).

Black glass, brick, Maritime redware, white refined earthenware, and leather shoe soles in black organic lot. Crushed stone fill at east end of access road.

Sketched a 1 metre-wide profile of south face of access road at the west end.

31 May 2006

Checked in at 8:00 this morning. Rick had setting up to do and levels to shoot to determine necessary grade. I was awaiting his call when Steve Powell (NS Museum curator) called at 11:30 to tell me excavation had started at the west end of the access road and there was a significant amount of black soil showing up. I headed to the site right away. Some cultural material in this soil including porcelain, white refined earthenware, brick, leather shoes, and blue-green bottle glass. Depth B.S. at west end is 0.66 m. Depth to top of black soil is 0.26 m.

A trench approximately 0.23 m wide along the exterior face of the NSM parking lot curb had been excavated and filled with crushed stone during the expansion of the parking lot in 2003.

Crew need clarification on levels so there will be no more excavation until after lunch. Left at 12:10 leaving instruction that I must be contacted when digging was to start up again.

1:30 Returned to site in response to Rick's phone call that excavation was resuming. Refuse deposits appear more concentrated (less patchy) away from the west end. Black soil throughout for the most part with pockets of black and purple ash and coal clinkers. I collected a representative sample (diagnostic pieces) dating to the late 19th to early 20th centuries. At east end, modern fill consisting of ironstone (rock), crushed rock, and broken up asphalt. Depth B.S. at survey marker inside access road trench is 0.67 m.

Brief visit from David Christianson (NSM – Provincial Archaeologist) at 2:30.

At east end of access road near the southeast corner of NSM parking lot is a buried rubber mud flap from an 18-wheeler truck in the modern fill. Depth B.S. is 0.65 m.

The material that is being excavated from the access road is being deposited temporarily on the opposite side of the fence on the Wanderer's Grounds. It will later be used on site to fill areas to the east, particularly the large circular depression on the NSM property.

Buried utility pole at east end of access road approximately 2.5 m east of the standing utility pole beside the concrete walkway. Also a concrete footing for a metal fence or sign post adjacent to it to the east.

Finished excavation of cultural soils at 4:30. The remaining soil to be excavated along the curb at the southeast corner of the NSM parking lot and under the concrete walkway is recent fill.

*Heather MacLeod-Leslie*July 19th/06 DAC on-call

Bengal Lancers Paddock

12 noon: Chance visit drop-in:

Pic 0042: looking WSW – state of site at arrival.

Noted excavator at work as I walked along Summer Street – noted sod removal between paved walkway SE of NSM and current temporary paddock. Asked Mike Freake (site manager) what the workplans for the day were....a bit more “rubbing” - (removal of sod).

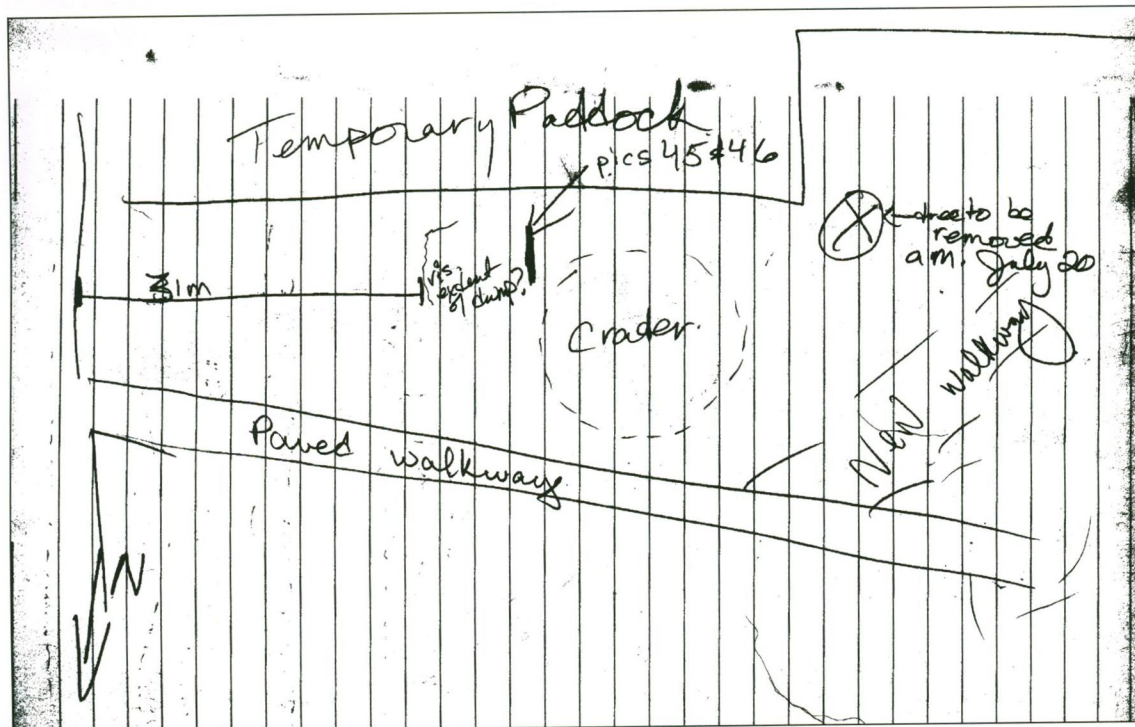
Pic 0043: looking west.

Noted mortar, charcoal, bricks (complete & chunks), ceramic frags – porcelain, gold-rimmed porcelain, maritime ware, indeterminate whiteware at 30 –35 cm dbs on ESE edge of bermed/crater edge. Deposit extends to the bottom of shovel/bucket cut – c 50 cm dbs.

Pics:

0045: looking west, crater edge cut.

0046: looking west. Strata: modern landscaping soil then ?disturbed? dump material – rocks, mortar, charcoal, artefacts, bricks, gravel.



Paddock sketch map #1

Indications of possible dump extent (says "vis extent of dump?" in above figure) at 31 m west of where current paved path (that passes on south side of NSM) meets the sidewalk along the west side of Bell Rd.

Digging/Rubbing appears to stop at 12:45.

Pic 0047: state of site at 1:15 departure.

July 20th/06

Pics:

0052: looking NW: state of site at arrival this a.m. – prep to remove young tree at Eastern corner of NSM parking lot.

0053: looking NW: removing young tree

0054: ditto.

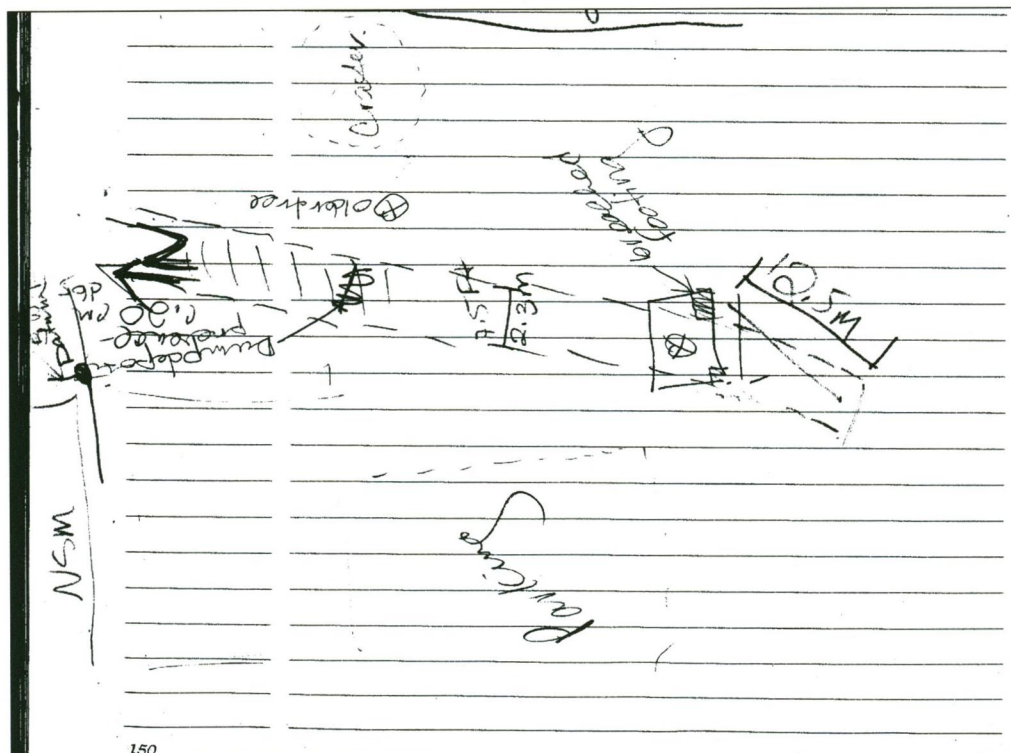
0055: looking NE – east profile of cut to remove tree: shows dump deposit.

0056: Looking E: east profile – shows concrete footing that was breached by cut and dump deposit.

0057: looking E: east profile of young tree removal cuts – see concrete footing on right, at south of cut.

0058: looking SE: after removal of OLD tree complete – see Paddock sketch map #1

On-site at 8 a.m. this morning, by then "1" scoop had been made to remove a young tree at the eastern corner of the NSM parking lot. That scoop began the breach of a concrete building footing. They decided to wait for my arrival before continuing.



Datum = bottom of cornerpost, southern extent of Black Wrought Iron Fence (BWIF).

Older Tree Removal:

8:30 – Calvin (excavator operator) removed older tree - black, oily material visible after tap root was broken, 1 artifact early – mid 20th c. whiteware teacup/sugar bowl base.

9 a.m. Sod removal (by Calvin) for new walkway. At c. 5.5 mE of pole (with bird's nest atop) and c. 17 mE of parking lot edge (to the immediate west of the point of interest) we see dump deposit: artefacts, mortar, charcoal, debris mix – grey soil.

10 a.m.

Pic 0059: looking SW along new walkway (point where dump deposit begins is just on the other side of the bucket).

0060: looking west: dump deposit?/c. 22 cm dba stratum...west profile.

0061: same as 62 – pointing at dump deposit visibility.

0062: looking west – west profile dump deposit - pointing at dump deposit visibility.

Breached concrete footing c. 41.5 m from southwestern end of new walkway c.7.5 foot breach in this footing.

0063: looking south – dump scatter deposit

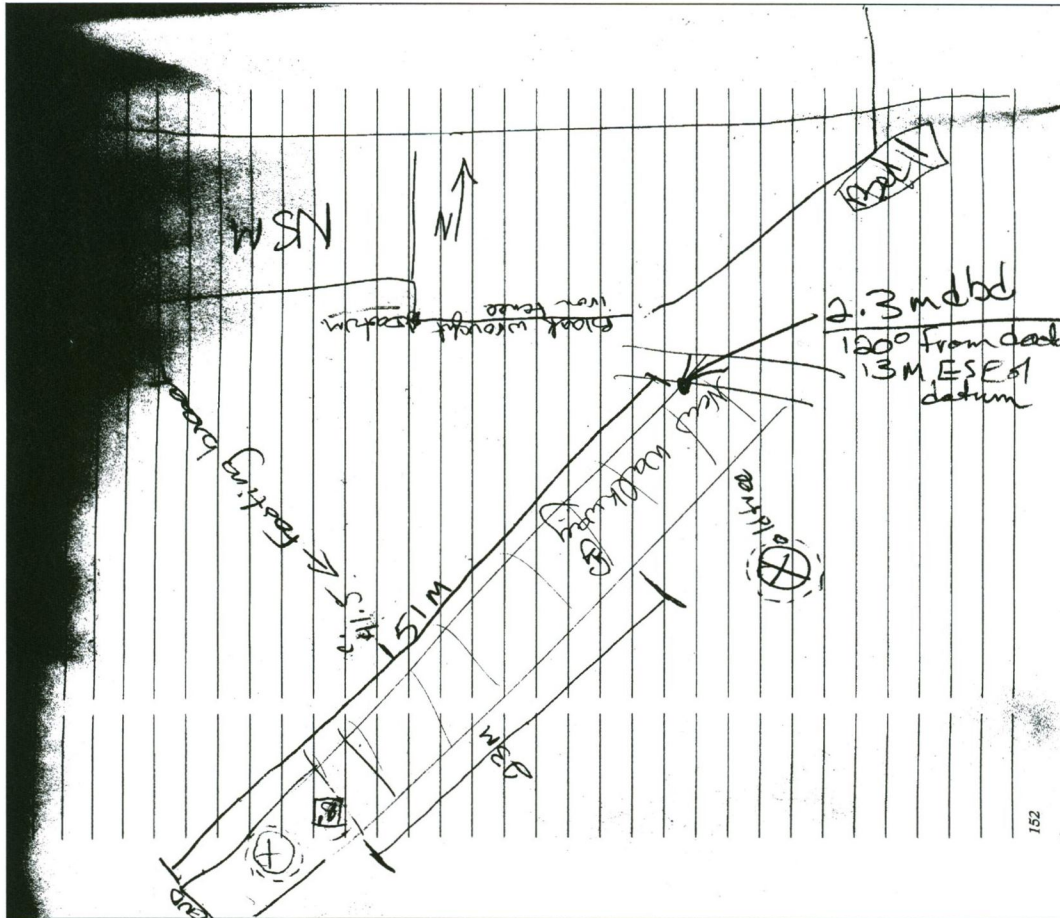
0064: looking east – dump scatter & east profile

0065: looking SSW – john & dump scatter

0066: looking WSW – city parking pack / strata on bottom of new walkway

0067: looking N – completing southern end of walkway.

Bottle found in the “rubbing” (sod removal) for new walkway stretch (south of current paved walkway). Found at c. 40 m south of datum.



Bed 1 (on south side of BWIF) c. 5 m long, dug to 40 cm dbs

Pic 0068: Bed 1 looking E: north profile.

Pic 0069: Datum

Bed 2 = On Bell Rd. side of BWIF – 11 m long.

Black, oily city parking hard pack – construction fill @ 26 – 27 cm dbs

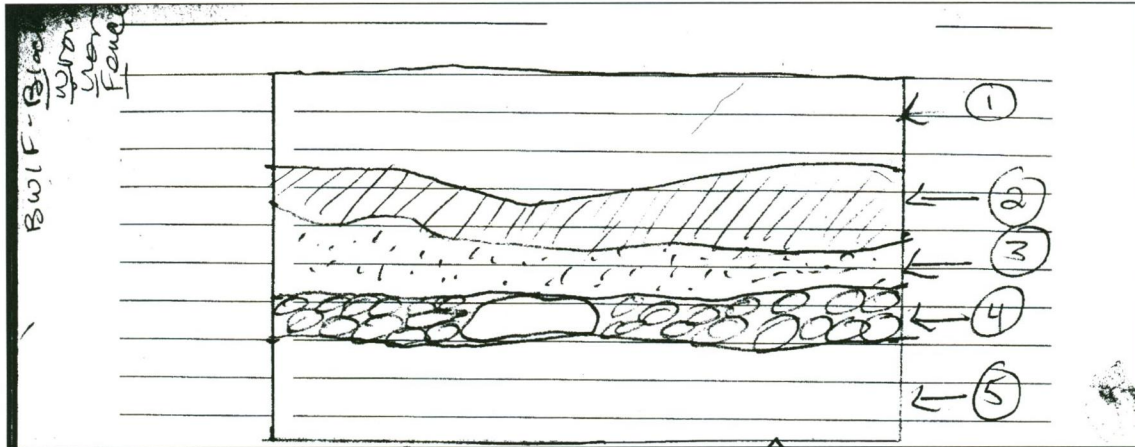
Steve D. visits site at 11:30 a.m. – 15 mins.

Steve D. noted a square/rectangular storm drain? c. 8.8m from juncture with current paved walkway. Feature is 80 cm (E/W) x 50 cm (N/S).

1 p.m. Calvin dug a deep hole for me to look for dump deposit. This hole (Test Pit #1) is into the current line of shrubs that borders the temporary paddock. See pics: 0070, 0071, 0072...

Within this hole was a concrete feature – corner present in TP #1 – but connected to a linear concrete feature (sprayed with orange spray paint in Pic 0072. In builder's trench associated with this concrete feature was a late glass Coke bottle (single serving size, undulating surface). Gave up looking for dump deposit when I realized the level and age of disturbance in this immediate area.

1:35 p.m. Calvin again dug deep for me (Test Pit #2), north of current walkway, after removing southern end of shrub line (D). We exposed the top of the dump deposit at 65 cm dbs. Calvin stopped digging and I continued to clean north wall with a trowel – thought I'd see how deep the dump deposit was. HA HA on me. After another 25 cm (c. 90 cm dbs) I stopped, no end in sight, no change in deposit .



Stratigraphy is as follows:

profile of test pit #2 on southern edge of Bell Rd. sidewalk.

5 strata:

- 1). 0 to -25cm dbs:
modern landscaping fill
reddish sandy soil
- 2). -25 to -39 cm dbs:
dense, mottled debris fill/accumulation
dense red-brown, mottled soil, some small gravel
- 3). -39 to -52 cm dbs:
City Field Parking lot surface?
oily black hardpack with gravel
- 4). -52 to -66 cm dbs:
Dump abandonment/ parking lot prep
rocks (to stabilize/cap dump deposit?)
- 5). -66 to -90 cm dbs:
dump deposit
artifacts, mortar speckles, red ?fire-hardened? soil, loosely consolidated

Dump deposit differs slightly in north TP #2. Deposit uincludes degraded rock (whitish), charcoal, artefacts (ironstone plate – stamped mark "...GHLIN" below that "on") Plate @ 80 cm dbs & within reddened soil (fire hardened – heat altered?)

Rocks were used to cap dump deposit? Stabilize for parking? Then black oily hardpack then use/abandonment then modern landscaping.

TP2 is c. 53 m East of datum...95°
Off site @ 3 p.m.

July 21st/06

Preparing for new walkway – removing current asphalt. Will dig below gravel pad (sub-grade) shortly.

Moving below grade – noted brick(?modern?) at 16 m E of datum c. 120 ° - 18 cm dbs. Extended Bed 2 by another 17 m on top of yesterday's 11 m (c. 25 cm dbs). Extension complete to corner of BWIF toward Bell Rd.

Extended Bed 1 by 7 m to the west, again to another post, shift in course, to c. 30 – 35 cm dbs.

From roughly the eastern end of the replanted shrubs on the south side of the BWIF, the new walkway trench between Bell Rd. and the “current walkway (whose asphalt was just ripped up this morning) is, in the top 12 <inches> all modern sandy landscaping soil – clean.

Cut to c. 5 m. south of sidewalk and stopped for the day. Nothing historic – lots of landscaping fill/soil on Bell Rd. side of BWIF and former asphalt walkway.

Off site by 2:45 p.m.

April MacIntyre

25 July 2006

8:00 Foggy and cool (17°C). Arrived before the rest of the crew. Did site walkabout. No additional digging since the work done on Saturday when Edmonds Landscaping removed some hedges from the north side of the temporary paddock fencing and transplanted them on the east side of the NSM black wrought iron fence. I visited the site yesterday morning at 7:30 to assess this disturbance and take some photos. No disturbance to stable soils. Crew cleaned up the mess left behind yesterday morning but did not dig down at all. I noticed a few sherds of late 19th century ceramics (ironstone and WRE).

Spoke to Mike Freake at 8:05. Plan for excavation is to dig down 9” on the north side the temporary paddock. This excavation will extend to the existing pole line to the north. The area beyond that (b/w the pole line and the old walkway) will have the surface gravel removed and be resodded.

Excavation started at 8:25. Started at west end at NW corner of temporary paddock fence. Modern fill just below the sandy orange landscaping fill just poking up in some areas.

Concrete block 1.70 m north of temporary paddock fence. Measures 0.26 m by 0.26 m. Pipe stem fragment adjacent to it. More of the concrete to the north (13' from temporary fence) with rebar and conduit in concrete. Brick fragment. The concrete has been dug into the grey/brown fill. Mike's plan for underground services shows an old utility pole line that connected to the existing utilities. Wires are dead. Complete Pepsi bottle (1980s vintage, not collected) approximately 0.69 m below surface. Rebar and concrete extends beyond this depth. Plastic wrappers, tin cans, etc in this matrix. Matrix consists of orange sandy fill, crushed stone, hard pack, ash and concrete or crusher dust.

North side of excavation area under the old walkway is crushed stone. More concrete adjacent to the light pole, likely associated with the same underground services. This portion was not disturbed by the excavator. Complete Coca Cola bottle in the landscape fill (1980s vintage, not collected).

Very wet towards the middle of the excavation area.

Excavation was deeper below the surface near the NSM property amphitheatre (circular depression) as there was some mounding here. Consequently, the excavation went deeper into the grey/brown modern fill (up to 0.55 m below surface).

Soil below the landscaping fill is much darker near the west end of the temporary paddock but is clean fill. Modern landscaping sand mixed with this at the NW corner of the temporary paddock fence. Sand is light brown to beige beach sand, the same as that used on the temporary paddock itself. Hard packed soil beneath this but it was not disturbed.

Concrete discovered 2.45 m west of NW corner of temp. paddock (between corner and light pole) This appears to be an old footing for a westward extension of the Bengal Lancers stables and is shown on the development plans.

Excavation along the south side of NSM wrought iron fence for planting of brush. Soil consisted only of orange sandy landscaping fill. Row of shrubs were removed from the west side of temp. paddock wall. Soil is clean medium brown sandy loam.

Concrete footing for old extension of Bengal Lancers stables at NW corner of temp. paddock extends westward past the pole line. Mike indicated that it showed up as a 2' high footing under the museum parking lot. A trench was excavated last week on the west side of this pole line and refilled for drainage reasons. It will be re-excavated for the new paddock but does not need to be monitored unless it goes deeper than last week's excavation, which Mike does not expect. The concrete footing extends through this trench. It will have to be removed.

Excavator stopped at 12:15 for fuelling up. Mike has to check on underground electrical for the concrete footing. Crew stopped for lunch. Spoke to Mike over lunch about what is to be done with the footing. It must be removed for drainage trenches under the temp. paddock. It will have to be excavated to the bottom (probably 2 to 3 feet below the surface of it) in order to remove it.

Spoke to Steve Powell (NSM Assistant Curator of Archaeology) at 1:00 to find out if I would need to monitor the removal of this footing. He suggested taking out a small section of it or digging a trench along the outside of the wall to determine its depth, function, and age.

Excavation southward revealed this was a concrete footing for a very substantial sized building. Cut granite stones approximately 0.15 m by 0.30 m, brick (some mortared), red drainage tiles, CEW pipe near the surface of the structure. Footing is 2' wide. The wall at the west end (running roughly N-S) is a partition wall as the south wall continues westward past it. SW corner is located 18 m west of the temp. paddock fence line. 6 m of the partition wall is exposed. Took some time to clean around the top of the footing and photograph it as well as record the measurements and location. 22.20 m to the SW corner of footing from the light pole and 18 m to the paddock fence. 2 m to the NW corner of the footing from the same light pole.

Asked the backhoe operator to dig a trench on the east side of the partition wall to the bottom of the feature. Mortared brick, lead pipes, wood, a complete Olands' beer bottle, electrical conduit were found. The wall is 8 feet in depth. Trench was quickly filled back in. Feature appears to be 20th century in origin.

To the south of the footing in the orange landscaping fill was a complete pop bottle with a plastic wrapper inside which looked very recent. Also an aluminum can. Building is 20 metres in width (N-S). No need for further monitoring today. Crew is removing the soil piles from the excavation area to an off site location. No more digging scheduled. Left at 3:30.

26 July 2006

8:00 Foggy and fine drizzle. 16°C. Plan for this morning is to dig the trenches on the west, north, and east sides of the NSM parking lot. Expected depth is 2' (0.61 m) but there is currently 0.5 m of fill at the surface (crushed stone). Area at SW corner of parking lot is most sensitive as it is nearest the dumping deposit recorded by S. Powell during the 2002 parking lot extension. At the north end, the disturbance layer will extend deeper due to the construction of the NSM building in the late '60s. The east end is heavily disturbed by the parking lot construction and is comprised of landscaping fill.

Excavator is going to remove the large maple tree at the SW end of the temp. paddock area. Upper matrix is grey soil and gravel (modern fill). Beneath this is medium brown sandy loam with large boulder-sized stone (0.40 to 0.70 m sized stones). Glass fragments (clear and lime green). Large piece of asphalt (1 m²) at 1.15 m below surface. Wooden

fence posts on west side of temp. paddock are also being removed but they are simply being pulled straight upwards so no digging is required.

Trenching in NSM parking lot is being done with a mini-Kubota (2' wide bucket).

Slight delay in beginning this excavation as one of the light standards is out of line with the rest. As luck would have it, it is the light standard at the SW end of the parking lot, where I need to monitor.

Started excavation at the southeast end of parking lot. Matrix is orange sandy landscaping fill, lt. grey crushed stone and crusher dust, mottle brown, black and grey cultural soil associated with the concrete footing to the east. This lot contains brick and CEW drainage pipe (broken). Directed the excavator (Kevin) to the west side of the lot to focus on the sensitive area first. The alignment of the light standard has now been fixed. Matrix here is crushed stone over a black ashy deposit (same as found along the access road to the south), then orange till. No artifacts other than a few small sherds of WRE and ironstone. Beneath the grassed area (pay parking meter), is orange landscaping fill, then the black/purple mottled ashy material over natural till. Piece of blue transfer printed WRE earthenware in mottled material beneath grassed area, CEW drainage pipe (broken), yellow ware sherd, cellulose (?) spoon handle (not collected).

On north side of grassed area, crushed gravel extends to 0.5 m in depth throughout.

Lot 1 – gravel and crusher dust to 23 cm below surface

Lot 2 – mottle orange/brown fill with gravel (associated with NSM parking lot construction) to 28 cm below surface.

Lot 3 – black/purple mottled ashy matrix related to secondary dumping episode to 61 cm below surface.

Lot 4 – sterile till, orange to 65 cm below surface.

Just beyond this (adjacent to old tree to the west – now cut down), black/purple ash is just being surface skimmed at the bottom of this trench. Larger backhoe is removing the tree stump. Soil is medium brown clean fill with boulder sized stones.

Left at 10:30.

**APPENDIX C:
ARTIFACT CATALOGUE**

FULL ENTITY NAME	Cataloguer_Rmks	Collection Unit	Material	Object Type	Object_Name	Quantit y
BdCv-36:00014-Bottle-Liquor Bottle	Production date: c. 1870-1915.	Access Road (off Summer St.)	Glass	Liquor Bottle	Bottle	1
BdCv-36:00015-Bottle-Soda Bottle	Production date: c. 1920-present	Access Road (off Summer St.)	Glass	Soda Bottle	Bottle	1
BdCv-36:00016-Pot-Storage Pot		Access Road (off Summer St.)	Ceramic, Coarse Earthenware	Storage Pot	Pot	2
BdCv-36:00017-Jar-Storage Jar		Access Road (off Summer St.)	Ceramic, Coarse Stoneware	Storage Jar	Jar	1
BdCv-36:00018-Indeterminate	Production date: 1835-1900	Access Road (off Summer St.)	Ceramic, Coarse Stoneware		Indeterminate	1
BdCv-36:00019-Jar-Marmalade Jar	Commemorative piece dated 1862.	Access Road (off Summer St.)	Ceramic, White Refined Earthenware	Marmalade Jar	Jar	1
BdCv-36:00020-Plate	Production date: c. 1830-1840.	Access Road (off Summer St.)	Ceramic, Pearlware		Plate	1
BdCv-36:00021-Pitcher	Production date: 1840-1930	Access Road (off Summer St.)	Ceramic, Ironstone		Pitcher	1
BdCv-36:00022-Bowl	Production date: 1830-20th century	Access Road (off Summer St.)	Ceramic, White Refined Earthenware		Bowl	1
BdCv-36:00023-Lid	Production date: 1830-present	Access Road (off Summer St.)	Ceramic, White Refined Earthenware		Lid	1
BdCv-36:00024-Ink well	Production date: 1800-1875	Access Road (off Summer St.)	Ceramic, Coarse Stoneware		Ink well	1
BdCv-36:00025-Bottle-Blacking bottle	Production date: 1800-1875	Access Road (off Summer St.)	Ceramic, Coarse Stoneware	Blacking bottle	Bottle	6
BdCv-36:00026-Jar		Access Road (off Summer St.)	Ceramic, Coarse Stoneware		Jar	1
BdCv-36:00027-Bottle-Ink bottle	Production date: c. 1835-1900	Access Road (off Summer St.)	Ceramic, Coarse Stoneware	Ink bottle	Bottle	1
BdCv-36:00028-Bottle-Medicine bottle?	Production date: c. 1885-present.	Access Road (off Summer St.)	Glass	Medicine bottle?	Bottle	1
BdCv-36:00029-Jar-Olive Jar?	Production date: c. 1856-1920.	Access Road (off Summer St.)	Glass	Olive Jar?	Jar	1
BdCv-36:00030-Pitcher?		Access Road (off Summer St.)	Ceramic, White Refined Earthenware		Pitcher?	2
BdCv-36:00031-Jar-Cosmetic jar	Production date: 1880-present.	Access Road (off Summer St.)	Glass	Cosmetic jar	Jar	1
BdCv-36:00032-Jar-Cosmetic jar	Production date: 1880-present.	Access Road (off Summer St.)	Glass	Cosmetic jar	Jar	1
BdCv-36:00033-Bottle-Soda bottle		New walkway from Bell Road	Glass	Soda bottle	Bottle	1
BdCv-36:00034-Ink well		South of Bell Road walkway beneath new paddock	Glass		Ink well	1
BdCv-36:00035-Mug		Light standard trench on west side of NSM parking lot.	Ceramic, Refined Earthenware		Mug	1
BdCv-36:00036-Plate		Light standard trench on west side of NSM parking lot.	Ceramic, White Refined Earthenware		Plate	1
BdCv-36:00037-Bottle-Milk bottle?		SE corner of NSM parking lot	Ceramic, Coarse Stoneware	Milk bottle?	Bottle	1
BdCv-36:00038-Bottle-Blacking bottle		SW corner of NSM parking lot north of driveway	Ceramic, Coarse Stoneware	Blacking bottle	Bottle	1
BdCv-36:00039-Bottle-Whiskey bottle		Surface collected by construction crew	Glass	Whiskey bottle	Bottle	1
BdCv-36:00040-Bottle-Soda bottle		Surface collected by construction crew	Glass	Soda bottle	Bottle	1
BdCv-36:00041-Bottle-Mineral water bottle		Surface collected by construction crew	Glass	Mineral water bottle	Bottle	1
BdCv-36:00042-Bottle-Medicine bottle		Surface collected by construction crew	Glass	Medicine bottle	Bottle	1
BdCv-36:00043-Tea Pot		Surface collected by construction crew	Ceramic, Ironstone		Tea Pot	1
BdCv-36:00013-Bottle-Liquor Bottle	Production date: c.1840-1900	Access Road (off Summer St.)	Glass	Liquor Bottle	Bottle	1