

**ARCHAEOLOGICAL
MONITORING OF THE
CONSTRUCTION OF
THE FORKS HERITAGE PLAZA**

Submitted to

THE FORKS-NORTH PORTAGE PARTNERSHIP

**QUATERNARY
CONSULTANTS
LIMITED**

March, 1996

EXECUTIVE SUMMARY

The development of The Forks Heritage Plaza entailed excavation of a central ceremonial bowl in the area between the Johnston Terminal and the Manitoba Children's Museum, on the north bank of the Assiniboine River. Ancillary components having the potential for impact upon sub-surface heritage resources were pre-boring for piling installation, excavations for footings of the orrery armatures, and an extension of the land drainage system into The Forks Archaeological Preserve. As numerous archaeological horizons had been recorded on the periphery of the projected plaza, an archaeological impact assessment was conducted during 1993. No significant resources were located during the assessment but, due to the adjacent presence of known resources, it had been recommended that archaeological monitoring of the construction of the plaza be undertaken.

During the monitoring program, it was ascertained that none of the known Precontact archaeological cultural horizons extended into the impact zone. The ceramic horizons recorded at North Point Node are not present at the location of the bowl. The ceramic horizon located near the southeast corner of the Johnston Terminal does not extend into the excavation zone. The edges of the Archaic horizon, located in The Forks Archaeological Preserve, seem to be north and west of the construction excavations.

Evidence of Fur Trade Period activities was minimal, consisting primarily of sub-surface soil horizons relating to horticultural practices. No structural evidence of the presence of Fort Gibraltar II/Fort Garry I was located in the impact zone, suggesting that it lies closer to the bank of the Assiniboine River—south of The Forks Heritage Plaza.

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1.0 INTRODUCTION

The Forks Heritage Plaza is being developed on the north bank of the Assiniboine River, between the Johnston Terminal and the Manitoba Children's Museum. The development consists of landscaping elements of a surface nature, and a central ceremonial bowl and orrery feature which has sub-surface impact. In the vicinity, several projects have recorded the presence of archaeological resources. At the North Point Node in The Forks National Historic Site, several Pre-Contact occupation horizons were recorded (Adams *et al.* 1990). During the North Assiniboine Node Assessment, to the west, evidence of the Hudson's Bay Company flour mill, a Woodland ceramic occupation horizon, and the extensive Archaic (3000 year old) occupation were recorded (Kroker 1989). Extensions of the Archaic horizon were investigated in conjunction with the Assiniboine Riverfront Quay Project (Kroker and Goundry 1993a), the 1992 Public Archaeology Project (Kroker and Goundry 1993b), and the 1993 Public Archaeology Project (Kroker and Goundry 1994). Due to the potential of impacting upon archaeological resources, a heritage impact assessment (HRIA) was undertaken in 1993 (Quaternary 1993). As a result of the HRIA, it was recommended that archaeological monitoring of all excavations extending beneath the railroad fill layers be conducted (Quaternary 1993:23).

The orrery construction project had three components which could encounter sub-surface archaeological resources: boring of holes for seating the armature pilings, excavations for the footings of the armatures, and excavation of the central bowl of the plaza (Figure 1). In addition, an extension of the land drainage system into the Archaeological Preserve was installed (Figure 1).

The monitoring of all components was conducted under Heritage Permit A67-95 (Appendix A) issued by Historic Resources Branch, Department of Culture, Heritage and Citizenship. The project was undertaken by Quaternary Consultants Ltd. and directed by Sid Kroker.

Preparatory to the onset of construction, a traditional sunrise ceremony was held on August 9, 1995. The ceremony, for the blessing of the site, was conducted by Mr. Lawrence Houle.

1.1 Study Team

The monitoring of the piling augering, armature footing excavations, bowl excavations, and land drainage excavations was conducted by Sid Kroker. Laboratory operations, resulting from artifact recovery, were supervised by Pam Goundry. Computer cataloguing was completed by Pam Goundry. Documentation and analysis has been undertaken by Sid Kroker and Pam Goundry.

1.2 Field Methodology

Each of the four components required a slightly different methodology, even though all were monitoring of construction excavation programs. All relied upon the field archaeologist visually inspecting the excavation procedures, recording stratigraphic profiles, and retrieving culturally diagnostic artifacts.

The eight armatures rest on footings which are anchored by three or four piles. The drilling for the seating of the piles was undertaken by AGRA Foundations with a truck-mounted rig using a 9" (23 cm) auger. The auger holes were drilled to a minimum depth of five metres and in most cases to a depth of eight to ten metres. Standard drilling practice is to auger to the base of the projected hole, allowing the soil to mound at the top of the auger and then clean the hole by pulling up the auger. This method does not enable determination of sub-surface strata and vertical placement of any artifacts which may be encountered. An arrangement was developed with the drilling crew which permitted sub-surface examinations without considerably increasing the time required for pre-boring. Under this arrangement, the first hole at each armature station was augered in sections. The auger bit is 5 ft (1.5 m) long and, if pulled at the end of each five foot section of drilling, will have the soil, relatively in place, on the auger bit. This enabled the monitoring archaeologist to ascertain the presence or absence of relict soil horizons and/or cultural horizons at each armature location. If no strata of relevance were encountered during the first hole, the remaining adjacent holes were bored using the standard technique. When a piling location was more than three metres from the first hole, it was augered in sections. Thus, at most armature Stations, two auger holes were examined in detail. The observations are detailed in Section 2.1

The second phase of the construction operation was the excavation for pouring concrete footings at each of the armature locations. These backhoe excavations were localized and rarely extended below the upper railroad cinder horizon. The excavations encountered soil strata which predated the cinder deposits only at Station 4 and Station 5. Observations are discussed in Section 2.2

The third phase of the construction was the excavation of the bowl for the plaza. The base of the excavations, at the centre of the bowl, was two metres below existing grade (Figure 2). Given the sloping sides of the bowl, only a portion of the excavation extended below the railroad cinder horizon which had an average depth of 110 cm. The excavation was carried out using a large backhoe and the excavated soil was directly loaded onto trucks for removal from the site. Due to a breakdown in communication between the contractor and the archaeological consultant, approximately one-quarter of the bowl was excavated before the archaeologist was notified. The unmonitored excavations extended from the beginning of the stairs at Station 1 to the armature location at Station 7 (Figure 1). Stratigraphic observations are detailed in Section 2.3.

The fourth component was the extension of the land drainage system into the Archaeological Preserve, west of the Heritage Plaza. The drainage system was installed by sub-surface boring from the western catchbasin, located within the Archaeological Preserve, to the edge of the excavated base of the bowl. Due to the distance involved, an intermediate vertical shaft had to be excavated west of the western edge of the bowl. The catchbasin in the Preserve was originally planned to have a base elevation of 228.02 metres above sea level. The Archaic horizon within the Archaeological Preserve lies at an elevation of 228.6 metres asl (Greco 1994:28) and the excavation for the installation of the catchbasin would have been deeper. Discussions with the architects, Hilderman Witty Crosby Hanna & Associates, attempted to have the base of the catchbasin excavation raised to above the potential Archaic horizon extension. However, the excavation extended to a depth of 326 cm below the surface grade of 231.25 metres asl, passing through the potential Archaic elevation. The stratigraphy observed in both vertical excavations is detailed in Section 2.4.

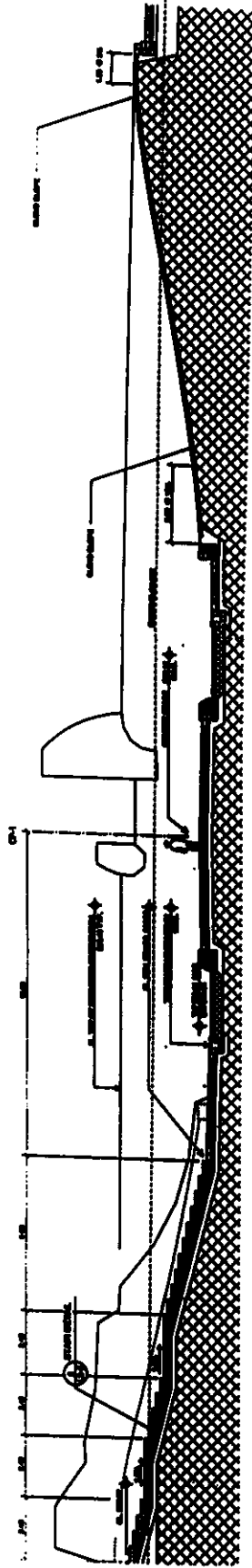


Figure 2: Vertical Cross-Section of The Forks Heritage Plaza

2.0 MONITORING OBSERVATIONS

Archaeological investigations consisted of visual inspection of the excavated soils in each of the components. Soil stratigraphy was recorded and diagnostic artifacts were hand-retrieved. Within the railroad strata, most non-diagnostic artifacts such as windowpane and nails were not curated.

2.1 *Piling Augering*

The monitoring consisted of visual inspection of the disturbed soil column observed from the auger cuttings. Given the plasticity of the soil and the resultant deformation of the soil column by the auger, only thick (more than 2 cm) cultural layers are readily observable. Thin horizons tend to become 'smeared' and, if observable, cannot be accurately placed in vertical context. Thus, the following observations are generalized as to depth below surface.

As the soil strata at The Forks consist of riverine sediments, there is a considerable variation in thickness and/or presence across short distances. Accordingly, detailed examination was conducted for auger holes which were separated by more than three metres. Where the data recovered from the second examined auger hole is the same as the first, a composite description is provided below.

Station 10 consisted of four auger holes. The upper 1.5 metres consist of gravel overlying the black cinder horizon, which rests on a dark brown silty clay horizon (15 cm). The subsequent strata are riverine sediments, primarily medium brown silty clay, interspersed with thin layers of sandy silt, clayey silt, and clay. No relict horizons were strongly enough defined to be observable.

Station 8 consisted of three auger holes. The upper 1.7 metres of Piling Hole 2 are gravel over black cinder, overlaying a dark brown silty clay horizon (15 cm). The subsequent strata are riverine sediments, primarily medium brown silty clay, interspersed with thin layers of sandy silt, clayey silt, and clay. A culturally sterile organic stratum (2.5 cm) is present at 2.8 metres. A stratum (15 cm) of light brown sand was encountered at 3.5 metres. The organic horizon was not present a Piling Hole 1.

Station 7 consisted of four auger holes. The first hole drilled was Piling Hole 4. The auger encountered fill consisting of gravel, cinder, black clay, and relocated silt for the upper 3.0 metres. The remainder of the augering passed through riverine sediments, primarily medium brown silty clay, interspersed with thin layers of sandy silt, clayey silt, and clay. No relict horizons were present. The second hole (Piling Hole 2) is railroad period strata of gravel, sand, cinder, and sand extending to a depth of 1.6 metres, resting on a dark brown clay stratum (20 cm). The lower riverine sediments consist of medium brown silty clay with a thick sand layer (25 cm) at 3.0 metres. Traces of hematite staining were observed in the basal section, below 7.0 metres. The other two holes were similar to Piling Hole 2.

Station 6 consisted of four auger holes. The stratigraphy at Piling Hole 4 replicated that observed at Station 7, with the upper 1.5 metres consisting of gravel over black cinder, resting on a dark brown silty clay horizon (15 cm). The subsequent strata are riverine sediments, primarily medium brown silty clay, interspersed with thin layers of sandy silt, clayey silt, and clay. The sand stratum is present at 3.0 metres. No relict horizons were observed.

Station 5 consisted of four auger holes. The upper 1.2 metres consist of minimal gravel overlying the black cinder horizon, which rests on a dark brown silty clay horizon (15 cm). Faunal remains were recovered from the cinder horizon and porcelain sherds from the dark clay horizon. The subsequent strata are riverine sediments, primarily medium brown silty clay, interspersed with thin layers of sandy silt, clayey silt, and clay. The sand stratum is lacking. Hematite staining of greyish brown clay was observed in the basal portion. No relict horizons were evident.

Station 4 consisted of four auger holes. The upper section of Piling Hole 4 consists of gravel and cinder to a depth of 90 cm, with an ash horizon extending to 1.4 metres. Coal fragments are present in the dark brown silty clay horizon below the ash. The remainder of the hole encountered the standard sequence of riverine sediments, with the sand stratum occurring at 3.2 metres. Piling Hole 1 and Piling Hole 2 were similar, although the ash horizon is not present and the cinder layer extends to the dark brown silty clay horizon at 1.4 metres and 1.3 metres, respectively. At Piling Hole 3, fill deposits consisting of gravel, black cinder, and relocated silts extend to 2.15 metres, below which are the riverine sediments. No relict horizons were observed.

Station 3 consisted of four auger holes. The upper 0.95 metres consist of gravel overlying the black cinder horizon, which rests on a dark brown silty clay horizon (15 cm). The subsequent strata are riverine sediments, primarily medium brown silty clay, interspersed with thin layers of sandy silt, clayey silt, and clay. Traces of a burnt tree trunk (very large charcoal fragments) were encountered at 2.2 metres. The sand stratum occurs at a depth of 3.2 metres. No relict horizons were strongly enough defined to be observable in Piling Hole 4, although very faint traces of organically modified silt were noted in Piling Hole 2 at depths of 2.2 and 2.8 metres.

Station 2 consisted of four auger holes. The upper metre is black cinder, overlaying a thin (2 to 3 cm) layer of rotted wood which rests on a dark brown silty clay horizon (5 to 8 cm). The subsequent strata are riverine sediments, primarily medium brown silty clay, interspersed with thin layers of sandy silt, clayey silt, and clay. A thick stratum (25 cm) of light brown sand was encountered at 2.5 metres. No relict horizons were strongly enough defined to be observable.

2.2 Armature Footing Excavations

The excavations for the concrete footings of the armatures were excavated around the piles which had been placed at each of the stations. The excavations were localized and relatively shallow, most being to a depth of 1.2 metres. Examination of the walls of the excavation provided profiles of recently deposited strata (Table 1). The excavations extended into riverine sediments only at Stations 4, 5, and 10. Faunal fragments were present in the cinder/ash layer at Station 5.

STATION STRATUM	2	3	4	5	6	7	8	10
Gravel	10	12	43	37	24	5	35	80
Cinder	120	120	104	83	52	135	128	148
Sand					86			158
Cinder					136			
Clay Fill			106	94	156			
Dk Brown Loam			132	107	162			175
Silty Clay			148	136				201

Table 1: Profiles of Footing Excavations

2.3 Excavations for the Central Bowl

The excavations for the ceremonial bowl at the centre of the plaza were the most extensive component of the project. In general, the bowl had sloped sides (Figure 2), except for the western portion where the excavation was straight-walled for the installation of a curvilinear ramp to the circular base. The vertical wall continued from Station 8 to Station 5, after which the excavation accommodated the sloped sides of the bowl. The excavations began in the northwest quadrant, moving toward the south. For that portion of the bowl which was sloped, only the inner ring was excavated below the railroad horizons. To facilitate surveying, the centre of the excavation area was retained as an island until nearly all of the bowl had been excavated.

To allow for the installation of finishing elements in the centre of the bowl, which are at a final elevation of 228.71 metres asl, the base of the bowl was excavated to approximately 228.00 metres asl which required excavation depths ranging from 3.0 metres to 3.75 metres below the existing irregular surface. Areas to the west of the centre were at a higher beginning elevation (averaging 231.75 metres) while the eastern portion was lower (averaging 231.00 metres).

The soil profiles (Tables 2, 3, 4) observed during the excavation were very similar to those recorded during the heritage resource impact assessment (Quaternary 1993:17-21). The upper metre consisted of recent deposits during the railroad period and are dominated by black cinder, the residue of coal burning activities, i.e., power for locomotives, heating of the various buildings, or energy and heat production at the Steam Plant. Other components of the railroad horizon include sand and gravel resulting from land modification activities and ash layers. Some of the disjunct ash layer appears to relate to the previously identified 'Winnipeg Dump Site #1' horizon (Kroker 1989:181). This horizon is not as dense or continuous as was recorded to the west during the North Assiniboine Node impact assessment.

The dark brown soil horizon represents the original soil surface during the period of the Hudson's Bay Flour Mill complex (1874 - 1907) and would have formed upon the sediments deposited by the floods of the 19th century, i.e., 1826, 1852, 1861, and 1881. Due to the vagaries of sediment deposition in riverine situations, not all of these flood episodes are present in the soil columns.

DEPTH OF STRATUM	ELEVATION	DESCRIPTION
0	231.90	Surface
0 - 180	230.10	Cinder fill, predominately black
180 - 210	229.80	Dark brown loam (A & B Horizons), coal dust
210 - 238	229.52	Medium brown silty clay
238 - 273	229.17	Light brown sand
273 - 297	228.93	Banded silt layers (brown, greyish, hematite)
297 - 304	228.86	Yellow brown sand
304 - 314	228.76	Medium brown silty clay
314 - 314	228.76	Faint relict A Horizon (7 mm)
314 - 325	228.65	Medium brown silty clay
325 - 325	228.65	Faint relict A Horizon (3 mm)
325 - 336	228.54	Medium brown silty clay
336 - 336	228.54	Faint relict A Horizon (5 mm)
336 - 386	228.04	Medium brown silty clay

Table 2: Soil Profile at the Northwest Vertical Wall (between Stations 7 & 8)

DEPTH OF STRATUM	ELEVATION	DESCRIPTION
0	231.15	Surface
0 - 85	229.30	Black cinder fill, gravel
85 - 120	229.95	Medium brown silty clay
120 - 135	229.80	Medium red-brown silty clay, Faint A Horizon
135 - 152	229.63	Medium brown silty clay
152 - 165	229.50	Light brown sand
165 - 171	229.44	Medium brown silty clay
171 - 176	229.39	Plow Zone - grey brown clay
176 - 192	229.23	Medium brown silty clay
192 - 195	229.20	Light brown sand
195 - 216	228.99	Grey brown silty clay
216 - 230	228.85	Light brown sand
230 - 320	227.95	Medium brown silty clay, marl inclusions

Table 3: Soil Profile at Centre of Bowl Excavation

DEPTH OF STRATUM	ELEVATION	DESCRIPTION
0	231.75	Surface
0 - 129	230.46	Black cinder, clay fill, gravel
129 - 142	230.33	Dark brown loam
142 - 156	230.19	Medium brown silty clay
156 - 156	230.19	Relict A Horizon
156 - 217	229.58	Medium yellow-brown silty clay
217 - 220	229.55	Medium red-brown silty clay
220 - 234	229.41	Medium brown silty clay
234 - 234	229.41	Faint A Horizon (4 mm)
234 - 239	229.36	Medium brown silty clay
239 - 249	229.26	Light brown sand
249 - 370	228.05	Medium brown silty clay

Table 4: Soil Profile at West Edge of Bowl Excavation (Station 6)

During the impact assessment, a soil horizon relating to the agricultural activities of the Hudson's Bay Company Experimental Farm was observed (Quaternary 1993:20). This horizon, the Plow Zone, was present in the centre profile (229.39 metres) but not in the other two profiles. An equivalent soil horizon, consisting of a medium red-brown silty clay occurs at the west profile (229.55 metres). This horizon was not as extensive, or as continuous, as the profiles recorded in the assessment trenches (Quaternary 1993:Figure 4, Figure 5) would indicate. Presence of the discontinuous horizon was sporadic in the west half and rarely visible in the portion of the east half which extended below the railroad horizons. Given the interrupted nature of the stratum, it may not represent the cultivation activities of the farm which centred around five buildings located north of the current Manitoba Children's Museum (Warkentin and Ruggles 1970:192). The Experimental Farm was established in 1836 but, by 1838, only 20 acres had been cultivated. The farm, as a project of the Hudson's Bay Company, was abandoned in 1841. However, Captain George Cary, the former HBC manager, continued to operate a portion of it as a private enterprise until 1847 (Coutts 1988:131). The traces of the soil modification represented by the Plow Zone stratum may actually represent garden plots rather than an extensive cultivation area. Guinn (1980a:87) records that the Chelsea Pensioners arrived from Britain to take up farming lots in 1848. Until accommodations were provided along the Assiniboine River, west of Upper Fort Garry, these individuals resided in the few buildings from Fort Garry I that had survived the 1826 Flood. They may have planted small gardens, preparatory to establishing their farms the following year.

Three instances of flood-deposited sand horizons were observed at the centre of the excavation, two were recorded at the northwest profile, and only one at the west profile. The sand layer at the west profile (229.26) appears to correlate with the upper layer at the northwest profile (229.17 metres) and the middle stratum at the centre profile (229.20 metres). These would represent the same event—probably the 1826 flood, as it occurs below the layer identified as the Plow Zone. The upper sand stratum at the centre profile (229.50 metres) would represent a later flood, either the 1852,

1861, or 1881 flood. The lowest sand horizon at the centre profile (228.85 metres) correlates with the lower layer at the northwest profile (228.86 metres) and would represent an earlier flood, perhaps the large flood which occurred during the 1790s.

Based upon the tentative seriation of the flood deposits, the relict soil horizons observed at the northwest profile predate the 18th century. The uppermost could represent the soil surface immediately prior to the 1790s flood. During the North Assiniboine Node impact assessment, a cultural horizon, containing a hearth and associated ceramic sherds, was recorded south of the Johnston Terminal (Kroker 1989:150). This horizon occurred immediately below a thick sand layer and may correlate with the upper relict soil horizon at the northwest profile. The two lower relict horizons would have occurred earlier and may correlate with the cultural horizons recorded during the Canadian Parks Service mitigative operations at the North Point Node (Adams *et al.* 1990)

All relict soil horizons were not continuous. Throughout the excavation area, traces of former soil zones occurred which would truncate after extending for a maximum distance of two or three metres. The horizons recorded at the northwest profile are no exception. The most extensive horizon, the lowest, disappeared after being traced along the wall for a distance of three metres. No cultural evidence relating to Precontact occupations was present in any of the relict soils.

Numerous locations within the excavation area showed evidence of prior impact. The installation of an abandoned combined sewer line had transected the western portion of the bowl (Figure 3), as had the installation of a former watermain. The trenches of the impact assessment (Quaternary 1993) encountered evidence of sub-surface disturbance which suggested that the earlier maps showing the placement of these services were not exact. During the bowl excavations, the former in-filled trench for the watermain was observed to run nearly parallel to the HRIA trenches, accounting for the presence of the recent disturbance recorded in the north/south trench (Quaternary 1993:Figure 4). The iron pipe for the watermain was encountered at depths approximating 2.8 metres below surface. The position for the fire hydrant was located, lying directly between the centre of the excavation and Station 5. The confirmed position for the hydrant indicates that the earlier maps were not exact, as had been hypothesized (Quaternary 1993:23), and that the watermain actually was seven metres further east than shown on the maps (Figure 3).

2.4 Land Drainage Excavations

The land drainage extension tied into the component which had been installed during the Children's Museum site services program (Quaternary 1993:25). This line had been terminated at the previously existing manhole, near the centre of the projected location of the bowl of the Heritage Plaza (Quaternary 1993:Figure 6). The new line extended from the previous terminus, oriented in a southwesterly direction, to the central portion of the Archaeological Preserve. The first portion of the line was installed in an open cut 75 cm wide and extending approximately 0.75 metres below the base of the excavation of the bowl. The remaining portion, from the western edge of the bowl to the catchbasin in the Archaeological Preserve, was installed by sub-surface boring. The distance between the edge of the bowl and the catchbasin (32 meters) required the excavation of an intermediate vertical shaft. The intermediate shaft was located 20 metres west of the bowl wall and

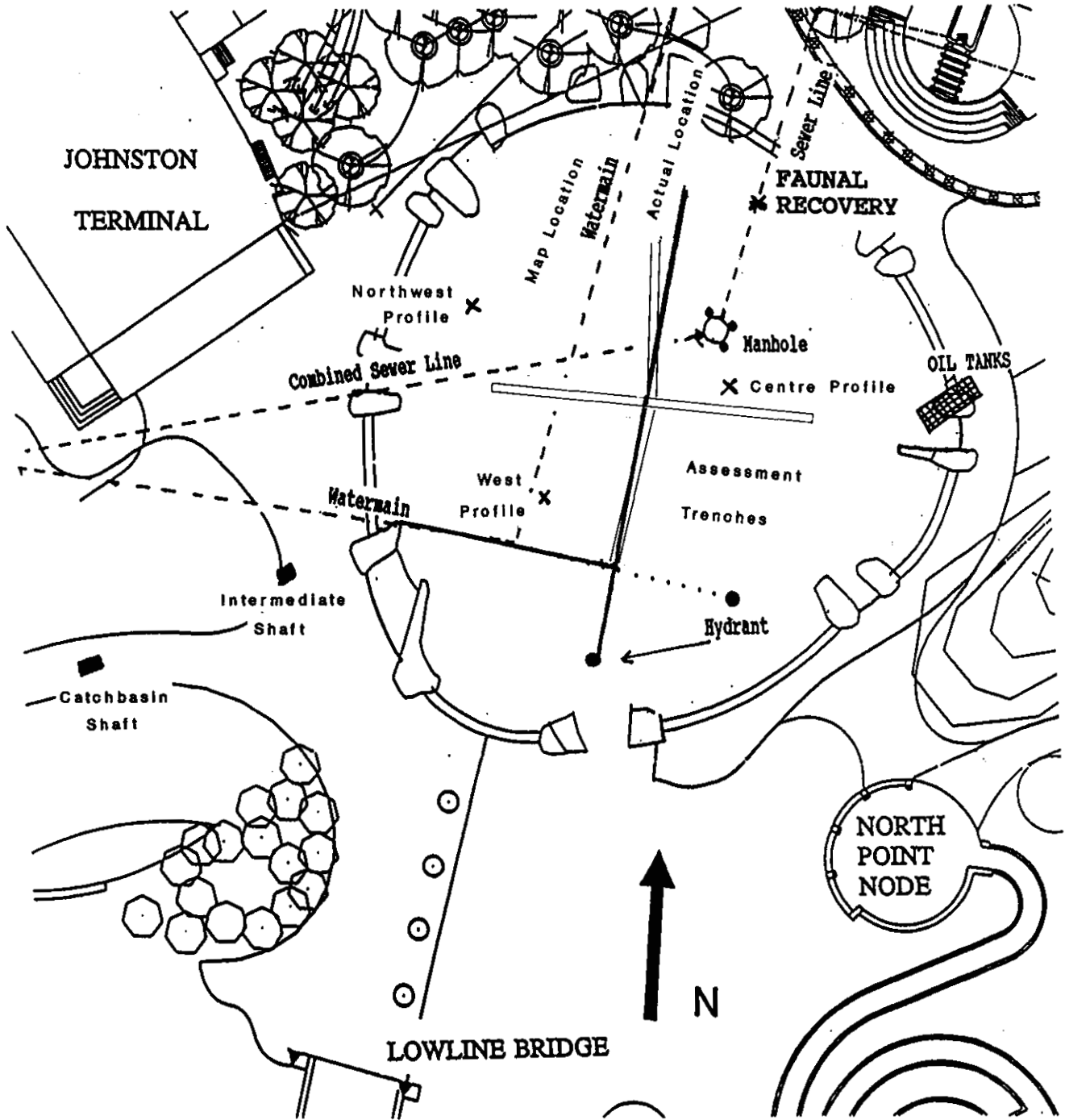


Figure 3: Map of Relevant Features

was 2.5 metres long by 1 metre wide. The base of excavation for this shaft was 420 cm below surface which is at 231.8 metres above sea level. The excavation for the installation of the catchbasin was approximately 4 metres by 2 metres and extended to a depth of 326 cm below surface at 231.25 metres above sea level.

The open cut across the base of the bowl encountered three relict soil horizons. All three were extremely thin (averaging 2 to 3 mm in thickness) and intermittent. Slight traces of minute charcoal fragments were present in each horizon but no evidence of cultural material or faunal remains were present. The depths of the horizons are 4 cm, 43 cm, and 67 cm below the base of the bowl.

The intermediate vertical shaft was situated near the former trackbed which connected with the Low Line Bridge. The upper stratigraphy (Table 5) results from railroad activities. The layer containing the brick results from the demolition of the track warehouse associated with the Hudson's Bay Flour Mill Complex in 1911 (FRC 1989:60). The strongly defined soil horizon at 140 to 160 cm below surface represents original ground surface during the period preceding the arrival of the Northern Pacific and Manitoba Railroad in 1888. The sand layer below the brick horizon could date to any of the four floods of the 19th century: 1826, 1852, 1861, or 1881. The 1826 flood was the most extensive. Records indicate that the remnants of the re-used portion of Fort Garry I (originally Fort Gibraltar II), located in the vicinity, were eradicated by the 1852 flood. The Double A Horizon was observed during the North Assiniboine Node Assessment (Kroker 1989:Figure 17) and noted to be present in other areas at The Forks (Kroker and Goundry 1990:148). The elevation of the faint soil horizon at 228.17 metres could be a continuation of the former soil level coincident with the Archaic occupation levels (Greco 1994:28).

DEPTH OF STRATUM	ELEVATION	DESCRIPTION
0	231.80	Surface
0 - 70	231.10	Cinder fill, predominately black
70 - 110	230.70	Ash, coal fragments
110 - 115	230.65	Dark brown clay fill
115 - 140	230.40	Brick, clay fill
140 - 160	230.20	Dark brown loam (A and B Horizons)
160 - 180	230.00	Medium brown sand
180 - 187	229.93	Medium brown silty clay
187 - 190	229.90	Double A Horizon
190 - 363	228.17	Medium brown silty clay with thin sand lenses
363 - 363	228.17	Faint relict A Horizon (2mm)
363 - 405	227.75	Medium brown silty clay
405 - 420	227.60	Medium brown sand

Table 5: Soil Profile for Intermediate Vertical Shaft

The stratigraphy of the catchbasin excavation demonstrated prior impact in the eastern half (Figure 4). The prior disturbance consisted of an infilled excavation trench for the placement of a terracotta pipe sloping toward the Assiniboine River. The undisturbed soils were recorded on the north wall of the excavation at the west end (Table 6). Some similarity can be observed between the two excavations, i.e., the presence of the 19th century soil zone and the Double A Horizon. No cultural material was present in any of the strata in either excavation.

DEPTH OF STRATUM	ELEVATION	DESCRIPTION
0	231.25	Surface
0 - 95	230.30	Cinder fill, predominately black
95 - 117	230.08	Disturbed dark brown clay fill
117 - 132	229.93	Light brown silty sand (fill)
132 - 140	229.85	Dark brown loam (A Horizon)
140 - 153	229.72	Medium brown silt (B Horizon)
153 - 202	229.23	Medium brown sand
202 - 207	229.18	Medium brown silty clay
207 - 213	229.12	Double A Horizon
213 - 217	229.08	Medium brown silty clay
217 - 217	229.08	Faint relict A Horizon (2mm)
217 - 244	228.81	Medium brown silty clay
244 - 245	228.80	Faint relict B Horizon (A Horizon missing)
245 - 308	228.17	Medium brown silty clay
308 - 326	227.99	Brown clayey silt with marl inclusions

Table 6: Soil Profile for Catchbasin Vertical Shaft

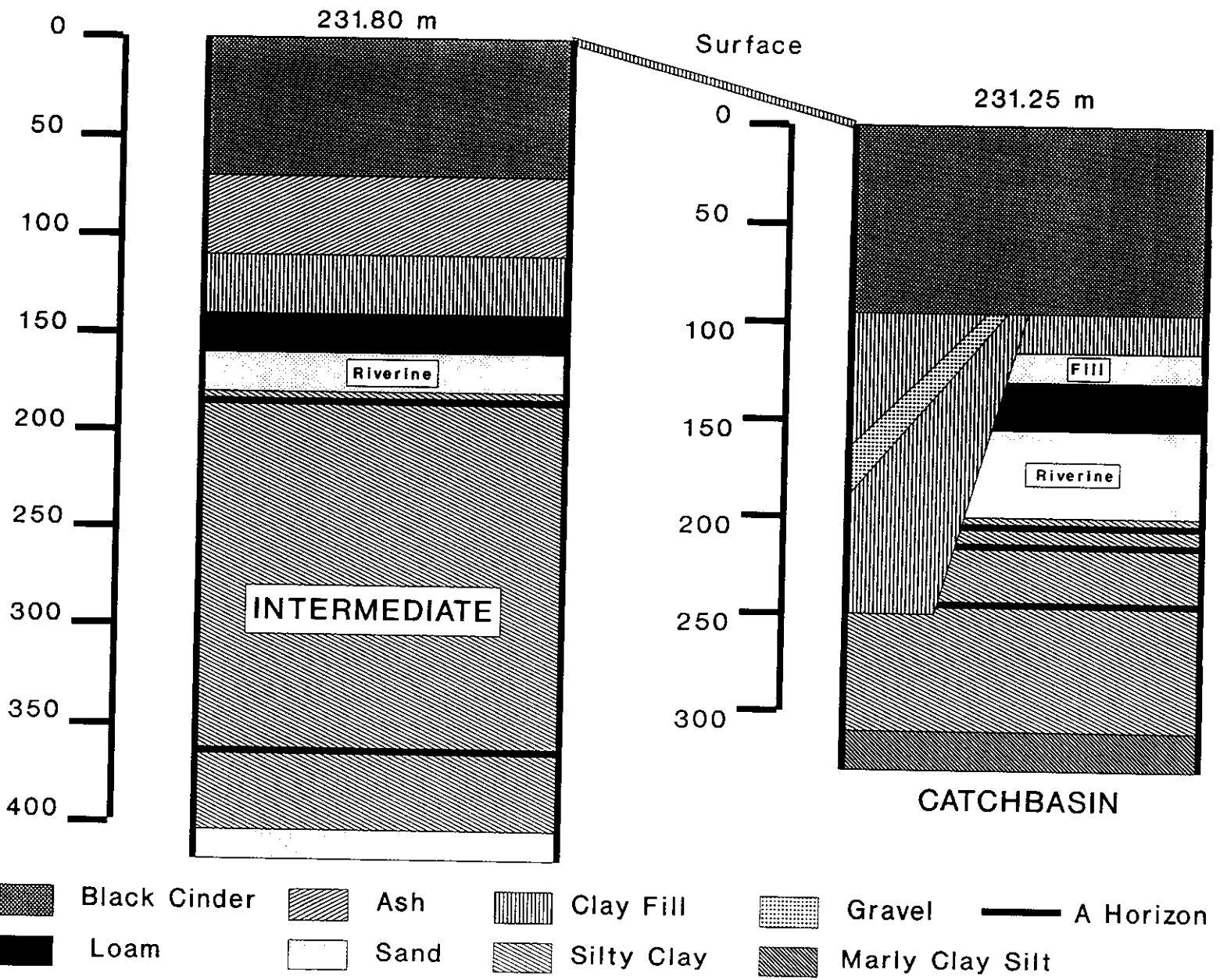


Figure 4: Land Drainage Excavation Profiles

3.0 HISTORIC ARTIFACTS

The artifacts, recovered during the monitoring for the development of The Forks Heritage Plaza, have been analyzed within functional categories based on the Canadian Heritage Inventory Network (CHIN) cataloguing format. All manufacturing equipment or all hardware will be examined together, rather than examining all glass artifacts and then all metal artifacts, as is often the case in reports of historic archaeological recoveries. The artifacts were recovered from two levels—the Railroad Horizon and the Plow Zone.

3.1 Railroad Horizon

The railroad horizon encompasses all deposits within the last century. The Northern Pacific and Manitoba Railroad purchased land from the Hudson's Bay Company in 1888 and began surface preparations that year. Construction activities occurred northeast of the plaza location with the building of the Roundhouse (demolished in 1926) and the Engine Repair Building (now the Manitoba Children's Museum). Land grading and levelling occurred (Guinn 1980a:140) in conjunction with the construction of a bridge across the Assiniboine River. There were large quantities of ash and cinder residue from coal-burning locomotives, as well as from the Steam Plant (built in 1947), which the rail companies disposed of by using it as landfill to elevate the ground level at the East Yard.

Debris associated with daily activities in a major railroad marshalling yard are found in the cinders. In addition, the demolition of buildings contributes to the matrix. The nearby Hudson's Bay Company Flour Mill was demolished in 1907. During the North Assiniboine Node impact assessment, a horizon, primarily ash with a concentration of household artifacts, was identified as Winnipeg Dump Site #1 (Kroker 1989:181). Dating between 1910 and 1915, this horizon intermittently occurs between layers of cinder.

The density of artifacts within the railroad horizon is dependant upon secondary and tertiary redeposition. Land modification activities occurred throughout the past century with the construction and subsequent removal of buildings and tracks. Artifacts which had been deposited in one location may have actually been moved several times before they reached their final position.

3.1.1 Architectural Objects

This functional category includes all artifacts which are used for the construction, the maintenance, and the furnishing of structures. These items can be made of many different materials: metal, glass, wood. Due to corrosion and fragmentation, many architectural objects are seldom identifiable to manufacturer or time period. Only two artifacts, recovered from the Railroad Horizon, were assigned to this category, both in the Accoutrements sub-category.

3.1.1.1 Accoutrements

Artifacts ascribed to this category pertain to the finishing touches of a structure. Only windowpane sherds were curated. DILg-33:95B/13 and 14 are single, plate glass sherds. DILg-33:95B/13 is aqua, while DILg-33:95B/14 is clear.

3.1.2 Lighting Equipment

Due to the rapid evolution in lighting techniques which occurred during the twentieth century, artifacts in this category are varied. They can represent candlelight, gaslight, and electric light.

3.1.2.1 Electric Lighting

One catalogue number was assigned to the sub-category of electric lighting. DILg-33:95B/31 is a single, thin (2.9 mm), white, glass body sherd from a light globe. This sherd is similar to, but thinner than, two sherds (DILg-33:95F/5 and 17) recovered during the monitoring of the Parking Lot Drainage System project north of Forks Market Road (Quaternary 1996:8).

3.1.3 Faunal Remains

All seventeen recovered faunal specimens, from the Railroad Horizon, are the residue from food resources (Table 7). The specimens were identified using standard references: Gilbert (1973), Olsen (1960, 1964), and Schmid (1972). All faunal remains were identified as specifically as possible: body part, age of individual, and species. Evidence of butchering techniques (cutting, axing, or sawing) and the condition (charred, broken, chewed, or gnawed), if applicable, was recorded.

TAXON	ELEMENT	QTY	CAT. #	COMMENTS
Sheep/Goat (<i>Ovis?/Capra?</i>)	Metacarpal	1	3	Complete
	Metatarsus	1	4	Complete; Copper stain
Cow (<i>Bos taurus</i>)	Rib	1	1	Sawn
	Vertebra	1	2	Sawn
	Radius/Ulna	1	6	Complete; Axed
	Carpus/Tarsus	3	7	Complete; Cut marks
	Rib	1	8	Spiral fracture
	Mandible	1	9	Spiral fracture
	Long bone	2	10	Sawn
	Vertebra	2	11	Sawn
	Radius/Ulna	1	12	Axed
	Vertebra	1	29	Broken
	Femur	1	30	Broken

Table 7: Mammal Recoveries from the Railroad Horizon

As noted in Table 7, most of the fifteen recovered cow (*Bos taurus*) specimens show evidence of butchering activities: sawn, cut marks, axe cut, or spiral fracture. All of the elements were identified as adult specimens. Most, with the exception of the radius/ulna and the carpals, were incomplete.

Two complete elements were identified to sheep (*Ovis aries*) or goat (*Capra hircus*). Similarities of most elements between these two species rarely permit specific identifications. Copper staining, the result of secondary deposition where the bone was in contact with a copper alloy, occurs on the metatarsus (DILg-33:95B/4).

3.1.4 Containers

This category includes all artifacts, or portions of artifacts, which are used to contain products. As such, it tends to cross-cut other functional divisions, with assignment to the category based upon form, as much as function. The category contains several sub-categories (Manitoba Museum of Man and Nature 1986), three of which are applicable to the artifacts recovered during this project:

- a. Storage - the purpose of the container is to hold material, e.g., bottles, jars, tin cans, boxes;
- b. Cooking - containers used in the preparation of food, e.g., pots and pans; and
- c. Dinnerware - the artifact is used in the serving or eating of food.

Within the analytical and computer cataloguing hierarchy, dinnerware is considered as a sub-category of containers. However, for discussion purposes, it is usually treated as a distinct and separate group. In part, this is due to the large quantities usually recovered, as well as the detail of information that can be derived from dinnerware specimens. Accordingly, the dinnerware recoveries are discussed in Section 3.1.4.3.

3.1.4.1 Storage

Storage containers include most of the commonly used artifacts in today's material culture. Many products are sold, transported, carried, or stored in a container of some type: bag, box, barrel, jar, sealer, can, bottle, pail. These containers come in a variety of material types, two of which, ceramic and glass, were recovered during this project

3.1.4.1.1 Ceramic Containers

Only one example of a ceramic container was recovered. DILg-33:95B/22 is a stoneware sherd from a jug with a grey exterior and a brown interior. There were no markings on this sherd to indicate a manufacturer.

3.1.4.1.2 Glass Containers

One complete bottle and six sherds from glass containers were recovered. Indications of the method of manufacture, which provide information about time period and technology, are often present on these artifacts. Where possible, the specimens have been identified to type of container, i.e., bottle,

sealer, jar. Jars are defined as containers which have a generally cylindrical body and a mouth which is greater than 2/3 of the diameter of the widest part of the base or body, while bottles have a constricted mouth and neck. Further identification, to a functional sub-type such as milk or wine bottle, has been done where possible.

3.1.4.1.2.1 Milk (or Dairy) Bottles

DILg-33:95B/32 is the lip, neck portion of a clear, quart-sized milk bottle. The body is ribbed. This type of decoration is found on bottles belonging to the Crescent Creamery Company in Manitoba, as well as dairies from other provinces. There are no markings on this bottle to indicate a particular company.

3.1.4.1.2.2 Wine Bottles

DILg-33:95B/33 is a green, lip, neck portion of a wine bottle. A flattened string rim occurs below the flat lip. This style is known as a flat top champagne finish (Jones and Sullivan 1985:88). No traces of mold seams are present on the neck, although vertical striae due to elongation during blowing are evident.

3.1.4.1.2.3 Liquor Bottles

This sub-type is a catchall for bottles that held some type of spirits but could not be assigned to whisky, gin, beer, etc. DILg-33:95B/37, the only complete bottle, appears to have been manufactured by the turn molding process. This process began in the 1870s and continued through WWI (Jones and Sullivan 1985:30-31). The aqua bottle is totally symmetrical with a cylindrical body, a bulged neck, and a down-tooled lip. DILg-33:95B/36 is a brown, body, base sherd from a cylindrical bottle produced in a two-piece post mold. The numeral 1, with serifs, is embossed on the base.

3.1.4.1.2.4 Unassignable Bottles

Artifacts in this grouping have some identifying characteristics, such as shape or manufacturer's marks. However, the data is insufficient to permit identification of the function of the container; i.e., sealer versus milk bottle or medicine bottle versus condiment bottle. Some specimens with marks could be attributed to a manufacturer but not to a functional grouping. Occasionally, the style of manufacture of the neck and lip of bottles suggests the possible contents of the container. Also, the type of closure and evidence of manufacturing technique can provide approximate dates. For example, the length of the mold seam can indicate a general age; e.g., if the seam extends to the lip of the bottle, it was produced after 1920.

Two sherds were assigned to this sub-type. DILg-33:95B/34 is the neck, lip portion of an aqua bottle. The mold seam terminates at the base of the neck, which is topped with a bulbous out-sloped finish. The interior bore is tapered suggesting closure with a cork wrapped glass stopper. The bottle probably was blown-in-mold prior to WWI. DILg-33:95B/35 is a clear, body, base sherd from an ovoid bottle. It was manufactured in a two-piece post mold and the centre portion of the base is

recessed. A portion of the identifying text is present on the side with letters, including "...N...", inside an embossed circular line.

3.1.4.2 Cooking

One catalogue number, consisting of five artifacts, was assigned to the cooking sub-category. DILg-33:95B/21 is the lip, body portion of a kitchen-style mixing bowl. It is plain yellow in colour on both the interior and exterior surface and has no markings to indicate a manufacturer.

3.1.4.3 Dinnerware

Even though plates, cups, bowls, etc., are types of containers and technically would be catalogued as a sub-category of the container hierarchy, in terms of general parlance and analytical methods, items used for the serving of food or tableware can be considered as a distinct entity. Accordingly, they have been elevated to a separate section due to the variety encountered and the different types of information that may be derived from these artifacts as opposed to other containers, i.e., bottles, cans, vases, chamber pots. Dinnerware comes in a variety of material types—plastic, glass, ceramic—however, only ceramic artifacts were recovered during the monitoring of this project.

3.1.4.3.1 *Ceramic Artifacts*

Ceramic dinnerware includes place settings—plates, small bowls, cups and saucers, etc.—and serving pieces—platters, large bowls, creamers, etc. As noted earlier, archaeological recoveries are often too fragmented to allow exact identification. This is reflected in the use of object types such as bowl?, plate?/saucer?, and bowl?/cup?. Because dinnerware is usually manufactured in sets of the same patterns, the decorative features of a set cross-cut the types of objects. The recoveries are separated into groups based on colour and, within each colour category, decorative design and any information such as manufacturer, jobber, company of use, etc. will be discussed.

3.1.4.3.1.1 White Ceramics

Two catalogue numbers comprising three sherds were curated. As noted in other reports these white sherds are only fragments of complete objects, there may be patterns with other colours that fit onto these sherds.

DILg-33:95B/23, two sherds, is the body base portion of a cup. There are no markings on this specimen to indicate a manufacturer. DILg-33:95B/24 is the lip, body, base of a dessert-sized plate. The lip is scalloped and the body has a vertical rippled pattern. It, too, has no marks to indicate a manufacturer.

3.1.4.3.1.2 Gold-on-White Ceramics

DILg-33:95B/25 is the lip, body portion of a thin-walled cup. It has a single gold line along the lip and an arabesque pattern, 9.8 mm wide, which falls from another gold line 2.0 mm below the lip on the exterior surface.

3.1.4.3.1.3 Blue-on-White Ceramics

The blue-on-white colour category consists of two catalogue numbers representing three sherds. DILg-33:95B/5, two sherds, is the body,base portion of a plate. The plate has a light blue background over which a darker blue tree and fluffy white/blue clouds are painted. There is no maker's marks or pattern name on these sherds.

DILg-33:95B/26 is a lip,body,base sherd of a plate. The pattern consists of a thick dark blue line with a thinner line just below it, near the lip, and a second thinner blue line at the junction of the body with the base. This pattern is ubiquitous to this area (Kroker and Goundry 1993a:93-94). During the Assiniboine Riverfront Quay project, two recovered sherds with this pattern (DILg-33:89B/708 and DILg-33:89B/979) have, in addition to the blue lines, a circular blue logo with "CANADIAN NORTHERN" printed inside it. Although DILg-33:95B/26 has no markings whatsoever, it could possibly have been used by the railroad. The Canadian Northern Railway began as the result of the union of two smaller Manitoba railway branch lines (Regehr 1985:277). The dates of the beginning and end of the Canadian Northern Railway vary somewhat according to references. Tucker (1985:276) states that the Canadian Northern Railway was founded by William MacKenzie and Donald Mann in 1895, while Regehr (1985:277) notes that incorporation of the Canadian Northern Railway took place in 1899. The dates of demise of the railway also vary. Tucker (1985:276) states that the Canadian Northern Railway was absorbed (along with four other railways) into the Canadian National Railways system between 1917 and 1923. Regehr (1985:277) notes that the Canadian Northern Railway ended as an independent company with nationalization in 1918, while Guinn (1980b:1) points out that the Canadian Northern Railway was in existence prior to amalgamation of the railroads in 1921.

3.1.4.3.1.4 Black-on-White Ceramics

Two catalogue numbers were catalogued in this colour grouping. DILg-33:95B/27 consists of four body sherds from either a bowl or a cup with a pattern of a tree with blossoms, possibly apple blossoms. DILg-33:95B/28 is fifteen lip and body sherds of a bowl. The pattern, on these sherds, includes lanceolate leaves and paniced flowers and berries. This pattern has been tentatively identified as Dogwood.

3.2 *Plow Zone*

As noted earlier, the Plow Zone is an extensive layer of buried, modified soil which occurs throughout The Forks. This horizon is associated with the agricultural activities of the Hudson's Bay Company Experimental Farm (1836-1847). However, due to the disjunct nature of the deposits in this area, the horizon could represent garden plots located near the former site of Fort Garry I which was severely damaged during the 1826 Flood. Some buildings were still usable and housed the Chelsea Pensioners in 1847. Artifacts from this horizon would represent activities from the nearby Experimental Farm or household activities based at the remnants of the fort.

3.2.1 Architectural Objects

As noted earlier, this functional category includes all artifacts which are used for the construction, the maintenance, and the furnishing of structures. Only one artifact, recovered from the Plow Zone, was assigned to this category, in the Hardware sub-category.

3.2.1.1 Hardware

One iron, hand wrought nail was curated. Hand wrought nails are the earliest form of nail and were used, in Canada, throughout the 17th and 18th century as well as into the 19th century (Nelson 1968:6). These nails were made on an individual basis by a blacksmith and are distinguished by a square cross-section with a relatively uniform taper from the head to the point. Numerous styles such as rose-head, T-head, and L-head can be identified. DILg-33:95B/15 is an incomplete, corroded hand wrought nail. The head type is indistinguishable.

3.2.2 Faunal Remains

All of the recovered faunal specimens, from the Plow Zone, are the residue from food resources (Table 8). Common names were used to list the identifications, the specimens were identified using the standard references, all faunal remains were examined and identified to body part, age of individual, and species, and any evidence of butchering techniques and the condition of the specimens was recorded.

Six elements were definitely identified as cow (*Bos taurus*), while the undesignated large mammal skull fragment is probably also bovine. Although all specimens are broken, none showed any indication of butchering techniques or post-butchered trauma.

TAXON	ELEMENT	QTY	CAT. #	COMMENTS
Mammal Large	Skull	1	20	Broken
Cow (<i>Bos taurus</i>)	Innominate	2	16	Broken
	Vertebra	2	17	Broken
	Rib	1	18	Broken
	Long Bone	1	19	Broken

Table 8: Mammal Recoveries from the Plow Zone

4.0 DISCUSSION

Most of the recovered artifacts derive from the railroad period. Very few, if any, are the result of primary deposition. The windowpane and lighting equipment may have resulted from the demolition of the nearby HBC track warehouse, although they, too, probably were deposited elsewhere and moved into this location by land modification activities. The few fragments of bottles and dinnerware indicate that little of the garbage disposal area, designated as Winnipeg Dump Site #1 (Kroker 1989:181), was present. In essence, the railroad horizon in this area is relatively sterile, in contrast to other nearby locations (Kroker 1989; Kroker and Goundry 1990, 1993a).

Archival data indicates that events occurred at the northeastern periphery of the impact zone. A roundhouse, attached to the north end of the Northern Pacific and Manitoba Engine Repair Building [later known as the B&B Building and now housing the Manitoba Children's Museum], was built in 1888/9 and demolished in 1926 (Guinn 1980b:4-8). A series of tracks ran through the area: from the Low Line Bridge into the centre of the East Yard; from the Low Line Bridge to the Engine Repair Building and Roundhouse; and from the CNR main line to the Engine Repair Building (Kroker 1989:161-163).

Prior to its demolition in 1911, the Hudson's Bay Company Track Warehouse was located on the west side of the main line from the Low Line Bridge. After construction of the Johnston Terminal, in 1928, on the west side of the main line, freight was unloaded into the east side of the building, with drayage pickup on the west side. Except for railroad maintenance personnel, minimal access to the location of the plaza occurred from 1930 to 1988.

The Moody map of 1848 (Warkentin and Ruggles 1970:192) depicts five buildings of the Hudson's Bay Experimental Farm complex to the north of the Engine Repair Building. The Experimental Farm was established in 1836 but, by 1838, only 20 acres had been cultivated. The farm, as a project of the Hudson's Bay Company, was abandoned in 1841. However, Captain George Cary, the former HBC manager, continued to operate a portion of it as a private enterprise until 1847 (Coutts 1988:131). Traces of the agricultural activities are represented by the Plow Zone stratum in soil profiles at many locations (Kroker and Goundry 1990; Quaternary 1993). The Plow Zone stratum is usually extensive, consisting of a continuous layer of modified soil. The representations of modified soil recorded during the monitoring activities are discontinuous and thinner than the usual Plow Zone manifestations. Accordingly, they are interpreted as garden plot activities during the same time period, either in conjunction with the agricultural activities at the Experimental Farm or during the residence of the Chelsea Pensioners at the remnants of Fort Garry I (1847).

No evidence of the activities which would have occurred during the fur trade period were observed. Fort Gibraltar II (1817-1821), the second North West Company trading post at The Forks, would have been located at or near the north bank of the Assiniboine River, south of the plaza location. This structure, renamed Fort Garry in 1821 after the amalgamation of the Hudson's Bay Company and the North West Company, served as the fur trade headquarters until the flood of 1826. This fort was severely damaged during the flood of 1826, traces of which are represented by sand deposits in the stratigraphic profiles. Remnants of an uncribbed cellar which could date to the

occupation of this structure were excavated during the 1990 University of Manitoba/University of Winnipeg Archaeological Field School (Monks 1990:pers. comm.).

No Precontact occupational evidence was observed during any of the excavations. In extreme contrast, Canadian Parks Service encountered several occupational horizons during development of the adjacent North Point interpretive node and river access ramp (Adams *et al.* 1990). It appears that northward extensions of these cultural horizons do not reach the location where excavation for the ceremonial bowl dip below the railroad horizons. To the west of the bowl excavations, a hearth containing Selkirk ceramics (A.D. 1000 - A.D. 1750) occurred just below a relatively recent sand horizon (Kroker 1989:150-151). Traces of the sand layer were observed in the soil profiles on the west side of the excavation, although no cultural evidence was present. The Archaic horizon, located in the Archaeological Preserve does not appear to extend to the west or, for that matter, any distance to the south of the areas demarcated during the 1992 and 1993 Public Archaeology Programs (Kroker and Goundry 1993b, 1994). Rather the Archaic horizon extends northward into the area occupied by the Johnston Terminal and under the Forks Market Plaza (Kroker and Goundry 1990:41-43). During the 1993 Public Archaeology project, the east edge of the horizon dipped sharply downward at the edge of an original gully. The artifact density diminished and was minimal at the eastern edge of the excavation (Greco 1994:30-32).

In summary, the excavations for the ceremonial bowl are located in an area which had little direct evidence of cultural activities prior to the railroad period. This may be due, in part to very early land modification activities by the Northern Pacific and Manitoba Railroad, whose land levelling actions may have eradicated much of the Fur Trade Period evidence from the probable location of Fort Gibraltar II/Fort Garry I, immediately south of the bowl. Previous flood episodes may have also contributed to the lack of cultural resources, where occupational strata were eroded. This would account for the sparseness and disjunctiveness of relict soil horizons. Previous campsite selection criteria also probably played a role: the slightly elevated levee at the river bank would have been better drained and provide greater access to breezes, as well as better visibility along the river. Previous landforms, such as the gully at the east edge of the Archaic horizon provided a natural boundary for that campsite. With all these factors combined, it appears that the ceremonial bowl for The Forks Heritage Plaza was placed in the optimum location to avoid impact upon cultural resources.

5.0 RECOMMENDATIONS

The sub-surface construction component of The Forks Heritage Plaza has had no impact upon archaeological resources. However, the presence of Precontact and Fur Trade horizons are recorded on all sides. While these horizons did not extend into the excavation area, there cannot be a great distance between the terminal extensions of the horizons and the beginning of the excavation area.

Accordingly, *it is recommended* that any further sub-surface activity below the railroad cinder horizons be avoided on the south and west sides of the ceremonial bowl. Activities to the north and east may be feasible with adequate archaeological monitoring.

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APPENDIX A
HERITAGE PERMIT



Heritage Permit No. A67-95

FORM 11

PURSUANT to Section/~~Subsection~~ 53 of *The Heritage Resources Act*:

Name: Quaternary Consultants Ltd.
Address: 130 Fort Street
Winnipeg MB R3C 1C7
ATTENTION Mr. Sid Kroker

(hereinafter referred to as "the Permittee"),

is hereby granted permission to:

carry out the monitoring of the excavation for The Forks Heritage Plaza at The Forks (D1Lg-33) in Downtown Winnipeg;

during the period:

July 26 to December 30, 1995

This permit is issued subject to the following conditions:

- (1) That the information provided in the application for this permit dated the 25th day of July 1995, is true in substance and in fact;
- (2) That the Permittee shall comply with all the provisions of *The Heritage Resources Act* and any regulations or orders thereunder; PLEASE NOTE ATTACHMENT RE CUSTODY AND OWNERSHIP OF HERITAGE OBJECTS
- (3) That the Permittee shall provide to the Minister a written report or reports with respect to the Permittee's activities pursuant to this permit, the form and content of which shall be satisfactory to the Minister and which shall be provided on the following dates:
March 31, 1996
- (4) That this permit is not transferable;
- (5) This permit may be revoked by the Minister where, in the opinion of the Minister, there has been a breach of any of the terms or conditions herein or of any provision of *The Heritage Resources Act* or any regulations thereunder;

(6) Special Conditions:

- a. All surface collections, excavations, etc. are to be carried out using the provenience system established for use at The Forks and this project will be designated 95B;
- b. All heritage objects (artifacts) recovered from The Forks are to be catalogued according to the CHIN system and the relevant Borden designation will be D1Lg-33/95B;
- c. All heritage objects from The Forks are to be deposited with the Manitoba Museum of Man and Nature by March 31, 1996, for permanent curation and storage, unless appropriate loan requirements are arranged with the Curator of Archaeology prior to that date;
- d. A complete set of archaeological field records, catalogue sheets, laboratory analysis records, photographs, reports, etc. are to be deposited with the Manitoba Museum of Man and Nature upon completion of the archaeological research, or sooner if required; and any subsequent revisions or additions to these records are to be filed as soon as possible thereafter;
- e. All computer systems and programs employed in archaeological research should be compatible with the computer system established for The Forks;
- f. Appropriate arrangements and funds should be made available for the conservation of perishable heritage objects collected from The Forks;
- g. In the event that any human remains are encountered during the excavations, all activity in that particular locus will cease immediately, and the Historic Resources Branch notified immediately so that appropriate action can be determined and taken;
- h. The Permittee will be on-site supervising all aspects of the field work, including the removal of the railroad overburden during site preparation, at least 75% of the time, but when the Permittee must be absent, a qualified designate acceptable to Historic Resources Branch (copy of vita to be filed prior to commencement of field work) shall be present;
- i. The Permittee shall be responsible for the conduct of the laboratory analysis of recovered heritage objects and information to be included in the permit report;
- j. The report identified in #3 above shall conform at a minimum to "The Contents and Format of a Heritage Resource Impact Assessment" (copy attached);
- k. Neither the Government of Manitoba nor the party issuing this permit be liable for any damages resulting from any activities carried out pursuant to this permit, and the Permittee specifically agrees, in consideration for receiving this permit, to indemnify and hold harmless the Minister and the Government of Manitoba, the Minister and any employees and officials of the Government, against any and all action, liens, demands, loss, liability, cost, damage and expense including, without limitation, reasonable legal fees, which the Government, Minister or any employee or official of the Government may suffer or incur by reason of any of the activities pursuant to or related to this permit.

8280h

Dated at the City of Winnipeg, in Manitoba, this 25th day of July 1995.



Minister of Culture, Heritage and Citizenship

APPENDIX B
CATALOGUE OF RECOVERED ARTIFACTS

SPECIMEN CATALOGUE RECORD

Site: DLG-33:95B FORKS PLAZAArea: RED RIVERClient: THE FORKS RENEWAL CORP.

Acc. No.: _____

Cat. #	Qty	Object Name / Object Type	Material / Cultural Phase	Location / Unit	Coll. Date
1	1	RIB BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950814
2	1	VERTEBRA BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950814
3	1	METACARPAL OVIS?; CAPRA?	BONE HISTORIC	PLAZA STATION 5	19950814
4	1	METATARSUS OVIS?; CAPRA?	BONE HISTORIC	PLAZA STATION 5	19950814
5	2	SHERD PLATE	PORCELAIN HISTORIC	PLAZA STATION 5	19950814
6	1	RADIUS; ULNA BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950824
7	3	CARPUS?/TARSUS? BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950824
8	1	RIB BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950824
9	1	MANDIBLE BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950824
10	2	LONG BONE BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950824
11	2	VERTEBRA BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950824
12	1	RADIUS; ULNA BOS TAURUS	BONE HISTORIC	PLAZA STATION 5	19950824
13	1	WINDOWPANE PLATE	GLASS HISTORIC	PLAZA STATION 5	19950824
14	1	WINDOWPANE PLATE	GLASS HISTORIC	PLAZA STATION 5	19950824
15	1	NAIL SQUARE	IRON HISTORIC	PLAZA	19951006
16	2	INNOMINATE BOS TAURUS	BONE HISTORIC	PLAZA	19951006
17	2	VERTEBRA BOS TAURUS	BONE HISTORIC	PLAZA	19951006
18	1	RIB BOS TAURUS	BONE HISTORIC	PLAZA	19951006
19	1	LONG BONE BOS TAURUS	BONE HISTORIC	PLAZA	19951006
20	1	SKULL MAMMALIA	BONE HISTORIC	PLAZA	19951006
21	5	SHERD BOWL	STONEWARE HISTORIC	PLAZA	19950915
22	1	SHERD JUG	STONEWARE HISTORIC	PLAZA	19950915
23	2	SHERD CUP	PORCELAIN HISTORIC	PLAZA	19950915
24	1	SHERD PLATE	PORCELAIN HISTORIC	PLAZA	19950915
25	1	SHERD CUP	PORCELAIN HISTORIC	PLAZA	19950915

SPECIMEN CATALOGUE RECORD

Site: DLG-33:95B FORKS PLAZAArea: RED RIVERClient: THE FORKS RENEWAL CORP.

Acc. No.: _____

Cat. #	Qty	Object Name / Object Type	Material / Cultural Phase	Location / Unit	Coll. Date
26	1	SHERD PLATE	PORCELAIN HISTORIC	PLAZA	19950915
27	4	SHERD BOWL?/ CUP?	PORCELAIN HISTORIC	PLAZA	19950915
28	15	SHERD BOWL	PORCELAIN HISTORIC	PLAZA	19950915
29	1	VERTEBRA BOS TAURUS	BONE HISTORIC	PLAZA	19950915
30	1	FEMUR BOS TAURUS	BONE HISTORIC	PLAZA	19950915
31	1	SHERD LAMP	GLASS HISTORIC	PLAZA	19950915
32	1	SHERD BOTTLE	GLASS HISTORIC	PLAZA	19950915
33	1	SHERD BOTTLE	GLASS HISTORIC	PLAZA	19950915
34	1	SHERD BOTTLE	GLASS HISTORIC	PLAZA	19950915
35	1	SHERD BOTTLE	GLASS HISTORIC	PLAZA	19950915
36	1	SHERD BOTTLE	GLASS HISTORIC	PLAZA	19950915
37	1	BOTTLE BOTTLE	GLASS HISTORIC	PLAZA	19950915