## ARCHAEOLOGICAL MONITORING OF THE NEW PARKING LOT AT THE FORKS

Submitted to

Cohlmeyer Architects Limited

QUATERNARY CONSULTANTS LIMITED

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#### 1.0 INTRODUCTION

To provide additional surface parking area, The Forks North Portage Partnership is developing a parking lot to the north of the new Inn at The Forks. The configuration of the parking lot is a modified oval with access off Forks Market Road (Figure 1). Due to the potential for impact upon heritage resources, Quaternary Consultants Ltd. was contracted to provide archaeological monitoring of all sub-surface operations. The monitoring was conducted under the terms of Heritage Permit A49-03 (Appendix A), issued by Historic Resources Branch, Manitoba Culture, Heritage and Tourism.

## 1.1 Scope of Project

The project consisted of two components. The initial component was the installation of a land drainage system which included three catchbasins and linked to the existing drainage system. The pipes between the catchbasins and the existing manhole were installed by horizontal boring between the holes. The second component was the preparation of the parking lot surface which entailed excavation of the upper railroad fill layers to provide a granular base for the parking lot surface.

#### 1.2 Study Team

The project was directed by Sid Kroker, Senior Archaeologist. The field operations were conducted by Sid Kroker and Ernie Reichert. Report preparation was undertaken by Sid Kroker and Pam Goundry.

## 1.3 Methodology

The holes for the catchbasins were excavated with a backhoe and the extracted soil was trucked off site. When the trucks were not available, the soil was temporarily stockpiled adjacent to the excavation. The monitoring archaeologist watched for buried soil horizons and changes in soil texture which could indicate possible former ground surfaces. The indicators watched for are charcoal layers, ash lenses, and/or reddish stained soil. The colour change is usually indicative of oxidation of the iron particles in Red River silt by heat—the more intense the heat, the redder the soil. These features can indicate either a natural event such as a brush or prairie fire or a cultural event such as a campfire. When evidence of fire is observed, the layer is investigated to ascertain if the cause was natural or cultural. The presence of food remains, particularly mammal or fish bones, resting upon a buried soil is a positive indicator of an archaeological occupation horizon. Other positive indicators are fragments of earthenware containers and/or lithic tools or flakes resulting from tool manufacture.

Once the hole was excavated to the appropriate depth and the sewer cage was installed, the monitoring archaeologist would enter the hole and record the soil layers. These are discussed in Chapter 2.

As the excavation for the parking lot surface preparation was relatively shallow, 40 to 60 cm, it only encountered layers deposited during the railroad period. These consisted of cinders, gravel, sand, and clay, often from secondary deposition. Monitoring of the excavations was intermittent.

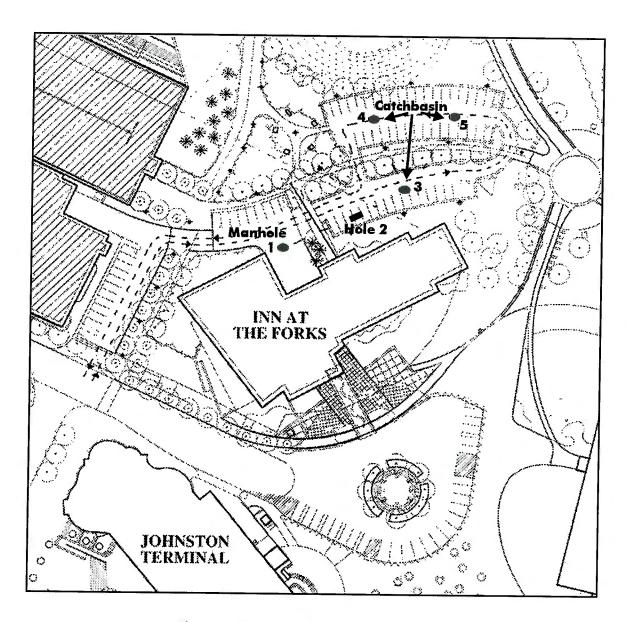


Figure 1: Location of Project Components

## 1.4 Archaeological Site Designation

Each archaeological site is assigned a Borden designation. Consisting of a four-letter prefix and a numerical suffix, this is a Canada-wide system of identifying archaeological sites based upon latitude and longitude (Borden 1954). The four letter identifier, DILg, designates a geographical block between 49° 50' and 50° 00' North latitude and 97° 00' and 97° 10' West longitude. Within each block, archaeological sites are assigned sequential numbers upon discovery.

This project, on the west side of the Red River, falls within the boundaries of DlLg-33. This site has been defined as: lying south of Water Avenue, west of the Red River, and east of the CNR Main Line Embankment. As numerous archaeological projects have occurred within the site boundaries over the past decade (Kroker 1989; Kroker and Goundry 1990, 1993a, 1993b, 1994; Quaternary 1988, 1989a, 1989b, 1989c, 1990a, 1990b, 1990c, 1992, 1993a, 1993b, 1994a, 1994b, 1995a, 1995b, 1995c, 1996a, 1996b, 1996c, 1998a, 1998b, 1999a, 1999b, 1999c, 2000a, 2000b, 2000c, 2000d, 2001a, 2001b, 2002a, 2002b, 2002c, 2003a, 2003b, 2003c), the site designation is expanded to include a sequential year/project identifier. The identifier for this project is 03D, denoting that this is the fourth project at this Borden designation during 2003.

The identifier is of primary significance in computer databases where it serves to distinguish artifacts from different projects that have occurred within the same Borden site. Accordingly, when no artifacts have been recovered during a project, the identifier is not used. If a fifth project were to occur within DILg-33, it would use the identifier 03E.

## 1.5 Laboratory Procedures

During this project, no artifacts were recovered. If artifacts had been present, all of the material would have been brought to Quaternary Consultants Ltd. laboratory facilities, where it would have been washed and sorted by material class and identified by the lab personnel. Material of the same type (e.g., white ceramic plate sherds) within the same location and depth would have been combined under a single catalogue number.

Each artifact would have received a catalogue number consisting of the Borden designation for the site and a sequential number for permanent identification, i.e., DlLg-33:03D/####. All pertinent data associated with the artifact would be entered into the computer cataloguing system which is based upon the Canadian Heritage Inventory Network (CHIN) system (Manitoba Museum of Man and Nature 1986; Kroker and Goundry 1993a:Appendix B). The computer cataloguing program is derived from **DBASE3®** and generates individual artifact catalogue cards.

Processed artifacts would have been prepared for storage by inserting the specimens and the catalogue cards into standard plastic storage bags, then stapling the bags closed. At the end of the project, if there had been recovered artifacts, they would have been delivered to the Manitoba Museum which is the repository designated by The Forks North Portage Partnership for artifacts recovered during development projects in their area.

#### 2.0 STRATIGRAPHY

The stratigraphy showed some variability between the different excavation holes. A total of five holes were excavated with the depth diminishing to the north. Representative profiles from each of the holes are detailed in Table 1.

All holes encountered the upper railroad fill layer which consisted of different layers of cinder, sand, gravel, clay, and/or silty clay. During the early period after the acquisition of the land by the railroads, the area was graded and leveled, with fill being added where necessary. Subsequently, the railroad companies used the cinder produced by coal-burning locomotives and the steam plant to raise the ground level. The thinnest fill layer was at Hole 4 (96 cm) and the thickest occurred at Hole 2 (138 cm). In many of the profiles, remnants of the original pre-railroad top soil, dating to 1888, were present, showing some degree of disturbance.

Underlying the historic top soil, riverine sediments were encountered. The soil profiles are relatively uniform, in that correlations of specific strata can be made between the different holes. However, variations are also readily noticeable. A case in point is the presence of a buried soil horizon on the south wall in Hole 4 at 142 cm below surface that does not appear on the north wall. This relict soil horizon does seem to be present in Hole 1, Hole 2, Hole 3, and the south wall of Hole 5. A second soil horizon occurs in four of the holes at a depth around 180 cm below surface. The flood churned layer, observed on the north wall of Hole 5, contained flecks of charcoal and exhibited a lack of internal structure, suggesting that organic material was picked up by flood waters from nearby, mixed with the suspended silt in the flood water, and re-deposited in an area of slow-moving or standing water.

Given the vagaries of deposition in a flood prone area, it is not possible to state definitively that these manifestations represent the same soil horizon. Ice jams and tree falls can result in deposition of a thick layer of sediment in the eddy behind an obstruction while fast water erodes soil alongside it. Even with a continuous trench, distinct strata will often pinch out over a distance of a few metres and, sometimes, reappear.

The upper of the two buried soil horizons is tentatively correlated with a cultural horizon that was recorded during adjacent projects. The Avonlea occupation horizon, recorded during the construction of The Forks Parkade (Quaternary 2002c), occurred at depths ranging from 120 cm to 145 cm below surface. Traces of this cultural layer were also recorded at five loci during the construction of The Inn at The Forks (Quaternary 2003b:32). Other occurrences of this horizon were at the Travel Manitoba Idea Centre at 150 cm (Quaternary 1994b:5-8) and, possibly, with a 150 cm cultural horizon identified during Stage I construction (Kroker and Goundry 1990:40).

The lower soil horizon is tentatively correlated to an undefined cultural horizon identified from the northeast corner of the parking structure at 175 cm (Quaternary 2002c:45). An equivalent soil horizon at 182 cm was identified at The Inn at the Forks (Quaternary 2003b:7)

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Table 1: Stratigraphic Profiles from Parking Lot Excavations

## 3.0 DISCUSSION

The construction of the new parking lot to the north of The Inn at The Forks did not result in any impact to cultural resources. The archaeological monitoring enabled the recording of buried soil horizons which indicate periods of soil formation between flood episodes. Some degree of correlation between previously recorded cultural horizons and these buried soil layers was possible, thereby indicating zones of potential impact if future sub-surface excavations occur in the vicinity.

The most likely cultural horizon that would extend between The Forks Parkade, The Inn at The Forks, and the new parking lot would be the Avonlea occupation zone, defined by the mitigation at The Forks Parkade (Quaternary 2002c). This would occur at depths ranging from 120 to 140 cm at the eastern edge of the parking structure and 130 to 140 cm at the north edge of the hotel. Thus, cultural impact could occur if excavations within the triangle formed by the parking structure, the hotel, and the parking lot were to exceed 120 centimetres.

Even though no cultural horizons were encountered, the presence of buried soil horizons, in conjunction with the known resources in the immediate vicinity, indicates that future projects adjacent to the parking lot which would involve excavation need to be archaeologically monitored.

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- 1993a Archaeological Monitoring and Impact Assessment Component of The Forks Heritage Plaza Project. On file with The Forks Renewal Corporation and Manitoba Culture, Heritage and Citizenship, Historic Resources Branch, Winnipeg.
- 1993b Archaeological Mitigation of the Johnston Terminal Refurbishment Project. On file with Marwest Management Canada Ltd. and Manitoba Culture, Heritage and Citizenship, Historic Resources Branch, Winnipeg.
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- 2002a Archaeological Monitoring of the Construction of the Eastbound Component of the Provencher Paired Bridges. On file with City of Winnipeg, Wardrop Engineering Inc., and Historic Resources Branch, Manitoba Culture, Heritage and Tourism.
- 2002b Archaeological Monitoring of Excavations for the West Abutment of the Provencher Pedestrian Bridge. On file with City of Winnipeg, Wardrop Engineering Inc., and Historic Resources Branch, Manitoba Culture, Heritage and Tourism.
- 2002c Archaeological Monitoring and Mitigation of the Parking Structure at The Forks. On file with The Forks North Portage Partnership and Historic Resources Branch, Manitoba Culture, Heritage and Tourism.
- 2003a Archaeological Monitoring of Service Installations for the Provencher Pedestrian Bridge.
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- 2003b Archaeological Monitoring and Mitigation of The Inn at The Forks. On file with Inn at The Forks Inc. and Historic Resources Branch, Manitoba Culture, Heritage and Tourism.
- 2003c Archaeological Monitoring of The Forks Axial Pathway from Esplanade Riel (Pedestrian Bridge) to Via Rail Station. On file with Scatliff + Miller + Murray and Historic Resources Branch, Manitoba Culture, Heritage and Tourism.

# APPENDIX A HERITAGE PERMIT

## Heritage Permit No. A49-03



-	zorituge i erimit i	10. A49-03			
P	ursuant to Section/Su	bsection53	of The Heritage Resources A	Act:	
	Address: 130	aternary Consultants Fort Street unipeg MB R3C 1C7			
	AT	ΓΕΝΤΙΟΝ: Mr. Sid 1	Kroker		
		•			
		(here	einafter referred to as "the Per	rmittee"),	
is l	hereby granted permiss	ion to:			
de	e Inn at The Forks, termine the presend ltural horizons, if p	e/absence of pre-rail	s iot, metading installations in the City of Winnipeg lway cultural horizons, and	on of the land drainage system, northeast g, in order to record the soil stratigraphy, and to mitigate the impacts on pre-railway	of to '
duri	ing the period:			•	
Oct This	tober 9 – Novembe s permit is issued subje	r 30, 2003. ct to the following condi	itions:		
(1)	That the information October	provided in the applica	tion for this permit dated the		
2)	That the permittee sl thereunder; Please	nall comply with all the p note attachment re cus			
3)	That the Permittee sl	nall provide to the Minist uit, the form and content es:	ton	with respect to the Permittee's activities to the Minister and which shall be provided	
<b>4</b> )	That this permit is no	t transferable;			
5)	This permit may be rethe terms or condition	evoked by the Minister voss herein or of any provis	where, in the opinion of the M sion of <i>The Heritage Resource</i>	linister, there has been a breach of any of es Act or any regulations thereunder;	

#### (6) Special Conditions:



- All heritage objects are to be deposited with the Manitoba Museum by March 31, 2004, for permanent curation and storage, unless appropriate loan requirements are arranged with the Curator of Archaeology prior to that date;
- b. 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;
- c. 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.

Dated at the City of Winnipeg, in Manitoba, this 9th day of October 2003.

Minister of Culture, Heritage and Tourism