

Pathway Accessibility and Lighting Improvements at Fort George NHS

June 2015

The following is an archaeological review by a Parks Canada terrestrial archaeology representative, (PCTAR) of proposed work to take place at Fort George NHS, Niagara. The work will consist of 3 projects:

1. Expanding and resealing existing pathways which connect the parking lot to the Visitor Reception Centre (VRC) and continuing into the fort, connecting the various blockhouses and buildings. This will also include removing, grading and re-seed or sodding a “redundant entrance path” from the bus parking lot to the town trail.
2. Removing an old lighting system and installing a new electrical system, including LED lights, on various buildings and on to-be-installed lamp posts.
3. Widening and paving the pathway leading to down the powder magazine while adjusting the slope for better wheelchair accessibility.

A similar archaeological review of field notes, site photos, and archaeological reports by a PCTAR was carried on in May 2015 for the pathway’s work, without knowledge of the electrical and powder magazine accessibility proposed work. The recommendations made at that time are still valid and re-stated here:

1. Heavy equipment used for this repaving should remain on the established path surfaces as much as possible. Operational Constraints 303.07.01 states that “public traffic shall only be permitted to travel on the final compacted surface of the second application of chip seal” (OPSS 303 Nov 09.pdf). Staff vehicles may also be required to park outside of the fort, whenever possible. This will hopefully prevent ruts on the parade surface.
2. Most of the parade surface and indeed the whole fort is a reconstruction dating to the 1930s. Since that time, numerous utilities lines and fort improvements have further disturbed the underlying archaeological resources. It was noted that a few utilities were installed parallel to the pathways. However, previous Parks work has found undisturbed culture layers intact beneath these fill and reconstruction layers. These cultural layers appear at various depths, and so although no “cleared” archaeological areas exist, if the construction excavations are limited to the 150 mm depth noted in Ainley’s report there may be limited archaeological concern WITHIN the interior of the fort. However, an archaeologist should be present during the excavations in case cultural resources are uncovered.
3. The pathway and ramp extension near the parking lot and VRC are the areas of most concern. Undisturbed Level 1 resources (now called cultural resources of national historic significance) have been noted in this area. This area will need archaeological “ground truthing” which may be accomplished through test pits along the pathway extensions and the ramp’s widening, or other methods.

An updated work plan, showing the electrical work, received in June, along with auger tests conducted by the site staff on the pathways, and communications with the field unit enabled clarifications of some of the above recommendations.

The parking lot area & pathways:

The park's plan to remove a redundant path from the bus parking lot to the town trail will involve some grading and re-seeding or sodding. As noted above in 3, the area around the parking lot does contain important archaeological remains (i.e., American trenches). The depth of the gravel bedding for this path is not known. Auger tests on the pathway from the parking lot to the VRC showed a 16" soft packed granular base. Auger testing of other pathways show 9" to 14" of gravel bedding. The current work plan indicates the present gravel bedding of these other paths will be kept and enlarged for repaving.

Archaeological Mitigation Measures:

Caution must be taken to remove only the extant gravel bedding on this parking lot to the town trail path. Excavation must stop above the undisturbed soil. The 9-16" of gravel noted in other paths would be adequate protection for the cultural resources from the planned (re)paving and bollard light installation as long as the repaving and electrical lines *follow the current path's footprint and do not exceed the extant gravel bedding.*

An update from the FU indicated that the installation of the parking lot bollards are to be put on hold until the area is redesigned in junction with the Town of NOTL. *Any new designs or adjustments to the parking lot and associated paths should be forwarded to the PCTAR for further review.*

New lighting for occupational health and public safety:

This work will involve placing new LED lights on buildings and on newly installed bollards. As the work will use already existing electrical pathways (the park estimated 90% of the work) and building facades, there is little archaeological concerns. However, the new trench to be excavated from Blockhouse 1 to the Cottage does cause concern. The park has stated they will look to more "archaeological friendly" directional boring or plowing methods. However, the existence of important buried cultural resources in this area, including the 1815 House (19H2, excavated in 1973), require a cautious approach to this boring or trenching.

Archaeological Mitigation Measures:

At this point there is no information on the method of or depth of excavation, however a cautious approach is recommended to avoid impact on cultural resources. It is recommended that archaeological mitigation occur prior to this trenching, particularly the entry/exit points for the boring (if entry/exit pits are to be dug) and in case cultural resources are encountered.

Once a final method of excavation and depth of excavation are known, the PCTAR will do a final assessment for archaeological mitigation.

Powder Magazine pathway and slope:

This is the area of most concern as it is the only remaining original building on the site. The slope leading down the talus to the Powder Magazine is considered unsafe for accessibility. In 1993 the park attempted to remedy this problem by lengthening the path, creating a switchback, and decreasing the slope to a 1:12 grade. At the time the park estimated the removal of some soil possibly creating a disturbance to a depth of 0.26 to 0.41m. Parks excavated 3 test units (19H3D, 3E and 3F) to understand the stratigraphy of this area. These test units found a 1937 fort reconstruction layer at ~ 40 to 50 cm below the 1993 surface. This would indicate fills were used to increase the grade of the pathway (at or

since the reconstruction. However, *no excavation units occurred off the pathway in the actual talus slope.*

Archaeological Mitigation Measures:

The FU suggested that the site hoped to “build up, not dig down” to correct the slope. This addition of soil would be the preferred recommendation for this as well as keeping to the footprint of the extant path. Once the final plans for this slope improvement are available, it is recommended that the FU forward these to the PCTAR so that mitigation measures can be created.

Recent communication with the FU suggested this work may also be on hold. Once final plans are ready, the FU should forward these to the PCTAR for further review of archaeological mitigation strategies.