Town of Newmarket
395 Mulock Drive P.O. Box 328,
Newmarket, Ontario, L3Y 4X7

Email: info@newmarket.ca | Website: newmarket.ca | Phone: 905-895-5193

500 Water Street Parking (Cachet Parking Lot Expansion)

Information Report

Report Number: ES 2018-11

Department(s): Engineering Services

Author(s): Rachel Prudhomme, M.Sc., P.Eng., Director, Engineering Services

Date: March 8, 2018

In accordance with the Procedure By-law, any member of Council may make a request to the Town Clerk to place this Report on an upcoming Committee of the Whole agenda for discussion.

Purpose

The purpose of this report is to update Council on the costs, risks and engineering considerations for the construction of additional parking spaces south of 500 Water Street (Cachet Restaurant), immediately west of Fairy Lake.

Background

The matter of additional parking behind Cachet Restaurant, just west of Fairy Lake, has been before Council on a few occasions since 2009. Information Report ES 2017-06, dated January 27, 2017, entitled "Fairy Lake West Parking (Behind Cachet Restaurant)", summarizes the previous Council reports and resolutions on this matter.

There were many reasons for Council's previous deliberations regarding these additional parking spaces, including the expected high cost of construction, the additional LSRCA requirements because the spaces are located so close to Fairy Lake, and the promotion and protection of green space in an area where the focus is on providing parkland and open spaces.

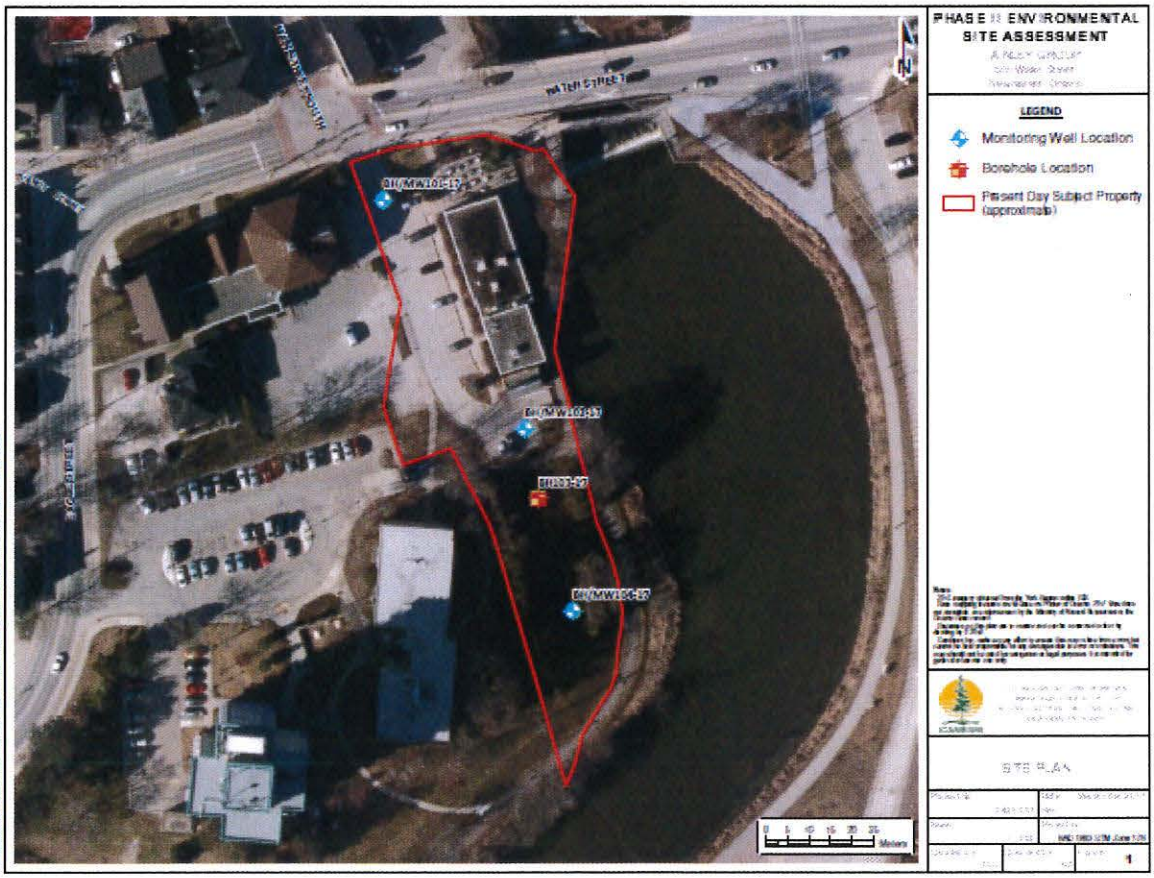
However, on June 7, 2016, the Committee of the Whole had a further discussion on this matter and directed staff as follows:

- "THAT Council approve the construction of up to 33 additional new parking spaces at the Fairy Lake Parking Lot" (which staff completed in 2017);
- "THAT staff prepare an Information Report outlining an estimate of costs related to the construction of additional parking spaces in the Fairy Lake lot and behind the Cachet Restaurant" (hence this Information Report);
- "AND THAT Council approve the construction of up to 22 new spaces behind Cachet Restaurant" (which is proceeding, pending on acceptance of this Information Report).

Discussion

Terms of Reference were developed and an engineering consultant (Ainley) was hired to conduct the preliminary design and to coordinate fieldwork required to determine the feasibility of the project. The site that was studied is depicted in Figure 1, below:

Figure 1: Study Site



In the summer of 2017, a geophysical company (Urban X Infrastructure Intelligence and Environmental Exploration) was hired to conduct Geophysical testing, including "Electromagnetic (EM)" and "Ground Probing Radar (GPR)" investigations. This was needed to determine if any large contiguous solid concrete or metal structures remained underground from previous uses of the property (such as a known hydro substation that used large

transformers on concrete foundations, a railroad with steel rails, and a mill that once operated on the site). Results of the GPR and EM investigations identified "buried metal-laden building rubble containing rebar and other metallic materials" as well as coarser debris which could be indicative of old concrete floors or foundations. Based on observations from both of the EM and GPR geophysical techniques used, it appears that most of the area is underlain by demolition fill, which could cause issues with excavation and haulage of the soils. There is uncertainty regarding the size or contiguity of the concrete and metals lying below the surface.

In the fall of 2017, a different consultant (Cambium Inc.) was brought in to supplement the geophysical investigation with a geotechnical survey consisting of a detailed borehole program to try to determine the extent of the foundations, reinforcing steel and demolition debris if possible, and to provide test pits for sampling of soils and groundwater. A Phase I Environmental Site Assessment (ESA), and a Phase II ESA were also completed by Cambium in the fall of 2017. A topographic survey was also done to determine elevations on the property and the excavation requirements.

The findings of the Phase I and Phase II Environmental Site Assessments identified elevated levels of contaminants in the soils that were tested. However, none of the groundwater samples that were collected exceeded the applicable standards.

The levels of soil contamination found on site are not concerning if the ground remains undisturbed. But if the soils are excavated or disturbed, there will be some risks to mitigate and some consequences. Firstly, there will be an elevated cost for hauling materials away from the site because they will have to be disposed of at a dumpsite that is certified by the MOECC as being capable of accepting such contamination. According to the environmental consultant, additional testing of the contaminated soils may be required by the MOECC for waste characterization before determining which certified dumpsite can accept the material. Secondly, extra precautions will be needed while excavating or stockpiling the soils to prevent any contamination from spreading onto other areas, especially Fairy Lake, which is less than 30 metres away from the construction site. The situation will be worsened during rainstorms.

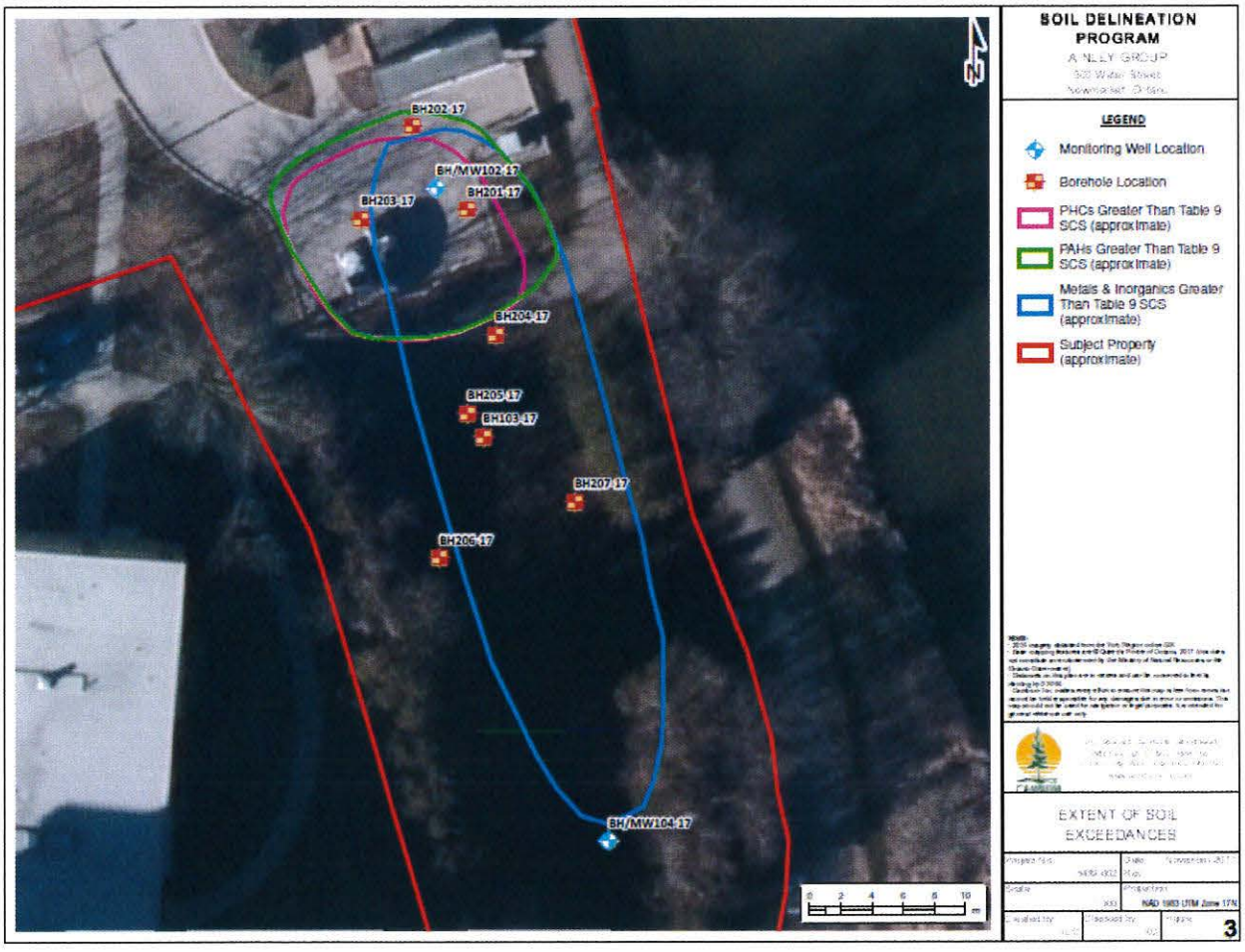
The findings of the Phase I and Phase II Environmental Site Assessments meant that staff had to now conduct an Environmental Soil Delineation Program to determine the horizontal and vertical extent of the contamination. Additional boreholes were drilled and sampled to determine the extent of contamination. The delineation program was completed in late November. Additional boreholes and the delineation results are shown in Figure 2.

Upon completion of the subsurface analyses and evaluation of the data, staff consulted the LSRCA to obtain their preliminary advice regarding the configurations of the parking lot and the maximum parking space yield. Given that the site is in a regulated floodplain area, the LSRCA

Watershed Development Guidelines and the Technical Guidelines for Stormwater Management will have to be taken into consideration in the design. These guidelines, as confirmed by the LSRCA, will require trees/bollards to protect the watercourse from cars during a possible flood, as well as significant LID features. In order to accommodate those elements, the consultant was not able to fit in the number of parking spaces that Council desired (i.e. up to 22 spaces) and was only able to incorporate 16 parking spaces in the design.

Considering all factors above, the detailed design and construction of the 16 additional parking spaces west of Fairy Lake and south of Cachet Restaurant is estimated to be approximately $368,000, or $23,000 per space. The average cost for a typical parking space in a normal parking lot is approximately $5,300.

Figure 2: Boreholes And Delineation Results



Conclusion

In summary, adding 16 additional parking spaces behind the existing Cachet Parking lot will cost approximately $368,000, or about $23,000 per parking space, where an average parking space

in a typical parking lot would cost about $5,300 to develop. There is some risk in this cost figure, though, due to the still uncertain contiguity and extent of the underground concrete and metal and costs could be higher or lower depending on what is found when the excavation begins. There was no way of predicting the high cost and the extra environmental requirements for adding parking in this location until the environmental, geotechnical and geophysical work was done. Council or staff had no way of knowing that the cost would be so high when Council gave approval to proceed with the project. As a result of the high estimated cost and the added risk involved, other options for downtown parking through the Parking Sub-Committee of the Community Centre Lands Task Force, including continuing to explore the costs of constructing a parking structure in the downtown area, could be considered.

Business Plan and Strategic Plan Linkages

Well-Equipped and Managed, by ensuring sound and accountable governance and fiscal responsibility in achieving service excellence.

Consultation

No external consultation was required in the production of this report.

Human Resource Considerations

No considerations required.

Budget Impact

To date, just under $36,000 has been expended to conduct the necessary geophysical, geotechnical and environmental studies and to produce a basic preliminary configuration for the 16 new parking spaces. In order to proceed with the project and design/construct the spaces, $368,000 is required, based on our Consultant's estimate. There is considerable risk that could either raise or lower this amount, depending on what is found if and when construction begins. As per Engineering Services Information Report 2017-16, dated January 27, 2017 and entitled "Fairy Lake West Parking (Behind Cachet Restaurant)", this initial investment was expected to be about $40,000. These funds (just under $36,000) will be taken from the Community Centre Lands Parking Sub-Committee Studies budget, as stated in Information Report 2017-16. Because the cost of the detailed design and construction were still unknown at the time of the 2018 budget exercise, there was no budget included for additional parking spaces at Cachet in 2018. Should Council wish to continue with detailed design and construction in 2018, the additional $332,000 would have to be funded through another source, such as the Community Centre Lands budgets or an appropriate reserve. The project could also be included in a 2019 Capital Budget request.

Attachments

No attachments needed.

Contact

For more information on this report, please contact Rachel Prudhomme, M.Sc., P. Eng., Director, Engineering Services at 905-953-5300 ext. 2501 or email: RPrudhomme@newmarket.ca

Approval

Rachel Prudhomme, M.Sc., P.Eng.
Director, Engineering Services

Peter Noehammer, P.Eng.
Commissioner, Development & Infrastructure Services