

HALIFAX

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Item No. 14.1.2
Halifax Regional Council
December 4, 2018

TO: Mayor Savage and Members of Halifax Regional Council

Original Signed by 

SUBMITTED BY: Jacques Dubé, Chief Administrative Officer

DATE: November 19, 2018

SUBJECT: Port Wallace Environmental Investigation

ORIGIN

Motion 1(c) of Halifax Regional Council, March 27, 2018 agenda item 14.1.6 Port Wallace Master Infrastructure Study, Urban Service Area Expansion, and Plan Amendment Request (Case 21601) to direct staff to report back to Council with further information from Nova Scotia Environment regarding development activity in the vicinity of Barry's Run.

LEGISLATIVE AUTHORITY

Halifax Regional Municipality Charter, Part IV, 79 (1) The Council may expend money required by the Municipality for:

(ah) playgrounds, trails, including trails developed, operated or maintained pursuant to an agreement made under clause 73(c), bicycle paths, swimming pools, ice arenas and other recreational facilities;

(ai) public grounds, squares, halls, museums, parks, tourist information centres and community centres.

(aw)(iii) all other expenditures ... incurred in the due execution of the duties, powers and responsibilities by law vested in, or imposed upon, the Municipality, the Mayor, Council or officers.

RECOMMENDATION

It is recommended that Halifax Regional Council direct staff to:

1. Conduct an environmental assessment of the HRM-owned lands along Barry's Run and Mitchell's Brook that would form part of the proposed Port Wallace development PID 41301789 and 41376898) (See Attachment A, Figure 3.5.1 of the WSP Land Suitability Analysis, generally shown as Area F).
2. Report the findings of the environmental assessment work to Regional Council prior to returning to them with a final recommendation report for the Port Wallace Secondary Plan project.

BACKGROUND

On March 27, 2018 Regional Council directed staff to prepare a capital cost contribution study for transportation-related costs, proceed with preparing the Port Wallace Secondary Plan, and report back to Council with further information from Nova Scotia Environment regarding development activity in the vicinity of Barry's Run. As noted in the Origin section, the purpose of this report is to provide recommendations regarding development activity in the vicinity of Barry's run.

In 1976 the former City of Dartmouth acquired land holdings along Mitchell's Brook and Barry's Run in the Port Wallace area of Dartmouth which once formed part of control structures for the Shubenacadie Canal. Port Wallace is located on the northeastern edge of Dartmouth and the 2014 Regional Plan identifies Port Wallace as a potential future growth area due to its proximity to the existing Urban Service Area boundary. Regional Council initiated a secondary planning project in 2014 with a goal of developing planning policy which would enable future development of the Port Wallace area. The project area consists of an industrial area (Conrad Brothers Quarry) and two main residential areas of land including 53-acres (former Conrad Brothers Quarry) west of Highway 107 and northwest of Montague Road and 527-acres (variety of land owners including the Municipality) located East of Montague Road between the Waverley Road and Highway 107.

There is a history of gold mining to the northeast and upstream of the 527-acre portion of the site, in the Montague Mines area. This area is known to have significant levels of arsenic and mercury contamination from mine tailings. The Province of Nova Scotia (Department of Natural Resources) is the current landowner of much of the former mine site. Mine tailings were historically discharged into Mitchell's Brook, which flows to wetlands at Barry's Run, located at the centre of the Port Wallace project area. Contaminated sediments have been documented in Lake Charles (approximately 2.5 km from the original mine site), which is downstream of the Port Wallace site.

In support of the secondary planning project, the Land Suitability Analysis for Port Wallace was completed by WSP¹, which included a desktop consideration of potential environmental risk. The report highlights past research documenting high concentrations of arsenic in well water as well as stream waters, stream sediments, ashed alder twigs and the waters that flow from Mitchell's Brook into Barry's Run. WSP's field investigation found identified tailings of significant size and strong metallic odour at the historic Montague Gold District east of the proposed development. There is a large wetland next to the tailings that is connected to Mitchell's Brook which may bring concentrations of metals into the wetland and watercourse system within the proposed development area.

Lake Charles is part of the headwaters of the Shubenacadie River system and is a source of drinking water for East Hants and several small water treatment plants owned and/or operated by the Halifax Regional Water Commission. A Source Water Protection Plan is in place over the headwaters because of it being a source for drinking water. Halifax Water has raised concerns regarding the potential impacts to the water supply that might arise from disturbing lands/contaminants during development. It is also possible that some residents surrounding the Shubenacadie River may draw potable water from downstream lakes.

DISCUSSION

Several conceptual designs for the proposed community have been developed and most designs, including the preferred option, include a road crossing over Barry's Run and public open space adjacent to the watercourse, both of which are on HRM owned property.

In considering the historic land use, potential contamination, source water supply concerns, and understanding that the development will surround the HRM-owned lands on either side of Barry's Run and Mitchell's Brook, HRM requested advice from Nova Scotia Environment on how to proceed with assessing

¹ Land Suitability Analysis – Port Wallace Secondary Planning Study Area, Version 5.0, WSP, February 23, 2016.

the possible contamination on these municipal lands. This past July, Nova Scotia Environment indicated that a Phase II Environmental Site Assessment will likely be required. Staff agree that further investigation of potential environmental risk is required to properly inform future decisions with respect to the proposed development in the Port Wallace area. While staff continue to draft policy and regulations for the site, they cannot be finalized until there is sufficient understanding of the extent/location of contamination, the potential health risks and environmental impacts, and whether remediation and/or risk management of these areas is required.

To answer these questions, and as a landowner of potentially contaminated lands within the development, staff anticipate needing to retain a Site Professional to conduct a Phase I and II Environmental Site Assessment (ESA). The Phase I ESA study area generally consists of the site and adjoining properties. For the purposes of this assessment, the site boundaries are comprised of the parcels of land identified in the Service Nova Scotia Municipal Relations (SNSMR) online property database as PID 41301789 and 41376898. Adjoining properties are defined as 'any properties that are contiguous or immediately adjacent to the site being assessed and/or can reasonably be expected to have been a source of substances of concern on the site'. In addition to the site and adjoining properties, a summary review of land use outside the immediate study area should be completed to identify other potential sources of contamination (e.g., former Montague gold mines), and to identify sensitive environmental or ecological receptors in the area such as municipal water wells, parks, protected watersheds and/or other areas of natural or environmental significance.

A Phase I ESA is an initial step in the property environmental assessment process, which may lead to the determination for additional assessment and/or remedial work, if sources of contamination are identified. A Phase I ESA can assist in reducing the uncertainty or risk related to unknown or previously unidentified potential environmental liabilities that may be present on, or adjacent to a property. A Phase I ESA may also provide the basis for further investigation, if required.

The objectives of this Phase I ESA would be to assess if evidence of potential or actual environmental contamination exists in connection with the site as a result of current or past activities on the site and/or adjoining properties. This Phase I ESA will be completed in accordance with the requirements of the most recent version of the CSA Phase I ESA Standard Z768-01.²

The objectives of the Phase II ESA are to confirm the presence of contamination at a site based on the results of the Phase I ESA, performed in accordance with protocol PRO-400.³ This protocol typically requires intrusive site investigations to delineate the extent of contamination in soil, groundwater, surface water, and sediment, with a goal of acquiring sufficient site information to develop a remedial action plan (if required). The results of the Phase II ESA will determine whether notification to NSE is required in accordance with the Nova Scotia Contaminated Sites Regulations.

The upgradient Montague Mines property is owned by the Nova Scotia Department of Lands and Forestry, who has contracted NS Lands, a Crown Corporation whose mandate is to assess and, where required, remediate and redevelop crown-owned properties to gain regulatory site closure for the Montague Mine Site. In October 2018, NS Lands contracted Intrinsic Environmental and Wood Group to complete Stage 1 of the project – to develop a conceptual site closure plan with an associated cost (Class D estimate) and schedule. This stage of work will involve limited onsite and possible offsite investigations. NS Lands indicated that the offsite investigation may include sediment sampling in Municipally-owned Mitchell's Brook and Barry's Run. If this is the case, it will reduce the amount of sampling required by the Municipality when conducting the proposed environmental assessment work. It is expected that Intrinsic Environmental and Wood Group's work plan and schedule will be made available in the coming weeks.

FINANCIAL IMPLICATIONS

² https://www.novascotia.ca/nse/contaminatedsites/docs/PRO300_Phase%20I%20ESA%20Protocol.pdf

³ https://www.novascotia.ca/nse/contaminatedsites/docs/PRO400_Phase_2_ESA_Protocol.pdf.

The Phase I and II Environmental Site Assessment work is estimated to cost \$100,000. This is a best estimate based on discussions with environmental consultants; however, the cost to complete Phase II can vary depending on the findings from Phase I. This work will be funded from cost centre M310-6614, Other Fiscal Services – Environmental Assessment and Cleanup.

The environmental assessment report may identify possible remedial actions, with potential financial implications for the Municipality. This will be addressed, when staff reports back to Regional Council with the findings of the environmental assessment work.

A portion of the cost of carrying out the environmental assessment work discussed in this report may be eligible for inclusion in a Capital Cost Contribution and recovered from developers. The eligibility of including the Environmental Assessment in a developer paid contribution will be assessed when the detailed Capital Cost Contribution study is carried out.

RISK CONSIDERATION

The recommendation of this report is actively seeking to minimize risk to human and environmental health related to the proposed Port Wallace development. If contamination is identified above applicable guidelines, notification of contamination must be submitted to NSE in accordance with the Nova Scotia Contaminated Sites Regulations. Once NSE is aware of contamination, pursuant to the Environmental Act and Contaminated Sites Regulations, they will submit a compliance order to the Municipality. The Municipality will then have approximately 24 months to complete remediation or a site management plan for the contaminated area, regardless of ongoing development plans. Significant financial risk is present if contamination is identified as the cost of remediation or site management is unknown. This becomes more complicated if the source of identified contamination is the provincially-owned Montague Mines area to the northeast of the site, as land owners are responsible for downstream impacts of discharges from a source on their property. The fact that the Province of Nova Scotia has begun a process to properly close the Montague gold mine site, and because closure requires that impacts to all other impacted lands be addressed, Staff would work closely with the Province to reduce possible overlap of effort and associated costs while continuing to work diligently on the Port Wallace Secondary Planning project. Staff will report the findings of the environmental assessment work to Regional Council and seek any required direction prior to completing a final report on the Port Wallace Secondary Planning project.

COMMUNITY ENGAGEMENT

Community engagement was not required for the completion of this report.

ENVIRONMENTAL IMPLICATIONS

The recommendation of this report will provide a more detailed understanding of possible contamination on Municipal lands along Barry's Run and Mitchell's Brook and will determine if this contamination is above acceptable levels. This information is critical to informing the policy and regulations for the proposed development, as well as any necessary actions by the Municipality or the Province of Nova Scotia to address the findings of this work.

ALTERNATIVES

None.

ATTACHMENTS

Attachment A Figure 3.5-1, Potential Contamination Constraints Map.

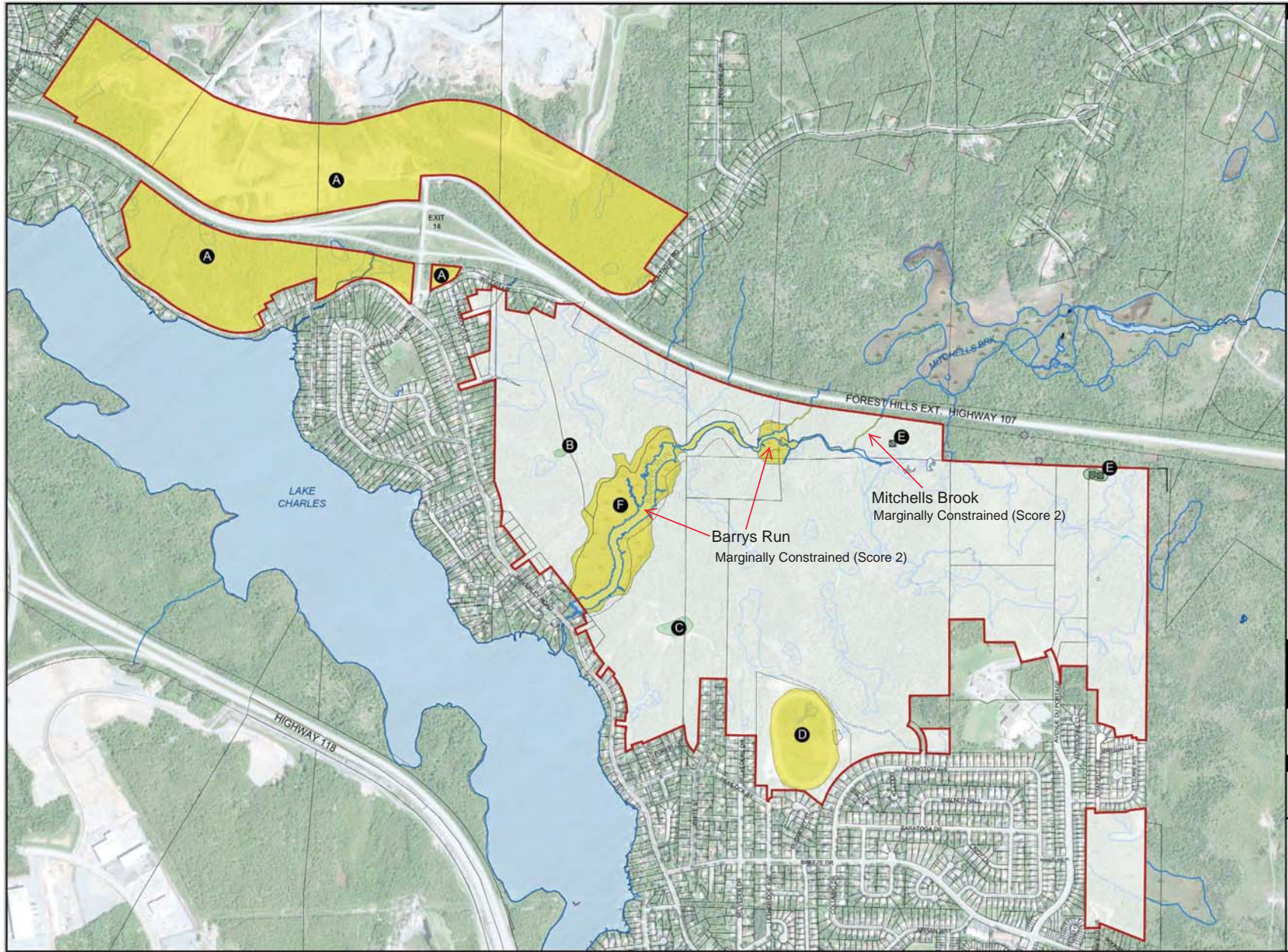
A copy of this report can be obtained online at halifax.ca or by contacting the Office of the Municipal Clerk at 902.490.4210.

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- LEGEND**
- Study Area Boundary
 - Property Boundaries
 - Watercourse
 - Wetlands
 - Abandon Mine (On-Site)
 - Abandon Mine (Off-Site)
- Score Classification**
- Not Constrained (Score 0)
 - Minor Constraints (Score 1)
 - Marginally Constrained (Score 2)
 - Moderately Constrained (Score 3)
 - Totally Constrained (Score 4)

NOTES:

- Property lines approximate only. Site subject to survey

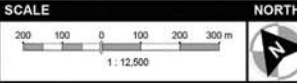
SOURCES:

- Service Nova Scotia and Municipal Relation Online Property Database
- Province of Nova Scotia Digital Topographic Series

NATURAL HAZARDS

FIGURE 3.5-1
POTENTIAL CONTAMINATION
(FROM HISTORICAL USE)
CONSTRAINTS MAP
DARTMOUTH, NOVA SCOTIA
PORT WALLACE SECONDARY
PLANNING STUDY AREA

OCTOBER 26, 2015 B07057-127-R1



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