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Item No. 8
Halifax Regional Council
October 20, 2009

TO: Mayor Kelly and Members of Halifax Regional Council

SUBMITTED BY: 
Paul Dunphy, Director, Community Development

DATE: September 24, 2009

SUBJECT: Blasting Concerns - Highway 102 and Larry Uteck Boulevard

INFORMATION REPORT

ORIGIN

September 8, 2009 Motion of Regional Council (item 13.1):

Moved by Councillor Hum, seconded by Councillor Walker that Halifax Regional Council request a staff report in regard to blasting concerns on Highway 102 and Larry Uteck Boulevard.

BACKGROUND

The interchange at the intersection of Larry Uteck Boulevard and the provincial Highway 102 has been planned for several years. The design and construction of the interchange has been undertaken by the provincial department of Transportation and Infrastructure Renewal.

The Province of Nova Scotia is not bound by municipal by-laws. Therefore, Nova Scotia Transportation and Infrastructure Renewal (NSTIR) is not required to obtain permits from the Halifax Regional Municipality (HRM). However, NSTIR required the contractor to obtain blasting permits from HRM for two borrow pit sites located between Highway 102 and Kearney Lake Road due to the proximity of the borrow locations to existing homes along the Kearney Lake Road.

The construction of the proposed interchange and the connecting ramps requires blasting and fracturing of bedrock in order to meet the proposed design grades and to match the proposed ramps with the existing infrastructure.

DISCUSSION

There were three areas of concern raised in the request for an information report. These were related to:

- Blast monitoring
- Testing of wells
- Impact of future blasting

Blast Monitoring

While municipal permits were not required for the blasting associated with the interchange, NSTIR did require that monitoring of the blasts be carried out. Staff have been advised that the monitoring results from all blasts were within the limits outlined in the HRM Blasting By-Law with the largest result reaching approximately 20% of the maximum allowable. Blasting associated with the interchange was completed by the end of September.

NSTIR did require their contractors to obtain municipal blasting permits for work on the two borrow pits due to their proximity to residential properties. Work at one pit was completed by the end of September and that at the other pit location is expected to be completed by the middle of October.

HRM's Blasting By-law specifies the requirements for monitoring of blasts. Based on the location and intensity of the blasting at the borrow sites, seismographs to monitor the blasts were placed at various locations in and around the blasting project including two residences on Kearney Lake Road which were in close proximity. The monitoring showed that the maximum vibrations at these locations were 9% and 14% of the allowable.

The by-law also provides discretion to the Inspector to require additional monitoring if necessary. Therefore, after receiving concerns of nearby residents, the Inspector required an additional seismograph on Saskatoon Drive. However, equipment trigger levels had to be reduced in order to register the vibrations of the blasts indicating that the vibrations in this location were minimal (less than 1% of the maximum allowable).

Investigations by the Inspector indicate that while vibration levels have not been significant, sound levels have approached the maximum allowable under the by-law. This is likely due to the location of the blasts relative to many residential properties. The water of Kearney Lake does not dissipate the sounds in the same way as land and buildings. Therefore, the sound levels of the blasts have been significant (95% of maximum allowable) and provide a similar sensation to humans as vibration.

One of the locations requested by Councillor Hum are located further away from the blast sites than Saskatoon Drive. Since vibrations at that location were barely measurable, monitors would not be able to register readings on Hamshaw Drive. Therefore, additional monitors are not warranted. The Inspector has required additional monitors on Collins Road due to its location across Kearney Lake from one of the borrow pits.

Testing of Wells

The second area of concern was a request by Councillor Outhit that additional well and septic sampling be done outside of the pre-blast survey areas. The pre-blast survey provides information on the condition of the property including wells and septic systems prior to any blasting. Testing on properties outside the pre-blast survey area only after blasting has been done would not provide meaningful information as the condition of the well or septic would not have been known prior to the blasting.

In addition, since all monitoring results were well within the acceptable limits as outlined in the by-law, there is no merit to request additional sampling. Regardless of any testing, any resident who feels blasting may have adversely impacted their property can have their concern investigated through their insurance company. If deemed to be caused by blasting, the insurance company would be in a position to make a claim to the blaster's insurer.

Impact of Future Blasting

The third and final area of concern is the potential impact of future blasting with respect to the West Bedford Development. As will all new development that requires blasting, the blasting by-law is in place to control such construction efforts. All requirements of the blasting by-law including pre-blast surveys and monitoring of blasts would be carried out for all blasting during the development of West Bedford.

BUDGET IMPLICATIONS

No budget implications.

FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Capital and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Capital and Operating reserves, as well as any relevant legislation.

ATTACHMENTS

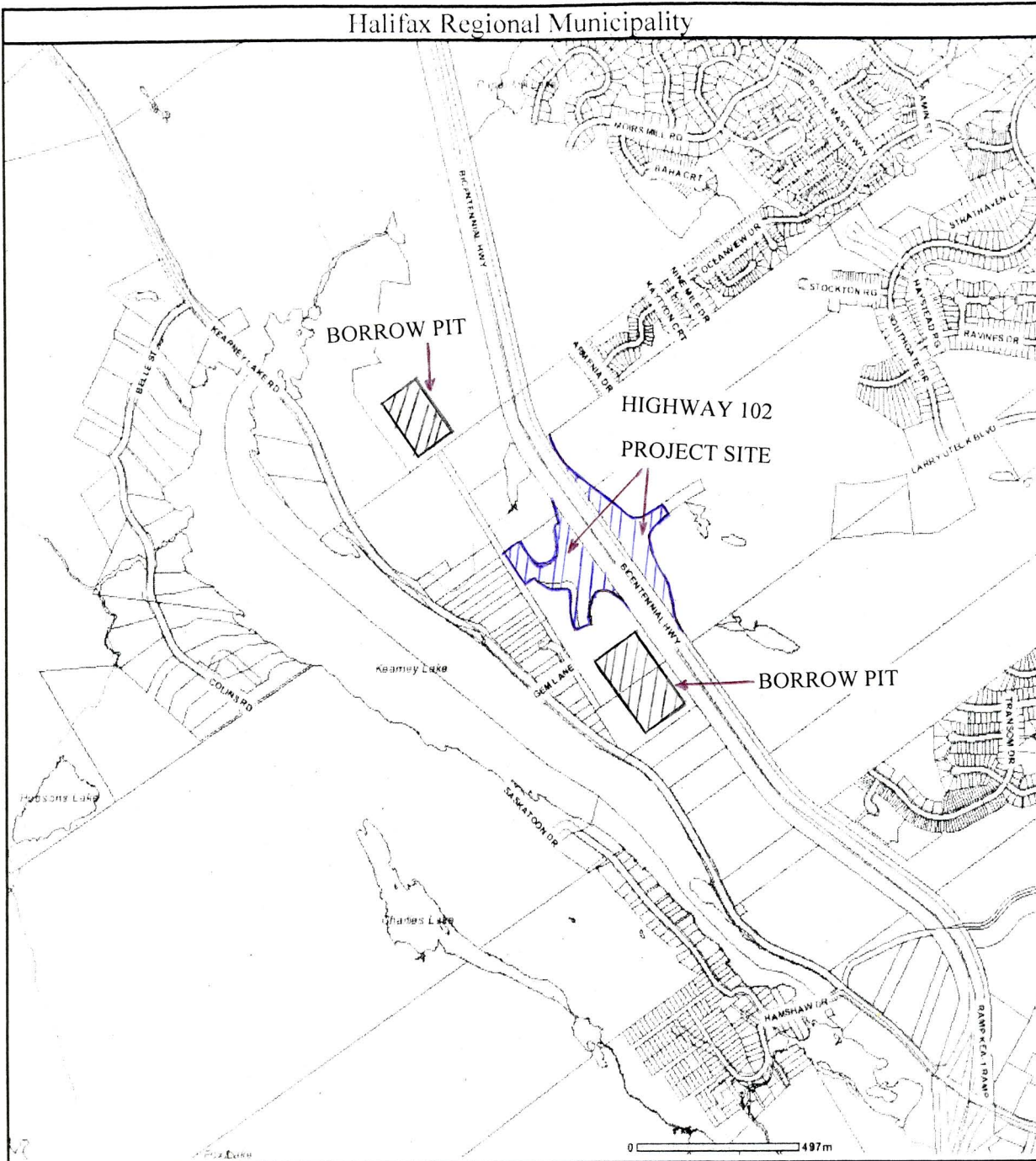
Attachment A: Map of blasting locations

A copy of this report can be obtained online at <http://www.halifax.ca/council/agendasc/cagenda.html> then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

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Halifax Regional Municipality



HALIFAX
REGIONAL MUNICIPALITY

This map was prepared for the internal use of Halifax Regional Municipality (HRM). HRM takes no responsibility for errors or omissions. For further information on Street Name or Community (GSA) data please contact HRM Civic Addressing at 490-5347 or email civicadd@halifax.ca. Date of map is not indicative of the date of data creation.

Legend

-  Parcels
-  Lakes
-  Streets
-  Streams