



Summary Notes and Comments Made at

Dufferin Aggregates Public Information Session January 28, 2008 The Hall at the Acton Arena

Note: The following is not an official transcript of the session, but rather the highlights of key themes identified and/or discussed at the public information session. Responses were provided by representatives from Dufferin Aggregates.

The January 28th Public Information Session was organized with 3 main components:

- Re-cap of issues raised on November 19, 2007 Public Information Session
- Presentation responding to water concerns
- Display panels and small group discussions

(Presentation materials are available online at <http://www.dufferinactonquarry.com>)

1) RECAP OF ISSUE RAISED FROM PREVIOUS SESSION

(Introduced by Andrea Bourrie, DFA)

Trucking concerns / issues:

Trucks are not coming to full stop at 4th Line entrance to the Quarry. Resident suggested erecting a barrier to force trucks to stop.

- Technical solution was evaluated and DFA will install a very significant speed bump in April that will force trucks to come to a complete stop at the 4th Line entrance before exiting from the Quarry.

Noise concerns / issues related to trucking:

Noise being generated by trucks parking in the new truck queue zone on 22nd side road; this noise is generated very early in the morning as the trucks line up in anticipation of the Quarry opening at 6:00 a.m.

- Dufferin has made a request through the town to have the current time frame reduced from 3 hours to 1 hour limit. This adjustment will be happening shortly and will limit trucks to only line up from 5:00 a.m. and wait there the hour before the Quarry opens at 6:00 a.m. This will potentially minimize truck noise during the early morning period.

Noise concerns / issues related to blasting:

Dufferin provided an update to the noise concerns that people had at the last meeting related to blasting.

- Dufferin is working on a noise reduction program in conjunction with the Ministry of Environment. The main focus revolves around the installation of a polyurethane rubber screen to reduce the noise from the main plant. This should be completed by April, 2008. Initial installation has already shown progress and improvements.

Lighting concerns / issues:

Concern was raised at the last meeting regarding unnecessary lighting during the night time hours being emitted from the Quarry.

- Dufferin is required to have some lights on during the maintenance shift for safety reasons. Site staff has been diligent to make sure any unnecessary lights are turned off. The situation will continue to be monitored.

Quarry extension concerns / issues:

Some people were unclear as to the JART process regarding the proposed extension to the Quarry.

- JART process will hold a formal pre-consultation meeting regarding Dufferin's proposed application on March 4, 2008. This will be a joint meeting with Dufferin and JART. Additional meeting information will be distributed by JART.

2) HIGHLIGHT OF WATER PRESENTATION

(Presented by Richard Murphy, Conestoga Rovers and Associates)

- Amabel Dolostone, which makes the cap of the Niagara Escarpment, is a hard durable stone and provides high quality construction materials. The geological structure of the Amabel Dolostone is consisted of fractured stones that have openings within the stone to permit water to move through the material. It is also a good source of ground water supply for domestic use. The flow of water within the Amabel is generally horizontally.
- The Amabel is underlain by the low permeability Cabot Head Shale, including Manitoulin Dolostone, WhirlPool Sandstone and the Queenston Shale, which is the reddish bedrock outcropping below the Escarpment. The Cabot Head Shale is an effective barrier for water movement and isolates the Amabel from the underlying formation.
- Quarrying is to extract the Amabel Dolostone for resource. As the result of the extraction process, the mining occurs below the ground water table so there is some influences in the ground water level in the nearby areas within the Amabel aquifer in close proximity to the quarry. However, the Quarry does not influence deeper groundwater flow system below the Cabot Head Shale.
- Because the quarry is being excavated below grade, majority of the water collected within the quarry comes from direct precipitation falling onto the quarry area. The majority of the water comes from surface water.
- The water gets pump out from the quarry to facilitate the operation. The water is returned back to the environment through pumping and discharge off-site to water features, such as to 16 Mile Creek and Black Creek. This pumping is done in accordance to the approvals that DFA has, primarily through the Ministry of Environment (MOE) Permit-to-take-Water (PTTW) and Certificate of Approval (CofA).
- One common question is why do quarry operations have large water taking limits. PTTW is issued by the MOE. This rate is the maximum foreseeable rate that can be pumped from the quarry in order handle extreme weather events, such as storm, snow

melt and it has to be high limit, because the quarry cannot be pumped higher than this limit. This is designed as the worse case condition limit.

- The actual limit for the Acton Quarry is far less from this limit. The actual consumption of water by the quarry is only happening by the evaporation of the stock piles, moistures of the materials shipped offsite and other dust control activities.
- Ministry of Environment accepted an industry study that indicates consumption typically in the range of :
 - 1% of Permit to Take Water (PTTW), or
 - <5% of Total Pumping
- There were water supply shortages experienced near Acton and elsewhere through Ontario in 2007.
- In particular, concerns that were raised at last public meeting have been evaluated by CRA, Dufferin, and well contractors. The information regarding wells have been reviewed, geology, hydrogeology conditions, well conditions and climate. Several well inspections have been undertaken. The concerns were raised to MOE. MOE also conducted its own investigation responding to the concerns.
- As the result of the analysis, we have identified 3 principle factors that contributing the low water conditions:
 - Specific Hydro-geologic condition of the Acton Quarry
 - Condition of the wells
 - Climate conditions experienced in 2007
- There are 4 different zones where wells are currently located at:
 - above the escarpment in the Amabel formation;
 - below the escarpment in the Queenston formation;
 - transitional zone, which is an intersecting unit between the Amabel and the Queenston; and
 - at northeast of the quarry, where wells have been constructed in the deep overburden deposits up in the valley of the Acton re-entrant.
- Characteristics between wells are quite variable. Wells in the Amabel tend to be stabilized and provide the most reliable source of water. Queenston is the least reliable because of its shale material that tends to weather over time, affecting the quality of water and destabilizing well structures. In addition, wells in the Queenston are below the Amabel and isolated from the Cabot Head Shale. They are not influenced by the quarry process.
- Similarly, wells located in the transitional area suffer the same challenges as in the Queenston formation. Water quality might not be desirable because of the chemistry of the shale, and the well-bores tend to be instable within the shale deposits. Wells may deteriorate over time and will require ongoing maintenance.

- Wells located in the buried valley northeast of the quarry have generally good supply but are dependent on well construction and maintenance. The area contains sands and gravel that can provide a good supply of water, but some of the fine sands may be drawn down to the bottom and block up the wells. It is important to remember that all wells must be kept up to date with maintenance in order to have good working order.
- And the last key factor is the record drought year of 2007. The data shown from the Georgetown 130 years of record of perception shows 2007 was the second lowest during this period.
- In conclusion:
 - There are areas that are problematic to get reliable water supplies from; however overall there is lots of water in the area of the Acton Quarry
 - 2007 was a drought year and this further exacerbated conditions
 - Well construction and proper maintenance are key factors
 - Acton Quarry was not the cause of the problems that have been experienced by some residents
 - The Ministry of the Environment investigation reached the same conclusion as Dufferin. MOE ended its investigation.
 - Dufferin supplied water to some residents as a short term solution
 - Dufferin is willing to conduct long-term monitoring of water resources features on neighboring properties for characterization and baseline.

3) HIGHLIGHTS OF COMMENTS RAISED DURING THE INFORMATION SESSION:

THEME	HIGHLIGHTS OF COMMENTS	GENERAL RESPONSE FROM DUFFERIN AGGREGATES (DFA)
WATER	Has the Acton Quarry ever dug through a creek / river / spring when it was digging?	<ul style="list-style-type: none"> • DFA extracts in the license areas where are designated for extraction approved by the Ministry of Natural Resources.
	Where is the water flowing from in stage 2? Resident noticed spurting water in the air.	<ul style="list-style-type: none"> • DFA has no historic knowledge of water spurting out in the air. • It is possible that water in a pipeline was release from a pressure release valve underneath the Quarry. The pressure valve do tend to release water from time to time.

	<p>Who did the water assessment on behalf of the Ministry of the Environment (MOE)?</p>	<ul style="list-style-type: none"> • Primarily lead by various MOE staff. • Residents may request studies directly from the MOE.
	<p>Did MOE hire consultants or did they rely information from CRA to form its assessment?</p>	<ul style="list-style-type: none"> • DFA provided information to the MOE, but that was only one of the sources of information that they used to complete the review. • MOE performed its own review with other sources of data and information.
	<p>Will Dufferin consider providing water to residents on the 4th line until residents can see what this year will bring?</p>	<ul style="list-style-type: none"> • DFA is continuing to engage in discussion with respect to this issue • DFA continues to provide water as has been requested until those discussions are complete • Not in a position to commit to continuing providing water until June / July until we see the results from the upcoming discussions • The analysis and conclusions drawn are based on historical information, not one year of data. • DFA understands that drought conditions from 2007 exacerbated the problem. However, there is enough scientific evidence to indicate that it is a longer term issue; it has been exacerbated by current drought conditions.
	<p>Question was raised regarding available water resources for future generations?</p>	<ul style="list-style-type: none"> • This will require a lot of technical information as we move through the review process by the agencies. • DFA will work through the approval process as appropriate.

	<p>If there is lots of water in the Amabel zones than why are all the wells having so many problems?</p>	<ul style="list-style-type: none"> • The wells that are having problems are not the wells in the Amabel formation. • The wells that are having problems most likely located in the transitional zones and Queenston formation • MOE has conducted investigations in the past on a number of the wells and identified similar issues during dry periods.
	<p>What is the impact of the Canada Packers Plant and the Dump that backs onto the swamp?</p>	<ul style="list-style-type: none"> • With regards to the Canada Packers Plant there are monitoring stations throughout and DFA is not seeing any issues from there • With respect to the municipal dump that backs onto the swamp – Dufferin has been conducting ongoing monitoring to ensure there are no concerns, as is the Ministry of the Environment. It can be confirmed that the site has been decommissioned and is closed.
	<p>Is it possible to get a fracture between all those layers of stone?</p>	<ul style="list-style-type: none"> • Data consistently shows no big fractures in the area.
	<p>How does the drought situation affect production of a well? One resident reported a lost of water in well.</p>	<ul style="list-style-type: none"> • DFA is currently working with the resident to address the specific concern.
	<p>How long does it take to see impact from drought to the well? How long does it take for litre of water to go down from the well?</p>	<ul style="list-style-type: none"> • Variable condition • Depends on circumstances, can be a long time

	<p>Can we have access to the DFA/CRA study?</p>	<ul style="list-style-type: none"> • DFA is more than willing to share available information, but it is required by the Freedom of Information Act that DFA cannot share personal information. • DFA will need formal written permission from specific residents before any information to share broadly with public.
	<p>Has Dufferin ever affected any well bordering the Acton Quarry?</p>	<ul style="list-style-type: none"> • Yes, one well on Highway 25 • Has been discussed publicly in past.
	<p>Does the Ministry of the Environment apply to each phase of operation for a PTTW?</p>	<ul style="list-style-type: none"> • PTTW specific to limit on pumping on phase 1, limit to pumping on phase 2, limit to pumping on phase 3. Little under 18,000 per litre allowed on an annual basis
	<p>Will a proper study be done of the area?</p>	<ul style="list-style-type: none"> • DFA has completed a study in accordance with the MOE requirements. • MOE acknowledged that there has been some reduction in water in the area but that the reduction is not associated with the Quarry. • Neither DFA nor MOE is planning on conducting any additional studies at this time. • DFA continues to have discussions with the town and others to see if there is anything else that can be resolved.
	<p>Have the seeps dried up in the last year? What was the impact on years before?</p>	<ul style="list-style-type: none"> • DFA did pump to the seeps last year as part of permit to take water requirement. • DFA is required to evaluate effectiveness of the seeps at an ongoing basis and will present information in 2007 monitoring report, which is due in Spring.

	What happens if you're beyond your PTTW limit?	<ul style="list-style-type: none"> • Exceedance will be in violation of PTTW. • It depends on how MOE respond • Dufferin is not exceeding its limit and continues to monitor on a regular basis.
NOISE & BLASTING	How can DFA claim that it is addressing noise complaints when the blasting along 22 nd Sideroad?	<ul style="list-style-type: none"> • DFA remains in compliance with all noise and vibration limits that are established by the MOE guidelines.
	What is DFA doing to address some of the direct effects of blasting on residential houses (such as cracked dual pane windows along 5 th Line)?	<ul style="list-style-type: none"> • Locations along 5th Line should not be affected by blasting occurred at the quarry. • In order to ensure that noise and vibration levels are within the MOE guidelines, blasts are monitored and carried out in accordance with blast design studies.
	Is it true that DFA cancels blasts if it suspects that an "outside source" is monitoring its operations?	<ul style="list-style-type: none"> • Blasting professional design each blast with high accuracy and precision. If certain conditions (e.g. atmosphere, wind, temperature, cloud cover, humidity, freeze/thaw conditions, etc.) do not meet the design criteria, blasting will be cancelled until conditions are met. • Each blast is monitored with necessary seismographs to ensure accurate measurements.
TRANSPORTATION	Why is DFA not working with the local Police to enforce speeding trucks? Does Dufferin do its own monitoring?	<ul style="list-style-type: none"> • DFA has been working with both local police and Halton Hills By-law officers to increase enforcement
	What is DFA doing to reduce the "dirt" that its trucks drag through Acton?	<ul style="list-style-type: none"> • DFA continues to increase frequency of road sweeping at quarry entrances. Installation of truck wheel wash has been effective in minimize dirt on roads.

	We asked for a speed bump 10 years ago and it has taken 10 years to finally admit it was needed, why?	<ul style="list-style-type: none"> • Since DFA acquired Acton Quarry in 2001, DFA has been proactive in implementing improvements in and around of the site.
EXTENSION	Which of DFA's current landholdings are earmarked for expansion, and which are not?	<ul style="list-style-type: none"> • DFA has been transparent in the land holdings in the area. The extension footprint represents the current land holdings that DFA owns.
	What will DFA do with land that is not earmarked for extension?	<ul style="list-style-type: none"> • Lands that are not used for extraction are dedicated for buffer and other natural enhancements, as part of the rehabilitation plan.
	What is DFA doing to minimize the strain of the planned expansion on local resources (roads are cracking as far East as Highway 7)?	<ul style="list-style-type: none"> • Transportation and safety issues will be addressed through the technical reports to be submitted with the extension application.
REHABILITATION	Does DFA plan to consult local residents on potential uses for rehabilitated land?	<ul style="list-style-type: none"> • DFA continues to consult with local residents on potential uses for quarry rehabilitation. • The Vision Advisory Committee has been established to discuss near-term implementation for after-use. • DFA is also engaging the Conservation Authorities, Halton Hills, Region of Halton and Ministry of Natural Resources
JART	How is it possible for Dufferin to have the JART process started when the application hasn't even been filed?	<ul style="list-style-type: none"> • Dufferin is following the approved JART process, which requires pre-consultation • JART committee following process and bring forward their formal pre-consultation meeting on March 4th