

>>> "Holiday, Stan" <SHoliday@hamilton.ca> 9/26/2006 2:08 PM >>>  
Gunther and David

As requested at the site meeting of September 22, 2006, please find attached our further comments for the GRS ( in particular, from Ken Ursic and David Kerr). Please note that the proponent must apply for a site alteration permit and obtain it from the City, prior to construction of the trench. Ken Ursic has recommended a number of on site measures, a proper documentation of the limits of the trench limits and monitoring wells in relation to the natural features, etc. All of these recommendations should be implemented for both the trench and the monitoring wells, as noted below. David has identified a number of groundwater issues for your information. Finally, Conservation Halton should be consulted and all of their necessary approvals be obtained.

Please contact me, if you have any questions.

Regards,

Stan Holiday, MCIP, RPP  
Senior Planner  
City of Hamilton  
Planning & Economic Development Department  
Legislative Approvals  
71 Main Street West, 7th Floor  
Hamilton On  
L8P 4Y5

905-546-2424 ext. 4280  
fax 905-546-4202

-----Original Message-----

**From:** Ken Ursic [mailto:kursic@dougan.ca]  
**Sent:** Friday, September 22, 2006 3:24 PM  
**To:** Holiday, Stan; deyrowe@sympatico.ca  
**Cc:** Cam Portt  
**Subject:** Mountsberg Quarry - Comments on proposed construction works for pilot GRS

Stan;

Based on our site visit today to review the area being considered for installation of the Pilot Groundwater Re-circulation system, I offer the following comments for your consideration.

1. The site visit today was most helpful and we appreciate the opportunity provided to us to review conditions in the field first hand.
2. There appeared to be some minor discrepancies on the GLL map that depict the north-eastern limit of the trench closer to the bush line than was actually reflected by the field stakes outlining

the centerline of the trench and anticipated construction limits. These discrepancies should be rectified and reflected on a Site Plan. The Site Plan should illustrate all of the project components (i.e. trench limits, monitoring wells in relation to the natural features).

3. Based on the site conditions, the proposed buffer dimension of drip line + 10 metres seems reasonable for avoiding impacts to trees in the adjacent bush. While this buffer dimension may be suitable for mitigating direct impacts associated with trench construction activities, this dimension should by no means be interpreted as being appropriate to mitigate the effect of proposed quarry.
4. Our primary concerns relate to potential impacts to vegetation from proposed monitoring well installations and trench construction activities. While representatives from Stantec and GLL reassured us that construction would be conducted in a manner the results in minimal impact to the environment, we would feel more confident of supporting the project if an environmental inspector was dedicated to oversee all the subcontractors to ensure best management practices are being implemented. The environmental inspector would be present on site during any activities and would be responsible for recording and reporting the details of any activities in the area. Reports should be filed monthly with the City and/or Conservation Halton.
5. Snow-fencing should be installed at the limit of the buffer zone and signed to inform subcontractors to keep out.
6. The installation of several of the monitoring wells will require slight encroachment into the woodland. It is our understanding that the installation of monitoring wells in the woodland and buffer can be completed using smaller, more light-footed equipment. This work should be closely supervised by the environmental inspector. Any trees (i.e. tree species > 9 cm d.b.h or > 6 m in height) that require clearing should be documented in detail.
7. The Site Plan should include details of how the trench will be vegetated and rehabilitated after use.
8. The area of proposed discharge from the pump tests should be protected with geotextile or equivalent materials to ensure that flows from hose discharge are dissipated and distributed so not affect vegetation or create erosion.

**Ken Ursic, M.Sc., Senior Ecologist**

Dougan & Associates - Ecological Consulting Services  
7 Waterloo Avenue, Guelph, ON N1H 3H2  
tel: 519 822-1609 x25 fax: 519 822-5389  
Email: kursic@dougan.ca \ Web: www.dougan.ca

Comments from David Kerr Sept 26, 2006.

Stan

The site visit was very useful. I don't foresee any significant impact as a result of the test pit investigation which is needed to provide necessary background information to finalize the location and construction details for the trench. However I do have some concerns for potential impacts to the adjacent woodlot to the north during the test pumping. Specifically my concern would be the potential for permanent impact to the ecology of sections of the woodlot as a result of possible localized lowering of the water table in this area. We did notice springs in this woodlot area and evidence of a high water table and possibly seasonally perched conditions during the site visit. As well there was evidence of

bedrock outcropping at the ground surface. It may be that this area is a sensitive discharge zone for groundwater. If a trench is cut into the surface of the bedrock (same shallow bedrock zone that the springs were noted) near the woodlot it is possible that the groundwater recharging the springs could be diverted away from the woodlot to some degree and cause some localized lowering of the water table and possible drying up of the springs. The risk for this to occur is higher if wells are drilled into the trench and fracturing is induced into bedrock which enhances the flow of groundwater downward from the ground surface. If the shallow water table in the woodlot is disturbed as a result of a situation such as this it may be difficult to restore the area due to the complexity of the fracturing in the shallow ground water flow regime.

In some perspectives it makes good sense to determine the potential for dewatering of the shallow bedrock in the woodlot at a preliminary stage and this can be done with more accuracy if the trench is very close to the woodlot. However the risk for permanent impact to a woodlot would likely be lower if the edge of the trench does not extend to the woodlot to the south. Therefore I agree that the program should move forward but there should be some reasonable buffer between the trench and the woodlot and the shallow water table in the bedrock in this zone be closely monitored in the woodlot during pumping

Hopefully my comments are useful-  
thanks, Dave