



June 26, 2015

**Via: Email (kwingrove@get.on.ca)**

Ms. Kim Wingrove  
Chief Administrative Officer  
Township of Guelph/Eramosa  
8348 Wellington Road 124  
P. O. Box 700  
Rockwood ON NOB 2K0

Dear Ms. Wingrove:

**Re: Peer Review of Haul Route Study  
Proposed Eramosa Quarry (Hidden Quarry)  
James Dick Construction Ltd.  
Project No.: 300032475.0000**

This review provides our peer review of the following study:

Haul Route Study, Eramosa Quarry, Township of Guelph-Eramosa; prepared by Cole Engineering; dated March 2015.

In completing this peer review we have also considered the following related reports:

- Revised Traffic Impact Study, Eramosa Quarry, Township of Guelph-Eramosa; prepared by Cole Engineering; dated December 2013.
- Eramosa Quarry, Final Traffic Impact and Haul Route Assessment; prepared for the Town of Halton Hills by Hatch Mott MacDonald; dated March 3, 2015.
- Letter Response to Burnside's April 7, 2014 Comments, Eramosa Quarry, Township of Guelph-Eramosa; prepared by Cole Engineering; dated April 17, 2014.
- Review of JDCL Traffic Impact Study and Haul Route Study; prepared by Concerned Residents Coalition (CRC Rockwood Inc.); dated April 27, 2015.
- Letter Response to CRC Memo dated April 27, 2015; prepared by James Dick Construction Limited (Greg Sweetnam); dated June 26, 2015.

The Haul Route Study is based on a Terms of Reference prepared by Burnside, dated October 10, 2014.

## Haul Route Study (HRS) – Cole Engineering

The main conclusions of the Cole HRS are summarized as follows (paraphrased):

- a) The proposed quarry is forecast to generate an average of 14 two-way trips per hour, an average peak of 26 two-way trips per peak hour, average peak daily traffic of 230 trips during the peak month and a total of 21,233 truck loads per year (i.e., 42,466 two-way trips). During the off-peak season, the Eramosa Quarry is expected to produce approximately 20 two-way trips per day.
- b) Quarry operations will ensure no queuing of trucks occurs on adjacent roadways.
- c) Quarry policies and enforcement by local authorities will ensure that drivers use only the King's Highway 7 and Regional roads (both of which are existing truck haul routes). The Eramosa Quarry will service markets to the east of Rockwood, replacing the Guelph Quarry in those markets. The Guelph Quarry will serve markets to the west of Rockwood. Therefore the Guelph Quarry traffic through Rockwood will be reduced to zero.
- d) A comparison was made of the potential reduction in truck trips, due to the proposed quarry being closer to the market than alternate quarry sources. Based on the assumptions made in the analysis, it was concluded that 1,505,282 km of truck trips could be reduced by the new quarry, thereby increasing road safety.
- e) The quarry traffic is estimated to be about 2% of the peak hourly traffic on Highway 7, which is considered to not be significant.
- f) The largest proportion of traffic (55%, equating to 126 two-way trips) is forecast to use Regional Road 25, south of Acton. Regional Road 25 presently has an AADT of about 10,461 vpd, with 7% of the AADT being heavy vehicles. The proposed quarry is forecast to increase the percentage of heavy vehicles in the AADT by about 1.0%.
- g) The intersection of Main Street / Mill Street (Highway 7) in Acton is recognized to be a constraint (i.e., for turning movements), however only 10% of the quarry traffic is forecast to use this route (i.e., about 20 two-way trips per day), with part of this traffic already existing from the Guelph Quarry operation (i.e., which will be supplanted by the new quarry).
- h) It is estimated that the increase in traffic on Regional Road 25 will lead to a theoretical increase of 0.06 collisions per year in the collision rate on this road in the vicinity of Acton (i.e., about 1 additional collision over the life of the quarry), and therefore will not significantly impact roadway conditions.
- i) Based on the *Haul Route Study – Terms of Reference*, the additional truck traffic on the haul routes is considered to be very low, there will not be any appreciable negative effects on the expected haul routes, and therefore Sections 5 to 8 of the study need not be undertaken (i.e. description of baseline environmental conditions, development of environmental evaluation criteria and indicators, assessment of potential road improvements, and comparative evaluation of haul routes and recommendation of a preferred route).

## **Burnside Comments**

1. **Coordination with Previous Traffic Impact Study** - The HRS does not reference the previous study work (i.e., Revised Traffic Impact Study (TIS), December 2013 and Response Letter, April 17, 2014). The April 17, 2014 response letter confirms the need for a left turn lane on Highway 7 at both 6<sup>th</sup> Line and at 5<sup>th</sup> Line, running continuous between the two intersections, however, the TIS has not been updated to include this recommendation. The conclusions / recommendations of these previous studies will impact the haul route. It is recommended that an updated TIS be provided, once the haul route details are confirmed.
2. **Forecast Truck Generation** - The forecast truck traffic is based on an average load of 33 tonnes. Insufficient information is provided in the TIS to confirm the veracity of this assumption. However, the follow-up letter from James Dick Construction Limited (JDCL) (June 26, 2015) now provides additional information on the applicant's fleet of gravel trucks and the haulage requirements associated with the aggregate product from the Eramosa Quarry. This supplementary information supports the assumptions made in the HRS and TIS with respect to truck generation. It is recommended that the HRS be revised to include this supplementary data.
3. **Coordination of Operations Between Guelph Quarry and Eramosa Quarry** - A follow-up email (March 15, 2015) from James Dick Construction Limited (JDCL) indicates that the existing Guelph Quarry will continue to service eastern markets using the Hanlon Expressway to access Highway 401. This appears to be contrary to the HRS, which suggests that the proposed Eramosa Quarry will supplant the supply from the Guelph Quarry, which has the benefit of removing the existing Guelph Quarry traffic through Rockwood and Acton. In the Hatch Mott MacDonald study (March 3, 2015, Town of Halton Hills), it was noted that no existing Guelph Quarry trucks were observed to be travelling through Rockwood in observations made in February 2015. The CRC submission also indicates that there is very little JDCL traffic presently travelling through Rockwood. The JDCL letter (June 26, 2015) clarifies that the loads shipped through Rockwood, from the Guelph Quarry, are being supplanted by the new quarry, however no quantification is provided to confirm if this represents any significant reduction in existing truck traffic (i.e. net increases in truck traffic on the haul routes due to the proposed Eramosa Quarry). The HRS should quantify the existing and proposed haul routes / truck volumes for the existing Guelph Quarry and any impacts on the analysis of the operations of the proposed Eramosa Quarry haul routes.
4. **Potential Reduction in Provincial Truck Travel** - Insufficient information is provided in the HRS to confirm if the assumptions made are reasonable, with respect to the forecast reductions in the kilometres of truck traffic provincially, resulting from the Eramosa Quarry being closer to market than alternate aggregate sources.
5. **Safety Issue At Intersection of Main Street / Mill Street (Highway 7, Acton)** - The turning constraints / safety issues at the intersection of Main Street / Mill Street (Highway 7, Acton) have not been quantified. Turning templates should be provided for the heavy vehicles, along with confirmation of how many heavy vehicles are currently making this turn, including the contribution that is attributable from the Guelph Quarry. Insufficient information has been provided to conclude that the forecast trips from the Eramosa Quarry (i.e., 20 trips per day) can be safely accommodated for this turning movement. The Hatch Mott MacDonald

study (March 3, 2015, Town of Halton Hills), reports observing trucks routinely mounting the curb to negotiate this turn, as well as significant pedestrian volumes in this area. The HRS should more fully address this potential safety issue.

6. **Safety Impacts of Increased Truck Percentages on Haul Routes** - The HRS suggests that increasing the heavy traffic on Regional Road 25 (south of Acton) from 7% of the AADT to 8% of the AADT is not significant, considering the very small percentage increase in potential collisions that this may promote. However, Burnside's calculations indicate that the percentage of heavy vehicles is forecast to grow by about 17% on this road, and that this percentage may be a more appropriate indicator of collision potential and/or severity.

The Hatch Mott MacDonald study (March 3, 2015, Town of Halton Hills), estimates that about 40% of all of the truck traffic entering Acton from the north travels east on Mill Street, with the remainder going south on Regional Road 25 (Main Street). It was suggested that this travel pattern may be an attempt to avoid a truck inspection station on Highway 401 in this area. The HMM report estimates that the Eramosa Quarry traffic may increase the heavy truck traffic by 9 to 12% through Acton (i.e., based on the trip generation forecast in the HRS). The HMM report provides additional analysis of collisions on the total Highway 7 connecting link in Acton, and notes that approximately 7% of the collisions in the 2008 to 2010 time period involved heavy trucks. It was noted that previous safety review, in this area, have shown that 80% of the heavy vehicles inspected had to be taken out of service.

Based on our review of this additional data, we conclude that the safety analysis in the HRS is incomplete and should be expanded to include the full length of the Regional Road 25 corridor, as well as the other haul routes that are being considered. In this respect, further review is also required for the potential use of Regional Road 1 (Guelph Line), which may be a preferred route to accommodate some of the forecast traffic from the quarry.

7. **Forecast Peak Period Truck Traffic** - Based on a review of the aggregate shipping data for the proxy site (i.e., Erin Pit), the HMM report indicates that, for a single day in August 2011, the records show a peak daily truck trip rate that is 52% higher (i.e., 348 two-way trips) than the rate forecast in the HRS, and a peak hour truck trip rate (i.e., 46 two-way trips) that is 77% higher than the rate forecast in the HRS. We note that the rates reported in the HRS are averages for the peak periods (i.e., which include Saturday production, which is significantly lower than the weekday production). Therefore, it is expected that there will be short term peak conditions that exceed the average forecasts in the HRS. It is reasonable to use these average peaks when determining impacts associated with increased Annual Average Daily Traffic (AADT). However, the use of average peak conditions may not be appropriate for intersection analysis purposes, if higher short term peak conditions occur frequently. The HRS should provide representative shipping data from the Erin Pit, to confirm whether the peak period truck traffic is under-estimated in the HRS.
8. **Need For Additional Environmental Review** - The HRS does not complete an assessment of the physical constraints, land use conflicts or pedestrian crossing conflicts, concluding that the small increase in truck traffic does not warrant these assessments. Considering the need for further review of the truck volumes / movements and haul route safety issues, as identified in our other peer review comments, the need for a more holistic environmental review cannot be confirmed at this time. Once updated information is provided, further comment will be provided to confirm whether the potential truck increases warrant such additional consideration.

9. **Consideration of Alternate Haul Routes** - The HRS does not consider alternative haul routes, beyond the Highway 7 and Regional Road 25 routes. Guelph Line should be further investigated for its ability to take additional truck traffic from the Eramosa Quarry. Further justification should be provided on the distribution of truck traffic, considering the existing, and potential, routes. Planning initiatives should be identified in the HRS, including the longer term potential for a bypass around Acton and around Georgetown, as well as for the potential network implications of MTO's ongoing GTA West Transportation Corridor study. The impact on the planned improvements to Wellington Road 50 should be identified, and considered for their potential to divert additional truck traffic around Acton.
10. **Truck Queuing At The Quarry Site Access** - Neither the HRS, or the revised TIS, has provided details of the queuing space that will be provided on-site for trucks waiting to be loaded. However the follow-up letter from JDCL (June 26, 2015) has confirmed that there will be space for on-site queuing of dozens of trucks, once the gates are opened. When the gates are closed, there will be sufficient space for a single truck to queue off of the roadway. Policies/enforcement are proposed to ensure that offsite queuing issues do not develop. Burnside recommends that these operational details be incorporated into the revised HRS and development agreement for this project.

In conclusion, we recommend that the Haul Route Study for the Eramosa Quarry be revised and resubmitted to address the issues identified in our comments.

Yours truly,

**R.J. Burnside & Associates Limited**



Henry Centen, P.Eng.  
Senior Transportation Engineer  
HBC:ls



Don McNalty, P.Eng.  
Vice President, Public Sector

cc: Elizabeth Howson, Macaulay Shiomi Howson Ltd. (Via: Email – [howson@msdplan.ca](mailto:howson@msdplan.ca))