



January 27, 2016

Via: Email

Ms. Kelsey Lang
Planning Associate
Township of Guelph/Eramosa
P.O. Box 700
Rockwood ON N0B 2K0

Dear Ms. Lang:

**Re: Tri City Lands Ltd. - Spencer Pit
Second Submission – Traffic Impact Assessment
Zoning By-Law Amendment Application ZBA 01/14 (Township File D14 TR)
6939 Wellington Road 124, Township of Guelph/Eramosa
Project No.: 300035544.0000**

We have completed our review of the GHD letter dated January 15, 2016, received as part of the January 18, 2016 submission by Harrington McAvan Ltd.

Our current submission comments are listed in the table below (the “Re” refers to the number in previous submission. Comments on a drawing should be reflected on all drawings.

No.	Re	Comment
2.1	-	<i>In keeping with discussions between the Township, MHBC Planning and Burnside, as well as the May 27, 2014 MHBC memo regarding the application, a coordination meeting is recommended with Transportation planning staff from the County and Region.</i>
		The meeting did not occur to our knowledge and our review at that time focused on larger transportation issues. In fact, the County in correspondence dated July 2, 2014 also requested a meeting with the applicant and Region.

No.	Re	Comment
2.2	-	<p><i>The major item in the study for discussion is the road network improvement required and who is responsible. GHD has projected background traffic volumes to be 1600 vehicles per hour in the peak direction of the peak hour by 2020 on Wellington Road 24. They have identified the need for Wellington Road 24 to be four lanes through the intersection, where currently it is only two lanes. The inference is that this is a background improvement and should be paid for by the municipal agencies. However, it is our understanding that Wellington Road 24 widening is not currently identified in future capital programs. Therefore, how does this improvement get completed? In terms of improvements the applicant is responsible for, having identified the driveway out to the signal opposite Kossuth Road, a southbound left turn lane on Wellington Road 24 to service the site, and traffic signal modifications to accommodate the driveway.</i></p>
		<p>GHD indicated that the road network shows over capacity conditions without the provision of additional through lanes on Wellington Road 124 at the Kossuth Road intersection for 2020 forecast traffic volumes, which they stated is a result of corridor growth along the two roads. They indicated that this condition will exist regardless, independent of whether the pit is allowed to proceed. Based upon their analysis, we concur that the road network will be at capacity.</p> <p>GHD indicated:</p> <p><i>“It has been demonstrated that the intersection can accommodate the pit entrance in the 2015 horizon year with reserve capacity available. This confirms that the local road network can fulfil its primary function of accommodating local development. The ability for roads to accommodate corridor traffic ... should be considered secondary as this traffic is highly unpredictable and subject to a variety of influences outside the immediate study area. Without the widening of Wellington Road 124, it is expected that corridor traffic will decline as the capacity of the road is reduced and these drivers respond by finding alternative routes or adjusting trips to another time of day... If this intersection begins to operate at over capacity, it is expected that the proposed site traffic will be accommodated on the adjacent road network through the displacement of corridor traffic.”</i></p> <p>There are a number of issues with the above. Firstly, we are now in 2016 and the road is projected to reach capacity by 2020 (in 4 years the intersection will be at capacity). The study projected out to 2020, but it is also common to have longer horizon years for aggregate studies.</p> <p>I would say that both roads are clearly higher in classification than a local road accommodating local development. In addition to carrying local traffic, they are County and Regional roads that carry more than local road traffic. The road network connectivity in this area is constrained with limited alternative routes.</p>

No.	Re	Comment
		<p>The assumption is that traffic will divert, where are they diverting to? If GHD believes their growth assumptions are too high, will the road network function with lower growth? Support should be provided that corridor traffic will decline as the capacity of the road is reached. In our opinion, traffic volumes will plateau as capacity is reached, but we would not expect a decline in corridor traffic.</p> <p>They indicated that <i>“the applicant is responsible for certain intersection improvements including a southbound left turn lane and right turn lane on Wellington Road 124 into the Pit and traffic signal modifications, as for widening of Wellington Road 124, this is a County issue and is being dealt with through discussions with the County who have reviewed the traffic study and provided comments.”</i></p> <p>We concur that widening of Wellington Road 124 is a County concern and we would also say the Region should have input as well. We have not seen any comments from the Region. We have reviewed the County’s comments of November 6, 2015 and they indicate the following:</p> <p><i>“... the County of Wellington does not object in principal to the request for a fourth leg to be added to the Wellington Road 124 and Kossuth Road intersection to accommodate an entrance to the proposed Spencer Pit.</i></p> <p><i>Based on the attached peer review that was completed on your traffic impact study, the County will not approve an entrance until all comments have been addressed satisfactorily.</i></p> <p><i>The County will work with the proponent to determine the best design and type of intersection to meet both the proponent’s needs for an entrance as well as the long term needs of the forecast traffic volumes.”</i></p> <p>Subject to the County providing more current information, there still appears to be outstanding items in getting an entrance approved.</p>
2.3	-	<p><i>Secondly, the operational assessment assumes that Wellington Road 24 has been widened through the intersection; however, from an operations perspective, the intersection operations will not be as efficient as indicated. The operations assume Wellington Road 24 as a four lane road, but it would be essentially a lane widening through the intersection. The additional lane is not as effective operationally as you get fewer people in the lane that move over as they have to merge once they get through the intersection. The operational analysis should reflect this.</i></p> <p>GHD confirmed that localized widening may not be as effective operationally when compared to full widening of Wellington Road 124, but that the operation is impacted by the design of the intersection and total length of widening, which can</p>

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		<p>be fined tuned during the detailed design with the County. We accept this approach.</p>
2.4	-	<p><i>We recommend an analysis of sight lines be provided for trucks turning right out of the site onto Wellington Road 124 given the driveway would be on the inside of the curve. The analysis should consider the operating characteristics of the trucks.</i></p> <p>GHD undertook a cursory review of sight lines and determined that there is approximately 180 m of sight distance available to the west and that under Transportation Association of Canada (“TAC”) standards that a truck requires 130 to 170 m for stopping sight distance based upon a 90 km/h design. They also indicated that right turns on red for trucks can be prohibited.</p> <p>We request the reference to their calculations. Our review would have a stopping sight distance of about 160 m required for a vehicle based upon Figure 2.3.3.6 for a 90 km/h design speed. This figure is not truck specific. Allowing for trucks, based upon equation 2.3.3 and Table 2.3.3.2a, would result in an intersection sight distance of 212 m if utilizing a single unit truck and longer for a larger truck. This is greater than the available distance that GHD reports for a right turn from the driveway onto Wellington Road 124. Also right turns onto a two lane road would also consider sight distance required to turn right without being overtaken by a vehicle approaching from the left. This would result in a longer sight distance than stopping sight distance. Therefore, if the development is approved, we would also recommend that right turns be restricted on red from the driveway unless during the detailed design process, additional and appropriate sight distance is available.</p>
2.5	-	<p><i>GHD concluded with “The analysis also shows the proposed pit traffic can be accommodated by the signalized intersection despite the high background growth used for the future analysis. The widening of Wellington Road 124 should be investigated by the County and the timing of such a capital improvement advanced to mitigate what is likely a pre-existing capacity deficiency. In the short term, constructing the improvements recommended in our traffic study will allow the additional entrance to the proposed pit to operate with acceptable v/c ratios and delays.”</i></p> <p>GHD analysis shows that with widening of Wellington Road 124 and turn lanes at the intersection, the intersection will function with excess capacity in 2020; however, their analysis demonstrates that with just the turn lane improvements, movements will be over capacity in 2020. Therefore, we cannot concur that with just their recommended improvements of turn lanes and modifications to the signals (which are a result of the additional turn lanes and/or widening of the</p>

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		road), that the road can accommodate the traffic. The County will need to accept over capacity conditions should only the turn lanes be added as the roadway is under their jurisdiction.

Yours truly,

R.J. Burnside & Associates Limited



David Argue, P.Eng.
Vice President, Transportation
DA:sd

cc: Ms. Meaghen Reid, Township of Guelph/Eramosa (enc.) (Via: Email)
Mr. Dan Currie, MHBC Planning (enc.) (Via: Email)
Ms. Emily Elliott, MHBC Planning (enc.) (Via: Email)