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Municipality of Trent Lakes
c/o Chris Jones
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ATTN: Chris Jones, Municipal Planning Services Ltd.

CC: Adele Arbour, Temporary Manager of Building and Planning
Municipality of Trent Lakes

Subject: Haul Route Noise Impact Assessment Report for the Proposed Dewdney Mountain Farms Quarry - 'No Mitigation' Option - Peer Review

1 Introduction

Aercoustics Engineering Limited (Aercoustics) has been retained by the Municipality of Trent Lakes (the Municipality) to provide a peer review of the Haul Route Noise Impact Assessment Report for the proposed Dewdney Mountain Farms Quarry 'No Mitigation' Option prepared by Hugh Williamson Associates Inc. (HWA), and dated May 25, 2020[1] (2020 Report).

The proposed Dewdney Mountain Farms Quarry (the Quarry) is to be located on Ledge Road in the Municipality of Trent Lakes, approximately 10 km northwest of Bobcaygeon, Ontario. The noise impact of vehicles travelling on the proposed haul route, to and from the proposed quarry, are assessed in this report. The proposed haul route connects the proposed main entrance of the Quarry to County Road 36, a major transport corridor approximately 4 km to the south.

The proposed quarry is located at the north end of Ledge Road approximately 4.26 km from the intersection of Quarry Road and County Road 36. Ledge Road, which dead ends at its north end where the proposed quarry is located, joins Quarry Road approximately 1.2 km north of the intersection of Quarry Road and County Road #36. Traffic along this haul route consists of three separate traffic profiles: Quarry Employee Traffic, Residential Traffic and Heavy Truck Traffic that transports material from the Quarry.

2 Background

The noise associated with the proposed Dewdney Mountain Farms Quarry was initially assessed in the Acoustic Assessment Report prepared by HWA dated July 2014[2]. The noise attributed to the road traffic caused by Quarry operations was assessed in the Haul Route Noise Impact Report prepared by HWA, dated August 2, 2014[3] (2014 HR Report). The 2014 HR Report proposed a noise mitigation strategy including earth berms and acoustic barriers to reduce the sound level increase at the receptors along the haul route. Both reports were accepted and the proposed amendments to the Official Plan and the Zoning By-Laws of the Township of Galway-Cavendish and Garvey were passed.

At an Ontario Municipal Board hearing on November 12, 2015, the noise mitigation strategy for the haul route proposed in the 2014 HR Report was deemed to be infeasible as the proposed noise controls, earth berms and acoustic barriers, were located on lands not owned by Dewdney Mountain Farms Quarry.

A Noise Mitigation Report prepared by WSP Canada Inc. dated March 5, 2018, was presented during the Local Planning Appeal Tribunal hearing held on March 21 and 22, 2018[4]. The report proposed a mitigation strategy that reduced sound levels at the receptors along the haul route through the use of acoustic barriers that were located within the road allowance. It was the Board's decision that the report failed to meet the standard of proof that such a noise mitigation strategy would be effective.

The 2020 Report in question for this review proposes a "No Mitigation" noise mitigation strategy. This noise mitigation strategy does not use earth berms or acoustic barriers, instead the noise controls are a reduction in the amount of traffic that services the Quarry and a reduction in the speed limit along the length of the haul route. This report proposed a reduction in the speed limit along the haul route from 50 km/hr to 40 km/hr and a reduction in the maximum 2-way hourly truck volume due to production from the Quarry from 41 trucks to 14 trucks. The report concluded that this noise mitigation strategy was sufficient in reducing the sound levels at the receptors along the haul route.

3 Review of Report Sound Level Limits

The noise impact of truck traffic on public roadways is not addressed by the MECP in their noise guidelines. However, the MECP requires consideration of noise impact in choosing the off-property haul route. The impact of a route is generally not assessed against a fixed sound limit but as an increase in sound level at the receptors along the haul route.

The 2020 Report contains two separate analyses of the noise impact of the haul route traffic. One analysis uses a method outlined in the Ministry of Environment, Conservation and Parks (MECP) Noise Guidelines for Landfill Sites (Draft) October 1998[5] and the other uses a method outlined in the MECP Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning, August 2013[6] (NPC-300). The 2020 Report assesses these noise impacts against limits which are discussed in this section.

3.1 Noise Guidelines for Landfill Sites

The 2014 HR Report predicted a one-hour equivalent sound level increase of 8 dBA at a number of receptors along the haul route above the assumed background sound level of 45 dBA. This increase, resulting in a 53 dBA sound level was deemed to be, on balance, an acceptable increase in the Ontario Municipal Board hearing of case no. PL130149, the decision of which was issued on 5 February, 2015[7] (the Decision).

The 2020 Report uses this established sound level increase as the basis for a daytime sound level limit of 53 dBA for all receptors along the haul route. The 2020 Report uses that daytime sound level limit to determine a nighttime sound level limit of 48 dBA, this limit being 5 dBA lower than the daytime sound level limit.

As the OMB has established the sound level increase of 8 dBA due to the haul route traffic as acceptable at some receptors along the haul route it is a convenient sound level to compare the impact of the '"No-Mitigation" noise mitigation strategy. However, it should be noted that there is no sound level limit nor sound level increase which precludes a haul route from being deemed acceptable. An overall traffic noise impact of 50 to 53 dBA is relatively low when compared to other haul routes and there is precedent for a significant change in sound level due to truck noise being considered acceptable if the haul route in question is the most reasonable option.

3.2 Environmental Noise Guideline - Stationary and Transportation Sources

The 2020 Report also calculates the sound levels for traffic noise according to the methodology outlined in Part C of NPC-300. Part C of NPC-300 is a guideline relating to the transportation sources of noise and stationary sources of noise in the land use planning process. The guidelines for land use planning were not designed to be used in a Noise Impact Assessment for Haul Routes.

4 Sound Level Prediction

Aercoustics notes the following relating to the road traffic noise impact at the receptors along the haul route according to the 2020 Report:

1. The proposed speed limit for the haul route is 40 km/hr. This is a reduction of 10 km/hr from the current unmarked road speed limit.

2. The maximum 2-way hourly truck volume due to production from the Quarry was reduced from 41 trucks, that was initially proposed in the 2014 HR Report, to 14 trucks.

3. The sound level at nearly all points of reception was predicted to be below 53 dBA for both the worst-case daytime and nighttime hours.

4. A single hunt camp has been identified which is very close to the road which would experience an increase in sound level that the MECP would classify as "very significant". It was proposed that the hunt camp should be relocated 50 m from the centerline of the road in coordination with the property owner to reduce the sound level at that receptor to 53 dBA or below.

5 Concluding Remarks

It is Aercoustics' opinion that the analysis presented in the 2020 Report were performed accurately and in accordance with the industry accepted guidelines.

The proposed noise mitigation was a lower speed limit for the haul route and a reduction in the amount of traffic due to production at the Quarry. This noise mitigation strategy resulted in a predicted sound level at nearly all points of reception below 53 dBA. A single hunt camp was predicted to experience a very significant sound level increase and it was proposed that the hunt camp be relocated farther from the road to lower the sound levels at that receptor.

Aercoustics notes that this haul route is the only feasible route for the Quarry to transport material to market and an 8 dBA increase above the assumed background noise level of 45 dBA has been established as acceptable in the Decision. The change in sound level compared to the negligible existing road traffic will certainly be noticeable and significant. However, the overall predicted traffic noise impact may be more meaningful. In this case, it is defined by a truck pass roughly every 4 minutes during the busiest hour of the season. This noise impact is in line with many other aggregate operations across the province.

Given the above, it is Aercoustics' opinion that the noise impact from this haul route, with the mitigation strategy as outlined in the 2020 Report, is acceptable and the proposed haul route should not be precluded due to the noise impact.

Sincerely,

AERCOUSTICS ENGINEERING LIMITED

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References

1. Hugh Williamson Associates Inc., Haul Route Noise Impact Assessment Report for the Proposed Dewdney Mountain Farms Quarry 'No Mitigation' Option, May 25, 2020.

2. Hugh Williamson Associates Inc., Acoustic Assessment of the Proposed Dewdney Mountain Farms Quarry, July 2014

3. Hugh Williamson Associates Inc., Haul Route Noise Impact Report for the Proposed Dewdney Mountain Farms Quarry, August 2, 2014.

4. Local Planning Appeal Tribunal, Case No. PL130149, Decision and Order, issued April 18, 2018.

5. Ministry of Environment Publication, Noise Guidelines for Landfill Sites (Draft), October 1998.

6. Ministry of Environment Publication NPC-300, Stationary and Transportation Sources - Approval and Planning, August 2013.

7. Ontario Municipal Board, Case No. PL130149, Decision and Order, issued February 5, 2015.