Memo

To:	Bernie Steiger, MCIP, RPP – Halton Region
From:	Lucas Arnold, P.Eng., Dillon Consulting Limited
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Date:	April 18, 2022
Subject:	Peer Review of Preliminary Environmental Noise Report and Land Use Compatibility – Air Report, 772 Winston Churchill Boulevard, Oakville, Ontario
Our File:	22-3765

Dillon Consulting Limited (Dillon) was retained by Halton Region (the Region) to complete a peer review of the air quality and noise land use compatibility reports completed for a proposed industrial development project at 772 Winston Churchill Boulevard in Oakville, Ontario (the Proposed Facility).

The subject lands are currently vacant and are located on the west side of Winston Churchill Boulevard, north of the Winston Churchill Boulevard and Lakeshore Road West intersection and south of the CN Oakville Subdivision rail line. As per the Town of Oakville Zoning By-Law 2014-014, the subject lands are zoned as E2 Special Provision (sp):201 – Business Employment.

It is Dillon's Understanding that the Proposed Facility will consist of two industrial buildings, intended for general warehousing, with office spaces, parking areas, trucking routes, and loading areas.

The following reports (the Reports) have been prepared as part of the planning and approvals process:

- "Land Use Compatibility (LUC) Assessment – Air, 700 and 750 Winston Churchill Blvd., Oakville, Ontario" (the Air Quality Report), prepared by ORTECH Consulting Inc., dated December 21, 2021; and
- "Preliminary Environmental Noise Report and Land Use Compatibility Report" (the Noise Report), prepared by Jade Acoustics Inc., dated December 15, 2021.

The findings of the peer review are summarized below and have been organized based on the review of the Air Quality Report (Air Quality Review) and the Noise Report (Noise Review).

Technical Peer Review

A peer review of the Reports was completed in the context of:

- The Ministry of the Environment, Conservation and Parks (MECP) D-Series Guidelines for Land-Use Compatibility (D-Series);
- The MECP's Environmental Noise NPC-300 Guideline (NPC-300);
- Ontario Regulation 419/05 – Local Air Quality;
- The Ontario Environmental Protection Act; and,
- Ontario's Provincial Policy Statement.

Dillon has completed a review of the surrounding area to identify sensitive land uses (e.g., residences, daycares, schools, hospitals, and senior retirement homes) as well as the zoning and official plan designation of the surrounding area to identify where other sensitive land uses would be allowable.

Dillon identified the following sensitive land uses that would require assessment from a land use compatibility perspective:

- Existing residences located in proximity to the Proposed Facility in the north and east direction on Winston Churchill Boulevard; and
- Existing residences located in proximity to the Proposed Facility in the south and west direction on Deer Run Avenue and Claremont Crescent, respectively.

Elevated sensitive receptors such as high-rise residential buildings or hospitals were not identified within proximity to the Proposed Facility. Therefore, in a given direction from the Proposed Facility, sensitive receptors in closest proximity are considered to be representative of worst-case conditions from an air quality and noise impact perspective.

Air Quality Review

Dillon's findings of the Air Quality Review are presented below, in bullet form, for clarity:

1. The Air Quality Report identifies the Proposed Facility as having characteristics of a Class I and Class II facility and categorizes the Proposed Facility as Class II. Dillon agrees that this is an appropriate and conservative classification.
2. The Air Quality Report has assessed the potential for off-site impacts using the US EPA's AERMOD air dispersion model, version 19191. Vehicle emissions were quantified using the US EPA's MOVES3 program. Both models are recommended for use in Ontario, and the use of these models represents good industry practice for assessing the potential for air quality impacts.
3. The Air Quality Report states that idling vehicles have not been assessed as the Town of Oakville's anti-idling bylaw prohibits idling for more than 3 minutes continuously. Section 2.(2)(k) of the bylaw states that the prohibition does not apply to "vehicles when the ambient outside temperature is more than 27 degrees Celsius or less than five degrees Celsius and the idling of the vehicle is necessary to the operation of air conditioning or heating equipment respectively." Based on this

exemption, and the frequency with which these conditions may occur, Dillon recommends that the assessment be updated to consider the potential impacts related to idling vehicles.

4. With the exception of the omission of idling vehicles, the assessment predicts air quality impacts as a result of Proposed Facility operations which are below the applicable air quality criteria. The assessment has considered Proposed Facility impacts cumulatively with ambient concentrations of the indicator compounds. Dillon agrees with the criteria selected and the approach used to assess Proposed Facility impacts.

Noise Review

The findings of the Noise Review are as follows:

1. Section 4 of the Noise Report identifies six noise sensitive receptors in close proximity to the Proposed Facility. The Noise Report identifies that the assessed receptors represent the façades of the residences assessed at a height of 4.5 m for two-storey dwellings, and 2.5 m for bungalow dwellings.

   As per NPC-300, a point of reception is any location on a noise sensitive land use where noise from a stationary source is received. In addition to the façades of the sensitive uses, outdoor points of reception for each residence should be assessed for non-impulsive and impulsive noise impacts. The Noise Report should be updated to consider outdoor points of reception.

2. Section 4 of the Noise Report identifies that the analysis assumes trucks will idle at the loading bays for a maximum of three minutes each, per the terms of the Town of Oakville Anti-Idling By-Law 2002-153.

   As per By-Law 2002-153 Section 2(2)(k), the anti-idling does not apply to vehicles when the ambient outside temperature is more than 27 degrees Celsius or less than five degrees Celsius and the idling of the vehicle is necessary to the operation of air conditioning or heating equipment respectively.

   As the above scenarios may result in truck idling in excess of three minutes, the Noise Report should be updated to consider the assessment of truck idling. Note, if feasible for facility operations, a facility-wide anti-idling policy may be suitable.

3. Table B of the Noise Report identifies the MECP Class 1 Area exclusionary limits to be applied to the surrounding sensitive receptors. The Town of Oakville By-Law 2008-098 Section 4 provides quantitative general limitations on sound levels. Daytime and nighttime limitations are aligned with NPC-300 Class 1 limits, however evening limitations are 47 dBA/dBAI as opposed to 50 dBA/dBAI.

   It should be noted that the predicted sound levels with mitigation outlined in Tables 4, 5, and 6 of the Noise Report demonstrate compatibility with the Oakville By-Law 2008-098 noise limitations on the surrounding sensitive uses. The purpose of this comment is to ensure that the appropriate criteria is used in future assessments and/or updates to the Noise Report.

Cumulative Impacts with Adjacent Proposed Development

Air Quality

As requested by the Region, Dillon has reviewed the relevant material of the Air Quality Report prepared for 772 Winston Churchill Boulevard and the Addendum Report prepared for 560 Winston Churchill Boulevard in the context of the Clarkson Airshed Study, which describes the historically taxed nature of the Airshed. A peer review of the Air Quality Report for the proposed facility at 560 Winston Churchill Boulevard is included in a separate memo.

Both studies characterize the potential for air quality impacts from the respective proposed facility as minor and insignificant at nearby sensitive receptors. Additionally, the significant sources at both facilities are vehicle emissions and combustion equipment for comfort heat. Dillon recommends that the addition of minor facilities with vehicular and combustion emissions is unlikely to significantly change the composition (i.e. which chemical species are emitted) or quantity of air emissions to the Airshed. Dillon recommends that these proposed facilities are not significant when considered in the context of the Clarkson Airshed Study.

Dillon was also asked to comment on the potential for cumulative impacts as a result of both facilities being operational. The two studies did not present results in a way which is easily compared: the Addendum Report for 560 Winston Churchill uses the significance of the emission sources to justify compatibility while the Air Quality Report for 772 Winston Churchill uses dispersion modelling to quantify the impacts to justify compatibility. This difference in the methods used makes it difficult to comment on the cumulative nature of the two facilities, however, Dillon recommends that when considering the nature of the proposed facilities and the expected emissions, the potential for cumulative impacts is low.

Noise

As requested by the Region, Dillon has reviewed the relevant material of the Noise Report prepared for 772 Winston Churchill and the Noise Feasibility Study prepared for 560 Winston Churchill Boulevard to comment on potential cumulative noise impacts from the two proposed industrial uses on the surrounding sensitive receptors. A peer review of the Noise Feasibility Study prepared for 560 Winston Churchill Boulevard is included in a separate memo.

Through reviewing the Noise Feasibility Study completed by HGC Engineering (560 Winston Churchill Boulevard) and the Noise Report completed by Jade Acoustics Inc. (772 Winston Churchill Boulevard), the surrounding sensitive receptors with the greatest potential to experience cumulative noise impacts were identified to be residential houses located at 658 Winston Churchill Boulevard and 645 Winston Churchill Boulevard.

Based on the predicted worst-case noise impacts presented in both noise assessments, there is the likelihood that both 658 Winston Churchill Boulevard and 645 Winston Churchill Boulevard would experience cumulative noise impacts. However, the worst-case cumulative impacts would likely only be a marginal exceedance of the noise criteria, less than 3 dB, which is typically imperceptible.

To fully understand the potential quantitative cumulative noise impacts from both industrial uses on the surrounding sensitive receptors, a stationary noise assessment should be completed by a Qualified Acoustic Consultant encompassing the operations of both 560 Winston Churchill Boulevard and 772 Winston Churchill Boulevard proposed developments.

Closing

The Reports and/or the modelling assessments should be revised to address the comments contained within this memo in order to justify compatibility between the Proposed Facility and the surrounding land uses.

Should you have any questions about our review, please don't hesitate to contact us.

Sincerely,

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