

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 Land Use Compatibility Assessment and Addendum and Noise Feasibility Study Reports, 560 Winston Churchill Boulevard, Oakville, Ontario

Our File: 22-3763

Dillon Consulting Limited (Dillon) was retained by Halton Region (the Region) to complete a peer review of the land use compatibility reports, with respect to air quality and noise, completed for a proposed commercial/industrial development project at 560 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. 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 three 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, Environmental Air Quality, Noise & vibration – Proposed 560 Winston Churchill Boulevard Commercial Development" (the Initial Report), prepared by Novus Environmental Inc. (Novus, a division of SLR consulting (Canada) Ltd.), dated July 16, 2019;
- "Addendum to Compatibility & Mitigation Study – Air Quality, Dust, Odour – Oakville, ON" (the Addendum Report), prepared by SLR Consulting (Canada) Ltd. (SLR), dated September, 2021; and
- "Noise Feasibility Study, Proposed Warehousing Facility – 560 Winston Churchill Boulevard, Oakville, Ontario" (the Noise Feasibility Study), prepared by Howe Gastmeier Chapnik Limited (HGC Engineering), dated November 2021.

The findings of the peer review are summarized below and have been organized based on the review of the Addendum Report (Air Quality Review) and the Noise Feasibility Study (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 reviewed the Initial Report and the Addendum Report from an air quality perspective. While Dillon reviewed both reports, the Addendum Report is considered to take precedence. Note that the Initial Report is based on an outdated design of the Proposed Facility, which includes two warehouse buildings as opposed to three as included in the Addendum Report.

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

1. The Initial Report and Addendum Report identify the Proposed Facility as having characteristics of a Class I and Class II facility and have categorized the Proposed Facility as Class II. Dillon agrees that this is an appropriate and conservative classification.
2. The Initial Report and Addendum Report identify existing residential receptors located within the Recommended Minimum Separation Distance of the Proposed Facility and correctly state that Guideline D-6 requires a technical assessment of compatibility in this situation.

3. Section 3.1.1 of the Initial Report identifies a proposed development consisting of 3 storey townhomes. It is unclear where this proposed development is in relation to the Proposed Facility or if this section is included in error. Should a proposed residential development be planned nearer to that Proposed Facility than existing sensitive receptors, this assessment should be revised accordingly.
4. The Report characterizes the sources on site as having "...negligible impacts and a low probability for adverse effects" based on exclusion from MECP regulatory requirements. While such exclusions do not always guarantee that sources will not result in nuisance impacts, Dillon agrees with the characterization of the sources at the Proposed Facility and the finding that adverse effects are not anticipated.
5. The Addendum Report characterizes the sources of emissions as minor with respect to the Town of Oakville Health Protection and Air Quality By-Law. Dillon agrees with the characterization of sources presented in the Addendum Report.

Noise Review

The Initial Report and the Noise Feasibility Study were both reviewed by Dillon, from a noise perspective. While Dillon reviewed both reports, the Noise Feasibility Study is considered to take precedence.

The findings of the Noise Review are as follows:

1. Section 3.2 of the Noise Feasibility Study identifies four representative noise sensitive receptors for existing one-storey and two-storey residences in close proximity to the Proposed Facility. The Noise Feasibility Study identifies assessment at the receptor façades.

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 3.2 and Tables 1 and 2 of the Noise Feasibility Study provides details on the process used to determine applicable sound level limits at the surrounding sensitive receptors based on minimum hour background sound levels due to traffic on Winston Churchill Boulevard.

No indication was provided regarding the analysis method used in determining background sound levels (e.g., STAMSON, TNM, RLS-90, etc.). Additionally, it is unclear how the traffic counts and heavy vehicle percentage were calculated for the minimum hourly traffic volumes for Winston Churchill Boulevard.

3. Background sound levels were calculated for the daytime and evening periods combined (07:00 – 23:00), as well as nighttime (23:00 – 07:00). Compared to daytime traffic, volumes typically decrease during evening hours (19:00 – 23:00). As such, background sound levels should be calculated independently for daytime and evening periods to account for the potential decrease, and align with NPC-300.

The Noise Feasibility Study should be updated to include: details and parameters regarding the method used in determining background sound levels (as well as analysis output), further details regarding how the traffic counts and heavy vehicle percentage were calculated, and the calculation of evening (19:00 – 23:00) background sound levels.

4. Section 3.2 of the Noise Feasibility Study 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.

The Noise Feasibility Study should be updated to consider the Oakville By-Law 2008-098 noise limitations on the surrounding sensitive uses.

5. Section 4 of the Noise Feasibility Study identifies the noise sources assessed. Back-up alarms associated with truck movements were not included in the assessment. MECP NPC-300 Noise Guidelines identifies back-up beepers as a safety device, and as such are not considered a stationary noise source. However, The Town of Oakville by-Law Number 2008-098 identifies back-up alarms mounted on vehicles when engaged in activities within a property as a stationary source.

The Noise Feasibility Study should be updated to include the assessment of back-up alarms as a stationary noise source.

6. Section 4 of the Noise Feasibility Study identifies the noise sources assessed. Additional information should be provided with respect to the trucking on site, specifically the potential for reefer trucks, as well as the truck speeds.

Cumulative Impacts with Adjacent Proposed Development

Air Quality

As requested by the Region, Dillon has reviewed the relevant material of the Addendum Report prepared for 560 Winston Churchill Boulevard and the Air Quality Report prepared for 772 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 772 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 Feasibility Study prepared for 560 Winston Churchill Boulevard and the Noise Report prepared for 772 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 Report for the proposed facility at 772 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 facilities.

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,

DILLON CONSULTING LIMITED



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