# 560 Winston Churchill Boulevard

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Addendum to Compatibility & Mitigation Study Air Quality, Dust, Odour Oakville, ON

> SLR Project No: 241.19208.00000 Former Novus Project No: 19-0133 November 2021

> > SLR

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SLR Project No.: 241.19208.00000

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for

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November 12, 2021

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### **EXECUTIVE SUMMARY**

SLR Consulting (Canada) Ltd. (SLR), was retained by Blackwood Partners Inc. to conduct an Addendum to the land-use compatibility assessment previously submitted for the proposed development located at 560 Winston Churchill Boulevard in Oakville, Ontario ("the Project"). This addendum focuses on air quality. A separate report has been prepared to respond to comments related to potential noise and vibration emissions.

SLR has reviewed the surrounding land uses in the area with respect to the following guidelines:

- The Provincial Policy Statement;
- The Provincial Growth Plan;
- The Ministry of the Environment, Conservation and Parks (MECP) land use compatibility guideline (D-Series) including Guideline D-6 – Compatibility Between Industrial Facilities and Sensitive Land Uses (MECP 1995);
- Ontario Regulation 419/05: *Air Pollution Local Air Quality* and its associated air quality standards and assessment requirements;
- The MECP's draft policies on odour impacts and assessment;
- The Town of Oakville's Health Protection and Air Quality By-law 2010-035;
- The Halton Region's Air Quality Guidelines, Regional Official Plan Guidelines; and
- The Halton Region's Noise Abatement Guidelines, Regional Official Plan Guidelines.

This Addendum report is prepared in support of a Site Plan resubmission and in response to the following comment from the Halton Region:

• due to the substantial change in the configuration, and the number of the proposed buildings, an updated LUC report that reflects the current plan is required in a subsequent site plan submission.

Based on the review completed, there are no significant sources of PM, VOCs,  $NO_x$ , and  $SO_2$  emissions associated with Project site warehousing uses. The Project site sources are not considered to be major as defined by the Town of Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

Further, the Project site is anticipated to be compatible with the surrounding land uses from an air quality perspective.

## VERSIONS

Version	Date	Comment
1	July 16, 2019	First Submission (Novus Environmental)
2	November 12, 2021	Revised Site Plan

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## 1. INTRODUCTION

SLR Consulting (Canada) Ltd. (SLR), was retained by Blackwood Partners Inc. to conduct an Addendum to the land-use compatibility assessment previously submitted for the proposed development located at 560 Winston Churchill Boulevard in Oakville, Ontario ("the Project").

Version 1 of the report was completed by Novus Environmental Inc., dated July 16, 2019. and was entitled "Land Use Compatibility, Environmental Air Quality, Noise & Vibration, Proposed 560 Winston Churchill Boulevard Commercial Development, Oakville, Ontario".

This addendum report focuses on air quality. A separate report has been prepared by HGC Engineering to address environmental noise and vibration.

SLR has reviewed the surrounding land uses in the area with respect to the following guidelines:

- The Provincial Policy Statement;
- The Provincial Growth Plan;
- The Ministry of the Environment, Conservation and Parks (MECP) land use compatibility guideline (D-Series) including Guideline D-6 – Compatibility Between Industrial Facilities and Sensitive Land Uses (MECP 1995);
- Ontario Regulation 419/05: *Air Pollution Local Air Quality* and its associated air quality standards and assessment requirements;
- The MECP's draft policies on odour impacts and assessment;
- The Town of Oakville's *Health Protection and Air Quality By-law 2010-035;*
- The Halton Region's Air Quality Guidelines, Regional Official Plan Guidelines; and
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This Addendum report is prepared in support of a Site Plan resubmission and in response to the following comment from the Halton Region:

• due to the substantial change in the configuration, and the number of the proposed buildings, an updated LUC report that reflects the current plan is required in a subsequent site plan submission.

## 2. DESCRIPTION OF DEVELOPMENT AND SURROUNDING AREA

### 2.1 AREA CONTEXT

In this area, Winston Churchill Boulevard forms the north-south boundary between the Town of Oakville and the City of Mississauga.

Immediately surrounding the site is vacant land to the west, low-density residential to the south and east and commercial/employment and residential across Winston Churchill Boulevard to the north.

A context plan of the site and surroundings is shown in Figure 1.

### 2.2 PROPOSED DEVELOPMENT

The Project site is located at 560 Winston Churchill Boulevard. The project will consist of three warehouse buildings: Building A on the eastern edge of the site, at 16,205.91 m<sup>2</sup> floor area; Building B on the southern edge of the site, at 12,790.65 m<sup>2</sup> floor area; and Building C on the western edge of the site, at 30,082.31 m<sup>2</sup> floor area. A context plan is provided in **Figure 1**.

The main access routes are off of Winston Churchill Boulevard, which will serve employee/visitor cars and warehouse truck traffic. The loading docks will be located at the middle of the Site between the warehouse buildings.

A copy of the current Project site plan is provided in Figure 2.

### 2.3 ZONING

### 2.3.1 CITY OF OAKVILLE BY-LAW

The Site is zoned as E2:sp201 – Employment. There is an additional E2-zoned employment property to the north, at 772 Winston Churchill Boulevard.

There is an existing residence at 658 Winston Churchill Boulevard. This property is zoned as E2:sp201 – Employment, making the residence a legal non-conforming land use.

The closest residentially zoned lands are to the south and west (zoned RL3-0), along Deer Run Ave, Acacia Court, and Claremont Crescent. These lands are separated from the Site by O1 - Open Space park lands and N – Natural Area lands.

An exert from the City of Oakville Zoning Map is provided in Figure 3.

### 2.3.2 CITY OF MISSISSAUGA ZONING BY-LAW

The Mississauga lands immediately across from the Site are zoned D – Development and are intended for future Business Employment uses. Current uses include some residences, and some commercial/ industrial uses. There are also E2 and E3 zoned employment lands in the area, to the north and east.

## **3.** ASSESSMENT FRAMEWORK

The intent of this report is to provide an Addendum to the previous submission which identified existing and potential land use compatibility issues and evaluated options to achieve appropriate design, buffering and/or separation distances between the Project site and the existing sensitive land uses, including residential uses.

The requirements of Ontario's planning regime are organized such that generic policy is informed by specific policy, guidance, and legislation, as follows:

- The Ontario Planning Act, Section 2.1 sets the ground rules for land use planning in Ontario, whereby planning decisions have regard to matters of provincial interest including orderly development, public health, and safety; then
- The Provincial Policy Statement ("PPS") sets out goals to ensure adjacent land uses are compatible from a health and safety perspective and are appropriately buffered); then

- The Provincial Growth Plan, Section 2.2.5 builds on the PPS to establish a unique land use planning framework for the Greater Golden Horseshoe, where the development of sensitive land uses will avoid, or where avoidance is not possible, minimize and mitigate adverse impacts on industrial, manufacturing, or other uses that are particularly vulnerable to encroachment; then
- The Ministry of the Environment, Conservation & Parks ("MECP") D-series of guidelines set out methods to determine if assessments are required (areas of influence, recommended separation distances, and the need for additional studies); then
- MECP and Municipal regulations, policies, standards, and guidelines then set out the requirements of additional air quality, noise and vibration studies and the applicable policies, standards, guidelines, and objectives to ensure that adverse effects do not occur.

### 3.1 ONTARIO PLANNING ACT

The Ontario Planning Act is "provincial legislation that sets out the ground rules for land use planning in Ontario. It describes how land uses may be controlled, and who may control them. The purpose of the Act is to:

- provide for planning processes that are fair by making them open, accessible, timely and efficient
- promote sustainable economic development in a healthy natural environment within a provincial policy framework
- provide for a land use planning system led by provincial policy
- integrate matters of provincial interest into provincial and municipal planning decisions by requiring that all decisions be consistent with the Provincial Policy Statement and conform/not conflict with provincial plans
- encourage co-operation and coordination among various interests
- recognize the decision-making authority and accountability of municipal councils in planning"

Section 2.1 of the Ontario Planning Act describes how approval authorities and Tribunals must have regard to matters of provincial interest including orderly development, public health, and safety.

### 3.2 PROVINCIAL POLICY STATEMENT

The PPS "provides policy direction on matters of provincial interest related to land use planning and development. As a key part of Ontario's policy-led planning system, the Provincial Policy Statement sets the policy foundation for regulating the development and use of land. It also supports the provincial goal to enhance the quality of life for all Ontarians."

The PPS is a generic document, providing a consolidated statement of the government's policies on land use planning and is issued under section 3 of the Planning Act. Municipalities are the primary implementers of the PPS through policies in their local official plans, zoning by-laws, and other planning related decisions. Policy direction concerning land use compatibility is provided in Section 1.2.6 of the PPS (2020).

#### "1.2.6 Land Use Compatibility

1.2.6.1 Major facilities and sensitive land uses shall be planned and developed to avoid, or if avoidance is not possible, minimize and mitigate any potential adverse effects from odour, noise, and other contaminants, minimize risk to public health and safety, and to ensure the long-term operational and economic viability of major facilities in accordance with provincial guidelines, standards, and procedures.

1.2.6.2 Where avoidance is not possible in accordance with policy 1.2.6.1, planning authorities shall protect the long-term viability of existing or planned industrial, manufacturing, or other uses that are vulnerable to encroachment by ensuring that the planning and development of proposed adjacent sensitive land uses are only permitted if the following are demonstrated in accordance with provincial guidelines, standards, and procedures:

- a) there is an identified need for the proposed use;
- b) alternative locations for the proposed use have been evaluated and there are no reasonable alternative locations;
- c) adverse effects to the proposed sensitive land use are minimized and mitigated; and
- d) potential impacts to industrial, manufacturing, or other uses are minimized and mitigated."

The goals of the PPS are implemented through Municipal and Provincial policies, as discussed below. Provided the Municipal and Provincial policies, guidelines, standards, and procedures are met, the requirements of the PPS will be met.

### 3.3 D-SERIES OF GUIDELINES

The D-series of guidelines were developed by the MECP in 1995 to assess Recommended Minimum Separation Distances and other control measures for land use planning proposals to prevent or minimize 'adverse effects' from the encroachment of incompatible land uses where a facility either exists or is proposed. D-series guidelines address sources including sewage treatment (Guideline D-2), gas and oil pipelines (Guideline D3), landfills (Guideline D-4), water services (Guideline D-5) and industries (Guideline D-6).

For this project, the applicable guideline is Guideline D-6 - Compatibility *between Industrial Facilities and Sensitive Land Uses*. The guidelines specifically address issues of air quality, odour, dust, noise, and litter.

Adverse effect is a term defined in the Environmental Protection Act and "means one or more of

- impairment of the quality of the natural environment for any use that can be made of it,
- injury or damage to property or to plant or animal life,
- harm or material discomfort to any person,
- an adverse effect on the health of any person,
- impairment of the safety of any person,
- rendering any property or plant or animal life unfit for human use,
- loss of enjoyment of normal use of property, and
- interference with the normal conduct of business".

### 3.3.1 GUIDELINE D-6 REQUIREMENTS

This guideline specifically addresses issues of air quality, odour, dust, noise, and litter. To minimize the potential to cause an adverse effect, potential Areas of Influence and Recommended Minimum Separation Distances are included within the guidelines. The potential Areas of Influence and Recommended Minimum Separation Distances from the guidelines are provided in the table below.

## Table 1: Guideline D-6 - Potential Influence Areas and Recommended Minimum Separation Distances for Industrial Land Uses

Industry Classification	Area of Influence	Recommended Minimum Separation Distance		
Class I – Light Industrial	70 m	20 m		
Class II – Medium Industrial	300 m	70 m		
Class III – Heavy Industrial	1000 m	300 m		

Industrial categorization criteria are supplied in Guideline D-6-2, and are shown in the following table:

#### Table 2: Guideline D-6 - Industrial Categorization Criteria

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
Class I Light Industry	<ul> <li>Noise: Sound not audible off-property</li> <li>Dust: Infrequent and not intense</li> <li>Odour: Infrequent and not intense</li> <li>Vibration: No ground- borne vibration on plant property</li> </ul>	<ul> <li>No outside storage</li> <li>Small-scale plant or scale is irrelevant in relation to all other criteria for this Class</li> </ul>	<ul> <li>Self-contained plant or building which produces/ stores a packaged product</li> <li>Low probability of fugitive emissions</li> </ul>	<ul> <li>Daytime operations only</li> <li>Infrequent movement of products and/ or heavy trucks</li> </ul>	<ul> <li>Electronics manufacturing and repair</li> <li>Furniture repair and refinishing</li> <li>Beverage bottling</li> <li>Auto parts supply</li> <li>Packaging and crafting services</li> <li>Distribution of dairy products</li> <li>Laundry and linen supply</li> </ul>
Class II Medium Industry	<ul> <li>Noise: Sound occasionally heard off- property</li> <li>Dust: Frequent and occasionally intense</li> <li>Odour: Frequent and occasionally intense</li> <li>Vibration: Possible ground-borne vibration, but cannot be perceived off-property</li> </ul>	<ul> <li>Outside storage permitted</li> <li>Medium level of production allowed</li> </ul>	<ul> <li>Open process</li> <li>Periodic outputs of minor annoyance</li> <li>Low probability of fugitive emissions</li> </ul>	<ul> <li>Shift operations permitted</li> <li>Frequent movements of products and/ or heavy trucks with the majority of movements during daytime hours</li> </ul>	<ul> <li>Magazine printing</li> <li>Paint spray booths</li> <li>Metal command</li> <li>Electrical production</li> <li>Manufacturing of dairy products</li> <li>Dry cleaning services</li> <li>Feed packing plants</li> </ul>

Category	Outputs	Scale	Process	Operations / Intensity	Possible Examples
Class III Heavy Industry	<ul> <li>Noise: Sound frequently audible off property</li> <li>Dust: Persistent and/ or intense</li> <li>Odour: Persistent and/ or intense</li> <li>Vibration: Ground-borne vibration can frequently be perceived off- property</li> </ul>	<ul> <li>Outside storage of raw and finished products</li> <li>Large production levels</li> </ul>	<ul> <li>Open process</li> <li>Frequent outputs of major annoyances</li> <li>High probability of fugitive emissions</li> </ul>	<ul> <li>Continuous movement of products and employees</li> <li>Daily shift operations permitted</li> </ul>	<ul> <li>Paint and varnish manufacturing</li> <li>Organic chemical manufacturing</li> <li>Breweries</li> <li>Solvent recovery plants</li> <li>Soaps and detergent manufacturing</li> <li>Metal refining and manufacturing</li> </ul>

### 3.3.2 REQUIREMENTS FOR ASSESSMENTS

Guideline D-6 requires that studies be conducted to assess impacts where sensitive land uses are proposed within the potential Area of Influence of an industrial facility. This Addendum report is intended to fulfill this requirement.

The D-series guidelines reference previous versions of the air quality regulation (Regulation 346) and noise guidelines (Publications NPC-205 and LU-131). However, the D-Series of guidelines are still in force, still represent current MECP policy and are specifically referenced in numerous other current MECP policies. In applying the D-series guidelines, the current policies, regulations, standards, and guidelines have been used (e.g., Regulation 419, Publication NPC-300).

### **3.3.3 REQUIREMENTS FOR MINIMUM SEPARATION DISTANCES**

Guideline D-6 also *recommends* that no sensitive land use be placed within the Recommended Minimum Separation Distance. However, it should be noted that this is a recommendation, only. Section 4.10 of the Guideline allows for development within the Recommended Minimum Separation Distance, in cases of redevelopment, infilling, and transitions to mixed use, provided that the appropriate studies are conducted and that the relevant air quality and noise guidelines are met.

### 3.4 TOWN OF OAKVILLE – HEALTH PROTECTION AND AIR QUALITY BY-LAW 2010-035

The Oakville-Clarkson Airshed Action Plan (OCAAP) was released on June 25, 2010. The OCAAP contains 35 recommendations for actions to prevent air pollution as well as decrease emissions by every sector in the community to improve air quality in the Oakville-Clarkson airshed.

Through the action plan, the MECP confirmed that the Oakville-Clarkson airshed represents a "taxed" or compromised airshed with respect to respirable particulate matter ( $PM_{2.5}$ ). The plan commits the MECP and the Town of Oakville to act to achieve measurable improvement to the Oakville Clarkson Airshed.

The Town of Oakville Health Protection and Air quality By-law 2010-035 requires that an application for approval be undertaken by a proposed or existing facility with the potential to be a major health-risk air pollutant emitter where major emissions mean:

"an emission from a facility into the air of a health-risk air pollutant that exceeds at least one of the following thresholds:

(a) for directly emitted fine particulate matter, more than 300 kilograms per year;

(b) for volatile organic compounds, more than 10,000 kilograms per year;

(c) for nitrogen oxides (as NO2 equivalent), more than 20,000 kilograms per year;

- (d) for sulphur dioxide, more than 20,000 kilograms per year; or,
- (e) for ammonia, more than 10,000 kilograms per year"

# 3.5 HALTON REGION'S REGIONAL OFFICIAL PLAN GUIDELINES: LAND USE COMPATIBILITY GUIDELINES

The purpose of Land Use Compatibility Guidelines development by the Region (LUCG) is to "identify how land use compatibility issues may be addressed by municipalities during a development proposal..." The LUCG were developed by the Region in consideration of the Provincial D-Series of Guidelines, prepared by the Ontario Ministry of the Environment, Conservation and Parks (MECP) in 1995 for planning guidance in evaluating land use compatibility. Section 2 of the LUCG identifies the relevant provincial guidelines and regulations which are to be considered in conducting air quality assessment in Ontario:

"The D-Series are used for development applications that require the re-designation (Official Plan Amendment) or rezoning of land uses (Zoning By-law amendment). The MOE's D-Series are only applicable when a:

- New sensitive land use requires a land use amendment and is proposed to be located within the influence, or potential influence, area of an impacting use, such as an existing industrial land use; or when a
- New industrial use requires a land use amendment and is proposed to be located near an existing sensitive residential use."

Included in the Region's summary is a discussion of the "potential areas of influence" approach, as presented in the D-series of guidelines when assessing compatibility of industrial uses with more sensitive uses such as residences.

In preparing the LUCG, the Region has clarified an aspect concerning recommended minimum separation distances. In the LUCG, it is understood that areas of influence of various industrial processes will be site specific. Actual areas of influence are determined through appropriate studies allowing for industrial activities to be compatible with more sensitive land uses within the area of influence and within recommended minimum separation distances which are presented in Table 1. Appropriate studies can provide mitigation strategies, if required.

# 3.6 HALTON REGION'S REGIONAL OFFICIAL PLAN GUIDELINES: AIR QUALITY GUIDELINES

The Region's Air Quality Guidelines (AQG) were developed along with a number of other guidelines for land use planning which came out of the Regional Official Plan Amendment (ROPA 38). In general terms, the AQG recommends consideration of local industrial sources and transportation features when evaluating the siting of a residential land use.

The AQG acts as a summary document of the applicable guidelines for a particular undertaking.

"2.1 Under the Region's policy 143(12), any source emission studies may only be applicable when sensitive land uses (residential, natural heritage) are proposed with these 3 conditions present:

- 1) Within 30 m of a major arterial road or provincial highway or within 150 m of provincial freeway;
- 2) In proximity to an industrial use; and a

### 3) Utility use"

SLR conducted a review of identified industrial uses and roadways/highways, as referred to in items 1) and 2) of Section 2.1 listed above.

## 4. LANDUSE CLASSIFICATION OF THE PROPOSED USE

The proposed warehousing use has the following characteristics:

- Outputs: No dust, odours, or vibration; sound occasionally heard off property
- Scale: No outside storage; no production
- Process: Closed process, self-contained plant, low probability of fugitive emissions
- Operations/ Intensity: Shift operations permitted, frequent movements of products and/ or heavy trucks with the majority of movements during daytime hours

Based on the above, the proposed use has characteristics of both Class I Light and Class II Medium scale industries. For this assessment, the Project site is conservatively considered a Class II Medium Scale industry, with a 70 m Recommended Minimum Separation Distance, and a 300 m Area of Influence. The Guideline D-6 potential Area of Influence and Recommended Minimum Separation Distance for the Project site can be seen in **Figure 4**.

### 4.1 GUIDELINE D-6 SUMMARY

As shown in **Figure 4**, there are a number of residences within the 300 m potential Area of Influence of the Project site. As such, under Guideline D-6 requirements, an assessment of the potential for noise and air quality impacts from Site is required.

There are five existing residences located within the 70 m Recommended Minimum Separation Distance, namely 535, 555, 645, 655 and 658 Winston Churchill Blvd. Guideline D-6 recommends that no sensitive land use be placed within the Recommended Minimum Separation Distance. However, it should be noted that this is a recommendation only, and within a guideline. Section 4.10 of the Guideline allows for development within the Recommended Minimum Separation Distance to proceed, provided that a detailed assessment is conducted and that the relevant MECP guidelines and standards are met. This is consistent with previous OMB/ LPAT decisions on separation distances.

Subsequent sections of this report assess the potential for air quality emissions from the Project site. Provided that the air quality from the Project site meet the applicable air quality and noise regulations, the requirements of Guideline D-6 will be met.

Noise emissions from the Project site are assessed and provided in a separate, stand-alone report.

### **5.** AIR QUALITY, DUST AND ODOUR ASSESSMENT

### 5.1 INDUSTRIAL SOURCES

#### 5.1.1 MECP GUIDELINES AND REGULATIONS

Within Ontario, facilities which emit significant amounts of contaminants to the environment are required to obtain and maintain an Environmental Compliance Approval (an "ECA") from the MECP or submit an

Environmental Activity and Sector Registry ("EASR"). Facilities with an ECA/EASR should already meet the MECP guidelines for air quality contaminants at their property line.

### 5.1.1.1 Air Quality Contaminants

Under O.Reg. 419/05, a facility is required to meet prescribed standards for air quality contaminants at their property boundary line and any location off-site ground level, or elevated sensitive receptor.

### 5.1.1.2 Odour

There are a select few compounds that are provincially regulated from an odour perspective; however, there is no formal regulation with respect to mixed odours. Impacts from mixed odours produced by industrial facilities are generally only considered and regulated by the MECP in the presence of persistent complaints (ECO 2010).

The MECP assesses mixed odours, in Odour Units, following draft guidelines. One odour unit (1 OU) has been used as a default threshold. This is the concentration at which 50 % of the population will just detect an odour (but not necessarily identify/recognize or object to it). Recognition of an odour will typically occur between 3 and 5 odour units. The following factors may be considered:

- **Frequency** How often the odour occurs. The MECP typically allows odours to exceed 1 OU with a 0.5 % frequency.
- Intensity The strength of the odour, in odour units. 1 OU is often used in odour assessments in Ontario.
- **Duration –** How long the odour occurs.
- **Offensiveness** How objectionable the odour is. The MECP may allow for a higher concentration of pleasant smells such as baking as opposed to off-putting smells such as rotting garbage or rancid meat.
- Location Where the odour occurs. The MECP assesses at odours where human activity is likely to occur.

The MECP has decided to apply odour-based standards to locations "where human activities regularly occur at a time when those activities regularly occur," which is generally accepted to be places that would be considered sensitive such as residences and public meeting places. As a guide, the MECP has provided proposed clarification of human odour receptors, as shown in the following table:

Receptor Category	Examples	Exposure Type	Type of Assessment
Permanent potential 24-hour sensitivity	Anywhere someone could sleep including any resident or house, motels, hospitals, senior citizen homes, campgrounds, farmhouse, etc.	Individual likely to receive multiple exposures	Considered sensitive 24 hours per day
Permanent daily hours but with definite periods of shutdown/closure	Schools, daycares, community centres, soccer fields, farmland, churches, bicycle paths, hiking areas, lakes, commercial or institutional facilities (with consideration of hours of operation such as night clubs, restaurants, etc.)	Individual could receive multiple exposures	Nighttime or daytime exclusion only (consider all other hours)
Seasonal variations with clear restrictions on accessibility during the off season	Golf courses, amusement parks, ski hills, other clearly seasonal private property	Short term potential for exposure	Exclusions allowed for non-seasonal use
Transient	Open fields, roadways, easements, driveways, parking lots, pump houses	Very short-term potential for exposure, may not be a single resident exposed to multiple events	Generally, would not be included as human receptors unless otherwise specified.

### Table 3: Proposed Clarification of Human Receptors (MECP 2008)

Note that commercial facilities are considered to be odour sensitive points of reception, as well as community spaces and residences.

### 5.1.1.3 Dust

Ontario Regulation 419/05 also provides limits for dust, including limits for suspended particulates and dust fall. Under Reg. 419/05, these air quality limits must be met at the property line and all points beyond.

### 5.1.1.4 Cumulative Assessments

Cumulative impact assessments, examining the combined effects of individual industries, or the combined effects of industry and roadway emissions, are generally not required. Neither the PPS, the D-Series of Guidelines, Regulation 419/05, or the current MECP odour assessment protocols require an assessment of cumulative impacts.

Which is not to say that such assessments are never warranted; rather, the need to do so must be considered on a case-by-case basis, depending on the nature and intensity of the industrial operation(s), and the nature of the pollutants released. Based on the types of pollutants released by the industries in this area, cumulative effects assessments are not warranted.

### 5.1.2 ASSESSMENT OF POTENTIAL AIR QUALITY EMISSIONS

There are no significant sources of air quality dust, odour or litter emissions associated with warehousing uses. The primary sources of air emissions are:

- Rooftop heating, ventilation, and air conditioning (HVAC) units for the office areas; and
- Emissions from moving and idling trucks.

As previously discussed in Section 5.1.1.1, facilities which emit significant amounts of contaminants to the environment are required to obtain and maintain an ECA from the MECP or submit an EASR. However, Ontario Regulation 524/98 sets out ECA approval exemptions for source which are known to have negligible impacts and a low probability for adverse effects. These exemptions include:

- Air conditioning units (Regulation 524/98, Section 1. (1) 5.)
- General ventilation exhausts (Regulation 524/98, Section 1. (1) 7.)
- HVAC systems (Regulation 524/98, Section 1. (1) 25.)
- Moving motor vehicles (*Environmental Protection Act*, Section 9(3))

Therefore, under MECP regulations, the air quality sources at the Project site are exempt from ECA or EASR requirements.

A wind frequency distribution diagram (a wind rose) is provided in **Figure 5**. Prevailing winds are from the northwest, which will generally direct emissions from the Project site away from the majority of residences in the area.

Considering the above, adverse air quality impacts from the Project site sources are not anticipated at the nearby sensitive receptors. Therefore, further study related to air quality is not warranted.

### 5.1.3 TOWN OF OAKVILLE – HEALTH PROTECTION AND AIR QUALITY BY-LAW 2010-035

The proposed operations have limited potential to emit air emissions that are regulated under the Town of Oakville Health Protection and Air Quality By-law 2010-035. Further, the facility is not considered to be a "major" emitter as defined in the By-law where major emissions mean:

"an emission from a facility into the air of a health-risk air pollutant that exceeds at least one of the following thresholds:

(a) for directly emitted fine particulate matter, more than 300 kilograms per year;

(b) for volatile organic compounds, more than 10,000 kilograms per year;

(c) for nitrogen oxides (as NO2 equivalent), more than 20,000 kilograms per year;

(d) for sulphur dioxide, more than 20,000 kilograms per year; or,

(e) for ammonia, more than 10,000 kilograms per year"

The potential sources for fine particulate matter (PM), volatile organic compounds (VOCs), nitrogen oxides (NO<sub>x</sub>), and sulphur dioxide (SO<sub>2</sub>) at the Project site include:

- HVAC units for the office areas; and
- Emissions from moving and idling trucks.

There are no sources anticipated to emit ammonia.

The natural gas fired HVAC sources have the potential to emit, particulate matter (PM), volatile organic compounds (VOCs), nitrogen oxides (NO<sub>x</sub>), and sulphur dioxide (SO<sub>2</sub>). The HVAC sources operate to provide comfort heating for the occupants of the buildings. These are small scale, natural gas-fired units. Because the heating input for each unit is so low, these units are exempt from the requirement to obtain an MECP permit under Regulation 524/98, Section 1. (1) 5.

Further, under the MECP Procedure for Preparing an Emission Summary and Dispersion Modelling Report (Guideline A-10 v4.1 March 2018, Section 7.1.1 Combustion of Natural Gas and Propane) "the significant contaminant from the combustion of natural gas and propane is nitrogen oxides. Other contaminants for this type of source, are generally emitted in negligible amounts."

The operation of trucks on the property has the potential to emit, PM, VOCs, NO<sub>x</sub>, and SO<sub>2</sub>. These air emissions are emitted from the operation of internal fuel combustion engines, brake wear, tire wear and the breakdown of dust/debris on roadways.

The emissions of VOCs,  $NO_x$ , and  $SO_2$  from truck engines (tailpipes) are specifically exempted from MECP permitting requirements by Section 9(3)(f) of the EPA and are addressed in Sections 21 to 23 of the EPA and by O. Reg. 457/19: Vehicle Emissions. Based on our experience, the types and numbers of vehicles used, their locations, and on the MECP guidance, adverse impacts from tailpipe emissions are highly unlikely and an assessment impacts of tailpipe emissions is not required.

The majority of PM emissions from the operations of trucks comes from brake wear, tire wear and the breakdown of dust/debris which is re-suspended by vehicles travelling on the road. Trucks will be travelling on short lengths of paved roadways internal to the property. Paved surfaces have a low potential to generate dust and to retain debris because the surface is continuously "flushed" by rainfall events. During rainfall events, dust/debris is directed to catch basins/sewers where is it later removed for off-property disposal. Vehicles speeds will be very low reducing the potential for re-suspension of dust/debris. The truck travel lanes are buffered from the surrounding residential properties by the proposed warehouse buildings reducing potential surface winds that could give rise to re-suspension of dust/debris. Given the low travel speeds, buffering of surface winds, and that the Trucks are moving on paved surfaces, the potential for re-suspension of PM is considered to be negligible.

Considering the above, there are no significant sources of PM, VOCs,  $NO_x$ , and  $SO_2$  emissions associated with Project site warehousing uses. The Project site sources are not considered to be major as defined by the Town of Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

# 5.2 SUMMARY OF AIR QUALITY, DUST AND ODOUR CONCLUSIONS AND RECOMMENDATIONS

The potential air quality emissions from the Project site, including dust and odour, have been assessed.

There are no significant sources of PM, VOCs,  $NO_x$ , and  $SO_2$  emissions associated with Project site warehousing uses. The Project site sources are not considered to be major as defined by the Town of Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

Based on the review completed, the Project site is anticipated to be compatible with the surrounding land uses from an air quality perspective.

## 6. ENVIRONMENTAL NOISE AND VIBRATION

A separate report has been prepared by HGC Engineering to address environmental noise and vibration.

## 7. CONCLUSIONS

SLR Consulting (Canada) Ltd. (SLR), was retained by Blackwood Partners Inc. to conduct an Addendum to the land-use compatibility assessment previously submitted for the Project site located at 560 Winston Churchill Boulevard in Oakville, Ontario. This addendum focuses on air quality. A separate report has been prepared to respond to comments related to potential noise and vibration emissions.

Based on the review completed, there are no significant sources of PM, VOCs, NO<sub>x</sub>, and SO<sub>2</sub> emissions associated with Project site warehousing uses. The Project site sources are not considered to be major as defined by the Town of Oakville Health Protection and Air Quality By-Law 2010-035, therefore an application for approval to be considered by Town Council is not required.

Further, the Project site is anticipated to be compatible with the surrounding land uses from an air quality perspective.

## 8. **REFERENCES**

Environmental Commissioner of Ontario (ECO, 2010), *Review of Posted Decision: Developing an Odour Policy Framework*, April 2010.

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1995), Guideline D-1: Land Use Compatibility

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1996), Guideline D-2: *Compatibility Between Sewage Treatment and Sensitive Land Uses* 

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1994) Guideline D-3: *Environmental Considerations For Gas Or Oil Pipelines And Facilities* 

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1994), Guideline D-4: Land Use On or Near Landfills and Dumps

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1996), Guideline D-5: *Planning for Sewage & Water Services* 

Ontario Ministry of the Environment, Conservation & Parks (MECP, 1995), Guideline D-6: *Compatibility Between Industrial Facilities and Sensitive Land Uses* 

Ontario Ministry of Municipal Affairs and Housing (MMAH, 2014). *Provincial Policy Statement* <u>http://www.ontario.ca/document/provincial-policy-statement-2014</u>

Ontario Ministry of Municipal Affairs and Housing (MMAH, 2019). Draft *Provincial Policy Statement*. <u>https://prod-</u>environmental-registry.s3.amazonaws.com/2019-07/EN\_PPS Proposed Policies\_July2019.pdf

Ontario Regulation 419/01 – Local Air Quality.

The Town of Oakville's Health Protection and Air Quality By-law 2010-035

The Halton Region's Air Quality Guidelines, Regional Official Plan Guidelines

The Halton Region's Noise Abatement Guidelines, Regional Official Plan Guidelines

## 9. STATEMENT OF LIMITATIONS

This report has been prepared and the work referred to in this report has been undertaken by SLR Consulting (Canada) Ltd. (SLR) for Blackwood Partners Inc., hereafter referred to as the "Client". It is intended for the sole and exclusive use of the Client. The report has been prepared in accordance with the Scope of Work and agreement between SLR and the Client. Other than by the Client and as set out herein, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted unless payment for the work has been made in full and express written permission has been obtained from SLR.

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### 560 Winston Churchill Boulevard

Addendum to Compatibility & Mitigation Study Air Quality, Dust, Odour SLR Project No.: 241.19208.00000





BLACKWOOD PARTNERS INC.	True North	Scale: 1:8,000	METRES	
560 WINSTON CHURCHILL BOULEVARD	$\bigwedge$	Date: Oct 15 2021 Rev. 1.0	Eiguro No	
CONTEXT PLAN	$\left\{ \right\}$	Project No. 241.19208.00000	<b>1</b>	global environmental solutions







BLACKWOOD PARTNERS INC.	True North	Scale: 1:9,50	METRES	
560 WINSTON CHURCHILL BOULEVARD		Data: Oct 15 2021 Boy 1		
CLASS I & CLASS II D-6 AREAS OF INFLUENCE AND RECOMMENDED MINIMUM SEPARATION DISTANCES	$\bigcirc$	Project No. 241.19208.00000	<b>4</b>	global environmental solutions

