Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

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Executive Summary

SLR Consulting (Canada) Ltd. (SLR), was retained by Rangeview Landowners Group Inc., to conduct a Preliminary Review of air quality, odour, dust, noise, and vibration in support of an Official Plan Amendment ("OPA") application with the City of Mississauga. The purpose of the OPA is to support an increase in the number of units permitted.

The site includes the blocks encompassed by Lakeshore Road East to the north, Hydro Road to the east, and East Avenue to the west in Mississauga, Ontario ("the Project Site").

This assessment has considered:

- Industrial air quality, odour, and dust emissions;
- Industrial/ commercial noise and vibration; and
- Transportation-related noise and vibration.

The assessment has included a review of air quality and noise emissions from industrial facilities in the area.

The potential for air quality impacts on the proposed development, including dust and odour, have been reviewed. There is potential for air emissions from surrounding industries to be detected at the Project Site. A more detailed assessment of air emissions may need to be conducted at a later stage in the planning process once the Project Site plans are further developed. Receptor-based mitigation measures may need to be implemented to improve land use compatibility with surrounding employment facilities.

This assessment has evaluated the potential for noise emission exposure at the Project site.

Noise emissions from two industries have the potential to exceed NPC-300 Class 1 guideline limits at sections of the Project Site. Receptor-based mitigation measures and or source-based mitigation measures may need to be implemented to meet applicable noise guideline limits.

The potential for transportation-related noise emissions at the Project Site have been evaluated. Receptor-based mitigation measures and or source-based mitigation measures may need to be implemented to meet applicable noise guideline limits.

The potential for vibration impacts on the Project site have been assessed. Based on the setback distances to industry and transportation sources:

- Adverse vibration impacts from industrial facilities are not anticipated at the Project.
- Adverse vibration impacts from Freight and GO Train sources are not anticipated.

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1.0 Introduction

SLR Consulting (Canada) Ltd. (SLR), was retained by Rangeview Landowners Group Inc., to conduct a Preliminary Review of air quality, odour, dust, noise, and vibration in support of an Official Plan Amendment ("OPA") application with the City of Mississauga. The purpose of the OPA is to support an increase in the number of units permitted.

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This assessment has considered:

- Industrial air quality, odour, and dust emissions;
- Industrial/ commercial noise and vibration; and
- Transportation-related noise and vibration.

The assessment has included a review of air quality, noise, and vibration emissions from industrial facilities in the area.

In this assessment, SLR has reviewed the surrounding land uses and major facilities in the area with respect to the following guidelines:

- The Provincial Policy Statement;
- Ministry of the Environment, Conservation and Parks ("MECP") Guidelines D-1 and D-6;
- Ontario Regulation 419/05: *Air Pollution – Local Air Quality* and its associated air quality standards and assessment requirements;
- The MECP draft policies on odour impacts and assessment;
- MECP Publication NPC-300 noise guidelines for industrial and transportation; and
- The City of Mississauga Noise By-law.

This preliminary report identifies existing and potential land use compatibility issues and where additional study may be required.

2.0 Description of Development and Surroundings

2.1 Proposed Development

The Rangeview Master Plan includes the redevelopment of the blocks encompassed by Lakeshore Road East to the north, Hydro Road to the east, and East Avenue to the west in Mississauga. The Project Site is currently occupied by low-rise commercial and light industrial buildings. A site and context plan are provided in **Figure 1.**

The proposed development includes approximately 5,300 residential units, consisting of the following:

- 592 low-rise units
- 3,654 mid-rise units
- 1,054 high-rise units

The proposed development Master Plan is provided in **Figure 2**.

2.2 Surroundings

Immediately surrounding the site are low-rise commercial buildings to the northwest and north along Lakeshore Road, Sunflower Garden Park and the waterfront trail to the northeast and east, Lakeview Park, Douglas Kennedy Park and the Lakeview Water Treatment Plant buildings to the south and Waterworks Park to the west. Beyond the immediate surroundings are low-rise residences to the southwest through west to north, the G. E. Booth Wastewater Treatment Plant to the east and Lake Ontario to the south. There is outdoor amenity and park space, as well as the Waterfront Trail.

2.3 Land Use Designations in the Area

The sections to follow outline the current land use designations under the City of Mississauga Official Plan (OP) (October 2021 consolidation) and the City of Mississauga Zoning By-law 0225-2007.

2.3.1 City of Mississauga Official Plan

The City of Mississauga Official Plan Map for the area can be seen in **Figure 3a**. The Project Site is designated as Mixed-Use, Residential Medium Density, and Public Open Space. The lands north of the Project Site are designated as Mixed-Use and Residential Low Density II. The lands to the east are designated as Mixed-Use, Residential Medium Density, Business Employment, Utility, Greenlands and Public Open Space. The lands to the south are designated as Mixed-Use, Residential Medium Density, Residential High Density, Utility, Convenience Commercial and Public Open Space. The lands west of the Project Site are designated as Residential Low Density II, Residential High Density, and Mixed Use.

2.3.2 City of Mississauga Zoning By-Law 0225-2007

The City of Mississauga Zoning Map for the area can be seen in **Figure 3b**. The Project Site is currently zoned as Employment (“E2”). The lands to the north of the Project Site are zoned as Mainstreet Commercial (“C4”), Detached Dwellings (“R3”), Townhouse (“RM4”), and Utility (“U”). The lands to the east are zoned as Apartment, Long-Term Care, Retirement Buildings (“RA5”), Mainstreet Commercial (“C4”), Back to Back Stacked Townhouses (“RM9”) and Employment (“E2”). Lands to the south are zoned as Utility (“U”), City Park (“OS2”), Apartment, Long-Term Care, Retirement Buildings (“RA5”), Back to Back Stacked Townhouses (“RM9”), and Mainstreet Commercial (“C4”). To the west of the Project Site, lands are zoned as Detached Dwellings (“R3”), Back to Back Stacked Townhouses (“RM8”), Apartment, Long-Term Care, Retirement Buildings (“RA2”), and Mainstreet Commercial (“C4”).

3.0 Assessment Framework

The intent of this report is to identify any existing and potential land use compatibility issues.

The requirements of the Ontario 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 – making sure 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 MECP D-series of guidelines set out methods to determine if assessments are required (Areas of Influence, Recommended Minimum 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 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"[1]

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 the Ontario policy-led planning system, the Provincial Policy

[1] https://www.ontario.ca/document/citizens-guide-land-use-planning/planning-act

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 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. The current 2020 PPS came into effect on May 1, 2020. Policy direction concerning land use compatibility is provided in Section 1.2.6 of the PPS.

From the current 2020 version:

> "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 as a means to assess Recommended Minimum Separation Distances and other control measures for land use planning proposals in an effort 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 D-3), landfills (Guideline D-4), water services (Guideline D-5) and industries (Guideline D-6).

For this assessment, the applicable guideline is Guideline D-6 - *Compatibility between Industrial Facilities and Sensitive Land Uses*.

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-2 Requirements

For Wastewater Treatment Plants, the applicable guideline is Guideline D-2 - *Compatibility between Sewage Treatment and Sensitive Land Uses*. The guideline sets out the following minimum separation distances and recommended separation distances:

Facility Capacity	Minimum Separation Distance	Recommended Separation Distance
Less than 500 m^3/d	N/A	100 m
Greater than 500 m^3/d but less than 25,000 m^3/d	100 m	150 m
Greater than 25,000 m^3/d	150 m or greater	150 m or greater

In order to provide additional guidance on acceptable separation distances, it is the SLR practice to treat large-scale facilities like the G.E. Booth "Lakeview" Wastewater Treatment Plant as if they were a Class III Heavy industry under Guideline D-6, including a 300 m Recommended Minimum Separation Distance as described in the following section.

3.3.2 Guideline D-6 Requirements

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

Table 1: Guideline D-6 - Potential Areas of Influence 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, 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	• Noise: Sound not audible off-property • Dust: Infrequent and not intense • Odour: Infrequent and not intense • Vibration: No ground-borne vibration on plant property	• No outside storage • Small-scale plant or scale is irrelevant in relation to all other criteria for this Class	• Self-contained plant or building which produces/ stores a packaged product • Low probability of fugitive emissions	• Daytime operations only • Infrequent movement of products and/ or heavy trucks	• Electronics manufacturing and repair • Furniture repair and refinishing • Beverage bottling • Auto parts supply • Packaging and crafting services • Distribution of dairy products • Laundry and linen supply
Class II Medium Industry	• Noise: Sound occasionally heard off-property • Dust: Frequent and occasionally intense • Odour: Frequent and occasionally intense • Vibration: Possible ground-borne vibration, but cannot be perceived off-property	• Outside storage permitted • Medium level of production allowed	• Open process • Periodic outputs of minor annoyance • Low probability of fugitive emissions	• Shift operations permitted • Frequent movements of products and/ or heavy trucks with the majority of movements during daytime hours	• Magazine printing • Paint spray booths • Metal command • Electrical production • Manufacturing of dairy products • Dry cleaning services • Feed packing plants
Class III Heavy Industry	• Noise: Sound frequently audible off property • Dust: Persistent and/ or intense • Odour: Persistent and/ or intense • Vibration: Ground-borne vibration can frequently be perceived off-property	• Outside storage of raw and finished products • Large production levels	• Open process • Frequent outputs of major annoyances • High probability of fugitive emissions	• Continuous movement of products and employees • Daily shift operations permitted	• Paint and varnish manufacturing • Organic chemical manufacturing • Breweries • Solvent recovery plants • Soaps and detergent manufacturing • Metal refining and manufacturing

3.3.3 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 report is intended to fulfill this requirement.

The D-series guidelines reference previous versions of the air quality regulation (Regulation 346). However, the D-Series of guidelines are still active, 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).

3.3.4 Recommended 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.

4.0 Nearby Industries

The Guideline D-6 Separation distances from the Project Site are shown in Figures 4a and 4b. Local industries within 1 km of the Project Site were inventoried using available satellite imagery. The lands surrounding the Project Site are generally comprised of commercial, residential and employment uses. The Arthur P Kennedy Water Treatment Plant and the G. E. Booth Wastewater Treatment Plant are also located in the vicinity of the Project Site.

In Ontario, facilities that emit significant amounts of contaminants to the environment are required to obtain and maintain an Environmental Compliance Approval (“ECA”) from the MECP or submit an Environmental Activity and Sector Registry (“EASR”). ECAs/ EASRs within 1 km of the Project Site were obtained from the MECP Access Environment website2.

Table 3 lists the identified industries within 1000 m of the Project site and within their applicable Area of Influence. A more detailed table of all industries within 1000 m is provided in Appendix A. Industries which lie within their applicable Area of Influence in respect to the Project are discussed further below.

[2] https://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action

Table 3: Identified Industries Within the Potential Area of Influence of the Project Site

Facility	Address	Type of Operation	Environmental Compliance Approval No.	Industry Class	Area of Influence Dist (m)	Actual Distance to Site (m)	Additional Assessment Required?
Arthur P Kennedy "Lakeview" Water Treatment Plant	920 East Avenue	Water Treatment	NA	II	300	10	Yes
G. E. Booth "Lakeview" Wastewater Treatment Plant	1300 Lakeshore Road E	Wastewater Treatment	4675-CAJSSL (2022) 9375-C4RKKZ (2021)	III	1000	310	Yes
Autotex Service Centre Ltd.	909 Lakeshore Road E	Car Repair/Service	NA	I	70	25	Yes
Krown Lakeshore	1019 Lakeshore Road E	Rust Protection Services	NA	I	70	28	Yes
Ontario Greenlight Motors	1019 Lakeshore Road E	Car Sales	NA	I	70	28	Yes
Ontario Auto Group	857 Lakeshore Road E	Car Sales	NA	I	70	28	Yes
Rosewood Automotive	827 Lakeshore Road E	Car Repair/Service	NA	I	70	25	Yes
Armstrong World Industries - Plaster Form Inc.	1180 Lakeshore Road E	Decorative Architectural Systems Manufacturer	6327-A3ARJN (2015)	II	300	150	Yes

The industries listed above were identified inside their Potential Area of Influence and, therefore, require additional assessment.

All other industries, detailed in Appendix B, are outside of their respective Guideline D-6 Area of Influence and, therefore, are anticipated to be compatible with the proposed Project site development.

4.1.1 G. E. Booth Lakeview Wastewater Treatment Plant

Address:	**1300 Lakeshore Road E**
Distance To Project:	310 m
D-6 Classification:	III (Assumed)

The Region of Peel operates G. E. Booth Wastewater Treatment Plant (hereafter the "Lakeview Wastewater Treatment Plant") located at 1300 Lakeshore Road East. The property is located 310 m northeast of the Project Site.

The Lakeview Wastewater Treatment Plant consists of conventional and biosolids treatment processes, and operates under MECP ECAs No. 4675-CAJSSL, issued September 19, 2022, and 9375-C4RKKZ, issued October 15, 2021. Copies of the MECP permits are provided in Appendix B. The facility has a rated capacity of 518,000 m3/day with all treatment trains in operation. The Lakeview Wastewater Treatment Plant includes a municipal sludge incineration facility, which operates at a Facility Production Limit of up to 400 dry tonnes of sludge per day.

The Lakeview Wastewater Treatment Plant treats wastewater from homes and industries in Peel Region. The final, disinfected effluent is released into Lake Ontario. The wastewater treatment process includes the following steps:

- Preliminary treatment – screens, vortex
- Primary treatment – clarifiers, chemical additives
- Secondary treatment – aeration tanks, secondary clarifiers
- Disinfection – chlorine
- Solids handling process - thickening, dewatering via centrifuges and chemical additives
- Sludge incineration – reduces sludge cake to ash
- Storage lagoons – for ash slurry

Based on the size and nature of the of the facility operations, including daytime, evening, and night-time operations and potential for odour emissions, the Lakeview Wastewater Treatment Plant is considered a Class III Heavy Industry under MECP Guideline D-6, with a Recommended Minimum Separation Distance of 300 m and a Potential Area of Influence of 1000 m.

4.1.2 Arthur P Kennedy Lakeview Water Treatment Plant

Address:	**920 East Avenue**
Distance To Project:	10 m
D-6 Classification:	II

The Ontario Clean Water Agency (OCWA) operates the Arthur P Kennedy Water Treatment Plant (hereafter the “Lakeview Water Treatment Plant”) on behalf of the Region of Peel. The facility located at 920 East Avenue. The property is directly adjacent to the Project Site to the south. MECP permits for the facility were not located at the Access Environment Ontario website.

The Lakeview Water Treatment Plant takes water from Lake Ontario and treats it to provide clean safe drinking water throughout Peel Region. The water treatment process includes the following steps:

- Mechanical screening
- Ozone treatment
- Biologically activated carbon filtration
- UV treatment
- Ultra-filtration membrane system
- Chlorine and fluoride addition

Based on the size and nature of the operations, the Lakeview Water Treatment Plant is considered a Class II Medium Industry under MECP Guideline D-6, with a 300 m Area of Influence and a Recommended Minimum Separation Distance of 70 m.

4.1.3 Armstrong World Industries – Plasterform Inc.

Address	**1180 Lakeshore Road E**
Distance To Project:	150 m
D-6 Classification:	Class II Medium Industry

Plasterform Inc. is a manufacturer of decorative architectural systems located at 1180 Lakeshore Road E, 150 m northeast of the Project Site. The facility operates under MECP ECA No.6327-A3ARJN, issued October 21, 2015. A copy of the MECP permit is in **Appendix E**.

Based on a review of the ECA, potential air emission sources at the Facility include:

- Paint spray booths
- Resin curing area exhausts
- Mould making area exhausts
- Baghouse dust collector
- Natural gas fired boilers
- Comfort heating

Based on a review of aerial imagery, the Facility appears to have a small amount of equipment stored outside the building, and on-site vehicle traffic is expected (paved lot). The rooftop has a number of exhaust stacks visible.

Based on the size and nature of the operations, Plasterform Inc. is considered a Class II Medium Industry under MECP Guideline D-6, with a 300 m Area of Influence and a Recommended Minimum Separation Distance of 70 m.

4.1.4 Automotive Dealerships and Repair Shops

Facility	**Autotex Service Centre Ltd.**
Address:	909 Lakeshore Road E
Distance To Project:	25 m
D-6 Classification:	Class I Light Industry

Facility	**Krown Lakeshore**
Address:	1019 Lakeshore Road E
Distance To Project:	28 m
D-6 Classification:	Class I Light Industry

Facility	**Ontario Greenlight Motors**
Address:	1019 Lakeshore Road E
Distance To Project:	28 m
D-6 Classification:	Class I Light Industry

Facility	Ontario Auto Group
Address:	857 Lakeshore Road E
Distance To Project:	28 m
D-6 Classification:	Class I Light Industry

Facility	Rosewood Automotive
Address:	827 Lakeshore Road E
Distance To Project:	25 m
D-6 Classification:	Class I Light Industry

There are several car dealerships and automotive repair facilities located directly north along Lakeshore Road East. A search of the MECP registry did not yield a permit or registration for any of these facilities.

Based on the size and nature of the operations, the Automotive Dealerships and repair shops are considered a Class I Light Industries under MECP Guideline D-6, with a 70 m Potential Area of Influence and a Recommended Minimum Separation Distance of 20 m.

5.0 Air Quality Assessment

5.1 Industrial Sources

5.1.1 Guidelines and Regulations

Within Ontario, 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. 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

Under O.Reg. 419/05, a facility is required to meet prescribed standards for air emissions at their property boundary line and any location off-site. The MECP does not require industries to assess their emissions at elevated points off-site, if a receptor does not exist at that location. While the introduction of mid-rise or high-rise residential buildings could trigger a facility to re-assess compliance at new receptor locations, the introduction of new low-rise receptors does not introduce any new receptors, as the facility is already required to be in compliance at grade-level at their property line.

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.
- **Location** – Where the odour occurs. The MECP assesses at odours where human activity is likely to occur.

1.1.1.1 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. This is not changed by the addition of the Project. That is to say, the existing mutual property line is already a point of reception for dust, and the limits must already be met at that location.

1.1.1.2 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 Local Meteorology

Surface wind data was obtained to generate a wind rose from data collected at the Pearson International Airport in Toronto from 1986 through 2015, as shown in Figure 6. As can be seen in the wind rose, predominant winds are from the west and northwestern quadrants, while winds from the northeast and southeast quadrants may be the least frequent.

5.1.3 Ministry of Environment, Conservation and Parks Facility Information

SLR recognizes that complaint history can be useful in evaluating land use compatibility. SLR typically only requests potential complaints information for facilities located within the potential Area of Influence or where an industry is known to have the potential to generate significant air emissions.

SLR submitted a request to the MECP for the Lakeview Wastewater Treatment Plant through the Environmental Property Information (EPI) Program. The results are provided in **Appendix D**. A review of the EPI results for the Lakeview Wastewater Treatment Plant indicates that there are a variety of reports of interest related to the property. These documents include air permits, noise permits, inspection reports, incident reports, and abatement and occurrence reports. SLR advanced an FOI request to review the documents listed in the EPI. At the time of preparation of this report a response from the FOI requests has not been received.

5.1.4 Assessment of Potential Air Emissions

The following facilities were identified as being within the Potential Area of Influence for their industrial classification and to require additional review from an air quality perspective:

- G.E. Booth Lakeview Wastewater Treatment Plant;
- Arthur P. Kennedy Lakeview Water Treatment;
- Armstrong World Industries - Plaster Form Inc.; and
- Automotive Dealerships and Repair Shops;

Further discussion regarding each of these facilities and potential air emissions is provided below.

All the other industries surrounding the Project Site were outside of the Potential Area of Influence. Therefore, the development of the Project Site is anticipated to be compatible with these facilities from an air quality perspective.

5.1.4.1 G. E. Booth Lakeview Wastewater Treatment Plant

The Lakeview Wastewater Treatment Plan is located at 1300 Lakeshore Road East. The property is located 310 m northeast of the Project Site.

The Lakeview Wastewater Treatment Plant consists of conventional and biosolids treatment processes, and operates under MECP ECAs No. 4675-CAJSSL, issued September 19, 2022, and 9375-C4RKKZ, issued October 15, 2021. Copies of the MECP permits are provided in **Appendix B**. The facility has a rated capacity of 518,000 m^3/day with all treatment trains in operation. The WWTP includes a municipal sludge incineration facility, which operates at a Facility Production Limit of up to 400 dry tonnes of sludge per day.

The Lakeview Wastewater Treatment Plant treats wastewater from homes and industries in Peel Region. The final, disinfected effluent is released into Lake Ontario. The wastewater treatment process includes the following steps:

- Preliminary treatment – screens, vortex
- Primary treatment – clarifiers, chemical additives
- Secondary treatment – aeration tanks, secondary clarifiers
- Disinfection – chlorine
- Solids handling process - thickening, dewatering via centrifuges and chemical additives
- Sludge incineration – reduces sludge cake to ash
- Storage lagoons – for ash slurry

Based on a review of aerial imagery, the Lakeview Wastewater Treatment Plant is a large operation with multiple rooftop exhaust stacks and outdoor treatment tanks.

During the 2022 calendar year, the Plant received eight (8) complaints, as published in the *G.E. Booth Wastewater Treatment Plant Annual Report* for 2022. An excerpt from the report summarizing the details of these complaints is provided in **Appendix C**.

Based on the size and nature of the of the facility operations, including daytime, evening, and night-time operations and potential for odour emissions, the Lakeview Wastewater Treatment Plant is equivalent to a Class III Heavy Industry under MECP Guideline D-6, with a

Recommended Minimum Separation Distance of 300 m and a Potential Area of Influence of 1000 m.

Figure 5 shows the Guideline D-6 Separation distances from the Lakeview Wastewater Treatment Plant . The entire Project Site lies just outside of the Recommended Minimum Separation distance, but the majority of the Project Site is within the Potential Area of Influence.

As can be seen in the **Figure 6** wind rose, winds with the potential to direct emissions towards the Project Site are predicted to occur less than 18% of the time with wind speeds less than 8.8 m/s.

There is potential for air emissions from the Lakeview Wastewater Treatment Plant to be detected at the Project Site. Additional assessment is warranted. A more detailed assessment of air emissions should be conducted at a later stage in the planning process once the Project Site plans are further developed.

5.1.4.2 Arthur P Kennedy Lakeview Water Treatment Plant

The Region of Peel operates the Arthur P Kennedy Water Treatment Plant (hereafter the "Lakeview Water Treatment Plant") located at 920 East Avenue. The property is directly adjacent to the Project Site to the south. MECP permits for the facility were not located at the Access Environment Ontario website.

The Lakeview Water Treatment Plant takes water from Lake Ontario and treats it to provide clean safe drinking water throughout Peel Region. The water treatment process includes the following steps:

- Mechanical screening
- Ozone treatment
- Biologically activated carbon filtration
- UV treatment
- Ultra-filtration membrane system
- Chlorine and fluoride addition

Based on a review of aerial imagery, these water treatment processes occur inside the facility. There are minimal exhaust stacks observed on the rooftops. There is outdoor mechanical equipment including HVAC units, air-cooled condensers, make-up air units, transformers, and emergency generators. There does not appear to be any outdoor storage of materials.

Based on the size and nature of the operations, the Lakeview Water Treatment Plant is considered a Class II Medium Industry under MECP Guideline D-6, with a 300 m Potential Area of Influence and a Recommended Minimum Separation Distance of 70 m.

The Project Site is located within both the 300 m Potential Area of Influence and the Recommended Minimum Separation Distance of 70 m. Additional assessment is warranted. It is recommended that this work be completed at a later stage in the planning process once the Project Site plans are further developed.

5.1.4.3 Automotive Dealerships and Repair Shops

There are several car dealerships and automotive repair facilities located directly north along Lakeshore Road East. A search of the MECP registry did not yield a permit or registration for any of these facilities.

As suggested in Guideline D-6, automotive repair shops may be listed as a Class II facility partly due to the operation of a spray-paint booth. However, auto-repair shops of this size are now generally considered Class I facilities, as the MECP has a specific Environmental Activity and Sector Registry for this industry with specific operating conditions required which reduces emissions. Auto-repair shops are regulated under Ontario Regulation 347/12: Regulations under part II.2 of the Ontario Environmental Protection Act – Automotive Refinishing. Therefore, these facilities have been classified as Class I light industries, with a Recommended Minimum Separation Distance of 20 m and a Potential Area of Influence of 70 m.

The Project site is within the Recommended Minimum Separation Distance and the Potential Area of Influence.

There is potential for air emissions from the automotive Dealerships and Repair Shop to be detected at the Project Site. A more detailed assessment of air emissions may need to be conducted at a later stage in the planning process once the Project Site plans are further developed.

5.1.4.4 Armstrong World Industries – Plasterform Inc.

Plasterform Inc. is a manufacturer of decorative architectural systems located at 1180 Lakeshore Road E, 150 m northeast of the Project Site. The facility operates under MECP ECA No.6327-A3ARJN, issued October 21, 2015. A copy of the MECP permit is in Appendix E.

Based on a review of the ECA, potential air emission sources at the Facility include:

- Paint spray booths
- Resin curing area exhausts
- Mould making area exhausts
- Baghouse dust collector
- Natural gas fired boilers
- Comfort heating

Based on a review of aerial imagery, the Facility appears to have a small amount of equipment stored outside the building, and on-site vehicle traffic is expected (paved lot). The rooftop has a number of exhaust stacks visible.

The Project site is within the 300 m Potential Area of Influence, but outside of the 70 m Recommended Minimum Separation Distance.

There is potential for air emissions from Plaster Form to be detected at the Project Site. A more detailed assessment of air emissions may need to be conducted at a later stage in the planning process once the Project Site plans are further developed.

5.2 Summary of Air Quality, Dust and Odour Conclusions And Recommendations

The potential for air quality impacts on the proposed development, including dust and odour, have been reviewed. There is potential for air emissions from surrounding industries to be detected at the Project Site. A more detailed assessment of air emissions may need to be conducted at a later stage in the planning process once the Project Site plans are further developed. Receptor-based mitigation measures may need to be implemented to improve land use compatibility with surrounding employment facilities.

6.0 Noise Assessment

6.1 Industrial (Stationary) Sources

6.1.1 Guidelines

6.1.1.1 MECP Publication NPC-300 Guidelines for Stationary Noise

The applicable MECP noise guidelines for new sensitive land uses adjacent to existing industrial commercial uses are provided in MECP Publication NPC-300. The guideline sets out noise limits for two main types of noise sources:

- Non-impulsive, “continuous” noise sources such as ventilation fans, mechanical equipment, and vehicles while moving within the property boundary of an industry. Continuous noise is measured using 1-hour average sound exposures (Leq (1-hr) values), in dBA; and
- Impulsive noise, which is a “banging” type noise characterized by rapid rise time and decay. Impulsive noise is measured using a logarithmic mean (average) level (LLM) of the impulses in a one-hour period, in dBAI.

Furthermore, the guideline requires an assessment at, and provides separate guideline limits for:

- Outdoor points of reception (e.g., back yards, communal outdoor amenity areas); and
- Façade points of reception such as the plane of windows on the outdoor façade which connect onto noise sensitive spaces, such as living rooms, dens, eat-in kitchens, dining rooms and bedrooms.

The applicable noise limits at a point of reception are the higher of:

- The existing ambient sound level due to road traffic, or
- The exclusion limits set out in the guideline.

The following tables set out the exclusion limits from the guideline for a Class 1 and Class 4 Area.

Table 4: NPC-300 Exclusion Limits for Non-Impulsive Sounds (L_{eq} (1-hr), dBA)

Time of Day	Class 1 Area		Class 4 Area	
	Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception	Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
7 am to 7 pm	50	50	60	55
7 pm to 11 pm	50	50	60	55
11 pm to 7 am	45	n/a	55	n/a

Table 5: NPC-300 Exclusion Limits for Impulsive Sounds (L_{LLM}, dBAI)

Time of Day	No. of Impulses in a 1-hour Period	Class 1 Area		Class 4 Area	
		Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception	Plane of Windows of Noise Sensitive Spaces	Outdoor Points of Reception
7 am to 11 pm	9 or more	50	50	60	55
	7 to 8	55	55	65	60
	5 to 6	60	60	70	65
	4	65	65	75	70
	3	70	70	80	75
	2	75	75	85	80
	1	80	80	90	85
11 pm to 7 am	9 or more	45	n/a	55	n/a
	7 to 8	50	n/a	60	n/a
	5 to 6	55	n/a	65	n/a
	4	60	n/a	70	n/a
	3	65	n/a	75	n/a
	2	70	n/a	80	n/a
	1	75	n/a	85	n/a

Notes:

n/a Not Applicable. Outdoor points of reception are not considered to be noise sensitive during the overnight period.

- Area classifications are: Class 1 – Urban, Class 4 - Urban Redevelopment

The applicable guideline limits for infrequent events such as testing of emergency generator sets, are +5 dB higher than the values above.

6.1.1.2 Application of the NPC-300 Guidelines

The stationary noise guidelines apply only to residential land uses and to noise-sensitive commercial and institutional uses, as defined in NPC-300 (e.g., schools, daycares, hotels). For the Project, the stationary noise guidelines only apply to the residential portions of the development, including:

- Individual residences;
- Communal indoor amenity areas; and
- Communal outdoor amenity areas.

All of the above have been considered as noise-sensitive points of reception in this report.

1.1.2 Proposed Area Classification

Under Ministry of the Environment, Conservation & Parks (MECP) Publication NPC-300 noise guidelines, noise sensitive receptors are defined using area classifications. The receptor areas are classified as either:

- Class 1 – Urban areas
- Class 2 – Suburban / semi-rural areas
- Class 3 – Rural areas
- Class 4 – Infill areas

Depending on the receptor area classification, different guideline limits apply. Classes 1, 2 and 3 were included in the predecessor guidelines to NPC-300, namely MECP Publications NPC-205, NPC-232, and LU-131. The Class 4 designation is a new designation, intended to allow for infill and redevelopment, whilst still protecting residences from undue noise.

Based on the nature of the area, the Class 1 area urban sound level limits apply. The area is urban in nature and dominated by man-made sounds, including road traffic noise and an “urban hum”, 24-hours per day. The Project site also meets the definition and requirements for a Class 4 area, and it would be recommended and appropriate to issue a Class 4 designation for the Project site development lands.

In NPC-300, a Class 4 area is defined as:

> “Class 4 area” means an area or specific site that would otherwise be defined as Class 1 or 2 and which:
>
> - is an area intended for development with new noise sensitive land use(s) that are not yet built;
> - is in proximity to existing, lawfully established stationary source(s); and
> - has formal confirmation from the land use planning authority with the Class 4 area classification which is determined during the land use planning process.

Additionally, areas with existing noise sensitive land use(s) cannot be classified as Class 4 areas.” Section C4.4.2 of Publication NPC-300 further discusses the use of Class 4 areas:

> “Class 4 area classification is based on the principle of formal confirmation of the classification by the land use planning authority. Such confirmation would be issued at the discretion of the land use planning authority and under the procedures developed by the land use planning authority, in the exercise of its responsibility and authority under the Planning Act.
>
> The following considerations apply to new noise sensitive land uses proposed in a Class 4 area:
>
> - an appropriate noise impact assessment should be conducted for the land use planning authority as early as possible in the land use planning process that verifies that the applicable sound level limits will be met;
> - noise control measures may be required to ensure the stationary source complies with the applicable sound level limits at the new noise sensitive land use;
> - noise control measures may include receptor-based noise control measures and/or source-based noise control measures;

- source based noise control measures may require an MECP approval;
- receptor based noise control measures may require agreements for noise mitigation, as described in Part A of this guideline;
- prospective purchasers should be informed that this dwelling is located in a Class 4 area through appropriate means and informed of the agreements for noise mitigation. Registration on title of the agreements for noise mitigation is recommended. Additionally, registration on title of an appropriate warning clause to notify purchasers that the applicable Class 4 area sound level limits for this dwelling are protective of indoor areas and are based on the assumption of closed windows, such as warning clause F in Section C8.3 is also recommended; and
- any final agreements for noise mitigation as described in Part A of this guideline and all other relevant documentation are to be submitted to the MECP by the stationary source owner(s) when applying for an MECP approval. These agreements will be assessed during the review of the application for MECP approvals."

The Project meets the definitions and requirements for a Class 4 area listed in Publication NPC-300:

- the site is within an area intended for new development.
- the site is in proximity existing lawfully established stationary sources.
- An appropriate, noise impact assessment has been conducted as part of a land use planning application (i.e., this report, as part of an OPA submission).

This is consistent with the Mississauga Official Plan implemented under MOPA 58.

In our opinion it is appropriate for the City to declare the development property as a Class 4 area, if necessary, under their role as the land use planning authority, in the exercise of its responsibility and authority under the Planning Act.

It is important to note that the Class 4 designation only applies to the development lands. Existing noise-sensitive receptors in the area will remain as Class 1 areas. Therefore, the designation will not allow for industries to increase their noise impacts at existing residences.

6.1.1.3 Guideline Summary and Interpretation

Both the Class 1 and Class 4 limits are examined in this report.

6.1.2 Industrial Source Impact Review

6.1.2.1 Noise Sources

Lakeview Wastewater Treatment Plant

- Ventilation louvres;
- condenser units;
- make up air units;
- exhaust fans;
- emergency generators; and
- truck activity including trucks with on-board blowers.

Lakeview Water Treatment Plant

- Exhaust Fans;
- Make-up air units;
- Trucks unloading w/ blower;
- Transformers; and
- Emergency Generators.

Plasterform Inc.

- Exhaust Fans;
- HVAC units;
- Baghouse;
- Idling trucks; and
- On-site truck movements.

Automotive Dealerships and Repair Shops

- Impact Wrenches;
- Grinders;
- Air compressors; and
- Paint booth exhausts.

6.1.2.2 Noise Modelling

6.1.3 Noise Modelling and Results

Worst-case scenario noise levels from the surrounding commercial/ industrial operations were modelled using Cadna/A, a computerized version of the internationally recognized ISO 9613-2 noise propagation algorithms. This is the preferred noise modelling methodology of the MECP. The ISO 9613 equations account for:

- Source to receiver geometry;
- Distance attenuation;
- Atmospheric absorption;
- Reflections off of the ground and ground absorption;
- Reflections off of vertical walls; and
- Screening effects of buildings, terrain, and purpose-built noise barriers (noise walls, berms, etc.).

The following additional parameters were used in the modelling, which are consistent with providing a conservative (worst-case assessment of noise levels):

- Temperature: 10°C;
- Relative Humidity: 70%;
- Ground Absorption G: G = 0.2 default global parameter.
- Reflection: An order of reflection of 1 was used (accounts for noise reflecting from walls);
- Wall Absorption Coefficients: Set to 0.37 (37 % of energy is absorbed, 63% reflected); and
- Terrain: Surrounding area assumed to be flat.

6.1.3.1 Likely Sound Levels at the Development

Lakeview Wastewater Treatment Plant

Valcoustics Canada Ltd. (Valcoustics) conducted an Environmental Noise Feasibility Study for the proposed Lakeview Village Community development directly east of the project site dated December 3, 2020. Sound levels at the proposed development from typical operation as well as emergency operations of the Lakeview Wastewater Treatment Plant were examined. Sound levels from the Lakeview Wastewater Treatment Plant were shown to meet Class 1 guideline requirements beyond the first row of buildings. A memorandum for the Valcoustics report dated August 30, 2021, showing the extent of the noise impacts is included in **Appendix F**.

It is also noted that the Acoustic Assessment Report for Lakeview Wastewater Treatment Plant accounted for the proposed Lakeview development. The AAR concluded that the sound levels due to the wastewater treatment plant were predicted to meet the Class 1 noise guideline limits at the proposed Lakeview site.

Given that the Lakeview Wastewater Treatment plant is anticipated to meet Class 1 guidelines at the closer and intervening proposed Lakeview Village Community development, it is also anticipated to meet Class 1 Guidelines at the Project Site.

Regardless, a full assessment of the Lakeview Wastewater Plant should be included for the Project Site at future stages of the planning process. The areas where the Class 1 Area noise guidelines may be exceeded, and which therefore require further study are shown in **Figure 7**.

Lakeview Water Treatment Plant

Given the proximity of the Lakeview Water Treatment Plant to the Project site a screening level assessment of the noise sources associated with the facility was conducted to assess potential noise impacts from the facility at the Project Site.

Noise sources for typical operations were assumed to operate during all times of the day with the exception of delivery trucks, which were assumed to be present during daytime and evening hours only. Emergency generators were assumed to be tested simultaneously during daytime only. Modeled noise source information is included in **Appendix F**.

Excesses of the Class 1 guidelines for this facility are predicted for all parcels of land in the Project Site that are east of Lakefront Promenade and south of Rangeview Road.

Given the above, further assessment should be conducted at further planning stages. The areas where the Class 1 Area noise guidelines may be exceeded, and which therefore require further study are shown in **Figure 7**. Potential mitigation measures are addressed in **Section 6.1.3.2**.

Plasterform Inc.

Given the proximity of Plasterform Inc. to the Project site and the number of significant noise sources, a screening level assessment of the noise sources associated with the facility was conducted to assess potential noise impacts from the facility at the Project Site.

Noise sources for typical operations were assumed to operate continuously during daytime and evening hours, with only HVAC units operating during nighttime hours. One truck movement per hour was assumed. Modeled noise source information is included in **Appendix F**.

Excesses of the Class 1 guidelines for this facility are predicted for all parcels of land in the Project Site that are west of the proposed "Central Square Park".

Given the above, further assessment should be conducted at further planning stages. The areas where the Class 1 Area noise guidelines may be exceeded, and which therefore require further study are shown in **Figure 7**. Potential mitigation measures are addressed in **Section 6.1.3.2**.

Automotive Dealerships and Repair Shops

There are multiple automotive dealerships and repair shops located across Lakeshore Road East. Sources from these facilities are not anticipated to exceed ambient roadway sound levels at the Project site due to the high ambient roadway noise from Lakeshore Road East.

Regardless, a full assessment of these facilities should be included for the Project Site at future stages of the planning process. The areas where the Class 1 Area noise guidelines may be exceeded, and which therefore require further study are shown in **Figure 7**.

6.1.3.2 Recommended Noise Mitigation Measures

Noise sources from the Lakeview Water Treatment Plant and Plasterform have the potential to exceed Class 1 guideline limits at the Project Site. Additional mitigation measures may be required for sections of the Project Site adjacent to these sources, subject to a detailed assessment.

Source-Based Mitigation Measures

If facilities are predicted to exceed the applicable guideline limits at noise sensitive receptors on the Project Site source-based mitigation measures can be used to reduce noise impacts. Potential feasible mitigation options include acoustic barriers, silencers, and variable frequency drives for off-site equipment.

The need for and extent of these measures would be appropriately determined as part of later noise studies to be conducted as part of ZBA submissions.

Receptor-Based Mitigation Measures

Alternatively, receptor-based noise mitigation measures could be used, if a Class 4 Area designation is applied to the Site by the City.

Class 4 Area designation

Requesting a Class 4 Area designation from the City allows for the application of relaxed guideline limits to the development. The exclusionary sound level limits for the Class 4 Area facades are 10 dBA/dBAI higher than the MECP default guideline limits for a Class 1 area. A 5 dBA/dBAI increase in the guideline limits is applied to the outdoor amenity areas of a Class 4 designated area.

Based on a preliminary review, the proposed development meets the requirements outlined in NPC-300 and MOPA 58 (e.g. new development not yet built, located near lawfully established facilities, etc.), and can be sought from the City of Mississauga. If approved, physical mitigation measure requirements would be reduced or removed for the project site.

Acoustic Barriers (For Outdoor Amenity areas)

If outdoor amenity areas are located with direct lines of sight to the above-mentioned facilities, acoustic barriers around the perimeter of OLAs may be required to reduce predicted sound levels from industries to applicable guideline limits. Acoustic barriers are unlikely to be a feasible mitigation measure for residential unit façades as residential buildings are expected to be too tall for a barrier to break line of sight to off-site equipment.

Site Configuration

During the planning process, noise-sensitive buildings should be planned in a manner that maximizes distance to the above-mentioned facilities. It is recommended that parks, greenspace, or non noise sensitive land uses act as buffer zones to reduce noise impacts from industries at residential buildings on the Project Site.

Ventilation and Warning Clause Requirements

As the surrounding industries have the potential to be audible at times, a warning clause should be included in the Agreement of Purchase and Sale or Lease and in the relevant Development Agreements. An MECP NPC-300 **Type E** warning clause is recommended for all residential units within the Project Site. See **Appendix F** for warning clause details.

In addition, central air conditioning and a **Type F** Warning Clause is required for all residential units if a Class 4 Area designation is obtained. See **Appendix F** for warning clause details.

6.2 Transportation Sources

6.2.1 Transportation Noise Sources

Transportation sources of interest with the potential to have noise impacts at the proposed development are roadway noise from Lakeshore Road East, Lakeshore Promenade, Ogden Avenue, and Alexandra Avenue.

The closest railway line is the Oakville subdivision, located approximately 380 m from the Project Site, and outside of the minimum 300 m separation distances for inclusion. Therefore, an assessment of noise impacts from rail sources is not expected to be required.

As the Project Site is not within the NEF contours of any airport an assessment of aircraft noise is not required.

6.2.2 MECP Publication NPC-300 Guidelines for Transportation Sources

6.2.2.1 Indoor Criteria

The following table summarizes the criteria in terms of energy equivalent sound exposure (L_{eq}) levels for specific indoor noise-sensitive locations. These indoor criteria vary with sensitivity of the space. As a result, sleep areas have more stringent criteria than Living / Dining room space.

Table 6: NPC-300 Sound Level Criteria for Road and Rail Noise

Type of Space	Time Period	Energy Equivalent Sound Exposure Level L_{eq} (dBA) [1]		Assessment Location
		Road	Rail [2]	
Criteria for Residential Units				
Living / Dining Room	Daytime (7 am to 11 pm)	45	40	Indoors
	Night-time (11 pm to 7 am)	45	40	Indoors
Sleeping Quarters	Daytime (7 am to 11 pm)	45	40	Indoors
	Night-time (11 pm to 7 am)	40	35	Indoors
Supplementary Criteria for Non-Residential Uses				
General offices, reception areas, retail stores, etc.	Daytime (7 am to 11 pm)	50	45	Indoors
Living/dining areas of residences, hospitals, schools, nursing/retirement homes, day-care centres, theatres, places of worship, libraries, individual or semi-private offices, conference rooms, reading rooms, etc.	Daytime (7 am to 11 pm))	45	40	Indoors
Sleeping quarters of hotels/motels	Night-time (11 pm to 7 am)	45	40	Indoors
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc.	Night-time (11 pm to 7 am)	40	35	Indoors

Notes: [1] Road and Rail noise impacts are to be combined for assessment of impacts.
[2] Whistle/warning bell noise is excluded for OLA noise assessments and included for indoor assessments, where applicable.

6.2.2.2 Ventilation and Warning Clauses

The following table summarizes requirements for ventilation where windows potentially would have to remain closed as a means of noise control. Despite the implementation of ventilation measures where required, some occupants may choose not to use the ventilation means provided, and as such, warning clauses advising future occupants of the potential excess over the indoor guideline limits are required.

Table 7: NPC-300 Ventilation and Warning Clause Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} (dBA)		Ventilation and Warning Clause Requirements [2]
		Road	Rail [1]	
Plane of Window	Daytime (7am to 11 pm)	≤ 55		None
		56 to 65 incl.		Forced Air Heating with provision to add AC + Applicable Warning Clause(s)
		> 65		Central AC + Applicable Warning Clause(s)
	Night-time (11 pm to 7 am)	51 to 60 incl.		Forced Air Heating with provision to add AC+ Applicable Warning Clause(s)
		> 60		Central AC + Applicable Warning Clause(s)

Notes: [1] Whistle/warning bell noise is excluded.
[2] Road and Rail noise is combined for determining Ventilation and Warning Clause requirements.

6.2.2.3 Building Shell Requirements

The following table provides sound exposure (L_{eq}) thresholds which if exceeded, require the building shell and components (i.e., wall, windows) to be designed and selected accordingly to ensure that the indoor location criteria are met.

Table 8: NPC-300 Building Component Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} (dBA)		Component Requirements
		Road	Rail [1]	
Facade	Daytime (7am to 11 pm)	> 65	> 60	Designed/ Selected to Meet Indoor Requirements [2]
	Night-time (11 pm to 7 am)	> 60	> 55	

Notes: [1] Including whistle/warning bell noise.
[2] The resultant sound isolation parameter from Road and Rail are to be combined for determining the overall acoustic parameter.

6.2.2.4 Outdoor Sound Level Criteria

The following table summarizes criteria in terms of energy equivalent sound exposure (L_{eq}) levels for the outdoor noise-sensitive locations, with a focus of outdoor areas being amenity spaces (called Outdoor Living Areas (OLAs) per NPC-300).

Table 9: NPC-300 Outdoor Sound Level Criteria for Road and Rail Noise

Type of Space	Time Period	Energy Equivalent Sound Exposure Level L_{eq} (dBA) [1, 2]	Assessment Location
OLA	Daytime (0700-2300h)	55	Outdoors

Notes: [1] Excluding whistle/warning bell noise for OLA noise assessments
[2] Road and Rail noise impacts are to be combined for assessment of OLA impacts.

6.2.2.5 Mitigation and Warning Clauses

The following table summarizes mitigation and warning clause requirements for outdoor amenity spaces.

Table 10: NPC-300 Outdoor Living Area Mitigation & Warning Clause Requirements

Assessment Location	Time Period	Energy Equivalent Sound Exposure Level - L_{eq} [1, 2] (dBA)	Mitigation and Warning Claus Requirements [3]
OLA	Daytime (0700-2300h)	≤ 55	None
		56 to 60 incl.	Noise Control Measures may be applied, **and/or** Applicable Warning Clause(s)
		> 60	Noise barrier to reduce noise to 55 dBA, **or** Noise barrier to reduce noise to 60 dBA and Applicable Warning Clause(s)

Notes: [1] Whistle/warning bell noise is excluded.
[2] Road and Rail noise is combined for determining Ventilation and Warning Clause requirements.

As indicated in NPC-300, noise control measures may be applied to reduce sound levels to 55 dBA. If measures are not provided, potential purchasers/tenants are required to be informed of potential noise problems with the applicable Warning Clause(s).

If noise impacts are predicted to be greater than 60 dBA, noise control measures are required to reduce noise levels to 55 dBA. If noise control measures are not technically feasible for meeting 55 dBA, an excess of up to 5 dBA is allowed, with the inclusion of the applicable Warning Clause(s).

6.2.3 Transportation Impact Review

6.2.3.1 Façade Sound Levels

A roadway noise assessment is expected to be required, as Lakeshore Road East is classified as a major arterial road. Roadway volumes are anticipated to be sufficiently high to require a detailed glazing analysis for residential buildings adjacent to Lakeshore Road East.

6.2.3.2 Ventilation and Warning Clause Requirements

Air conditioning is expected to be required for units with a direct line of sight to Lakeshore Road East.

A combination of MECP **Type C** and **Type D** warning clauses are expected to be required for the development. See **Appendix G** for warning clause details.

6.2.3.3 Outdoor Living Areas

Outdoor amenity areas may require physical noise controls, given the high roadway traffic volumes.

Should common amenity areas be included within the Project Site, MECP **Type A** warning clauses are expected to be required for residential units along Lakeshore Road East. Should OLAs have direct line of sight to Lakeshore Road East, acoustic barrier and a MECP **Type B** warning Clause may be required for residential units. See **Appendix F** for warning clause details.

6.3 Summary of Noise Conclusions and Recommendations

Noise emissions from two industries have the potential to exceed NPC-300 Class 1 guideline limits at sections of the Project Site. Receptor-based mitigation measures and or source-based mitigation measures may need to be implemented to meet applicable noise guideline limits. A more detailed assessment of noise emissions may need to be conducted at a later stage in the planning process once the Project Site plans are further developed.

7.0 Vibration Assessment

7.1 Industrial (Stationary) Sources

There are no existing or proposed significant industrial vibration sources within 75 m of the Project Site, such as large stamping presses or forges. Under applicable MECP guidelines, a detailed vibration assessment is not required. Adverse impacts from industrial vibration are not anticipated. Further study is not required.

7.2 Transportation Sources

As the railway corridor is located greater than 75 m from the Project Site, a detailed vibration assessment of freight and passenger trains is not required. Adverse impacts from transportation vibration are not anticipated.

7.3 Summary of Vibration Conclusions and Recommendations

The potential for vibration impacts on the Project site have been assessed. Based on the setback distances to industry and transportation sources:

- Adverse vibration impacts from industrial facilities are not anticipated at the Project.
- Adverse vibration impacts from Freight and GO Train sources are not anticipated.

8.0 Conclusions

SLR conducted a Preliminary Review of air quality, odour, dust, noise, and vibration in support of an Official Plan Amendment (“OPA”) application with the City of Mississauga. The purpose of the OPA is to support an increase in the number of units permitted.

This assessment has considered:

- Industrial air quality, odour, and dust emissions;
- Industrial/ commercial noise and vibration; and
- Transportation-related noise and vibration.

The assessment has included a review of air quality and noise emissions from industrial facilities in the area.

The potential for air quality impacts on the proposed development, including dust and odour, have been reviewed. There is potential for air emissions from surrounding industries to be detected at the Project Site. A more detailed assessment of air emissions may need to be conducted at a later stage in the planning process once the Project Site plans are further developed. Receptor-based mitigation measures may need to be implemented to improve land use compatibility with surrounding employment facilities.

This assessment has evaluated the potential for noise emission exposure at the Project site.

Noise emissions from two industries have the potential to exceed NPC-300 Class 1 guideline limits at sections of the Project Site. Receptor-based mitigation measures and or source-based mitigation measures may need to be implemented to meet applicable noise guideline limits.

The potential for transportation-related noise emissions at the Project Site have been evaluated. Receptor-based mitigation measures and or source-based mitigation measures may need to be implemented to meet applicable noise guideline limits.

The potential for vibration impacts on the Project site have been assessed. Based on the setback distances to industry and transportation sources:

- Adverse vibration impacts from industrial facilities are not anticipated at the Project.
- Adverse vibration impacts from Freight and GO Train sources are not anticipated.

9.0 Closure

Should you have questions on the above report, please contact the undersigned.

Regards,

SLR Consulting (Canada) Ltd.

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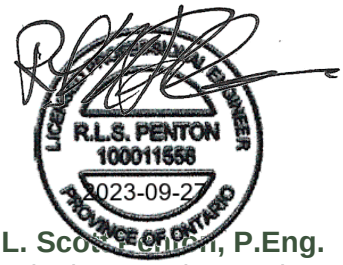

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10.0 References

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

International Organization for Standardization, (ISO, 1989), ISO 2631-2: 2003 (1989) *Evaluation of human exposure to whole-body vibration — Part 2: Continuous and shock-induced vibrations in buildings (1 to 80 Hz)*

Ontario Ministry of the Environment, Conservation & Parks (MECP), 1993, Publication NPC-207: *Impulse Vibration in Residential Buildings (Draft)*

Ontario Ministry of the Environment, Conservation & Parks (MECP), 1993, Publication NPC-216: *Residential Air Conditioning Devices*

Ontario Ministry of the Environment, Conservation & Parks (MECP), 1994, *Environmental Noise Guidelines for Installation of Residential Air Conditioning Devices*

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

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

Ontario Ministry of the Environment, Conservation & Parks (MECP, 2008), *Technical Bulletin, Standards Development Branch, Methodology For Modelling Assessments Of Contaminants With 10-Minute Average Standards And Guidelines Under O. Reg. 419/05*, September 2016

Ontario Ministry of the Environment, Conservation & Parks (MECP), 2013, Publication NPC-300: *Environmental Noise Guideline: Stationery and Transportation Sources – Approval and Planning*

Ontario Ministry of Municipal Affairs and Housing (MMAH, 2020). *Provincial Policy Statement*

Ontario Ministry of the Environment, Conservation & Parks (MECP, 2008), *Technical Bulletin, Standards Development Branch, Methodology For Modelling Assessments Of Contaminants With 10-Minute Average Standards And Guidelines Under O. Reg. 419/05*, April 2008.

Ontario Regulation 419/01 – *Local Air Quality.*

Region of Peel, 2022, *G. E. Booth Wastewater Treatment Plant Annual Report.*

Valcousitc*, Lakeview Village Community Environmental Noise Feasibility Report,* Dec 2020

Figures

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

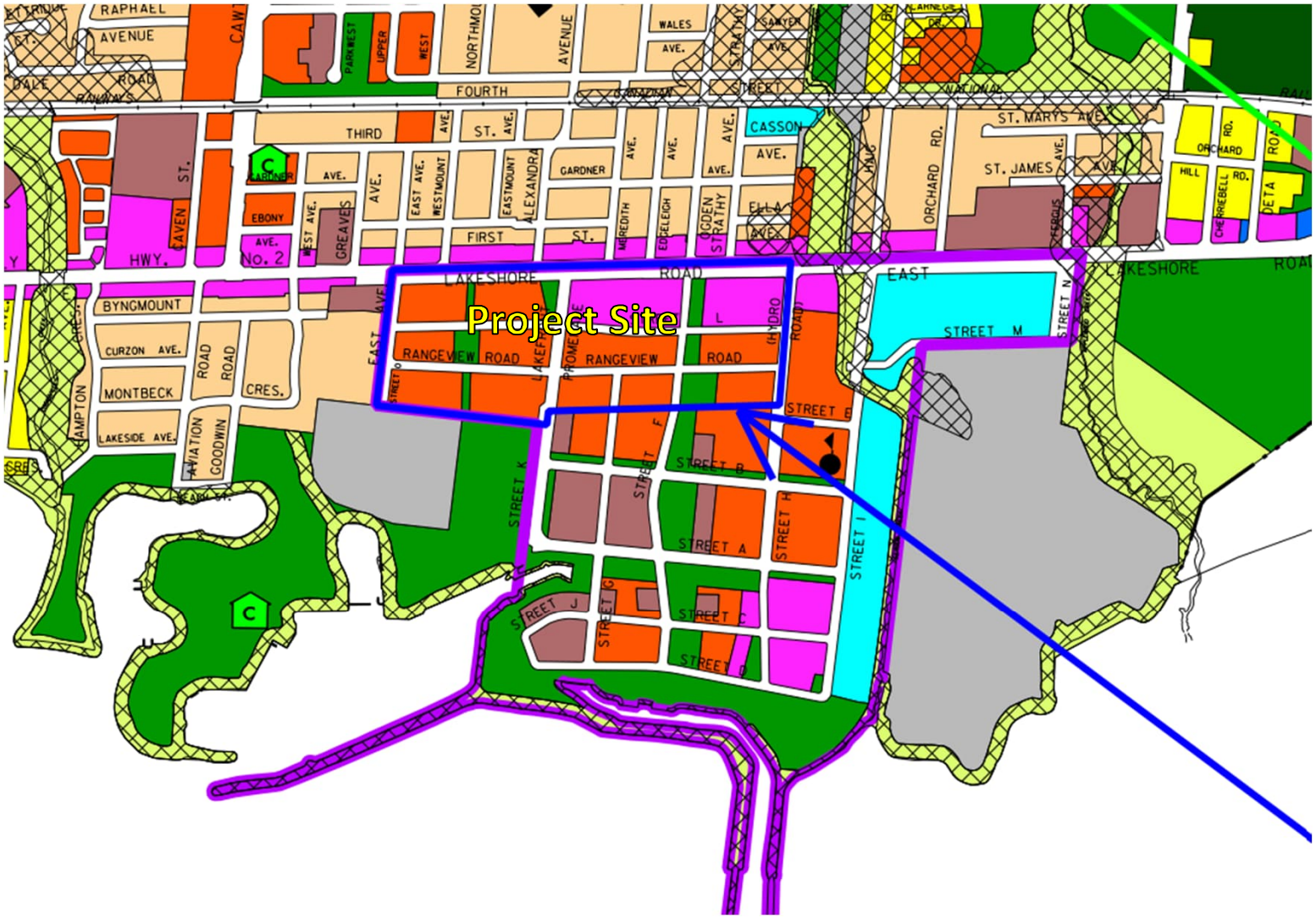
SLR Project No.: 241.30662.00001

Aerial Photography from Google Earth

RANGEVIEW LANDOWNERS GROUP INC.	True North	Scale: 1:8,000	METRES	SLR
RANGEVIEW MASTER PLAN– MISSISSAUGA, ONTARIO		Date: Sept.27, 2023 Rev 0.0	Figure No. **1**	
SITE AND CONTEXT PLAN		Project No. 241.30662.00001		

Concept Plan

RANGEVIEW LANDOWNERS GROUP INC.	True North	Scale: n/a	METRES	SLR
RANGEVIEW MASTER PLAN– MISSISSAUGA, ONTARIO		Date: Sept.27, 2023 Rev 0.0	Figure No. **2**	
CONCEPT PLAN		Project No. 241.30662.00001		



LAND USE DESIGNATIONS

- Residential Low Density I
- Residential Low Density II
- Residential Medium Density
- Residential High Density
- Mixed Use
- Downtown Mixed Use
- Downtown Core Mixed Use
- Convenience Commercial
- Motor Vehicle Commercial
- Office
- Business Employment
- Industrial
- Airport
- Institutional
- Public Open Space
- Private Open Space
- Greenlands
- Parkway Belt West
- Utility

True North

RANGEVIEW LANDOWNERS GROUP INC.

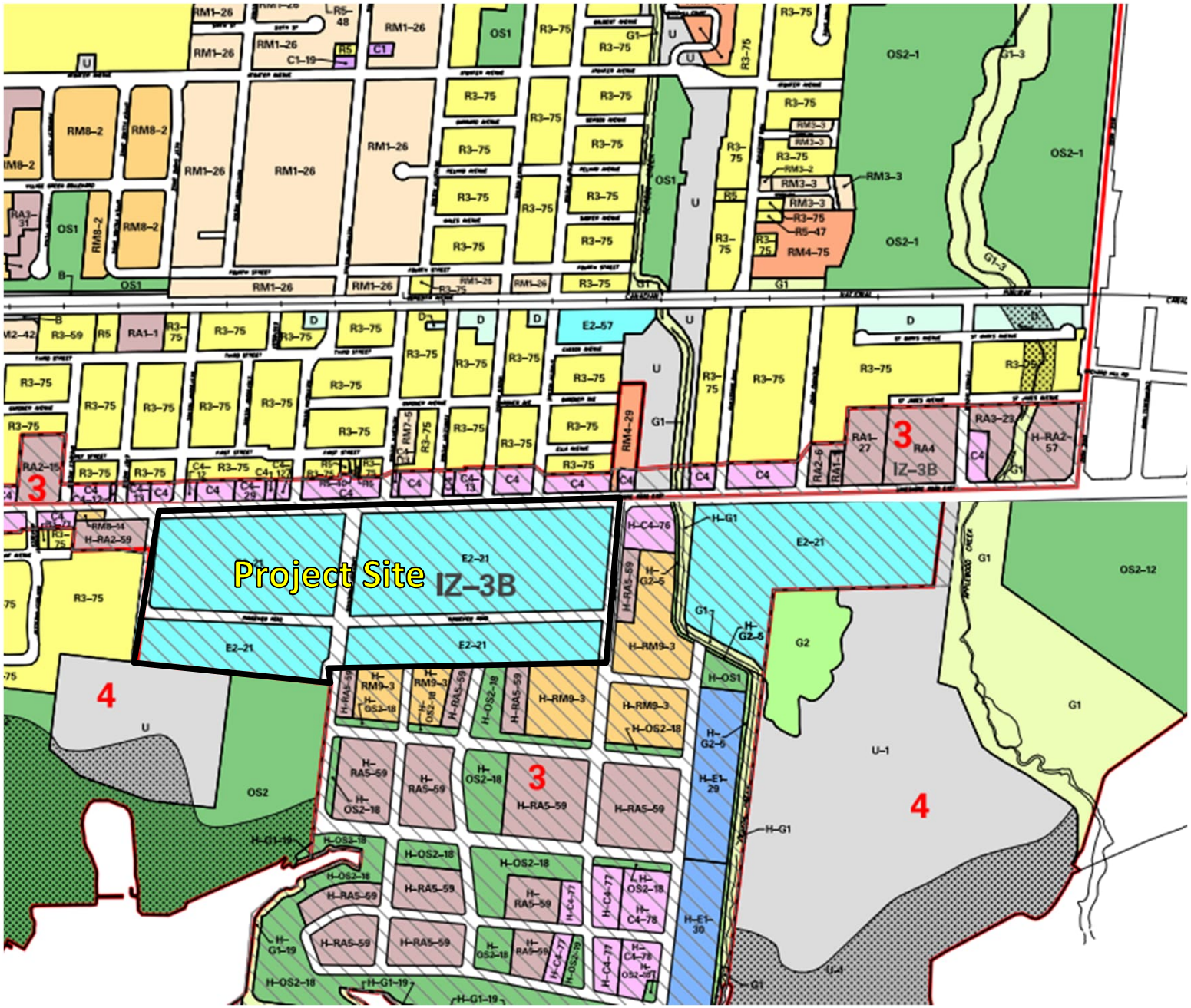
RANGEVIEW MASTER PLAN–
MISSISSAUGA, ONTARIO

EXCERPT FROM OFFICIAL PLAN MAP

I:\cadd\Core Maintenance\Landuse\Official Plan\OP_2010\Working\LandUse\LandUse10_MOP_Appeals.dgn (mississauga.ca)

Scale:	n/a	METRES
Date: Sept.27, 2023	Rev 0.0	Figure No. **3a**
Project No. 241.30662.00001		

SLR



True North

RANGEVIEW LANDOWNERS GROUP INC.

RANGEVIEW MASTER PLAN– MISSISSAUGA, ONTARIO

EXCERPT FROM AREA ZONING MAPS

Scale: n/a		METRES
Date: Sept.27, 2023	Rev 0.0	Figure No. **3b**
Project No. 241.30662.00001		

SLR

Aerial Photography from Google Earth

70 m Separation

300 m Separation

1000 m Separation

True North

RANGEVIEW LANDOWNERS GROUP INC.

RANGEVIEW MASTER PLAN– MISSISSAUGA, ONTARIO

GUIDELINE D-6 SEPARATION DISTANCES TO 1000 M

Scale: 1: 18,290		METRES
Date: Sept.27, 2023	Rev 0.0	Figure No. **4a**
Project No. 241.30662.00001		

SLR

Aerial Photography from Google Earth

Facility with MECP Permit (ECA/EASR)

Facility without MECP Permit (ECA/EASR)

70 m Separation Distance

300 m Separation Distance

1. Autotex Service Centre
2. Krown Lakeshore and Ontario Greenlight Motors
3. Ontario Auto Group
4. Rosewood Automotive
5. Armstrong World - Plasterform

True North

RANGEVIEW LANDOWNERS GROUP INC.

RANGEVIEW MASTER PLAN– MISSISSAUGA, ONTARIO

GUIDELINE D-6 SEPARATION DISTANCES TO 300 M

Scale: 1: 9,452		METRES
Date: Sept.27, 2023	Rev 0.0	Figure No. **4b**
Project No. 241.30662.00001		

SLR

Aerial Photography from Google Earth

Facility with MECP Permit (ECA/EASR)

Facility without MECP Permit (ECA/EASR)

70 m Separation Distance

300 m Separation Distance

1000 m Separation Distance

6. Arthur P Kennedy Lakeview Water Treatment Plant
7. G.E. Booth Wastewater Treatment Plant

True North

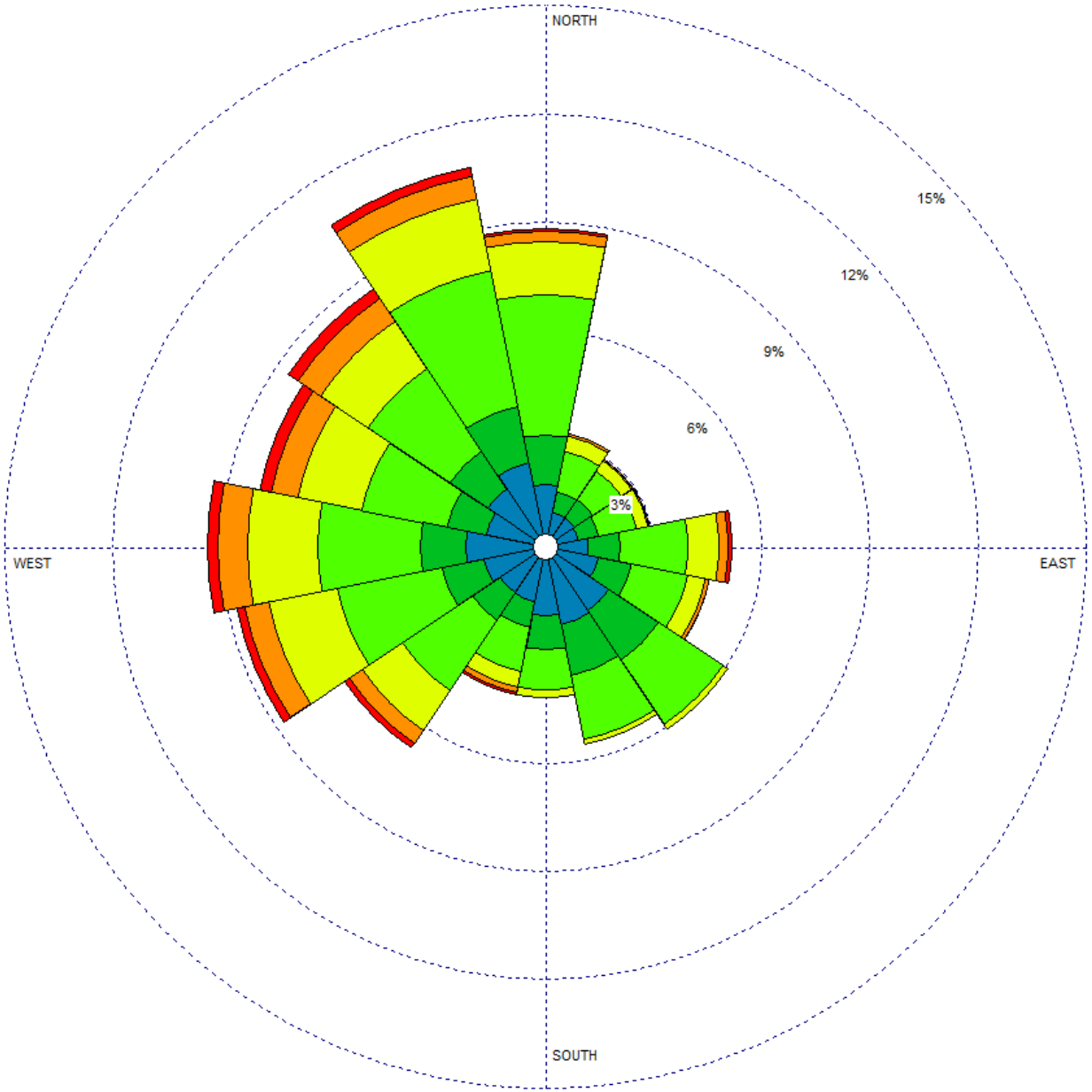
RANGEVIEW LANDOWNERS GROUP INC.

RANGEVIEW MASTER PLAN– MISSISSAUGA, ONTARIO

GUIDELINE D-6 SEPARATION DISTANCES – GE BOOTH LAKESHORE WASTEWATER FACILITY

Scale: 1: 19,027		METRES
Date: Sept.27, 2023	Rev 0.0	Figure No. **5**
Project No. 241.30662.00001		

SLR



WIND SPEED
(m/s)

- >= 11.10
- 8.80 - 11.10
- 5.70 - 8.80
- 3.60 - 5.70
- 2.10 - 3.60
- 0.50 - 2.10

Calms: 0.00%

True North

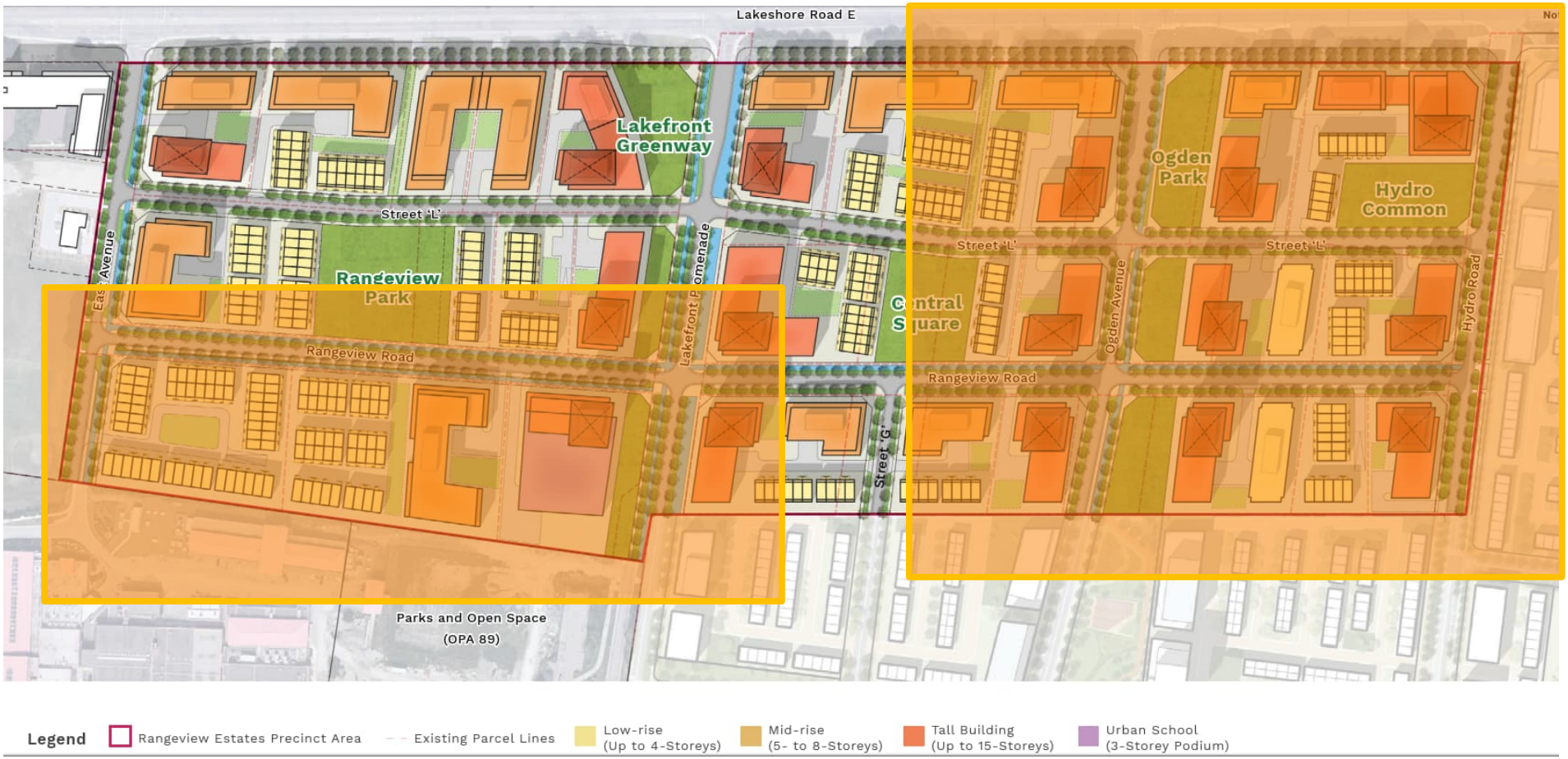
RANGEVIEW LANDOWNERS GROUP INC.

RANGEVIEW MASTER PLAN–
MISSISSAUGA, ONTARIO

WIND FREQUENCY
DISTRIBUTION DIAGRAM
(WIND ROSE)
TORONTO LESTER B.
PEARSON INT' L AIRPORT

Scale: n/a		METRES
Date: Sept.27, 2023	Rev 0.0	Figure No. **6**
Project No. 241.30662.00001		

SLR



RANGEVIEW LANDOWNERS GROUP INC.	True North	Scale: n/a	METRES	SLR
RANGEVIEW MASTER PLAN– MISSISSAUGA, ONTARIO		Date: Sept.27, 2023 Rev 0.0	Figure No. **7**	
AREAS OF POTENTIAL EXCESSES OF CLASS 1 AREA NOISE LIMITS / AREAS REQUIRING FURTHER NOISE ANALYSIS		Project No. 241.30662.00001		

Appendix A Industrial Information

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

SLR Project No.: 241.30662.00001

Facility	Address	Type of Operation	Environmental Compliance Approval No.	Industry Class	Area of Influence Dist (m)	RMS	Actual Distance to Site (m)	Within A of I?	Within RMS?
Arthur P Kennedy Water Treatment Plant	920 East Avenue	Water Treatment		II	300	70	10	Yes	Yes
G. E. Booth Wastewater Treatment Plant	1300 Lakeshore Road E	Wastewater Treatment	4675-CAJSSL (2022) 9375-C4RKKZ (2021)	III	1000	300	310	Yes	-
Autotex Service Centre Ltd.	909 Lakeshore Road E	Car Repair/Service	NA	I	70	20	25	Yes	-
Krown Lakeshore	1019 Lakeshore Road E	Rust Protection Services	NA	I	70	20	28	Yes	-
Ontario Greenlight Motors	1019 Lakeshore Road E	Car Sales	NA	I	70	20	28	Yes	-
Ontario Auto Group	857 Lakeshore Road E	Car Sales	NA	I	70	20	28	Yes	-
Rosewood Automotive	827 Lakeshore Road E	Car Repair/Service	NA	I	70	20	25	Yes	-
Assured Automotive - Imperial Lakeview	1104 Alexandra Avenue	Car Repair/Service	7338-7TBGVL (2009)	II	300	70	335	-	-
Armstrong World Industries - Plaster Form Inc.	1180 Lakeshore Road E	Decorative Architectural Systems Manufacturer	6327-A3ARJN (2015)	II	300	70	150	Yes	-
Cintube	1200 Lakeshore Road E	Custom Metal Fabrication/Bending	NA	II	300	70	305	-	-
Bluebird Self Storage	1230 Lakeshore Road E	Self Storage	NA	I	70	20	360	-	-
Canadian Food for Children Warehouse	1258 Lakeshore Road E	Charity Food Warehouse	NA	I	70	20	455	-	-
McKenna Warehouse & Distribution Centre	1260 Lakeshore Road E	Warehouse and Distribution Centre	NA	I	70	20	480	-	-
Sawmill Sid Inc.	1352 Lakeshore Road E	Portable Sawmilling and Wood Repurposing	NA	II	300	70	740	-	-
Coolican & Company	4-1299 St. Marys Avenue	Custom Furniture Manufacturer	NA	II	300	70	700	-	-
North Star Landscaping Inc.	1273 St. Marys Avenue	Landscaping Office and Equipment Storage Yard	NA	II	300	70	605	-	-
Avante Floors Inc.	1257 St. Marys Avenue	Flooring Manufacturer	NA	II	300	70	565	-	-

Appendix B G. E. Booth Wastewater Treatment Plant Permits

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

SLR Project No.: 241.30662.00001

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 9375-C4RKKZ
Issue Date: October 15, 2021

The Regional Municipality of Peel
10 Peel Centre Dr,
Brampton, Ontario
L6T 4B9

Site Location: G.E. Booth (Lakeview) Wastewater Treatment Facility
1300 Lakeshore Rd East
Regional Municipality of Peel

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act , R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

establishment/alteration/re-rating, usage and operation of existing municipal sewage works, for the treatment of sanitary sewage and disposal of effluent to Lake Ontario via a Sewage Treatment Plant (G.E. Booth) and Final Effluent disposal facilities as follows:

Classification of Collection System: Separate Sanitary Sewer System

Classification of Sewage Treatment Plant: Secondary

Design Capacity of Sewage Treatment Plant

Design Capacity with All Treatment Trains in Operation	Existing Works
Rated Capacity	518,000 m^3/d

Influent, Imported Sewage and Processed Organic Waste

Receiving Location	Types
In Collection System	Sanitary Sewage/Septage, Portable Toilet Waste, Leachate/Pretreated Leachate and Pretreated Industrial Wastewater
At Sewage Treatment Plant	Dewatered biosolids cake from Clarkson WWTP

Proposed Works:

G.E. Booth Wastewater Treatment Plant

New Plant 1 (Average Daily Flow 80,000 m^3/day)

Influent

- primary inlet conduit adjacent to Plant 2 primary inlet conduit;

Influent Flow Measurement

- flow measurement device at the primary inlet conduit;

Primary Treatment System

- two (2) 65.5 m long x 19.5 m wide x 3.82 m SWD primary clarifiers, each equipped with sludge and scum removal mechanisms;
- four (4) raw sludge pumps (one duty and one standby for each primary clarifier), each rated at 18 L/s at 30.3 TDH;
- two (2) scum pumps (one duty and one standby), each rated at 9.3 L/s at 30.3 m TDH;

Secondary Treatment System

Biological Treatment

- two (2) 81.2 m x 27.5 m x 5.9 m SWD two pass aeration tanks, each equipped with fine bubble aeration system;
- three (3) air blowers (two duty and one standby), each rated at 20,300 m3/hr

Secondary Sedimentation

- two (2) 90.2 m x 27.5 m x 3.9 m SWD secondary clarifiers, each equipped with sludge and scum removal mechanisms;
- three (3) return activated sludge pumps (two duty and one standby), each rated at 463 L/s at 7.0 m TDH
- four (4) waste activated sludge pumps (two duty and two standby), each rated at 30.7 L/s at 10.0 m TDH
- four (4) scum pumps (two duty and two standby), each rated at 10 L/s at 9.8 m;
- flow measurement device at the outlet of each secondary clarifier;

Supplementary Treatment Systems

Phosphorus Removal

- one (1) chemical metering assembly at 2,500 L/h capacity to discharge to Plant 3 primary inlet conduits;
- two (2) chemical metering assemblies at 750 L/h capacity each to discharge to each of the Plant 1 and Plant 2 primary inlet conduits;
- one (1) chemical metering assembly at 2,500 L/h capacity to be shared standby;

Polymer System

- additional polymer dosing point at Plant 1 primary inlet conduit;

Plant 2 (Average Daily Flow 80,000 m3/day)

- two (2) new sludge and scum removal mechanisms;
-

Plant 3 (Average Daily Flow derated from 398,000 to 358,000 m3/day)

Existing Works:

G.E. Booth Wastewater Treatment Plant

Influent Sewers

- one (1) 2,450 mm diameter and two (2) 2,140 mm x 1,680 mm inlet sewers from Lakeshore Road to the Preliminary Treatment System;

Preliminary Treatment System

Inlet Channel

- two (2) 3,335 mm x 2,165 mm inlet channels to the screening facility;
- one (1) 3,600 mm x 2,765 mm bypass channel;

Screening

- six (6) mechanical screens, each with a Peak Instantaneous Flow

Rate of 3,345 L/s;

- six (6) screenings washer compactor units;

Grit Removal

- four (4) vortex grit removal units, each with a Peak Hourly Flow Rate of 15,291 m^3/h;;
- four (4) grit pumps each having a capacity of 32 L/s at 15 m TDH;
- two (2) grit classifier dewatering units;

Discharge Channels

- one (1) discharge channel with flow splitting gates to Plant 1 and 2;
- two (2) discharge channels with flow splitting gates to Plant 3;

Influent Flow Measurement and Sampling Point

- flow measurement device at the discharge channels;
- automatic composite sampler for Influent from the inlet channels of the preliminary treatment system;

Existing Plant 1 (40,000 m^3 /d Average Daily Flow **)**

Existing Plant 1 to be decommissioned upon commissioning of new Plant 1

Primary Treatment System (to be decommissioned)

- four (4) 26.5 m x 4.9 m x 3.7 m SWD primary clarifiers, each equipped sludge and scum removal mechanisms;
- two (2) raw sludge pumps, each rated at 15.7 L/s at 21 m TDH;
- one (1) scum pump rated at 9 L/s at 13.7 m TDH;

Secondary Treatment Systems (to be decommissioned)

Biological Treatment

- four (4) 43.9 m x 18.7 m x 4.2 m SWD three pass aeration tanks, each equipped with fine bubble aeration system;
- three (3) air blowers (one standby), each rated at 56,000 m^3/h supplying process air for Plant 1 and Plant 2;

Secondary Sedimentation

- four (4) 26.5 m x 10.2 m x 3.7 m SWD secondary clarifiers, each equipped with sludge and scum removal mechanisms;
- four (4) return activated sludge pumps (one standby), each rated at 45.4 L/s at 8.5 m TDH;
- one (1) waste activated sludge pump, rated at 17.4 L/s at 4.3 m TDH;
- one (1) scum pump, rated at 3.8 L/s at 10 m TDH;
- two (2) 31.7 m x 15.5 m x 3.7 m SWD secondary clarifiers, each equipped with sludge and scum removal mechanisms;
- three (3) return activated sludge pumps (one standby), each rated at 83.3 L/s at 6.4 m TDH;
- one (1) waste activated sludge pump, rated at 14.4 L/s at 4.8 m TDH;
- one (1) scum pump, rated at 3.8 L/s at 12 m TDH;

Plant 2 (Average Daily Flow 80,000 m^3 /d)

Primary Treatment System

- two (2) 65.2 m x 19.8 m x 3.7 m SWD primary clarifiers, each equipped sludge and scum removal mechanisms;
- four (4) raw sludge pumps (two standby), each rated at 18.9 L/s at 15.2 m TDH
- two (2) scum pumps each rated at 3.8 L/s at 18.3 m TDH;

Secondary Treatment Systems

Biological Treatment

- four (4) 65.8 m x 24.6 m x 4.3 m SWD four pass aeration tanks, each equipped with fine bubble aeration system;
- air blowers in common with Plant 1;

Secondary Sedimentation

- four (4) 42.7 m x 24 m x 3.7 m SWD secondary clarifiers, each equipped with sludge and scum removal mechanisms;
- three (3) return activated sludge pumps, each rated at 650 L/s at 10.0 m TDH;
- two (2) waste activated sludge pumps, each rated at 106 L/s at 12.3 m TDH;
- two (2) scum pumps, each rated at 3.8 L/s at 10 m TDH;

Plant 3 (Average Daily Flow 358,000 m^3 /d)

Primary Treatment System

- seven (7) 65.2 m x 19.8 m x 3.7 m SWD primary clarifiers, each equipped sludge and scum removal mechanisms;
- fourteen (14) raw sludge pumps (one duty and one standby for each primary clarifier), three rated at 19.0 L/s at 18.3 m TDH each, three rated at 18.9 L/s at 24.5 m TDH each, four rated at 19.0 L/s at 19.0 m TDH each; and four rated 18.0 L/s at 24.4 m TDH;
- eight (8) scum pumps (four duty, four standby), four rated at 3.8 L/s at 18.3 m TDH , two rated at 3.8 L/s at 16.6 m TDH and two rated at 9.3 L/s at 18 m TDH;

Secondary Treatment Systems

Biological Treatment

- one (1) 131 m x 24.6 m x 4.6 m SWD four pass aeration tank with a 79.0 m x 19.7 m two pass extension, equipped with fine bubble aeration system;
- two (2) 131 m x 24.6 m x 4.6 m SWD four pass aeration tanks each with a 79.0 m x 25.3 m two pass extension, equipped with fine bubble aeration systems;
- three (3) 131.7 m x 25.2 m x 4.6 m SWD two pass aeration tanks, each with a 82.5 m x 25.3 m two pass extension, equipped with fine bubble aeration systems;
- five (5) air blowers (one standby), four rated at 56,000 m^3/h each and one rated at 50,000 m^3/h;

Secondary Sedimentation

- one (1) 79.2 m x 23.8 m x 3.7 m SWD secondary clarifier and three (3) 120 m x 22.6 m x 3.7 m SWD secondary clarifiers, each equipped with sludge and scum removal mechanisms;
- six (6) return activated sludge pumps (two standby), two rated at 680 L/s at 12.5 m TDH each, one rated at 650 L/s at 7.8 m TDH, three rated at 650 L/s at 6.2 m TDH each;
- eight (8) waste activated sludge pumps, two rated at 127 L/s at 12.2 m TDH each, two rated at 5.6 L/s at 26 m TDH each, two rated at 30.7 L/s at 7.3 m TDH each, two rated at 30.7 L/s at 9.1 m TDH each;
- six (6) scum pumps, four rated at 3.5 L/s at 18.3 m TDH each, two rated at 3.5 L/s at 11.8 m TDH each;
- two (2) 104 m x 26 m x 4.0 m SWD secondary clarifiers, each equipped with sludge and scum removal mechanisms;
- three (3) return activated sludge pumps (one standby) each rated at 650 L/s at 6.2 m TDH;
- four (4) waste activated sludge pumps (two standby) each rated at 40.0 L/s at 11.9 m TDH;
- three (3) scum pumps (one standby) each rated at 4.1 L/s at 24.7 m TDH;

Supplementary Treatment Systems

Phosphorus Removal

- eight (8) 46 m^3 chemical storage tanks in two outdoor containment structures;
- two (2) chemical metering assemblies at 2,500 L/h capacity each (as duty and mutual backup) to service the feed points at the preliminary treatment discharge channel and Plant 3 aeration tanks inlet and/or outlet;
- two (2) chemical metering assemblies at 750 L/h capacity each (as duty and mutual backup) to service the feed points at Plant 1 and Plant 2 aeration tanks inlet and/or outlet;

Polymer System

- one (1) polymer wetting unit, two (2) aging/feed tanks; and eight (8) chemical feed pumps;

Disinfection System

Chlorination

- two (2) 137.5 m^3 sodium hypochlorite storage tanks;
- three (3) metering pumps (one standby) each rated at 1,530 L/h for effluent disinfection at the Plant 3 secondary effluent channel (outlet chamber as backup dosing point) with disinfection contact occurring within the effluent outfall pipe in the designated disinfection contact zone from the outlet chamber to approximately 1,120 m downstream of the outlet chamber;
- two (2) metering pumps (one standby) each 768 L/h capacity for return activated sludge disinfection dosing via a carrier water line by two (2) carrier water pumps to the return activated sludge lines;

Dechlorination

- two (2) 17.5 m^3 capacity sodium bisulphite storage tanks;

- three (3) metering pumps (one standby) each rated at 194 L/h for final effluent dechlorination dosing via a carrier water line by two (2) carrier water pumps to the effluent outfall pipe at the end of the designated disinfection contact zone approximately 1,120 m downstream of the outlet chamber;

Final Effluent Flow Measurement and Sampling Point

- flow measurement device at outlet of the secondary treatment system;
- automatic composite sampler for Final Effluent at outlet of the secondary treatment system for all parameters except *E. coli* and Total Residual Chlorine/Bisulphite Residual;
- sampling for Final Effluent from the simulator for *E. coli* and Total Residual Chlorine/Bisulphite Residual;

Sludge Management System

Waste Activated Sludge Thickening

- two (2) 14.69 m x 7.8 m x 4.5 m SWD waste activated sludge wet wells, each equipped with a submersible mixer;
- six (6) centrifugal feed pumps (one standby), each rated at 69.4 L/s at 36.3 m TDH;
- five (5) waste activated sludge thickening centrifuges, each rated at 60 L/s;

Sludge Blending and Dewatering

- two (2) 14.69 m x 7.8 m x 4.5 m SWD thickened waste activated sludge and primary sludge blend tanks, each equipped with a submersible mixer;
- six (6) in-line grinders (one standby), each rated at 18.9 L/s and installed in the suction lines of the dewatering centrifuge feed pumps;
- six (6) dewatering centrifuge feed pumps (one standby), each rated at

18.9 L/s at 415 kPa;

- six (6) centrifuges, each with rated at 2 dry T/h;
- two (2) 7.63 m x 7.12 m x 3.8 m SWD centrate tanks;
- three (3) centrate pumps (one standby), each rated at 184.9 L/s at 10.7 m TDH to return centrate to the Preliminary Treatment;
- three (3) 49 m^3 dewatered sludge cake storage silos;
- six (6) dewatered sludge cake pumps, each rated at of 5 L/s at 28% total solids;

Polymer System

- polymer make up system for both liquid emulsion polymer and dry polymer, including bulk emulsion polymer storage tank, feeder/blender and transfer pump, dry polymer silo, feeders and hoppers, wetting chambers;
- polymer addition for waste activated sludge thickening as required, with two (2) 15,500 L feed tanks and six (6) metering pumps (one standby), each rated at 18 L/min;
- polymer addition for sludge dewatering, with two (2) 15,500 L feed tanks and six (6) metering pumps (one standby), each rated at 56 L/min.;

Dewatered Sludge Cake Receiving

- two (2) 80 m^3 storage silos for receiving dewatered sludge cake from other sewage treatment plants, as approved by the District Manager;
- two (2) dewatered sludge cake pumps, each rated at 5 L/s;
- Sludge Incineration
    - four (4) fluidized bed incinerators, each with a sludge feed rate of 100 T/d at 28% total solids;

Ash Lagoons

- two (2) 4,500 m^2 x 3.0 m depth primary ash lagoons, lined with impermeable geosynthetic membrane or clay liner with decanting chambers and supernatant pipes discharging to a 120 m^3 wet well adjoining the Plant 2 aeration tanks;
- three (3) supernatant pumps (one standby) each rated at 186 L/s at 12.5 m to 24.0 m TDH, located in the Plant 2 blower building basement, with discharge pipes returning ash lagoon supernatant to the primary clarifiers of Plant 2 and Plant 3;
- one (1) secondary ash lagoon with supernatant returned to the primary clarifiers, or aeration tanks of Plant 2 or under emergency situations discharged to the outfall of Plant 2;

Final Effluent Disposal Facilities

- one (1) 3,650 mm dia, 1,400 m long effluent outfall pipe with a peak Flow Rate of 17,627 L/s, with discharge port diffusers in the last 200 m section, discharging effluent into Lake Ontario;
- a simulator system to simulate the effectiveness of the chlorine contact in the outfall pipe for disinfection and the bisulphite for subsequent dechlorination and to provide data for process control;

including all other mechanical system, electrical system, instrumentation and control system, standby power system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the Works in accordance with this Approval, in the context of process performance and general principles of wastewater engineering only;

all in accordance with the submitted supporting documents listed in Schedule A.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "Annual Average Daily Effluent Flow" means the cumulative total Final Effluent discharged during a calendar year divided by the number of days during which Final Effluent was discharged that year;

2. "Annual Average Effluent Concentration" is the mean of all Single Sample Results of

the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year, calculated and reported as per the methodology specified in Schedule F;

3. "Annual Average Daily Effluent Loading" means the value obtained by multiplying the Annual Average Effluent Concentration of a contaminant by the Annual Average Daily Effluent Flow over the same calendar year;

4. "Annual Average Daily Influent Flow" means the cumulative total sewage flow of Influent to the Sewage Treatment Plant during a calendar year divided by the number of days during which sewage was flowing to the Sewage Treatment Plant that year;

5. "Approval" means this environmental compliance approval and any schedules attached to it, and the application;

6. "BOD5" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;

7. "Bypass" means diversion of sewage around one or more treatment processes, excluding Preliminary Treatment System, within the Sewage Treatment Plant with the diverted sewage flows being returned to the Sewage Treatment Plant treatment train upstream of the Final Effluent sampling point(s) and discharged via the approved effluent disposal facilities;

8. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

9. "Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

10. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Works is geographically located;

11. "*E. coli*" refers to coliform bacteria that possess the enzyme beta-glucuronidase and are capable of cleaving a fluorogenic or chromogenic substrate with the corresponding release of a fluorogen or chromogen, that produces fluorescence under long wavelength (366 nm) UV light, or color development, respectively. Enumeration methods include tube, membrane filter, or multi-well procedures. Depending on the method selected, incubation temperatures include 35.5 + 0.5 °C or 44.5 + 0.2 °C (to enumerate thermotolerant species). Depending on the procedure used, data are reported as either colony forming units (CFU) per 100 mL (for membrane filtration methods) or as most probable number (MPN) per 100 mL (for tube or multi-well

methods);

12. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;

13. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;

14. "Event" means an action or occurrence, at a given location within the Works that causes a Bypass or Overflow. An Event ends when there is no recurrence of Bypass or Overflow in the 12-hour period following the last Bypass or Overflow. Overflows and Bypasses are separate Events even when they occur concurrently;

15. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;

16. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, including all Bypasses, that are required to meet the compliance limits stipulated in the Approval for the Sewage Treatment Plant at the Final Effluent sampling point(s);

17. "Imported Sewage" means sewage hauled to the Sewage Treatment Plant by licensed waste management system operators of the types and quantities approved for co-treatment in the Sewage Treatment Plant, including hauled sewage and leachate within the meaning of R.R.O. 1990, Regulation 347: General – Waste Management, as amended;

18. "Influent" means flows to the Sewage Treatment Plant from the collection system and Imported Sewage but excluding process return flows ;

19. "Limited Operational Flexibility" (LOF) means the conditions that the Owner shall follow in order to undertake any modification that is pre-authorized as part of this Approval;

20. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

21. "Monthly Average Effluent Concentration" is the mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month, calculated and reported as per the methodology specified in Schedule F;

22. "Monthly Geometric Mean Density" is the mean of all Single Sample Results of *E. coli* measurement in the samples taken during a calendar month, calculated and reported as per the methodology specified in Schedule F;

23. "Normal Operating Condition" means the condition when all unit process(es), excluding Preliminary Treatment System, in a treatment train is operating within its design capacity;

24. "Operating Agency" means the Owner or the entity that is authorized by the Owner for the management, operation, maintenance, or alteration of the Works in accordance with this Approval;

25. "Overflow" means a discharge to the environment from the Works at designed location(s) other than the approved effluent disposal facilities or via the effluent disposal facilities downstream of the Final Effluent sampling point;

26. "Owner" means Region of Peel and its successors and assignees;

27. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;

28. "Peak Hourly Flow Rate" (also referred to as maximum hourly flow or maximum hour flow) means the largest volume of flow to be received during a one-hour period for which the sewage treatment process unit or equipment is designed to handle;

29. "Peak Instantaneous Flow Rate" means the instantaneous maximum flow rate as measured by a metering device for which the sewage treatment process unit or equipment is designed to handle;

30. "Preliminary Treatment System" means all facilities in the Sewage Treatment Plant associated with screening and grit removal;

31. "Primary Treatment System" means all facilities in the Sewage Treatment Plant associated with the primary sedimentation unit process and includes chemically enhanced primary treatment;

32. "Professional Engineer” means a person entitled to practice as a Professional Engineer in the Province of Ontario under a license issued under the Professional Engineers Act;

33. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;

34. "Rated Capacity" means the Annual Average Daily Influent Flow for which the Sewage Treatment Plant is designed to handle;

35. "Sanitary Sewers" means pipes that collect and convey wastewater from residential, commercial, institutional and industrial buildings, and some infiltration and inflow from extraneous sources such as groundwater and surface runoff through means other than stormwater catch basins;

36. "Separate Sewer Systems" means wastewater collection systems that comprised of Sanitary Sewers while runoff from precipitation and snowmelt are separately collected in Storm Sewers;

37. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;

38. "Single Sample Result" means the test result of a parameter in the effluent discharged on any day, as measured by a probe, analyzer or in a composite or grab sample, as required;

39. "Source Protection Authority" has the same meaning as in the Clean Water Act, 2006;

40. “Source Protection Plan" means a drinking water source protection plan prepared under the Clean Water Act, 2006;

41. "Storm Sewers" means pipes that collect and convey runoff resulting from precipitation and snowmelt (including infiltration and inflow);

42. "Works" means the approved sewage works, and includes Proposed Works, Existing Works and modifications made under Limited Operational Flexibility.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. **GENERAL PROVISIONS**

2. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

3. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.

4. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

5. **CHANGE OF OWNER AND OPERATING AGENCY**

6. The Owner shall, within thirty (30) calendar days of issuance of this Approval, prepare/update and submit to the District Manager the Municipal and Local Services Board Wastewater System Profile Information Form, as amended (Schedule G) under any of the following situations:

a. the form has not been previously submitted for the Works;
b. this Approval is issued for extension, re-rating or process treatment upgrade of the Works;
c. when a notification is provided to the District Manager in compliance with requirements of change of Owner or Operating Agency under this condition.

7. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:

a. change of address of Owner;
b. change of Owner, including address of new owner;
c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the *Business Names Act, R.S.O. 1990, c. B.17*, as amended, shall be included in the notification;
d. change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39*, as amended, shall be included in the notification.

8. The Owner shall notify the District Manager, in writing, of any of the following changes within thirty (30) days of the change occurring:

a. change of address of Operating Agency;
b. change of Operating Agency, including address of new Operating Agency.

9. In the event of any change in ownership of the Works, the Owner shall notify the succeeding owner in writing, of the existence of this Approval, and forward a copy of

the notice to the District Manager.

10. The Owner shall ensure that all communications made pursuant to this condition refer to the environmental compliance approval number.

11. **CONSTRUCTION OF PROPOSED WORKS**

12. All Proposed Works in this Approval shall be constructed and installed and must commence operation within five (5) years of issuance of this Approval, after which time the Approval ceases to apply in respect of any portions of the Works not in operation. In the event that the construction, installation and/or operation of any portion of the Proposed Works is anticipated to be delayed beyond the time period stipulated, the Owner shall submit to the Director an application to amend the Approval to extend this time period, at least six (6) months prior to the end of the period. The amendment application shall include the reason(s) for the delay and whether there is any design change(s).

13. Within thirty (30) days of commencement of construction, the Owner shall prepare and submit to the District Manager a schedule for the completion of construction and commissioning operation of the Proposed Works. The Owner shall notify the District Manager within thirty (30) days of the commissioning operation of any Proposed Works. Upon completion of construction of the Proposed Works, the Owner shall prepare and submit a statement to the District Manager, certified by a Professional Engineer, that the Proposed Works is constructed in accordance with this Approval.

14. Within one (1) year of completion of construction of the Proposed Works, a set of record drawings of the Works shall be prepared or updated. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be readily accessible for reference at the Works.

15. A set of record drawings of the Works shall be kept up to date through revisions undertaken from time to time and a copy shall be readily accessible for reference at the Works.

16. **BYPASSES**

17. Any Bypass is prohibited, except:

a. an emergency Bypass when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of a treatment process or when an unforeseen flow condition exceeds the design capacity of a treatment process that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a portion of

the flow is not bypassed;

b. a planned Bypass that is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the District Manager in writing at least fifteen (15) days prior to the occurrence of Bypass, including an estimated quantity and duration of the Bypass, an assessment of the impact on the quality of the Final Effluent and the mitigation measures if necessary, and the District Manager has given written consent of the Bypass;

18. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) prior to bypassing.

19. At the beginning of a Bypass Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

a. the type of the Bypass as indicated in Paragraph 1 and the reason(s) for the Bypass;

b. the date and time of the beginning of the Bypass;

c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;

d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.

20. Upon confirmation of the end of a Bypass Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

a. the date and time of the end of the Bypass;

b. the estimated or measured volume of Bypass.

21. For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples, following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.

22. The Owner shall submit a summary report of the Bypass Event(s) to the District Manager on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.

23. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Bypass Event.

24. **OVERFLOWS**

25. Any Overflow is prohibited, except:

a. an emergency Overflow in an emergency situation when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of the Works or when an unforeseen flow condition exceeds the design capacity of the Works that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a portion of the flow is not overflowed;
b. a planned Overflow that is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the District Manager in writing at least fifteen (15) days prior to the occurrence of Overflow, including an estimated quantity and duration of the Overflow, an assessment of the impact on the environment and the mitigation measures if necessary, and the District Manager has given written consent of the Overflow;

26. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) and Bypass(es) prior to overflowing.

27. At the beginning of an Overflow Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

a. the type of the Overflow as indicated in Paragraph 1 and the reason(s) for the Overflow;
b. the date and time of the beginning of the Overflow;

c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;

d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypass(es) and the reason(s) why the Overflow was not avoided.

28. Upon confirmation of the end of an Overflow Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:

a. the date and time of the end of the Overflow;

b. the estimated or measured volume of the Overflow.

29. For any Overflow Event

a. in the Sewage Treatment Plant, the Owner shall collect grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, total ammonia nitrogen, nitrate as N, nitrite as N, total Kjeldahl nitrogen, E. coli., except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.

b. at a sewage pumping station in the collection system, the Owner shall collect at least one (1) grab sample representative of the Overflow Event and have it analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen.

30. The Owner shall submit a summary report of the Overflow Event(s) to the District Manager on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary report shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5). If there is no Overflow Event during a quarter, a statement of no occurrence of Overflow is deemed sufficient.

31. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Overflow Event.

32. The Owner shall develop a response plan for any unplanned Overflows, consisting of measures to mitigate and prevent the contamination of drinking water.

33. **DESIGN OBJECTIVES**

34. The Owner shall design and undertake everything practicable to operate the Sewage Treatment Plant in accordance with the following objectives:

a. Final Effluent parameters design objectives listed in the table(s) included in Schedule B.
b. Final Effluent is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.
c. Total Residual Chlorine (TRC) in the Final Effluent shall be non-detectable as measured by a method with a sensitivity of at least 0.02 mg/L. Normal operation of de-chlorination equipment should provide for an excess of reagents to ensure that total chlorine residuals are not detected.
d. Annual Average Daily Influent Flow is within the Rated Capacity of the Sewage Treatment Plant.

35. **COMPLIANCE LIMITS**

1. The Owner shall operate and maintain the Sewage Treatment Plant such that compliance limits for the Final Effluent parameters listed in the table(s) included in Schedule C are met.

2. The Owner shall operate and maintain the Sewage Treatment Plant such that the Final Effluent is disinfected continuously year-round.

36.

OPERATION AND MAINTENANCE

1. The Owner shall ensure that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the Works.

2. The Owner shall update/maintain the operations manual for the Works within six (6) months of completion of construction of the Proposed Works, that includes, but not necessarily limited to, the following information:

a. operating procedures for the Works under Normal Operating Conditions;

b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;

c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;

d. procedures for the inspection and calibration of monitoring equipment;

e. operating procedures for the Works to handle situations outside Normal Operating Conditions and emergency situations such as a structural, mechanical or electrical failure, or an unforeseen flow condition, including procedures to minimize Bypasses and Overflows;

f. a spill prevention and contingency plan, consisting of procedures and contingency plans, including notification to the District Manager, to reduce the risk of spills of pollutants and prevent, eliminate or ameliorate any adverse effects that result or may result from spills of pollutants;

g. procedures for receiving, responding and recording public complaints, including recording any followup actions taken.

h. The Owner shall include maintenance, inspections, and monitoring details in all regular and annual reports.

3. The Owner shall maintain the operations manual up-to-date and make the manual readily accessible for reference at the Works.

4. The Owner shall ensure that the Operating Agency fulfills the requirements under O. Reg. 129/04, as amended for the Works, including the classification of facilities, licensing of operators and operating standards.

37. **MONITORING AND RECORDING**

38. The Owner shall, upon commencement of operation of the Works, carry out a scheduled monitoring program of collecting samples at the required sampling points, at the frequency specified or higher, by means of the specified sample type and analyzed for each parameter listed in the tables under the monitoring program included in Schedule D and record all results, as follows:

a. all samples and measurements are to be taken at a time and in a location characteristic of the quality and quantity of the sewage stream over the time period being monitored.

b. definitions and preparation requirements for each sample type are included in document referenced in Paragraph 3.b.

c. definitions for frequency:
    i. Daily means once every day;
    ii. Weekly means once every week;

d. a schedule of the day of the week/month for the scheduled sampling shall be created. The sampling schedule shall be revised and updated every year through rotation of the day of the week/month for the scheduled sampling program, except when the actual scheduled monitoring frequency is three (3) or more times per week.

39. In addition to the scheduled monitoring program required in Paragraph 1, the Owner shall collect daily sample(s) of the Final Effluent, on any day when there is any situation outside Normal Operating Conditions, and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples, following the same protocol specified in this condition for the regular samples. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.

40. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following documents and all analysis shall be conducted by a laboratory accredited to the ISO/IEC:17025 standard or as directed by the District Manager:

a. the Ministry's Procedure F-10-1, “Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended;
b. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;
c. the publication "Standard Methods for the Examination of Water and Wastewater", as amended.

41. If the Owner monitors Bisulphite Residual as a surrogate to Total Residual Chlorine, then detected levels of Bisulphite Residual in the sample shall be deemed to confirm absence of Total Residual Chlorine.

42. The Owner shall monitor and record the flow rate and daily quantity using flow measuring devices or other methods of measurement as approved below calibrated to an accuracy within plus or minus 15 per cent (+/- 15%) of the actual flowrate of the following:

a. Influent flow to the Sewage Treatment Plant by continuous flow measuring devices and instrumentations, pumping rates, or in lieu of an actual installation of equipment, adopt the flow measurements of the Final Effluent for the purpose of estimating Influent flows if the Influent and Final Effluent streams are considered not significantly different in flow rates and quantities;

b. Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices and instrumentations, pumping rates, or in lieu of an actual installation of equipment, adopt the flow measurements of the Influent for the purpose of estimating Final Effluent flows if the Influent and Final Effluent streams are considered not significantly different in flow rates and quantities;

c. each type of Imported Sewage received for co-treatment at the Sewage Treatment Plant by flow measuring devices/pumping rates/haul truck manifests;

43. The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

44.

LIMITED OPERATIONAL FLEXIBILITY

1. The Owner may make pre-authorized modifications to the sewage pumping stations and Sewage Treatment Plant in Works in accordance with the document "Limited Operational Flexibility - Protocol for Pre-Authorized Modifications to Municipal Sewage Works" (Schedule E), as amended, subject to the following:

a. the modifications will not involve the addition of any new treatment process or the removal of an existing treatment process, including chemical systems, from the liquid or solids treatment trains as originally designed and approved.

b. the scope and technical aspects of the modifications are in line with those delineated in Schedule E and conform with the Ministry’s publication “Design Guidelines for Sewage Works 2008”, as amended, Ministry’s regulations, policies, guidelines, and industry engineering standards;

c. the modifications shall not negatively impact on the performance of any process or equipment in the Works or result in deterioration in the Final Effluent quality;

d. where the pre-authorized modification requires notification, a "Notice of Modifications to Sewage Works" (Schedule E), as amended shall be completed with declarations from a Professional Engineer and the Owner and retained on-site prior to the scheduled implementation date. All supporting information including technical memorandum, engineering plans and specifications, as

applicable and appropriate to support the declarations that the modifications conform with LOF shall remain on-site for future inspection.

2. The following modifications are not pre-authorized under Limited Operational Flexibility:

a. Modifications that involve addition or extension of process structures, tankages or channels;

b. Modifications that involve relocation of the Final Effluent outfall or any other discharge location or that may require reassessment of the impact to the receiver or environment;

c. Modifications that involve addition of or change in technology of a treatment process or that may involve reassessment of the treatment train process design;

d. Modifications that require changes to be made to the emergency response, spill prevention and contingency plan; or

e. Modifications that are required pursuant to an order issued by the Ministry.

45. **REPORTING**

1. The Owner shall report to the District Manager orally as soon as possible any non-compliance with the compliance limits, and in writing within seven (7) days of non-compliance.

2. The Owner shall, within fifteen (15) days of occurrence of a spill within the meaning of Part X of the EPA, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation, in addition to fulfilling the requirements under the EPA and O. Reg. 675/98 "Classification and Exemption of Spills and Reporting of Discharges".

3. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff, Source Protection Authority and any other parties identified in the Source Protection Plans.

4. The Owner shall keep all reports at the Operating Agency's Office.

5. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:

a. a summary and interpretation of all Influent, Imported Sewage monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

b. a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

c. a summary of all operating issues encountered and corrective actions taken;

d. a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

e. a summary of any effluent quality assurance or control measures undertaken;

f. a summary of the calibration and maintenance carried out on all Influent, Imported Sewage and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;

g. a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:
    i. when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality;
    ii. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;

h. a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed; a tabulation of the measured volume of sludge accumulated in the lagoon cells in five year intervals and the estimated volume in the interim years and when sludge was disposed of during the reporting period, a summary of disposal locations and volumes of sludge disposed at each location;

i. a summary of any complaints received and any steps taken to address the complaints;

j. a summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;

k. a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modification.

l. a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.

m. any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works.

n. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

Schedule A

1. Application for Environmental Compliance Approval submitted by Mr Matt Woodbeck of CIMA received on November 3, 2020 for the proposed alternation to the GE Booth Wastewater Plant design report, final plans and specifications.

Schedule B

Final Effluent Design Objectives

Concentration Objectives prior to completion of construction of all Proposed Works

Final Effluent Parameter	**Averaging Calculator**	**Objective (milligrams per litre unless otherwise indicated)**
CBOD5	Annual Average Effluent Concentration	15.0 mg/L
Total Suspended Solids	Annual Average Effluent Concentration	15.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.7 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	8.0 mg/L (May 1 - 31) 6.0 mg/L (Jun 1 - Sep 30) 8.0 mg/L (Oct 1 - 31) 17.0 mg/L (Nov 1 - Apr 30)
E. coli	Monthly Geometric Mean Density	*150 CFU/100 mL
pH	Single Sample Result	6.5 - 8.5 inclusive
Total Residual Chlorine**	Monthly Average Effluent Concentration	Non-detectable

*If the MPN method is utilized for *E. coli* analysis the objective shall be 150 MPN/100 mL

**Total Residual Chlorine shall be non-detectable as measured by a method with a

sensitivity of at least 0.02 mg/L

Concentration Objectives upon completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Objective
CBOD5	Annual Average Effluent Concentration	15.0 mg/L
Total Suspended Solids	Annual Average Effluent Concentration	15.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.7 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	8.0 mg/L (May 1 - 31) 6.0 mg/L (Jun 1 - Sep 30) 8.0 mg/L (Oct 1 - 31) 17.0 mg/L (Nov 1 - Apr 30)
E. coli	Monthly Geometric Mean Density	*150 CFU/100 mL
pH	Single Sample Result	6.5 - 8.5 inclusive

*If the MPN method is utilized for *E. coli* analysis the objective shall be 150 MPN/100 mL

**Total Residual Chlorine shall be non-detectable as measured by a method with a sensitivity of at least 0.02 mg/L

Schedule C

Final Effluent Compliance Limits

Concentration Limits prior to completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Annual Average Effluent Concentration	25.0 mg/L
Total Suspended Solids	Annual Average Effluent Concentration	25.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.8 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	16.0 mg/L (May 1 - 31) 8.0 mg/L (Jun 1 - Sep 30) 16.0 mg/L (Oct 1 - 31) 34.0 mg/L (Nov 1 - Apr 30)
E. coli	Monthly Geometric Mean Density	*200 CFU/100 mL

pH	Single Sample Result	between 6.0 - 9.5 inclusive
Total Residual Chlorine	Monthly Average Effluent Concentration	0.02 mg/L

*If the MPN method is utilized for *E. coli* analysis the limit shall be 150 MPN/100 mL
**If continuous analyzer is used for monitoring of Total Residual Chlorine, reading shall be
recorded at a minimum frequency of every 5 minutes and any record is not to exceed 0.1 mg/L
and any two-hour moving average is not to exceed 0.02 mg/L

Schedule C

Final Effluent Compliance Limits

Concentration Limits upon completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	25.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	25.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.8 mg/L
Total Ammonia Nitrogen	Monthly Average Effluent Concentration	16.0 mg/L (May 1 - 31) 8.0 mg/L (Jun 1 - Sep 30) 16.0 mg/L (Oct 1 - 31) 34.0 mg/L (Nov 1 - Apr 30)
E. coli	Monthly Geometric Mean Density	*200 CFU/100 mL
pH	Single Sample Result	between 6.0 - 9.5 inclusive
Total Residual** Chlorine	Single Sample Result	0.02 mg/L

*If the MPN method is utilized for *E. coli* analysis the limit shall be 200 MPN/100 mL

**If continuous analyzer is used for monitoring of Total Residual Chlorine, reading shall be recorded at a minimum frequency of every 5 minutes and any record is not to exceed 0.1 mg/L and any two-hour moving average is not to exceed 0.02 mg/L

Loading Limits prior to completion of construction of all Proposed Works

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)

Total Phosphorus	Monthly Average Daily Effluent Loading	394 kg/d

Schedule D

Monitoring Program

Influent - Influent sampling point

Parameters	Sample Type	Minimum Frequency
BOD5	24 hour composite	Weekly
Total Suspended Solids	24 hour composite	Weekly
Total Phosphorus	24 hour composite	Weekly
Total Kjeldahl Nitrogen	24 hour composite	Weekly

Imported Sewage - Imported Sewage Receiving Station

Parameters	Sample Type	Minimum Frequency
BOD5	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Phosphorus	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly

Final Effluent - Final Effluent sampling point

Parameters	Sample Type	Minimum Frequency
CBOD5	24 hour composite	Weekly
Total Suspended Solids	24 hour composite	Weekly
Total Phosphorus	24 hour composite	Weekly
Total Ammonia Nitrogen	24 hour composite	Weekly
Total Kjeldahl Nitrogen	24 hour composite	Weekly
Nitrate as Nitrogen	24 hour composite	Weekly
Nitrite as Nitrogen	24 hour composite	Weekly
E. coli	Grab	Weekly
Total Residual Chlorine / Bisulphite Residual	Grab/Analyzer	Daily
Dissolved Oxygen	Grab/Probe/Analyzer	Weekly
pH*	Grab/Probe/Analyzer	Weekly
Temperature*	Grab/Probe/Analyzer	Weekly
Un-ionized Ammonia**	As Calculated	Weekly

*pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.

**The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.

Sludge/Biosolids – holding tank/truck loading bay

Parameters	Sample Type	Minimum Frequency
Total Solids	Grab	Annually
Total Phosphorus	Grab	Annually
Total Ammonia Nitrogen	Grab	Annually
Nitrate as Nitrogen	Grab	Annually
Metal Scan - Arsenic - Cadmium - Cobalt - Chromium - Copper - Lead - Mercury - Molybdenum - Nickel - Potassium - Selenium - Zinc	Grab	Annually

Schedule E

Limited Operational Flexibility

Protocol for Pre-Authorized Modifications to Municipal Sewage Works

1. **General**

2. Pre-authorized modifications are permitted only where Limited Operational Flexibility has already been granted in the Approval and only permitted to be made at the pumping stations and sewage treatment plant in the Works, subject to the conditions of the Approval.

3. Where there is a conflict between the types and scope of pre-authorized modifications listed in this document, and the Approval where Limited Operational Flexibility has been granted, the Approval shall take precedence.

4. The Owner shall consult the District Manager on any proposed modifications that may fall within the scope and intention of the Limited Operational Flexibility but is not listed explicitly or included as an example in this document.

5. The Owner shall ensure that any pre-authorized modifications will not:

f. adversely affect the hydraulic profile of the Sewage Treatment Plant or the performance of any upstream or downstream processes, both in terms of hydraulics and treatment performance;

g. result in new Overflow or Bypass locations, or any potential increase in frequency or quantity of Overflow(s) or Bypass(es).

h. result in a reduction in the required Peak Flow Rate of the treatment process or equipment as originally designed.

9. **Modifications that do not require pre-authorization:**

10. Sewage works that are exempt from Ministry approval requirements;

11. Modifications to the electrical system, instrumentation and control system.

12. **Pre-authorized modifications that do not require preparation of "Notice of Modification to Sewage Works"**

13. Normal or emergency maintenance activities, such as repairs, renovations, refurbishments and replacements with Equivalent Equipment, or other improvements to an existing approved piece of equipment of a treatment process do not require pre-authorization. Examples of these activities are:

a. Repairing a piece of equipment and putting it back into operation, including replacement of minor components such as belts, gear boxes, seals, bearings;

b. Repairing a piece of equipment by replacing a major component of the equipment such as motor, with the same make and model or another with the same or very close power rating but the capacity of the pump or blower will still be essentially the same as originally designed and approved;

c. Replacing the entire piece of equipment with Equivalent Equipment.

14. Improvements to equipment efficiency or treatment process control do not require pre-authorization. Examples of these activities are:

a. Adding variable frequency drive to pumps;

b. Adding on-line analyzer, dissolved oxygen probe, ORP probe, flow measurement or other process control device.

15. **Pre-Authorized Modifications that require preparation of "Notice of Modification to Sewage Works"**

16. Pumping Stations

q. Replacement, realignment of existing sewers including manholes, valves, gates, weirs and associated appurtenances provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved.

r. Extension or partition of wetwell to increase retention time for emergency response and improve station maintenance and pump operation;

s. Replacement or installation of inlet screens to the wetwell;

t. Replacement or installation of flowmeters, construction of station bypass;

u. Replacement, reconfiguration or addition of pumps and modifications to pump suctions and discharge pipings including valve, gates, motors, variable frequency drives and associated appurtenances to maintain firm pumping capacity or modulate the pump rate provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head or an increase in the peak pumping rate of the pumping station as originally designed;

v. Replacement, realignment of existing forcemain(s) including valves, gates, and associated appurtenances provided that the modifications will not reduce the flow capacity or increase the total dynamic head and transient in the forcemain.

23. Sewage Treatment Plant

24. Sewers and appurtenances

a. Replacement, realignment of existing sewers (including pipes and channels) or construction of new sewers, including manholes, valves, gates, weirs and associated appurtenances within the a sewage treatment plant, provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved and that the modifications will remove hydraulic bottlenecks or improve the conveyance of sewage into and through the

Works.

25. Flow Distribution Chambers/Splitters

    a. Replacement or modification of existing flow distribution chamber/splitters or construction of new flow distribution chamber/splitters, including replacements or installation of sluice gates, weirs, valves for distribution of flows to the downstream process trains, provided that the modifications will not result in a change in flow distribution ratio to the downstream process trains as originally designed.

26. Imported Sewage Receiving Facility

    a. Replacement, relocation or installation of loading bays, connect/disconnect hook-up systems and unloading/transferring systems;
    b. Replacement, relocation or installation of screens, grit removal units and compactors;
    c. Replacement, relocation or installation of pumps, such as dosing pumps and transfer pumps, valves, piping and appurtenances;
    d. Replacement, relocation or installation of storage tanks/chambers and spill containment systems;
    e. Replacement, relocation or installation of flow measurement and sampling equipment;
    f. Changes to the source(s) or quantity from each source, provided that changes will not result in an increase in the total quantity and waste loading of each type of Imported Sewage already approved for co-treatment.

27. Preliminary Treatment System

    a. Replacement of existing screens and grit removal units with equipment of the same or higher process performance technology, including where necessary replacement or upgrading of existing screenings dewatering washing compactors, hydrocyclones, grit classifiers, grit pumps, air blowers conveyor system, disposal bins and other ancillary equipment to the screening and grit removal processes.
    b. Replacement or installation of channel aeration systems, including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers.

28. Primary Treatment System

    a. Replacement of existing sludge removal mechanism, including sludge chamber;
    b. Replacement or installation of scum removal mechanism, including scum

chamber;

c. Replacement or installation of primary sludge pumps, scum pumps, provided that:the modifications will not result in a reduction in the firm pumping capacity or discharge head that the primary sludge pump(s) and scum pump(s) are originally designed to handle.

29. Secondary Treatment System

1. Biological Treatment
    a. Conversion of complete mix aeration tank to plug-flow multi-pass aeration tank, including modifications to internal structural configuration;
    b. Addition of inlet gates in multi-pass aeration tank for step-feed operation mode;
    c. Partitioning of an anoxic/flip zone in the inlet of the aeration tank, including installation of submersible mixer(s);
    d. Replacement of aeration system including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers, provided that the modifications will not result in a reduction in the firm capacity or discharge pressure that the blowers are originally designed to supply or in the net oxygen transferred to the wastewater required for biological treatment as originally required.
2. Secondary Sedimentation
    a. Replacement of sludge removal mechanism, including sludge chamber;
    b. Replacement or installation of scum removal mechanism, including scum chamber;
    c. Replacement or installation of return activated sludge pump(s), waste activated sludge pump(s), scum pump(s), provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head that the activated sludge pump(s) and scum pump(s) are originally designed to handle.

30. Post-Secondary Treatment System

a. Replacement of filtration system with equipment of the same filtration technology, including feed pumps, backwash pumps, filter reject pumps, filtrate extract pumps, holding tanks associated with the pumping system, provided that the modifications will not result in a reduction in the capacity of the filtration system as originally designed.

31. Disinfection System

1. UV Irradiation
    a. Replacement of UV irradiation system, provided that the modifications will not result in a reduction in the design capacity of the disinfection system or the radiation level as originally designed.

2. Chlorination/Dechlorination and Ozonation Systems
    a. Extension and reconfiguration of contact tank to increase retention time for effective disinfection and reduce dead zones and minimize short-circuiting;
    b. Replacement or installation of chemical storage tanks, provided that the tanks are provided with effective spill containment.

32. Supplementary Treatment Systems

1. Chemical systems
    a. Replacement, relocation or installation of chemical storage tanks for existing chemical systems only, provided that the tanks are sited with effective spill containment;
    b. Replacement or installation of chemical dosing pumps provided that the modifications will not result in a reduction in the firm capacity that the dosing pumps are originally designed to handle.
    c. Relocation and addition of chemical dosing point(s) including chemical feed pipes and valves and controls, to improve phosphorus removal efficiency;
    d. Use of an alternate chemical provided that it is a non-proprietary product and is a commonly used alternative to the chemical approved in the Works, provided that the chemical storage tanks, chemical dosing pumps, feed pipes and controls are also upgraded, as necessary..

33. Sludge Management System

1. Sludge Holding and Thickening
    a. Replacement or installation of sludge holding tanks, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;

2. Sludge Digestion
    a. Replacement or installation of digesters, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;
    b. replacement of sludge digester covers.

3. Sludge Dewatering and Disposal
    a. Replacement of sludge dewatering equipment, sludge handling pumps, such as transfer pumps, feed pumps, cake pumps, loading pumps, provided that modifications will not result in reduction in solids storage or handling capacities.

4. Processed Organic Waste
    a. Changes to the source(s) or quantity from each source, provided that changes will not result in an increase in the total quantity already approved for co-processing.

34. Standby Power System

1. Replacement or installation of standby power system, including feed from alternate power grid, emergency power generator, fuel supply and storage systems, provided that the existing standby power generation capacity is not reduced.

35. Pilot Study

1. Small side-stream pilot study for existing or new technologies, alternative treatment process or chemical, provided:
    a. all effluent from the pilot system is hauled off-site for proper disposal or returned back to the sewage treatment plant for at a point no further than immediately downstream of the location from where the side-stream is drawn;
    b. no proprietary treatment process or propriety chemical is involved in the pilot study;
    c. the effluent from the pilot system returned to the sewage treatment plant does not significantly alter the composition/concentration of or add any new contaminant/inhibiting substances to the sewage to be treated in the downstream process;
    d. the pilot study will not have any negative impacts on the operation of the sewage treatment plant or cause a deterioration of effluent quality;
    e. the pilot study does not exceed a maximum of two years and a notification of completion shall be submitted to the District Manager within one month of completion of the pilot project.

36. Lagoons

a. installing baffles in lagoon provided that the operating capacity of the lagoon system is not reduced;

b. raise top elevation of lagoon berms to increase free-board;

c. replace or install interconnecting pipes and chambers between cells, provided that the process design operating sequence is not changed;

d. replace or install mechanical aerators, or replace mechanical aerators with diffused aeration system provided that the mixing and aeration capacity are not reduced;

e. removal of accumulated sludge and disposal to an approved location offsite.

37. Final Effluent Disposal Facilities

al. Replacement or realignment of the Final Effluent channel, sewer or forcemain, including manholes, valves and appurtenances from the end of the treatment train to the discharge outfall section, provided that the sewer conveys only effluent discharged from the Sewage Treatment Plant and that the replacement or re-aligned sewer has similar dimensions and performance criteria and is in the same or approximately the same location and that the hydraulic capacity will not be reduced.

This page contains an image of the form entitled "Notice of Modification to Sewage Works". A digital copy can be obtained from the District Manager.

Ontario

Ministry of the Environment, Conservation and Parks

Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA ON-SITE PRIOR TO THE SCHEDULED IMPLEMENTATION DATE.

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)

ECA Owner	Municipality

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Description shall include:
1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:
1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print)	PEO License Number

Signature	Date (mm/dd/yy)

Name of Employer

Part 4 – Declaration by Owner

I hereby declare that:
1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print)	Owner representative's title (Print)

Owner Representative's Signature	Date (mm/dd/yy)

Schedule F

Methodology for Calculating and Reporting

Monthly Average Effluent Concentration, Annual Average Effluent Concentration and Monthly Geometric Mean Density

1. Monthly Average Effluent Concentration

Step 1: Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month and proceed as follows depending on the result of the calculation:

a. If the arithmetic mean does not exceed the compliance limit for the contaminant, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;

b. If the arithmetic mean exceeds the compliance limit for the contaminant and there was no Bypass Event during the calendar month, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;

c. If the arithmetic mean exceeds the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, then proceed to Step 2;

d. If the arithmetic mean does not exceed the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, the Owner may still elect to proceed to Step 2 calculation of the flow-weighted arithmetic mean.

Step 2: Calculate the flow-weighted arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month and proceed depending on the result of the calculation:

a. Group No Bypass Days (**NBPD**) data and Bypass Days (**BPD**) data during a calendar month separately;

b. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all NBPD during a calendar month and record it as **Monthly Average NBPD Effluent Concentration**;

c. Obtain the "**Total Monthly NBPD Flow**" which is the total amount of Final Effluent discharged on all NBPD during the calendar month;

d. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all BPD during a calendar month and record it as **Monthly Average BPD Effluent Concentration**;

e. Obtain the "**Total Monthly BPD Flow**" which is the total amount of Final Effluent discharged on all BPD during the calendar month;

f. Calculate the flow-weighted arithmetic mean using the following formula:

[(Monthly Average NBPD Effluent Concentration × Total Monthly NBPD Flow) + (Monthly Average BPD Effluent Concentration × Total Monthly BPD Flow)] ÷ (Total Monthly NBPD Flow + Total Monthly BPD Flow)

It should be noted that in this method, if there are no Bypass Event for the month, the calculated result would be the same as the non-flow-weighted arithmetic mean method;

g. Report and use the lesser of the flow-weighted arithmetic mean obtained in Step 2 and the arithmetic mean obtained in Step 1 as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval.

2. Annual Average Effluent Concentration

Step 1: Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year and proceed as follows depending on the result of the calculation:

a. If the arithmetic mean does not exceed the compliance limit for the contaminant, then report and use this arithmetic mean as the Annual Average Effluent Concentration for this parameter where applicable in this Approval;

b. If the arithmetic mean exceeds the compliance limit for the contaminant and there was no Bypass Event during the calendar year, then report and use this arithmetic mean as the Annual Average Effluent Concentration for this parameter where applicable in this Approval;

c. If the arithmetic mean exceeds the compliance limit for the contaminant and there was Bypass Event(s) during the calendar year, then proceed to Step 2;

d. If the arithmetic mean does not exceed the compliance limit for the contaminant and there was Bypass Event(s) during the calendar year, the

Owner may still elect to proceed to Step 2 calculation of the flow-weighted arithmetic mean.

Step 2: Calculate the flow-weighted arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar year and proceed depending on the result of the calculation:

a. Group No Bypass Days (**NBPD**) data and Bypass Days (**BPD**) data during a calendar year separately;

b. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all NBPD during a calendar year and record it as **Annual Average NBPD Effluent Concentration**;

c. Obtain the "**Total Annual NBPD Flow**" which is the total amount of Final Effluent discharged on all NBPD during the calendar year;

d. Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all BPD during a calendar year and record it as **Annual Average BPD Effluent Concentration**;

e. Obtain the "**Total Annual BPD Flow**" which is the total amount of Final Effluent discharged on all BPD during the calendar year;

f. Calculate the flow-weighted arithmetic mean using the following formula:

[(Annual Average NBPD Effluent Concentration × Total Annual NBPD Flow) + (Annual Average BPD Effluent Concentration × Total Annual BPD Flow)] ÷ (Total Annual NBPD Flow + Total Annual BPD Flow)

It should be noted that in this method, if there are no Bypass Event for the calendar year, the calculated result would be the same as the non-flow-weighted arithmetic mean method;

g. Report and use the lesser of the flow-weighted arithmetic mean obtained

in Step 2 and the arithmetic mean obtained in Step 1 as the Annual Average Effluent Concentration for this parameter where applicable in this Approval.

3. Monthly Geometric Mean Density

Geometric mean is defined as the n^{th} root of the product of *n* numbers. In the context of calculating Monthly Geometric Mean Density for *E. coli*, the following formula shall be used:

$$\sqrt[n]{x_1 x_2 x_3 \cdots x_n}$$

in which,

"*n*" is the number of samples collected during the calendar month; and

"*x*" is the value of each Single Sample Result.

For example, four weekly grab samples were collected and tested for *E. coli* during the calendar month. The *E. coli* densities in the Final Effluent were found below:

Sample Number	***E. coli* Densities* (CFU/100 mL)**
1	10
2	100
3	300
4	50

The Geometric Mean Density for these data:

$$\sqrt[4]{10 \times 100 \times 300 \times 50} = 62$$

*If a particular result is zero (0), then a value of one (1) will be substituted into the calculation of the Monthly Geometric Mean Density. If the MPN method is utilized for E. coli analysis, values in the table shall be MPN/100 mL.

Schedule G

Municipal and Local Services Board Wastewater System

Profile Information Form

(For reference only, images of the form are attached on the next four pages. A digital copy can be obtained from the District Manger.)

Ontario

Ministry of the Environment, Conservation and Parks

Municipal and Local Services Board Wastewater System Profile Information Form

The information in this form is necessary to administer the Ministry's approvals, compliance and enforcement programs with respect to wastewater treatment and collection systems owned by municipalities and local services boards. These programs are authorized under the *Ontario Water Resources Act*, the *Environmental Protection Act*, the *Nutrient Management Act* and their respective regulations.

Email the completed form to: waterforms@ontario.ca
For any questions call 1-866-793-2588.

[A] SYSTEM PROFILE INFORMATION

Wastewater System Number *(if assigned)*

☐ New Profile
☐ Update Existing Profile

Name of System

Name of Municipality or Local Services Board

Level of Treatment (select one*)
☐ Primary
☐ Secondary
☐ Tertiary
☐ Secondary Equivalent
☐ Other (specify):
*See Terms and Concepts on page 4

Population Served	Population (Design)	Type of System
		☐ Treatment & Collection System ☐ Collection System Only

Design Rated Capacity (m^3/day)	Peak Flow Rate (m^3/day)	Current Environmental Compliance Approval (ECA) Number	Current ECA Issue Date (yyyy/mm/dd):

The treatment plant receives sewage from: (Check all that applies.* If you have checked more than one option below, indicate the approximate %)

☐ Sanitary Sewer ☐ Combined Sewer
☐ Nominally Separated Sewer ☐ Partially Separated Sewer *See Terms and Concepts on page 4

[B] OWNER INFORMATION

Legal Name of Municipality or Local Services Board

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)

PO Box	City/Town	Postal Code

☐ Dr ☐ Miss ☐ Mr ☐ Mrs ☐ Ms	Owner Contact First Name	Owner Contact Last Name	Owner Contact Job Title

Tel. No.	Fax Number	Email address
( ) - ext.	( ) -	

[C] OPERATING AUTHORITY ☐ Check if same as owner

Legal Name of Operator

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)

PO Box	City/Town	Postal Code

☐ Dr ☐ Miss ☐ Mr ☐ Mrs ☐ Ms	Operator Contact First Name	Operator Contact Last Name	Operator Contact Job Title

Tel. No.	Fax Number	Email address
( ) - ext.	( ) -	

[D] 24/7 CONTACT

☐ Dr ☐ Miss ☒ Mr ☐ Mrs ☐ Ms	First Name	Last Name	Job Title

Tel. No.	Fax Number	Email address
( ) - ext.	( ) -	

[E] SYSTEM CIVIC LOCATION ADDRESS (I.E. ADDRESS OF TREATMENT PLANT)

Unit No	Street No.	Street Name.	Street Type (St, Rd, etc)	Street Direction (N,S,E,W)

PO Box	City/Town	Postal Code

If the Wastewater System has no street address

Geographical Township	Lot	Concession

Geographical Referencing (if known, enter the Geographical Reference Information for this Wastewater System)

Map Datum	Geo-Referencing Method	Accuracy Estimate	Location Reference	
Latitude	**Longitude**	**Zone**	**Easting**	**Northing**

[F] TREATMENT PROCESS

Preliminary	Primary	Secondary	Secondary Equivalent	Post-Secondary	Additional Treatment
☐ Screening	☐ Settling/sedimentation/ clarification	☐ Conventional Activated Sludge (CAS)	☐ Aerated Lagoon	☐ Filtration	☐ Phosphorous Removal ☐ Biological ☐ Chemical
☐ Shredding/ grinding	☐ Scum Removal	☐ Extended Aeration	☐ Facultative Lagoon	☐ Clarification	If chemical is used, specify:
☐ Grit Removal	☐ Polymer Addition	☐ Membrane Bioreactor (MBR)	☐ Anaerobic Lagoon	☐ Intermittent Sand Filter (after lagoons)	☐ Nitrification
☐ Other(specify):	☐ Other(specify):	☐ Sequencing Batch Reactor (SBR)	☐ Aerobic Lagoon	☐ Polishing Wetlands	☐ Denitrification
		☐ Rotating Biological Contactor (RBC)	☐ Other(specify):	☐ Polishing Lagoons	☐ Other(specify):
		☐ Trickling Filter (TF)		☐ Other(specify):	
		☐ Biological Aerated Filter (BAF)			
		☐ Other(specify):			

[G] DISINFECTION

Method of Disinfection	Disinfection Period
☐ Chlorination If you chlorinate, do you practice de-chlorination? ☐ Yes ☐ No	☐ Continuous ☐ Seasonal
☐ Ultraviolet Irradiation	☐ Continuous ☐ Seasonal
☐ Other (specify):	☐ Continuous ☐ Seasonal

[H] SLUDGE

Sludge Stabilization Process	Method of Sludge Disposal/Utilization
☐ Aerobic Digestion	☐ Agricultural
☐ Anaerobic Digestion	☐ Landfill
☐ Drying & Pelletization	☐ Incineration
☐ Lime Treatment	☐ Other (specify):
☐ Composting	
☐ Other (specify):	

Available Sludge Storage Capacity (m^3):

[I] EFFLUENT

Effluent Disposal Method	Effluent Discharge Frequency
☐ Surface Water Receiving Water Body Name:	☐ Continuous ☐ Seasonal
☐ Subsurface	☐ Continuous ☐ Seasonal
☐ Other (specify):	☐ Continuous ☐ Seasonal

Is the effluent discharged in a vulnerable area identified in the local source protection assessment report approved under the Clean Water Act, 2006?
☐ Yes ☐ No

[J] INFLUENT

Does the plant receive sewage from another municipality or local services board either through an interconnected collection system or hauled sewage?
☐ Yes ☐ No
(if yes, name(s) of other municipality or local services board):

Plant receives:
☐ Leachate (approximate annual volume in m^3):
☐ Septage (approximate annual volume in m^3):
☐ Industrial input (approximate annual volume in m^3):
or (approximate volume in %):

Terms and Concepts

The following Terms and Concepts are provided to assist you when completing Wastewater System Profile Information Form.

In order to determine the level of treatment that applies to the wastewater system, the effluent quality objectives that the wastewater treatment plant was designed to meet must be considered. The process based approach often used in the past has led to confusion and is open to interpretation due to recent developments and practices in the wastewater treatment industry. For example, a plant with a high rate filter (often referred to as a tertiary filter) after its secondary treatment was considered a tertiary treatment in the past since the filter was designed and operated to produce a tertiary quality effluent. However, secondary plants are now being constructed with these filters as a safeguard against any potential secondary clarifier performance degradation and not for the purpose of ensuring tertiary treatment performance. Also, new technologies have evolved that can produce tertiary quality effluent without having these high rate filters (e.g., membrane bioreactors). Lagoons were considered in the past as being capable of providing only secondary equivalent treatment. However, with add-on treatment after the lagoons (e.g. intermittent sand filters), many lagoon treatment systems are capable of producing secondary or tertiary quality effluent.

During the establishment of sewage works, site-specific effluent limits (including averaging periods) are provided by the Ministry's Regional Technical Support Section, considering the assimilative capacity of the receivers and the minimum treatment requirements provided in Procedure F-5-1. The designer of the sewage works then selects objective values that are acceptable to the Ministry and are less (i.e. more stringent) than the effluent limits , in order to provide an adequate safety factor based on the designer's confidence/experience with the technology chosen and other site-specific conditions. The sewage works are then designed (and operated) to meet these design objectives in a reliable and consistent manner. Therefore, the values that are to be used in the determination of the level of treatment that applies to the sewage works must be based on the design objectives, and not the effluent limits.

Two common parameters used in almost all sewage works designs and performance evaluations are $CBOD_5$ (carbonaceous biochemical oxygen demand) (BOD_5 – biochemical oxygen demand - for primary sewage works) and total suspended solids (TSS). Therefore, it is logical that the **objective values** of these two parameters are used to determine the level of treatment at the sewage works.

Level of Treatment:

Primary:
Wastewater treatment plants that have only settling/sedimentation (with or without chemical addition) and providing 30% and 50% or better reduction of BOD_5 and TSS respectively are considered primary plants (MOE Procedures F-5-1 and F-5-5).

Secondary:
Wastewater treatment plants that have biological processes (e.g. activated sludge process and its variations, fixed film processes) or physical-chemical processes producing an effluent quality of $CBOD_5$ and TSS of 15 mg/L or better are considered secondary plants (MOE Design Guidelines for Sewage Works, 2008).

Secondary Equivalent:
Wastewater treatment plants producing an effluent quality of $CBOD_5$ of 25 mg/L and TSS of 30 mg/L or better are considered as secondary equivalent plants.

Note: Wastewater treatment plants that provide only primary settling of solids and the addition of chemicals to improve the removal of TSS (and phosphorus) are not considered as secondary treatment plants or secondary equivalent plants (MOE Design Guidelines for Sewage Works, 2008).

Tertiary:
Wastewater treatment plants that have biological processes (e.g. activated sludge process and its variations, fixed film processes) and/or physical-chemical processes producing an effluent quality of $CBOD_5$ and TSS of 5 mg/L or better are considered tertiary plants.

Note: Biological processes such as nitrification, denitrification and enhanced biological phosphorus removal can be part of either a secondary or tertiary treatment plant. They may be described as secondary treatment plant with nitrification, secondary treatment plant with enhanced biological phosphorus removal, tertiary treatment plant with nitrification etc.

Sewer System Type:

Sanitary Sewers:
Pipes that convey sanitary sewage flows made up of wastewater discharges from residential, commercial, institutional and industrial establishments plus extraneous flow components from such sources as groundwater and surface run off.

Combined Sewers:
Pipes that convey both sanitary sewage and stormwater runoff through a single-pipe system.

Partially Separated Sewers:
Exist when either a portion of the combined sewer area was retrofitted to separate (sanitary and storm) sewers and/or a service area with combined sewers has had a new development area with separate sewers added to the service area; whatever the case may be, the final flows will be combined sewage.

Nominally Separated Sewers:
These sewers are constructed as separate sewers, but the sanitary sewers accept stormwater from roof and foundation drains (i.e., these are separated sewers in name only).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 regarding general provisions is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which

approval was granted.

2. Condition 2 regarding change of Owner and Operating Agency is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Agency of the Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

3. Condition 3 regarding construction of Proposed Works/record drawings is included to ensure that the Works are constructed in a timely manner so that standards applicable at the time of Approval of the Works are still applicable at the time of construction to ensure the ongoing protection of the environment, and that prior to the commencement of construction of the portion of the Works that are approved in principle only, the Director will have the opportunity to review detailed design drawings, specifications and an engineer's report containing detailed design calculations for that portion of the Works, to determine capability to comply with the Ministry's requirements stipulated in the terms and conditions of the Approval, and also ensure that the Works are constructed in accordance with the Approval and that record drawings of the Works "as constructed" are updated and maintained for future references.

4. Condition 4 regarding Bypasses is included to indicate that Bypass is prohibited, except in circumstances where the failure to Bypass could result in greater damage to the environment than the Bypass itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Bypass Events.

5. Condition 5 regarding Overflows is included to indicate that Overflow of untreated or partially treated sewage to the receiver is prohibited, except in circumstances where the failure to Overflow could result in greater damage to the environment than the Overflow itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Overflow Events.

6. Condition 6 regarding design objectives is imposed to establish non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.

7. Condition 7 regarding compliance limits is imposed to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.

8. Condition 8 regarding operation and maintenance is included to require that the Works be properly operated, maintained, funded, staffed and equipped such that the

environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Works.

9. Condition 9 regarding monitoring and recording is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level which is consistent with the design objectives and compliance limits.

10. Condition 10 regarding Limited Operational Flexibility is included to ensure that the Works are constructed, maintained and operated in accordance with the Approval, and that any pre-approved modification will not negatively impact on the performance of the Works.

11. Condition 11 regarding reporting is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for this Approval.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 5461-AWWQUL issued on May 24, 2018

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or** www.ert.gov.on.ca

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 15th day of October, 2021

Aziz Ahmed, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

WS/
c: District Manager, DWECD, MECP Halton-Peel
Matt Woodbeck, P.Eng., CIMA Canada Inc.

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 4675-CAJSSL
Issue Date: September 19, 2022

The Regional Municipality of Peel
10 Peel Centre Dr Suite B, No. 4
Brampton, Ontario
L6T 4B9

Site Location: G.E. Booth (Lakeview) Wastewater Treatment Facility - Lake Ontario
1300 Lakeshore Rd E
Lot 9,10, Concession 3 SOUTH OF DUNDAS STREET
Mississauga City, Regional Municipality of Peel

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act , R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

A municipal sewage sludge incineration facility, consisting of the following processes and support units:

fluidized bed reactors for the combustion of dewatered biosolids

including the Equipment and any other ancillary and support processes and activities, operating at a Facility Production Limit of up to **400 dry tonnes of sludge per day** discharging to the air as described in the Original ESDM Report.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "ACB list" means the document entitled "Air Contaminants Benchmarks (ACB) List: Standards, guidelines and screening levels for assessing point of impingement concentrations of air contaminants", as amended from time to time and published by the Ministry and available on a Government website;
2. "Acceptable Point of Impingement Concentration" means a concentration accepted by the Ministry as not likely to cause an adverse effect for a Compound of Concern that,
    a. is not identified in the ACB list, or
    b. is identified in the ACB list as belonging to the category "Benchmark 2" and has a concentration at a Point of Impingement that exceeds the concentration set out for the contaminant in that document.

With respect to the Original ESDM Report, the Acceptable Point of Impingement Concentration for a Compound of Concern mentioned above is the concentration set out in the Original ESDM Report;

3. "Acoustical Consultant" means a person currently active in the field of environmental acoustics and noise/vibration control, who is familiar with Ministry noise guidelines and procedures and has a combination of formal university education, training and experience necessary to assess noise emissions from a Facility;
4. "Acoustic Assessment Report" means the report, prepared in accordance with Publication NPC-233 and Appendix A of the Basic Comprehensive User Guide, by Shivraj Sagar and Anmol Bhardwaj of Wood Environmental & Infrastructure Solutions, dated April 2022 and submitted in support of the application, that documents all sources of noise emissions and Noise Control Measures present at the Facility, as updated in accordance with Condition 5 of this Approval;
5. "Acoustic Assessment Summary Table" means a table prepared in accordance with the Basic Comprehensive User Guide summarising the results of the Acoustic Assessment Report, as updated in accordance with Condition 5 of this Approval;
6. "Acoustic Audit" means an investigative procedure consisting of measurements and/or acoustic modelling of all sources of noise emissions due to the operation of the Facility, assessed to determine compliance with the Performance Limits for the Facility regarding noise emissions, completed in accordance with the procedures set in Publication NPC-103 and reported in accordance with Publication NPC-233;
7. "Acoustic Audit Report" means a report presenting the results of an Acoustic Audit, prepared in accordance with Publication NPC-233;
8. "Approval" means this entire Environmental Compliance Approval and any Schedules to it;
9. "Basic Comprehensive User Guide" means the Ministry document titled "Basic Comprehensive Certificates of Approval (Air) User Guide" dated March 2011, as amended;
10. "Building Code Act, 1992" means the Building Code Act, S.O. 1992, c.23, as amended and any replacement or successor legislation;
11. "Biosolids Incinerators" means four (4) fluidized bed sewage sludge incinerators described in the Company's application, this Approval and in the Supporting Documentation referred to herein, to the extent approved by this Approval;
12. "Carbon Filter" means carbon filters and carbon scrubbers that are being used for reducing Hydrogen Sulphide (H_2S), odour and mercury emissions;
13. "Company" means **The Regional Municipality of Peel** that is responsible for the

construction or operation of the Facility and includes any successors and assigns in accordance with section 19 of the EPA;

14. "Compound of Concern" means a contaminant described in paragraph 4 subsection 26 (1) of O. Reg. 419/05, namely, a contaminant that is discharged from the Facility in an amount that is not negligible;
15. "Description Section" means the section on page one of this Approval describing the Company's operations and the Equipment located at the Facility and specifying the Facility Production Limit for the Facility;
16. "Director" means a person appointed for the purpose of section 20.3 of the EPA by the Minister pursuant to section 5 of the EPA;
17. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located;
18. "Emission Summary Table" means a table described in paragraph 14 of subsection 26 (1) of O. Reg. 419/05;
19. "Environmental Assessment Act" means the Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended;
20. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;
21. "Equipment" means equipment or processes described in the Original ESDM Report, this Approval and in the Schedules referred to herein and any other equipment or processes;
22. "Equipment with Specific Operational Limits" means:
    - four (4) Biosolids Incinerators, identified as TOX-1 to TOX-4; or
    - any equipment related to the thermal oxidation of waste or waste derived fuels, fume incinerators; or
    - any other equipment that is specifically referenced in any published Ministry document that outlines specific operational guidance that must be considered by the Director in issuing an Approval;
23. "ESDM Report" means the most current Emission Summary and Dispersion Modelling Report that describes the Facility. The ESDM Report is based on the Original ESDM Report and is updated after the issuance of this Approval in accordance with section 26 of O. Reg. 419/05 and the Procedure Document;
24. "Depleted" means the capacity of the Carbon Filter to adsorb emissions is reached and the Carbon Filter is no longer able to effectively reduce emissions;
25. "Facility" means the entire operation located on the property where the Equipment is located;

26. "Facility Production Limit" means the production limit placed by the Director on the main product(s) or raw materials used by the Facility;
27. "Independent Acoustical Consultant" means an Acoustical Consultant who is not representing the Company and was not involved in preparing the Acoustic Assessment Report or the design/implementation of Noise Control Measures for the Facility and/or Equipment. The Independent Acoustical Consultant shall not be retained by the Acoustical Consultant involved in the noise impact assessment or the design/implementation of Noise Control Measures for the Facility and/or Equipment;
28. "Log" means a document that contains a record of each change that is required to be made to the ESDM Report and Acoustic Assessment Report, including the date on which the change occurred. For example, a record would have to be made of a more accurate emission rate for a source of contaminant, more accurate meteorological data, a more accurate value of a parameter that is related to a source of contaminant, a change to a Point of Impingement and all changes to information associated with a Modification to the Facility that satisfies Condition 2;
29. "Manager" means the Manager, Technology Standards Section, Technical Assessment and Standards Development Branch of the Ministry, or any other person who represents and carries out the duties of the Manager, as those duties relate to the conditions of this Approval;
30. "Manual" means a document or set of documents that provide written instruction to staff of the Company;
31. "Minister" means the Minister of the Environment, Conservation and Parks or such other member of the Executive Council as may be assigned the administration of the EPA under the Executive Council Act;
32. "Ministry" means the ministry of the Minister;
33. "Modification" means any construction, alteration, extension or replacement of any plant, structure, equipment, apparatus, mechanism or thing, or alteration of a process or rate of production at the Facility that may discharge or alter the rate or manner of discharge of a Compound of Concern to the air or discharge or alter noise or vibration emissions from the Facility;
34. "Noise Abatement Action Plan" means the noise abatement program developed by the Company, submitted to the Director and District Manager and approved by the Director, designed to achieve compliance with the applicable Ministry sound level limits;
35. "Noise Control Measures" means measures to reduce the noise emissions from the Facility and/or Equipment including, but not limited to, silencers, acoustic louvers, enclosures, absorptive treatment, plenums and barriers. It also means the

Noise Control Measures as detailed in the Acoustic Assessment Report dated April 2022, signed by Shivraj Sagar and Anmol Bhardwaj of Wood Environment & Infrastructure Solutions; and in the updated Noise Abatement Action Plan required in condition 4.4 of this Approval;

36. "O. Reg. 419/05" means Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended;
37. "Odour Management Plan" means a document or a set of documents that provide written instructions to staff of the Company, for the purpose of meeting the requirements of terms and condition No. 7(1)(d) of this Approval;
38. "Original ESDM Report" means the Emission Summary and Dispersion Modelling Report which was prepared in accordance with section 26 of O. Reg. 419/05 and the Procedure Document by Wood Environment & Infrastructure Solutions dated July 08, 2021 and signed by Akhter Iqbal submitted in support of the application, and includes any changes to the report made up to the date of issuance of this Approval;
39. "Point of Impingement" has the same meaning as in section 2 of O. Reg. 419/05;
40. "Point of Reception" means Point of Reception as defined by Publication NPC-300;
41. "Pre-Test Plan" means a plan for the Source Testing including the information required in Section 5 of the Source Testing Code;
42. "Procedure Document" means Ministry guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated February 2017, as amended;
43. "Processes with Significant Environmental Aspects" means the Equipment which, during regular operation, would discharge one or more contaminants into the air in an amount which is not considered as negligible in accordance with section 26 (1) 4 of O. Reg. 419/05 and the Procedure Document;
44. “Properties” means the vacant lands to the west of the Facility zoned as U-1 "Utility and Business Employment" which may allow the development of future buildings containing noise sensitive spaces;
45. "Publication NPC-103" means the Ministry Publication NPC-103 of the Model Municipal Noise Control By-Law, Final Report, August 1978, published by the Ministry as amended;
46. "Publication NPC-207" means the Ministry draft technical publication "Impulse Vibration in Residential Buildings", November 1983, supplementing the Model Municipal Noise Control By-Law, Final Report, published by the Ministry, August 1978, as amended;

47. "Publication NPC-233" means the Ministry Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended;
48. "Publication NPC-300" means the Ministry Publication NPC-300, “Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300”, August 2013, as amended;
49. "Report EPS 1/PG/7" means the report titled "Protocols and Performance Specifications for Continuous Monitoring of Gaseous Emissions from Thermal Power Generation" dated December 2005 and published by Environment Canada, as amended;
50. "Schedules" means the following schedules attached to this Approval and forming part of this Approval namely:
    - Schedule A - Supporting Documentation
    - Schedule B and C - Test Contaminants
    - Schedule D - Continuous Temperature Monitor
    - Schedule E - Continuous Oxygen Monitor
    - Schedule F - Continuous Total Hydrocarbons Monitor
51. "Sensitive Receptor" means any location where routine or normal activities occurring at reasonably expected times would experience adverse effect(s) from odour discharges from the Facility, including one or a combination of:
    a. private residences or public facilities where people sleep (e.g.: single and multi-unit dwellings, nursing homes, hospitals, trailer parks, camping grounds, etc.),
    b. institutional facilities (e.g.: schools, churches, community centres, day care centres, recreational centres, etc.),
    c. outdoor public recreational areas (e.g.: trailer parks, play grounds, picnic areas, etc.), and
    d. other outdoor public areas where there are continuous human activities (e.g.: commercial plazas and office buildings);
52. "Source Testing" means site-specific sampling and testing to measure the rates of emissions of Test Contaminants from the Biosolids Incinerators exhaust under operating conditions that will derive an emission rate that, for the relevant averaging period of the contaminant, is at least as high as the maximum emission rate that the source of contaminant is reasonably capable of within the approved operating range of the Biosolids Incinerators which satisfies paragraph 1 of subsection 11(1) of O. Reg. 419/05 or as directed or agreed by the Manager;

53. "Source Testing Code" means the Ontario Source Testing Code, dated June 2010, prepared by the Ministry, as amended; and
54. "Start-up Date" means the date when any of the Biosolids Incinerator is restarted after a shutdown of 45 days or greater.
55. "Test Contaminants" means those contaminants set out in Schedule B and Schedule C of this Approval;
56. "Toxicologist" means a qualified professional currently active in the field of risk assessment and toxicology that has a combination of formal university education, training and experience necessary to assess contaminants;
57. "Trucks" means sludge receiving truck(s), treatment chemical delivery truck(s), and garbage truck(s)
58. "Updated Noise Abatement Action Plan" means the updated Noise Abatement Action Plan developed by the Company, submitted to the Director and District Manager and approved by the Director, designed to manage and achieve compliance with the sound level limits set in Publication NPC-300; and
59. "Written Summary Form" means the electronic questionnaire form, available on the Ministry website, and supporting documentation, that documents the activities undertaken at the Facility in the previous calendar year.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. **GENERAL**
    1. Except as otherwise provided by this Approval, the Facility shall be designed, developed, built, operated and maintained in accordance with the terms and conditions of this Approval and in accordance with the following Schedules attached hereto:
        - Schedule A - Supporting Documentation
        - Schedule B and C - Test Contaminants
        - Schedule D - Continuous Temperature Monitor
        - Schedule E - Continuous Oxygen Monitor
        - Schedule F - Continuous Total Hydrocarbons Monitor

2. **LIMITED OPERATIONAL FLEXIBILITY**

1. Pursuant to section 20.6 (1) of the EPA and subject to Conditions 2.2 and 2.3 of this Approval, future construction, alterations, extensions or replacements are approved in this Approval if the future construction, alterations, extensions or replacements are Modifications to the Facility that:
    a. are within the scope of the operations of the Facility as described in the Description Section of this Approval;
    b. do not result in an increase of the Facility Production Limit above the level specified in the Description Section of this Approval; and
    c. result in compliance with the performance limits as specified in Condition 4.

2. Condition 2.1 does not apply to,
    a. the addition of any new Equipment with Specific Operational Limits or to the Modification of any existing Equipment with Specific Operational Limits at the Facility; and
    b. Modifications to the Facility that would be subject to the Environmental Assessment Act; and
    c. the addition of any new Equipment to control odour or odour causing contaminants or to the Modification of any existing Equipment that is being used to control odour or odour causing contaminants.

3. Condition 2.1 of this Approval shall expire ten (10) years from the date of this Approval, unless this Approval is revoked prior to the expiry date. The Company may apply for renewal of Condition 2.1 of this Approval by including an ESDM Report and an Acoustic Assessment Report that describes the Facility as of the date of the renewal application.

3. **REQUIREMENT TO REQUEST AN ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION**
    1. Prior to making a Modification to the Facility that satisfies Condition 2.1.a. and 2.1.b., the Company shall prepare a proposed update to the ESDM Report to reflect the proposed Modification.
    2. The Company shall request approval of an Acceptable Point of Impingement Concentration for a Compound of Concern if the Compound of Concern is not identified in the ACB list as belonging to the category “Benchmark 1” and a proposed update to an ESDM Report indicates that one of the following changes with respect to the concentration of the Compound of Concern may occur:
        a. The Compound of Concern was not a Compound of Concern in the previous version of the ESDM Report and

i. the concentration of the Compound of Concern exceeds the concentration set out for the contaminant in the ACB list; or

ii. the Compound of Concern is not identified in the ACB list; or

b. The concentration of the Compound of Concern in the updated ESDM Report exceeds the higher of,

i. the most recent Acceptable Point of Impingement Concentration, and

ii. the concentration set out for the contaminant in the ACB list,if the contaminant is identified in that document.

3. The request required by Condition 3.2 shall propose a concentration for the Compound of Concern and shall contain an assessment, performed by a Toxicologist, of the likelihood of the proposed concentration causing an adverse effect at Points of Impingement.
4. If the request required by Condition 3.2 is a result of a proposed Modification described in Condition 3.1, the Company shall submit the request, in writing, to the Director at least 30 days prior to commencing to make the Modification. The Director shall provide written confirmation of receipt of this request to the Company.
5. If a request is required to be made under Condition 3.2 in respect of a proposed Modification described in Condition 3.1, the Company shall not make the Modification mentioned in Condition 3.1 unless the request is approved in writing by the Director.
6. If the Director notifies the Company in writing that the Director does not approve the request, the Company shall,
   a. revise and resubmit the request; or
   b. notify the Director that it will not be making the Modification.
7. The re-submission mentioned in Condition 3.6 shall be deemed a new submission under Condition 3.2.
8. If the Director approves the request, the Company shall update the ESDM Report to reflect the Modification.
9. Condition 3 does not apply if Condition 2.1 has expired.

4. **PERFORMANCE LIMITS**
   1. Subject to Condition 4.2, the Company shall not discharge or cause or permit the discharge of a Compound of Concern into the air if,
      a. the Compound of Concern is identified in the ACB list as belonging to

the category "Benchmark 1" and the discharge results in the concentration at a Point of Impingement exceeding the Benchmark 1 concentration; or

b. the Compound of Concern is not identified in the ACB list as belonging to the category “Benchmark 1” and the discharge results in the concentration at a Point of Impingement exceeding the higher of,
    i. if an Acceptable Point of Impingement Concentration exists, the most recent Acceptable Point of Impingement Concentration, and
    ii. the concentration set out for the contaminant in the ACB list, if the contaminant is identified in that document.

2. Condition 4.1 does not apply if the benchmark set out in the ACB list has a 10-minute averaging period and no ambient monitor indicates an exceedance at a Point of Impingement where human activities regularly occur at a time when those activities regularly occur.
3. The Company shall:
    a. operate and maintain the Facility/Equipment in accordance with the Acoustic Assessment Report;
    b. ensure, at all times, that the noise emissions from the Facility/Equipment comply with the limits set out in Ministry Publication NPC-300;
    c. restrict the stand-by generator sets testing to the daytime hours from 7 a.m. to 7 p.m.;
    d.
    e. restrict the tanker trucks (treatment chemical delivery trucks) unloading, using truck mounted blowers to the hours from 7 a.m. to 11 p.m.;
    f.
    g. ensure that any and all Trucks arrive at and depart from the Facility only during the hours from 7 a.m. to 11 p.m., and limit Trucks arrivals and departures in accordance with the following:
        i. a maximum of three (3) tanker trucks (no more than one (1) treatment chemical delivery truck at each of three (3) unloading positions as per Acoustic Assessment Report) per sixty (60) minute period;
        ii. a maximum of one (1) sludge receiving truck per sixty (60) minute period; and
        iii. a maximum of one (1) garbage collection truck per sixty (60) minute period;

h. ensure that all Noise Control Measures are properly maintained and continue to provide the acoustical performance outlined in the Acoustic Assessment Report.

4. Should a zoning by-law come into force and effect for the Properties to permit buildings containing noise sensitive spaces, the Company shall:
   a. develop and submit an updated Acoustic Assessment Report with the updated Noise Abatement Action Plan that is acceptable to the Director and the District Manager, not later than three (3) months after the issuance of an above grade building permit under the Building Code Act, 1992, for a building containing noise sensitive spaces in respect of the Properties or part thereof; and
   b. implement an updated Noise Abatement Action Plan, as approved by the Director, not later than six (6) months after the Director has approved the Noise Abatement Action Plan or twelve (12) months after the issuance of an above grade building permit under the Building Code Act, 1992, for a building containing noise sensitive spaces in respect of the Properties or part thereof, whichever occurs later.
5. The Company shall ensure that the vibration emissions from the Facility comply with the limits set out in Ministry Publication NPC-207.
6. The Company shall ensure that Biosolids Incinerators are designed and operated in accordance with the Original ESDM Report and shall comply with, the performance specifications listed in Table 1 of this Approval at all times.

5. **DOCUMENTATION REQUIREMENTS**
   1. The Company shall maintain an up-to-date Log.
   2. No later than March 31 in each year, the Company shall update the Acoustic Assessment Report and shall update the ESDM Report in accordance with section 26 of O. Reg. 419/05 so that the information in the reports is accurate as of December 31 in the previous year.
   3. The Company shall make the Emission Summary Table (see section 27 of O. Reg. 419/05) and Acoustic Assessment Summary Table available for examination by any person, without charge, by posting it on the Internet or by making it available during regular business hours at the Facility.
   4. The Company shall, within three (3) months after the expiry of Condition 2.1 of this Approval, update the ESDM Report and the Acoustic Assessment Report such that the information in the reports is accurate as of the date that Condition 2.1 of this Approval expired.

5. Conditions 5.1 and 5.2 do not apply if Condition 2.1 has expired.

6. **REPORTING REQUIREMENTS**
    1. Subject to Condition 6.2, the Company shall provide the Director no later than June 30 of each year, a Written Summary Form to be submitted through the Ministry's website that shall include the following:
        a. a declaration of whether the Facility was in compliance with section 9 of the EPA, O. Reg. 419/05 and the conditions of this Approval;
        b. a summary of each Modification satisfying Condition 2.1.a. and 2.1.b. that took place in the previous calendar year that resulted in a change in the previously calculated concentration at a Point of Impingement for any Compound of Concern or resulted in a change in the sound levels reported in the Acoustic Assessment Summary Table at any Point of Reception.

    2. Condition 6.1 does not apply if Condition 2.1 has expired.

7. **OPERATION AND MAINTENANCE**
    1. The Company shall:
        a. prepare and implement, not later than three (3) months from the date of this Approval, operating procedures and maintenance programs for all Processes with Significant Environmental Aspects, which shall specify as a minimum:
            i. frequency of inspections and scheduled preventative maintenance;
            ii. procedures to prevent upset conditions;
            iii. procedures to minimize all fugitive emissions;
            iv. procedures to prevent and/or minimize noise emissions;
            v. procedures for record keeping activities relating to the operation and maintenance programs; and
            vi. a list of management and supervisory personnel responsible for operation and maintenance of the Equipment and Carbon Filter;
        b. ensure that all Processes with Significant Environmental Aspects are operated and maintained in accordance with this Approval, the operating procedures and maintenance programs.
        c. not permit the Carbon Filter to be Depleted at any time during the operation of the Carbon Filter.
        d. prepare and submit to the District Manager, not later than six (6) months from the date of this Approval, an Odour Management Plan, and review

and update as necessary or as a minimum annually, outlining:

i. elements of operation of the Facility that have a potential to release odour including fugitive odour emission sources;

ii. the physical and procedural controls such as policies and standard operating procedures, monitoring, measurement, corrective actions, communication and management reviews required in order to prevent or mitigate any impacts on the Sensitive Receptors; and

iii. timeline to implement physical and procedural controls identified in condition 7(1)(d)(ii) of this Approval.

e. implement the procedures/recommendations of the accepted and updated Odour Management Plan.

2. The District Manager may not accept the Odour Management Plan if the requirements of condition No. 7(1)(d) were not followed.
3. If the District Manager does not accept the Odour Management Plan, the District Manager may require the Odour Management Plan to be revised and re-submitted.

8. **SOURCE TESTING**
   1. The Company shall perform Source Testing to determine the emission rates of the Test Contaminants and the emission rates of dioxins and furans from the Biosolids Incinerators.
   2. The Company shall submit to the Manager and the District Manager for approval a Pre-Test Plan, within three (3) months from the date of this Approval for the first calendar year. For each subsequent Source Testing, the Company shall submit a letter of confirmation by March 01 regarding scheduled Source Testing to the Manager that the approved Pre-Test Plan will be used for that subsequent Source Testing. The letter shall also include revised information on the following, if applicable, and any deviation proposed to the approved Pre-Test Plan.
      a. The Pre-Test Plan shall include the appropriate rationale on selecting specific Biosolids Incinerators for the Source Testing;
      b. Hourly sludge processing rate (in dry tonnes per day and litres per minute together with the daily moisture data) for each Biosolids Incinerators for the period of twelve months prior to the Source Testing;
      c. The name, title, phone number and email address of the Company's contact person responsible for the Source Testing;
      d. The name, address, phone number and email address of the consultant,

project manager and field contact person who will perform the Source Testing;

e. The details of the local district office of the Ministry, where the Facility is geographically located and operated including the name, phone number and email address of the District Manager, supervisor or the officer of the Ministry in charge overseeing the Facility; and

f. The name, title, address, phone number and email address of the contact person at the analytical laboratory that will be used for the Source Testing.
The Manager may require the re-submission of the Pre-Test Plan, for more thorough review of the deviations proposed to the approved Pre-Test Plan.

3. The Company shall finalize the test protocol in consultation with the Manager.
4. The Company shall not perform Source Testing required under this Approval until the Manager has accepted the test protocol.
5. The Company shall complete the Source Testing within six (6) months from the Start-up Date and repeat it within one (1) month after one (1) year of continuous operation from previous Source Testing.
6. The Company shall notify the Director, the District Manager and the Manager in writing of the location, date and time of any impending Source Testing required by this Approval, at least fifteen (15) days prior to the Source Testing.
7. The Company shall submit a report, whenever Source Testing is completed, on the Source Testing to the Director, the District Manager and the Manager not later than three (3) months after completing the Source Testing. The report shall be in the format described in the Source Testing Code, and shall include, but not be limited to:
    a. an executive summary including the results from the Source Testing;
    b. records of operating conditions of each Biosolids Incinerators in service, including but not limited to the all records produced by the continuous monitoring systems of the stack testing contractor during the Source Testing;
    c. records of weather conditions such as ambient temperature and relative humidity, wind speed and direction, and any environmental complaints if received, at the time of the Source Testing;
    d. a table summarizing the emission rates of the Test Contaminants and dioxins and furans obtained in the most recent Source Testing and its

comparison with the:

i. emission rates used in the Original ESDM Report;

ii. emission rates obtained in minimum previous three (3) Source Testing events;

iii. the respective limits in Table 1 of the Approval if applicable and available;

e. a table summarizing the results for the total hydrocarbon and oxygen obtained in the most recent Source Testing and its comparison with the:

i. results obtained by the Continuous Monitoring Systems at the flue exit of each Biosolids Incinerators in service during the Source Testing; and

ii. the respective limits in Table 1 of this Approval.

f. the results of dispersion calculations in accordance with O. Reg. 419/05 indicating the maximum Point of Impingement concentrations of the Test Contaminants and dioxins and furans Point of Impingement concentrations expressed as toxic equivalents in accordance with Note 5 of Table 1; if any of the calculated emission factors or calculated emission rates for the Test Contaminants or dioxins and furans are higher than the predicted rates used in the Original ESDM Report;

g. the static pressure drop across the throat of the venturi within the venturi scrubber;

h. the line pressure at all spray nozzles located in the venturi scrubber;

i. the inlet temperature of the venturi scrubber; and

j. the sewage sludge feed rate;

8. The Director may not accept the results of the Source Testing if:
   a. the Source Testing Code or the requirements of the Manager were not followed, or
   b. the Company did not notify the Director, the District Manager and the Manager of the Source Testing, or
   c. the Company failed to provide a complete report on the Source Testing.

9. If the Director does not accept the results of the Source Testing, the Director may require re-testing. If re-testing is required, the Pre-Test Plan strategies need to be revised and submitted to the Manager for approval. The actions taken to minimize the possibility of the Source Testing results not being accepted by the Director must be noted in the revision.

10. The Company shall update their ESDM Report in accordance with Section 26 of O. Reg. 419/05 and the Procedure Document with the results from the Source Testing if any of the calculated emission factors or calculated emission rates are higher than the predicted rates in the Original ESDM report, not later than three (3) months after the submission of the Source Testing report and make these records available for review by staff of the Ministry upon request.

9. **CONTINUOUS MONITORING**
    1. The Company shall install, conduct and maintain a program to continuously monitor total hydrocarbon and oxygen in the undiluted gas discharged from the Biosolids Incinerators.
    2. The Company shall install, conduct and maintain a program to continuously monitor temperature in the freeboard of the Biosolids Incinerators.
    3. The continuous monitoring systems shall be equipped with continuous recording devices and shall comply with the requirements outlined in Schedules D to F, where applicable.
    4. The Company shall continuously monitor the sewage sludge feed rate to each Biosolids Incinerators in service.

10. **START-UP NOTIFICATION AND ANNUAL REPORTING REQUIREMENTS**
    1. The Company shall notify the District Manager in writing one (1) week before the Start-up Date including reasons for change-over and its impact, if any on the Source Testing schedule as a result.
    2. Under the start-up notification specified in condition 10.1, the Company shall also provide an operating status for all four Biosolids Incinerators, including each Source Testing schedule and indicate if there has been any changes to the Source Testing schedule since the previous start-up notification.

11. **COMPLAINTS RECORDING AND REPORTING**
    1. If at any time, the Company receives an environmental complaint from the public regarding the operation of the Equipment approved by this Approval, the Company shall take the following steps:
        a. Record and number each complaint, either electronically or in a log book. The record shall include the following information: the time and date of the complaint and incident to which the complaint relates, the nature of the complaint, wind direction at the time and date of the incident to which the complaint relates and, if known, the address of the complainant.
        b. Notify the District Manager of the complaint within two (2) business days

after the complaint is received, or in a manner acceptable to the District Manager.

c. Initiate appropriate steps to determine all possible causes of the complaint, and take the necessary actions to appropriately deal with the cause of the subject matter of the complaint.

d. Complete a report within one (1) week of the complaint date and make these records available for review by staff of the Ministry upon request. The report shall list the actions taken to appropriately deal with the cause of the complaint and set out steps to be taken to avoid the recurrence of similar incidents.

12. **RECORD KEEPING REQUIREMENTS**

1. Any information requested by any employee in or agent of the Ministry concerning the Facility and its operation under this Approval, including, but not limited to, any records required to be kept by this Approval, shall be provided to the employee in or agent of the Ministry, upon request**,** in a timely manner.
2. Unless otherwise specified in this Approval, the Company shall retain, for a minimum of five (5) years from the date of their creation all reports, records and information described in this Approval, including,
   a. a copy of the Original ESDM Report and each updated version;
   b. a copy of each version of the Acoustic Assessment Report;
   c. supporting information used in the emission rate calculations performed in the ESDM Reports and Acoustic Assessment Reports;
   d. the records in the Log;
   e. copies of each Written Summary Form provided to the Ministry under Condition 6.1 of this Approval;
   f. records of maintenance, repair and inspection of Equipment related to all Processes with Significant Environmental Aspects;
   g. records related to all measures taken to minimize odour emissions from all potential sources; and
   h. all records related to environmental complaints made by the public as required by Condition 11 of this Approval.

13. **REVOCATION OF PREVIOUS APPROVALS**

1. This Approval replaces and revokes all Certificates of Approval (Air) issued under section 9 EPA and Environmental Compliance Approvals issued under Part II.1 EPA to the Facility in regards to the activities mentioned in

subsection 9(1) of the EPA and dated prior to the date of this Approval.

14. **ACOUSTIC AUDIT**

1. The Company shall carry out Acoustic Audit measurements on the actual noise emissions due to the operation of the Facility. The Company:

2. a. shall carry out Acoustic Audit measurements in accordance with the procedures in Publication NPC-103; and

b.

c. shall submit an Acoustic Audit Report on the results of the Acoustic Audit, prepared by an Independent Acoustical Consultant, in accordance with the requirements of Publication NPC-233, to the District Manager and the Director, not later than eighteen (18) months after the issuance of an above grade building permit under the Building Code Act, 1992, for a building containing noise sensitive spaces in respect of the Properties or part thereof.

d.

3. The Director:

4. a. may not accept the results of the Acoustic Audit if the requirements of Publication NPC-233 were not followed; and

b.

c. may require the Company to repeat the Acoustic Audit if the results of the Acoustic Audit are found unacceptable to the Director.

d.

TABLE 1

Parameter	Limit
Oxygen	minimum 6% [1] , calculated as a ten minute rolling arithmetic average based on measurements taken at least once every minute intervals
Total Hydrocarbons	maximum 100 parts per million based on rolling arithmetic average of ten minute averaging time [2] ; and maximum 20 parts per million based on thirty minute rolling arithmetic averaging time [2]

Hydrogen Chloride	maximum 30 parts per million [3]
Dioxins and Furans	maximum 80 picograms per cubic metre [4]
Mercury	maximum 70 micrograms per cubic metre [5]
Total Suspended Particulate	average of 20 milligrams per dry cubic metre [6]
Minimum Exit Temperature	700 degrees Celsius [7]
Maximum Exit Temperature	900 degrees Celsius [8]
Arsenic	minimum 99% [9]
Cadmium	minimum 89% [9]
Chromium	minimum 99% [9]
Lead	minimum 92% [9]
Nickel	minimum 99% [9]

Notes for Tables 1 :

1. This limit refers to the minimum concentration of oxygen in the undiluted gas emitted from the Biosolids Incinerators on a dry basis.
2. This limit refers to the maximum concentration of organic matter in the undiluted flue gas, emitted from the Biosolids Incinerators, normalized to 11 percent (by volume) oxygen at a reference temperature of 25

degrees Celsius and a reference pressure of 101.3 kilopascals emitted from the Biosolids Incinerators, expressed as equivalent methane.

3. This limit refers to the maximum concentration of hydrogen chloride in the undiluted flue gas, emitted from the Biosolids Incinerators, normalized to 11 percent (by volume) oxygen at a reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals, on a dry basis.
4. This limit refers to the maximum concentration of dioxins and furans in the undiluted flue gas emitted from the Biosolids Incinerators, expressed as toxic equivalents, which shall be calculated in accordance with the rules identified in O. Reg. 419/05, and normalized to 11 percent oxygen at a reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals, on a dry basis.
5. This limit refers to the maximum concentration of mercury in the undiluted flue gas emitted from the Biosolids Incinerators, normalized to 11 percent (by volume) oxygen at a reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals, on a dry basis.
6. This limit refers to the concentration of total suspended particulate in the undiluted flue gas, emitted from the Biosolids Incinerators, normalized to 11 percent (by volume) oxygen at a reference temperature of 25 degrees Celsius and a reference pressure of 101.3 kilopascals, on a dry basis, based on the average of the three tests performed during the Source Testing required by this Approval.
7. This limit refers to the minimum temperature at the freeboard exit of the Biosolids Incinerators. This minimum temperature must be achieved by preheating prior to firing sludge into the Biosolids Incinerators.
8. This limit refers to the maximum temperature at the freeboard exit of the Biosolids Incinerators. This maximum temperature must not be exceeded when the Biosolids Incinerators are operating.
9. This limit refers to the minimum removal efficiency of a metal, relative to the metal feed rate in the sewage sludge charged into the Biosolids Incinerators. However, if the concentration of any metal in the stack emission is less than the sensitivity of the analytical instrumentation used to measure its concentration, then the metal removal efficiency is deemed to be met for that metal.

SCHEDULE A

Supporting Documentation

1. Environmental Compliance Approval Application, dated July 08, 2021, signed by Michael Menalo and submitted by the Company;
2. Original ESDM Report, and an email update provided by Akhter Iqbal of Wood Environment & Infrastructure Solutions on June 21, 2021;
3. Acoustic Assessment Report dated April 2022, prepared by Shivraj Sagar and Anmol Bhardwaj of Wood Environment & Infrastructure Solutions;

SCHEDULE B

The following is a list of contaminants that must be tested for on an annual basis in the required Source Testing:

Particulate

Nitrogen Oxides

Sulphur Dioxide

Hydrogen Chloride

Fluoride

Oxygen

Total Hydrocarbons

Benzo(a)pyrene (as a surrogate of total Polycyclic Aromatic Hydrocarbons)

METALS

Cadmium

Beryllium

Molybdenum

Calcium

Vanadium

Aluminum

Magnesium

Barium

Potassium

Sodium

Zinc

Manganese

Cobalt

Copper

Silver

Lithium

Iron

Lead

Chromium

Nickel

Silicon

Titanium

Boron

Phosphorus

Mercury

Arsenic

Antimony

Bismuth

Selenium

Tellurium

Tin

Strontium

SCHEDULE C
VOLATILE ORGANIC COMPOUNDS (ONCE EVERY 2 YEARS)

Acetone

Benzene

Bromodichloromethane

Bromoform

Bromomethane

2-Butanone

Carbon Tetrachloride

Chloroform

Dibromochloromethane

Dichlorodifluoromethane

1,1-Dichloroethane

1,2-Dichloroethane

trans-1,2-Dichloroethylene

1,2-Dichloropropane

Ethylbenzene

Ethylene Dibromide

Mesitylene

Methylene Chloride

Styrene

Tetrachloroethylene

Toluene

1,1,1-Trichloroethane

Trichloroethene

Trichlorodifluoromethane

m-Xylene

o-Xylene

p-Xylene

Vinyl Chloride

Trichlorotrifluorethane

Cumene

SCHEDULE D

Continuous Temperature Monitoring System

PARAMETER:
Temperature

LOCATION:

The continuous temperature monitor shall be installed in accordance with the requirements of Report EPS 1/PG/7 where the measurements are representative of the minimum temperature of the gasses leaving the Biosolids Incinerators.

PERFORMANCE:
The Continuous Temperature Monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
Type	"K", "J" or other type with equivalent measurement accuracy and suitable to the temperature range being measured
Accuracy	± 1.5 percent of the minimum gas temperature

DATA RECORDER:
The data recorder must be capable of registering continuously the measurement of the monitor without a significant loss of accuracy and with a time resolution of 1 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 95 percent of the time for each calendar quarter.

SCHEDULE E

Continuous Oxygen Monitoring System

PARAMETER:
Oxygen

LOCATION:

The Continuous Oxygen Monitor shall be installed in accordance with the requirements of Report EPS 1/PG/7 at an accessible location where the measurements are representative of the actual concentration of oxygen in the undiluted gases leaving Biosolids Incinerators, and shall meet the

following installation specifications:

PARAMETERS	SPECIFICATION
Range (percentage):	0 to 20 or 0 to 25
Calibration Gas Ports:	close to the sample point

PERFORMANCE:

The Continuous Oxygen Monitor shall meet the following minimum performance specifications for the following parameters.

PARAMETERS	SPECIFICATION
Span Value (percentage)	2 times the average normal concentration of the source
Relative Accuracy	≤ 10 percent of the mean value of the reference method test data
Calibration Error	0.25 percent O_2
System Bias	≤ 4 percent of the mean value of the reference method test data
Procedure for Zero and Span Calibration check	all system components checked
Zero Calibration Drift (24-hour):	≤ 0.5 percent O_2
Span Calibration Drift (24-hour):	≤ 0.5 percent O_2
Response Time (90 percent response to a step change)	≤ 180 seconds
Operational Test Period	≥ 168 hours without corrective maintenance

CALIBRATION:

Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of Report EPS 1/PG/7.

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained during a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

SCHEDULE F

Continuous Total Hydrocarbon Monitoring System

PARAMETER:

Total Hydrocarbon

LOCATION:

The total hydrocarbons monitor shall draw samples from the stack where the measurements are representative of the actual concentrations of total hydrocarbons in the undiluted gases leaving the Biosolids Incinerators and shall meet the following installation specifications:

PARAMETERS	SPECIFICATION

Detector Type:	Flame Ionization
Oven Temperature:	160 degrees Celsius minimum
Flame Temperature:	1800 degrees Celsius minimum at the corona of the hydrogen flame
Range (parts per million, ppm):	0 to greater than or equal to 200 ppm Methane
Calibration Gas:	Acceptable organic compounds such as i.e methane, propane etc.
Calibration Gas Ports:	close to the sample point

PERFORMANCE:

The continuous total hydrocarbons monitor shall meet the following minimum performance specifications for the following parameters:

PARAMETERS	SPECIFICATION
Span Value (nearest ppm equivalent):	2 times the average normal concentration of the source or 90% to 100% of the full scale
Relative Accuracy:	≤ 10 percent of the mean value of the reference method test data or ± 5 ppm whichever is greater
System Bias:	≤ 4 percent of the mean value of the reference method test data or +- 5 ppm whichever is greater
Noise:	≤ 1 percent of span value on most sensitive range
Repeatability:	≤ 1 percent of span value
Linearity (response with propane in air):	≤ 3 percent of span value over all ranges
Calibration Error:	≤ 2 percent of actual concentration
Procedure for Zero and Span Calibration Check:	all system components checked on all ranges
Zero Calibration Drift (24-hours):	≤ 2.5 percent of span value on all ranges
Span Calibration Drift (24-hours):	≤ 2.5 percent of span value
Response Time (90 percent response to a step change):	≤ 180 seconds
Operational Test Period:	≥168 hours without corrective maintenance

CALIBRATION:

Daily calibration drift checks on the monitor shall be performed and recorded in accordance with the requirements of *Report EPS 1/PG/7.*

DATA RECORDER:

The data recorder must be capable of registering continuously the measurement of the monitor with an accuracy of 0.5 percent of a full scale reading or better and with a time resolution of 2 minutes or better.

RELIABILITY:

The monitor shall be operated and maintained so that accurate data is obtained a minimum of 90 percent of the time for each calendar quarter during the first full year of operation, and 95 percent, thereafter.

The reasons for the imposition of these terms and conditions are as follows:

1. **GENERAL**
   Condition No. 1 is included to require the Approval holder to build, operate and maintain the Facility in accordance with the Supporting Documentation in Schedule A considered by the Director in issuing this Approval.
2. **LIMITED OPERATIONAL FLEXIBILITY, REQUIREMENT TO REQUEST AN ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION AND PERFORMANCE LIMITS**
   Conditions No. 2, 3 and 4 are included to limit and define the Modifications permitted by this Approval, and to set out the circumstances in which the Company shall request approval of an Acceptable Point of Impingement Concentration prior to making Modifications. The holder of the Approval is approved for operational flexibility for the Facility that is consistent with the description of the operations included with the application up to the Facility Production Limit. In return for the operational flexibility, the Approval places performance based limits that cannot be exceeded under the terms of this Approval. Approval holders will still have to obtain other relevant approvals required to operate the Facility, including requirements under other environmental legislation such as the Environmental Assessment Act.
3. **DOCUMENTATION REQUIREMENTS**
   Condition No. 5 is included to require the Company to maintain ongoing documentation that demonstrates compliance with the performance limits as specified in Condition 4 of this Approval and allows the Ministry to monitor on-going compliance with these performance limits. The Company is required to have an up to date ESDM Report and Acoustic Assessment Report that describe the Facility at all times and make the Emission Summary Table and Acoustic Assessment Summary Table from these reports available to the public on an ongoing basis in order to maintain public communication with regard to the emissions from the Facility.
4. **REPORTING REQUIREMENTS**
   Condition No. 6 is included to require the Company to provide a yearly Written Summary Form to the Ministry, to assist the Ministry with the review of the site's compliance with the EPA, the regulations and this Approval.
5. **OPERATION AND MAINTENANCE**
   Condition No. 7 is included to require the Company to properly operate and maintain the Processes with Significant Environmental Aspects to minimize the impact to the environment from these processes.
6. **SOURCE TESTING**
   Condition No. 8.is included: (1) to require the Company to gather accurate information so that the environmental impact and subsequent compliance with the EPA, the regulations and this Approval can be verified.

7. **CONTINUOUS MONITORING**
   Condition No. 9. is included: (1) to require the Company to gather accurate information on a continuous basis so that the environmental impact and subsequent compliance with the EPA, the regulations and this Approval can be verified.
8. **START-UP NOTIFICATION AND ANNUAL REPORTING REQUIREMENTS**
   Condition No. 10 is included to require the Company to notify the Ministry regarding start-up of any Biosolids Incinerators and its impact on the Source Testing schedule.
9. **COMPLAINTS RECORDING AND REPORTING PROCEDURE**
   Condition No. 11 is included to require the Company to respond to any environmental complaints regarding the operation of the Equipment, according to a procedure that includes methods for preventing recurrence of similar incidents and a requirement to prepare and retain a written report.
10. **RECORD KEEPING REQUIREMENTS**
    Condition No. 12 is included to require the Company to retain all documentation related to this Approval and provide access to employees in or agents of the Ministry, upon request, so that the Ministry can determine if a more detailed review of compliance with the performance limits as specified in Condition 4 of this Approval is necessary.
11. **REVOCATION OF PREVIOUS APPROVALS**
    Condition No. 13 is included to identify that this Approval replaces all Section 9 Certificate(s) of Approval and Part II.1 Approvals in regards to the activities mentioned in subsection 9(1) of the EPA and dated prior to the date of this Approval.
12. **ACOUSTIC AUDIT**
    Conditions Nos. 14.1 and 14.2 are included to require the Company to gather accurate information and submit an Acoustic Audit Report in accordance with procedures set in the Ministry's noise guidelines, so that the environmental impact and subsequent compliance with this Approval can be verified.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 0832-C42SHT issued on June 25, 2021.

In accordance with Section 139 of the *Environmental Protection Act,* you may by written notice served upon me and the Ontario Land Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the *Environmental Protection Act* provides that the Notice requiring the hearing shall state:

a. The portions of the environmental compliance approval or each term or condition in the

environmental compliance approval in respect of which the hearing is required, and;

b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the *Environmental Protection Act,* a hearing may not be available with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Director appointed for the purposes of Part II.1 of the *Environmental Protection Act*
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or** www.olt.gov.on.ca

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act.*

DATED AT TORONTO this 19th day of September, 2022

Nancy E Orpana, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

BS/
c: District Manager, MECP Halton-Peel
Akhter Iqbal, Wood Environment & Infrastructure Solutions

Appendix C 2022 Complaints Summary, G. E. Booth Wastewater Treatment Plant

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

SLR Project No.: 241.30662.00001

4.10 Summary of Complaints

The Approval requires that the Region log, investigate and resolve all resident complaints. The Region attempts to contact all customers and satisfactorily address their concerns and enquiries. A database is used to record details including information collected from the customer on the nature of the enquiry and action taken by the Region. Eight complaints were received in 2022, and of those, originated from the same address, related to an ongoing inquiry (see Table 9). In 2021 and 2020, the Region received five and four complaints respectively.

The Region takes proactive action to reduce sewage odour at the source. In 2022, an interim odour mitigation measure was taken with covers installed over the weirs on Plant 1 primary tanks. The covers capture odorous air from the weirs, where the effluent is agitated thus releasing odours, and convey the captured air for treatment through odour control units. In addition, operations staff proactively take mitigative measures during activities that are likely to generate additional odours, such as dewatering of tanks for maintenance.

Table 9 – Summary of Complaints

Date of Complaint	Description of Complaint	Action Taken in Response
20-May	Sewage odour for about a week	Odourous primary tanks were treated with an oxidizer to minimize odours
21-Jun	Sewage odour	One primary tank was out of service for maintenance, which can cause odours. The maintenance was completed on June 22. Odour control units were operating throughout this duration.
28-Jun	Intermittent odour for a few weeks	One primary tank was out of service for maintenance. Hot weather and algae accumulation may have contributed to odours. The plant was otherwise operating normally, and odour control units were operating properly throughout.
16-Jul	Rotten Eggs/Sulphur odour	One primary tank was out of service for maintenance earlier that week. Mitigation efforts were taken, and odour equipment was working properly.
2-Aug, 4-Aug, 29-Sep, 9-Nov	Reporting long term odour issues and enquiring about control measures	Operations staff investigated the plant and collection system, and all were operating normally without increased odour. Investigation of multiple complaints from the same resident, suggested a correlation between reports of odour and wind blowing towards the resident's building. Resident was informed about maintenance program and current and future mitigation efforts.

Appendix D Ministry of Environment Freedom of Information, G. E. Booth Wastewater Treatment Plant

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

SLR Project No.: 241.30662.00001

Ontario

Ministry of the Environment, Conservation and Parks

Corporate Management Division

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Division de la gestion ministérielle

June 29, 2023

Alice Najjar
SLR Consulting Ltd.

Dear Alice Najjar
RE: Request #: EPI-2023-2000002662
Requestor provided Client Reference: 241.030662
Site address: 1300 Lakeshore Road, Mississauga

This letter confirms that, after conducting a thorough search of its source system applications, the ministry has identified potential records related to your property request. Our search indicates that the ministry may hold the following records:

- Drinking Water System[1]
- Waste Generator number/classes, Spills
- Correspondence, Abatement, Occurrence reports
- Sewage, Air, Water, Noise Approval[1]
- Waste Site Records - PCB[1]
- PTTW, Industrial Sewage Approval[1]
- Abatement Response, Incident Reporting
- Inspections, IEB Referral, Information Report
- Facility Air Profile, Inspection,Tech Support
- Municipal and Private Sewage Works, Other[1]

If you would like to submit a Freedom of Information (FOI) request to the ministry, please return to the table on the Requests tab of the EPI application and select “Submit FOI” under the Actions column in the row identified by EPI-2023-2000002662.

If you have any questions regarding the matter, please contact the ministry at eproperty@ontario.ca.

Sincerely,

Environmental Property Information (EPI) Program

Disclaimer

This search result is provided for informational purposes only and is not intended to provide specific advice or recommendations. The Ministry of the Environment, Conservation and Parks (MECP) cannot and does not guarantee that the information provided is current, accurate, complete, or free of errors. Any reliance upon this information is solely at the risk of the user.

[1] In addition to the core reports (e.g Environmental Compliance Approval), there may be extensive supporting documentation associated with this record type. When transferring your request over to FOI, we encourage you to refine the scope of your request to only the supporting documentation required for your purposes, as the inclusion of this additional documentation can add significant processing time.

Ontario

Ministry of the Environment, Conservation and Parks

Corporate Management Division

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Division de la gestion ministérielle

Le 29 juin 2023

Alice Najjar
SLR Consulting Ltd.

Madame,
Monsieur, Alice Najjar
Objet : No de demande : EPI-2023-2000002662
Le demandeur a fourni une référence client: 241.030662
Adresse du site: 1300 Lakeshore Road, Mississauga

La présente lettre confirme que, après avoir effectué une recherche exhaustive dans ses applications de système source, le ministère a circonscrit des dossiers potentiels reliés à votre demande concernant des biens immobiliers. Notre recherche indique que les dossiers suivants peuvent être en possession du ministère:

- Drinking Water System[1]
- Waste Generator number/classes, Spills
- Correspondence, Abatement, Occurrence reports
- Sewage, Air, Water, Noise Approval[1]
- Waste Site Records - PCB[1]
- PTTW, Industrial Sewage Approval[1]
- Abatement Response, Incident Reporting
- Inspections, IEB Referral, Information Report
- Facility Air Profile, Inspection,Tech Support
- Municipal and Private Sewage Works, Other[1]

Si vous souhaitez soumettre une demande de liberté d'information (FOI) au ministère, veuillez retourner au tableau de l'onglet Requêtes de l'application EPI et sélectionner "Soumettre FOI" dans la colonne Actions de la ligne identifiée par EPI-2023-2000002662.

Si vous avez des questions concernant votre demande, nous vous invitons à communiquer avec le ministère à l’adresse électronique suivante : eproperty@ontario.ca.

Veuillez recevoir mes salutations les plus sincères,

Programme d’Information Environnementale de la propriété

Avertissement

Ce résultat de recherche est fourni uniquement à titre informatif et n’a aucunement pour but de donner des conseils particuliers ou des recommandations. Le ministère de l’Environnement de la Protection de la nature et des Parcs (MEPP) ne peut pas garantir que les renseignements fournis sont à jour, exacts, complets et exempts d’erreurs. L’utilisateur qui se fie à ces renseignements le fait à ses seuls risques.

[1] En plus des rapports de base (par exemple, l'approbation de conformité environnementale), il peut y avoir de nombreux documents justificatifs associés à ce type d'enregistrement. Lors du transfert de votre demande vers FOI, nous vous encourageons à affiner la portée de votre demande en ne tenant compte que des pièces justificatives requises pour vos besoins, car l'inclusion de ces documents supplémentaires peut ajouter un temps de traitement important.

Appendix E Plaster Form Inc. Permit

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

SLR Project No.: 241.30662.00001

Ontario

Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en matière de changement climatique

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 6327-A3ARJN
Issue Date: October 21, 2015

Plaster Form Inc.
1180 Lakeshore Rd E
Mississauga, Ontario
L5E 1E9

Site Location: 1180 Lakeshore Rd E
Mississauga City, Regional Municipality of Peel

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

- two (2) paint spray booths, designated as Gelcoat Booth A1 and Gelcoat Booth B1, for the application of gelcoat resin coating at a maximum rate of 6.38 kilograms per hour, equipped with 11.1 square metres of dry type paint arrestor filters, each exhausting into the air at a volumetric flow rate of 5.66 cubic metres per second at room temperature, through individual stacks EF#1 and EF#4, each having an exit diameter of 0.76 metre and extending 6.40 metres above the roof and 12.50 metres above grade;

- two (2) paint spray booths designated as Chopper Booth A2 and Chopper Booth B2, for the application of chopped strand resin coating at a maximum rate of 17.50 kilograms per hour, equipped with 11.1 square metres of dry type paint arrestor filters, each exhausting into the air at a volumetric flow rate of 5.66 cubic metres per second at room temperature, through individual stacks EF#2, and EF#5, and each having an exit diameter of 0.76 metre and extending 6.40 metres above the roof and 12.50 metres above grade;

- two (2) paint spray booths designated as Chopper Booth A3 and Chopper Booth B3, for the application of chopped strand resin coating at a maximum rate of 21.88 kilograms per hour, equipped with 11.1 square metres of dry type paint arrestor filters, each exhausting into the air at a volumetric flow rate of 5.66 cubic metres per second at room temperature, through individual stacks EF#3, and EF#6, and each having an exit diameter of 0.76 metre and extending 6.40 metres above the roof and 12.50 metres above grade;

- one (1) paint spray booth, designated as FTP Booth, for the application of primer sealer at a maximum rate of 1.25 kilogram per hour, equipped with 11.1 square metres of dry type paint arrestor filters, exhausting into the air at a volumetric flow rate of 5.66 cubic metres per second at room temperature, through a stack EF#10, having an exit diameter of 0.61 metre and extending 4.72 metres above the roof and 10.80 metres above grade;
- one (1) paint spray booth, designated as Gelcoat Booth, for the application of gelcoat resin or sealer coating at a maximum rate of 6.40 kilograms per hour gelcoat resin or 1.25 kilogram per hour sealer, equipped with 11.1 square metres of dry type paint arrestor filters, exhausting into the air at a volumetric flow rate of 7.08 cubic metres per second at room temperature, through a stack EF#13, having an exit diameter of 0.91 metre and extending 4.88 metres above the roof and 11.00 metres above grade;

- three (3) general exhaust systems serving the gelcoat resin curing areas, exhausting into the air at a volumetric flow rate of 2.36 cubic metres per second at room temperature, through three (3) stacks EF#7, EF#8 and EF#9, each having an exit diameter of 0.61 metre and extending 4.72 metres above the roof and 10.80 metres above grade;

- two (2) general exhaust systems serving the mould making areas, exhausting into the air at a volumetric flow rate of 7.08 actual cubic metres per second at room temperature, through two (2) stacks EF#11, and EF#12, each having an exit diameter of 0.91 metre and extending 5.03 metres above the roof and 11.10 metres above grade;
- one (1) mill room baghouse dust collector, exhausting into the air at a volumetric flow rate of 4.28 actual cubic metres per second at room temperature, through one (1) stack EF#14, having an exit diameter of 0.51 metre and extending 0.30 metre above the roof and 6.40 metres above grade.

- two (2) natural gas fired boilers with a maximum total thermal input of 12,660,600 kilojoules per hour exhausting into the air through individual stacks B1 and B2, each having an exit diameter of 0.76 metre and extending 1.83 metres above the roof and 7.92 metres above grade; and

- three (3) natural gas fired air make up units with a maximum total thermal input of 18,780,000 kilojoules per hour.

All in accordance with the Application for Approval (Air) submitted by Plaster Form Inc., dated November 14, 2014 and signed by Louis Borges, President; and the supporting information, including the Emission Summary and Dispersion Modelling report submitted by ORTECH Consulting Inc., dated November 14, 2014 and signed by Scott Manser.

For the purpose of this environmental compliance approval, the following definitions apply:

1. "Approval" means this Environmental Compliance Approval, including the application and supporting documentation listed above;
2. "Company" means **Plaster Form Inc.**, that is responsible for the construction or operation of the Facility and includes any successors and assigns;

3. "District Manager" means the District Manager of the appropriate local district office of the Ministry, where the Facility is geographically located;

4. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;

5. "Equipment" means the eight (8) paint spray booths, five (5) general exhaust systems, and one (1) mill room baghouse dust collector described in the Company's application, this Approval and in the supporting documentation submitted with the application, to the extent approved by this Approval;

6. "Facility" means the entire operation located on the property where the Equipment is located;

7. "Manual" means a document or a set of documents that provide written instructions to staff of the Company;

8. "Ministry" means the ministry of the government of Ontario responsible for the EPA and includes all officials, employees or other persons acting on its behalf;

9. "Publication NPC-300" means the Ministry Publication NPC-300, "Environmental Noise Guideline, Stationary and Transportation Sources – Approval and Planning, Publication NPC-300", August, 2013, as amended.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

OPERATION AND MAINTENANCE

1. The Company shall ensure that the Equipment is properly operated and maintained at all times. The Company shall:

(1) prepare, not later than three (3) months after the date of this Approval, and update, as necessary, a Manual outlining the operating procedures and a maintenance program for the Equipment, including:

(a) routine operating and maintenance procedures in accordance with good engineering practices and as recommended by the Equipment suppliers;

(b) emergency procedures;

(c) procedures for any record keeping activities relating to operation and maintenance of the Equipment, and

(d) all appropriate measures to minimize noise and odorous emissions from all potential sources;

(2) implement the recommendations of the Manual.

RECORD RETENTION

2. The Company shall retain, for a minimum of two (2) years from the date of their creation, all records and information related to or resulting from the recording activities required by this Approval, and make these records available for review by staff of the Ministry upon request. The Company shall retain:

(1) all records on the maintenance, repair and inspection of the Equipment; and

(2) all records of any environmental complaints; including:

(a) a description, time and date of each incident to which the complaint relates;

(b) wind direction at the time of the incident to which the complaint relates; and

(c) a description of the measures taken to address the cause of the incident to which the complaint relates and to prevent a similar occurrence in the future.

NOTIFICATION OF COMPLAINTS

3. The Company shall notify the District Manager, in writing, of each environmental complaint within two (2) business days of the complaint. The notification shall include:

(1) a description of the nature of the complaint; and

(2) the time and date of the incident to which the complaint relates.

NOISE

4. The Company shall, at all times, ensure that the noise emissions from the Facility comply with the limits set out in Ministry Publication NPC-300.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition No. 1 is included to emphasize that the Equipment must be maintained and operated according to a procedure that will result in compliance with the EPA, the Regulations and this Approval.
2. Condition No. 2 is included to require the Company to keep records and to provide information to staff of the Ministry so that compliance with the EPA, the Regulations and this Approval can be verified.

3. Condition No. 3 is included to require the Company to notify staff of the Ministry so as to assist the Ministry with the review of the site's compliance.

4. Condition No. 4 is included to provide the minimum performance requirement considered necessary to prevent an adverse effect resulting from the operation of the Facility.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 1724-65JJB6 issued on June 23, 2005.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993 , S.O. 1993, c. 28 (Environmental Bill of Rights), the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

1. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary* Environmental Review Tribunal	AND	The Environmental Commissioner 1075 Bay Street, Suite	AND	The Director appointed for the purposes of Part II.1 of the Environmental Protection Act

655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

605
Toronto, Ontario
M5S 2B1

Ministry of the Environment and Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca , you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 21st day of October, 2015

Rudolf Wan, P.Eng.
Director
appointed for the purposes of Part II.1 of the *Environmental Protection Act*

CR/
c: District Manager, MOECC Halton-Peel
Scott Manser, ORTECH Consulting

Appendix F Stationary Noise Source Information

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

SLR Project No.: 241.30662.00001

Table F.1: Summary of Noise Source Sound Power Levels

Source Description	ID	Maximum Sound Power Levels (1/1 Octave Band Levels)									Total PWL (dBA)	Notes
		32 (dB)	63 (dB)	125 (dB)	250 (dB)	500 (dB)	1000 (dB)	2000 (dB)	4000 (dB)	8000 (dB)		
HVAC Unit (10 ton)	HVAC_10ton	80	83	84	84	83	81	77	73	67	86	- Based on SLR historical data - Assumed to operate continuously during the daytime and evening with 50% duty cycle during the nighttime
HVAC Unit (5 ton)	HVAC_5ton	77	80	81	81	80	78	74	70	64	83	- Based on SLR historical data - Assumed to operate continuously during the daytime and evening with 50% duty cycle during the nighttime
EGen (75@7m for MECP exemption)	EGen_75dBA	0	106	105	98	95	93	94	91	85	100	- Based on SLR historical data - Assumed to operate continuously during daytime and evening only
Generic 3500 cfm MUA - Inlet	GEN_MUA_Inlet	0	78	79	73	75	69	63	56	45	75	- Based on SLR historical data -Assumed to operate conitinously during all times of day
Upblast Mushroon Fan - Small	MushroomEx_Small	0	0	80	76	79	71	67	64	59	79	- Based on SLR historical data -Assumed to operate conitinously during all times of day
Generic Exhaust Fan- Medium	Gen_ExFan_M	2	101	101	94	90	84	80	74	68	92	- Based on SLR historical data -Assumed to operate conitinously during daytime only
Transformer	TRANSFORMER	102	96	89	89	85	77	72	71	68	86	- Based on SLR historical data - +5 dB Tonality Penalty Applied. -Assumed to operate continuusly during all time of day
Liquid O2 Delivery	O2delivery	109	106	98	97	95	97	100	103	103	108	- Based on SLR historical data - Assumed to operate 60 minutes per hour during daytime only
Air Cooled Condenser - 2 fan	ACC_2f	0	93	99	93	89	85	80	74	65	91	- Based on SLR historical data -Assumed to operate conitinously during all times of day
Air Cooled Condenser - 3 fan	ACC_3f	0	95	101	95	91	87	82	76	67	93	- Based on SLR historical data -Assumed to operate conitinously during all times of day
Generic Exhaust Fan- Small	Gen_ExFan_S	0	83	93	88	82	77	75	69	66	85	- Based on SLR historical data -Assumed to operate conitinously during all times of day
DustColecPWL	DCPWL_2	109	108	104	103	98	102	101	93	90	106	- Based on SLR historical data -Assumed to operate during daytime only
Heavy Truck - Idling	HeavyTruckIdle	19	93	88	83	90	87	88	82	71	93	- Based on SLR historical data -Assumed to operate during daytime only
Heavy Truck - Passby	HeavyTruckPassby	98	101	101	97	96	96	92	84	78	100	- Based on SLR historical data -Assumed to operate during daytime only

MEMORANDUM #6

TO: Matthew Marsili
matthew@argoland.com **VIA E-MAIL**

FROM: Mark Levkoe

DATE: August 30, 2021

RE: Lakeview Village
Class 1 and 4 Noise Contours

FILE: 120-0302

As requested, we reviewed the Class 1 and Class 4 noise impact areas from the surrounding existing industrial uses at the proposed Lakeview community.

The analysis is based on the information presented in our Environmental Noise Feasibility Report dated December 3, 2020 and the Response to Peer Review Comments Letter dated June 10, 2021.

Figure 1-7 from the "Response to Peer Review Comments Letter" showed the areas on the Lakeview site where the Class 1 sound level limits were predicted to be exceeded. This figure is reproduced here as Figure 1. The Class 1 sound level limits are predicted to be exceeded at locations in proximity to Plasterform, the Long Branch Foundry, Xtreme Tire Garage, Interior Manufacturers Group and Construction Specialities. Note, we are also showing areas that that exceed the Class 1 limits close to GE Booth, which were not shown in the original Figure 1-7. As can be seen, the predicted sound levels at the closest residential buildings to GE Booth, west of Street "I", meet the Class 1 limits.

Figure 2 shows the areas where the Class 4 guideline limits are predicted to be exceeded. These areas are much smaller and are localized around the Long Branch Foundry and Plasterform.

Note that the contours shown on the attached figures were generated at heights of 22.5 m above grade, which is the approximate height of an 8-storey building. Also, the contours do not account for any acoustical screening from buildings on the Lakeview site.

ML
J:\2020\1200302\000\Memos\M#6 Lakeview Village Noise Studies - Class 1 and 4 Contours.docx

Maurice Luchich (mauricel@gsai.ca)
Fabio Mazzoco (fabio@argoland.com)
Brian Sutherland (brian@argoland.com)

VALCOUSTICS Canada Ltd.
consulting acoustical engineers

Title	Date	Figure
Areas with excesses over Class 1 sound level Limits	August 30, 2021	1
Project Name: Lakeview Village	Project No.: 120-0302	

J:\2020\1200302\000\Analysis\Cadna\2021-05-19 For response to peer review commen2020-05-19 - 200904 RWDI Lakeview Village 1804164 - w updated site.cna

Date Plotted:30.08.21

VALCOUSTICS Canada Ltd. consulting acoustical engineers	Title: Class 4 Exceedances	Date: August 30, 2021	Figure: 2
	Project Name: Lakeview Village	Project No.: 120-0302	

J:\2020\1200302\000\Analysis\Cadna\2021-08-23 Class 4 contour2020-05-19 - 200904 RWDI Lakeview Village 1804164 - w updated site_Class 4 contours.cna

Date Plotted:30.08.21

Appendix G Warning Clause Text

Rangeview Estates Development Master Plan

Preliminary Review of Air Quality, Odour, Dust, Noise & Vibration

Rangeview Landowners Group Inc.

SLR Project No.: 241.30662.00001

Noise Warning Clauses

The following Warning Clauses should be registered on Title and/or included in all agreements of purchase and sale and/or leases and/or disclosure statements and declarations for the development:

MECP Type A

> “Purchasers/tenants are advised that sound levels due to increasing road traffic may occasionally interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.”

MECP Type B

> “Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing road traffic (rail traffic) (air traffic) may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment.”

MECP Type C

> "This dwelling unit has been designed with the provision for adding central air conditioning at the occupant's discretion. Installation of central air conditioning by the occupant in low and medium density developments will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."

MECP Type D

> "This dwelling unit has been supplied with a central air conditioning system which will allow windows and exterior doors to remain closed, thereby ensuring that the indoor sound levels are within the sound level limits of the Municipality and the Ministry of the Environment."

MECP Type E

> “Purchasers are advised that due to the proximity of the adjacent industrial and commercial facilities, sound levels from these facilities may at times be audible.”

MECP Type F – If Class 4 Designation is obtained

> “Purchasers/tenants are advised that sound levels due to the adjacent industry (facility) (utility) are required to comply with sound level limits that are protective of indoor areas and are based on the assumption that windows and exterior doors are closed. This dwelling unit has been supplied with a ventilation/air conditioning system which will allow windows and exterior doors to remain closed.”

Air Quality Warning Clause

"Purchasers/tenants are advised that due to the proximity of adjacent industries, dust and odours from these facilities may at times be perceptible."

Receptor-Based Physical Mitigation Measures for Air Quality, dust and Odour

Ventilation System Design

Forced Air Heating Systems / Future Air Conditioning (Units ### to ###)

The above listed unit should be designed with a provision for the installation of central air conditioning in the future, at the occupant's discretion.

Mandatory Air Conditioning (Units ### to ###)

The above listed units should be designed with central air conditioning systems, will allow windows and exterior doors to remain closed.

Air Intake Locations (Building or Units ### to ###)

All air intakes for building mechanical systems, central air conditioning units and heat recovery units shall be located in areas of least impact, on the lea-side of the building, facing away from the industrial areas or behind a significant intervening building or structure.

Provisions for Carbon/ Dust Filters (Building or Units ### to ###)

All air intakes for building mechanical systems, make-up air units, HVAC units, central air conditioning units and heat recovery units shall include space for the future installation of carbon and/or dust filters. The filtration system is to be designed to supply the space with 100% odour filtered air drawn from outside the building envelope.

Mandatory Carbon/ Dust Filters (Building or Units ### to ###)

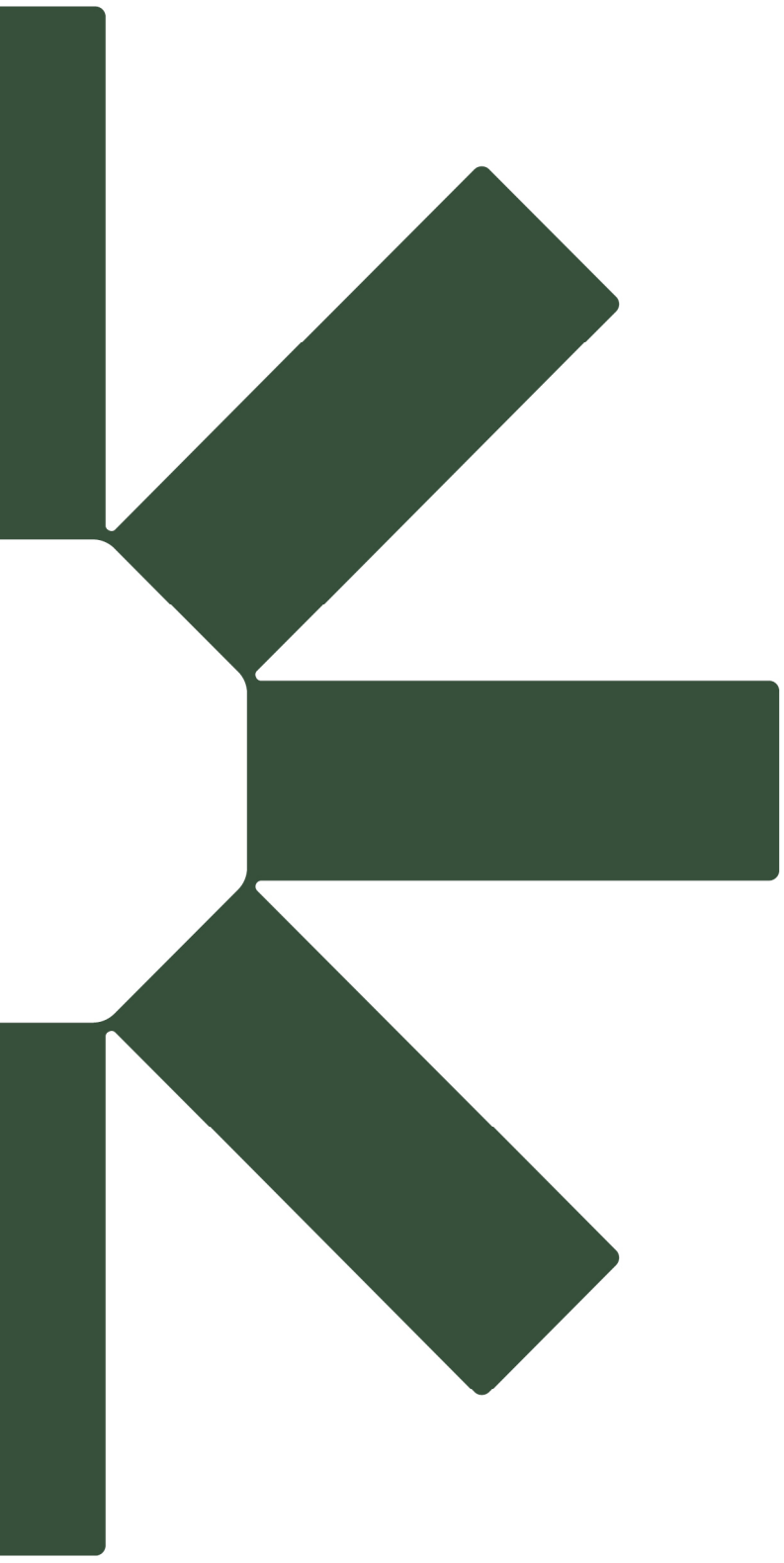
All air intakes for building mechanical systems, make-up air units, HVAC units, central air conditioning units and heat recovery units shall include carbon and/or dust filters. The filtration system is to be designed to supply the space with 100% odour filtered air drawn from outside the building envelope.

Positive Pressurization (Building or Units ### to ###)

The building mechanical systems, make-up air units, HVAC units, central air conditioning units and heat recovery units shall be designed to maintain positive pressurization under normal weather conditions of all occupied areas, in accordance with current ASHRAE recommendations.

Automatic Door Closers (Building or Units ### to ###)

All door accessing the exterior (outdoors) of the Units must be outfitted with an automatic door closer that is designed to operate under normal weather conditions and exclude any mechanisms that would allow the doors to be left in an open position.



Making Sustainability Happen