DILLON CONSULTING

SIFTON PROPERTIES LTD.

Noise and Vibration Assessment

10242 Glendon Drive, Komoka, Ontario

May 2025 – 24-9073

Table of Contents

Figures

Tables

Appendices

1.0 Introduction

1.1 Purpose and Objectives

Dillon Consulting Limited (Dillon) was retained by Sifton Properties Ltd. (Sifton) to complete a Noise and Vibration Assessment (the Assessment) for a Proposed Development located 10242 Glendon Drive, Komoka, Ontario (the Proposed Development). This Assessment has been completed to determine stationary noise impacts on the Proposed Development, transportation noise impacts at the worst case impacted receptors, and the vibration impacts from rail corridors.

The Assessment presented herein was prepared in accordance with the guidelines and requirements of the Ontario Ministry of Environment, Conservation and Parks (MECP).

1.2 The Project and Surrounding Areas

At the time of this assessment, the Proposed Development of the Subject Site consists of the following residential land uses:

- 97 Low Density Units
- 66 Street Town Units
- 295 Medium Density Units
- 309 Mixed Use Density Units

The subject lands are located directly south of Canadian National Railway (CN) Strathroy Subdivision and north of Glendon Drive. The subject lands are in proximity to the following land uses:

- North – Golf course
- East – Agricultural and residential
- South – Residential and commercial
- West – Light manufacturing, agricultural, and residential

The subject site and surrounding area are shown in **Figure 1**. The draft plan of subdivision and zoning plan is shown in **Appendix A**.

2.0 Transportation Noise and Vibration

This section investigates noise impacts from nearby transportation sources on the proposed sensitive uses. As the Proposed Development is located within 75 m from the railway right-of-way, per the Guidelines for New Development in Proximity to Railway Operations, Railway Association of Canada and Federation of Canadian Municipalities, vibration impacts are anticipated, and a vibration assessment has been completed.

2.1 Transportation Noise Assessment

The transportation sources with the potential to impact the Proposed Development include rail traffic from the CN Strathroy Subdivision and road traffic along Glendon Drive. Impacts from rail and road were predicted and compared against the applicable criteria in the MECP's noise guideline publication, *NPC 300 – Environmental Noise Guideline – Stationery and Transportation Sources – Approvals and Planning* (2013). NPC-300 outlines noise level criteria for sensitive land uses, which assist in determining requirements for façade construction, ventilation requirements, warning clauses, and potential noise barriers for the Proposed Development.

2.1.1 Noise Criteria

The applicable transportation noise criteria, as outlined in Part C of NPC-300, is presented in **Table 1** through **Table 5**. **Table 1** summarizes the indoor sound level limits based on the type of space assessed, time of day, transportation noise source, and the maximum allowable equivalent sound levels from railway sources. The indoor noise levels are based on the assumption of closed windows and doors.

Table 1: Indoor Sound Level Limits for Road and Rail

Type of Space	Time Period	Equivalent Sound Level – L_{eq}	
		Road	Rail
General offices, reception areas, retail stores, etc.	Daytime 07:00 – 23:00	50 dBA	45 dBA
Living/dining areas of residences, hospitals, nursing homes, schools, daycares, etc.	Daytime 07:00 – 23:00	45 dBA	40 dBA
Living/dining areas of residences, hospitals, nursing homes, etc. (except schools and daycares)	Night-time 23:00 – 07:00	45 dBA	40 dBA
Sleeping quarters of residences	Daytime 07:00 – 23:00	45 dBA	40 dBA
	Night-time 23:00 – 07:00	40 dBA	35 dBA
Sleeping quarters of hotels	Night-time 23:00 – 07:00	45 dBA	40 dBA

Table 2 outlines the maximum equivalent plane-of-window sound levels for road and rail where if exceeded, a detailed building component design assessment is required to ensure the indoor sound level limits (see **Table 1**) are achieved.

Table 2: Requirements for Building Component Assessment

Assessment Location	Time Period	Equivalent Sound Level – L_{eq}	
		Road	Rail[1]
Plane of window for living area or sleeping quarters	Daytime (07:00 – 23:00)	65 dBA	60 dBA
	Night-time (23:00 – 07:00)	60 dBA	55 dBA

Note: [1] Whistle noise is included for the building component and indoor noise assessment.

The MECP's NPC-300 Noise Guideline outlines façade construction requirements for proposed residential developments within 100 metres of rail tracks, shown in **Table 3**. These requirements apply only to the first row of dwellings.

Table 3: Façade Construction Requirements

Assessment Location	Equivalent Sound Level – L_{eq} 24hr[1]	Façade Construction Requirement
Plane of window for living area or sleeping quarters	> 60 dBA	Brick veneer or acoustical equivalent
	≤ 60 dBA	No requirement

Note: [1] Whistle noise is included for façade construction requirements.

Table 4 summarizes potential noise warning clauses and ventilation requirements that should be used to warn of potential annoyance due to existing noise sources related to road and rail. Whistle noise is not included in the determination of warning clause requirements.

Table 4: Ventilation and Warning Clause Requirements for Road and Rail

Assessment Location	Time Period	Equivalent Sound Level – L_{eq} Road/Rail[1]	Ventilation and Warning Clause Requirements
Plane of window for living area or sleeping quarters	Daytime (07:00 – 23:00)	≤ 55 dBA	No Requirement
		> 55 dBA and ≤ 65 dBA	Provision for the installation of central air conditioning with a Type C warning clause
		> 65 dBA	Installation of central air conditioning with a Type D warning clause
Plane of window for living area or sleeping quarters	Nighttime (23:00 – 7:00)	≤ 50 dBA	No Requirement
		> 50 dBA and ≤ 60 dBA	Provision for the installation of central air conditioning with a Type C warning clause
		> 60 dBA	Installation of central air conditioning with a Type D warning clause

Note: [1] Whistle noise is not included in combined road/rail assessments for warning clause requirements.

The applicable noise criteria for Outdoor Living Areas (OLAs) specific to surface transportation are presented in **Table 5**. If the 16-Hour Equivalent Sound Level (Leq 16hr) at an OLA is greater than 55 dBA and less than or equal to 60 dBA, noise control measures may be applied to reduce the sound level to 55 dBA. Otherwise, prospective purchasers or tenants should be informed of potential elevated noise levels by way of warning clause Type A. For a Leq 16h of greater than 60 dBA, noise mitigation measures are required to reduce the noise levels to 55 dBA or less. Whistle noise is not included in the determination of the rail outdoor sound level.

Table 5: OLA Level Limits for Road and Rail Noise

Assessment Location	Equivalent Sound Level – L_{eq} 16hr[1],[2] Road/Rail	Noise Control Measures and Warning Clause Requirements
Outdoor Living Area	≤ 55 dBA	No requirement
	> 55 dBA and ≤ 60 dBA	Installation of noise control measure OR a Type A warning clause [1]
	> 60 dBA	Installation of noise control measure with a Type B warning clause

Notes: [1] Daytime only (07:00 – 23:00)
[2] Whistle noise is not included in assessment of rail noise for warning clause requirements.

2.1.2 Transportation Sources

In assessing potential transportation noise impacts on the Proposed Development, train movements from the CN Strathroy Subdivision and road traffic along Glendon Drive were analyzed as surface transportation sources. All traffic data used in modelling road and rail traffic is included in **Appendix B**.

Rail Noise Sources

The Proposed Development is located directly south of the CN Strathroy Subdivision. Rail traffic data was requested from CN for the purpose of predicting rail traffic noise on the Proposed Development. CN provided daytime and nighttime train volumes, number of locomotives, number of cars, and maximum speed for freight, way freight, and passenger trains in proximity to the Proposed Development. The rail data was projected to the year 2035 using a 2.5% per annum growth rate. As noted by CN, anti-whistling bylaws are not in effect for the at-grade crossings in proximity to the Proposed Development and the double mainline track is considered to be continuously welded rail.

Forecasted Rail traffic data assumed and forecasted to 2034 is presented in **Table 6**. Rail traffic data provided is included in **Appendix B**.

Table 6: Future (2035) Rail Traffic Data

Train Type	Daytime Trains (07:00-23:00)	Nighttime Trains (23:00-07:00)	Locomotives per Train	Cars per Train	Speed (km/h)
Freight	14	4	4	140	97
Way Freight	4	0	4	25	97
Passenger	10	0	2	10	129

Road Noise Sources

The development area is located North of Glendon Drive. Road traffic data in the form of average annual daily traffic was provided by Middlesex County. Historic AADTs for Glendon Drive were analyzed and a per annum growth rate of 2% was considered reflective of the road traffic. Conservatively, it was assumed that 8% of vehicles were heavy trucks and 5% were medium trucks. A 90% and 10% split for daytime and nighttime traffic volumes, respectively, was used in the analysis. The forecasted future (2035) road traffic data is presented in **Table 7**.

Table 7: Future (2035) Road Traffic Data

Roadway	Forecasted AADT	Medium Trucks (%)	Heavy Trucks (%)	Posted Speed Limit (km/h)
Glendon Drive	17,850	8	5	70

2.1.3 Predicted Sound Level

The noise analysis was completed using STAMSON Version 5.04. STAMSON is the Ministry approved model for transportation noise analysis and implements the Ontario Road Noise Analysis Method for Environment and Transportation (ORNAMENT) as well as the Sound from Trains Environmental Analysis Method (STEAM). The model is capable of incorporating various site specific features, such as elevation, berms, absorptive grounds, and barriers to accurately predict noise levels at specific receptors, pertaining to noise emissions from a particular noise source. The model is considered conservative as it represents atmospheric conditions that promote propagation of sound from source to receptor. The STAMSON modelling files have been included in **Appendix C**.

Sensitive Receptor Locations

For the purposes of this study, the following representative sensitive points of reception were considered to reflect the worst-case noise impacts on the Proposed Development due to rail and road noise:

- POR1 – A 2-storey single detached dwellings located 40 m from the rail right-of-way;
- OLA1 – An outdoor living area located in the rear yard of POR1;
- POR2 – a 3-storey townhome located 130 m from Glendon Drive;
- OLA2 – An outdoor living area located in the side yard of POR2; and
- POR3 – a 10-storey apartment building located 13 m from Glendon Drive

As POR1 is located within 100 m of the rail right-of-way, the 24-hour L_{eq} for rail noise impacts was predicted to determine if a brick veneer or equivalent facade construction is required.

Transportation Noise Impacts – Plane of Window

Table 8 summarizes the representative worst-case predicted building façade noise levels from road and rail noise sources at the sensitive receptors within the Proposed Development.

Table 8: Combined Road and Rail Noise Prediction Summary Table – Facade Impacts

Residential [5]	Equivalent Sound Level - L_{eq} [1],[2] [dBA]						
	Road Impacts		Railway Impacts [6]		Combined Road and Rail [3]		24hr Railway Impacts [4]
	Daytime	Nighttime	Daytime	Nighttime	Daytime	Nighttime	
POR1 Single Detached Dwelling	NA	NA	**68**	**64**	**67**	**63**	**67**
POR2 Townhome Dwelling	58	51	NA	NA	**58**	**51**	NA
POR3 Apartment Building	**72**	**65**	NA	NA	**72**	**65**	NA

Notes: [1] L_{eq} represents maximum predicted impacts along façade.
[2] Predicted noise levels that exceed the applicable limits are presented in **bold**.
[3] Excludes whistle noise. Combined impacts may not be equal to road plus rail, as maxima may be in different locations along the façade.
[4] 24hr railway impacts are only assessed at the first row of residences that are within 100 m of the railway.
[5] Representative worst-case predicted building façade noise levels.
[6] Includes whistle noise.

The predicted transportation sound levels for combined road and rail impacts at the sensitive façades of Proposed Development are presented in **Figure 2**, for daytime and nighttime impacts, respectively.

Transportation Noise Impacts – Outdoor Living Areas

Table 9 summarizes the predicted road and rail noise levels at representative sensitive receptors outdoor amenity areas (backyards and side yards).

Table 9: Road and Rail Noise Prediction Summary Table – Daytime Outdoor Impacts

Residential Outdoor Living Area	Road and Rail Noise Impacts without Whistle – L_{eq} [1]
OLA1	**66 dBA**
OLA2	55 dBA

Notes: [1] Predicted noise levels that exceed the applicable limits are presented in **bold**.

2.1.4 Noise Control Measures

Façade Construction Recommendations

Based on the predicted façade sound levels shown in **Table 8**, and the threshold criteria outlined in **Table 2**, a detailed building component design analysis is required for POR1, representing the first row of single detached dwellings from the rail right-of-way, and POR3, representing the 10-storey apartment building located in Block 20, to ensure the indoor sound level criteria is met (outlined in **Table 1**).

Indoor sound levels, and the building component analysis were completed using the National Research Council's (NRC) Building Practice Note 56 (BPN56). BPN56 is the method for selecting appropriate STC

ratings for the façade and glazing components to control impacts from transportation noise sources and satisfy indoor sound level criterion.

At the time of this assessment, finalized detailed floor and façade plans were not available for the Proposed Development. POR1 unit layouts were assumed to have a façade glazing that is consistent with typical townhome or detached dwellings and would be represented by 35% glazed façade for living/dining spaces and 25% glazing for sleeping quarters. POR3 unit layouts were assumed to have a façade glazing that is consistent with typical mid-rise apartment buildings and would be represented by 70% glazed facade for living/dining spaces and 50% glazing for sleeping quarters.

Results from an initial building component analysis are shown in **Table 10**. As detailed floor plans were not available at the time of this study, typical unit layouts were assumed. Overall window STC requirements were determined using the combined (logarithmic addition) requirements from the individual transportation noise impacts from locomotive, wheel, whistle, and roadway noise. STC calculations were completed for daytime and nighttime periods, with the worst-case requirement selected for recommendation. The BPN56 analysis is presented in **Appendix C**.

Table 10: Building Component Analysis Using Maximum Impacts

Building	Maximum Required Glazing (STC)	
	Living/Dining Area	Sleeping Quarters
POR1	32	32
POR3	34	32

The above mentioned STC ratings were conservatively calculated and represent the recommended minimum STC ratings for the windows. Windows should be carefully selected to ensure the entire assembly (frame and glazing) meets the specified minimum STC ratings. It is recommended that manufacturer tests and specifications be reviewed by an Acoustical Consultant upon selection. Sensitive spaces located on corners of buildings, which have multiple façade exposure and potential contribution from multiple sources may require an STC increase of 3.

POR1 and POR 3 represents the worst case maximum required glazing for the Proposed Development. Reduced STC requirements may be achieved for receptors with decreased exposure and proximity to the rail corridor. It is recommended that as the design progresses, the façade and glazing requirements be delineated for the entire development.

In addition to glazing requirements, the predicted 24-hour rail noise impacts at POR1 exceed the criteria shown in **Table 3**. Due to the exceedance of the 24-hour rail noise criteria, it is recommended that the first row of dwellings (with respect to the rail right-of-way) have a façade construction of brick veneer or an acoustical equivalent (STC-54).

Ventilation Requirements and Warning Clauses

Based on the predicted façade sound levels shown in **Table 8**, and the threshold criteria outlined in **Table 4**, a Type D warning clause and the installation of air conditioning is recommended based on the rail noise impacts of POR1 and POR3. POR2 requires the provision for the installation of central air conditioning and Type C warning clause based on the road noise impacts of Glendon Drive.

These ventilation requirements and warning clauses represent the worst-case impacts on the Proposed Developments. It is recommended that as the design progresses, the transportation noise impacts be determined throughout the proposed development to understand the delineation of the ventilation and warning clause requirements throughout the subject lands.

Additionally, CN requires that a warning clause regarding the potential for noise and vibration impacts be applied to all sensitive locations within 300 metres of their right-of-way. **Figure 3** the locations throughout the Proposed Development that require the CN warning clause.

All warning clauses should be included in agreements that are registered on Title for all Offers of Purchase and Sale, lease/rental agreements, and condominium declarations. The list of applicable warning clauses required for the Proposed Development are provided in **Appendix D**.

Outdoor Living Areas (OLAs)

As shown in **Table 9**, the predicted sound level at OLA1 exceeds 60 dBA. Per NPC-300, it is recommended that noise control measures are installed to reduce the predicted noise impacts to 55 dBA. Where a noise reduction to achieve 55 dBA is not feasible due to the scale of required noise control measures, the predicted noise impacts may be reduced to 60 dBA with a Type B warning clause.

Based on additional acoustic modelling, it was determined that a 3.0 m barrier located atop a 2.5 m safety berm would reduce the predicted noise impacts at OLA1 to 60 dBA. As the site design progresses, and ground elevation contours become available, the height and location of the recommended acoustic barrier should be reviewed by an Acoustical Consultant.

At this time, reducing the predicted noise levels to 55 dBA is not feasible, as such, a Type B warning clause is required. OLAs located towards the east or west edges of the site may require additional acoustic barriers, as the design progresses the assessment of all OLAs should be completed.

The acoustic barrier shown in **Figure 3** should have a minimum surface density of 20 kg/m^2, be structurally sounds and appropriately designed to withstand wind and snow load. It should be constructed without cracks or surface gaps. Any gaps under the barrier that are necessary for drainage purposes should be minimized and localized.

The above noted mitigation measures are intended to mitigate transportation noise impacts at the worst case impacted receptors of the Proposed Development. It is recommended that as the design progresses, the noise mitigation measures should be determined at each dwelling of the Proposed Development.

2.2 Transportation Vibration Assessment

The proposed development is located approximately 30 m from the CN Rail Strathroy Subdivision right-of-way. As the proposed development is located within the vibration influence area of 75 m, per the *Guidelines for New Development in Proximity to Railway Operations* (FCM/RAC, 2013), a vibration assessment for the proposed development is required.

2.2.1 Vibration Criteria

There are no MECP guidelines with respect to railway vibration and proposed sensitive land-uses. Applicable guidelines for vibration impacts due to railway operations are those published in the *Guidelines for New Development in Proximity to Railway Operations* (FCM/RAC, 2013).

Overall vibration levels from railway activities are recommended not to exceed 0.14 mm/s RMS (root mean square) in the vertical direction between 4 Hz and 200 Hz, on and above the first floor of all dwellings. This criterion is based on the human perception of ground-borne vibration, published in the International Standard ISO 2631-2. Vibration levels from railway operations meeting this criterion will generally not be perceptible by the occupants.

2.2.2 Vibration Measurements

On March 21st, 2025, Dillon staff visited the site of the proposed development to conduct field ground vibration measurements at various distances from the rail right-of-way to determine the required setback to achieve compliance with the criterion. Measurements were completed for one passenger train passby and four freight train passbys. Three Instantel Minimate were used for the field measurements. The instrument can measure peak particle velocity between 2 to 250 Hz. The vertical RMS was then calculated for all train passbys using an averaging time constant of 1 second.
Table 11 shows the calculated vertical RMS of the five train passbys.

Table 11: Rail Vibration Measurements

Date and Time of Rail Passby	Type of Train	Distance from Rail Right-of-Way (m)	Maximum Vertical RMS (mm/s)	Compliance with Criterion
2025-03-21 12:00	Freight	10	0.06	Yes
		20	0.12	Yes
		40	0.06	Yes
2025-03-21 12:15	Freight	10	0.10	Yes
		20	0.19	**No**
		40	0.09	Yes
2025-03-21 13:22	Freight	10	0.09	Yes
		20	0.14	Yes
		40	0.07	Yes
2025-03-21 14:06	Passenger	20	0.09	Yes
		40	0.04	Yes
		60	0.04	Yes
2025-03-21 14:20	Freight	20	0.17	**No**
		40	0.06	Yes
		60	0.07	Yes

The vibration measurement data shown in **Appendix E.**

The measured ground vibration levels from train passbys were found to be in compliance with the applicable criteria at 40 m from the rail right-of-way. It is recommended that all building foundations of the Proposed Development are located at a minimum distance of 40 m from the rail right-of-way.

3.0 Preliminary Land Use Compatibility

The following sections describe the methods and results of the land use compatibility assessment which was performed for environmental noise and air quality (including dust and odour).

3.1 MECP Guideline D-6

The MECP's land-use compatibility guidelines (D-series) are intended to prevent or minimize the encroachment of sensitive land uses upon industrial/commercial land uses and vice versa, as these two types of land uses are normally incompatible, due to possible adverse effects on the sensitive land use.

3.1.1 Industry Classification

The Industrial Categorization Criteria presented in Appendix A of Guideline D-6 is provided in **Table 12**. Note that the examples provided in this table should not be considered a comprehensive list but are to be used to provide examples of each industrial category. Additionally, the examples listed in **Table 12** may not apply to all instances of a particular industry type; for example, some electronics manufacturing and repair facilities may meet the definition of a Class II or Class III facility.

Table 12: Industrial Categorization Criteria

Class	Outputs	Scale	Process	Operations/Intensity	Possible Examples
I	Noise: Sound not audible off property Dust and/or 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. Beverages bottling. Auto parts supply.
II	Noise: Sound occasionally audible off property Dust and/or 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 movement of products and/or heavy trucks with the majority of movements during daytime hours.	Magazine printing. Paint spray booths. Metal command. Electrical production manufacturing. Manufacturing of dairy products.

Class	Outputs	Scale	Process	Operations/Intensity	Possible Examples
III	Noise: sound frequently audible off property. Dust and/or 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.	Manufacturing of paint and varnish. Organic chemicals manufacturing. Solvent recovery plants. Metal manufacturing.

3.1.2 Setback Distances

The D-Series Guidelines provide two categories of setback distances within which technical studies should be performed to determine potential land use compatibility issues. The Potential Influence Area and Recommended Minimum Separation Distance for each industry class as defined by the D-Series Guidelines are provided in **Table 13**. The described distances vary for Class I, II, and III industries due to the frequency and magnitude of potential adverse effects.

Table 13: Industrial Classification Study Distances

Industrial Categorization	Potential Influence Area (m)	Recommended Minimum Separation Distance (m)
Class I	70	20
Class II	300	70
Class III	1000	300

In the assessment of distances between the Proposed Development and surrounding industries, the distance was considered to be the shortest length measured between property boundaries.

3.1.3 Summary of Industry Classifications

Dillon reviewed the current land uses in areas surrounding the subject lands in order to classify the existing industrial and commercial lands based on the MECP's D-Series framework, as well as to identify vacant lands, which are zoned to allow for commercial or industrial uses. Zoning maps for the area are provided in **Appendix A**.

Site visits were completed by Dillon staff on October 25th, 2024 and March 21st, 2025, for the purpose of classifying facilities in proximity to the Proposed Developments.

Industries were classified based on site visit observations, review of existing MECP approvals documents, and review of publicly available information. The identified industries, as well as their Guideline D-6 classification, have been provided in **Table 14**.

Table 14: Surrounding Commercial/Industrial Facilities

Industry and Address	Distance from Proposed Development	Industrial Classification	Operations	ECA Number
Masterfeeds 171 Railway Avenue	0 m West	Class II	Animal feed manufacturing facility. Processes include receiving, storage, cleaning, drying, mixing, bagging, and shipping of product.	2890-AKRNZA
Vacant land PLAN 33M761 BLK 232	30 m South	Class I	Vacant land zoned village commercial. Allowable uses that may be considered a Class I include: motor vehicle service establishment and service shop.	NA

Following the classification system presented in Guideline D-6, the Proposed Development is located within the Minimum Recommended Separation Distance of Masterfeeds and is within the Potential Influence Area of the Village Commercial zoned lands.

Figure 4 shows the Potential Influence Areas and Recommended Minimum Separation Distance identified during the Assessment.

3.1.3.1 Masterfeeds

Masterfeeds is an animal feed manufacturing facility with a facility production limit of up to 150,000 tonnes of animal feed per year, consisting of the following processes and support units:

- Receiving
- Storage
- Cleaning
- Drying
- Mixing
- Bagging
- Shipping

Masterfeeds operates under Environmental Compliance Approval (ECA) Number 2890-AKRNZA, which was issued March 30th, 2017, by the MECP and is provided in **Appendix F**.

Masterfeeds is located at 171 Railway Avenue, directly west of the Proposed Development. Masterfeeds is best defined as a Class II industry per MECP D-6. The following potential emissions are expected from the facility:

- Noise – Due to the shipping, receiving, storage, drying, and mixing of the animal feed product
- Dust – Due to the transfer of exposed product
- Odour – Due to the transfer of exposed product and potential idling of diesel trucks and locomotives during loading/unloading

Based on the industry classification and observations made during the site visit, there is a potential for the above listed impacts on sensitive land uses within 300 m of the facility's property boundary.

Figure 4 shows the expected potential influence area of the facility, as well as the minimum recommended separation distance for sensitive land uses from the facility. As shown in **Figure 4**, a large portion of the Proposed Development is located within the Potential Influence Area of Masterfeeds. A detailed technical assessment analyzing potential impacts from noise, vibration, dust, and odour should be completed to assess compatibility for any sensitive land uses within 300 m of the facility.

This study has been updated in April 2025 to include an assessment of stationary noise impacts from Masterfeeds on the Proposed Development. The stationary noise assessment has been included in **Section 4.0**.

3.1.3.2 Vacant Land Zoned Village Commercial

The vacant land located southwest of the intersection of Glendon Drive and Crestview Drive, legally identified as Plan 33M761 BLK 232, is zoned as C1-14(h-7) Village Commercial. The vacant lands are located approximately 30 m south of the Proposed Development.

Under the Village Commercial allowable uses described in the Municipality of Middlesex Centre Comprehensive Zoning By-Law No. 2005-005, the lands may operate as a motor vehicle service establishment and service shop which may be considered a Class I industry. Through the worst-case scenario of the vacant lands operating as a motor vehicle service establishment and service shop, it would be expected that facility may have noise, dust, and odour impacts on sensitive land uses up to 70 m from the property boundary.

However, as shown in By-Law No. 2005-005, the subject vacant lands are currently undergoing rezoning to facilitate residential development. By rezoning the lands to residential development, they are expected to be compatible with the Proposed Development. In the event these lands are to remain as Village Commercial, a detailed stationary noise study should be completed to assess potential impacts at the Proposed Development.

3.1.4 Agricultural

Agricultural operations with proximity to the Proposed Development were not considered as an industrial facility. Agricultural operations are exempt from the requirement of the *Environmental Protection Act* to obtain approval to operate. Additionally, the *Farming and Food Protection Act* provides agricultural uses protection from liability with respect to nuisance operations in accordance with good farming practice. Nuisance impacts may be expected from time to time as a result of agricultural operations, but such impacts are not typically considered to represent a compatibility concern. Notwithstanding the above, Planning authorities are advised to consider proximity to agricultural uses when dedicating lands for sensitive uses.

4.0 Masterfeeds Stationary Noise Assessment

At the request of the planning authority, this assessment has been updated to include a detailed stationary noise assessment to determine the predicted stationary noise impacts from Masterfeeds on the Proposed Development.

4.1 Noise Criteria

NPC-300 defines sound level limits for noise impacts from stationary sources on noise sensitive land uses. A noise sensitive land use is defined as a property of a person that accommodates a dwelling, a noise sensitive commercial purpose, or a noise sensitive institutional purpose. This definition includes:

- Permanent, seasonal, and rental residences;
- Hotels, motels, and campgrounds;
- Schools, universities, libraries, and daycare centres;
- Hospitals and clinics, nursing/retirement homes; and
- Places of worship.

Points of reception (POR) for dwellings are located at the centre of any window on a noise sensitive space, with a first-storey height of 1.5 m and subsequent storeys separated by 3 m. A dwelling may have an outdoor point of reception located on its property within 30 m of its façade at a height of 1.5 m, typically in back or front yards, terraces, or patios.

In NPC-300, areas are divided into four classes based on their existing background acoustical environment:

- Class 1 – Urban Area;
- Class 2 – Semi-Urban/Semi-Rural Area;
- Class 3 – Rural Area; and
- Class 4 – Areas of Redevelopment and Infill.

The sound level limits for outdoor and plane-of-window PORs for continuous and impulsive noise are outlined in **Table 15**.

Table 15: Stationary Source Continuous Noise Exclusionary Limits

Assessment Location	Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
Plane of window for living area or sleeping quarters[1]	Daytime (07:00 to 19:00)	50 dBA	50 dBA	45 dBA	60 dBA
	Evening (19:00 to 23:00)	50 dBA	50 dBA	40 dBA	60 dBA
	Nighttime (23:00 to 07:00)	45 dBA	45 dBA	40 dBA	55 dBA
Outdoor points of reception	Daytime (07:00 to 19:00)	50 dBA	50 dBA	45 dBA	55 dBA
	Evening (19:00 to 23:00)	50 dBA	45 dBA	40 dBA	55 dBA

Table Note: [1] The plane of window for living area or sleeping quarters will be referred to as the "façade" of a receptor.

Based on observations made during the site visit completed on October 25th 2024 and March 21st 2025, the existing background acoustical environment of the Proposed Development's lands are considered Class 2 – Urban Area.

4.2 Stationary Noise Modelling

For the purpose of determining stationary noise impacts on the Proposed Development, Masterfeeds provided Dillon with the facility's Acoustic Assessment Report (AAR), prepared by GHD and dated May 26th, 2022. The AAR includes information on the noise sources of the Masterfeeds facility, as well as the facility's noise abatement action plan.

Dillon utilized information provided in the Masterfeeds AAR to develop an outdoor noise propagation model, completed using Cadna/A, based on International Organization for Standardization (ISO) Standard 9613, Part 1: Calculation of the absorption of sound by the atmosphere, 1993 and Part 2: General method of calculation (ISO-9613-2:1996). The model is capable of incorporating various site-specific features, such as elevation, berms, absorptive grounds, and barriers to accurately predict noise levels at specific receptors, pertaining to noise emissions from a particular source / sources. The ISO based model accounts for reduction in sound level due to increased distance and geometrical spreading, air absorption, ground attenuation, and acoustical shielding by intervening structures and topography. The model is considered conservative as it represents atmospheric conditions that promote propagation of sound from the source to the receiver.

The stationary noise model developed by Dillon was calibrated according to the parameters used in the Masterfeeds AAR and adjusted based on the presented sound levels at existing points of reception. The stationary noise model assumed that all noise control measures described in the Masterfeeds AAR noise abatement action plan would be implemented. Based on the information provided by the facility's noise abatement action plan, the noise control measures are committed to be implemented in the near future. It is expected that occupancy of the Proposed Development would occur after the completion of the noise abatement action plan commitments.

The following assumptions were incorporated in the noise propagation modelling:

- A global ground absorption coefficient of 0.70, representing a mix of reflective and absorptive grounds of the area surrounding the proposed development.
- Second order reflection was incorporated in the noise model; and
- The ground within the study area is considered to be generally flat.

The façades and outdoor points of reception (OPRs) of the Proposed Development were modelled based on the draft plan of subdivision concept plan dated April 14th, 2025. It was assumed that balconies of the Proposed Development are less than 4 m in depth, and therefore not considered OPRs as per NPC-300.

4.3 Predicted Sound Levels

Impacts from the Masterfeeds stationary noise sources were predicted through noise propagation modelling. **Table 16** below summarizes the worst-case noise impacts on the façades and outdoor points of reception throughout the Proposed Development.

Table 16: Predicted Masterfeeds Stationary Noise Impacts Summary

Point of Reception	Maximum Leq (1 hour) (dBA)			MECP Compliance
	Daytime (07:00-19:00)	Evening (19:00-23:00)	Nighttime (23:00-07:00)	
Block 1 - Façades	54	37	34	Class 4
Block 1 - OPRs	55	38	NA	Class 4
Block 2 - Façades	58	38	35	Class 4
Block 2 - OPRs	60	40	NA	Exceeds Class 4
Block 3 - Façades	52	32	30	Class 4
Block 3 - OPRs	41	20	NA	Class 2
Block 4 – Façades	51	31	28	Class 4
Block 4 - OPRs	48	23	NA	Class 2
Block 5 – Façades	49	29	26	Class 2
Block 7 – Façades	52	27	25	Class 4
Block 7 - OPRs	52	27	NA	Class 4
Block 11 – Façades	52	34	32	Class 4
Block 12 – Façades	47	29	27	Class 2
Block 17 – Façades	52	35	32	Class 4
Block 19 – Façades	50	33	31	Class 2

The predicted stationary noise impacts are shown graphically in **Figure 5**.

As shown in **Table 16**, the predicted stationary noise impacts at multiple points of reception exceed the Class 2 sound level limits. Mitigation measures are recommended to achieve compliance with the criterion.

4.4 Stationary Noise Mitigation Measures

To achieve compliance at the Proposed Development with the Class 2 NPC-300 sound level limits, significant source-based noise control measures would be required at Masterfeeds. Based on Dillon's understanding of the operations and sources associated with Masterfeeds, achieving compatibility with source-based mitigation may be challenging. It is Dillon's understanding that the lands located to the southwest of the Masterfeeds operations were recently granted a Class 4 designation.

Seeking Class 4 Area Designation

As shown in **Table 16**, all façades of the Proposed Development are in compliance with the Class 4 sound level limits. A Class 4 Area designation may be applicable to the Proposed Development provided that it satisfies the below requirements:

I. Is an area intended for development with new noise sensitive land uses that are not yet built;
II. Is in proximity to existing, lawfully, established stationary sources;
III. A detailed stationary noise study assessment has been completed;
IV. Has formal confirmation from the land use planning authority with the Class 4 area classification which is determined during the land use planning process.

The Proposed Development would satisfy Class 4 requirements I, II, and III. Based on consultation with the land use planning authority, Class 4 area classification has been formally confirmed for residential developments with similar proximity to Masterfeeds.

The following areas of the Proposed Development would require a Class 4 designation:

- Block 1
- Block 2
- Block 3
- Block 4
- Block 7
- Block 11
- Block 17

The locations that would require Class 4 designation are shown in **Figure 6**.

If a Class 4 area designation is approved for the above listed Blocks of the Proposed Development, a Type F warning clause should be applied to the registration on title of the dwellings located on those Blocks and each dwelling unit be supplied with a ventilation/air conditioning system which allows windows and exterior doors to remain closed. The purpose of the Type F warning clause is to notify purchasers that the applicable Class 4 area sound level for the dwelling are protective of indoor areas and are based on the assumption of closed windows. The Type F warning clause has been included in **Appendix D**.

In the event a Class 4 Designation is not granted by the planning authority, significant source-based mitigation measures would be required. As previously discussed, based on Dillon's understanding of Masterfeeds operations, this may prove difficult and further consultation with the industry would be required to determine if source-based mitigation is technically, economically, and/or administratively feasible.

Rear Yard Acoustic Barriers

The OPRs associated with the rear yards of Block 2 are predicted to exceed the Class 4 sound level limits. It is recommended that an acoustic barrier with a height of 2.5 m be installed to reduce exposure to Masterfeeds' stationary noise sources. The barrier would be located in the rear yards of Block 2, with an approximate length of 175 m.

The location of the acoustic barrier, as well as the predicted mitigated noise impacts, is shown in **Figure 6**. The acoustic barrier should have a minimum surface density of 20 kg/m^2, be structurally sounds and appropriately designed to withstand wind and snow load. It should be constructed without cracks or surface gaps. Any gaps under the barrier that are necessary for drainage purposes should be minimized and localized.

With the above noted acoustic barriers, the predicted stationary noise impacts at the OPRs of Blocks 2 and 6 comply with Class 4 sound level limits. The predicted mitigated noise impacts at the subject receptors are shown in **Table 17** below.

Table 17: Predicted Masterfeeds Stationary Noise Impacts Summary - Mitigated

Point of Reception	Maximum Leq (1 hour) (dBA)			MECP Compliance
	Daytime (07:00-19:00)	Evening (19:00-23:00)	Nighttime (23:00-07:00)	
Block 2 - OPRs	55	35	NA	Class 4

It should be noted that the above noise mitigation measures are based on the assumed building footprints for the Low Density areas of Blocks 1-11. As the design of the development progresses (including ground elevations and building footprints), this study should be updated by an Acoustic Consultant.

5.0 Conclusions

Dillon Consulting Limited was retained by Sifton Properties Ltd. to complete a Noise and Vibration Assessment in support of the Proposed Development.

The assessment presented in this report was prepared in accordance with the guidelines and requirements of the Ontario MECP.

5.1 Transportation Noise Assessment

As outlined in Section 2.1.4, the results of the transportation noise assessment confirm that the noise impacts on the Proposed Development can be sufficiently controlled by the following steps:

- Upgraded glazing requirements
- Type C warning clause and the provision for the installation of central air conditioning
- Type D warning clause and the installation of central air conditioning
- Upgrade façade construction for the first row of dwellings with respect to the rail right-of-way
- An acoustic barrier with a height of 3.0 m atop a 2.5 m safety berm
- Type B warning clause
- All sensitive uses within 300 m of the railway right-of-way require a warning clause regarding the potential for noise and vibration impacts from CN operations.

All warning clauses should be included in agreements that are registered on Title for all Offers of Purchase and Sale, lease/rental agreements, and condominium declarations.

The above are mitigation measures to achieve compliance at the worst-case impacted receptors of the Proposed Development. As the design progresses, this study should be updated to determine the required extent of the mitigation measures throughout the Proposed Development.

5.2 Transportation Vibration Assessment

As outlined in Section 2.2, the vibration measurements 40 m from the rail right-of-way comply with the applicable vibration criteria. It is recommended that all building footprints are located a minimum distance of 40 m from the rail right-of-way.

5.3 Preliminary Land Use Compatibility

As shown in **Section 3.0**, a large portion of Proposed Development is located within the Potential Influence Area of the Masterfeeds facility. Noise, dust, vibration, and odour impacts are expected at the sensitive land uses located within 300 m of the Masterfeeds. A detailed technical assessment for noise, dust, and odour impacts should be completed to determine land use compatibility for sensitive land uses located within 300 m of Masterfeeds.

5.4 Stationary Noise Assessment

At the request of the planning authority, this assessment has been updated to include a detailed stationary noise assessment to determine the predicted stationary noise impacts from Masterfeeds on the Proposed Development.

As shown in **Section 4.0**, a detailed stationary noise assessment was completed to predict noise impacts from the Masterfeeds facility on the Proposed Development. It was determined that the predicted stationary noise impacts can be sufficiently controlled by the following steps:

- Seeking Class 4 area designation for the Proposed Development
- A Type F warning clause
- An acoustic barrier with a height of 2.5 m

6.0 Closure

This Noise and Vibration Assessment has been prepared based on the information provided and/or approved by Sifton Properties Ltd. This report is intended to provide a reasonable review of available information within an agreed work scope, schedule, and budget. This report was prepared by Dillon for the sole benefit of the Sifton Properties Ltd. The material in the report reflects Dillon's judgement in light of the information available to Dillon at the time of this report preparation. Any use which a third party makes of this report, or any reliance on or decisions made based on it, are the responsibilities of such third parties. Dillon accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

We trust that the report is to your satisfaction. Please do not hesitate to contact the undersigned if you have any further questions on this report.

DILLON CONSULTING LIMITED

Callum Heggart, P.Eng.

CH:lld

7.0 References

Ontario Ministry of Environment Publication NPC-300, Environmental Noise Guideline, Stationary and Transportation Sources- Approval and Planning, October 2013.

US FTA Transit Noise and Vibration Impact Assessment Manual, 2018

Guidelines for New Development in Proximity to Railway Operations, Railway Association of Canada and Federation of Canadian Municipalities, May 2013.

MECP Environmental land use planning guides, 1995.

Figures

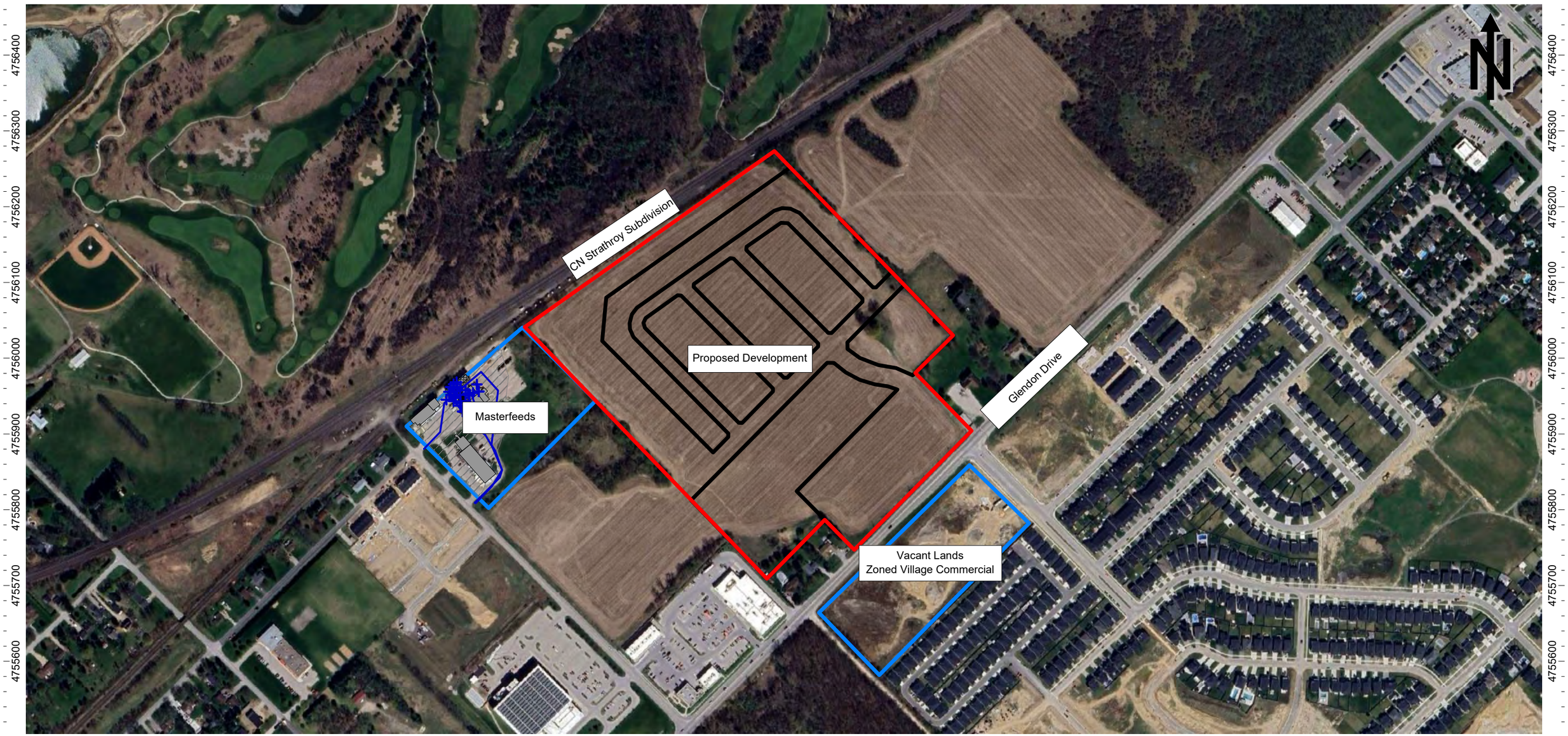


Figure 1

Project # 24-9073

Apr 2025

Subject Site and Surrounding Area

10242 Glendon Drive, Komoka, Ontario

DILLON CONSULTING

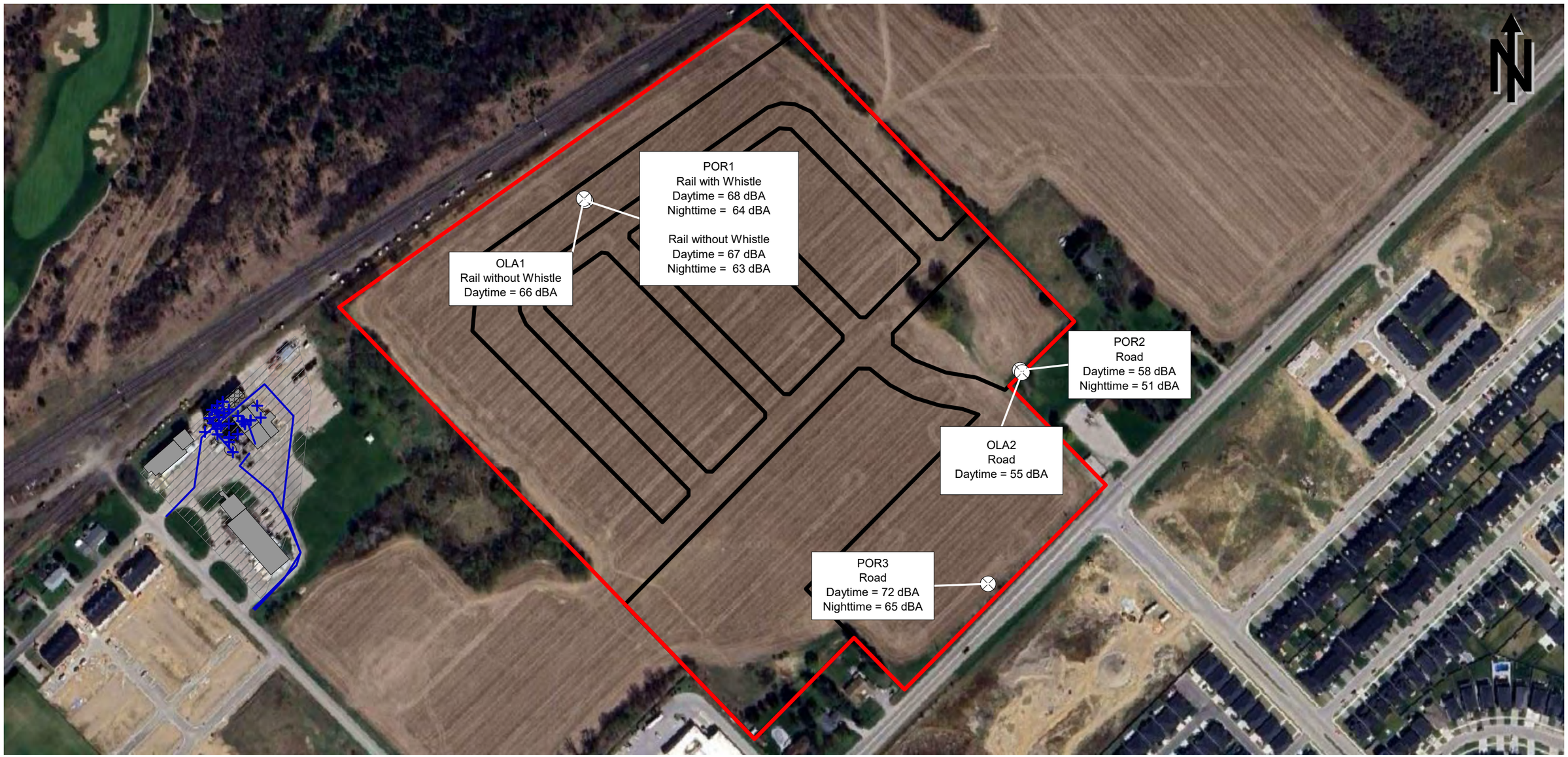


Figure 2

Project # 24-9073

Apr 2025

Predicted Transportation Noise Impacts

10242 Glendon Drive, Komoka, Ontario

DILLON CONSULTING

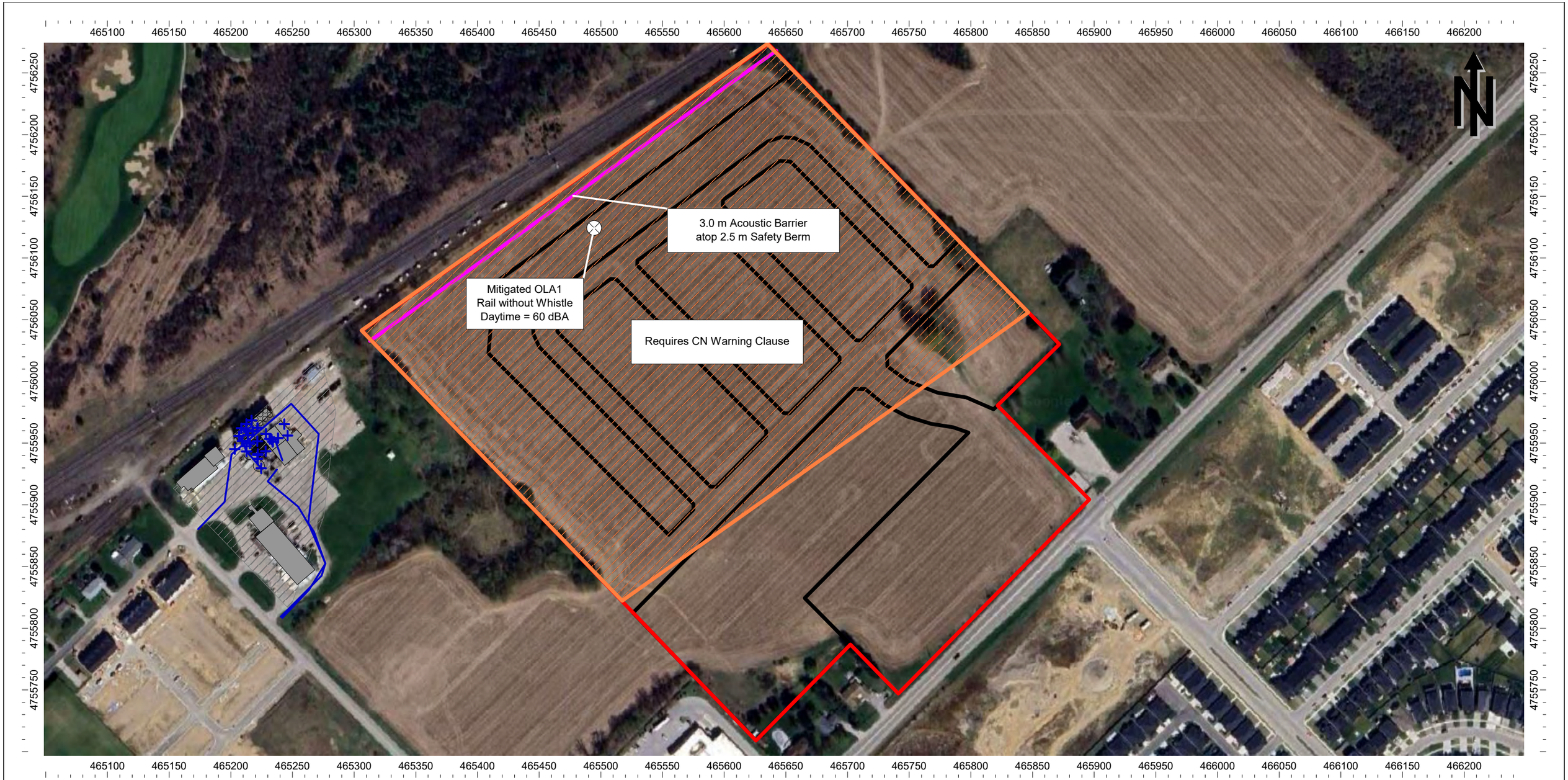


Figure 3

Project # 24-9073

Apr 2025

Predicted Transportation Impacts - OLA Mitigation

10242 Glendon Drive, Komoka, Ontario

DILLON CONSULTING

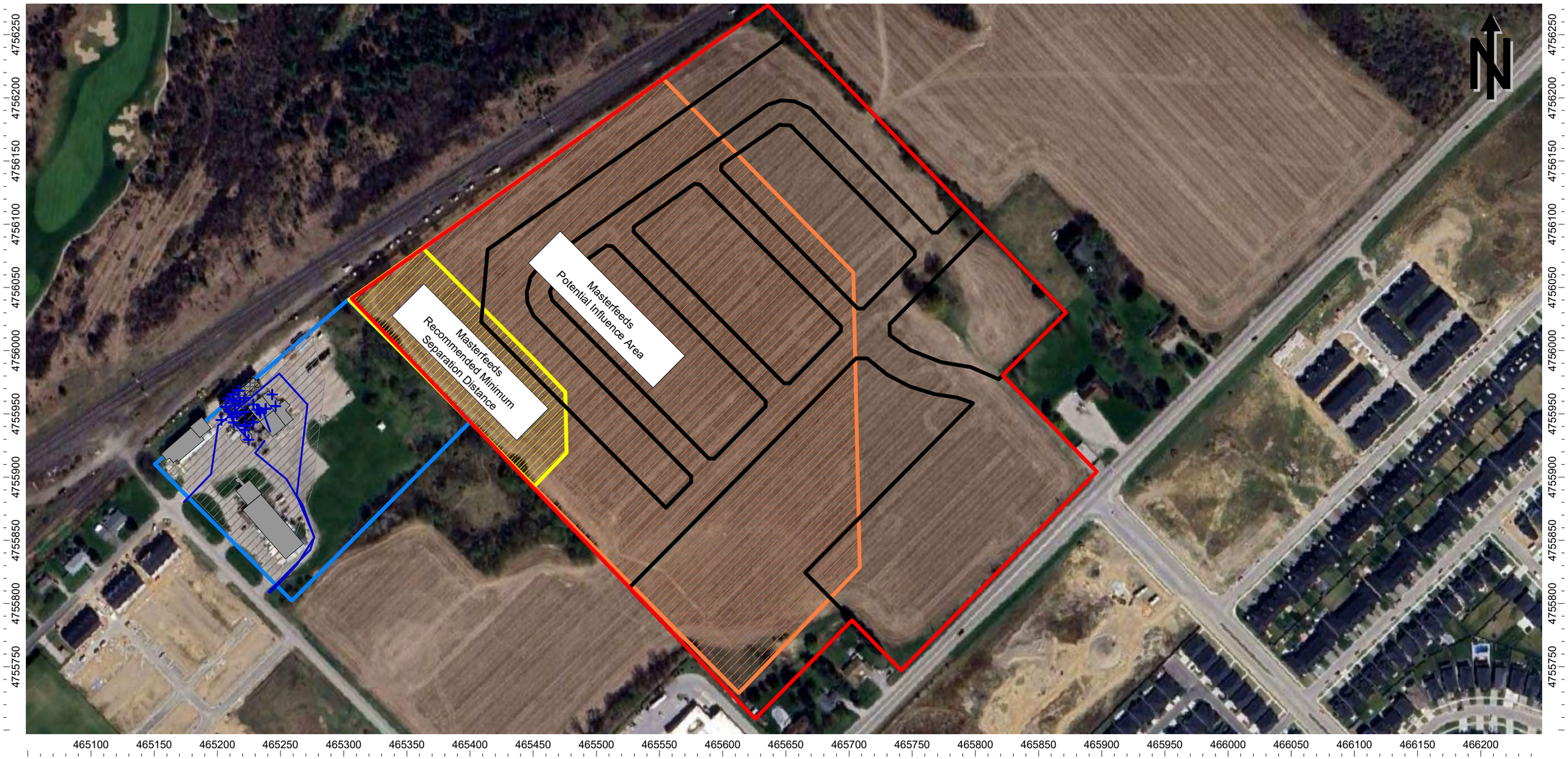


Figure 4

Project # 24-9073

Apr 2025

Masterfeeds Potential Influence Area and Recommended Minimum Separation Distance

10242 Glendon Drive, Komoka, Ontario

DILLON CONSULTING

50 <= ... < 55 dBA
55 <= ... < 60 dBA
60 <= ... < 65 dBA

Grid Height = 4.5 m

Figure 5

Project # 24-9073

Apr 2025

Masterfeeds Predicted Stationary Noise Impacts - Daytime

10242 Glendon Drive, Komoka, Ontario

DILLON CONSULTING

Figure 6

Project # 24-9073

Apr 2025

Masterfeeds Predicted Stationary Noise Impacts - Daytime Mitigated

10242 Glendon Drive, Komoka, Ontario

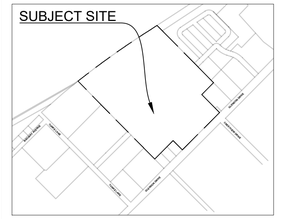
DILLON CONSULTING

Appendix A

Development Site Plan

DRAFT PLAN OF SUBDIVISION

CON 2 S PT LOT 7
10242 GLENDON DRIVE
KOMOKA, ONTARIO N0L 1R0



KEY PLAN – N.T.S.

OWNER'S CERTIFICATE

I hereby consent to the filing of this Plan in Draft Form.

Richard Sifton
President & CEO — Date

Phillip Masschelein
Senior Vice President
Neighbourhood Developments — Date

SURVEYOR'S CERTIFICATE

I hereby certify that the boundary of the lands to be subdivided as shown on this plan and their relationship to the adjacent lands are accurately and correctly shown.

O.L.S.
Surveyor — Date

REQUIREMENTS UNDER SECTION 51 (17) OF THE PLANNING ACT, 1990

a) as shown on plan
b) as shown on plan
c) as shown on key plan
d) as shown on land use schedule
e) as shown on plan
f) as shown on plan
g) as shown on plan
h) municipal water
i) clayey silt till
j) as shown on plan
k) municipal sewers
l) as shown on plan

LAND USE SCHEDULE

LAND USES	HECTARES	PERCENT
BLOCKS: 1 - 10 Low Density Residential	3.75	20.7
BLOCKS: 11 - 16 Medium Density Residential - Street Townhouses	1.75	9.6
BLOCKS: 17 & 18 Medium Density Residential	2.42	13.3
BLOCK: 19 Medium / High Density Residential	1.57	8.7
BLOCK: 20 Mixed Use Development	2.08	11.5
BLOCK: 21 - 23 Parkland	1.26	7.0
BLOCKS: 24 - 27 Municipal Walkways	0.07	0.4
BLOCKS: 28 & 29 Open Space	0.61	3.4
BLOCK: 30 Storm Water Management Pond	1.10	6.1
BLOCKS: 31 - 33 Future Development	0.10	0.6
BLOCKS: 34 - 36 0.3 Reserve	0.00	0.0
Proposed Roads and ROW	3.41	18.8
TOTAL SITE AREA	18.11	100

AREA CALCULATIONS:
Frontage (Low Density): 1,088.7 m / 3,571.7 feet ~ 89 Units
Frontage (Street Townhouses): 546.0 m / 1,791.3 feet ~ 78 Units
Medium & High Density Areas @ 75 Uph ~ 295 Units
Mixed Use Density Areas @ 150 Uph ~ 312 Units

- LOW DENSITY
- MEDIUM DENSITY
- STREET TOWNHOUSES
- HIGH DENSITY
- COMMERCIAL
- OFFICE / MIXED USE
- INSTITUTIONAL
- INDUSTRIAL
- OPEN & GREEN SPACES
- NATURAL HERITAGE
- STORM WATER POND
- FUTURE DEVELOPMENT
- ROADS & ROW

Sifton
Experience. The Difference.™

1: 1,000
0 20 40 60 80m

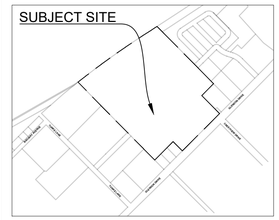
DRAFT PLAN OF SUBDIVISION
10242 GLENDON DRIVE
KOMOKA, ONTARIO, N0L1R0

DESIGNED BY:	APPROVED BY:	DATE:
AL	NO	April 29, 2025

DRAFT PLAN OF SUBDIVISION

CON 2 S PT LOT 7
10242 GLENDON DRIVE
KOMOKA, ONTARIO N0L 1R0

SUBJECT SITE



KEY PLAN – N.T.S.

OWNER'S CERTIFICATE

I hereby consent to the filing of this Plan in Draft Form.

Richard Sifton
President & CEO — Date

Phillip Masschelein
Senior Vice President
Neighbourhood Developments — Date

SURVEYOR'S CERTIFICATE

I hereby certify that the boundary of the lands to be subdivided as shown on this plan and their relationship to the adjacent lands are accurately and correctly shown.

O.L.S.
Surveyor — Date

REQUIREMENTS UNDER SECTION 51 (17) OF THE PLANNING ACT, 1990

a) as shown on plan
b) as shown on plan
c) as shown on key plan
d) as shown on land use schedule
e) as shown on plan
f) as shown on plan
g) as shown on plan
h) municipal water
i) clayey silt till
j) as shown on plan
k) municipal sewers
l) as shown on plan

LAND USE SCHEDULE

LAND USES	HECTARES	PERCENT
BLOCKS: 1 - 10 Low Density Residential	3.75	20.7
BLOCKS: 11 - 16 Medium Density Residential - Street Townhouses	1.75	9.6
BLOCKS: 17 & 18 Medium Density Residential	2.42	13.3
BLOCK: 19 Medium / High Density Residential	1.57	8.7
BLOCK: 20 Mixed Use Development	2.08	11.5
BLOCK: 21 - 23 Parkland	1.26	7.0
BLOCKS: 24 - 27 Municipal Walkways	0.07	0.4
BLOCKS: 28 & 29 Open Space	0.61	3.4
BLOCK: 30 Storm Water Management Pond	1.10	6.1
BLOCKS: 31 - 33 Future Development	0.10	0.6
BLOCKS: 34 - 36 0.3 Reserve	0.00	0.0
Proposed Roads and ROW	3.41	18.8
TOTAL SITE AREA	18.11	100

AREA CALCULATIONS:
Frontage (Low Density): 1,088.7 m / 3,571.7 feet ~ 89 Units
Frontage (Street Townhouses): 546.0 m / 1,791.3 feet ~ 78 Units
Medium & High Density Areas @ 75 Uph ~ 295 Units
Mixed Use Density Areas @ 150 Uph ~ 312 Units

Sifton
Experience. The Difference.™

1: 1,000
0 20 40 60 80m

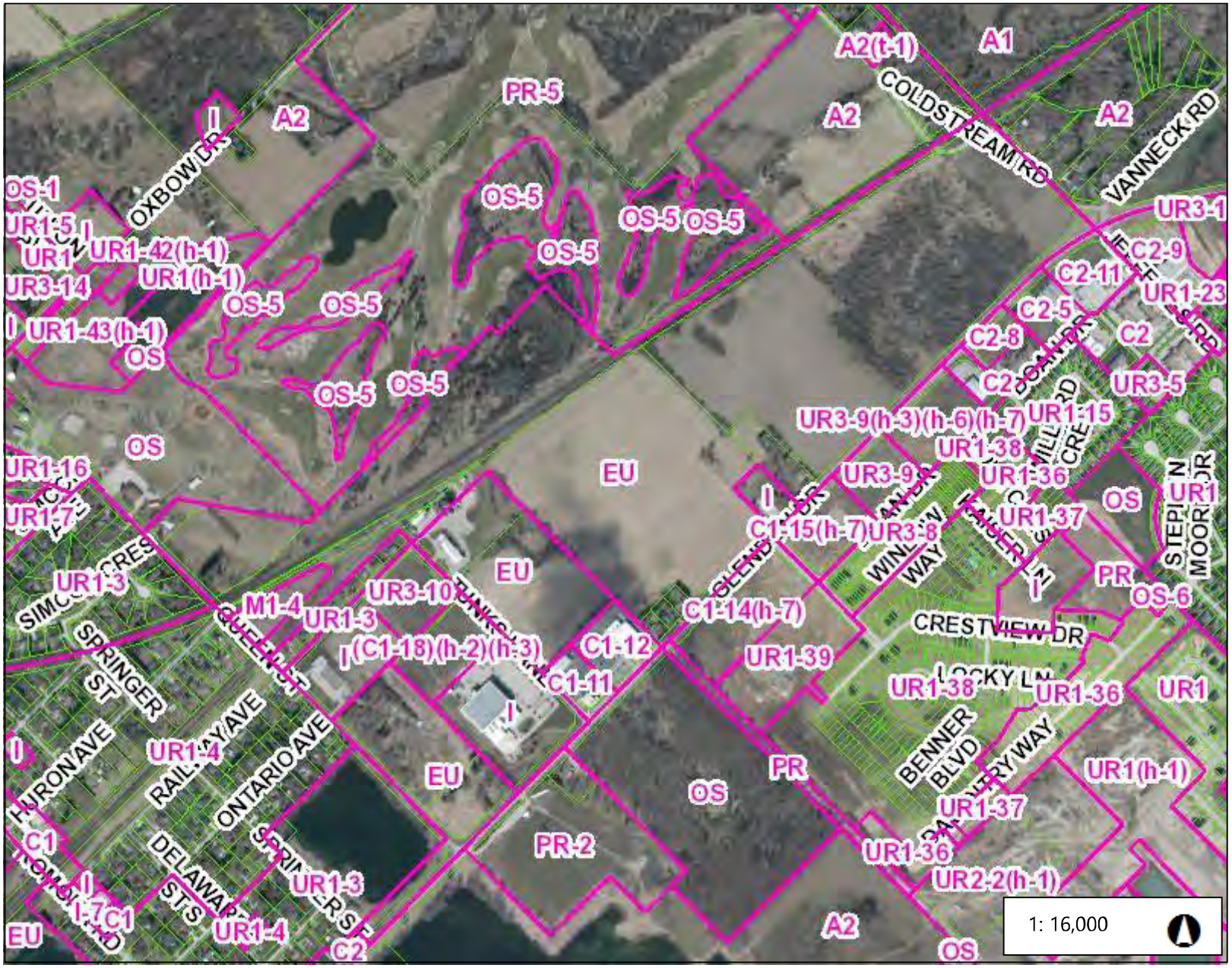
DRAFT PLAN OF SUBDIVISION
10242 GLENDON DRIVE
KOMOKA, ONTARIO, N0L1R0

DESIGNED BY:	APPROVED BY:	DATE:
AL	NO	April 29, 2025

GLENDON DRIVE

GLENDON DRIVE

Middlesex Maps



Legend

- Middlesex Centre Zoning
- Parcels

0.8 0 0.41 0.8 Kilometers

WGS_1984_Web_Mercator_Auxiliary_Sphere

Notes

10242 Glendon Drive Zoning Map

10/31/2024

Appendix B

Road/Rail Traffic Data

Date: 2024/10/15 Project Number: STY-9.13 – Coldstream Rd, Middlesex, ON

Dear Aimen:

Re: Train Traffic Data – CN Strathroy Subdivision near Coldstream Rd in Middlesex, ON

The following is provided in response to Aimen's 2024/10/07 request for information regarding rail traffic in the vicinity of Coldstream Rd in Middlesex, ON at approximately Mile 9.13 on CN's Strathroy Subdivision.

Typical daily traffic volumes are recorded below. However, traffic volumes may fluctuate due to overall economic conditions, varying traffic demands, weather conditions, track maintenance programs, statutory holidays and traffic detours that when required may be heavy although temporary. For the purpose of noise and vibration reports, train volumes must be escalated by 2.5% per annum for a 10-year period.

Typical daily traffic volumes at this site location are as follows:

***Maximum train speed is given in Miles per Hour**

	0700-2300			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	11	140	60	4
Way Freight	3	25	60	4
Passenger	8	10	80	2

	2300-0700			
Type of Train	Volumes	Max.Consist	Max. Speed	Max. Power
Freight	3	140	60	4
Way Freight	0	25	60	4
Passenger	0	10	80	2

The volumes recorded reflect westbound and eastbound freight and passenger operations on CN's Strathroy Subdivision.

Except where anti-whistling bylaws are in effect, engine-warning whistles and bells are normally sounded at all at-grade crossings. There are five (5) at-grade crossing in the immediate vicinity of the study area at Mile 8.45 (Farm Crossing), 10.67 (Komoka Rd), 10.95 (Oxbow Rd) and 11.30 (Farm Crossing). Anti-whistling bylaws are not in effect at these crossing. Please note that engine warning whistles may be sounded in cases of emergency, as a safety and warning precaution at station locations and pedestrian crossings and occasionally for operating requirements.

With respect to equipment restrictions, the gross weight of the heaviest permissible car is 286,000 lbs.

The double mainline track is considered to be continuously welded rail throughout the study area. The presence of one (1) switch located at Mile 9.92 may exacerbate the noise and vibration caused by train movements.

The Canadian National Railway continues to be strongly opposed to locating developments near railway facilities and rights-of-way due to potential safety and environmental conflicts. Development adjacent to the Railway Right-of-Way is not appropriate without sound impact mitigation measures to reduce the incompatibility. For confirmation of the applicable rail noise, vibration and safety standards, Adjacent Development, Canadian National Railway Properties at Proximity@cn.ca should be contacted directly.

I trust the above information will satisfy your current request.

Sincerely,

Sarangan Srikanth

Sarangan Srikanth
Officer Public Works
Permits.gld@cn.ca

TRAFFIC VOLUMES ON MIDDLESEX COUNTY ROADS - 2023

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
HAGERTY RD. 1	LAMBTON BOUNDARY TO NEWBURY	***998***	3.8	1.6	3	2994
HAGERTY RD. 1	NEWBURY TO CR#14	***2817***	1.7		1.7	4789
HAGERTY RD. 1	CR#14 TO THE THAMES RIVER	***1262***	4.7		4.7	5931
DUNDAS ST. 2	LONDON TO CR#32	***21558***	2.1		2.1	45272
DUNDAS ST. 2	CR#32 TO CR#73	***16004***	4.7		4.7	75219
DUNDAS ST. 2	CR#73 TO THE OXFORD COUNT BOUNDARY	***15115***	2.9	1.4	2.2	33253
LONGWOODS RD. 2	LONDON TO HIGHWAY #402	***7980***	7.2		7.2	57456
LONGWOODS RD. 2	HIGHWAY #402 TO CR#9	***4920***	13.9		13.9	68388
LONGWOODS RD. 2	CR#9 TO CR#1	***4576***	24.9		24.9	113942
LONGWOODS RD. 2	CR#1 TO THE KENT COUNTY BOUNDARY	***2654***	8.6		8.6	22824
GIDEON DR. 3	DELAWARE TO CR#16	***4769***	3.2		3.2	15261
GIDEON DR. 3	CR#16 TO LONDON	***4294***	3.7		3.7	15888
MOUNT CARMEL DR. 5	HIGHWAY #4 TO MT. CARMEL	***2203***	12.4	12.4	6.2	13659
MOUNT CARMEL DR. 5	HURON CR#2 TO CR#81	***2175***	6.5	6.5	3.25	7069
BREENWAY DR. 5	CR#81 TO TRI-COUNTY BRIDGE	***2473***	5	5	2.5	6183
KERWOOD RD. 6	CR#10 TO CR#77	***972***	6.4		6.4	6221
KERWOOD RD. 6	CR#77 TO KERWOOD SOUTH BOUNDARY	***1725***	4.1		4.1	7073
KERWOOD RD. 6	KERWOOD SOUTH BOUNDARY TO CR#22	***2044***	6.9		6.9	14104
KERWOOD RD. 6	CR#22 TO CR#12	***1980***	6.0		6.0	11880

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
KERWOOD RD. 6	CR#12 TO CR#7	***1317***	9.4		9.4	12380
ELGINFIELD RD. 7	HIGHWAY #4 TO CR#19	***5616***	15.4		15.4	86486
ELGINFIELD RD. 7	CR#19 TO EAST JUNCTION CR#81	***3290***	12.2		12.2	40138
ELGINFIELD RD. 7	EAST JUNCTION CR#81 TO MAIN STREET PARKHILL	***4790***	2.1		2.1	10059
ELGINFIELD RD. 7	MAIN STREET PARKHILL TO LAMBTON COUNTY	***2202***	11.5		11.5	25323
THAMES RD. 8	CR#6 TO CR#10	***586***	0.9		0.9	527
THAMES RD. 8	CR#10 TO CR#2	***1183***	14.2		14.2	16799
THAMES RD. 8	CR#2 TO THE THAMES RIVER	***1055***	5.7		5.7	6014
MELBOURNE RD. 9	CR#39 TO PARK STREET IN STRATHROY	***5608***	0.8		0.8	4486
MELBOURNE RD. 9	PARK STREET IN STRATHROY TO CR#77	***2915***	6.8		6.8	19822
MELBOURNE RD. 9	CR#77 TO CR#14	***2854***	10.1		10.1	28825
MELBOURNE RD. 9	CR#14 TO CR#2 MELBOURNE	***2847***	4.2		4.2	11957
MELBOURNE RD. 9	CR#2 TO THE THAMES RIVER	***3515***	9.7		9.7	34096
CALVERT DR. 10	CR#80 TO CR#8	***1510***	8.3	0.8	7.9	11929
CALVERT DR. 10	CR#8 TO CR#9 CAIRNGORM	***1914***	7.3		7.3	13972
CALVERT DR. 10	CR#9 TO CR#81 STRATHROY	***2301***	6.7		6.7	15417
CARROLL STREET 10	CR#81 STRATHROY TO CR#37 McEVOY ROAD	***3414***	3		3	10242
MUNCEY RD. 11	CR#2 TO MUNCEY	***1450***	8.1		8.1	11745
TOWNSEND LN. 12	LAMBTON COUNTY BOUNDARY TO CR #81	***2387***	10	1.6	9.2	21960
WILLIAM ST. 13	CR#20 TO LUCAN WEST LIMITS	***1566***	3.2		3.2	5011
WILLIAM ST. 13	LUCAN WEST LIMITS TO CR#47	***1139***	1.1		1.1	1253

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
GLENDON DR. 14	LONDON TO CR#16	*14586*	4.3		4.3	62720
GLENDON DR. 14	CR#16 TO CR#81	*6898*	7.1		7.1	48976
GLENDON DR. 14	CR#81 TO CR#9	*3477*	10.6		10.6	36856
GLENDON DR. 14	CR#9 APPIN TO CR#8	*3002*	7.5		7.5	22515
GLENDON DR. 14	CR#8 APPIN TO CR#80	*3009*	7.3		7.3	21966
CONCESSION DR. 14	CR#80 GLENCOE TO CR#1 NEWBURY	*2923*	10.1		10.1	29522
CONCESSION DR. 14	CR#1 TO THE KENT COUNTY BOUNDARY	*1745*	9.7	4.4	7.5	13088
CARRAGE RD. 15	CR#2 TO CR#35	*3089*	8		8	24712
KOMOKA RD. 16	CR#3 TO CR #14	*4842*	1.7		1.7	8231
KOMOKA RD. 16	CR#14 TO CR#22	*1848*	9.4		9.4	17371
ILDERTON RD. 16	CR#22 TO CR#17	*2552*	5.8		5.8	14802
ILDERTON RD. 16	CR#17 TO CR#20 SOUTH	*5210*	9.5		9.5	49495
ILDERTON RD. 16	CR#20 SOUTH TO HIGHWAY #4	*4298*	5		5	21490
ILDERTON RD. 16	HIGHWAY #4 TO CR#23	*3916*	5		5	19580
PLOVER MILLS RD. 16	CR#23 TO CR#27	*2322*	7.8		7.8	18112
PLOVER MILLS RD. 16	CR#27 TO CR#31	*4847*	2.8		2.8	13572
PLOVER MILLS RD. 16	CR#31 TO THE OXFORD COUNTY BOUNDARY	*1725*	4.3		4.3	7418
GAINSBOROUGH RD. 17	LONDON TO CR#22	*6452*	6.5		6.5	41938
NAIRN RD. 17	CR#22 TO CR#16	*2479*	5.8		5.8	14378
NAIRN RD. 17	CR#16 TO CR#19	*2566*	10.3		10.3	26430
NAIRN RD. 17	CR#19 TO CR#81	*3178*	9.6		9.6	30509

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
NAIRN RD. 17	CR#81 TO CR#7	***1878***	2.7		2.7	5071
PARKHILL DR. 18	CR#81 TO THE LAMBTON COUNTY BOUNDARY	***1293(2021)***	11.4		11.4	14740
PETTY ST. 19	CR#7 TO CR#17	***3845***	5.6		5.6	21532
PETTY ST. 19	CR#17 TO CR#81	***3624***	9.3		9.3	33703
HYDE PARK RD. 20	LONDON TO CR#16	***6729***	6.4		6.4	43066
DENFIELD RD. 20	CR#16 TO CR#7	***2563***	8.4		8.4	21529
DENFIELD RD. 20	CR#7 TO HIGHWAY #4	***2695***	6.4		6.4	17248
CASSIDY RD. 21	CR#7 TO CR#24	***1386***	6.1		6.1	8455
EGREMONT DR. 22	LAMBTON COUNTY BOUNDARY TO CR#81	***2199***	13.4		13.4	29467
EGREMONT DR. 22	CR#81 TO CR#39	***2933***	6.1		6.1	17891
EGREMONT DR. 22	CR#39 TO CR#16 SOUTH	***8881***	3.8		3.8	33748
EGREMONT DR. 22	CR#16 SOUTH TO CR#17	***8668***	7.4		7.4	64143
EGREMONT DR. 22	CR#17 TO LONDON	***10223***	5.3		5.3	54182
HIGHBURY AVE. 23	HIGHWAY #7 TO CR#16 ILDERTON ROAD	***10599***	8.2		8.2	86912
HIGHBURY AVE. 23	CR#16 TO LONDON	***9732***	6.4		6.4	62285
McGILLIVRAY DR. 24	HIGHWAY #4 TO CR#21	***1247***	8.4		8.4	10475
McGILLIVRAY DR. 24	CR#21 TO CR#81	***1491***	10		10	14910
GORE RD. 25	LONDON TO CR#32	***2992***	3	0.6	2.7	8078
GORE RD. 25	CR#32 TO OXFORD COUNTY BOUNDARY	***2353***	7.5		7.5	17648
WILTON GROVE RD. 26	LONDON TO CR#74	***4308***	0.8		0.8	3446
NISSOURI RD. 27	CR#2 TO CR#28	***6015***	9.3		9.3	55940

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
NISSOURI RD. 27	CR#28 TO CR#16	***3280***	6.2		6.2	20336
WELLBURN RD. 27	CR#16 TO HIGHWAY #7	***3679***	7		7	25753
THORNDALE RD. 28	OXFORD COUNTY BOUNDARY TO CR#27	***4380***	7.1		7.1	31098
MEDWAY RD. 28	CR#27 TO CR#23	***6182***	8.4		8.4	51929
MEDWAY RD. 28	CR#23 TO HIGHWAY #4	***6797***	5		5	33985
MEDWAY RD. 28	HIGHWAY #4 TO CR#20	***6238***	5		5	31190
HAMILTON RD. 29	LONDON TO CR#74	***8216***	0.8		0.8	6573
HAMILTON RD. 29	CR#74 TO CR#32 DORCHESTER	***6517***	4.9		4.9	31933
HAMILTON RD. 29	CR#32 DORCHESTER TO CR#73	***6454***	3.4		3.4	21944
HAMILTON RD. 29	CR#73 TO OXFORD COUNTY BOUNDARY	***5397***	8		8	43176
PUTNAM RD. 30	OXFORD COUNTY BOUNDARY TO CR#29	***1277***	1.3		1.3	2076
PUTNAM RD. 30	CR#29 PUTNAM TO HIGHWAY #401	***2882***	1.7		1.7	5063
PUTNAM RD. 30	HIGHWAY #401 TO ELGIN COUNTY BOUNDARY AVON	***3692***	7.8		7.8	28072
HERITAGE RD. 31	CR#28 TO CR#16	***610***	6.2		6.2	3782
DORCHESTER RD. 32	CROMARTY DRIVE TO HIGHWAY #401	***2573***	0.7		0.7	1801
DORCHESTER RD. 32	HIGHWAY #401 TO CR#29	***4868***	4		4	19472
DORCHESTER RD. 32	CR#29 TO CR#49	***7297***	0.3		0.3	2189
SHAW RD. 32	CR#49 TO CR#2	***3796***	4.3		4.3	16323
SECOND ST. 33	CR#81 TO CR#39	***4975***	3.3		3.3	16418
MULLIFARRY DR. 33	CR#81 TO CR#45	***1840(2021)***	1.8		1.8	3312
LITTLEWOOD DR. 35	ONEIDA TO CR#15	***7023***	1.5		1.5	10535

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
LITTLEWOOD DR. 35	CR#15 TO LONDON	***5379***	6.8		6.8	36577
McEVOY RD. 37	CR#39 TO CR#10	***1637***	1		1	1637
VANNECK RD. 38	CR#14 TO CR#17	***7458***	3.3		3.3	24611
VANNECK RD. 38	CR#17 TO CR#22	***4767***	1.9		1.9	9057
NAPPERTON DR. 39	LAMBTON COUNTY BOUNDARY TO TO WEST LIMITS OF STRATHROY	***2292***	12		12	27504
ALBERT ST. 39	WEST LIMIT OF STRATHROY TO CR#81	***5230***	1.8		1.8	9414
METCALFE ST. E 39	CR#81 TO QUEEN STREET	***9920***	0.4		0.4	3968
HICKORY DR. 39	QUEEN STREET TO HWY#402	***7565***	4.7		4.7	35556
HICKORY DR. 39	HIGHWAY #402 TO CR#22	***6745***	2.8		2.8	18886
ADELAIDE ST. N 41	LONDON TO CR#28	***6276***	0.8		0.8	5021
ADELAIDE ST. N 41	CR#28 TO CR#16	***3855***	5.6		5.6	21588
CLARKE RD. 42	LONDON TO CR#28	***7789***	0.8		0.8	6231
VICTORIA ST. 44	CR#9 TO CR#81	***3917***	1.1		1.1	4309
PIKE RD. 45	CR #39 TO CR #33	***1467 (2021)***	2.5		2.5	3668
PIKE RD. 45	CR #9 TO CR #39	***1213(2021)***	2.7		2.7	3275
SAINTSBURY LN. 47	CR #7 TO HIGHWAY #4	***3003***	3.2		3.2	9610
SAINTSBURY LN. 47	HIGHWAY #4 TO CR#47 EAST	***3549***	2		2	7098
FALLON DR. 47	CR#47 SOUTH TO HIGHWAY #23	***1088***	4.1		4.1	4461
CATHERINE ST. 49	CR#73 TO DORCHESTER ROAD	***1348***	2.5		2.5	3370
CATHERINE ST. 49	DORCHESTER ROAD TO CR#32	***3353***	2.5		2.5	8383
CATHERINE ST. 49	CR#32 TO LONDON	***3940***	3.9		3.9	15366

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
PROSPECT HILL RD. 50	HIGHWAY #7 TO PERTH COUNTY BOUNDARY	***2242***	1.4		1.4	3139
WHALEN LINE 55	CR #59 TO HIGHWAY #23	***2358***	5.2		5.2	12262
WHALEN LINE 55	HIGHWAY #23 TO HIGHWAY #4	***2496***	9.7		9.7	24211
WONDERLAND RD. N 56	LONDON TO CR#28	***6753***	0.8		0.8	4910
WONDERLAND RD. N 56	CR#28 TO CR#16	***4544***	5.6		5.6	20787
GRANTON LN. 59	PERTH COUNTY BOUNDARY TO FALLON DRIVE	***2075***	2.3		2.3	4773
GRANTON LN. 59	CR#47 FALLON DRIVE TO HIGHWAY #7	***2273***	4		4	9092
ELGIN RD. 73	ELGIN COUNTY BOUNDARY TO HIGHWAY #401	***7652***	7.8		7.8	59686
ELGIN RD. 73	HIGHWAY #401 TO CR#29	***8761***	1.6		1.6	14018
ELGIN RD. 73	CR#29 TO CR#2	***7066***	7.5		7.5	52995
WESTCHESTER BOURNE 74	BELMONT TO HIGHWAY #401	***8509***	6.5		6.5	55309
WESTCHESTER BOURNE 74	HIGHWAY #401 TO CR#29 NILESTOWN	***5008***	2.9		2.9	14523
WESTCHESTER BOURNE 74	CR#29 NILESTOWN TO CR#49	***3100***	1.4		1.4	4340
BRADLEY AV. 75	LONDON TO CR#74	***2252***	0.7		0.7	1576
PRATT SIDING RD. 76	CR#2 TO THE THAMES RIVER	***1671***	2.1		2.1	3509
MURPHY DR. 77	CR#6 TO CR#9	***645***	5.8		5.8	3741
DONNYBROOK DR. 78	CR#74 TO CR#32	***1592***	3.8		3.8	6050
DUNDONALD RD. 80	CR#2 TO CR#14 WEST	***3136***	4.1		4.1	12858
DUNDONALD RD. 80	CR#14 WEST TO THE LAMBTON COUNTY	***2511***	13.4		13.4	33647
ADELAIDE RD. 81	CR#2 TO CR#14	***4128***	6.2		6.2	25594
ADELAIDE RD. 81	CR#14 TO SOUTH LIMITS OF STRATHROY	***8372***	10.9		10.9	91255

ROAD NO.	LOCATION	AVERAGE TRAFFIC COUNT	LENGTH (Km)	BOUNDARY LENGTH	EQUIVALENT LENGTH	DAILY VEH-(Km)
CARADOC ST. 81	SOUTH LIMITS OF STRATHROY TO CR#39	***15041***	1.4		1.4	21057
CENTRE RD. 81	CR#39 TO CR#22	***10760***	5.7		5.7	61332
CENTRE RD. 81	CR#22 TO CR#12	***7343***	9.1		9.1	66821
CENTRE RD. 81	CR#12 TO CR#17	***2345***	9.4		9.4	22043
CENTRE RD. 81	CR#17 TO CR#7	***2537***	2.1		2.1	5328
GRAND BEND RD. 81	CR#7 TO CR#5	***2934***	13.1		13.1	38435
			873.0	***34.3***	***855.9***	***3423829***

Appendix C

STAMSON and BPN-56

STAMSON 5.0 NORMAL REPORT Date: 15-04-2025 15:39:32 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: por1.te Time Period: Day/Night 16/8 hours Description:

Rail data, segment # 1: Freight (day/night) ----------
Train ! Trains ! Trains ! Speed !# loc !# Cars! Eng !Cont Type ! (Left) ! (Right) !(km/h) !/Train!/Train! type !weld ----------+----------+----------+-------+------+------+------+---- 1. ! 7.0/2.0 ! 7.0/2.0 ! 97.0 ! 4.0 !140.0 !Diesel! Yes

Data for Segment # 1: Freight (day/night) ----------
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 60.00 / 60.00 m
Receiver height : 4.50 / 4.50 m
Topography : 2 (Flat/gentle slope; with barrier) Whistle Angle : 0 deg Track 1
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 42.00 / 42.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Rail data, segment # 2: Way Freight (day/night) ----------
Train ! Trains ! Trains ! Speed !# loc !# Cars! Eng !Cont Type ! (Left) ! (Right) !(km/h) !/Train!/Train! type !weld ----------+----------+----------+-------+------+------+------+---- 1. ! 2.0/0.0 ! 2.0/0.0 ! 97.0 ! 4.0 ! 25.0 !Diesel! Yes

Data for Segment # 2: Way Freight (day/night) ----------
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 60.00 / 60.00 m
Receiver height : 4.50 / 4.50 m
Topography : 2 (Flat/gentle slope; with barrier) Whistle Angle : 0 deg Track 1
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 42.00 / 42.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m

Barrier elevation : 0.00 m
Reference angle : 0.00

Rail data, segment # 3: Passenger (day/night) ----------
Train ! Trains ! Trains ! Speed !# loc !# Cars! Eng !Cont Type ! (Left) ! (Right) !(km/h) !/Train!/Train! type !weld ----------+----------+----------+------+------+------+---- 1. ! 5.0/0.0 ! 5.0/0.0 ! 129.0 ! 2.0 ! 10.0 !Diesel! Yes

Data for Segment # 3: Passenger (day/night) ----------
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 60.00 / 60.00 m
Receiver height : 4.50 / 4.50 m
Topography : 2 (Flat/gentle slope; with barrier) Whistle Angle : 0 deg Track 1
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 42.00 / 42.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m Barrier elevation : 0.00 m
Reference angle : 0.00

Results segment # 1: Freight (day)

Barrier height for grazing incidence ----------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ----------+----------+-------------+--------------
 4.00 ! 4.50 ! 4.15 ! 4.15
 0.50 ! 4.50 ! 1.70 ! 1.70

LOCOMOTIVE (0.00 + 65.35 + 0.00) = 65.35 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
----------- -90 90 0.34 75.51 -8.10 -0.87 0.00 0.00 -0.87 65.68* -90 90 0.50 75.51 -9.00 -1.17 0.00 0.00 0.00 65.35 ----------

 * Bright Zone !

WHEEL (0.00 + 53.52 + 0.00) = 53.52 dBA Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- -90 90 0.45 69.10 -8.73 -1.08 0.00 0.00 -5.77 53.52 ----------

LEFT WHISTLE (0.00 + 56.92 + 0.00) = 56.92 dBA

```
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -81 0 0.34 70.24 -
8.10 -4.08 0.00 0.00 -0.62 57.45*  -81 0 0.50 70.24 -9.00 -4.32 0.00 0.00
0.00 56.92 ------------------------------------------------------------------
----

 * Bright Zone !

RIGHT WHISTLE (0.00 + 56.92 + 0.00) = 56.92 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  0 81 0.34 70.24 -
8.10 -4.08 0.00 0.00 -0.62 57.45*  0 81 0.50 70.24 -9.00 -4.32 0.00 0.00 0.00
56.92 ------------------------------------------------------------------

 * Bright Zone !

Segment Leq : 66.66 dBA


Results segment # 2: Way Freight (day) ------------------------------------

Barrier height for grazing incidence -------------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 4.50 ! 4.15 ! 4.15
 0.50 ! 4.50 ! 1.70 ! 1.70

LOCOMOTIVE (0.00 + 55.59 + 0.00) = 55.59 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.34 65.76
-8.10 -0.87 0.00 0.00 -0.87 55.93*  -90 90 0.50 65.76 -9.00 -1.17 0.00 0.00
0.00 55.59 ------------------------------------------------------------------
----

 * Bright Zone !

WHEEL (0.00 + 41.12 + 0.00) = 41.12 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.45 56.70
-8.73 -1.08 0.00 0.00 -5.77 41.12  ---------------------------------------
----------------------------

LEFT WHISTLE (0.00 + 51.48 + 0.00) = 51.48 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -81 0 0.34 64.80 -
8.10 -4.08 0.00 0.00 -0.62 52.01*  -81 0 0.50 64.80 -9.00 -4.32 0.00 0.00
0.00 51.48 ------------------------------------------------------------------
----

 * Bright Zone !

RIGHT WHISTLE (0.00 + 51.48 + 0.00) = 51.48 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
```

---------- 0 81 0.34 64.80 -8.10 -4.08 0.00 0.00 -0.62 52.01* 0 81 0.50 64.80 -9.00 -4.32 0.00 0.00 0.00 51.48 ----------

* Bright Zone !

Segment Leq : 58.17 dBA

Results segment # 3: Passenger (day) ----------

Barrier height for grazing incidence ----------
Source ! Receiver ! Barrier ! Elevation of Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ----------+----------+----------+----------
4.00 ! 4.50 ! 4.15 ! 4.15
0.50 ! 4.50 ! 1.70 ! 1.70

LOCOMOTIVE (0.00 + 58.05 + 0.00) = 58.05 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- -90 90 0.34 68.21 -8.10 -0.87 0.00 0.00 -0.87 58.38* -90 90 0.50 68.21 -9.00 -1.17 0.00 0.00 0.00 58.05 ----------

* Bright Zone !

WHEEL (0.00 + 43.21 + 0.00) = 43.21 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- -90 90 0.45 58.79 -8.73 -1.08 0.00 0.00 -5.77 43.21 ----------

LEFT WHISTLE (0.00 + 54.22 + 0.00) = 54.22 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- -81 0 0.34 67.54 -8.10 -4.08 0.00 0.00 -0.62 54.76* -81 0 0.50 67.54 -9.00 -4.32 0.00 0.00 0.00 54.22 ----------

* Bright Zone !

RIGHT WHISTLE (0.00 + 54.22 + 0.00) = 54.22 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- 0 81 0.34 67.54 -8.10 -4.08 0.00 0.00 -0.62 54.76* 0 81 0.50 67.54 -9.00 -4.32 0.00 0.00 0.00 54.22 ----------

* Bright Zone !

Segment Leq : 60.75 dBA

Total Leq All Segments: 68.12 dBA

Results segment # 1: Freight (night) ----------

Barrier height for grazing incidence ----------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ----------+---------
----+----------+----------
 4.00 ! 4.50 ! 4.15 ! 4.15
 0.50 ! 4.50 ! 1.70 ! 1.70

LOCOMOTIVE (0.00 + 62.92 + 0.00) = 62.92 dBA Angle1 Angle2 Alpha RefLeq D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- -90 90 0.34 73.08 -8.10 -0.87 0.00 0.00 -0.87
63.25* -90 90 0.50 73.08 -9.00 -1.17 0.00 0.00 0.00 62.92 ----------
----

 * Bright Zone !

WHEEL (0.00 + 51.09 + 0.00) = 51.09 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- -90 90 0.45 66.67
-8.73 -1.08 0.00 0.00 -5.77 51.09 ----------

LEFT WHISTLE (0.00 + 54.49 + 0.00) = 54.49 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- -81 0 0.34 67.81 -
8.10 -4.08 0.00 0.00 -0.62 55.02* -81 0 0.50 67.81 -9.00 -4.32 0.00 0.00
0.00 54.49 ----------
----

 * Bright Zone !

RIGHT WHISTLE (0.00 + 54.49 + 0.00) = 54.49 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------
---------- 0 81 0.34 67.81 -
8.10 -4.08 0.00 0.00 -0.62 55.02* 0 81 0.50 67.81 -9.00 -4.32 0.00 0.00 0.00
54.49 ----------

 * Bright Zone !

Segment Leq : 64.23 dBA

Results segment # 2: Way Freight (night) ----------

Barrier height for grazing incidence ----------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ----------+---------
----+----------+----------
 4.00 ! 4.50 ! 4.15 ! 4.15 0.50 ! 4.50 ! 1.70 ! 1.70

LOCOMOTIVE (0.00 + -10.17 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq ----------

```
---------------------------------------------------------  -90 90 0.34 0.00 -
8.10 -0.87 0.00 0.00 -0.87 -9.83*  -90 90 0.50 0.00 -9.00 -1.17 0.00 0.00
0.00 -10.17 ----------------------------------------------------------------
-----

 * Bright Zone !

WHEEL (0.00 + -15.58 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
---------------------------------------------------------  -90 90 0.45 0.00 -
8.73 -1.08 0.00 0.00 -5.77 -15.58  ----------------------------------------
----------------------------

LEFT WHISTLE (0.00 + 54.49 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
---------------------------------------------------------  -81 0 0.34 0.00 -
8.10 -4.08 0.00 0.00 -0.62 55.02   -81 0 0.50 0.00 -9.00 -4.32 0.00 0.00 0.00
54.49 ----------------------------------------------------------------------

Segment Leq : 0.00 dBA


Results segment # 3: Passenger (night) -------------------------------------

Barrier height for grazing incidence ---------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 4.50 ! 4.15 ! 4.15
 0.50 ! 4.50 ! 1.70 ! 1.70

LOCOMOTIVE (0.00 + -10.17 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
---------------------------------------------------------  -90 90 0.34 0.00 -
8.10 -0.87 0.00 0.00 -0.87 -9.83*  -90 90 0.50 0.00 -9.00 -1.17 0.00 0.00
0.00 -10.17 ----------------------------------------------------------------
-----

 * Bright Zone !

WHEEL (0.00 + -15.58 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
---------------------------------------------------------  -90 90 0.45 0.00 -
8.73 -1.08 0.00 0.00 -5.77 -15.58  ----------------------------------------
----------------------------

LEFT WHISTLE (0.00 + 54.49 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
---------------------------------------------------------  -81 0 0.34 0.00 -
8.10 -4.08 0.00 0.00 -0.62 55.02   -81 0 0.50 0.00 -9.00 -4.32 0.00 0.00 0.00
54.49 ----------------------------------------------------------------------

Segment Leq : 0.00 dBA
```

Total Leq All Segments: 64.23 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 68.12
 (NIGHT): 64.23

STAMSON 5.0 NORMAL REPORT Date: 15-04-2025 14:43:38
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: por3.te Time Period: Day/Night 16/8 hours Description:

Road data, segment # 1: glendon Dr (day/night) ----------

Car traffic volume : 13976/1553 veh/TimePeriod
Medium truck volume : 803/89 veh/TimePeriod
Heavy truck volume : 1285/143 veh/TimePeriod
Posted speed limit : 70 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: glendon Dr (day/night) ----------

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 20.00 /
20.00 m Receiver height : 28.50 / 28.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Results segment # 1: glendon Dr (day)

Source height = 1.68 m

ROAD (0.00 + 71.68 + 0.00) = 71.68 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -90 90
0.00 72.93 0.00 -1.25 0.00 0.00 0.00 0.00 71.68 ----------

Segment Leq : 71.68 dBA

Total Leq All Segments: 71.68 dBA

Results segment # 1: glendon Dr (night) ----------
--

Source height = 1.68 m

ROAD (0.00 + 65.15 + 0.00) = 65.15 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -90 90
0.00 66.40 0.00 -1.25 0.00 0.00 0.00 0.00 65.15 ----------

Segment Leq : 65.15 dBA

Total Leq All Segments: 65.15 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 71.68
 (NIGHT): 65.15

STAMSON 5.0 NORMAL REPORT Date: 15-04-2025 15:51:02 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola1.te Time Period: Day/Night 16/8 hours Description:

Rail data, segment # 1: Freight (day/night) ----------
Train ! Trains ! Speed !# loc !# Cars! Eng !Cont
Type ! !(km/h) !/Train!/Train! type !weld ----------+----------+----+------+------+------+----
 1. ! 14.0/4.0 ! 97.0 ! 4.0 !140.0 !Diesel! Yes

Data for Segment # 1: Freight (day/night) ----------
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 57.00 / 34.00 m
Receiver height : 1.50 / 1.50 m Topography : 2 (Flat/gentle slope; with barrier) No Whistle
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 39.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Rail data, segment # 2: Way Freight (day/night) ----------
Train ! Trains ! Speed !# loc !# Cars! Eng !Cont
Type ! !(km/h) !/Train!/Train! type !weld ----------+----------+----+------+------+------+----
 1. ! 4.0/0.0 ! 97.0 ! 4.0 ! 25.0 !Diesel! Yes

Data for Segment # 2: Way Freight (day/night) ----------
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0 Surface : 1 (Absorptive ground surface) Receiver source distance : 57.00 / 34.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier) No Whistle
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 39.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

```
Rail data, segment # 3: Passenger (day/night) ------------------------------
--------------
Train ! Trains ! Speed !# loc !# Cars! Eng !Cont
Type ! !(km/h) !/Train!/Train! type !weld -----------------+-------------+---
----+------+------+------+----
 1. ! 10.0/0.0 ! 129.0 ! 2.0 ! 10.0 !Diesel! Yes

Data for Segment # 3: Passenger (day/night) ---------------------------------
---------- Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 57.00 /
34.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier) No Whistle
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 2.50 m
Barrier receiver distance : 39.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00


Results segment # 1: Freight (day)
----------------------------------

Barrier height for grazing incidence ----------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
  4.00 ! 1.50 ! 3.21 ! 3.21
 0.50 ! 1.50 ! 0.82 ! 0.82

LOCOMOTIVE (0.00 + 65.00 + 0.00) = 65.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.44 75.51
-8.32 -1.05 0.00 0.00 -4.24 61.90*  -90 90 0.58 75.51 -9.19 -1.33 0.00 0.00
0.00 65.00 ------------------------------------------------------------------
----

 * Bright Zone !

WHEEL (0.00 + 51.24 + 0.00) = 51.24 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.54 69.10
-8.93 -1.25 0.00 0.00 -7.68 51.24  ---------------------------------------
----------------------------

Segment Leq : 65.18 dBA


Results segment # 2: Way Freight (day) ----------------------------------
```

Barrier height for grazing incidence ----------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ----------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 3.21 ! 3.21
 0.50 ! 1.50 ! 0.82 ! 0.82

LOCOMOTIVE (0.00 + 55.24 + 0.00) = 55.24 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
--- -90 90 0.44 65.76
-8.32 -1.05 0.00 0.00 -4.24 52.15* -90 90 0.58 65.76 -9.19 -1.33 0.00 0.00
0.00 55.24 --
----

 * Bright Zone !

WHEEL (0.00 + 38.84 + 0.00) = 38.84 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
--- -90 90 0.54 56.70
-8.93 -1.25 0.00 0.00 -7.68 38.84 --

Segment Leq : 55.34 dBA

Results segment # 3: Passenger (day) ----------

Barrier height for grazing incidence ----------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ----------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 3.21 ! 3.21
 0.50 ! 1.50 ! 0.82 ! 0.82

LOCOMOTIVE (0.00 + 57.70 + 0.00) = 57.70 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
--- -90 90 0.44 68.21
-8.32 -1.05 0.00 0.00 -4.24 54.60* -90 90 0.58 68.21 -9.19 -1.33 0.00 0.00
0.00 57.70 --
----

 * Bright Zone !

WHEEL (0.00 + 40.93 + 0.00) = 40.93 dBA Angle1 Angle2 Alpha RefLeq D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq ----------
----------------------- -90 90 0.54 58.79 -8.93 -1.25 0.00 0.00 -7.68 40.93

Segment Leq : 57.79 dBA

Total Leq All Segments: 66.27 dBA

Results segment # 1: Freight (night) ----------

```
Barrier height for grazing incidence ----------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 2.75 ! 2.75
 0.50 ! 1.50 ! 1.00 ! 1.00

LOCOMOTIVE (0.00 + 66.12 + 0.00) = 66.12 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.44 73.08
-5.10 -1.05 0.00 0.00 -4.87 62.06*  -90 90 0.58 73.08 -5.63 -1.33 0.00 0.00
0.00 66.12 ------------------------------------------------------------------
----

 * Bright Zone !

WHEEL (0.00 + 51.99 + 0.00) = 51.99 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.54 66.67
-5.47 -1.25 0.00 0.00 -7.96 51.99  ---------------------------------------
----------------------------

Segment Leq : 66.28 dBA


Results segment # 2: Way Freight (night) ----------------------------------
----

Barrier height for grazing incidence ----------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 2.75 ! 2.75  0.50 ! 1.50 ! 1.00 ! 1.00

LOCOMOTIVE (0.00 + -6.96 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.44 0.00 -
5.10 -1.05 0.00 0.00 -4.87 -11.03*  -90 90 0.58 0.00 -5.63 -1.33 0.00 0.00
0.00 -6.96 ------------------------------------------------------------------
----

 * Bright Zone !

WHEEL (0.00 + -14.68 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.54 0.00 -
5.47 -1.25 0.00 0.00 -7.96 -14.68  ---------------------------------------
----------------------------

Segment Leq : 0.00 dBA


Results segment # 3: Passenger (night) ----------------------------------
```

```
Barrier height for grazing incidence ------------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 2.75 ! 2.75
 0.50 ! 1.50 ! 1.00 ! 1.00

LOCOMOTIVE (0.00 + -6.96 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.44 0.00 -
5.10 -1.05 0.00 0.00 -4.87 -11.03*  -90 90 0.58 0.00 -5.63 -1.33 0.00 0.00
0.00 -6.96 ----------------------------------------------------------------
----

 * Bright Zone !

WHEEL (0.00 + -14.68 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.54 0.00 -
5.47 -1.25 0.00 0.00 -7.96 -14.68  ---------------------------------------
----------------------------

Segment Leq : 0.00 dBA

Total Leq All Segments: 66.28 dBA




TOTAL Leq FROM ALL SOURCES (DAY): 66.27
 (NIGHT): 66.28
```

STAMSON 5.0 NORMAL REPORT Date: 15-04-2025 15:53:37 MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola1_m.te Time Period: Day/Night 16/8 hours Description:

Rail data, segment # 1: Freight (day/night) ----------
Train ! Trains ! Speed !# loc !# Cars! Eng !Cont
Type ! !(km/h) !/Train!/Train! type !weld ----------+----------+----+------+------+------+----
 1. ! 14.0/4.0 ! 97.0 ! 4.0 !140.0 !Diesel! Yes

Data for Segment # 1: Freight (day/night) ----------
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 57.00 / 34.00 m
Receiver height : 1.50 / 1.50 m Topography : 2 (Flat/gentle slope; with barrier) No Whistle
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 5.50 m
Barrier receiver distance : 39.00 / 16.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

Rail data, segment # 2: Way Freight (day/night) ----------
Train ! Trains ! Speed !# loc !# Cars! Eng !Cont
Type ! !(km/h) !/Train!/Train! type !weld ----------+----------+----+------+------+------+----
 1. ! 4.0/0.0 ! 97.0 ! 4.0 ! 25.0 !Diesel! Yes

Data for Segment # 2: Way Freight (day/night) ----------
Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0 Surface : 1 (Absorptive ground surface) Receiver source distance : 57.00 / 34.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier) No Whistle
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 5.50 m
Barrier receiver distance : 39.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00

```
Rail data, segment # 3: Passenger (day/night) ------------------------------
--------------
Train ! Trains ! Speed !# loc !# Cars! Eng !Cont
Type ! !(km/h) !/Train!/Train! type !weld -----------------+-------------+---
----+------+------+------+----
 1. ! 10.0/0.0 ! 129.0 ! 2.0 ! 10.0 !Diesel! Yes

Data for Segment # 3: Passenger (day/night) ---------------------------------
---------- Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 57.00 /
34.00 m
Receiver height : 1.50 / 1.50 m
Topography : 2 (Flat/gentle slope; with barrier) No Whistle
Barrier angle1 : -90.00 deg Angle2 : 90.00 deg
Barrier height : 5.50 m
Barrier receiver distance : 39.00 / 17.00 m
Source elevation : 0.00 m
Receiver elevation : 0.00 m
Barrier elevation : 0.00 m
Reference angle : 0.00


Results segment # 1: Freight (day)
---------------------------------

Barrier height for grazing incidence ----------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
  4.00 ! 1.50 ! 3.21 ! 3.21
 0.50 ! 1.50 ! 0.82 ! 0.82

LOCOMOTIVE (0.00 + 58.54 + 0.00) = 58.54 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-----------------------------------------------------  -90 90 0.25 75.51
-7.28 -0.67 0.00 0.00 -9.03 58.54  ---------------------------------------
----------------------------

WHEEL (0.00 + 47.16 + 0.00) = 47.16 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-----------------------------------------------------  -90 90 0.36 69.10
-7.89 -0.90 0.00 0.00 -13.15 47.16  ---------------------------------------
----------------------------

Segment Leq : 58.85 dBA


Results segment # 2: Way Freight (day) ----------------------------------

Barrier height for grazing incidence ----------------------------------
Source ! Receiver ! Barrier ! Elevation of Height (m) ! Height (m) ! Height
```

```
(m) ! Barrier Top (m) ------------+-------------+-------------+-------------
 4.00 ! 1.50 ! 3.21 ! 3.21
 0.50 ! 1.50 ! 0.82 ! 0.82

LOCOMOTIVE (0.00 + 48.79 + 0.00) = 48.79 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-----------------------------------------------------------  -90 90 0.25 65.76
-7.28 -0.67 0.00 0.00 -9.03 48.79  ----------------------------------------
----------------------------

WHEEL (0.00 + 34.76 + 0.00) = 34.76 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-----------------------------------------------------------  -90 90 0.36 56.70
-7.89 -0.90 0.00 0.00 -13.15 34.76  ----------------------------------------
----------------------------

Segment Leq : 48.96 dBA


Results segment # 3: Passenger (day) -----------------------------------
 Barrier height for grazing incidence -----------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 3.21 ! 3.21
 0.50 ! 1.50 ! 0.82 ! 0.82

LOCOMOTIVE (0.00 + 51.24 + 0.00) = 51.24 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-----------------------------------------------------------  -90 90 0.25 68.21
-7.28 -0.67 0.00 0.00 -9.03 51.24  ----------------------------------------
----------------------------

WHEEL (0.00 + 36.85 + 0.00) = 36.85 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-----------------------------------------------------------  -90 90 0.36 58.79
-7.89 -0.90 0.00 0.00 -13.15 36.85  ----------------------------------------
----------------------------

Segment Leq : 51.40 dBA

Total Leq All Segments: 59.93 dBA


Results segment # 1: Freight (night) -----------------------------------

Barrier height for grazing incidence -----------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 2.68 ! 2.68
 0.50 ! 1.50 ! 1.03 ! 1.03

LOCOMOTIVE (0.00 + 56.80 + 0.00) = 56.80 dBA
```

```
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.25 73.08
-4.46 -0.67 0.00 0.00 -11.16 56.80  ---------------------------------------
-----------------------------

WHEEL (0.00 + 46.85 + 0.00) = 46.85 dBA Angle1 Angle2 Alpha RefLeq D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq -----------------------------------------------
-----------------------  -90 90 0.36 66.67 -4.83 -0.90 0.00 0.00 -14.09
46.85  ------------------------------------------------------------------

Segment Leq : 57.22 dBA


Results segment # 2: Way Freight (night) -----------------------------------
----

Barrier height for grazing incidence ---------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 2.75 ! 2.75
 0.50 ! 1.50 ! 1.00 ! 1.00

LOCOMOTIVE (0.00 + -16.12 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.25 0.00 -
4.46 -0.67 0.00 0.00 -10.99 -16.12  ---------------------------------------
-----------------------------

WHEEL (0.00 + -19.85 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
-------------------------------------------------------  -90 90 0.36 0.00 -
4.83 -0.90 0.00 0.00 -14.12 -19.85  ---------------------------------------
-----------------------------

Segment Leq : 0.00 dBA


Results segment # 3: Passenger (night) -------------------------------------

Barrier height for grazing incidence ---------------------------------
Source ! Receiver ! Barrier ! Elevation of
Height (m) ! Height (m) ! Height (m) ! Barrier Top (m) ------------+---------
----+-------------+--------------
 4.00 ! 1.50 ! 2.75 ! 2.75
 0.50 ! 1.50 ! 1.00 ! 1.00

LOCOMOTIVE (0.00 + -16.12 + 0.00) = 0.00 dBA Angle1 Angle2 Alpha RefLeq D.Adj
F.Adj W.Adj H.Adj B.Adj SubLeq -----------------------------------------------
-----------------------  -90 90 0.25 0.00 -4.46 -0.67 0.00 0.00 -10.99 -
16.12  ------------------------------------------------------------------

WHEEL (0.00 + -19.85 + 0.00) = 0.00 dBA
Angle1 Angle2 Alpha RefLeq D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------------
```

---------- -90 90 0.36 0.00 -4.83 -0.90 0.00 0.00 -14.12 -19.85 ---------- ----------

Segment Leq : 0.00 dBA

Total Leq All Segments: 57.22 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 59.93
 (NIGHT): 57.22

STAMSON 5.0 NORMAL REPORT Date: 31-10-2024 13:35:54
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: por2.te Time Period: Day/Night 16/8 hours Description:

Road data, segment # 1: glendon Dr (day/night) ----------

Car traffic volume : 13976/1553 veh/TimePeriod
Medium truck volume : 803/89 veh/TimePeriod
Heavy truck volume : 1285/143 veh/TimePeriod
Posted speed limit : 70 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: glendon Dr (day/night) ----------

Angle1 Angle2 : -90.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 131.87 /
131.87 m Receiver height : 7.50 / 7.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Results segment # 1: glendon Dr (day)

Source height = 1.68 m

ROAD (0.00 + 57.89 + 0.00) = 57.89 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -90 90
0.47 72.93 0.00 -13.92 -1.13 0.00 0.00 0.00 57.89 ----------

Segment Leq : 57.89 dBA

Total Leq All Segments: 57.89 dBA

Results segment # 1: glendon Dr (night) ----------
--

Source height = 1.68 m

ROAD (0.00 + 51.36 + 0.00) = 51.36 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -90 90
0.47 66.40 0.00 -13.92 -1.13 0.00 0.00 0.00 51.36 ----------

Segment Leq : 51.36 dBA

Total Leq All Segments: 51.36 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 57.89
 (NIGHT): 51.36

STAMSON 5.0 NORMAL REPORT Date: 31-10-2024 14:54:08
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: ola2.te Time Period: Day/Night 16/8 hours Description:

Road data, segment # 1: glendon Dr (day/night) ----------

Car traffic volume : 13976/1553 veh/TimePeriod
Medium truck volume : 803/89 veh/TimePeriod
Heavy truck volume : 1285/143 veh/TimePeriod
Posted speed limit : 70 km/h
Road gradient : 0 %
Road pavement : 1 (Typical asphalt or concrete)

Data for Segment # 1: glendon Dr (day/night) ----------

Angle1 Angle2 : -45.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 1 (Absorptive ground surface) Receiver source distance : 128.87 /
128.87 m Receiver height : 1.50 / 1.50 m
Topography : 1 (Flat/gentle slope; no barrier) Reference angle : 0.00

Results segment # 1: glendon Dr (day)

Source height = 1.68 m

ROAD (0.00 + 55.20 + 0.00) = 55.20 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -45 90
0.65 72.93 0.00 -15.45 -2.28 0.00 0.00 0.00 55.20 ----------

Segment Leq : 55.20 dBA

Total Leq All Segments: 55.20 dBA

Results segment # 1: glendon Dr (night) ----------
--

Source height = 1.68 m

ROAD (0.00 + 48.67 + 0.00) = 48.67 dBA
Angle1 Angle2 Alpha RefLeq P.Adj D.Adj F.Adj W.Adj H.Adj B.Adj SubLeq -------
--- -45 90
0.65 66.40 0.00 -15.45 -2.28 0.00 0.00 0.00 48.67 ----------

Segment Leq : 48.67 dBA

Total Leq All Segments: 48.67 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 55.20
 (NIGHT): 48.67

BPN-56

Receptor	Source	Time of Day	Location	Sound Levels				Façade and Room Inputs										Source Inputs			Component 1 - Veneer						Component 2 - Glazing						Required Glazing	
				Façade Level	Free Field Correction	Indoor Requirement	Required Reduction	Exposed Façade Height	Exposed Façade Length	Room Depth	Floor Area	Façade Area	Glazing as % of Façade Area	Glazing as % of Floor Area	Veneer as % of Floor Area	Room Absorption	Height of Receptor	Horizontal Distance to Source	Incident Sound Angle	Angle Correction	Source Spectrum	Assumed Veneer	Building Component	Spectrum Correction	Room Correction	% Total Transmitted Energy	Energy Correction	Building Component	Spectrum Correction	Room Correction	% Total Transmitted Energy	Energy Correction	(STC)	
				(dBA)	(dBA)	(dBA)	(dBA)	(m)	(m)	(m)	(m^2)	(m^2)	(%)	(%)	(%)		(m)	(m)	(deg)			(STC)				(%)					(%)			
POR1 First Row of Single Detached Dwellings from Rail Right-of-way	Locomotive	Daytime	Living/Dining	66	3	40	29	3.00	3.00	3.00	9.00	9.00	35%	35%	65%	Intermediate	4.5	37	6.93	0	F	54	D	10	-1	5%	45	C	6	-4	95%	0	*32*	
	Wheel	Daytime	Living/Dining	54	3	40	17	3.00	3.00	3.00	9.00	9.00	35%	35%	65%	Intermediate	4.5	37	6.93	0	B	54	D	2	-1	5%	53	C	1	-4	95%	0	*15*	
	Horn	Daytime	Living/Dining	62	3	40	25	3.00	3.00	3.00	9.00	9.00	35%	35%	65%	Intermediate	4.5	37	6.93	0	B	54	D	2	-1	5%	53	C	1	-4	95%	0	*23*	
																																32	
	Locomotive	Night-time	Living/Dining	62	3	40	25	3.00	3.00	3.00	9.00	9.00	35%	35%	65%	Intermediate	4.5	37	6.93	0	F	54	D	10	-1	5%	45	C	6	-4	95%	0	*28*	
	Wheel	Night-time	Living/Dining	51	3	40	14	3.00	3.00	3.00	9.00	9.00	35%	35%	65%	Intermediate	4.5	37	6.93	0	B	54	D	2	-1	5%	53	C	1	-4	95%	0	*12*	
	Horn	Night-time	Living/Dining	58	3	40	21	3.00	3.00	3.00	9.00	9.00	35%	35%	65%	Intermediate	4.5	37	6.93	0	B	54	D	2	-1	5%	53	C	1	-4	95%	0	*19*	
																																28	**32**
	Locomotive	Daytime	Sleeping Quarters	66	3	40	29	3.00	3.00	3.00	9.00	9.00	25%	25%	75%	Intermediate	4.5	37	6.93	0	F	54	D	10	0	5%	44	C	6	-5	95%	0	*30*	
	Wheel	Daytime	Sleeping Quarters	54	3	40	17	3.00	3.00	3.00	9.00	9.00	25%	25%	75%	Intermediate	4.5	37	6.93	0	B	54	D	2	0	5%	52	C	1	-5	95%	0	*13*	
	Horn	Daytime	Sleeping Quarters	62	3	40	25	3.00	3.00	3.00	9.00	9.00	25%	25%	75%	Intermediate	4.5	37	6.93	0	B	54	D	2	0	5%	52	C	1	-5	95%	0	*21*	
																																31	
	Locomotive	Night-time	Sleeping Quarters	62	3	35	30	3.00	3.00	3.00	9.00	9.00	25%	25%	75%	Intermediate	4.5	37	6.93	0	F	54	D	10	0	5%	44	C	6	-5	95%	0	*31*	
	Wheel	Night-time	Sleeping Quarters	51	3	35	19	3.00	3.00	3.00	9.00	9.00	25%	25%	75%	Intermediate	4.5	37	6.93	0	B	54	D	2	0	5%	52	C	1	-5	95%	0	*15*	
	Horn	Night-time	Sleeping Quarters	58	3	35	26	3.00	3.00	3.00	9.00	9.00	25%	25%	75%	Intermediate	4.5	37	6.93	0	B	54	D	2	0	5%	52	C	1	-5	95%	0	*22*	
																																32	**32**
POR3 10 Storey Apartment Building - Block 21	Roadway	Daytime	Living/Dining	72	3	45	30	3.00	3.00	3.00	9.00	9.00	70%	70%	30%	Intermediate	28.5	20	54.94	2	D	45	D	7	-4	5%	42	C	4	-1	95%	0	*34*	Living / Dining Areas
																																34	
	Roadway	Night-time	Living/Dining	65	3	45	23	3.00	3.00	3.00	9.00	9.00	70%	70%	30%	Intermediate	28.5	20	54.94	2	D	45	D	7	-4	5%	42	C	4	-1	95%	0	*27*	
																																27	**34**
	Roadway	Daytime	Sleeping Quarters	72	3	45	30	3.00	3.00	3.00	9.00	9.00	50%	50%	50%	Intermediate	28.5	20	54.94	2	D	45	D	7	-2	5%	40	C	4	-2	95%	0	*32*	Sleeping Quarters
																																32	
	Roadway	Night-time	Sleeping Quarters	65	3	40	28	3.00	3.00	3.00	9.00	9.00	50%	50%	50%	Intermediate	28.5	20	54.94	2	D	45	D	7	-2	5%	40	C	4	-2	95%	0	*30*	
																																30	**32**

Appendix D

Warning Clauses

Warning Clauses

All warning clauses should be included in agreements that are registered on Title for all Offers of Purchase and Sale, lease/rental agreements, and condominium declarations.

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."

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."

CN "Warning: Canadian National Railway Company or its assigns or successors in interest has or have a rights-of-way within 300 metres from the land the subject hereof. There may be alterations to or expansions of the railway facilities on such rights-of-way in the future including the possibility that the railway or its assigns or successors as aforesaid may expand its operations, which expansion may affect the living environment of the residents in the vicinity, notwithstanding the inclusion of any noise and vibration attenuating measures in the design of the development and individual dwelling(s). CNR will not be responsible for any complaints or claims arising from use of such facilities and/or operations on, over or under the aforesaid rights-of-way."

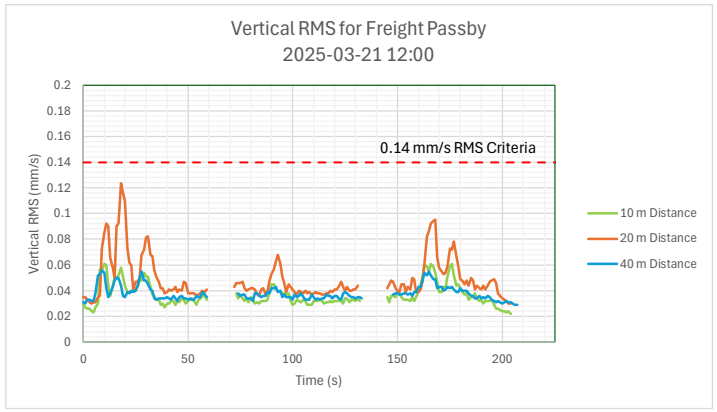
Type B "Purchasers/tenants are advised that despite the inclusion of noise control features in the development and within the building units, sound levels due to increasing rail traffic may on occasions interfere with some activities of the dwelling occupants as the sound levels exceed the sound level limits of the Municipality and the Ministry of the Environment."

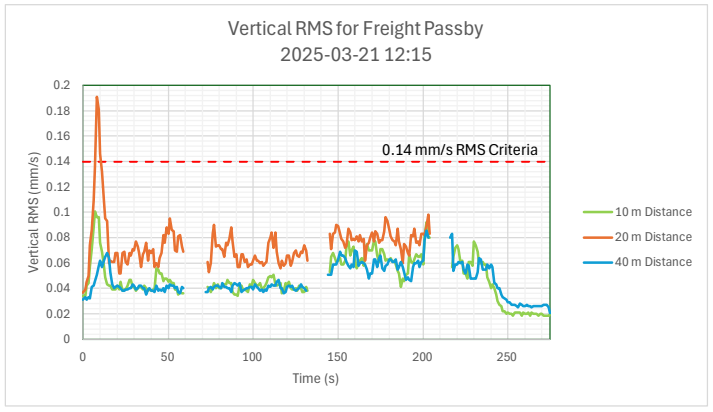
Type F "Purchasers/tenants are advised that sound levels due to the adjacent industry, Masterfeeds facility, are required to comply with sound level limits that are protective of indoor areas and are based on the assumption that windows and exterior doors are closed. This dwelling unit has been supplied with a ventilation/air conditioning system which will allow windows and exterior doors to remain closed."

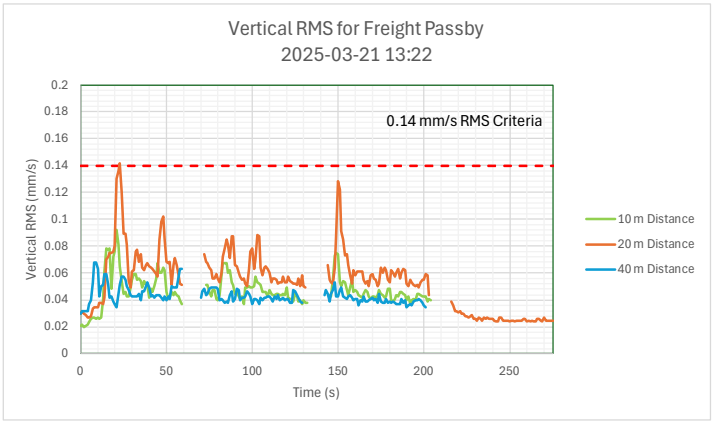
Appendix E

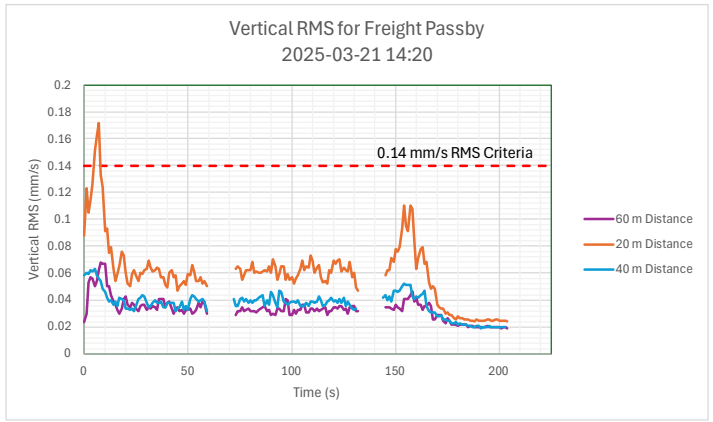
Vibration Data

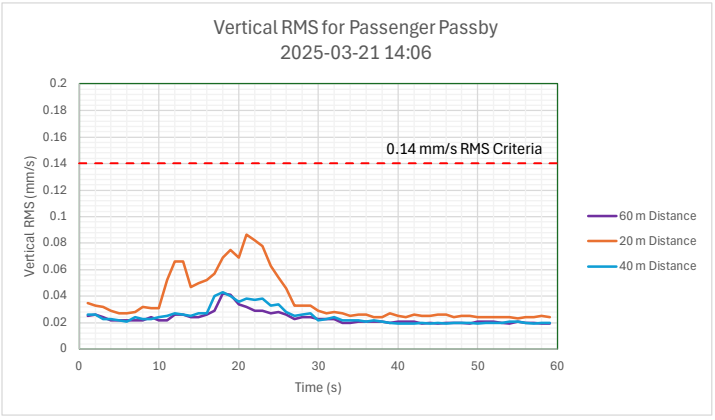
DILLON CONSULTING


Vertical RMS for Freight Passby
2025-03-21 12:00
0.14 mm/s RMS Criteria
Vertical RMS (mm/s)
Time (s)
10 m Distance
20 m Distance
40 m Distance


Vertical RMS for Freight Passby
2025-03-21 12:15
0.14 mm/s RMS Criteria
Vertical RMS (mm/s)
Time (s)
10 m Distance
20 m Distance
40 m Distance


Vertical RMS for Freight Passby
2025-03-21 13:22
0.14 mm/s RMS Criteria
Vertical RMS (mm/s)
Time (s)
10 m Distance
20 m Distance
40 m Distance


Vertical RMS for Freight Passby
2025-03-21 14:20
0.14 mm/s RMS Criteria
Vertical RMS (mm/s)
Time (s)
60 m Distance
20 m Distance
40 m Distance


Vertical RMS for Passenger Passby
2025-03-21 14:06
0.14 mm/s RMS Criteria
Vertical RMS (mm/s)
Time (s)
60 m Distance
20 m Distance
40 m Distance

Appendix F

Surrounding Industrial Information

DILLON CONSULTING

Ontario

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

ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER 2980-AKRNZA
Issue Date: March 30, 2017

Masterfeeds Inc.
171 Railway Avenue
Post Office Box, No. 10
Middlesex Centre, Ontario
N0L 1R0

Site Location: 171 Railway Avenue
Middlesex Centre Municipality, County of Middlesex

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:

Description Section
An animal feed manufacturing facility, consisting of the following processes and support units:

- receiving;
- storage;
- cleaning;
- drying;
- mixing;
- bagging;
- shipping;

including the *Equipment* and any other ancillary and support processes and activities, operating at a *Facility Production Limit* of up to **150,000 tonnes of animal feed per year** 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. "*Acoustic Assessment Report"* means the report, prepared in accordance with *Publication NPC-233* and Appendix A of the *Basic Comprehensive User Guide,* by GHD Limited, dated August 10, 2016 and signed by Erik Martinez, P.Eng., 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 6 of this *Approval.*
4. "*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 6 of this *Approval.*
5. "*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.*
6. "*Acoustic Audit Report"* means a report presenting the results of an *Acoustic Audit,* prepared in accordance with *Publication NPC-233.*
7. "*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.*
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. "*Best Management Practices Plan*" means a document or a set of documents which describe measures to minimize dust emissions from the Facility and/or Equipment.
11. "*Company"* means **Masterfeeds Inc.** 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.*
12. "*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.
13. "*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.*
14. "*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.*
15. "*District Manager"* means the District Manager of the appropriate local district office of the *Ministry,* where the *Facility* is geographically located.
16. "*Emission Summary Table"* means a table described in paragraph 14 of subsection 26 (1) of *O. Reg. 419/05.*
17. "*Environmental Assessment Act"* means the Environmental Assessment Act, R.S.O. 1990, c.E.18, as amended.
18. "*EPA"* means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended.
19. "*Equipment"* means equipment or processes described in the *ESDM Report,* this *Approval* and in the *Schedules* referred to herein and any other equipment or processes.
20. "*Equipment with Specific Operational Limits"* means 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.*

21. "*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.*
22. "*Facility"* means the entire operation located on the property where the *Equipment* is located.
23. "*Facility Production Limit"* means the production limit placed by the *Director* on the main product(s) or raw materials used by the *Facility.*
24. "*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.*
25. "*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.
26. "*Minister"* means the Minister of the Environment and Climate Change or such other member of the Executive Council as may be assigned the administration of the *EPA* under the Executive Council Act.
27. "*Ministry"* means the ministry of the *Minister.*
28. "*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.*
29. "*Noise Control Measures"* means measures to reduce the noise emissions from the *Facility* and/or *Equipment* including, but not limited to, silencers, acoustic louvres, enclosures, absorptive treatment, plenums and barriers.
30. "*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 sound level limits set in Publication NPC-300. It also means the *Noise Abatement Action Plan* prepared by GHD Limited dated August 10, 2016 and signed by Erik Martinez, P.Eng.
31. "*O. Reg. 419/05"* means Ontario Regulation 419/05, Air Pollution – Local Air Quality, as amended.
32. "*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 Erik Martinez / GHD Limited and dated May 2, 2016 submitted in support of the application, and includes any changes to the report made up to the date of issuance of this *Approval.*
33. "*Point of Impingement"* has the same meaning as in section 2 of *O. Reg. 419/05.*

34. "*Point of Reception"* means Point of Reception as defined by *Publication NPC-300.*
35. "*Procedure Document"* means *Ministry* guidance document titled "Procedure for Preparing an Emission Summary and Dispersion Modelling Report" dated February 2017, as amended.
36. "*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.*
37. "*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.
38. "*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.
39. "*Publication NPC-233"* means the *Ministry* Publication NPC-233, "Information to be Submitted for Approval of Stationary Sources of Sound", October, 1995, as amended.
40. "*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.
41. "*Schedules"* means the following schedules attached to this *Approval* and forming part of this *Approval* namely:
    - Schedule A - Supporting Documentation.
42. "*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.
43. "*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**
    I. 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.
2. **LIMITED OPERATIONAL FLEXIBILITY**
    I. Pursuant to section 20.6 (1) of the *EPA* and subject to Conditions 2.II and 2.III 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:
        I. are within the scope of the operations of the *Facility* as described in the *Description Section* of this *Approval;*
        II. do not result in an increase of the *Facility Production Limit* above the level specified in the

Description Section of this *Approval;* and

III. result in compliance with the performance limits as specified in Condition 4.

II. Condition 2.I does not apply to,

I. 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;* or

II. *Modifications* to the *Facility* that would be subject to the *Environmental Assessment Act.*

III. Condition 2.I of this *Approval* shall expire on January 31, 2027 unless this *Approval* is revoked prior to the expiry date.

3. **REQUIREMENT TO REQUEST AN *ACCEPTABLE POINT OF IMPINGEMENT CONCENTRATION***

I. Prior to making a *Modification* to the *Facility* that satisfies Condition 2.I.a. and 2.I.b., the *Company* shall prepare a proposed update to the *ESDM Report* to reflect the proposed *Modification.*

II. 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:

I. 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

II. 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.

III. The request required by Condition 3.II 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.*

IV. If the request required by Condition 3.II is a result of a proposed *Modification* described in Condition 3.I, 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.*

V. If a request is required to be made under Condition 3.II in respect of a proposed *Modification* described in Condition 3.I, the *Company* shall not make the *Modification* mentioned in Condition 3.I unless the request is approved in writing by the *Director.*

VI. If the *Director* notifies the *Company* in writing that the *Director* does not approve the request, the *Company* shall,

I. revise and resubmit the request; or

II. notify the *Director* that it will not be making the *Modification.*

VII. The re-submission mentioned in Condition 3.VI shall be deemed a new submission under Condition 3.II.

VIII. If the *Director* approves the request, the *Company* shall update the *ESDM Report* to reflect the *Modification.*

IX. Conditions 3 does not apply if Condition 2.I has expired.

4. **PERFORMANCE LIMITS**

I. Subject to Condition 4.II, the *Company* shall not discharge or cause or permit the discharge of a *Compound of Concern* into the air if,

I. the *Compound of Concern* has a *Ministry Point of Impingement Limit* and the discharge results in the concentration at a *Point of Impingement* exceeding the *Ministry Point of Impingement Limit;* or

II. 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.

III. Condition 4.I 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.

IV. The *Company* shall:

I. implement by not later than twelve (12) months from the date of this *Approval,* the *Noise Control Measures* as outlined in the *Noise Abatement Action Plan* section of the *Acoustic Assessment Report* prepared by GHD Limited, dated August 10, 2016 and signed by Erik Martinez, P.Eng;

II. ensure, subsequent to the implementation of the proposed *Noise Control Measures* that the noise emissions from the *Facility* comply with the limits set in *Ministry Publication NPC-300;*

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

V. The *Company* shall ensure that the vibration emissions from the *Facility* comply with the limits set out in *Ministry Publication NPC-207.*

VI. The *Company* shall operate any *Equipment with Specific Operational Limits* approved by this *Approval* in accordance with the *Original ESDM Report.*

5. **FUGITIVE DUST CONTROL**

I. The *Company* shall develop in consultation with the *District Manager* and acceptable to the *Director,* a *Best Management Practices Plan* for the control of fugitive dust emissions. This *Best Management Practices Plan* shall include, but not be limited to:

I. identification of the main sources of fugitive dust emissions such as:

i. on-site traffic;
ii. paved roads/areas;
iii. unpaved roads/areas;
iv. material stock piles;
v. loading/unloading areas and loading/unloading techniques;
vi. material spills;
vii. material conveyance systems;
viii. exposed openings in process and storage buildings; and
ix. general work areas.

II. potential causes for high dust emissions and opacity resulting from these sources;

III. preventative and control measures in place or under development to minimize the likelihood of high dust emissions and opacity from the sources of fugitive dust emissions identified above. Details of the preventative and control measures shall include:

i. a description of the control equipment to be installed;

ii. a description of the preventative procedures to be implemented; and/or
iii. the frequency of occurrence of periodic preventative activities, including material application rates, as applicable.

IV. an implementation schedule for the *Best Management Practices Plan,* including training of facility personnel;

V. inspection and maintenance procedures and monitoring initiatives to ensure effective implementation of the preventative and control measures; and

VI. a list of all *Ministry* comments received, if any, on the development of the *Best Management Practices Plan,* and a description of how each *Ministry* comment was addressed in the *Best Management Practices Plan.*

II. The *Company* shall submit the *Best Management Practices Plan* to the *Director* and the *District Manager* not later than six (6) months after the date of this *Approval.*

I. The *Director* may not accept the *Best Management Practices Plan* if the minimum requirements described in Condition No. 5.I were not included in the *Best Management Practices Plan.*

II. If the *Best Management Practices Plan* is not accepted by the *Director,* the *Company* shall submit a *Best Management Practices Plan* acceptable to the *Director* not later than nine months after the date of this *Approval;*

III. Upon acceptance of the *Best Management Practices Plan* by the *Director,* the *Company* shall immediately implement the *Best Management Practices Plan* for the control of fugitive dust emissions to provide effective dust suppression measures to any potential sources of fugitive dust emissions resulting from the operation of the *Facility.*

6. **DOCUMENTATION REQUIREMENTS**

I. The *Company* shall maintain an up-to-date *Log.*

II. No later than June 30 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.

III. 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.*

IV. The *Company* shall, within three (3) months after the expiry of Condition 2.I 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.I of this *Approval* expired.

V. Conditions 6.I and 6.II do not apply if Condition 2.I has expired.

7. **REPORTING REQUIREMENTS**

I. Subject to Condition 7.II, the *Company* shall provide the *Director* no later than August 31 of each year, a *Written Summary Form* to be submitted through the *Ministry's* website that shall include the following:

I. 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;*

II. a summary of each *Modification* satisfying Condition 2.I.a and 2.I.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.*

II. Condition 7.I does not apply if Condition 2.I has expired.

8. **OPERATION AND MAINTENANCE**

I. The *Company* shall 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 odorous emissions;

V. procedures to prevent and/or minimize noise emissions; and

VI. procedures for record keeping activities relating to the operation and maintenance programs.

II. The *Company* shall ensure that all *Processes with Significant Environmental Aspects* are operated and maintained in accordance with this *Approval,* the operating procedures and maintenance programs.

9. **COMPLAINTS RECORDING AND REPORTING**

I. 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:

I. 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.

II. 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.*

III. 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.

IV. Complete and retain on-site a report written within one (1) week of the complaint date. 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.

10. **RECORD KEEPING REQUIREMENTS**

I. 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.

II. 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,

I. a copy of the *Original ESDM Report* and each updated version*;*

II. a copy of each version of the *Acoustic Assessment Report;*

III. supporting information used in the emission rate calculations performed in the *ESDM Reports* and *Acoustic Assessment Reports;*

IV. the records in the *Log;*

V. copies of each *Written Summary Form* provided to the *Ministry* under Condition 7.I of this *Approval;*

VI. records of maintenance, repair and inspection of *Equipment* related to all *Processes with Significant Environmental Aspects;* and

VII. all records related to environmental complaints made by the public as required by Condition 9 of this *Approval.*

11. **REVOCATION OF PREVIOUS APPROVALS**
    I. 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.*
12. ***ACOUSTIC AUDIT***
    I. The *Company* shall carry out *Acoustic Audit* measurements on the actual noise emissions due to the operation of the *Facility.* The *Company* shall:
        I. carry out *Acoustic Audit* measurements in accordance with the procedures in *Publication NPC-103;*
        II. 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 twelve (12) months after the full implementation of the *Noise Control Measures.*
    II. The *Director:*
        I. may not accept the results of the *Acoustic Audit* if the requirements of *Publication NPC-233* were not followed;
        II. may require the *Company* to repeat the *Acoustic Audit* if the results of the *Acoustic Audit* are found unacceptable to the *Director.*

SCHEDULE A

Supporting Documentation

1. Environmental Compliance Approval Application, dated April 26, 2016, signed by Bill Kittmer, Director of Operations and submitted by the *Company;*
2. Emission Summary and Dispersion Modelling Report, prepared by Erik Martinez / GHD Limited and dated May 2, 2016;
3. *Acoustic Assessment Report,* prepared by GHD Limited, dated August 10, 2016 and signed by Erik Martinez, P.Eng; and
4. Additional information provided by Gavin Moore / GHD Limited in emails dated February 21, 2017, March 23, 2017 and March 27, 2017.

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. **FUGITIVE DUST CONTROL**

   Condition No. 5 is included to require the *Company* to develop and implement effective control measures to minimize fugitive dust emissions from all sources at the *Facility.*

4. **DOCUMENTATION REQUIREMENTS**

   Condition No. 6 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.*

5. **REPORTING REQUIREMENTS**

   Condition No. 7 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.*

6. **OPERATION AND MAINTENANCE**

   Condition No. 8 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.

7. **COMPLAINTS RECORDING AND REPORTING PROCEDURE**

   Condition No. 9 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.

8. **RECORD KEEPING REQUIREMENTS**

   Condition No. 10 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.

9. **REVOCATION OF PREVIOUS APPROVALS**

   Condition No. 11 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.*

10. ***ACOUSTIC AUDIT***

    Condition 12 is intended 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.

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:

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.

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 Environmental Commissioner
1075 Bay Street, Suite 605
Toronto, Ontario
M5S 2B1

AND

The Director appointed for the purposes of Part II.1 of the Environmental Protection Act
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 30th day of March, 2017

Rudolf Wan, P.Eng.

Director
appointed for the purposes of Part II.1 of
the *Environmental Protection Act*

KS/
c: District Manager, MOECC London - District
Erik Martinez, GHD Limited