



D-6 COMPATIBILITY and NOISE ASSESSMENT

**Creative Beginnings ELC
2415 University Avenue E
Waterloo ON N2K 0H5**

May 13, 2025

Prepared for:

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Project 1573

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1.0 INTRODUCTION

CCS Engineering Inc. (CCS) was retained by Witzel Dyce Engineering Inc. to prepare D-6 Land Use Compatibility Assessment for the proposed development property - Creative Beginnings ELC (Child Care Center) - located at 2415 University Avenue E in Waterloo ON N2K 0H5.

The purpose of this assessment is to determine if noise, odour, vibration, or dust emissions associated with existing and or planned industrial uses operating in proximity to the proposed sensitive land use may be incompatible as a result of the proposed development property.

This report describes the surrounding agricultural, open space, residential and employment one (E1) land uses, focusing on the nearest employment land uses to the proposed development as having the highest potential to be impacted by the proposed development.

2.0 SITE AND NEIGHBOURHOOD DESCRIPTION

The proposed development is on property at 2415 University Avenue E in Waterloo ON N2K 0H5.

The current use of this property is employment, zoned E1, including a medical clinic use.

This property abuts the municipal boundary with the Township of Woolwich to the North and Northwest.

These lands across Northfield Drive E to the Northwest are agricultural zoned lands and environmental feature / floodplain lands along the Conestogo reiver zoned A and F.

The property to the North, along Country Squire Road, is residential properties zoned R-1 in the Township of Woolwich.

The adjacent property to the immediate Southeast is a municipally owned property, currently used as a wastewater pumping station, owned by the City of Waterloo.

The property to the East is currently a storm water management pond, owned by the City of Waterloo. Beyond the storm water pond is E1 zoned lands that are baseball diamonds used as part of the RIM recreational complex on University Ave E.

The lands across University Ave to the Southeast are currently used for employment purposes, zoned E1, including the Northfield Technology Park which comprises four large office buildings (formerly RIM and Blackberry office buildings / campus) and parking areas that accommodate thousands of employees. Adjacent to the RIM buildings are baseball diamonds and soccer fields used as part of the RIM recreational complex on University Ave E.

The lands across University Ave to the Southwest are used for employment purposes, zoned E1, with the nearest building being the GRT Northfield Drive Maintenance Facility.

Lands beyond the GRT facility along Northfield Dr E and south of University / Bridge St W are Employment lands (E1 to E3), interspersed with mixed used residential / commercial properties along Northfield zoned RMU. South of the Employment lands corridor are residential zoned lands.

Attachment A provides Site Location and Zoning Figures. Attachment B provides the proposed site development layout drawing.

2.1 GUIDELINE D-6 LAND USE COMPATIBILITY

Guideline D-6 – Land Use Compatibility deals with the compatibility between industrial uses and sensitive uses by classification of the industry and identifying an area of influence and establishing recommended minimum setback distances between the industrial operations and sensitive land uses.

D-6 indicates that sensitive land uses can include the following:

- recreational uses which are deemed by the municipality or provincial agency to be sensitive; and/or
- any building or associated amenity area (i.e., may be indoor or outdoor space) which is not directly associated with the industrial use, where humans or the natural environment may be adversely affected by emissions generated by the operation of a nearby industrial facility. For example, the building or amenity area may be associated with residences, senior citizen homes, schools, day care facilities, hospitals, churches and other similar institutional uses, or campgrounds.

The D-6 Industrial Categorization Criteria is summarized in Attachment C. There are three industrial classes:

- Class 1 = light industrial,
- Class 2 = medium industrial and
- Class 3 = heavy industry

The general descriptions of each class are given below:

Class I Industrial Facility – Light Industrial

A place of business for a small-scale, self-contained plant or building which produces/stores a product which is contained in a package and has low probability of fugitive emissions. Outputs are infrequent and could be point source or fugitive emissions for any of the following: noise, odour, dust and/or vibration. There are daytime operations only, with infrequent movement of products and/or heavy trucks and no outside storage.

Class II Industrial Facility – Medium Industrial

A place of business for medium scale processing and manufacturing with outdoor storage of wastes or materials (i.e., it has an open process) and/or there are periodic

outputs of minor annoyance. There are occasional outputs of either point source or fugitive emissions for any of the following: noise, odour, dust and/or vibration, and low probability of fugitive emissions. Shift operations are permitted and there is frequent movement of products and/or heavy trucks during daytime hours.

Class III Industrial Facility – Heavy Industrial

A place of business for large scale manufacturing or processing, characterized by large physical size, outside storage of raw and finished products, large production volumes and continuous movement of products and employees during daily shift operations. It has frequent outputs of major annoyance and there is high probability of fugitive emissions.

The Ministry has identified in the D-6 guideline potential influence areas - areas within which adverse effects may be experienced. The D-6 guideline also outlines recommended minimum separation distances where no development ideally should occur. The D-6 guideline suggests that distances typically be measured between property lines but can also be measured from a specific source to sensitive receptor. These distances are summarized in the table below.

Industry Classification	Recommended Min Separation Distance (m)	Potential Influence Area (m)
Class I – Light Industrial	20	70
Class II – Medium Industrial	70	300
Class III – Heavy Industrial	300	1000

3.0 INDUSTRY CLASSIFICATION AND SURROUNDING LAND USE

The proposed development is on property at 2415 University Avenue E in Waterloo ON N2K 0H5.

The current use of this property is employment, zoned E1, including a medical clinic use.

The neighbouring employment lands incorporate E1 zoned light industrial or commercial type operations, including office buildings.

The RIM campus (2200/20/40 and 2300 University Ave E) would conservatively be considered a class I – light industrial facility.

ECA 3568-8YKP74, October 2012, exists for these properties.

These office buildings are not sources of industrial type noise, air or odour emissions, dust or vibration. Cooling tower equipment is located on top of the buildings within enclosures. Other mechanical equipment such as boilers and emergency back up power generators are inside mechanical buildings and mechanical rooms in the building. The emergency back up generators are exempt from Section 9 of the Act following Ontario Regulation 524/98.



There is a separation distance of approximately 100 m from the nearest structure of this campus to the proposed development.

The GRT maintenance facility (300 Northfield Dr E) is designed to accommodate buses inside for maintenance purposes. The GRT site does not have an ECA registered on the MOE Access Environment database.

There is no exterior maintenance activities or storage. Maintenance bays are facing the opposite direction from the proposed development property and any bus noise on site is blocked by the building.



The building has two bay doors (#23, 24) that face the intersection of University Ave and Northfield Dr towards the proposed development property. The GRT property incorporates 10 ft tall earthen landscape berms and landscaped trees that block the bay doors and two fenced in back up emergency power generators.



Roof top air handling units (HVACs) are situated behind barrier fencing on the roof at the GRT building.

The back up generators are exempt from Section 9 of the Act following Ontario Regulation 524/98.

There is a separation distance of approximately 130 m from the nearest driveway to the proposed development.

The residential houses to the north of the proposed development are approximately 40 m.

The agricultural lands to the North/Northwest across Northfield Drive E are separated by approximately 40 m. If the Township of Woolwich rezoned this property to employment lands that would be compatible with the existing residential houses and employment E1 lands, it would likely be similar class I light industrial or commercial properties that would be located more than 20 m beyond the recommended separation distance and likely at or outside the influence zone of 70 m.

Figure 3 in Attachment D shows the separation distances from the nearest E1 operations to the proposed development property.

All separation distances exceed the D-6 Guideline recommended separation distance of 20 m.

4.0 NOISE IMPACT ASSESSMENT

4.1 INDUSTRIAL NOISE BACKGROUND

NPC 300 is the Environmental Noise Guideline for Stationary and Transportation Sources - Approval and Planning outlining the proper control of sources of noise emissions to the environment. The Ministry of the Environment, Conservation and Parks (MOECP) ensures sources of emissions to the environment are adequately controlled to prevent potential negative effects.

In the province of Ontario, contaminants released by local industrial and commercial facilities are regulated by the MOECP under the Environmental Protection Act. Other Acts including the Planning Act, Municipal Act, etc. establish rules that may require assessment of the effects of noise emissions. The definition of "contaminant" includes sound. The industrial facilities are required to meet NPC 300 guidelines that may apply to limit exposure to noise and vibration that can affect human health and the environment.

The MOECP provides guides and resources to conduct noise and sound level assessments in support of an ECA/EASR. <https://www.ontario.ca/page/noise-and-sound-level-assessments-sample-applications-guides-and-resources>

The applicable noise limit at the sensitive point of reception is the higher of the existing ambient sound level from road traffic/existing approved industry (background sound level) or the exclusion limit outlined in the NPC 300 guideline.

MOECP NPC 300 provides various definitions for noise sensitive buildings and uses:

"Noise sensitive commercial purpose building"

means a building used for a commercial purpose that includes one or more habitable rooms used as sleeping facilities such as a hotel and a motel.

"Noise sensitive institutional purpose building"

means a building used for an institutional purpose, including an educational facility, a day nursery, a hospital, a health care facility, a shelter for emergency housing, a community centre, a place of worship and a detention centre. *A place of worship located in commercially or industrially zoned lands is not considered a noise sensitive institutional purpose building.*

"Noise sensitive land use" means:

- a property of a person that accommodates a dwelling and includes a legal nonconforming residential use; or
- a property of a person that accommodates a building used for a noise sensitive commercial purpose; or

- a property of a person that accommodates a building used for a noise sensitive institutional purpose.

"Noise sensitive space"

means the living and sleeping quarters of dwellings and sleeping quarters of noise sensitive commercial or institutional land uses. Examples include, but are not limited to bedrooms, sleeping quarters such as patient rooms, living/dining rooms, eat-in kitchens, dens, lounges, classrooms, therapy or treatment rooms, assembly spaces for worship, sleeping quarters of detention centres.

4.2 INDUSTRIAL NOISE IMPACTS

The proposed development property will face the GRT maintenance building kitty corner through the Northfield Drive and University Ave intersection. The GRT facility will have buses driving on their pave driveway.

The following assessment was conducted estimating potential bus noise sources and locations for the proposed development property assuming daytime operations, the earthen berms on GRT property, and 10 buses intermittently over 30 minutes an hour driving on the driveway.

Table 1: Sound Source Overview

Source ID	Description	Expected Operating Period	Sound Sequence
TR	Bus route	Daytime	10 truck per hour

Table 2: Noise Source Summary Table

Source ID	Source Description	Sound Power Level (dBA)	Source Location ¹	Sound Characteristics ²	Noise Control Measures ³
TR	Bus route (conservatively using truck sound level)	104.9	O	S	U

O- source location outside, S – steady, U – uncontrolled.

We have assumed a general HVAC and AMU are insignificant relative to these significant bus driving sources.

The noise level estimates are conservative with sound sequences a transport truck used in place for a “city bus”. In fact, many buses in the GRT fleet are electric and sound levels are considerably lower than gas and hybrid buses.

Sound impacts predicted at the proposed development from the bus maintenance facility bus traffic on the GRT driveway are below the Ministry of Environment, Conservation and Parks NPC 300 requirement of 50 dBA during the daytime. Summary tables are given below.

Table 1.1 - Summary of Sound Level Predictions											
Point of Reception Identification POR - 1		Acoustical Classification Class 2					Sound Level Limit (dBA) 50				
Hours of Operation Daytime Operation 07:00 to 19:00 hours											
Is POR - 1 located within 100 metres of the edge of pavement of a 400 series highway; or within 30 metres of the edge of pavement of a provincial highway or a regional road? No											
Unique Source Label	Source Description	Source of Data	DA (metres)	D50 (metres)	Sound Power Level (dBA)	Reference Sound Level (dBA)	Reference Distance (metres)	Barrier Adjustment (dBA)	Tonality Adjustment / Number of Trucks Adjustment (dBA)	Intermittency Adjustment (dBA)	Predicted SL at POR (dBA)
Bus	Bus	Trucks – On-site	130		96			5	10.00	-3.01	47.73
Cumulative Impact / Combined SL											48
Compliance with Ministry Limits											Yes
Acoustic Assessment Report Required											No
Note: Impacts from noise sources must be calculated according to the principle of the “predictable worst case” noise impact, as defined in NPC-300.											

Note: Impacts from noise sources must be calculated according to the principle of the "predictable worst case" noise impact, as defined in NPC-300.

Secondary noise screening detailed calculations are in Attachment E.

Sound impacts predicted at the proposed development from the nearest RIM building campus – building A – roof top chillers – also is predicted in compliance following conservative assumptions for sound levels and that sound levels will emit from behind the roof top equipment enclosures (essentially that the enclosures are not there).

Table 1.1 - Summary of Sound Level Predictions											
Point of Reception Identification POR - 1			Acoustical Classification Class 2					Sound Level Limit (dBA) 50			
Hours of Operation Daytime Operation 07:00 to 19:00 hours											
Is POR - 1 located within 100 metres of the edge of pavement of a 400 series highway; or within 30 metres of the edge of pavement of a provincial highway or a regional road? No											
Unique Source Label	Source Description	Source of Data	DA (metres)	D50 (metres)	Sound Power Level (dBA)	Reference Sound Level (dBA)	Reference Distance (metres)	Barrier Adjustment (dBA)	Tonality Adjustment / Number of Trucks Adjustment (dBA)	Intermittency Adjustment (dBA)	Predicted S at POR (dBA)
Cooling tower	Cooling Tower	Manufacturer's Specifications of Sound Levels at a Distance	200			90	3	5	0	0.00	48.52
Cumulative Impact / Combined SL											49
Compliance with Ministry Limits											Yes
Acoustic Assessment Report Required											No
Note: Impacts from noise sources must be calculated according to the principle of the "predictable worst case" noise impact, as defined in NPC-300.											

Note: Impacts from noise sources must be calculated according to the principle of the "predictable worst case" noise impact, as defined in NPC-300.

Review of Region of Waterloo annual Average Daily Traffic values for Northfield Drive at University Ave in the vicinity of the proposed development property suggest that annual average daily traffic is approximately 13749 vehicles (2024 data). The tables are given below.

23517	KING ST (Regional Road 15) AT Union St
9606	KING ST (Regional Road 15) AT Grand River Hospital (835 King St) Main Entrance
9793	KING ST (Regional Road 15) BTWN Grand River Hospital Main Entrance & Green
13749	NORTHFIELD DR (Regional Road 22) AT University Ave
9429	NORTHFIELD DR E (Regional Road 22) BTWN Toman & University
10915	NORTHFIELD DR (Regional Road 22) AT Toman Dr
10401	NORTHFIELD DR E (Regional Road 22) BTWN BRIDGE & Toman
22284	NORTHFIELD DR (Regional Road 22) AT BRIDGE ST/Bridge St
15652	NORTHFIELD DR E (Regional Road 22) BTWN BRIDGE & Wissler

This data suggests there are approximately 500 vehicles per hour driving by the proposed development property along Northfield Drive.

The dominant noise source in the vicinity of the proposed development property is road traffic on Northfield and University.

5.0 ODOUR AND DUST

The proposed development is on property at 2415 University Avenue E in Waterloo ON N2K 0H5 will not be impacted by neighbouring properties for potential odour and dust emissions.

There are no neighbouring industrial operations with odour potential or dust potential.

Prevailing winds are typically from the West and Northwest. The proposed development would typically be exposed to winds coming across Northfield from the agricultural lands to the West and Northwest.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the Guideline D-6 – Land Use Compatibility review for the proposed development property at 2415 University Avenue E in Waterloo ON N2K 0H5, the surrounding Northfield Dr and University Ave roads, agricultural lands, residential houses, City of Waterloo stormwater ponds and open space lands, and employment land (zoned E1) along Northfield and University are not expected to be adversely impacted by the proposed development with compatibility from noise, dust, or odour emissions.

The GRT bus maintenance center to the Southwest of the proposed development property is separated across the University Ave Northfield Dr intersection by approximately 130 m. The proposed development property will not be impacted by potential noise emissions from GRT buses. Predicted conservative noise impacts from the GRT buses at the maintenance facility are predicted to be lower than 50 dBA during the daytime at the proposed development property and within Ministry of Environment, Conservation and Parks compliance for daytime operations. The dominant noise impacts to properties along Northfield Dr and University Av is from road traffic during the day. A similarly conservative noise assessment is also provided for the RIM buildings campus on University Ave.

Nearby employment zoned properties (zoned E1) are separated from the proposed development property by more than 20 m exceeding the D-6 Guidelines Recommended Minimum Separation Distance.

Based on the compatibility review and noise assessment, it is recommended to install barrier fencing around the proposed outdoor play area to shield the potential outdoor play area and noise receptor.

The barrier should comply with NPC 300 recommendations:

The acoustic barrier fence used as a noise control measure should be high enough to break the line-of-sight between the source and the receptor.

The minimum surface density (face weight) is 20 kg/m^2 .

The barrier should be structurally sound, appropriately designed to withstand wind and snow load, and constructed without cracks or surface gaps. Any gaps under the barrier that are necessary for drainage purposes should be minimized and localized, so that the acoustical performance of the barrier is maintained.

Alternatively to the above description and specification, noise barriers complying with the requirements and certification of CAN/CSA-Z107.9-00 (R2004) - Standard for Certification of Noise Barriers (Reaffirmed 2004), by the Canadian Standards Association, Reference [4](#), are acceptable.

Based on the nature of the operation and the site layout, the proposed development property at 2415 University Avenue E in Waterloo will not cause or impose adverse impact or compatibility concerns for the surrounding employment zoned E1 properties with potential noise, odour or dust emissions.

If you have any questions, please contact the undersigned.

Yours truly,
CCS Engineering Inc.



Jim Anderson, M.Eng., P.Eng.
Principal

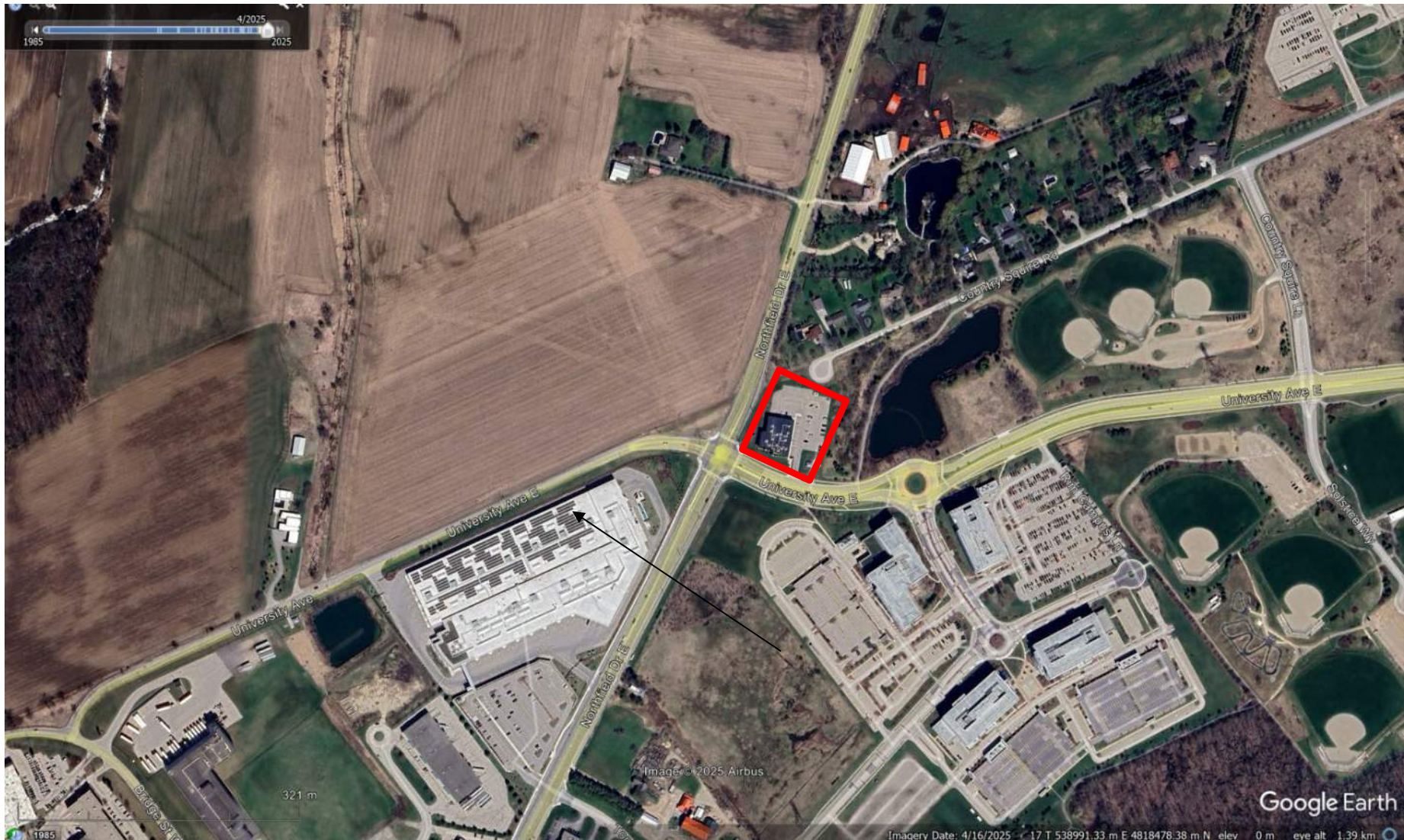
JA/JA

Attachments



ATTACHMENT A

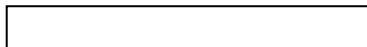
SITE LOCATION AND ZONING FIGURES



Source: Google Earth

Approximate Scale Metres

0



320



SITE LOCATION

Creative Beginnings ELC
2415 University Avenue E
WATERLOO, ONTARIO

By: JA

Date: May 2025

Project No. 1573

Figure 1

Tools

Find Data

Draw



Pan



Zoom In



Zoom Out



Initial View



Previous Extent



Next Extent



Switch to street map



Switch to imagery map



Distance



Area



Estimate Walkshed



Identify



Print



Find zoning



Find Address



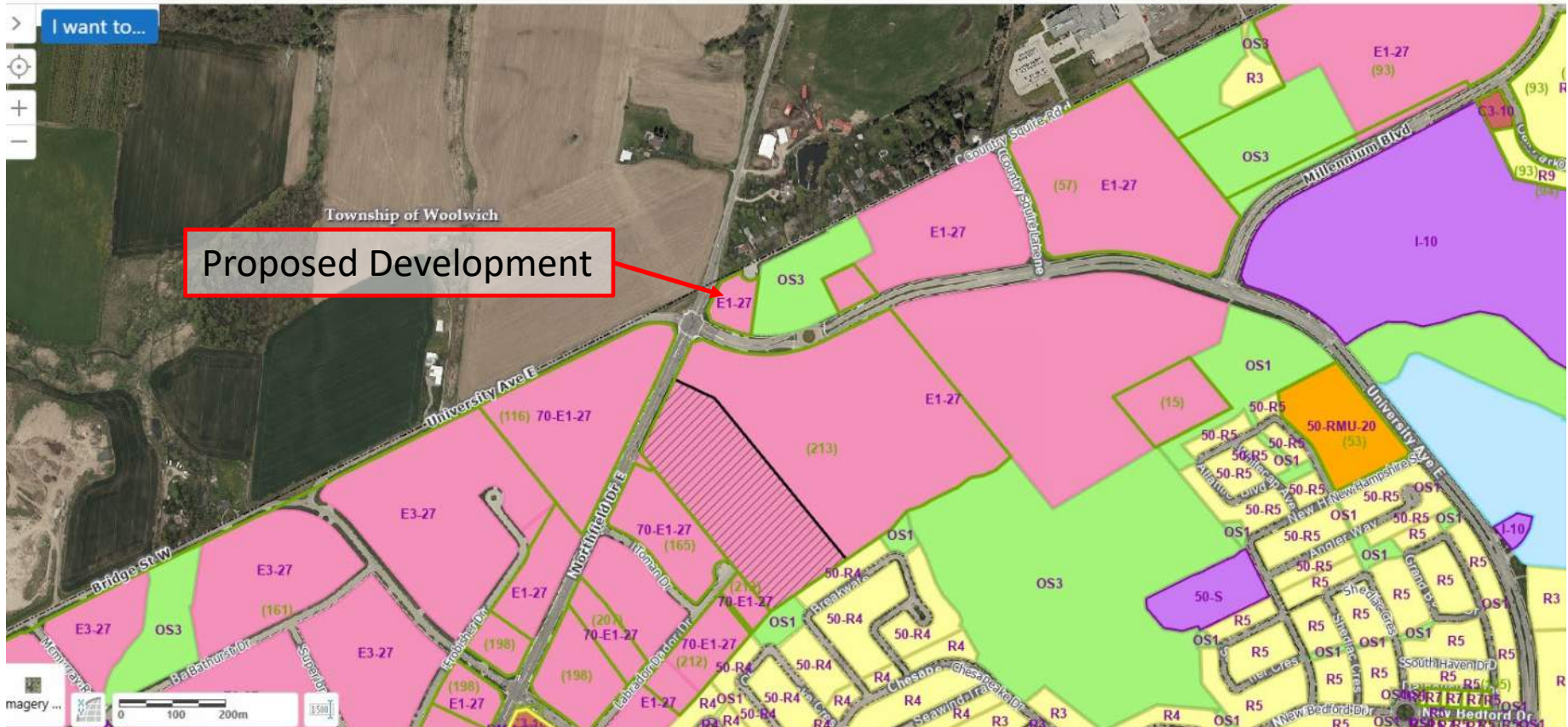
Find sign bylaw

Navigation

Measure

Basic Tools

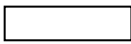
Searches



Source: City of Waterloo

Approximate Scale Metres

0



200



ZONING

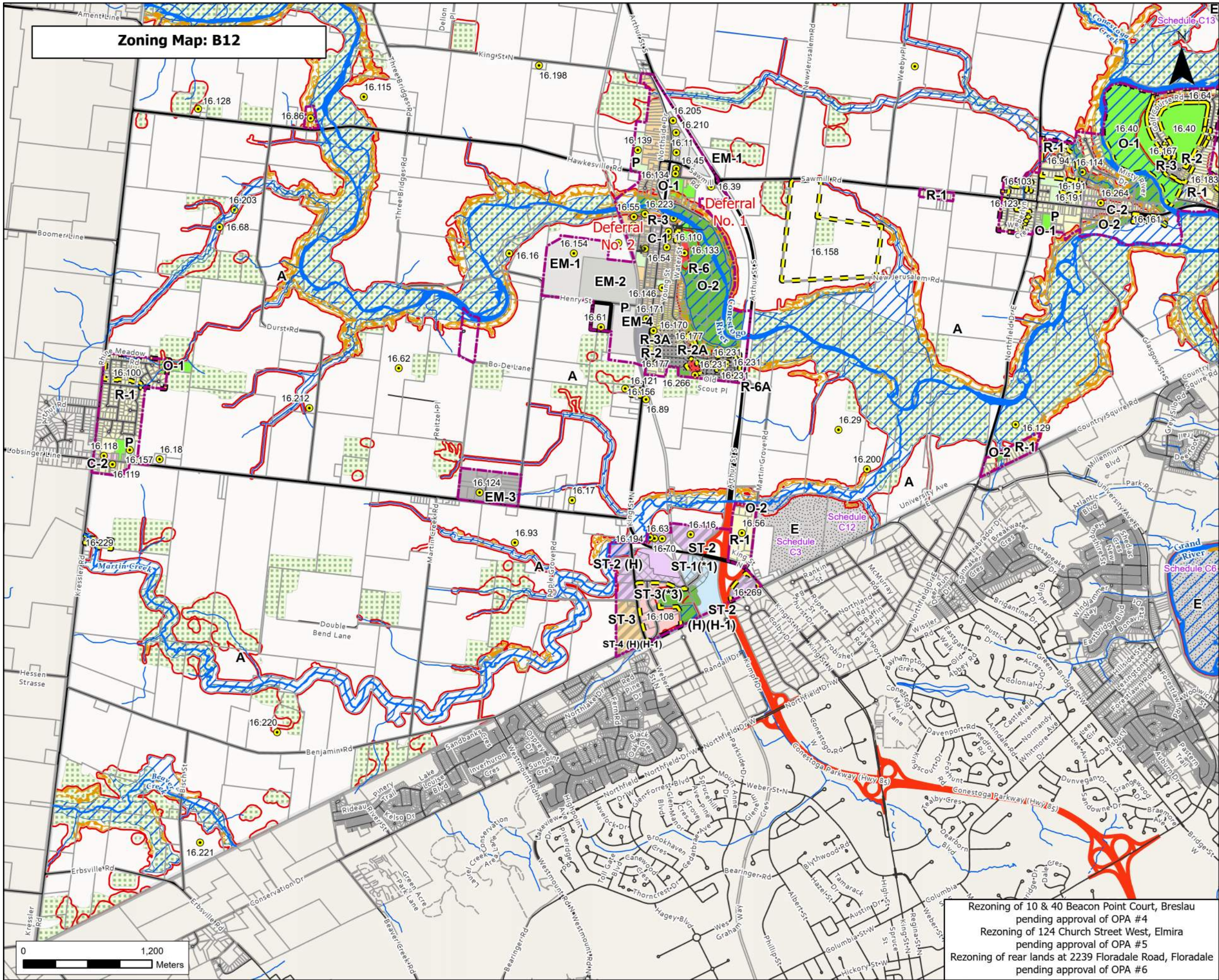
Creative Beginnings ELC
2415 University Avenue E
WATERLOO, ONTARIO

By: JA

Date: May 2025

Project No. 1573

Figure 2



Zoning Schedule B Maps

Legend

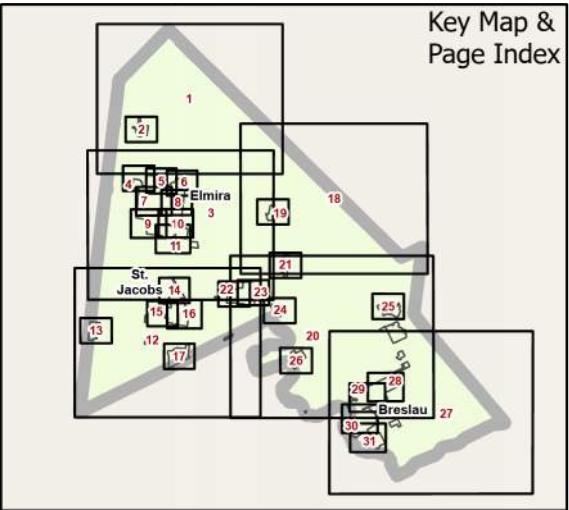
- Property - MPAC
- Settlement Boundary
- Township Boundary
- Site Specific
- Site Specific - Multiple Properties
- Holding
- Design Guidelines (A Suffix)
- Hazard Lands - Regulatory Buffer Area (RBA)
- Hazard Lands - Slope Erosion (SE)
- Hazard Lands - Floodplain (F)
- Hazard Lands - Flood Way (FW)
- Hazard Lands - Flood Fringe (FF)
- Environmental Feature

Stockyards Overlays

- Special Provision
- Holding

ZONE

- A
- C-1
- C-2
- C-3
- C-4
- C-5
- C-6
- E
- EM-1
- EM-2
- EM-3
- EM-4
- EM-5
- EM-6
- EM-7
- EM-8
- MU-1
- MU-2
- MU-3
- MU-4
- O-1
- O-2
- P
- R-1
- R-2
- R-3
- R-4
- R-5
- R-6
- R-7
- ST-1
- ST-2
- ST-3
- ST-4



For display purposes only, the roads, watercourses and railway rights-of-way shown on the map do not illustrate the applicable underlying zone. However, as per Section 2.9.2 a) of the Zoning By-law, where any zone boundary is indicated as following a highway, a street, lane, watercourse or railway right-of-way, such zone boundary shall be construed to follow the centre line of the highway, street, lane, watercourse, or railway right-of-way.

Rezoning of 10 & 40 Beacon Point Court, Breslau pending approval of OPA #4
Rezoning of 124 Church Street West, Elmira pending approval of OPA #5
Rezoning of rear lands at 2239 Floradale Road, Floradale pending approval of OPA #6

ATTACHMENT B

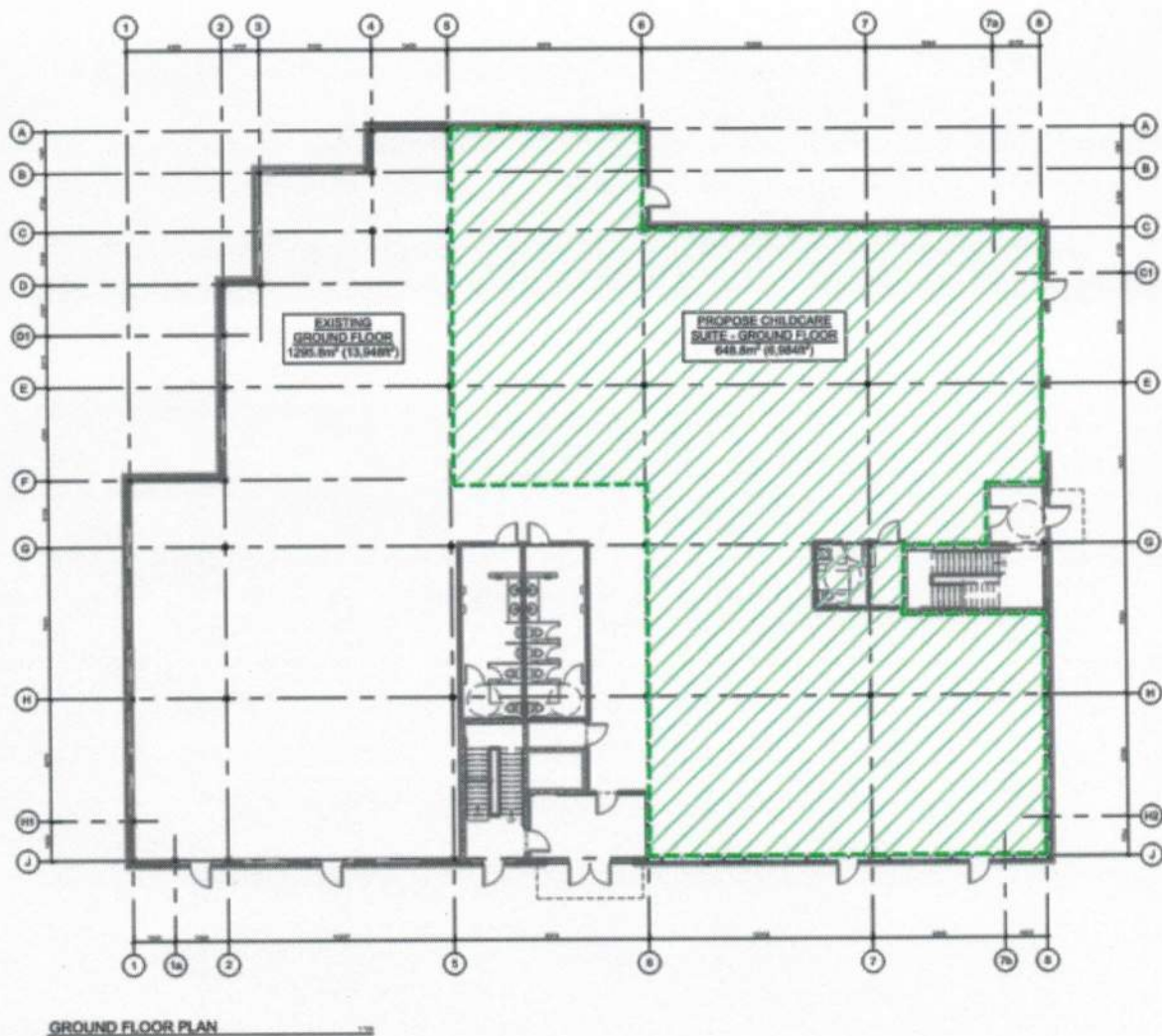
PROPOSED DEVELOPMENT LAYOUT DWG

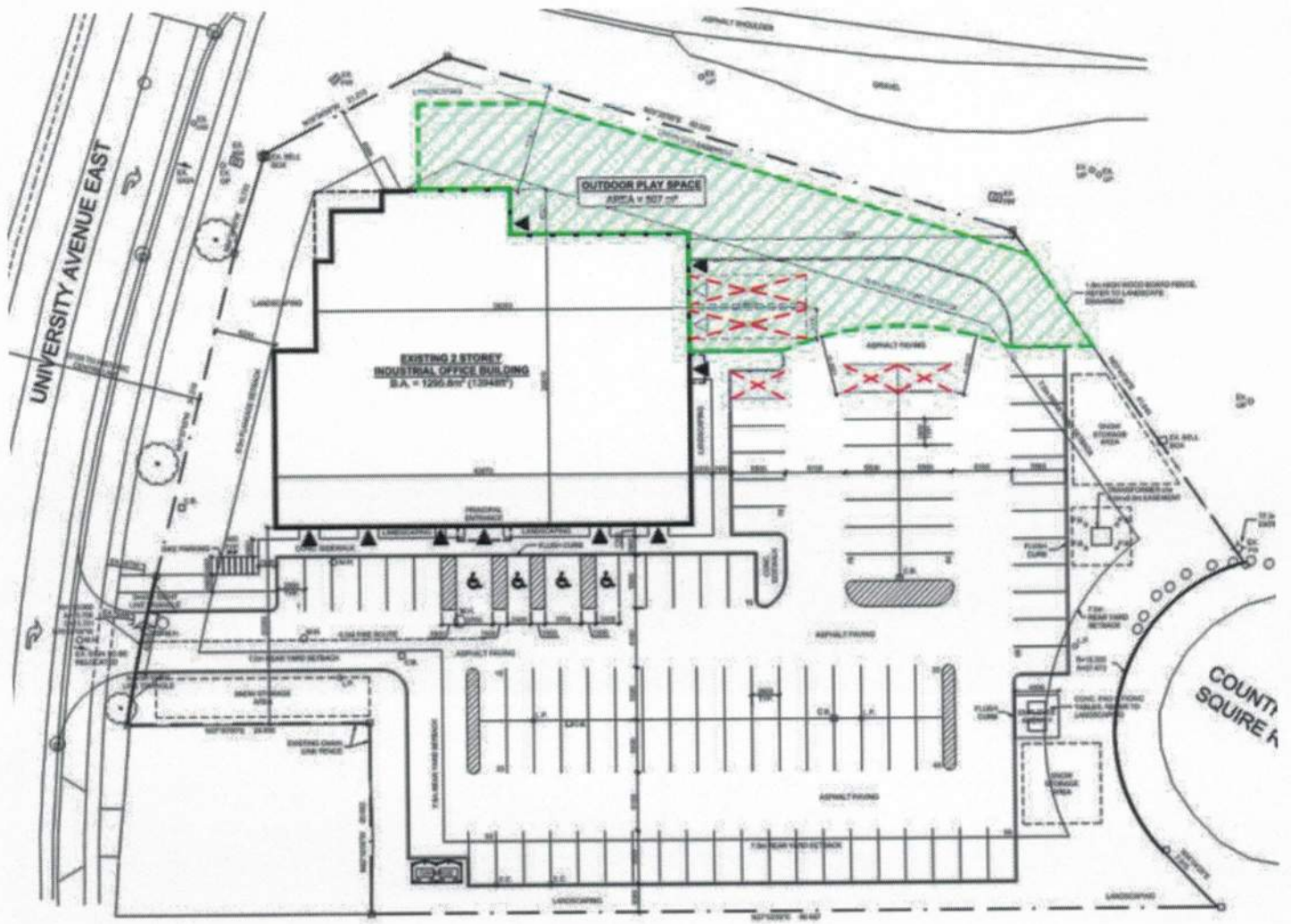
PART B – DESCRIPTION OF DEVELOPMENT PROPOSAL

The subject site, being 2415 University Ave E, is approximately 0.73 hectares in size and located at the northeast corner of the University Ave E and Northfield Dr E intersection. The current use of the building is employment.

The development concept submitted includes a proposal for a tenant fit up and site modifications to allow for a Child Care Centre Use. This concept proposed of 33% of the building floor area to be converted to this ancillary use, as well as the creation of a new outdoor play space.

The development concept as submitted by the applicant, is appended below:





ATTACHMENT C

D-6-1 Industrial Categorization Criteria

D-6-1 Industrial Categorization Criteria

A guide for land use planning authorities on the appropriate distances between industrial areas and sensitive land uses like people's homes and workplaces.

Industrial categorization criteria *						
Category	Outputs	Scale	Process	Operation /Intensity	Possible examples **	
Class 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 - Packaging and crafting services - Distribution of dairy products - Laundry and linen supply	
Class 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 - Dry cleaning services - Feed packing plant	
Class 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 - Breweries - Solvent recovery plants - Soaps and detergent manufacturing - Manufacturing of resins and costing	

Industrial categorization criteria *				
Category	Outputs	Scale	Process	Operation /Intensity
				Possible examples **
				Metal manufacturing

Note: Emissions may be point source or fugitive.

* Note: This Table should not be considered a comprehensive list but is to be used to provide examples of industrial categories.

** Note: The following examples are not limited to the Class indicated on the Table. The categorization of a particular industry will vary with the specifics of the case.

Source: The criteria for categorizing industries into Class I, II or III are derived from Ministry experience and the investigation of complaints related to industrial facilities.

Updated: April 4, 2016
Published: February 26, 2016

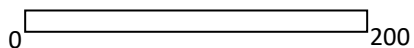
ATTACHMENT D

SEPARATION AND INFLUENCE ZONE FIGURE



Source: Google Earth

Approximate Scale Metres



INDUSTRIAL CLASS SEPARATION

Creative Beginnings ELC
2415 University Avenue E
WATERLOO, ONTARIO

By: JA

Date: May 2025

Project No. 1573

Figure 3

ATTACHMENT E

NOISE CALCULATION TABLES



GRT Bus driveway to proposed development



RIM Building A cooling tower to proposed development.



Fields marked with an asterisk (*) are mandatory.

General Information and Instructions

General:

The *Environmental Protection Act* (EPA) defines "contaminant" to mean any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that causes or may cause an adverse effect. The intended audience for this form are persons who discharge sound to air in Ontario. The form is not meant to be used in respect of any other jurisdiction. While every effort has been made to ensure the accuracy of the information contained in this form, it should not be construed as legal advice. In the event of a conflict with requirements of the EPA or O. Reg. 1/17, the legislative requirements shall determine the appropriate approach.

Information provided in this form and in any supporting information is collected and maintained by the Client Services and Permissions Branch of the Ministry of the Environment, Conservation and Parks ("MECP") under the authority of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended ("EPA"), and will be used to evaluate compliance with MECP noise guidelines for an application for an Environmental Compliance Approval (Air & Noise) made under section 20.2 of Part II.1 of the EPA for approval to engage in an activity mentioned in subsection 9(1) of the EPA. This Secondary Noise Screening Method may also be used in order to prepare a noise report under O. Reg. 1/17 Registrations under Part II.2 of the *Act - Activities Requiring Assessment of Air Emissions*. Supporting information may be claimed as confidential; however, the collection, use and dissemination of this information are governed by the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F.31, as amended. Questions about this collection should be directed to the Customer Services and Outreach Unit Supervisor, Client Services and Permissions Branch, 135 St. Clair Ave. W, 1st Floor, Toronto ON M4V 1P5. Telephone outside Toronto 1-800-461-6290 or in Toronto 416-314-8001.

Instructions:

Refer to the Secondary Noise Screening Method Guide for information and instructions on how to complete this form.

Facility Information

Company Name *

GRT Maintenance

Site Name

GRT Maintenance

North American Industry Classification System (NAICS) Code *
3333333

Site Address - Street information (applies to an address that has civic numbering and street information - includes street number, name, type and direction)

Unit Number

Street Number

300

Street Name

Northfield Dr E

PO Box

Survey Address (used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory)

Non Address Information (includes any additional information to clarify clients' physical location)

Municipality/Unorganized Township

County/District

City/Town *

Waterloo

Province *

ON

Postal Code *

N2V 2G4

Step 1 - Confirm Eligibility and Describe Facility *

1. Do any of the following cases apply to the facility?

- | | | |
|--|------------------------------|--|
| a) Facility has a Point of Reception in a Class 4 Area. | ☐ Yes | ☒ No |
| b) Application for a Renewable Energy Approval. | ☐ Yes | ☒ No |
| c) Includes trucks that have refrigeration units or truck loading/unloading utilizing truck-mounted blowers or pumps. | ☐ Yes | ☒ No |
| d) Facility/operations use significant impulsive and/or vibration sources, including, but not limited to, stamping presses or forging hammers. | ☐ Yes | ☒ No |

2. Provide a description of the facility that meets the Secondary Noise Screening Method Guide's requirements.
truck mtce facility

3. What are the facility's hours of operation? Check all that apply.

- ☒ Daytime Operation 07:00 to 19:00 hours
- ☐ Evening Operation 19:00 to 23:00 hours
- ☐ Nighttime Operation 23:00 to 07:00 hours

4. How many Points of Reception have been identified for assessment, as outlined in Step 3 of the Secondary Noise Screening Method Guide?

1

5. Provide a description of the surrounding area, including transportation corridors and other factors relevant in the determination of the acoustical classification of the study area.
ag, emp

Step 2 - Identify Noise Sources *

6. How many significant noise sources are present at the facility?

1

7. Identify the facility's significant noise sources.

1. Trucks – on-site idling, loading and unloading

Unique Source Label

Bus

Source Description

Bus

8. What are the facility's insignificant noise sources, if any?

HVAC

Step 3 - Complete Secondary Noise Screening Assessment

POR - 1

Step 3.1 - Identify and Describe the Affected Points of Reception *

Provide a description of POR - 1 including a description of its zoning and structures (e.g., two-storey single family dwellings), and direction relative to the facility (e.g., north-west).

Proposed day care 2145 University Ave E

What is the acoustical classification for POR - 1?

Class 2

Is POR - 1 located within 100 metres of the edge of pavement of a 400 series highway; or within 30 metres of the edge of pavement of a provincial highway or a regional road?

☐ Yes ☒ No

Step 3.2 - Identify the Applicable Sound Level Limits *

What is the Sound Level limit (dBA) for POR - 1?

50

Step 3.3 - Calculate Sound Level

What noise sources identified in Question 7 contribute to the Sound Level at POR - 1? Check all that apply.

Noise Sources *

1. ☒ Bus

Source of Data

Trucks – On-site

Required Variables *

L_w ► 96

dBA

D_A ► 130

m N ► 10

t ► 30

min/hour

Adjustments *

Barrier Adjustment (BA)

5 dBA

Number of Trucks Adjustment

10.00 dBA

Intermittency Adjustment (IA)

-3.01 dBA

Equation

$$SL = L_w - 10 \log_{10} (2 \pi D_A^2) + 10 \log_{10} (N) - BA + IA$$

Sound Level

SL ► 47.73

dBA

Step 3.4 - Calculate Cumulative Impact/Combined Sound Levels

Equation

$$SL_{Total} = 10 \log_{10} \left[\left(10^{\left(\frac{SL_1}{10} \right)} + \left(10^{\left(\frac{SL_2}{10} \right)} + \dots + \left(10^{\left(\frac{SL_N}{10} \right)} \right) \right] \right)$$

Cumulative Impact / Combined SL ► 48

dBA

See Appendix A

The facility meets the requirements of the Secondary Noise Screening Method

Step 4 - Appendices

☒ Tables in Appendix A demonstrate that the combined sound level at each affected POR does not exceed the MECP SL limit *

☒ A Site Plan is appended that meets the Secondary Noise Screening Method Guide's requirements *

☒ A Land Use Zoning Designation Plan is appended that meets the Secondary Noise Screening Method Guide's requirements *

☒ A Scaled Area Location Plan is appended that meets the Secondary Noise Screening Method Guide's requirements *

☒ A Summary of Noise Red Flag Table Data used is appended, if applicable

☒ Manufacturer's Noise Data is appended, if applicable

Step 5 - Preparer Statement *

Sign the below Preparer Statement.

By signing this statement you are verifying that:

- I am a representative of the company identified in "Facility Information", or have been retained by the company, for the purposes of completing this Secondary Noise Screening Method form;
- I have confirmed that the facility is eligible to use the Secondary Noise Screening Method (Step 1);
- I have identified the facility's noise sources, and provided appropriate source descriptions (Step 2);
- I have completed the Secondary Noise Screening Assessment in accordance with the Secondary Noise Screening Method Guide (Step 3);
- I have ensured that the applicable sound level limits, sources of data, required variables and adjustments have been entered appropriately (Step 3);
- The required appendices are attached to the Secondary Noise Screening Method form (Step 4);
- To my knowledge, the statements made in the Secondary Noise Screening Method form are true and representative of the facility.
- The facility meets the requirements of the Secondary Noise Screening Method.

☒ By checking this each of the undersigned acknowledge that in providing their name on the applicable line below in electronic form will constitute a signature for the purposes of the *Electronic Commerce Act, 2000*, S.O. 2000, c. 17.

Preparer Last Name

Anderson

Preparer First Name

Jim

Preparer Title

Engineer

Company

CCS Engineering Inc.

Signature

Date (yyyy/mm/dd)

2025/05/10

Appendix A

Table 1.1 - Summary of Sound Level Predictions

Point of Reception Identification POR - 1		Acoustical Classification Class 2						Sound Level Limit (dBA) 50			
Hours of Operation Daytime Operation 07:00 to 19:00 hours											
Is POR - 1 located within 100 metres of the edge of pavement of a 400 series highway; or within 30 metres of the edge of pavement of a provincial highway or a regional road? No											
Unique Source Label	Source Description	Source of Data	DA (metres)	D50 (metres)	Sound Power Level (dBA)	Reference Sound Level (dBA)	Reference Distance (metres)	Barrier Adjustment (dBA)	Tonality Adjustment / Number of Trucks Adjustment (dBA)	Intermittency Adjustment (dBA)	Predicted SL at POR (dBA)
Bus	Bus	Trucks – On-site	130		96			5	10.00	-3.01	47.73
Cumulative Impact / Combined SL											48
Compliance with Ministry Limits											Yes
Acoustic Assessment Report Required											No

Note: Impacts from noise sources must be calculated according to the principle of the "predictable worst case" noise impact, as defined in NPC-300.



Fields marked with an asterisk (*) are mandatory.

General Information and Instructions

General:

The *Environmental Protection Act* (EPA) defines "contaminant" to mean any solid, liquid, gas, odour, heat, sound, vibration, radiation or combination of any of them resulting directly or indirectly from human activities that causes or may cause an adverse effect. The intended audience for this form are persons who discharge sound to air in Ontario. The form is not meant to be used in respect of any other jurisdiction. While every effort has been made to ensure the accuracy of the information contained in this form, it should not be construed as legal advice. In the event of a conflict with requirements of the EPA or O. Reg. 1/17, the legislative requirements shall determine the appropriate approach.

Information provided in this form and in any supporting information is collected and maintained by the Client Services and Permissions Branch of the Ministry of the Environment, Conservation and Parks ("MECP") under the authority of the *Environmental Protection Act*, R.S.O. 1990, c. E.19, as amended ("EPA"), and will be used to evaluate compliance with MECP noise guidelines for an application for an Environmental Compliance Approval (Air & Noise) made under section 20.2 of Part II.1 of the EPA for approval to engage in an activity mentioned in subsection 9(1) of the EPA. This Secondary Noise Screening Method may also be used in order to prepare a noise report under O. Reg. 1/17 Registrations under Part II.2 of the *Act - Activities Requiring Assessment of Air Emissions*. Supporting information may be claimed as confidential; however, the collection, use and dissemination of this information are governed by the *Freedom of Information and Protection of Privacy Act*, R.S.O. 1990, c. F.31, as amended. Questions about this collection should be directed to the Customer Services and Outreach Unit Supervisor, Client Services and Permissions Branch, 135 St. Clair Ave. W, 1st Floor, Toronto ON M4V 1P5. Telephone outside Toronto 1-800-461-6290 or in Toronto 416-314-8001.

Instructions:

Refer to the Secondary Noise Screening Method Guide for information and instructions on how to complete this form.

Facility Information

Company Name *

RIM Northfield Campus

Site Name

RIM Northfield Campus

North American Industry Classification System (NAICS) Code *

333333

Site Address - Street information (applies to an address that has civic numbering and street information - includes street number, name, type and direction)

Unit Number

Street Number

2200

Street Name

University Ave E

PO Box

Survey Address (used for a rural location specified for a subdivided township, an unsubdivided township or unsurveyed territory)

Non Address Information (includes any additional information to clarify clients' physical location)

Municipality/Unorganized Township

County/District

City/Town *

Waterloo

Province *

ON

Postal Code *

N2L 5L2

Step 1 - Confirm Eligibility and Describe Facility *

1. Do any of the following cases apply to the facility?

- | | | |
|--|------------------------------|--|
| a) Facility has a Point of Reception in a Class 4 Area. | ☐ Yes | ☒ No |
| b) Application for a Renewable Energy Approval. | ☐ Yes | ☒ No |
| c) Includes trucks that have refrigeration units or truck loading/unloading utilizing truck-mounted blowers or pumps. | ☐ Yes | ☒ No |
| d) Facility/operations use significant impulsive and/or vibration sources, including, but not limited to, stamping presses or forging hammers. | ☐ Yes | ☒ No |

2. Provide a description of the facility that meets the Secondary Noise Screening Method Guide's requirements.
Office building complex

3. What are the facility's hours of operation? Check all that apply.

- ☒ Daytime Operation 07:00 to 19:00 hours
- ☐ Evening Operation 19:00 to 23:00 hours
- ☐ Nighttime Operation 23:00 to 07:00 hours

4. How many Points of Reception have been identified for assessment, as outlined in Step 3 of the Secondary Noise Screening Method Guide?

1

5. Provide a description of the surrounding area, including transportation corridors and other factors relevant in the determination of the acoustical classification of the study area.
ag, emp, rec

Step 2 - Identify Noise Sources *

6. How many significant noise sources are present at the facility?

1

7. Identify the facility's significant noise sources.

1. Cooling Towers

Unique Source Label
Cooling tower

Source Description
Cooling Tower

8. What are the facility's insignificant noise sources, if any?
boilers, back up gen

Step 3 - Complete Secondary Noise Screening Assessment

POR - 1

Step 3.1 - Identify and Describe the Affected Points of Reception *

Provide a description of POR - 1 including a description of its zoning and structures (e.g., two-storey single family dwellings), and direction relative to the facility (e.g., north-west).

Proposed day care 2145 University Ave E

What is the acoustical classification for POR - 1?

Class 2

Is POR - 1 located within 100 metres of the edge of pavement of a 400 series highway; or within 30 metres of the edge of pavement of a provincial highway or a regional road?

☐ Yes ☒ No

Step 3.2 - Identify the Applicable Sound Level Limits *

What is the Sound Level limit (dBA) for POR - 1?

50

Step 3.3 - Calculate Sound Level

What noise sources identified in Question 7 contribute to the Sound Level at POR - 1? Check all that apply.

Noise Sources *

1. ☒ Cooling tower

Source of Data

Manufacturer's Specifications of Sound Levels at a Distance

Equation

$$K_{\text{size}} = 10 \times \log_{10} \left(\frac{S_{\text{ref}}}{2\pi D_{\text{ref}}^2} \right) \quad S_{\text{ref}} = 2 \times (H + D_{\text{ref}}) \times (L + W + 4D_{\text{ref}}) + (L + 2D_{\text{ref}}) \times (W + 2D_{\text{ref}})$$

Required Variables *

$SL_{\text{ref}} \triangleright 90$ dBA $D_A \triangleright 200$ m $D_{\text{ref}} \triangleright 3$ m $t \triangleright 60$ min/hour

$H \triangleright 1.5$ m $L \triangleright 1.5$ m $W \triangleright 1.5$ m $K_{\text{size}} \triangleright 0.00$

Adjustments *

Barrier Adjustment (BA)

5 dBA

Tonality Adjustment (TA)

0 dBA

Intermittency Adjustment (IA)

0.00 dBA

Equation

$$SL = SL_{\text{ref}} - 20 \times \log_{10} \left(\frac{D_A}{D_{\text{ref}}} \right) + K_{\text{size}} - BA + TA + IA$$

Sound Level

$SL \triangleright 48.52$ dBA

Step 3.4 - Calculate Cumulative Impact/Combined Sound Levels

Equation

$$SL_{\text{Total}} = 10 \log_{10} \left[10^{\left(\frac{SL_1}{10} \right)} + 10^{\left(\frac{SL_2}{10} \right)} + \dots + 10^{\left(\frac{SL_N}{10} \right)} \right]$$

Cumulative Impact / Combined SL $\triangleright 49$ dBA

See Appendix A

The facility meets the requirements of the Secondary Noise Screening Method

Step 4 - Appendices

- ☒ Tables in Appendix A demonstrate that the combined sound level at each affected POR does not exceed the MECP SL limit *
- ☒ A Site Plan is appended that meets the Secondary Noise Screening Method Guide's requirements *
- ☒ A Land Use Zoning Designation Plan is appended that meets the Secondary Noise Screening Method Guide's requirements *
- ☒ A Scaled Area Location Plan is appended that meets the Secondary Noise Screening Method Guide's requirements *
- ☒ A Summary of Noise Red Flag Table Data used is appended, if applicable
- ☒ Manufacturer's Noise Data is appended, if applicable

Step 5 - Preparer Statement *

Sign the below Preparer Statement.

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Anderson

Preparer First Name

Jim

Preparer Title
Engineer

Company
CCS Engineering Inc.

Signature

Date (yyyy/mm/dd)

2025/05/10

Appendix A

Table 1.1 - Summary of Sound Level Predictions

Point of Reception Identification POR - 1		Acoustical Classification Class 2						Sound Level Limit (dBA) 50			
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Unique Source Label	Source Description	Source of Data	DA (metres)	D50 (metres)	Sound Power Level (dBA)	Reference Sound Level (dBA)	Reference Distance (metres)	Barrier Adjustment (dBA)	Tonality Adjustment / Number of Trucks Adjustment (dBA)	Intermittency Adjustment (dBA)	Predicted SL at POR (dBA)
Cooling tower	Cooling Tower	Manufacturer's Specifications of Sound Levels at a Distance	200			90	3	5	0	0.00	48.52
Cumulative Impact / Combined SL											49
Compliance with Ministry Limits											Yes
Acoustic Assessment Report Required											No

Note: Impacts from noise sources must be calculated according to the principle of the "predictable worst case" noise impact, as defined in NPC-300.