

Acoustic Assessment Report - Petawawa Sewage Treatment Plant



October 7, 2022

Prepared for:
Anaergia

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CAMBIUM INC.

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Version Control

Revision	Date	Revision Description	Prepared By:	Submitted To:
1.0	2022-08-10	Initial Acoustic Assessment Report	Cambium Inc.	Anaergia
2.0	2022-10-07	MECP Comments	Cambium Inc.	Anaergia

Company Name

The Corporation of the Town of Petawawa

Company Address

Unit Number	Street Number 560	Street Name Abbie Lane	PO Box
City/Town Petawawa	Province Ontario		Postal Code K8H 2X2
Location of Facility Petawawa, Ontario			

The attached Acoustic Assessment Report was prepared in accordance with the guidance in the ministry document "Information to be Submitted for Approval of Stationary Sources of Sound" (NPC-233) dated October 1995 and the minimum required information identified in the check-list on the reverse of this sheet has been submitted.

Company Contact

Company Contact
The Corporation of the Town of Petawawa

Last Name Unrau	First Name David	Middle Initial
Title Director of Public Works	Telephone Number 613-687-5536	
Signature  David Unrau, P. Eng	<small>Digitally signed by David Unrau, P. Eng DN: cn=David Unrau, P. Eng, o=Town of Petawawa, ou=Director of Public Works, email=dunrau@petawawa.ca, c=CA Date: 2022.08.08 09:15:47 -04'00'</small>	Date (yyyy/mm/dd) 2022/08/08

Technical Contact

Last Name Sellars	First Name James	Middle Initial
Representing Cambium Inc.	Telephone Number 613-690-2767	
Signature 	Date (yyyy/mm/dd) 2022/08/05	

	Required Information	Submitted	Explanation/Reference
1.0	Introduction (Project Background and Overview)	<input checked="" type="checkbox"/> Yes	
2.0	Facility Description		
	2.1 Operating hours of Facility and significant Noise Sources	<input checked="" type="checkbox"/> Yes	
	2.2 Site Plan identifying all significant Noise Sources	<input checked="" type="checkbox"/> Yes	
3.0	Noise Source Summary		
	3.1 Noise Source Summary Table	<input checked="" type="checkbox"/> Yes	
	3.2 Source noise emissions specifications	<input checked="" type="checkbox"/> Yes	
	3.3 Source power/capacity ratings	<input checked="" type="checkbox"/> Yes	
	3.4 Noise control equipment description and acoustical specifications	<input checked="" type="checkbox"/> Yes	
4.0	Point of Reception Noise Impact Calculations		
	4.1 Point of Reception Noise Impact Table	<input checked="" type="checkbox"/> Yes	
	4.2 Point(s) of Reception (POR) list and description	<input checked="" type="checkbox"/> Yes	
	4.3 Land-use Zoning Plan	<input checked="" type="checkbox"/> Yes	
	4.4 Scaled Area Location Plan	<input checked="" type="checkbox"/> Yes	
	4.5 Procedure used to assess noise impacts at each POR	<input checked="" type="checkbox"/> Yes	
	4.6 List of parameters/assumptions used in calculations	<input checked="" type="checkbox"/> Yes	
5.0	Acoustic Assessment Summary		
	5.1 Acoustic Assessment Summary Table	<input checked="" type="checkbox"/> Yes	
	5.2 Rationale for selecting applicable noise guideline limits	<input checked="" type="checkbox"/> Yes	
	5.3 Predictable Worst Case Impacts Operating Scenario	<input checked="" type="checkbox"/> Yes	
6.0	Conclusions		
	6.1 Statement of compliance with the selected noise performance limits	<input checked="" type="checkbox"/> Yes	
7.0	Appendices (Provide details such as)		
	Listing of Insignificant Noise Sources	<input checked="" type="checkbox"/> Yes	
	Manufacturer's Noise Specifications	<input checked="" type="checkbox"/> Yes	
	Calculations	<input checked="" type="checkbox"/> Yes	
	Instrumentation	<input checked="" type="checkbox"/> Yes	
	Meteorology during Sound Level Measurements	<input checked="" type="checkbox"/> Yes	
	Raw Data from Measurements	<input checked="" type="checkbox"/> Yes	
	Drawings (Facility / Equipment)	<input checked="" type="checkbox"/> Yes	



Executive Summary

Anaergia has retained Cambium Inc. to undertake an Acoustic Assessment Report for the proposed expansion of the Petawawa Sewage Treatment Plant located at 560 Abbie Lane in Petawawa, Ontario. This Acoustic Assessment Report was prepared to support an application for a Renewable Energy Approval to determine the noise and vibration impact from the current and proposed operations of equipment at the facility on the most sensitive points of reception in all critical directions near the Facility.

The facility has the potential to operate all hours of the day (24 hours), seven days a week. Specific events such as maintenance testing of the emergency generator, truck loading and tuck movement on site will be limited to daytime hours (07:00-19:00). Noise sources of concern include an existing backup generator, heat exchanger, HVAC equipment, CHP unit, biogas processing equipment, compressors, chillers, and an emergency flare.

Sound level data was calculated for each of the existing and proposed noise producing sources through site measurements, provided manufacturer data, or equipment characteristics and red flag calculations. The source sound levels were used as input to a predictive model to quantify the environmental sound emissions associated with the facility. Acoustic assessment criteria were established in accordance with the sound level limits in the following Ministry of the Environment, Conservation, and Parks NPC-300.

Six locations were identified as being representative of the most sensitive Points of Reception in the vicinity of the facility. The receptor locations are best defined as Class 2 as per the Ministry publication NPC-300. The facility is not a source of vibration. The measurements and analysis indicate that the current sound emissions of the facility are within the applicable sound level limits prescribed by the Ministry of the Environment, Conservation, and Parks during the predictable worst case hour of operations at the nearest residential receptors.



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1.0 Introduction

Anaergia has retained Cambium Inc. to undertake an Acoustic Assessment Report for the proposed expansion of the Petawawa Sewage Treatment Plant located at 560 Abbie Lane in Petawawa, Ontario. This Acoustic Assessment Report was prepared to support an application for a Renewable Energy Approval to determine the noise and vibration impact from the current and proposed operations of equipment at the facility on the most sensitive points of reception in all critical directions near the Facility.

This report has been prepared in accordance with the applicable Ministry of the Environment, Conservation, and Parks NPC-300 guidelines.

The purpose of the assessment is to evaluate the overall noise emissions of the Facility with respect to Ministry NPC-300 noise guidelines. The Facility is not a significant source of vibration and therefore there was no need for a vibration assessment.

A Scaled Area Location Plan showing the site with respect to the surrounding area is provided on Figure 1. A Site Layout Plan, showing the Facility arrangement and source locations, is provided in Figure 2. The Land Use Zoning Plan is provided as Figure 3.

Noise sensitive Points of Reception (POR - as defined in the Ministry guidelines), were selected in all directions surrounding the Facility. For the purpose of this assessment, six locations have been selected to represent the sensitive PORs, labeled as POR1 – POR6 on Figure 1. The closest POR is located approximately 150 metres (m) north of the Facility.



2.0 Facility Description

The main processes at the Facility involve the primary and secondary treatment of wastewater. The Facility receives raw municipal sewage which is first treated in the primary clarifiers, where suspended solids are settled out and removed. The water is then treated in secondary aeration tanks, where activated sludge which contains micro-organisms is mixed in with the water to consume organic material in the water known as biological oxygen demand. The water is then treated in the secondary clarifiers which settle out the micro-organisms and remaining suspended solids. Finally, the water receives ultra-violet treatment for disinfection.

Methane gas from the digesters at the Facility is currently used to power boilers which provide heating for the Facility. The proposed Combined Heat and Power (CHP) unit will divert the waste methane and use it for generating heat and electrical power.

The North American Industrial Classification System (NAICS) code that applies to this Facility is 221320 – Sewage Treatment Facilities.

Noise sources of concern include an existing backup generator, heat exchanger, HVAC equipment, CHP unit, biogas processing equipment, compressors, chillers, and an emergency flare. There is also truck loading and associated movement on the facility which is limited to daytime hours. The Facility is located east of Abbie Lane in an area zoned as Industrial and is surrounded by residential areas to the north and west. The Ottawa River is located to the east of the facility. The Land Use Zoning Plan is provided in Figure 3.



3.0 Noise Source Summary

In preparing the assessment, every reasonable effort was taken by Cambium to ensure that the source numbering convention was consistent with the information submitted by Anaergia, to the Ministry in the Emission Summary and Dispersion Modelling Report (ESDM). The primary noise sources of concern are summarized in Table 1 and include the following:

- AHU-01 to AHU-02 – Point source representing the rooftop air handling unit located on the dewatering and thickening buildings.
- EX-01 to EX-02 – Point source representing the exhaust fan for the dewatering and thickening buildings.
- CHP-01 – Point source representing the proposed Tedom Cento 200 kW combined heating and power unit located within an enclosure.
- CO-01 – Point source representing the CHP unit compressor located outside of the enclosure. A tonal penalty of 5 dB was included for this source.
- CO-02 – Point source representing the Biogas compressor located outside of an enclosure. A tonal penalty of 5 dB was included for this source.
- CO-03 – Point source representing the service gas compressor located outside of an enclosure. A tonal penalty of 5 dB was included for this source.
- CH-01 - Point source representing the chiller for the biogas unit.
- CH-02 – Point source representing the chiller for the proposed CHP unit.
- FL-01 – Point source representing the emergency flare for the CHP unit and biogas equipment.
- TR-01 to TR-02 – Point source representing the existing and proposed locations a truck could idle during loading and unloading; this source is only active during the daytime period (07:00-19:00).



- TR-03 – Point source represents the facility based truck blower and pump; this source is only active during the daytime period (07:00-19:00).
- TR-04 to TR-05 – Onsite truck traffic at the Facility is responsible for bringing material to the Site and removing waste; this source is only active during the daytime period (07:00-19:00). Moving source represents 8 trucks per hour.
- GE-01– Point source representing the measured existing exhaust and louver for the emergency generator.
- GE-02 – Point source representing the existing measured intake for the emergency generator.
- BL-01 – Point source representing the Biogas blower Inlet.
- UF-01 – Point source representing an existing upblast fan measured on site.
- FG-01 – Point source representing an existing water flow grate measured on site.
- VF-01 – Point source representing an existing vent fan measured on site.
- VF-02 – Point source representing an existing vent fan measured on site.
- HE-01 – Point source presenting the existing heat exchanger measured on site. This source is rarely operational under current configurations but will be decommissioned once the proposed equipment has been installed.

The locations of all the significant noise sources are provided in Figure 2.

There are no impulse noise sources located at the Facility.

An emergency backup generator and flare are located on the northwest side of the site and testing will only occur during daytime hours (07:00 – 19:00). The sound level limits for noise produced by emergency equipment operating in non-emergency situations, such as testing or maintenance, are 5 dB greater than the applicable Class 2 limits. The emergency equipment testing was also assessed independently of all other stationary noise sources on site. Figure 4 includes an illustration of the noise impact contours at a height of 4.5 m for the emergency equipment testing during daytime hours.

4.0 Point of Reception Summary

During the site visit conducted on May 27, 2021, six PORs were identified as being representative of the most sensitive PORs in the vicinity of the Facility, labeled as POR1 – POR6 on Figure 1. As per Ministry noise guidelines, “Point of Reception” means any point on the premises of a person where sound or vibration originating from other than those premises is received. For the purpose of an AAR, the points with “the predictable worst case noise impacts” must be considered. The PORs shown on Figure 1 are described below. Actual source to receptor separation distances are provided in Table 2.

- POR1_A is a plane of window POR modelled at 4.5 meters, at a two storey private residence located on Bayshore Drive, north from the Site;
 - POR1_B is an outdoor living area POR at the same private residence, located at the property line in the direction of the Site;
- POR2_A is a plane of window POR modelled at 4.5 meters, at a two storey private residence located on Bayshore Drive, north from the Site;
 - POR2_B is an outdoor living area POR at the same private residence, located at the property line in the direction of the Site;
- POR3_A is a plane of window POR modelled at 4.5 meters, at a two storey private residence located on Earl Street, north from the Site;
 - POR3_B is an outdoor living area POR at the same private residence, located at the property line in the direction of the Site;
- POR4_A is a plane of window POR modelled at 4.5 meters, at a two storey private residence located on East Street, north from the Site;
 - POR4_B is an outdoor living area POR at the same private residence, located at the property line in the direction of the Site;
- POR5_A is a plane of window POR modelled at 4.5 meters, at a two storey private residence located on Dundonald Drive, west from the Site;



- POR5_B is an outdoor living area POR at the same private residence, located on the property 30 metres in the direction of the Site;
- POR6_A is a plane of window POR modelled at 4.5 meters, at a two storey private residence located on Abbie Lane, southeast from the Site;
 - POR6_B is an outdoor living area POR at the same private residence, located at the property line in the direction of the Site;

All the outdoor living area (OLA) PORs were also modelled at a height of 1.5 m. As the selected PORs generally account for receptors in all directions, compliance at the selected PORs will represent compliance at all sensitive PORs.

The lot directly south of the facility is a single lot and an existing dwelling has been constructed and identified as POR6. As a conservative approach and based upon aerial imagery, two additional receptors have been included on the property to represent potential future residential developments, which have been described as POR7 and POR8.

An assessment of potential vacant lots near the facility has also been completed. No vacant lots have been identified that are closer to the facility than previously identified points of reception.

4.1 Assessment Criteria

The Facility is located in Petawawa, Ontario, near industrial and residential areas. Nearby arterial roadways include Victoria Street and Laurentian Drive. This assessment has been based upon the noise criteria for Class 2 and Class 3 areas as per NPC-300. In a Class 2 area, the background sound levels during the daytime (07:00- to 19:00) are dominated by the activities of people, while evening (19:00 to 23:00) and nighttime (23:00 to 07:00) periods are defined by natural sounds. A Class 3 area means a rural area with an acoustical environment that is dominated by natural sounds. The Ministry exclusionary sound level limits are described below. Points of Reception POR6 to POR8 have been assessed as Class 3.



Table 1 - Time Period Ministry Exclusionary Sound Level Limit (dBA)

		Sound Level Limit – L _{eq} (dBA)		
		Day (07:00 – 19:00)	Evening (19:00- 23:00)	Night (23:00 – 07:00)
Class 2 Plane of Window Noise Sensitive Spaces	Steady L _{eq}	50	50	45
Class 2 Outdoor Points of Reception	Steady L _{eq}	50	45	-
Class 3 Plane of Window Noise Sensitive Spaces	Steady L _{eq}	45	40	40
Class Outdoor Points of Reception	Steady L _{eq}	45	40	-

5.0 Impact Assessment

This acoustic analysis at the POR has incorporated all noise sources at the Facility and modelled each as either a point source or a mobile source. Sound power levels for each of the sources were obtained from provided manufacturer data, site measurements, or provided equipment parameters used to perform red flag calculations.

The sound power levels associated with each noise producing unit are summarized in Table 1. The worst case noise source sound power levels are also summarized in Table 1.

The predicted sound levels at the identified POR due to each noise source are summarized in Table 2. The table also includes the distance from each source to the identified POR. The Impact Assessment Results are provided in Table 2. The expected Facility noise impacts at the identified POR are summarized in Table 3. The resulting noise from the emergency flare and generator testing have been assessed independently from other sources on site, as per NPC-300. Table 4 provides a summary of the noise impacts during emergency equipment testing.

5.1 Noise Source Assessment

5.1.1 Sound Power level

Sound power levels were calculated from sound pressure level measurements collected onsite for the individual pieces of equipment, manufacturer data provided by Anaergia, representative data based upon red flag calculations, or previous Cambium measurements at similar sites. Table 1 provides further details regarding the supporting calculations. All measurements were completed following Ministry guidance for measurements including satisfactory weather conditions and pre-post calibrations.

5.1.2 Tonality Assessment

Some types of sound have a special quality which may tend to increase their audibility and potential disturbance or annoyance. For tonal sound, the Ministry NPC-104 guideline stipulate



that a penalty of five A-weighted decibels (dBA) is to be added to the measured sound level if the sound has a “pronounced audible tonal quality such as a whine, screech, buzz or hum”.

Sources that have been identified to be tonal are indicated as such in Table 1, and if identified, a penalty of five dB has been added to the sources’ sound power levels in the noise model.

5.1.3 Existing Noise Control Measures

During the site visit conducted on May 27, 2021, Cambium observed existing noise mitigation on the west side of the fan cooled heat exchangers. The mitigation consists of elevated sheet metal panels, with interior perforated panels facing the fans, providing minimal absorption and shielding. Cambium requested manual operation of the heat exchangers while on site to determine the performance of the installed mitigation measures. The elevated panels demonstrated a minimal reduction in sound levels, especially to the north in the direction of the nearest noise sensitive receptors.

Based upon conversations with Anaergia, the fan cooled heat exchangers are rarely used with the existing equipment on site. The heat exchangers will be permanently decommissioned once the proposed equipment is installed and operational. As such, they were not included in the assessment. It is important to note that this source was measured and observed to be significant noise source while operational. The decommissioning of the heat exchanger will be required to be compliant with the applicable noise limits and should be a conditional requirement.

5.1.4 Variable Operations of Noise Sources

For the purposes of NPC-300 assessment the following variability assumptions have been made.

- The Facility has the potential to operate all hours of the day (24 hours), seven days a week.
- The generator and flare will not be tested for maintenance purposes outside of the daytime period (07:00-19:00).



- Truck loading and movements will not take place outside of the daytime period (07:00–19:00).

5.2 Noise Impact Calculation Procedure

The noise impact calculations were performed using the Bruel and Kjaer *Predictor Type 7810 version 2021* (Predictor) environmental noise prediction and control software. The calculations completed by this software are based on established prediction methods accepted by the Ministry; mainly ISO 9613-2 *Acoustics – Attenuation of Sound during Propagation Outdoors – Part 2: General Method of Calculation* (International Organization for Standardization, December 1996). Predictor is an internationally marketed software package that offers calculation algorithms that comply with ISO 9613-2.

The Predictor software tool is a proprietary noise calculation package used to calculate, assess, predict, and display environmental noise. This software utilizes calculation algorithms and visualization of the predicted noise emissions, often referred to as acoustic mapping. The software calculates the resultant noise level and takes into account a range of factors affecting the propagation of sound including:

- Sources with direct line of site to receivers ignore barriers;
- Negative ground attenuation over barriers is not subtracted;
- The Facility layout, which includes the position and elevation of each building, major equipment and other façades in the propagation path;
- The natural topography and vegetation;
- The magnitude of the noise source in terms of octave band sound power;
- The distance between the source(s) and the POR(s);
- The presence of reflecting surfaces; and,
- The hardness of the ground between the source and the POR(s).

5.3 Calculation Assumptions

The residences have been assessed at a height of 4.5 m (as a worst case) at the perimeter of the house to represent the plane of an exterior door or window of a room located on the second floor of a house in which a person may be exposed to sound if open. The outdoor living space was assessed at a height of 1.5 m at the property line or at a location 30 m from the residence in the direction of the facility

The ground cover of the Facility and the surrounding regions have been considered. Where soft ground occurs, along the highway buffer, and at receptor residential area, a ground factor of one has been inputted which corresponds with “porous ground” (grass land, farming land). The Facility and all other surrounding areas have been inputted as having a semi hard ground factor. The groundcover at Site is comprised of grass, dirt, paved ground and has therefore been considered as semi hard ground with a ground factor of 0.3. This is conservative and aligns with the guidance in ISO 9613-2 Section 7.3.1 where mixed ground is defined as having a value between 0 and 1 with the value reflecting the percentage of porous ground.

The terrain was modelled using elevations retrieved from Ontario Base Map sources.

The worst-case exposure scenarios for each residence assumed that the all sources are running at full capacity. It has also been generally assumed that the noise is emitted from the highest point of the equipment. These maximum heights are conservative compared to using the acoustic centres of the equipment because of the reduction of barrier and ground effects.

All buildings on the Site have been incorporated into the model as being mostly reflective and no other offsite sources of sound were considered (i.e. traffic, etc.).

The Predictor software allows for the setting to ignore negative path length difference, and ignore negative ground attenuation over barriers, this is in line with the Ministry’s preferred settings for CADNA prediction software models.

Due to the numerous conservative assumptions that have been made, the predicted noise impact at the PORs is expected to be greater than the actual noise impact.



5.4 Acoustic Assessment Summary

The modelled predicted sound pressure levels for each noise source are summarized in Table 2 for day, evening, and night periods. The total Facility noise impact at each receptor is presented in Table 3. The sound pressure level contour plot files and the predicted sound levels at the receptors are provided in Appendix A. As indicated in Table 3, the Facility noise impact at each established POR is less than the applicable criteria set by the Ministry.



6.0 Conclusions

Anaergia has retained Cambium Inc. to undertake an Acoustic Assessment Report supporting a Renewable Energy Approval for the proposed expansion of the Petawawa Sewage Treatment Plant located at 560 Abbie Lane in Petawawa, Ontario.

It was determined that the combined sound level resulting from the existing and proposed equipment at each point of receptions, is less than or equal to the applicable sound level limit in MECP Publication NPC-300. The scope of this report includes the proposed expansion and existing noise sources located at the facility.

Please note that this work program and report are governed by the attached Qualifications and Limitations.

Respectfully submitted.

Cambium Inc.

James Sellars
Project Coordinator

Trevor Copeland, P. Eng.
Project Engineer



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Qualifications and Limitations

Limited Warranty

In performing work on behalf of a client, Cambium relies on its client to provide instructions on the scope of its retainer and, on that basis, Cambium determines the precise nature of the work to be performed. Cambium undertakes all work in accordance with applicable accepted industry practices and standards. Unless required under local laws, other than as expressly stated herein, no other warranties or conditions, either expressed or implied, are made regarding the services, work or reports provided.

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Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work or report considers any locations or times other than those from which information, sample results and data was specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those extrapolations.

Only conditions at the site and locations chosen for study by the client are evaluated; no adjacent or other properties are evaluated unless specifically requested by the client. Any physical or other aspects of the site chosen for study by the client, or any other matter not specifically addressed in a report prepared by Cambium, are beyond the scope of the work performed by Cambium and such matters have not been investigated or addressed.

Reliance

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Potential liability to the client arising out of the report is limited to the amount of Cambium's professional liability insurance coverage. Cambium shall only be liable for direct damages to the extent caused by Cambium's negligence and/or breach of contract. Cambium shall not be liable for consequential damages.

Personal Liability

The client expressly agrees that Cambium employees shall have no personal liability to the client with respect to a claim, whether in contract, tort and/or other cause of action in law. Furthermore, the client agrees that it will bring no proceedings nor take any action in any court of law against Cambium employees in their personal capacity.



7.0 References

Bies, D. A., & Hansen, C. H. (2003). *Engineering Noise Control Theory and Practice*. New York: Spon Press.

International Organization for Standardization. (December 1996). *ISO 9613-2 Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation*.

Ontario Ministry of the Environment. (2016). Publication NPC-233: Information to be Submitted for Approval of Stationary Sources of Sound.

Ontario Ministry of the Environment and Climate Change. (2017). *NPC-300 - Environmental Noise Guideline Stationary and Transportation Sources - Approval and Planning*.

Appended Figures

**ACOUSTIC ASSESSMENT
REPORT**
TOWN OF PETAWAWA
560 Abbie Lane
Petawawa, Ontario

LEGEND

-  Receptor
-  Major Road
-  Minor Road
-  Watercourse, Permanent
-  Contour 5m Interval (Major)
-  Contour 5m Interval (Minor)
-  Lot / Concession
-  Unevaluated Wetlands
-  Water Area
-  Wooded Area
-  Building
-  Site (approximate)

Notes:
 - Base mapping features are © Queen's Printer of Ontario, 2019 (this does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government).
 - Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
 - Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.



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SITE LOCATION PLAN

Project No.: 11757-003	Date: October 2022
Scale: 1:4,500	Rev.: Projection: NAD 1983 UTM Zone 18N
Created by: TLC	Checked by: SLB
Figure: 1	

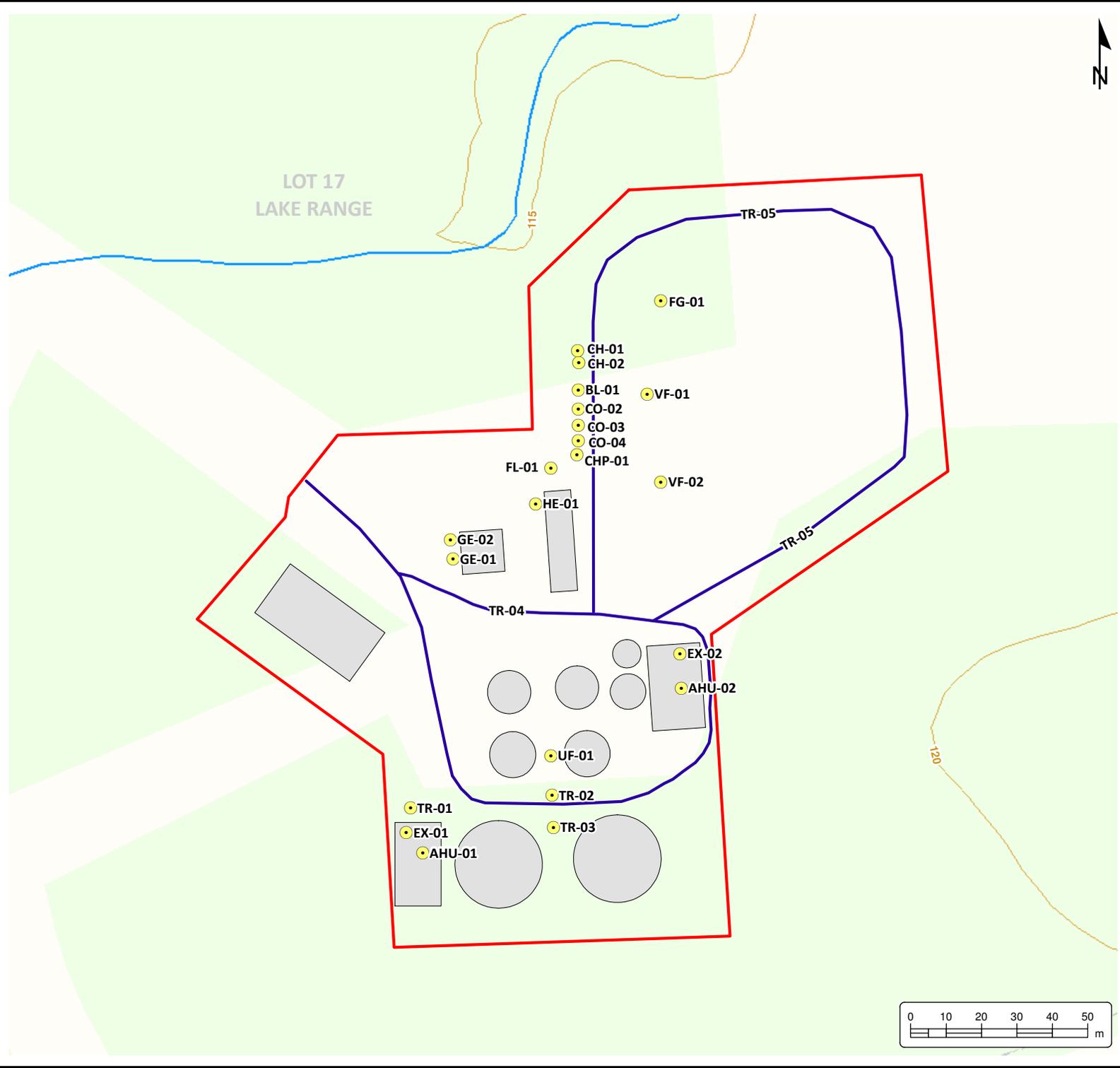


Main Entrance (approx.):
 E: 325438 N: 5085474
 NAD 1983 UTM Zone 18N

Southwest Property Corner (approx.):
 E: 325466 N: 5085352
 NAD 1983 UTM Zone 18N

O:\GIS\MXDs\11700-11799\11757-003_IDM Designworks - Air & Noise - Petawawa STP\2022-10-04\AAR - FIG 1 - Site Location Plan.mxd

O:\GIS\MXDs\11700-11799\11757-003_IDM Designworks - Air & Noise - Petawawa STP\2022-10-04\AAR - FIG 2 - Site Plan.mxd



ACOUSTIC ASSESSMENT REPORT
TOWN OF PETAWAWA
 560 Abbie Lane
 Petawawa, Ontario

LEGEND

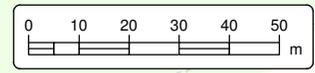
- Point Source
- Moving Source
- ➔ Watercourse, Permanent
- Contour 5m Interval (Minor)
- Lot / Concession
- Wooded Area
- Building
- Site (approximate)

Notes:
 - Base mapping features are © Queen's Printer of Ontario, 2019 (this does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government).
 - Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
 - Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.

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SITE PLAN

Project No.:	11757-003	Date:	October 2022
Scale:	1:1,500	Projection:	NAD 1983 UTM Zone 18N
Created by:	TLC	Checked by:	SLB
			2



**ACOUSTIC ASSESSMENT
REPORT**
TOWN OF PETAWAWA
560 Abbie Lane
Petawawa, Ontario

LEGEND

 Site (approximate)

17

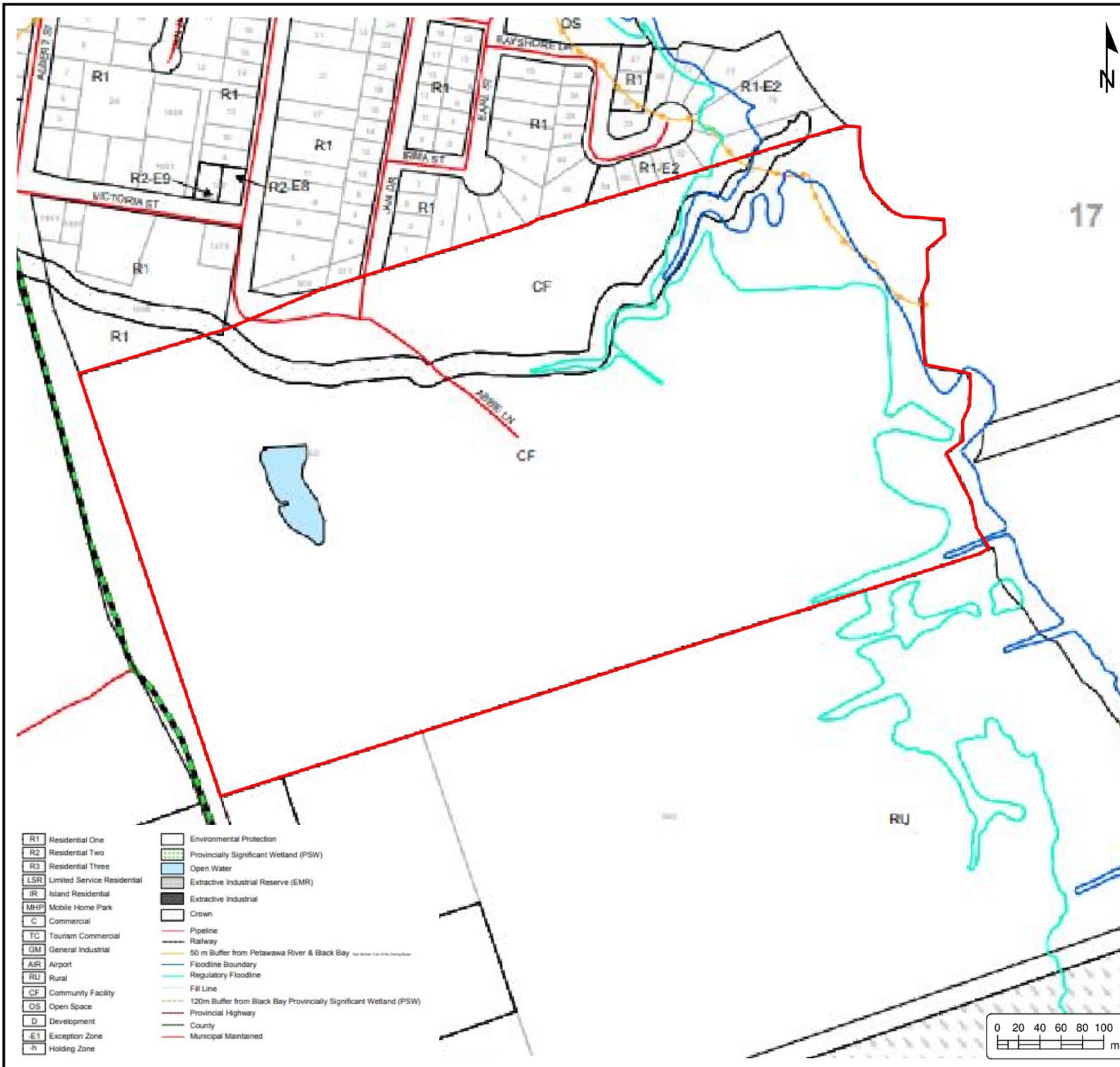
Notes:
- Zoning was obtained from Map 1 of Schedule "A" to By-law No. 456/07 passed the 15th day of October, 2007.
- Base mapping features are © Queen's Printer of Ontario, 2019 (this does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
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**LAND USE ZONING
DESIGNATION PLAN**

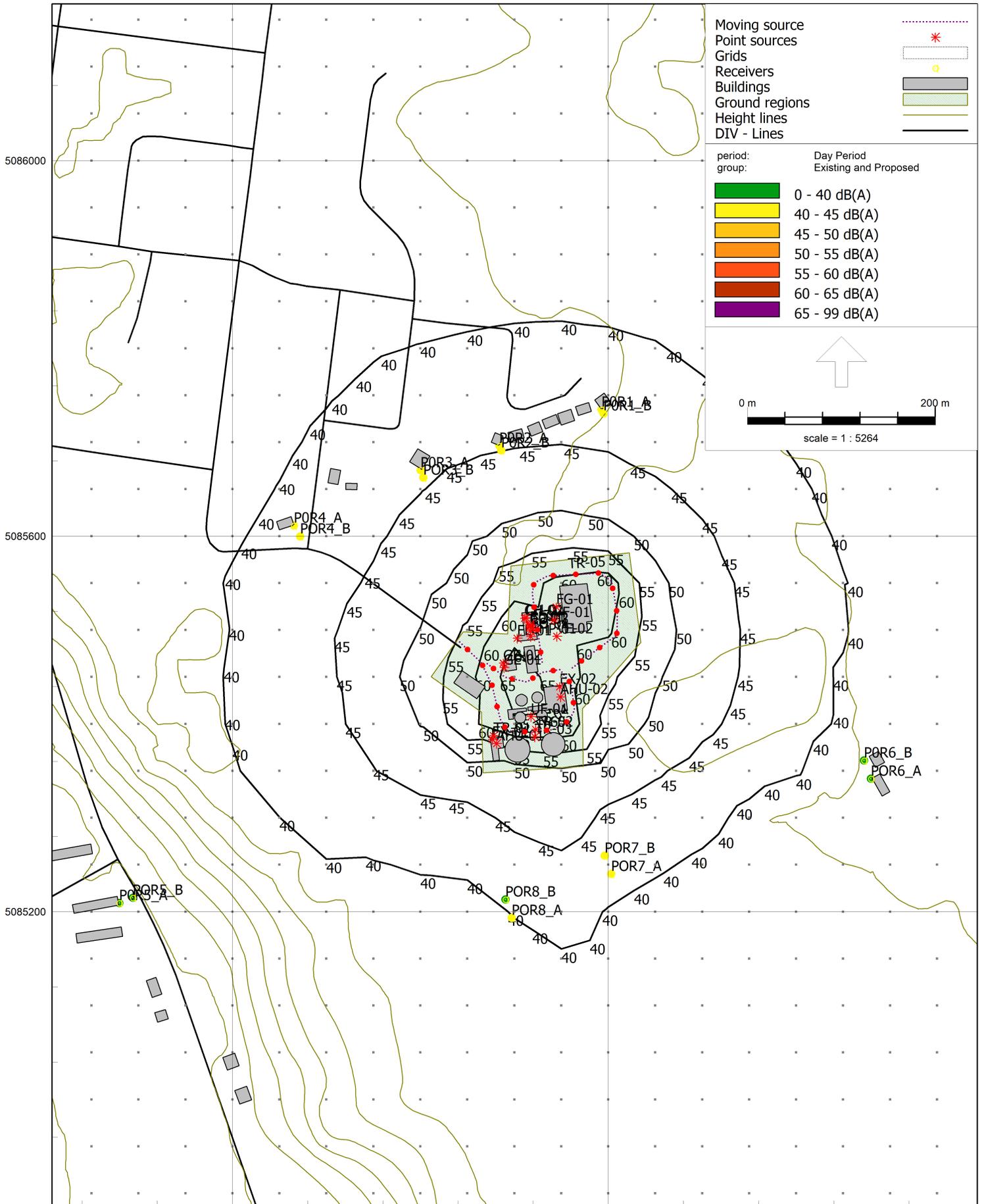
Project No.:	11757-003	Date:	October 2022
Scale:	1:5,000	Projection:	NAD 1983 UTM Zone 18N
Created by:	TLC	Checked by:	SLB
Figure:	3		



R1	Residential One		Environmental Protection
R2	Residential Two		Provincially Significant Wetland (PSW)
R3	Residential Three		Open Water
LSR	Limited Service Residential		Extractive Industrial Reserve (EMR)
IR	Island Residential		Extractive Industrial
MHP	Mobile Home Park		Crown
C	Commercial		Pipeline
TC	Tourism Commercial		Railway
GM	General Industrial		50 m Buffer from Petawawa River & Black Bay
AIR	Airport		Floodline Boundary
RU	Rural		Regulatory Floodline
CF	Community Facility		Fill Line
OS	Open Space		120m Buffer from Black Bay Provincially Significant Wetland (PSW)
D	Development		Provincial Highway
E1	Exception Zone		County
h	Holding Zone		Municipal Maintained

Figure 4 - Existing and Proposal Equipment - Daytime - 4.5m Contours

4 Oct 2022, 07:45



325200

325600

Figure 5 - Existing and Proposed Equipment - Nighttime - 4.5 m Contour Height

4 Oct 2022, 07:47

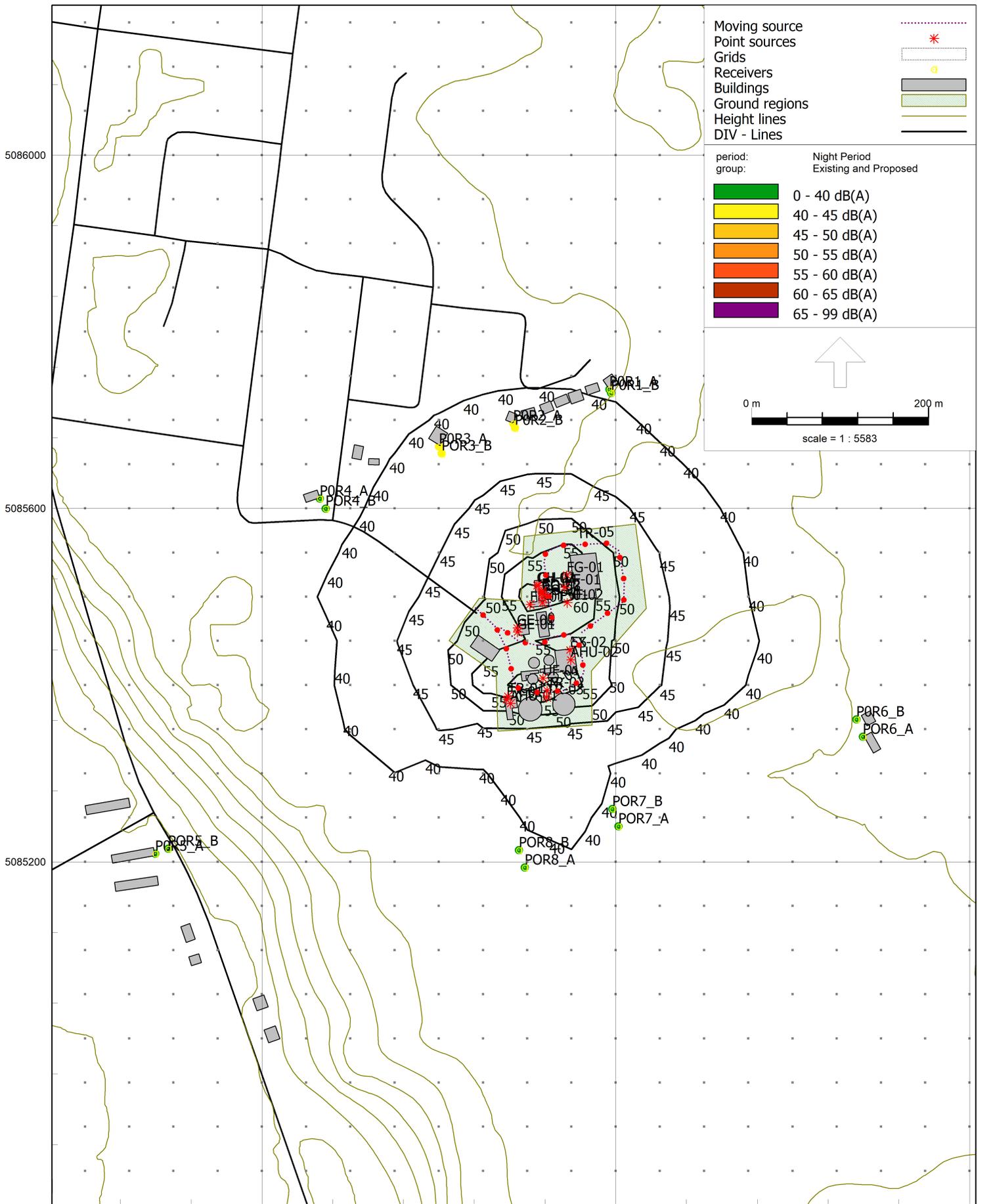
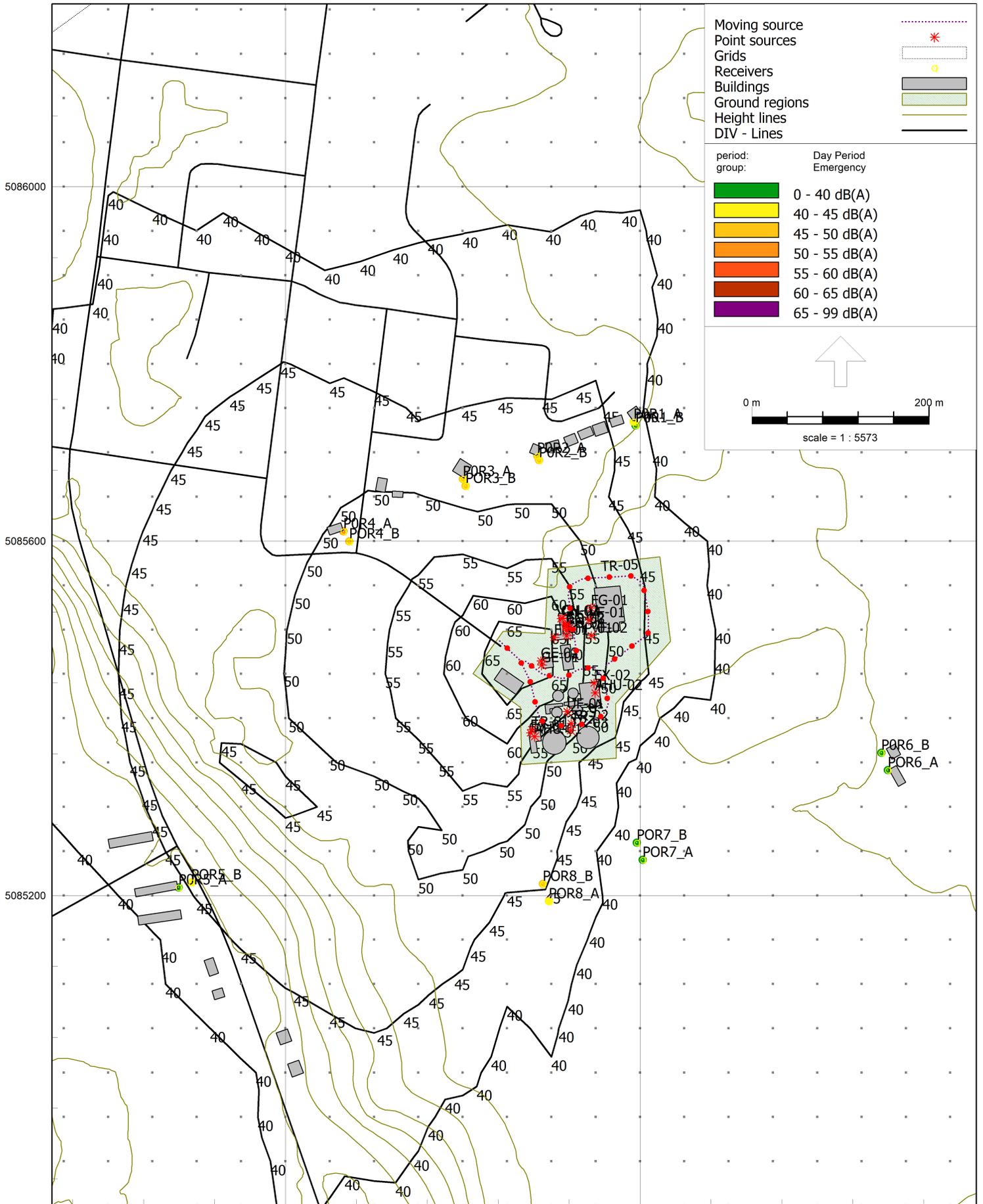


Figure 6 - Emergency Equipment - Daytime - 4.5 m Contour Height

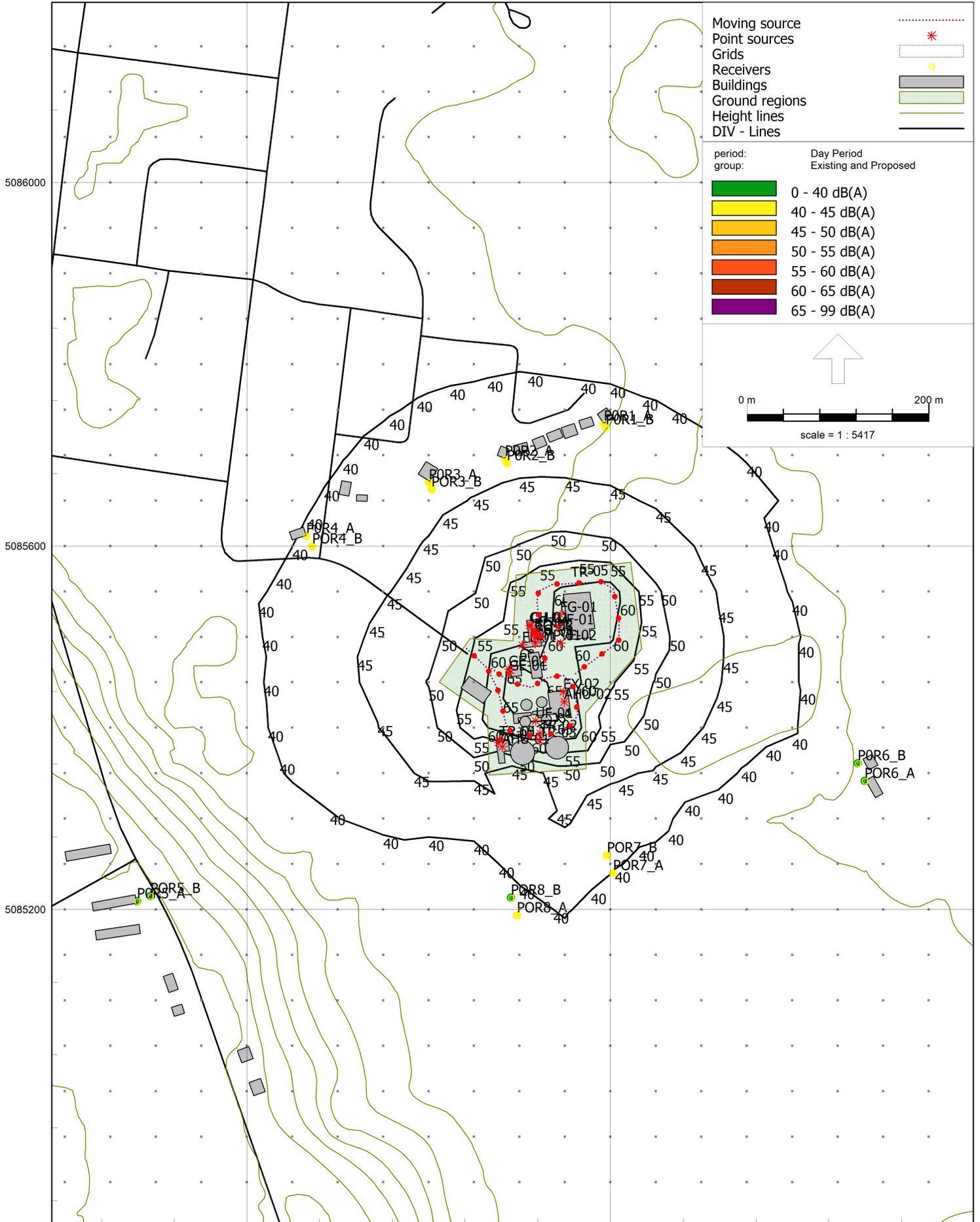
4 Oct 2022, 07:48



325200

325600

Figure 7 - Existing and Proposed Equipment - Daytime - 1.5 m Contours



Appended Tables



Table 1 - Representative Noise Source Summary Table

Source ID	Description	A-Weighted Sound Power Level After Reduction									Total dBA	Data Source	Equipment Location	Operating Times/Limits day, evening, night (%)	Proposed Noise Control ¹	Noise Quality ²	Source Location	UTM Easting	UTM Northing	Height Above Roof top or Ground
		63	125	250	500	1000	2000	4000	8000											
AHU-01	Dewatering AHU	56.6	64.1	68.1	73.5	74.7	71.6	66.1	56.1	79.0	Cambium Database	Dewatering Building	100,100,100	N/A	SS	Roof top	325481	5085379	1.0	
EX-01	Dewatering Building Exhaust Fan	44.3	56.1	61.4	61.0	60.4	57.8	53.4	41.3	67.0	Cambium Database	Dewatering Building	100,100,100	N/A	SS	Roof top	325477	5085384	2.0	
EX-02	Thickening Building Exhaust Fan	44.3	56.1	61.4	61.0	60.4	57.8	53.4	41.3	67.0	Cambium Database	Thickening Building	100,100,100	N/A	SS	Roof top	325548	5085440	0.5	
AHU-02	Thickening Building AHU	56.6	64.1	68.1	73.5	74.7	71.6	66.1	56.1	79.0	Sound Data	Thickening Building	100,100,100	N/A	SS	Roof top	325549	5085429	1.0	
CHP-01	CHP Unit Enclosed	75.1	85.2	83.1	85.6	83.7	83.6	80.9	73.6	91.9	Sound Data	CHP/Biogas Area	100,100,100	N/A	SS	CHP/Biogas Area	325517	5085493	2.0	
CO-01	CHP Compressor	73.0	83.4	84.5	88.3	91.0	88.4	83.7	73.6	95.3	Sound Data	CHP/Biogas Area	100,100,100	N/A	T	CHP/Biogas Area	325517	5085499	1.0	
CO-02	Biogas Compressors	63.0	73.4	74.5	78.3	81.0	78.4	73.7	63.6	85.3	Sound Data	CHP/Biogas Area	100,100,100	N/A	T	CHP/Biogas Area	325517	5085505	1.0	
CH-01	Biogas Chiller	58.0	68.4	69.5	73.3	76.0	73.4	68.7	58.6	80.3	Sound Data	CHP/Biogas Area	100,100,100	N/A	SS	CHP/Biogas Area	325512	5085513	2.0	
CH-02	CHP Chiller	71.0	81.4	82.5	86.3	89.0	86.4	81.7	71.6	93.3	Sound Data	CHP/Biogas Area	100,100,100	N/A	SS	CHP/Biogas Area	325511	5085512	2.0	
CO-03	Service Gas Compressor	70.0	80.4	81.5	85.3	89.2	85.4	80.7	70.6	92.8	Sound Data	CHP/Biogas Area	100,100,100	N/A	T	CHP/Biogas Area	325517	5085503	1.0	
TR-01	Truck Loading Point 1	64.5	78.6	75.9	94.1	93.9	97.3	88.3	75.5	100.5	Sound Data	CHP/Biogas Area	20,20,20	N/A	SS	South Site	325478	5085387	2.0	
TR-02	Truck Loading Point 2	64.5	78.6	75.9	94.1	93.9	97.3	88.3	75.5	100.5	Cambium	South Site	20,20,20	N/A	SS	South Site	325523	5085394	2.0	
TR-03	Plant Based Truck Blower	57.7	71.4	73.7	77.6	78.2	77.4	72.8	58.5	83.7	Cambium	East Site	100,100,100	N/A	SS	East Site	325522	5085386	1.0	
BL-01	Biogas Blower Inlet	50.3	70.7	68.1	73.7	74.7	73.9	68.2	54.7	80.1	Cambium	East Site	100,100,100	N/A	SS	East Site	325517	5085506	1.0	
UF-01	Upblast Fan	52.2	76.3	72.7	79.8	78.0	77.1	71.8	62.1	84.6	Cambium	South Site	100,100,100	N/A	SS	South Site	325518	5085408	2.0	
FG-01	Flow Grate	54.5	69.4	76.1	84.7	89.0	88.1	83.9	74.9	93.2	Cambium	Northeast Site	100,100,100	N/A	SS	Northeast Site	325545	5085525	3.0	
VF-01	Vent Fan 1	53.6	62.5	71.9	72.4	73.9	70.8	72.3	60.2	78.5	Cambium	Northeast Site	100,100,100	N/A	SS	Northeast Site	325542	5085511	2.0	
VF-02	Vent Fan 2	51.9	67.5	72.0	76.2	75.9	74.3	69.3	61.1	81.4	Cambium	South Site	100,100,100	N/A	SS	South Site	325545	5085493	2.0	
FL-01	Flare	63.7	77.5	79.7	83.6	84.3	83.4	78.8	64.5	89.7	Sound Data	CHP/Biogas Area	100,100,100	N/A	SS	Northeast Site	325503	5085491	4.0	
GE-01	Generator Louver & Exhaust	72.6	82.9	93.5	95.1	89.8	92.6	80.4	69.3	99.3	Cambium	Northeast Site	100,100,100	N/A	SS	Northeast Site	325489	5085460	2.0	
GE-02	Generator Intake	65.3	75.2	92.5	102.1	101.7	98.7	90.2	78.6	106.2	Cambium	Northeast Site	100,100,100	N/A	SS	Northeast Site	325488	5085465	2.0	
TR-04	Truck Movement	77.5	95.0	91.2	95.9	96.9	98.9	96.7	86.9	104.2	Cambium	Northeast Site	8 Per Hour	N/A	N/A	Entire Site	325442	5085487	2.5	
TR-05	Truck Routing	77.5	95.0	91.2	95.9	96.9	98.9	96.7	86.9	104.2	Cambium	Northeast Site	8 Per Hour	N/A	N/A	Entire Site	325562	5085460	2.5	

¹Noise Control Descriptions:

²Noise Quality Descriptions:
 SS Steady State
 T Total
 I Impulse



Table 2 - Point of Reception Noise Impact

Receptor ID		Receptor Coordinates				Predicted SPL (dBA)			Predictor Source ID	Source ID	PWL (dBA)	Time Correction (%)			Source/Receptor Distance (m)
		X (m)	Y (m)	Ground Elevation	Height	Daytime	Evening	Nighttime				Day	Evening	Night	
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	15.61	15.61	15.61	1888	AHU-01	79.0	100.0	100.0	100.0	373
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	-9.04	-9.04	-9.04	1889	EX-01	67.0	100.0	100.0	100.0	370
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	4.84	4.84	4.84	1890	EX-02	67.0	100.0	100.0	100.0	298
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	17.33	17.33	17.33	1891	AHU-02	79.0	100.0	100.0	100.0	309
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	29.44	29.44	29.44	1892	FL-01	89.7	100.0	100.0	100.0	260
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	27.66	27.66	27.66	1893	CHP-01	91.9	100.0	100.0	100.0	253
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	29.75	29.75	29.75	1894	CO-01	95.3	100.0	100.0	100.0	248
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	19.39	19.39	19.39	1895	CO-02	85.3	100.0	100.0	100.0	242
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	15.44	15.44	15.44	1897	CH-01	80.3	100.0	100.0	100.0	236
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	28.44	28.44	28.44	1898	CH-02	93.3	100.0	100.0	100.0	237
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	27.03	27.03	27.03	1904	CO-03	92.8	100.0	100.0	100.0	244
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	34.25	34.25	34.25	1905	TR-01	100.5	20.0	20.0	20.0	366
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	25.38	25.38	25.38	1906	TR-02	100.5	20.0	20.0	20.0	348
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	14.1	14.1	14.1	1907	TR-03	83.7	100.0	100.0	100.0	356
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	30.84	30.84	30.84	1909	GE-01	99.3	100.0	100.0	100.0	294
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	41.36	41.36	41.36	1910	GE-02	106.2	100.0	100.0	100.0	290
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	35.86	-200	-200	1913	TR-04	104.2	--	--	0.0	290
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	38.58	-200	-200	1920	TR-05	104.2	--	--	0.0	277
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	14.11	14.11	14.11	1921	BL-01	80.1	100.0	100.0	100.0	241
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	13.98	13.98	13.98	1922	UF-01	84.6	100.0	100.0	100.0	336
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	34.39	34.39	34.39	1923	FG-01	93.2	100.0	100.0	100.0	216
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	20.04	20.04	20.04	1924	VF-01	79.5	100.0	100.0	100.0	230
POR1_A_A	1465167.69	325592.8	5085735	115.0	4.5	21.98	21.98	21.98	1925	VF-02	81.4	100.0	100.0	100.0	246
POR2_A_A	1464678.27	325484.1	5085696	115.1	4.5	16.85	16.85	16.85	1888	AHU-01	79.0	100.0	100.0	100.0	317
POR2_A_A	1464678.27	325484	5085696	115.1	5	-7.93	-7.93	-7.93	1889	EX-01	67.0	100.0	100.0	100.0	313
POR2_A_A	1464678.27	325484	5085696	115.1	5	6.12	6.12	6.12	1890	EX-02	67.0	100.0	100.0	100.0	264
POR2_A_A	1464678.27	325484	5085696	115.1	5	18.56	18.56	18.56	1891	AHU-02	79.0	100.0	100.0	100.0	275
POR2_A_A	1464678.27	325484	5085696	115.1	5	31.63	31.63	31.63	1892	FL-01	89.7	100.0	100.0	100.0	206
POR2_A_A	1464678.27	325484	5085696	115.1	5	30.88	30.88	30.88	1893	CHP-01	91.9	100.0	100.0	100.0	206
POR2_A_A	1464678.27	325484	5085696	115.1	5	32.78	32.78	32.78	1894	CO-01	95.3	100.0	100.0	100.0	200
POR2_A_A	1464678.27	325484	5085696	115.1	5	22.23	22.23	22.23	1895	CO-02	85.3	100.0	100.0	100.0	194
POR2_A_A	1464678.27	325484	5085696	115.1	5	17.34	17.34	17.34	1897	CH-01	80.3	100.0	100.0	100.0	186
POR2_A_A	1464678.27	325484	5085696	115.1	5	31.18	31.18	31.18	1898	CH-02	93.3	100.0	100.0	100.0	186
POR2_A_A	1464678.27	325484	5085696	115.1	5	29.9	29.9	29.9	1904	CO-03	92.8	100.0	100.0	100.0	196
POR2_A_A	1464678.27	325484	5085696	115.1	5	35.6	35.6	35.6	1905	TR-01	100.5	20.0	20.0	20.0	309
POR2_A_A	1464678.27	325484	5085696	115.1	5	26.74	26.74	26.74	1906	TR-02	100.5	20.0	20.0	20.0	305
POR2_A_A	1464678.27	325484	5085696	115.1	5	15.83	15.83	15.83	1907	TR-03	83.7	100.0	100.0	100.0	312
POR2_A_A	1464678.27	325484	5085696	115.1	5	39.17	39.17	39.17	1909	GE-01	99.3	100.0	100.0	100.0	236
POR2_A_A	1464678.27	325484	5085696	115.1	5	46.79	46.79	46.79	1910	GE-02	106.2	100.0	100.0	100.0	232
POR2_A_A	1464678.27	325484	5085696	115.1	5	37.42	-200	-200	1913	TR-04	104.2	--	--	0.0	213



Table 2 - Point of Reception Noise Impact

Receptor ID		Receptor Coordinates				Predicted SPL (dBA)			Predictor Source ID	Source ID	PWL (dBA)	Time Correction (%)			Source/Receptor Distance (m)
		X (m)	Y (m)	Ground Elevation	Height	Daytime	Evening	Nighttime				Day	Evening	Night	
POR2_A_A	1464678.27	325484	5085696	115.1	5	39.78	-200	-200	1920	TR-05	104.2	--	--	0.0	249
POR2_A_A	1464678.27	325484	5085696	115.1	5	16.94	16.94	16.94	1921	BL-01	80.1	100.0	100.0	100.0	193
POR2_A_A	1464678.27	325484	5085696	115.1	5	15.4	15.4	15.4	1922	UF-01	84.6	100.0	100.0	100.0	290
POR2_A_A	1464678.27	325484	5085696	115.1	5	36.09	36.09	36.09	1923	FG-01	93.2	100.0	100.0	100.0	182
POR2_A_A	1464678.27	325484	5085696	115.1	5	21.7	21.7	21.7	1924	VF-01	79.5	100.0	100.0	100.0	194
POR2_A_A	1464678.27	325484	5085696	115.1	5	23.71	23.71	23.71	1925	VF-02	81.4	100.0	100.0	100.0	212
POR4_A_A	1463694.3	325265	5085611	118.3	5	16.67	16.67	16.67	1888	AHU-01	79.0	100.0	100.0	100.0	317
POR4_A_A	1463694.3	325265	5085611	118.3	5	-7.71	-7.71	-7.71	1889	EX-01	67.0	100.0	100.0	100.0	311
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	3.59	3.59	3.59	1890	EX-02	67.0	100.0	100.0	100.0	331
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	16.24	16.24	16.24	1891	AHU-02	79.0	100.0	100.0	100.0	338
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	28.44	28.44	28.44	1892	FL-01	89.7	100.0	100.0	100.0	266
POR4_A_A	1463694.3	325265	5085611	118.3	5	26.33	26.33	26.33	1893	CHP-01	91.9	100.0	100.0	100.0	278
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	27.28	27.28	27.28	1894	CO-01	95.3	100.0	100.0	100.0	276
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	17.02	17.02	17.02	1895	CO-02	85.3	100.0	100.0	100.0	273
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	13.35	13.35	13.35	1897	CH-01	80.3	100.0	100.0	100.0	266
POR4_A_A	1463694.3	325265	5085611	118.3	5	24.99	24.99	24.99	1898	CH-02	93.3	100.0	100.0	100.0	265
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	24.53	24.53	24.53	1904	CO-03	92.8	100.0	100.0	100.0	273
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	34.41	34.41	34.41	1905	TR-01	100.5	20.0	20.0	20.0	309
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	26.19	26.19	26.19	1906	TR-02	100.5	20.0	20.0	20.0	337
POR4_A_A	1463694.3	325265	5085611	118.3	5	16.78	16.78	16.78	1907	TR-03	83.7	100.0	100.0	100.0	341
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	42.43	42.43	42.43	1909	GE-01	99.3	100.0	100.0	100.0	270
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	49.84	49.84	49.84	1910	GE-02	106.2	100.0	100.0	100.0	267
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	35.82	-200	-200	1913	TR-04	104.2	--	--	0.0	215
POR4_A_A	1463694.3	325265	5085611	118.3	5	34.62	-200	-200	1920	TR-05	104.2	--	--	0.0	333
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	11.87	11.87	11.87	1921	BL-01	80.1	100.0	100.0	100.0	272
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	16.52	16.52	16.52	1922	UF-01	84.6	100.0	100.0	100.0	324
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	31.3	31.3	31.3	1923	FG-01	93.2	100.0	100.0	100.0	292
POR4_A_A	1463694.3	325265	5085611	118.3	5	15.36	15.36	15.36	1924	VF-01	79.5	100.0	100.0	100.0	295
POR4_A_A	1463694.3	325265.4	5085611	118.3	4.5	19.58	19.58	19.58	1925	VF-02	81.4	100.0	100.0	100.0	303
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	7.19	7.19	7.19	1888	AHU-01	79.0	100.0	100.0	100.0	436
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	-13.5	-13.5	-13.5	1889	EX-01	67.0	100.0	100.0	100.0	434
POR5_A_A	487618.98	325079	5085209	150.0	2	-3.41	-3.41	-3.41	1890	EX-02	67.0	100.0	100.0	100.0	522
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	9.91	9.91	9.91	1891	AHU-02	79.0	100.0	100.0	100.0	519
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	17.54	17.54	17.54	1892	FL-01	89.7	100.0	100.0	100.0	509
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	20.17	20.17	20.17	1893	CHP-01	91.9	100.0	100.0	100.0	522
POR5_A_A	487618.98	325079	5085209	150.0	2	19.24	19.24	19.24	1894	CO-01	95.3	100.0	100.0	100.0	525
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	8.83	8.83	8.83	1895	CO-02	85.3	100.0	100.0	100.0	528
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	5.49	5.49	5.49	1897	CH-01	80.3	100.0	100.0	100.0	529
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	16.3	16.3	16.3	1898	CH-02	93.3	100.0	100.0	100.0	527
POR5_A_A	487618.98	325079	5085209	150.0	2	16.27	16.27	16.27	1904	CO-03	92.8	100.0	100.0	100.0	527
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	21.71	21.71	21.71	1905	TR-01	100.5	20.0	20.0	20.0	437



Table 2 - Point of Reception Noise Impact

Receptor ID		Receptor Coordinates				Predicted SPL (dBA)			Predictor Source ID	Source ID	PWL (dBA)	Time Correction (%)			Source/Receptor Distance (m)
		X (m)	Y (m)	Ground Elevation	Height	Daytime	Evening	Nighttime				Day	Evening	Night	
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	17.25	17.25	17.25	1906	TR-02	100.5	20.0	20.0	20.0	480
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	2.05	2.05	2.05	1907	TR-03	83.7	100.0	100.0	100.0	477
POR5_A_A	487618.98	325079	5085209	150.0	2	31.64	31.64	31.64	1909	GE-01	99.3	100.0	100.0	100.0	480
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	38.82	38.82	38.82	1910	GE-02	106.2	100.0	100.0	100.0	482
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	26.32	-200	-200	1913	TR-04	104.2	--	--	0.0	457
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	26.19	-200	-200	1920	TR-05	104.2	--	--	0.0	544
POR5_A_A	487618.98	325079	5085209	150.0	2	3.73	3.73	3.73	1921	BL-01	80.1	100.0	100.0	100.0	528
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	13.04	13.04	13.04	1922	UF-01	84.6	100.0	100.0	100.0	481
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	23.69	23.69	23.69	1923	FG-01	93.2	100.0	100.0	100.0	562
POR5_A_A	487618.98	325079.3	5085209	150.0	1.5	6.01	6.01	6.01	1924	VF-01	79.5	100.0	100.0	100.0	553
POR5_A_A	487618.98	325079	5085209	150.0	2	11.78	11.78	11.78	1925	VF-02	81.4	100.0	100.0	100.0	546
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	9.78	9.78	9.78	1888	AHU-01	79.0	100.0	100.0	100.0	400
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	-7.86	-7.86	-7.86	1889	EX-01	67.0	100.0	100.0	100.0	405
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	2.68	2.68	2.68	1890	EX-02	67.0	100.0	100.0	100.0	346
POR6_A_A	1466458.065	325880	5085342	115.0	5	15.37	15.37	15.37	1891	AHU-02	79.0	100.0	100.0	100.0	342
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	20.73	20.73	20.73	1892	FL-01	89.7	100.0	100.0	100.0	405
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	23.26	23.26	23.26	1893	CHP-01	91.9	100.0	100.0	100.0	393
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	20.4	20.4	20.4	1894	CO-01	95.3	100.0	100.0	100.0	395
POR6_A_A	1466458.065	325880	5085342	115.0	5	9.54	9.54	9.54	1895	CO-02	85.3	100.0	100.0	100.0	398
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	9.95	9.95	9.95	1897	CH-01	80.3	100.0	100.0	100.0	405
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	23.29	23.29	23.29	1898	CH-02	93.3	100.0	100.0	100.0	406
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	17.13	17.13	17.13	1904	CO-03	92.8	100.0	100.0	100.0	397
POR6_A_A	1466458.065	325880	5085342	115.0	5	16.71	16.71	16.71	1905	TR-01	100.5	20.0	20.0	20.0	404
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	29.67	29.67	29.67	1906	TR-02	100.5	20.0	20.0	20.0	361
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	6.19	6.19	6.19	1907	TR-03	83.7	100.0	100.0	100.0	361
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	21.8	21.8	21.8	1909	GE-01	99.3	100.0	100.0	100.0	408
POR6_A_A	1466458.065	325880	5085342	115.0	5	26.34	26.34	26.34	1910	GE-02	106.2	100.0	100.0	100.0	410
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	31.04	-200	-200	1913	TR-04	104.2	--	--	0.0	462
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	29.33	-200	-200	1920	TR-05	104.2	--	--	0.0	339
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	4.34	4.34	4.34	1921	BL-01	80.1	100.0	100.0	100.0	399
POR6_A_A	1466458.065	325880	5085342	115.0	5	15.71	15.71	15.71	1922	UF-01	84.6	100.0	100.0	100.0	368
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	24.29	24.29	24.29	1923	FG-01	93.2	100.0	100.0	100.0	382
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	10.84	10.84	10.84	1924	VF-01	79.5	100.0	100.0	100.0	377
POR6_A_A	1466458.065	325879.6	5085342	115.0	4.5	13.47	13.47	13.47	1925	VF-02	81.4	100.0	100.0	100.0	367
POR4_B_A	487908.12	325272	5085600	118.2	2	16.21	16.21	16.21	1888	AHU-01	79.0	100.0	100.0	100.0	304
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	-7.37	-7.37	-7.37	1889	EX-01	67.0	100.0	100.0	100.0	298
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	2.27	2.27	2.27	1890	EX-02	67.0	100.0	100.0	100.0	319
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	15.25	15.25	15.25	1891	AHU-02	79.0	100.0	100.0	100.0	326
POR4_B_A	487908.12	325272	5085600	118.2	2	27.23	27.23	27.23	1892	FL-01	89.7	100.0	100.0	100.0	255
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	25.91	25.91	25.91	1893	CHP-01	91.9	100.0	100.0	100.0	267



Table 2 - Point of Reception Noise Impact

Receptor ID		Receptor Coordinates				Predicted SPL (dBA)			Predictor Source ID	Source ID	PWL (dBA)	Time Correction (%)			Source/Receptor Distance (m)
		X (m)	Y (m)	Ground Elevation	Height	Daytime	Evening	Nighttime				Day	Evening	Night	
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	26.72	26.72	26.72	1894	CO-01	95.3	100.0	100.0	100.0	265
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	16.49	16.49	16.49	1895	CO-02	85.3	100.0	100.0	100.0	262
POR4_B_A	487908.12	325272	5085600	118.2	2	12.89	12.89	12.89	1897	CH-01	80.3	100.0	100.0	100.0	256
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	24.59	24.59	24.59	1898	CH-02	93.3	100.0	100.0	100.0	254
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	24.01	24.01	24.01	1904	CO-03	92.8	100.0	100.0	100.0	263
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	33.82	33.82	33.82	1905	TR-01	100.5	20.0	20.0	20.0	296
POR4_B_A	487908.12	325272	5085600	118.2	2	25.95	25.95	25.95	1906	TR-02	100.5	20.0	20.0	20.0	324
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	15.48	15.48	15.48	1907	TR-03	83.7	100.0	100.0	100.0	328
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	40.12	40.12	40.12	1909	GE-01	99.3	100.0	100.0	100.0	258
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	48.36	48.36	48.36	1910	GE-02	106.2	100.0	100.0	100.0	255
POR4_B_A	487908.12	325272	5085600	118.2	2	35.49	-200	-200	1913	TR-04	104.2	--	--	0.0	203
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	34.04	-200	-200	1920	TR-05	104.2	--	--	0.0	322
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	11.41	11.41	11.41	1921	BL-01	80.1	100.0	100.0	100.0	262
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	14.93	14.93	14.93	1922	UF-01	84.6	100.0	100.0	100.0	312
POR4_B_A	487908.12	325272	5085600	118.2	2	30.6	30.6	30.6	1923	FG-01	93.2	100.0	100.0	100.0	283
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	13.54	13.54	13.54	1924	VF-01	79.5	100.0	100.0	100.0	285
POR4_B_A	487908.12	325272.1	5085600	118.2	1.5	18.1	18.1	18.1	1925	VF-02	81.4	100.0	100.0	100.0	293
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	15.67	15.67	15.67	1888	AHU-01	79.0	100.0	100.0	100.0	312
POR2_B_A	488229.12	325486	5085691	115.1	2	-8.06	-8.06	-8.06	1889	EX-01	67.0	100.0	100.0	100.0	308
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	4.71	4.71	4.71	1890	EX-02	67.0	100.0	100.0	100.0	259
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	17.45	17.45	17.45	1891	AHU-02	79.0	100.0	100.0	100.0	270
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	30.32	30.32	30.32	1892	FL-01	89.7	100.0	100.0	100.0	201
POR2_B_A	488229.12	325486	5085691	115.1	2	30.22	30.22	30.22	1893	CHP-01	91.9	100.0	100.0	100.0	201
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	31.67	31.67	31.67	1894	CO-01	95.3	100.0	100.0	100.0	195
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	21.07	21.07	21.07	1895	CO-02	85.3	100.0	100.0	100.0	189
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	17.38	17.38	17.38	1897	CH-01	80.3	100.0	100.0	100.0	180
POR2_B_A	488229.12	325486	5085691	115.1	2	30.38	30.38	30.38	1898	CH-02	93.3	100.0	100.0	100.0	180
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	28.75	28.75	28.75	1904	CO-03	92.8	100.0	100.0	100.0	190
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	34.6	34.6	34.6	1905	TR-01	100.5	20.0	20.0	20.0	304
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	25.59	25.59	25.59	1906	TR-02	100.5	20.0	20.0	20.0	299
POR2_B_A	488229.12	325486	5085691	115.1	2	14.86	14.86	14.86	1907	TR-03	83.7	100.0	100.0	100.0	307
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	37.11	37.11	37.11	1909	GE-01	99.3	100.0	100.0	100.0	231
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	45.31	45.31	45.31	1910	GE-02	106.2	100.0	100.0	100.0	227
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	36.42	-200	-200	1913	TR-04	104.2	--	--	0.0	209
POR2_B_A	488229.12	325486	5085691	115.1	2	39.33	-200	-200	1920	TR-05	104.2	--	--	0.0	243
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	15.82	15.82	15.82	1921	BL-01	80.1	100.0	100.0	100.0	188
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	14.73	14.73	14.73	1922	UF-01	84.6	100.0	100.0	100.0	285
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	35.43	35.43	35.43	1923	FG-01	93.2	100.0	100.0	100.0	177
POR2_B_A	488229.12	325486	5085691	115.1	2	20.41	20.41	20.41	1924	VF-01	79.5	100.0	100.0	100.0	189
POR2_B_A	488229.12	325486.1	5085691	115.1	1.5	22.37	22.37	22.37	1925	VF-02	81.4	100.0	100.0	100.0	207



Table 2 - Point of Reception Noise Impact

Receptor ID		Receptor Coordinates				Predicted SPL (dBA)			Predictor Source ID	Source ID	PWL (dBA)	Time Correction (%)			Source/Receptor Distance (m)
		X (m)	Y (m)	Ground Elevation	Height	Daytime	Evening	Nighttime				Day	Evening	Night	
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	14.3	14.3	14.3	1888	AHU-01	79.0	100.0	100.0	100.0	369
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	-9.28	-9.28	-9.28	1889	EX-01	67.0	100.0	100.0	100.0	367
POR1_B_A	488392.26	325595	5085731	115.0	2	3.3	3.3	3.3	1890	EX-02	67.0	100.0	100.0	100.0	295
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	16.12	16.12	16.12	1891	AHU-02	79.0	100.0	100.0	100.0	306
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	27.93	27.93	27.93	1892	FL-01	89.7	100.0	100.0	100.0	256
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	27.28	27.28	27.28	1893	CHP-01	91.9	100.0	100.0	100.0	250
POR1_B_A	488392.26	325595	5085731	115.0	2	28.89	28.89	28.89	1894	CO-01	95.3	100.0	100.0	100.0	244
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	18.55	18.55	18.55	1895	CO-02	85.3	100.0	100.0	100.0	239
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	14.7	14.7	14.7	1897	CH-01	80.3	100.0	100.0	100.0	233
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	27.69	27.69	27.69	1898	CH-02	93.3	100.0	100.0	100.0	234
POR1_B_A	488392.26	325595	5085731	115.0	2	26.16	26.16	26.16	1904	CO-03	92.8	100.0	100.0	100.0	240
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	29.06	29.06	29.06	1905	TR-01	100.5	20.0	20.0	20.0	363
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	24.24	24.24	24.24	1906	TR-02	100.5	20.0	20.0	20.0	344
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	12.91	12.91	12.91	1907	TR-03	83.7	100.0	100.0	100.0	352
POR1_B_A	488392.26	325595	5085731	115.0	2	29.02	29.02	29.02	1909	GE-01	99.3	100.0	100.0	100.0	291
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	37.75	37.75	37.75	1910	GE-02	106.2	100.0	100.0	100.0	287
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	34.7	-200	-200	1913	TR-04	104.2	--	--	0.0	288
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	37.99	-200	-200	1920	TR-05	104.2	--	--	0.0	273
POR1_B_A	488392.26	325595	5085731	115.0	2	13.38	13.38	13.38	1921	BL-01	80.1	100.0	100.0	100.0	238
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	13.41	13.41	13.41	1922	UF-01	84.6	100.0	100.0	100.0	332
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	33.58	33.58	33.58	1923	FG-01	93.2	100.0	100.0	100.0	212
POR1_B_A	488392.26	325594.8	5085731	115.0	1.5	18.53	18.53	18.53	1924	VF-01	79.5	100.0	100.0	100.0	226
POR1_B_A	488392.26	325595	5085731	115.0	2	20.36	20.36	20.36	1925	VF-02	81.4	100.0	100.0	100.0	243
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	8.64	8.64	8.64	1888	AHU-01	79.0	100.0	100.0	100.0	391
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	-9.14	-9.14	-9.14	1889	EX-01	67.0	100.0	100.0	100.0	396
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	-1.66	-1.66	-1.66	1890	EX-02	67.0	100.0	100.0	100.0	333
POR6_B_A	488808.255	325872	5085361	115.0	2	10.89	10.89	10.89	1891	AHU-02	79.0	100.0	100.0	100.0	330
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	20.37	20.37	20.37	1892	FL-01	89.7	100.0	100.0	100.0	391
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	20.98	20.98	20.98	1893	CHP-01	91.9	100.0	100.0	100.0	379
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	19.04	19.04	19.04	1894	CO-01	95.3	100.0	100.0	100.0	381
POR6_B_A	488808.255	325872	5085361	115.0	2	8.36	8.36	8.36	1895	CO-02	85.3	100.0	100.0	100.0	383
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	6.8	6.8	6.8	1897	CH-01	80.3	100.0	100.0	100.0	390
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	20.02	20.02	20.02	1898	CH-02	93.3	100.0	100.0	100.0	392
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	15.83	15.83	15.83	1904	CO-03	92.8	100.0	100.0	100.0	383
POR6_B_A	488808.255	325872	5085361	115.0	2	14.16	14.16	14.16	1905	TR-01	100.5	20.0	20.0	20.0	395
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	25.16	25.16	25.16	1906	TR-02	100.5	20.0	20.0	20.0	351
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	3.52	3.52	3.52	1907	TR-03	83.7	100.0	100.0	100.0	351
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	21.27	21.27	21.27	1909	GE-01	99.3	100.0	100.0	100.0	396
POR6_B_A	488808.255	325872	5085361	115.0	2	25.42	25.42	25.42	1910	GE-02	106.2	100.0	100.0	100.0	398
POR6_B_A	488808.255	325872.2	5085361	115.0	1.5	28.11	-200	-200	1913	TR-04	104.2	--	--	0.0	449



Table 2 - Point of Reception Noise Impact

Receptor ID		Receptor Coordinates				Predicted SPL (dBA)			Predictor Source ID	Source ID	PWL (dBA)	Time Correction (%)			Source/Receptor Distance (m)
		X (m)	Y (m)	Ground Elevation	Height	Daytime	Evening	Nighttime				Day	Evening	Night	
P0R6_B_A	488808.255	325872.2	5085361	115.0	1.5	28.7	-200	-200	1920	TR-05	104.2	--	--	0.0	326
P0R6_B_A	488808.255	325872.2	5085361	115.0	1.5	3.2	3.2	3.2	1921	BL-01	80.1	100.0	100.0	100.0	384
P0R6_B_A	488808.255	325872	5085361	115.0	2	12.18	12.18	12.18	1922	UF-01	84.6	100.0	100.0	100.0	357
P0R6_B_A	488808.255	325872.2	5085361	115.0	1.5	23.3	23.3	23.3	1923	FG-01	93.2	100.0	100.0	100.0	366
P0R6_B_A	488808.255	325872.2	5085361	115.0	1.5	9.5	9.5	9.5	1924	VF-01	79.5	100.0	100.0	100.0	362
P0R6_B_A	488808.255	325872.2	5085361	115.0	1.5	12.54	12.54	12.54	1925	VF-02	81.4	100.0	100.0	100.0	353
P0R3_A_A	1464301.035	325400	5085670	116.1	5	17.46	17.46	17.46	1888	AHU-01	79.0	100.0	100.0	100.0	302
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	-7.49	-7.49	-7.49	1889	EX-01	67.0	100.0	100.0	100.0	297
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	5.48	5.48	5.48	1890	EX-02	67.0	100.0	100.0	100.0	274
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	17.94	17.94	17.94	1891	AHU-02	79.0	100.0	100.0	100.0	284
P0R3_A_A	1464301.035	325400	5085670	116.1	5	31.02	31.02	31.02	1892	FL-01	89.7	100.0	100.0	100.0	206
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	30.3	30.3	30.3	1893	CHP-01	91.9	100.0	100.0	100.0	212
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	31.92	31.92	31.92	1894	CO-01	95.3	100.0	100.0	100.0	207
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	22.07	22.07	22.07	1895	CO-02	85.3	100.0	100.0	100.0	202
P0R3_A_A	1464301.035	325400	5085670	116.1	5	17.43	17.43	17.43	1897	CH-01	80.3	100.0	100.0	100.0	193
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	29.66	29.66	29.66	1898	CH-02	93.3	100.0	100.0	100.0	193
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	29.49	29.49	29.49	1904	CO-03	92.8	100.0	100.0	100.0	203
P0R3_A_A	1464301.035	325400.2	5085670	116.1	4.5	36.2	36.2	36.2	1905	TR-01	100.5	20.0	20.0	20.0	293
P0R3_A_A	1464301.035	325400	5085670	116.1	5	27.14	27.14	27.14	1906	TR-02	100.5	20.0	20.0	20.0	302



Table 3 - Acoustic Assessment Summary - Proposed Equipment

Point of Reception ID	Point of Reception Information					Noise Characteristic	Daytime (dBA)	Evening (dBA)	Nighttime (dBA)	Verified by Acoustic Audit (Yes or No)	Daytime Limit (dBA)	Evening Limit (dBA)	Nighttime Limit (dBA)	Compliant with Limit
	Description	UTM Easting	UTM Northing	Height POW	Height OLA									
P0R1_A_A	Residential Dwelling POW	325592.8	5085734.7	4.5	-	Steady State Leq	43.0	40.0	40.0	N	50	50	45	Yes
P0R1_B_A	Residential Dwelling OLA	325594.8	5085730.7	-	1.5	Steady State Leq	42.0	38.0	38.0	N	50	45	-	Yes
P0R2_A_A	Residential Dwelling POW	325484.1	5085696.2	4.5	-	Steady State Leq	45.0	42.0	42.0	N	50	50	45	Yes
P0R2_B_A	Residential Dwelling OLA	325486.1	5085691.2	-	1.5	Steady State Leq	44.0	41.0	41.0	N	50	45	-	Yes
P0R3_A_A	Residential Dwelling POW	325400.2	5085670.0	4.5	-	Steady State Leq	44.0	41.0	41.0	N	50	50	45	Yes
POR3_B_A	Residential Dwelling OLA	325403.2	5085662.3	-	1.5	Steady State Leq	43.0	40.0	40.0	N	50	45	-	Yes
P0R4_A_A	Residential Dwelling POW	325265.4	5085611.2	4.5	-	Steady State Leq	41.0	38.0	38.0	N	50	50	45	Yes
POR4_B_A	Residential Dwelling OLA	325272.1	5085599.7	-	1.5	Steady State Leq	41.0	38.0	38.0	N	50	45	-	Yes
P0R5_A_A	Residential Dwelling POW	325079.3	5085209.2	1.5	-	Steady State Leq	32.0	29.0	29.0	N	50	50	45	Yes
POR5_B_A	Residential Dwelling OLA	325093.9	5085214.9	-	1.5	Steady State Leq	35.0	32.0	32.0	N	50	45	-	Yes
POR6_A_A	Residential Dwelling POW	325879.6	5085341.6	4.5	-	Steady State Leq	36.0	33.0	33.0	N	45	40	40	Yes
P0R6_B_A	Residential Dwelling OLA	325872.2	5085361.1	-	1.5	Steady State Leq	34.0	30.0	30.0	N	45	40	-	Yes
POR7_A_A	Residential Dwelling POW	325603.0	5085240.2	4.5	-	Steady State Leq	41.0	37.0	37.0	N	45	40	40	Yes
POR7_B_A	Residential Dwelling OLA	325596.2	5085259.7	-	1.5	Steady State Leq	41.0	36.0	36.0	N	45	40	-	Yes
POR8_A_A	Residential Dwelling POW	325497.3	5085193.6	4.5	-	Steady State Leq	40.0	38.0	38.0	N	45	40	40	Yes
POR8_B_A	Residential Dwelling OLA	325490.4	5085213.1	-	1.5	Steady State Leq	39.0	37.0	37.0	N	45	40	-	Yes



Table 3 - Acoustic Assessment Summary - Emergency Equipment Testing

Point of Reception ID	Point of Reception Information					Noise Characteristic	Daytime (dBA)	Evening (dBA)	Nighttime (dBA)	Verified by Acoustic Audit (Yes or No)	Daytime Limit (dBA)	Evening Limit (dBA)	Nighttime Limit (dBA)	Compliant with Limit
	Description	UTM Easting	UTM Northing	Height POW	Height OLA									
P0R1_A_A	Residential Dwelling POW	325592.8	5085734.7	4.5	-	Steady State Leq	42.0	-	-	N	55	-	-	Yes
P0R1_B_A	Residential Dwelling OLA	325594.8	5085730.7	-	1.5	Steady State Leq	39.0	-	-	N	55	-	-	Yes
P0R2_A_A	Residential Dwelling POW	325484.1	5085696.2	4.5	-	Steady State Leq	48.0	-	-	N	55	-	-	Yes
P0R2_B_A	Residential Dwelling OLA	325486.1	5085691.2	-	1.5	Steady State Leq	46.0	-	-	N	55	-	-	Yes
P0R3_A_A	Residential Dwelling POW	325400.2	5085670.0	4.5	-	Steady State Leq	48.0	-	-	N	55	-	-	Yes
POR3_B_A	Residential Dwelling OLA	325403.2	5085662.3	-	1.5	Steady State Leq	46.0	-	-	N	55	-	-	Yes
P0R4_A_A	Residential Dwelling POW	325265.4	5085611.2	4.5	-	Steady State Leq	51.0	-	-	N	55	-	-	Yes
POR4_B_A	Residential Dwelling OLA	325272.1	5085599.7	-	1.5	Steady State Leq	49.0	-	-	N	55	-	-	Yes
P0R5_A_A	Residential Dwelling POW	325079.3	5085209.2	1.5	-	Steady State Leq	40.0	-	-	N	55	-	-	Yes
POR5_B_A	Residential Dwelling OLA	325093.9	5085214.9	-	1.5	Steady State Leq	43.0	-	-	N	55	-	-	Yes
POR6_A_A	Residential Dwelling POW	325879.6	5085341.6	4.5	-	Steady State Leq	28.0	-	-	N	50	-	-	Yes
P0R6_B_A	Residential Dwelling OLA	325872.2	5085361.1	-	1.5	Steady State Leq	28.0	-	-	N	50	-	-	Yes
POR7_A_A	Residential Dwelling POW	325603.0	5085240.2	4.5	-	Steady State Leq	36.0	-	-	N	50	-	-	Yes
POR7_B_A	Residential Dwelling OLA	325596.2	5085259.7	-	1.5	Steady State Leq	34.0	-	-	N	50	-	-	Yes
POR8_A_A	Residential Dwelling POW	325497.3	5085193.6	4.5	-	Steady State Leq	45.0	-	-	N	50	-	-	Yes
POR8_B_A	Residential Dwelling OLA	325490.4	5085213.1	-	1.5	Steady State Leq	46.0	-	-	N	50	-	-	Yes

Appendix A
Noise Source Supporting Information and Calculations

Government
of CanadaGouvernement
du Canada[Home](#) > [Environment and natural resources](#) > [Weather, Climate and Hazard](#)> [Past weather and climate](#) > [Historical Data](#)

Hourly Data Report for May 28, 2021

If selected Local Standard Time (LST), add 1 hour to adjust for Daylight Saving Time where and when it is observed.

PETAWAWA AWOS 2 ONTARIO Current Station Operator: DND

Latitude: 45°57'00.000" N **Longitude:** 77°19'00.000" W **Elevation:** 130.10 m**Climate ID:** 6106396 **WMO ID:** 71625 **TC ID:** YWA

TIME LST	Temp	Dew Point	Rel Hum	Precip. Amount mm	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
	°C	°C	%								
00:00	3.6	-3.8	58		34	4	14.5	100.79			NA
01:00	4.7	-5.2	49		36	11	14.5	100.87			NA
02:00	2.2	-4.8	60			0	14.5	100.88			NA
03:00	3.7	-5.1	53		1	13	14.5	100.86			NA
04:00	3.2	-5.8	52		4	11	14.5	100.88			NA
05:00	3.0	-7.2	47		2	11	14.5	100.93			NA
06:00	3.1	-8.0	44		3	7	14.5	100.97			NA
07:00	3.6	-7.5	44		4	15	14.5	100.97			Snow
08:00	4.7	-7.5	41		4	17	14.5	100.95			Snow
09:00	5.7	-6.5	41		7	6	14.5	100.92			NA
10:00	7.0	-6.4	38		8	6	14.5	100.87			NA
11:00	7.9	-7.2	34		36	11	14.5	100.81			NA
12:00	9.2	-5.9	34			0	14.5	100.77			NA
13:00	9.9	-6.7	30		36	7	14.5	100.68			NA
14:00	10.4	-6.6	30			0	14.5	100.58			NA
15:00	11.9	-5.8	29			0	14.5	100.50			NA
16:00	12.2	-5.0	30			0	14.5	100.46			NA
17:00	13.7	-4.5	28		5	13	14.5	100.38			NA
18:00	13.8	-4.7	27		5	13	14.5	100.37			NA

TIME	Temp °C	Dew Point °C	Rel Hum %	Precip. Amount mm	Wind Dir 10's deg	Wind Spd km/h	Visibility km	Stn Press kPa	Hmdx	Wind Chill	Weather
19:00	13.0	-4.4	30		4	9	14.5	100.42			NA
20:00	9.3	-1.9	45		5	9	14.5	100.45			NA
21:00	7.9	-3.2	45			0	14.5	100.51			NA
22:00	7.3	-3.7	46			0	14.5	100.54			NA
23:00	2.9	-3.7	62			0	14.5	100.53			NA

Legend

- E = Estimated
- M = Missing
- NA = Not Available*
- [empty] = Indicates an unobserved value

Date modified:

2021-07-09



	Approx dBA <u>@ 1m</u>
Blower	72
Air Cooler	85
Chiller	72
Membrane Compressor	77
Final Sales Gas Compressor	85



Point Source Sound Power Level Calculations

$$L_w = L_p + 20 \log(r) + 11 - 10 \log(Q)$$

$$L_p(\text{total}) = 10 \log(10^{L_p(31\text{Hz})/10} + 10^{L_p(63\text{Hz})/10} + \dots + 10^{L_p(8\text{kHz})/10})$$

r is distance measurement was taken, Q is directivity index, t is operating time

Source ID	Source Description	Source Directionality	Operating Condition	Horizontal Measurement Distance (m)	SLM Height (m)	Source Height (m)	Total Measurement Distance (m)	Measurement Directionality (deg)	Source To Receptor Directionality (deg)	Directivity Factor (Q)	Tonal (Yes/No)	Octave Band (Hz)									
												63	125	250	500	1000	2000	4000	8000	Total	
Hidden Row																					
AHU-01	Carrier 48HCED AHU	None	Steady State	1	1.5	1.5	1	N/A	N/A	2	No	A-Weighting									
												Measured SPL (dB)	-26	-16	-9	-3	0	1.0	1	-1	
												Calculated PWL (dBA)	74.57	72.06	69.14	68.52	66.68	62.60	57.07	49.07	78.27
												Msmnt Directionality Correction (dB)	56.56	64.05	68.13	73.51	74.67	71.59	66.06	56.06	79.04
												Applied PWL with Penalties (dBA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AHU-02	Carrier 48HCED AHU	None	Steady State	1	1.5	1.5	1	N/A	N/A	2	No	Measured SPL (dB)	74.57	72.06	69.14	68.52	66.68	62.60	57.07	49.07	78.27
												Calculated PWL (dBA)	56.56	64.05	68.13	73.51	74.67	71.59	66.06	56.06	79.04
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	56.56	64.05	68.13	73.51	74.67	71.59	66.06	56.06	79.04
EX-01	Mushroom Exhaust Fan Carnes	None	Steady State	0.5	0.5	0.5	0.5	N/A	N/A	2	No	Measured SPL (dB)	68.37	70.16	68.40	62.02	58.46	54.87	50.45	40.34	74.29
												Calculated PWL (dBA)	44.34	56.13	61.37	60.99	60.42	57.84	53.42	41.31	67.00
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	44.34	56.13	61.37	60.99	60.42	57.84	53.42	41.31	67.00
EX-02	Mushroom Exhaust Fan Carnes	None	Steady State	0.5	0.5	0.5	0.5	N/A	N/A	2	No	Measured SPL (dB)	68.37	70.16	68.40	62.02	58.46	54.87	50.45	40.34	74.29
												Calculated PWL (dBA)	44.34	56.13	61.37	60.99	60.42	57.84	53.42	41.31	67.00
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	44.34	56.13	61.37	60.99	60.42	57.84	53.42	41.31	67.00
CHP-01	CHP Unit Enclosed	None	Steady State	10	1.5	1.5	10.0	N/A	N/A	2	No	Measured SPL (dB)	73.08	73.16	64.08	60.60	55.74	54.62	51.88	46.65	76.59
												Calculated PWL (dBA)	75.07	85.15	83.07	85.59	83.73	83.61	80.87	73.64	91.86
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	75.07	85.15	83.07	85.59	83.73	83.61	80.87	73.64	91.86
CO-01	CHP Compressor	None	Steady State	10	1.5	1.5	10.0	N/A	N/A	2	Yes	Measured SPL (dB)	70.97	71.45	65.47	63.26	62.98	59.44	54.71	46.63	75.48
												Calculated PWL (dBA)	72.96	83.44	84.46	88.25	90.97	88.43	83.70	73.62	95.30
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	72.96	83.44	84.46	88.25	90.97	88.43	83.70	73.62	95.30
CO-02	Biogas Compressor	None	Steady State	1	1.5	1.5	1	N/A	N/A	2	Yes	Measured SPL (dB)	80.97	81.45	75.47	73.26	72.98	69.44	64.71	56.63	85.48
												Calculated PWL (dBA)	62.96	73.44	74.46	78.25	80.97	78.43	73.70	63.62	85.30
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	62.96	73.44	74.46	78.25	80.97	78.43	73.70	63.62	85.30
CO-03	Service Gas Compressor	None	Steady State	1	1.5	1.5	1	N/A	N/A	2	Yes	Measured SPL (dB)	87.97	88.45	82.47	80.26	81.24	76.44	71.71	63.63	92.56
												Calculated PWL (dBA)	69.96	80.44	81.46	85.25	89.23	85.43	80.70	70.62	92.81
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	69.96	80.44	81.46	85.25	89.23	85.43	80.70	70.62	92.81
CH-01	Biogas Chiller	None	Steady State	1	1.5	1.5	1	N/A	N/A	2	No	Measured SPL (dB)	75.97	76.45	70.47	68.26	67.98	64.44	59.71	51.63	80.48
												Calculated PWL (dBA)	57.96	68.44	69.46	73.25	75.97	73.43	68.70	58.62	80.30
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	57.96	68.44	69.46	73.25	75.97	73.43	68.70	58.62	80.30
CH-02	CHP Chiller	None	Steady State	10	1.5	1.5	10.0	N/A	N/A	2	No	Measured SPL (dB)	68.97	69.45	63.47	61.26	60.98	57.44	52.71	44.63	73.48
												Calculated PWL (dBA)	70.96	81.44	82.46	86.25	88.97	86.43	81.70	71.62	93.30
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	70.96	81.44	82.46	86.25	88.97	86.43	81.70	71.62	93.30



FL-01	Flare	None	Steady State	10	1.5	1.5	10.0	N/A	N/A	2	No	Measured SPL (dB)	61.71	65.47	60.68	58.63	56.27	54.39	49.83	37.52	68.87
												Calculated PWL (dBA)	63.70	77.46	79.67	83.62	84.25	83.38	78.82	64.51	89.75
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	63.70	77.46	79.67	83.62	84.25	83.38	78.82	64.51	89.75
TR-01	Truck Loading Idle	None	Steady State	5	1.5	1.5	5	N/A	N/A	2	No	Measured SPL (dB)	68.57	72.67	62.90	75.11	71.97	74.36	65.31	54.48	80.28
												Calculated PWL (dBA)	64.54	78.63	75.87	94.07	93.93	97.33	88.28	75.45	100.52
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	64.54	78.63	75.87	94.07	93.93	97.33	88.28	75.45	100.52
TR-02	Truck Loading Idle	None	Steady State	5	1.5	1.5	5	N/A	N/A	2	No	Measured SPL (dB)	68.57	72.67	62.90	75.11	71.97	74.36	65.31	54.48	80.28
												Calculated PWL (dBA)	64.54	78.63	75.87	94.07	93.93	97.33	88.28	75.45	100.52
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	64.54	78.63	75.87	94.07	93.93	97.33	88.28	75.45	100.52
TR-03	Plant Based Truck Blower / Pump	None	Steady State	5	1.5	1.5	5	N/A	N/A	2	No	Measured SPL (dB)	61.71	65.47	60.68	58.63	56.27	54.39	49.83	37.52	68.87
												Calculated PWL (dBA)	57.68	71.44	73.65	77.60	78.23	77.36	72.80	58.49	83.73
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	57.68	71.44	73.65	77.60	78.23	77.36	72.80	58.49	83.73
TR-04	Truck Movement	None	Steady State	15	1.5	1.5	15	N/A	N/A	2	No	Measured SPL (dB)	71.96	79.44	68.64	67.38	65.39	66.38	64.22	56.36	81.05
												Calculated PWL (dBA)	77.47	94.95	91.15	95.90	96.91	98.89	96.73	86.87	104.19
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	77.47	94.95	91.15	95.90	96.91	98.89	96.73	86.87	104.19
TR-05	Truck Movement	None	Steady State	15	1.5	1.5	15	N/A	N/A	2	No	Measured SPL (dB)	71.96	79.44	68.64	67.38	65.39	66.38	64.22	56.36	81.05
												Calculated PWL (dBA)	77.47	94.95	91.15	95.90	96.91	98.89	96.73	86.87	104.19
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	77.47	94.95	91.15	95.90	96.91	98.89	96.73	86.87	104.19
BL-01	Biogas Blower Inlet	None	Steady State	1	1.5	1.5	1	N/A	N/A	2	No	Measured SPL (dB)	68.34	78.68	69.11	68.69	66.69	64.94	59.24	47.69	80.20
												Calculated PWL (dBA)	50.33	70.67	68.10	73.68	74.68	73.93	68.23	54.68	80.11
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	50.33	70.67	68.10	73.68	74.68	73.93	68.23	54.68	80.11
UF-01	Upblast Fan 1	None	Steady State	1	1.5	1.5	1	N/A	N/A	2	No	Measured SPL (dB)	66.65	81.28	71.08	74.28	69.56	67.20	62.22	54.48	82.89
												Calculated PWL (dBA)	48.64	73.27	70.07	79.26	77.55	76.19	71.21	61.47	83.60
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	48.64	73.27	70.07	79.26	77.55	76.19	71.21	61.47	83.60
FG-01	Flow Grate	None	Steady State	3	1.5	1.5	3	N/A	N/A	2	No	Measured SPL (dB)	62.94	67.82	67.59	70.18	71.50	69.56	65.35	58.37	77.12
												Calculated PWL (dBA)	54.48	69.35	76.12	84.71	89.03	88.10	83.88	74.90	93.15
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	54.48	69.35	76.12	84.71	89.03	88.10	83.88	74.90	93.15
VF-01	Vent Fan 1	None	Steady State	2	1.5	1.5	2	N/A	N/A	2	no	Measured SPL (dB)	65.62	64.44	66.89	61.35	59.89	55.77	57.25	47.19	71.65
												Calculated PWL (dBA)	53.63	62.45	71.90	72.37	73.90	70.78	72.26	60.20	79.50
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	53.63	62.45	71.90	72.37	73.90	70.78	72.26	60.20	79.50
VF-02	Vent Fan 2	None	Steady State	2	1.5	1.5	2	N/A	N/A	2	No	Measured SPL (dB)	63.87	69.46	66.97	65.20	61.86	59.30	54.32	48.06	73.48
												Calculated PWL (dBA)	51.88	67.47	71.98	76.21	75.87	74.31	69.33	61.07	81.42
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	51.88	67.47	71.98	76.21	75.87	74.31	69.33	61.07	81.42



HE-01	Heat Exchanger - Side 2	None	Steady State	10	1.5	1.5	10	N/A	N/A	2	No	Measured SPL (dB)	63.21	76.93	79.46	80.70	75.32	70.16	63.16	55.79	84.83
												Calculated PWL (dBA)	65.20	88.92	98.45	105.69	103.31	99.15	92.15	82.78	108.83
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	65.20	88.92	98.45	105.69	103.31	99.15	92.15	82.78	108.83
GE-01	Generator Louver 2	None	Steady State	4	1.5	1.5	4	N/A	N/A	2	No	Measured SPL (dB)	79.62	75.30	78.47	78.94	71.32	71.06	60.73	51.27	84.80
												Calculated PWL (dBA)	73.65	79.33	89.50	95.97	91.35	92.09	81.77	70.31	99.08
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	73.65	79.33	89.50	95.97	91.35	92.09	81.77	70.31	99.08
GE-02	Generator Intake 2	None	Steady State	4	1.5	1.5	4	N/A	N/A	2	No	Measured SPL (dB)	71.24	71.19	81.43	85.03	81.67	77.71	69.12	59.58	88.44
												Calculated PWL (dBA)	65.27	75.23	92.46	102.06	101.70	98.74	90.15	78.61	106.16
												Msmnt Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Receptor Directionality Correction (dB)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
												Applied PWL with Penalties (dBA)	65.27	75.23	92.46	102.06	101.70	98.74	90.15	78.61	106.16