SS WILSON ASSOCIATES
Consulting Engineers

REPORT NO. WA19-025

NOISE CONTROL FEASIBILITY STUDY
PROPOSED MIXED-USE CONDO BUILDING
1854 & 1858 LIVERPOOL ROAD
PICKERING

SUBMITTED TO:
LIVERPOOL ESTATES
C/O ALIREZA ADJEDANI
9 YUKON DRIVE
RICHMOND HILL, ON
L4B 4E9

AND

DR. GRANT MORRIS,
PLANNING CONSULTANT
GRANT MORRIS ASSOCIATES LTD.

PREPARED BY:

AMIRA RAHAL, BAS, B.COM.
ASSOCIATE PRINCIPAL

DEREK LY, B.ENG., E.I.T.
ACOUSTICS ANALYST

REVIEWED BY:

HAZEM GIDAMY, M.ENG., P.ENG.
PRINCIPAL

NOVEMBER 1, 2019

SSWA INC. 15 Wertheim Court, Suite 211, Richmond Hill, Ontario, L4B 3H7
Tel: (905) 707-5800 e-mail: engineering@sswilsonassociates.com
www.sswilsonassociates.com & www.noisetraining.com

NOISE CONTROL FEASIBILITY STUDY
PROPOSED MIXED-USE CONDO BUILDING
1854 & 1858 LIVERPOOL ROAD
PICKERING

INDEX PAGE

1.0 INTRODUCTION

1.1 The services of SS Wilson Associates (SSWA) were retained by Dr. Grant Morris Associates Ltd. on behalf of Liverpool Estates to prepare a Noise Control Feasibility Study for the proposed mixed-use residential/commercial development located at 1854 and1858 Liverpool Road in the City of Pickering.

The objective of this report is to support an application for Official Plan/ By-Law Amendment and rezoning of the land containing the proposed development.

1.2 The site is bounded by the following land uses:
- to the north by residential dwellings
- to the south by commercial developments and furthermore, by Kingston Road
- to the east by Liverpool Road and furthermore, by commercial developments
- to the west by residential dwellings

The location of the site is shown in Figure 1. Project North is indicated in Figure 2.

1.3 Major features of the development are defined by the set of drawings prepared by Emilio De Leon, Architect dated October 31, 2019.

Figure 2 illustrates the general layout of the proposed development.

1.4 Major surface transportation noise sources (current and future) of concern to the development are:
1. Kingston Road
2. Liverpool Road

1.5 Major stationary noise source(s) (current and future) of concern to the development are:

1. Rooftop HVAC Equipment serving the existing commercial building located on the east of the proposed development
2. Rooftop HVAC Equipment serving the existing commercial building located on the south side of the proposed development
3. Mechanical equipment located internal to the development

1.6 The proposed development is located outside the 25 NEF/NEP contour lines prepared by Transport Canada; therefore aircraft noise is not considered a problem.

1.7 The scope of this report is to define the minimum noise attenuation requirements for the control of outdoor and indoor environmental sound levels.

2.0 SUMMARY AND RECOMMENDATIONS

2.1 SUMMARY

Based on the analysis conducted in this investigation it is concluded that:

1. The unattenuated daytime sound level in the Common Outdoor Living Area (COLA)[1] for the proposed development (located on the west side of the 10th floor of the Condo Building) will exceed the recommended objective sound level. Therefore, for this area, outdoor noise control measures are required along with relevant warning clauses. With the inclusion of noise control measures, the MECP objective criteria will be met for this COLA.

2. All balconies/terraces in the proposed building will be less than 4m in depth and as such, based on the MECP guidelines, these areas are not considered as OLAs. Therefore, no physical mitigation measures are required and a warning clause registered in the Development Agreement(s) will suffice.

3. The unattenuated sound levels at the outside walls of the proposed Condo Building will exceed the recommended objective sound levels. Therefore, indoor noise controls are required for all units within the Condo Building along with relevant warning clauses.

4. Although the projected sound levels are predicted to be above the sound level criteria outlined in Section 3, it is feasible to control sound levels within the outdoor and indoor areas of the proposed development to meet the stated criteria.

5. The results of the investigation of the stationary sources of noise that are likely to be required as part of the proposed building indicate that the unattenuated sound levels at the Points of Reception of concern are predicted to exceed the applicable sound level criteria for stationary sources. Accordingly, noise control measures are warranted for these Points of Reception. The following is a summary of the recommended mitigation measures/actions to be taken prior to submission of the building drawings for a Building Permit as per the following procedures:
   a. Acoustic Liner to be implemented for the garage exhaust shaft
   b. The cooling tower, to be designed as part of the future Mechanical Drawings should not exceed a sound level rating of 67 dBA at 10m, or alternatively, incorporate a silencer and acoustic louvres onto the rooftop cooling tower unit.
   c. Controlling the sound emitted from the future emergency power generator

[1] At times, it may also be referred to as Outdoor Amenity Areas. The size of an OLA is subject to municipal standards and other project requirements (except when classified as a balcony along with other applicable MECP rules).

set is technically feasible, which warrants a more detailed study when the information is made available as part of the Electrical Engineering plans to be submitted for a Building Permit.

With implementation of the above noted recommendations, we are satisfied that the applicable sound level criteria will be met.

2.2 RECOMMENDATIONS

A summary of the minimum noise attenuation requirements is presented in Table 1. Detailed description is as follows:

1. Outdoor Noise Control Measures

COLA-10th Floor:

Acoustical barriers should be constructed to shield the above-noted Common Outdoor Living Area with the following details:

(i) The parapet/rooftop barrier should be constructed along the alignment shown schematically in Figure 3.
(ii) The required parapet/rooftop barrier height as shown in Figure 3 could be as high as 1.1 m.
(iii) The parapet/rooftop barriers may consist of transparent material to OBC requirements to be constructed of a durable material having minimum 20kg/m^2 (Ξ 4 lb/ft^2) of surface area and be in a continuous line without openings or gaps.

2. Air Conditioning

Condo Building (All Residential Dwelling Units and Offices):

The above noted properties should be equipped with central air conditioning. The air conditioning system may be central to the entire building or may be central to each dwelling unit (for example using packaged incremental units (PTAC) with suitable duct work to all rooms). The *Ministry of the Environment*, *Conservation and Parks* does not accept window-type air conditioning units in lieu of a central system. In all cases, serious attention should be given by the proponent, the Mechanical Engineer, and the Contractor to the noise potential of the air conditioning system as it may affect the outdoor and indoor receivers within or outside of the proposed development. It is important that the Builder, the Mechanical Engineer, and the Contractor achieve the MECP objectives (the maximum sound level L_{AS} of 50 dBA[2] at the neighbour's closest point(s) of

[2] Or the lowest hourly ambient Leq due to road traffic projected at the receptor location(s).). It should be noted that L_{AS} of 55 dBA is acceptable only for cases where the A/C unit is placed in a high ambient location (i.e. with a direct line of sight to a major roadway).

reception, i.e. at their outdoor areas as well as at the closest window on any floor level) included in Publication NPC-300.

The following warning clause should be registered in all Development Agreement(s) and Offers of Sale and Purchase or Lease of these properties:

"*In order to achieve a suitable indoor noise environment, windows may have to remain closed; therefore this dwelling unit has been equipped with a central air conditioning system*".

It is also our recommendation that the necessary detailed technical analysis be performed prior to the certification process for Building Permit to address the specific requirements for the control of the selected air conditioning system to meet the sound level criteria at the point(s) of reception and to include same in the applicable permit drawings/specifications.

3. **<u>Warning Clause *3</u>**

Condo Building (All Residential Dwelling Units and Offices):

The following warning clause should be registered in all Development Agreement(s) and Offers of Sale and Purchase or Lease of these properties:

"*Purchasers/tenants are advised that despite the inclusion of noise control features within this development area and within the dwellings, sound levels from increasing road traffic may continue to be of concern, occasionally interfering with some activities of the dwelling occupants as the sound level exceeds the Municipality's and the Ministry of the Environment, Conservation and Parks noise criteria."*

Condo Building (All Units with Balcony):

The following Warning Clause should be registered in all Development Agreements and Offers of Sale and Purchase or Lease of these properties having a balcony:

"*Purchasers/tenants are advised that despite the inclusion of noise control features within this development and within the dwellings, sound levels from increasing road traffic will continue to be of concern as the levels in the balcony exceed the Ministry of the Environment, Conservation and Parks criteria, and that a protected Common Outdoor Living Area meeting the Ministry sound level criteria has been provided within the development".*

---

*3 Reference should be made to Bulletin No. 91003, Environmental Warnings/Restrictions, Ontario Ministry of Consumer and Commercial Relations.

4. Building Acoustic Insulation

Condo Building (All Residential Dwelling Units and Offices):

All exterior building components (walls, windows and doors) should meet the minimum Acoustic Insulation Factors (AIF) shown in Tables 3 and 4. All windows should be well fitted and weather-stripped.

It is also the responsibility of the developer/builder responsible for final design and construction of the subject dwellings to ensure that the correct windows, walls and doors acoustic specifications are secured from the Acoustical Engineer prior to planning and construction of the noted dwellings.

5. Implementation Procedures

The following is a summary of the generally recommended procedures for implementation as per the MECP requirements:

a) Prior to final approval of this development, a Detailed Noise Control Study, or an upgraded noise study should be required to take into consideration the following:
   - Exact building location
   - The exact distances to all sources of concern
   - Final/approved sound barrier locations as well as barrier height-sound level alternatives
   - Other relevant conditions to noise in the Development Agreement

b) The Development Agreement(s) should include the details of all the necessary noise control measures and procedures as outlined herein this noise study to the satisfaction of all concerned parties.

c) Prior submission of the project plans for Building Permit, the Builder's plans, with respect to the units requiring noise control measures as referred to earlier, should be certified by an Acoustical Engineer as being in conformance with the recommendations of the Detailed Noise Control Study as approved and/or amended by the authorities having jurisdiction. The barrier certification should include approval of the sound barrier shop drawings (showing the barrier material/wood species, construction details, support details, arrangements of the panels and exact locations on a development plan, height, and material composition) if applicable.

d) Prior to their final inspection and release for occupancy, these dwellings should be certified by an Acoustical Engineer as being in compliance with the recommendations of the Detailed Noise Control Study.

In view of the fact that municipal implementation procedures of the noise control

measures recommended herein may differ, it is the responsibility of the developer/builder responsible for final design and construction of the subject structures/dwellings to ensure that the correct details related to the noise control measures referred in this report, such as sound barriers, building shell component specifications (windows, walls, doors, and others), air conditioning noise control technical requirements, etc. are secured from the Acoustical Engineer prior to planning and construction of the noted building.

3.0 SOUND AND VIBRATION LEVEL CRITERIA

3.1 SURFACE TRANSPORTATION CRITERIA[4]

The surface transportation noise is based on the objective sound levels recommended by the Ministry of the Environment, Conservation and Parks (Ref: MECP Publication NPC-300 "Environmental Noise Guideline, Noise Assessment Criteria for Stationary Sources and for Land Use Planning, 2013") and applicable Regional/Municipal sound level standards and procedures for different land uses and spaces.

The following is a summary of the applicable sound level criteria for surface transportation sources for the shown time periods (day=d & night=n):

Sound Level Limits for Outdoor Living Areas (OLAs)

AREA & TIME PERIOD	$L_{Aeq(day)}$ ROAD AND RAIL (dBA)
Designated (Individual or common) Outdoor Living Areas (16 hr day, 07:00 - 23:00)	$L_{Aeq(day)}$ 55

Indoor Sound Level Limits

Type of Space	L_{Aeq} (Time Period) (dBA)	
	Road	Rail
Living/dining, den areas of residences, hospitals, nursing homes, schools, daycare centres, etc. (Time period-day: 16 hr, 07:00 - 23:00)	$L_{Aeq(day)}$ 45	$L_{Aeq(day)}$ 40
Living/dining, den areas of residences, hospitals. nursing homes, etc. (except schools or daycare centres) (Time period-night: 8 hr, 23:00 - 07:00)	$L_{Aeq(night)}$ 45	$L_{Aeq(night)}$ 40
Sleeping quarters (Time period-day: 16 hr, 07:00 - 23:00)	$L_{Aeq(day)}$ 45	$L_{Aeq(day)}$ 40
Sleeping quarters (Time period-night: 8 hr, 23:00 - 07:00)	$L_{Aeq(night)}$ 40	$L_{Aeq(night)}$ 35

[4] Road, rail and rolling stock traffic.

Additional Supplementary (Best Management Practices) Sound Level Criteria Recommended for Other Uses

Type of Space	L_{Aeq} (Time Period) (dBA)	
	Road	Rail
General offices, reception areas, retail stores, etc. (Time period-day: 16 hr, 07:00 - 23:00)	$L_{Aeq(day)}$ 50	$L_{Aeq(day)}$ 45
Living/dining areas of residences, hospitals, schools, nursing/retirement homes, daycare centres, theatres, places of worship, libraries, individual or semiprivate offices, conference rooms, reading rooms, etc. (Time period-day: 16 hr, 23:00 - 07:00)	$L_{Aeq(day)}$ 45	$L_{Aeq(day)}$ 40
Sleeping quarters of hotels/motels (Time period-night: 8 hr, 23:00 - 07:00)	$L_{Aeq(night)}$ 45	$L_{Aeq(night)}$ 40
Sleeping quarters of residences, hospitals, nursing/retirement homes, etc. (Time period-night: 8 hr, 23:00 - 07:00)	$L_{Aeq(night)}$ 40	$L_{Aeq(night)}$ 35

The criteria for acceptable outdoor and indoor sound levels are based on "free-field" predicted and/or measured sound levels at the applicable receiver locations, thus the effects of sound reflections and reverberant sound fields are not considered.

If the sound level is less than or equal to the sound level criteria, no control measures will be required.

The outdoor sound levels ***may*** exceed the outdoor sound level criterion by up to 5 decibels, provided that it can be demonstrated that it is not technically, economically or administratively feasible to achieve the criterion and that the occupants are informed of a potential disturbance due to the excess noise by means of a warning clause or cautionary note to be registered in all Development Agreement(s) and Offers of Sale and Purchase or Lease.

Central air conditioning is required when the daytime sound level at the outside wall of any habitable room containing windows exceeds an $L_{Aeq(day)}$ 16 hrs of 65 dBA or when the nighttime sound level at the outside wall of any habitable room containing windows exceeds an $L_{Aeq(night)}$ 8hrs of 60 dBA.

Forced air ventilation (with provision for future installation of a central air conditioning system) is required when the daytime sound level at the outside wall of any habitable room containing windows an exceeds $L_{Aeq(day)}$ 16 hrs of 55 dBA

but is less than or equal to 65 dBA or when the nighttime sound level at the outside wall of any habitable room containing windows exceeds an $L_{Aeq(night)}$ 8hrs of 50 dBA but is less than or equal to 60 dBA.

Application of Criteria

The following table summarizes the requirements for noise control measures for the various sound level ranges:

SOURCE OF NOISE	DAYTIME SOUND LEVEL $L_{Aeq(day)}$	NIGHTTIME SOUND LEVEL $L_{Aeq(night)}$	AIR CONDITIONING	FORCED AIR VENTILATION WITH PROVISION FOR FUTURE AIR COND.	WARNING CLAUSE	ACOUSTIC INSULATION
ROAD	<=55	<=50	-	-	-	-
	>55 & <=65	>50 & <=60	-	Yes	Yes "Type C"	-
	>65	>60	Yes	-	Yes "Type D"	Yes
RAIL	<=55	<=50	-	-	-	-
	>55 & <=60	>50 & <=55	-	Yes	Yes "Type C"	-
	>60 & <=65	>55 & <=60	-	Yes	Yes "Type C"	Yes
	>65	>60	Yes	-	Yes "Type D"	Yes

3.2 CRITERIA FOR STATIONARY NOISE SOURCES

The following criteria apply to the impact of Stationary Sources of noise as defined by the MECP to include industrial and commercial facilities. The criteria apply to the impact of Stationary Sources external to the development on the proposed development or to the impact of any proposed Stationary Sources internal to the development on the development itself and other receptors in the vicinity.

The criteria used in this study are based on the objective sound levels recommended by the Ministry of the Environment, Conservation and Parks (Ref.: MECP Publication NPC-300 “Environmental Noise Guideline, Noise Assessment Criteria for Stationary Sources and for Land Use Planning, 2013) and other relevant publications.

For sound from a stationary source, including Quasi-Steady Impulsive Sound but not including other impulsive sound, the predicted and/or measured “predictable worst case” 1-hour equivalent sound levels (L_{Aeq1hr}) of the stationary source(s) at a point of reception is the higher of the applicable exclusion limit value (given in

the following tables) or the background sound level for that point of reception. The outdoor sound level limits for stationary sources apply only to daytime and evening (07:00 – 23:00 hours).

In regards to the design and operation of emergency power generators, the MECP considers such sources to be independent of stationary sources of noise and require the application of a Leq(1hr) 55 dBA sound level limit at the closest points of reception, including the project being proposed, or the prevailing ambient due to traffic noise if higher.

Exclusion[5] Limit Values of One-Hour Equivalent Sound Level (L_{Aeq}, dBA) Outdoor Points of Reception

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	55
19:00 – 23:00	50	45	40	55

Exclusion Limit Values of One-Hour Equivalent Sound Level (L_{Aeq}, dBA) Plane of Window of Noise Sensitive Spaces

Time of Day	Class 1 Area	Class 2 Area	Class 3 Area	Class 4 Area
07:00 – 19:00	50	50	45	60
19:00 – 23:00	50	50	40	60
23:00 – 07:00	45	45	40	55

3.3 CRITERIA FOR TRUCK TRAFFIC NOISE IMPACT DUE TO A PROPOSED DEVELOPMENT ON AN EXISTING NEAR-BY NOISE-SENSITIVE LAND USE

The following criteria apply to the sound levels of vehicular truck traffic generated by a proposed development when traveling on public roadways in the vicinity of an existing noise-sensitive land use.

The following table shows the general acoustic criteria relating the significance of potential vehicular truck noise impact to the increase in sound levels due to the traffic associated with the proposed development:

[5] or the minimum hourly background (ambient) sound level $LAeq_{1hr}$, whichever is higher

IMPACT ASSESSMENT TABLE	
EXCESS/CHANGE	**IMPACT RATING**
0 to < 3	Insignificant
≥ 3 to < 5 dBA	Noticeable
≥ 5 to < 10 dBA	Significant
≥ 10	Very Significant

If the addition of the proposed development traffic increases the ambient noise at the receptors by more than 5 dB, then mitigation should be considered based on the Ministry of Environment, Conservation and Parks MOE/MTO Protocol (1986) criteria for traffic noise control.

4.0 ANALYSIS

4.1 TRANSPORTATION SOURCES OF NOISE

The relevant road and traffic data were obtained from the Regional Municipality of Durham and are summarized below:

- Liverpool Road

Current No. of Lanes	4
Future No. of Lanes	4
Posted Speed Limit	60 km/hr.
Future Speed Limit	60 km/hr.
Ultimate AADT	20,000 vpd
Total Truck Percentage – Medium Truck Split – Heavy Truck Split	7% 4.9% 2.1%
Day(16 hrs.)/Night(8 hrs.) Split (assumed)	90%/10%
Directional Traffic Split (assumed)	50%/50%
Road Gradient (assumed)	2%

- Kingston Road

Current No. of Lanes	4
Future No. of Lanes	4
Posted Speed Limit	60 km/hr.
Future Speed Limit	60 km/hr.
Ultimate AADT	35,000vpd
Total Truck Percentage – Medium Truck Split – Heavy Truck Split	8% 5.6% 2.4%
Day(16 hrs.)/Night(8 hrs.) Split (assumed)	90%/10%
Directional Traffic Split (assumed)	50%/50%
Road Gradient (assumed)	2%

Appendix A contains the relevant road traffic data used in this study.

4.2 OUTDOOR NOISE ENVIRONMENT

Sound level predictions were carried out based on MECP's ORNAMENT sound level prediction modeling procedures[6] (Ontario Road Noise Analysis Method for

[6] The MECP's noise prediction models ORNAMENT and STEAM have a limitation as to the minimum AADT value for 24 hour traffic volume (calculated for the daytime and nighttime hourly volume). When the AADT value is less than 40 vph, there is a neutral mathematical manipulation that can be used as long as the hourly traffic volume is not very low. The manipulation is implemented by multiplying the traffic volume by any reasonable factor (for example a factor of 10) and then by deducting 10 x log "factor" from the results (in this case, 10 x log 10=10).

Environment and Transportation, Technical Document, 1989.

It is concluded that for the Common Outdoor Living Area on the 10th Floor, the unattenuated daytime sound level is predicted to be in the range of L_{Aeq} 55dBA to 60dBA, therefore, outdoor noise control measures are recommended. The barrier alignment is as shown in Figure 3.

The conventional approach by which excess noise may be mitigated is through construction of acoustical barriers. Barrier height calculations for 10th Floor COLA are included in Appendix B are shown in Table 2.

Based on the MECP guidelines, the other balconies and terraces within the proposed development, are not considered as OLAs due to the fact that the depths of these areas are less than 4m. No physical mitigation measures are, therefore required and a warning clause registered in the Development Agreement(s) will suffice.

4.3 INDOOR NOISE ENVIRONMENT

The criteria for indoor L_{Aeq} sound levels are based on projected L_{Aeq} levels at the outside face of the dwellings with appropriate assumptions for the differences between the outdoor and indoor sound levels. If the outside L_{Aeq} levels do not exceed the recommended objective sound levels, then the indoor L_{Aeq} levels will not be exceeded, assuming standard building construction and operable windows.

Overall daytime sound levels at the building facades are shown in Table 3 and the overall nighttime sound levels at the building facades are shown in Table 4.

In consideration of the estimated sound levels and by comparison to the acceptable indoor sound level criteria (Section 3) the following is concluded:

- The sound levels at the outside walls of the proposed Condo Building (within any habitable room on any floor) is predicted to exceed $L_{Aeq(day)}$ 65 dBA and/or $L_{Aeq(night)}$ 60 dBA respectively. Therefore, central air conditioning is required for all units within the Condo Building.

Typical Acoustic Insulation Factors (A.I.F.) are summarized in Tables 3 and 4.

Additional Notes Regarding Air Conditioning Systems in Apartment Buildings

Based on the Sound Level Criteria and the established future sound levels, it was concluded that some of the dwelling units in the apartment building(s) within the proposed development may require air conditioning and/or provision for future installation of air conditioning.

There are several techniques available to air condition apartment units using either

a system central to the entire building or alternatively each apartment unit would have its own central system including the indoor fan and the outdoor condensing unit.

As it is not the subject of this report to discuss the specifics of all systems that may be used, the following comments are offered, to assist the proponent, the Mechanical Engineer and the Contractor in appreciating the acoustical problems and concerns associated with some of the commonly available commercial air conditioning systems:

1. The location and the design of the central system (cooling tower, condensing unit, openings in mechanical rooms, etc.) are important elements that should be checked by the Mechanical Engineer in order to achieve the stated outdoor and indoor sound level criteria.
2. Air conditioning units central to each individual apartment unit should also be designed by the Mechanical Engineer to meet the objective sound levels. If split-systems are used, then the location of the outdoor units should be selected to avoid outdoor living areas and the windows of habitable spaces. Other noise control measures available include quieter makes, the use of sound barriers, etc. If through the wall incremental units are used, then the selected incremental units should have the following features in order to reduce the transmission of high outside noise levels into the suites:
   a) The partition in the heating/cooling chassis should be of the acoustically sealed type (this partition separates the outdoor and indoor components).
   b) The unit should preferably be of the insulated “double casing design”.
   c) The interior of the unit should be acoustically lined.
   d) The perimeter of the sleeve should be caulked all around with acoustical sealant.
   e) The unit may be placed through the living room wall and ducts extended to the adjoining bedroom or dining room in accordance with manufacturers recommendations.

4.4 TYPICAL WINDOW / WALL CONSTRUCTION

As the detailed architectural plans for Building Permit submission are not available at this time, it is not possible to specify the window and wall details to meet the AIF requirements presented in Tables 3 and 4. Further detailed analysis should be undertaken based on the data presented in this Report to take into consideration the final room location, floor area, window type (operable or fixed), window size and orientation, etc. Such analysis is required by the MECP and the municipality prior to submission for building permits as part of their Certification process.

It must be pointed out that there are several factors affecting the final glass selection including:

1. Size of window.

2. Room dimensions.
3. Floor level and direction room faces.
4. Fixed or operable glass.
5. The number of building components.
6. Type of wall to be used.
7. Projected sound levels outside the window
8. The choice of “laminated” window glazing in one or two of the window panes.

For the calculation of type of windows required for each dwelling, a detailed description of each unit is required.

As an example, for a typical unit with daytime outdoor sound level of 71 dBA, the AIF value for the Living Room will be 33 assuming 3 components. If the window to floor ratio is 32%, then the window requirements in terms of glass thickness, mm (air space thickness, mm) glass thickness, mm are any of the following:

Double Glazed: 3mm (6mm) 6mm

As an example, for a typical unit with nighttime outdoor sound level of 64 dBA, the AIF value for the bedrooms will be 31 assuming 3 components. If the window to floor ratio is 20%, then the window requirements in terms of glass thickness, mm (air space thickness, mm) glass thickness, mm are any of the following:

Double Glazed: 3mm (6mm) 6mm

The above window glazing construction is typical examples only. It is recommended that prior to the submission of the building plans for Building Permit that the detailed architectural drawings of the units requiring noise control measures, as referred to earlier, be examined by an Acoustical Engineer in order to advise the design consultant on the ***specific*** building components for noise control to suite the actual window construction details.

IMPORTANT NOTES TO THE WINDOW SUPPLIER/CONTRACTOR:

The Contractor should use the window glazing dimensions specified in this report. If the Contractor chooses to use, instead the minimum specified STC values herein in this report, then the Contractor MUST observe the following rules:

(1) The **specific** windows MUST be tested by an “accredited” acoustic laboratory that is “NVLAP” accredited, and
(2) The full STC test results shall be submitted to SS Wilson Associates for prior approval before installation.

Indoor Sound Levels

While the control of the indoor noise created by the air conditioning equipment is not the direct subject of this study, it is important that the selected and designed air conditioning systems achieve indoor sound levels that meet the OBC/ASHRAE criteria and be at least 5dB lower than the Ministry of the Environment, Conservation and Parks recommended indoor sound level criteria included in Section 3.0 of this study.

4.5 Important Notes for the Residential Builder Regarding Windows THIS SHOULD BE PART OF THE PREVIOUS TRAFFIC SECTION?

The results in this report provide information on the calculated Acoustic Insulation Factors (AIF) for windows based on typical assumed window and room dimensions.

To assist the Builder in appreciating the fact of whether the results presented herein require typical commercially available residential type windows, or special type windows, the following table[7] provides reasonably accurate information on whether such window(s) are standard industry window or not:

Acoustic Insulation Factor (AIF) in this report	35	34	33	32	31	30	29	28	27	26
Window to room floor area percentage NOT to be exceeded	10%	13%	16%	20%	25%	32%	40%	50%	63%	80%

If the above ratios are exceeded, several options are available to the builder including one or more of: reducing the size of the window, increasing the inter-pane air spacing, the use of thicker glazing, the use of “laminated” glazing (1 or 2 panes), etc.

WORKED EXAMPLE 1:

- AIF shown in this study: 31
- Actual room floor area: 250 sq.ft.
- You selected a window area of: 45 sq.ft
- Your window/floor ratio: (45 divided by 250, then times 100) =18%
- Your result is less than above table value 25%; i.e. standard glazing unit

WORKED EXAMPLE 2:

- AIF shown in this study: 34
- Actual room floor area: 200 sq.ft.
- You selected a window area of: 50 sq.ft
- Your window/floor ratio: (50 divided by 200, then times 100) =25%
- Your result is more than above table value 13%; i.e. Non-standard (special) glazing unit

[7] Based on a typical commercially available glazing: 3mm inside pane, 16mm inter-pane air space & 3mm exterior pane.

4.6 STATIONARY SOURCES OF NOISE EXTERNAL TO THE PROPOSED DEVELOPMENT

1. Introduction

The proposed development is a 13-Storey mixed-use residential commercial building with the commercial development located on the ground floor, and two levels of underground parking. The common noise sources of concern from the external sources near the proposed development are defined in this section.

2. Description of the Sources of Stationary Noise

The main stationary sources of noise affecting the subject building are as follows:

1. Rooftop HVAC equipment serving commercial developments located on the East Side of the proposed development. Based on satellite imagery, SSWA had assumed eight 5-ton A/C Units, one 10-ton A/C Unit, and one kitchen exhaust fan to be located on the rooftop of the commercial developments.
2. Rooftop HVAC equipment serving a commercial development located on the South Side of the proposed development. Based on satellite imagery, SSWA had assumed 11 3-ton A/C Units to be located on the rooftop of the commercial developments

Figure 4 shows the location of the subject sources of stationary noise.

3. Points of Reception

To determine the level of noise impact, the nearest and most exposed outdoor areas and building facades to the sources of noise are selected to represent the worst-case scenarios. The following receptor locations were taken:

R1: 2nd Floor North Façade of Proposed Development
R2: 13th Floor North Façade of the Proposed Development
R3: 2nd Floor East Façade of Proposed Development
R4: 13th Floor East Façade of the Proposed Development
R5: 2nd Floor South Façade of Proposed Development
R6: 13th Floor South Façade of the Proposed Development
R7: 2nd Floor West Façade of Proposed Development
R8: 13th Floor West Façade of the Proposed Development

Figure 5 shows the location of the points of reception.

4. Description of the Sources of Ambient Noise

The land-use and character of the areas near the subject site is urban. This is

due to its proximity to Liverpool Road, which qualify the area as a Class 1 Area (Urban) based on the MOECC definition. The traffic data provided by Region of Durham determined that the road traffic count relevant to the proposed development is quite high in volume, therefore the ambient traffic noise will be calculated to determine the applicable sound level criteria for stationary noise.

5. Sound Level Calculations Model

A 3-D computer program8 for multiple point and line sources and multiple receivers developed by SS Wilson Associates was used to calculate the sound levels. The program takes into account:

- Reference sound levels and reference distances for the equipment working in each area of the subject development, i.e. sound emission levels.
- The Cartesian co-ordinates (x, y & z) of all sources and receivers.
- The number of events or occurrences of the noise in a given time period and the time period of each event.
- Spherical divergence factor.
- Additional attenuation due to sound barriers; natural or man-made types.
- Additional attenuation due to ground (as modified by sources/receiver elevations, the presence of intervening barriers and the type of ground).
- Atmospheric attenuation due to air molecular absorption.

For the purposes of this study, tonal sound level adjustments +5db were applied to the measured transformer sound emission levels In accordance with the MOECC procedures into the overall analysis of the Leq.

6. Established Ambient Sound Levels

The primary sources of ambient noise in the study area are vehicular traffic movements on Liverpool Road. The hourly traffic data for Liverpool road was provided by Region of Durham, and this data is used to establish the ambient noise due to vehicular traffic.

Liverpool Road

- AADT: 19,706 vpd (2018)
- Projected AADT at growth of 2.5% per year: 20,199
- Medium Truck Percentage: 4.9%
- Heavy Truck Percentage: 2.1%
- Posted Speed Limit: 60kph
- Road Gradient(assumed): 2%
- Day/Night traffic split (assumed): 90% day / 10% night

[8] The model used by SSWA to predict the sound levels due to Stationary Sources in this report is a proprietary prediction spreadsheet program developed by SSWA and is primarily based on the ISO 9613-2 publication recognized by the MOECC as an acceptable method for sound level predictions.

The subject site is considered as a Class 1 area as the daytime ambient noise is dominated by traffic sounds during the day and night. The MOECC noise prediction model, ORNAMENT was used to predict the ambient noise due to vehicular traffic for the PORs. The following are the established ambient noise due to vehicular traffic at all selected points of reception.

Point of Reception ID	Sound Level Limit Criteria Leq(1h)
R1 & R2	61 dBA Day 55 dBA Evening 58 dBA Night
R3 & R4	64 dBA Day 68 dBA Evening 51 dBA Night
R5 & R6	61 dBA Day 55 dBA Evening 58 dBA Night
R7 & R8	50 dBA Day 50 dBA Evening 45 dBA Night

Based on the above listed sound levels, the established ambient noise due to vehicular traffic exclusion limit will be used as the applicable criteria for noise impact assessment purposes (ref. MOECC Publication NPC-300).

Appendix C includes the road traffic data used to determine the ambient hourly noise levels and the relevant ambient noise calculations.

7. Predicted Stationary Source Sound Levels

The following is a summary of the resulting sound level assessment, without mitigation at each of the selected receptors:

Point of Reception ID	Predicted Sound Level Leq(1h)
R1	37 dBA Day 36 dBA Evening 34 dBA Night
R2	39 dBA Day 38 dBA Evening 36 dBA Night
R3	48 dBA Day 47 dBA Evening 45 dBA Night
R4	47 dBA Day 46 dBA Evening 44 dBA Night

R5	44 dBA Day 42 dBA Evening 41 dBA Night
R6	43 dBA Day 41 dBA Evening 40 dBA Night
R7	39 dBA Day 37 dBA Evening 36 dBA Night
R8	38 dBA Day 36 dBA Evening 34 dBA Night

Figure 6 illustrate the sound level contours of the external stationary sources of noise.

8. Impact Assessment and Findings

The following is a summary of the resulting sound level impact, with no mitigation, at each of the selected receptors:

Point of Reception ID	Point of Reception Description	Sound Level at Point of Reception Leq(1h)	Applicable MOECC Criteria	Compliance with MOECC Criteria
R1	North Facade 2nd Storey Plane of Window	37 dBA Day 36 dBA Evening 34 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes
R2	North Facade 13th Storey Plane of Window	39 dBA Day 38 dBA Evening 36 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes
R3	East Facade 2nd Storey Plane of Window	48 dBA Day 47 dBA Evening 45 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes
R4	East Facade 13th Storey Plane of Window	47 dBA Day 46 dBA Evening 44 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes
R5	South Facade 2nd Storey Plane of Window	44 dBA Day 42 dBA Evening 41 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes
R6	South Facade 13th Storey Plane of Window	43 dBA Day 41 dBA Evening 40 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes
R7	West Facade 2nd Storey Plane of Window	39 dBA Day 37 dBA Evening 36 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes
R8	West Facade 13th Storey Plane of Window	38 dBA Day 36 dBA Evening 34 dBA Night	50dBA Day 50dBA Evening 45dBA Night	Yes Yes Yes

The established external stationary sound levels at the selected points of reception

are predicted to meet the MECP's applicable sound level criteria during the daytime, evening and night.

4.7 STATIONARY SOURCES OF NOISE INTERNAL TO THE PROPOSED DEVELOPMENT

1. Introduction

This section of the report addresses the potential noise impact from the proposed building to the internal and external noise sensitive land-use areas. Typical, a high-rise residential building such as the development under consideration also contain stationary source such as rooftop Heating Ventilation and Air Conditioning (HVAC) equipment, underground garage exhaust fans leading to the outside to expel the exhaust fumes from the underground parking levels though a shaft to the outside, and a generator set..

At this preliminary stage of the planning process, the detailed specifications and locations of such equipment are seldom available, however to ensure that future consideration will be given to their potential impact, the following subsections provide typical and realistic sound levels predictions of such equipment.

2. Air Conditioning and Ventilation

The proposed development consists of 12 storeys of residential and 1 storey of commercial, which requires heating and cooling. Typically, there are three types of suite A/C units that may be used:

1. The use of a central A/C system that is central to the entire building whereby a large chiller, condenser (or fluid cooler/air-cooled condenser), pumps, etc. are used. The general location of such system is commonly on the roof of the subject building. Noise control of the referenced equipment is a straightforward design exercise whereby the engineers can make use of several standard provisions for noise control. The provisions include the use of silencers, acoustic louvers, acoustic shielding by the structure, low noise emission levels equipment, etc. All of such measures are fairly straightforward as far as selection, design, and specifications. Accordingly, the details such measures can be specified in due course suitable for this land use application.

2. For many types of buildings and for the purposes of independent energy metering for individual suites, a packaged HVAC unit that is considered central to each suite is installed within each suite in a small closet with access to the outside for heat exchange and for gas heating vents. Each closet serving one suite contains a louver to the outside for condenser intake and discharge, as well as for natural gas exhaust vents. Of concern is the potential cumulative noise impact when several of such A/C units operate simultaneously during the day and night in the hot season, thus affecting the adjoining neighbours.

3. The other alternate means for central air conditioning of apartment units is to use split-system heating/cooling units where the condenser is located on the roof of the building along with other condensing units serving the other neighbours in the same building or on each balcony in the suite. The evaporative coils are located in a small enclosure within the suite with access to the outside for combustion exhaust release (not usually of concern). The multiple condensing unit installation on the roof or the cumulative balcony noise potential is the source of environmental noise affecting the neighbours and other nearby residential dwellings.

At the present time, there is no information available on the type of Heating, Ventilation, and Air Conditioning system to be used. Therefore, the cumulative noise impact of the Apartment Building is determined using noise prediction model based on reasonable technical assumptions and based on information extracted from the building plan and elevation drawings. The following is a summary of the predictions/assumptions made regarding the potential noise sources:

Cooling Tower

Sound Power Level: 95 dBA

Overhead Sound Level Emission: 67 dBA at 10m

Garage Exhaust Shaft

The two underground parking levels combined have a total of 126 parking spots. It is recommended to implement the garage exhaust shaft near Liverpool Road, as the ambient road traffic noise will act as a “mask” to the stationary noise. To provide a conservative assumption, a rate of 75 CFM per parking lot was assumed, which leads to a required 9,500 CFM to meet the ventilation needs of the underground parking garage.

Garage Exhaust Shaft Sound Emission: 60 dBA at 10m

Emergency Generator

A typical apartment tower would normally be fitted with an emergency diesel / gas powered generator that is to be located either below or above ground.
As far as approvals are concerned, the Proponent will also be required to apply for a permit to have the generator installed as part of the MECP’s EASR Program. It is important to note that with the application to the MECP, all noise requirements would be deemed to have been satisfied and no further requirements apply. To ensure compliance, the following are typical commercially available controls that are commonly used depending on the size of the generator, the energy source and its final location within the building:

The following is summary of the possible noise control measures:

1. The air/intake and air discharge ducts within the Generator Room may be fitted with passive silencers capable of providing minimum Dynamic Insertion Loss to meet the performance specs.
2. The air intake louver and air discharge louvers serving the Generator Room should be of the acoustic type to provide an additional Insertion Loss where required.
3. The interior wall and ceiling of the Emergency Generator Room should be lined with sound absorbing material having a minimum NRC 0.90 (approx. 75mm, 3" thick material) to cover a least 75% of the surfaces.
4. The Generator silencer should be of the Critical Hospital grade type.
5. The air intake duct to the Fluid Cooler should be covered with minimum 50 mm (2") acoustic duct liner.

Alternatively, the maximum permissible sound emission level without all of the above noise controls should be limited to 55 dBA or the ambient if higher at the nearest point of reception. Therefore, for the proposed project, the closest receptor is at an approximate distance of 5m, and the maximum sound emission level of the generator set should not exceed 52 dBA at 7m. The above noted recommendations are possible recommendations that follow for the generator set. It is recommended to conduct a detailed analysis for when the detailed generator set information is made available.

3. Points of Reception

For the subject building, the near-by noise sensitive receptors may be affected by the predicted sound levels summarized below, (the prediction sheets are included in Appendix C):

External Points of Reception

POR 1: South-building façade at the second-storey of the residential dwelling located on 1862 Liverpool Road
POR 2: West-building façade at the second-storey of the townhouse located at Unit 48, 1331 Glenanna Road
POR 3: South-building façade at the second-storey of the residential dwelling located on 1852 Liverpool Road
POR 4: East-building façade at the second-storey of the residential dwelling located on 1857 Glendale Drive
POR 5: East-building façade at the second-storey of the townhouse located at Unit 1299 Glenanna Road

Internal Receptor Locations

R1: 2nd Floor North Façade of Proposed Development
R2: 13th Floor North Façade of the Proposed Development
R3: 2nd Floor East Façade of Proposed Development
R4: 13th Floor East Façade of the Proposed Development

R5: 2nd Floor South Façade of Proposed Development
R6: 13th Floor South Façade of the Proposed Development
R7: 2nd Floor West Façade of Proposed Development
R8: 13th Floor West Façade of the Proposed Development

Figure 5 illustrates the locations of the external and internal points of reception.

4. Established Ambient Sound Levels

The land use and character of the areas near the subject site is essentially urban. This is due to its proximity to Martha Street, which qualify the area as a Class 1 Area (Urban) based on the MECP definition. To provide a conservation initial assessment, the MECP exclusion limits will be assumed for the stationary noise impact onto the nearby existing noise sensitive land use.

Point of Reception ID	Sound Level Limit Criteria Leq(1h)
POR 1	50 dBA Day 50 dBA Evening 45 dBA Night
POR 2	50 dBA Day 50 dBA Evening 45 dBA Night
POR 3	50 dBA Day 50 dBA Evening 45 dBA Night
POR 4	50 dBA Day 50 dBA Evening 45 dBA Night
POR 5	50 dBA Day 50 dBA Evening 45 dBA Night

Although the ambient road traffic noise will emit higher sound levels, if the stationary noise impact will meet the MECP exclusion limits, then the predicted sound levels will not exceed the ambient road traffic noise.

5. Predicted Stationary Source Sound Levels

The following is a summary of the resulting sound level assessment, without mitigation at each of the selected receptors:

Point of Reception ID	Predicted Sound Levels Leq(1h)
POR 1	57 dBA Day 57 dBA Evening 57 dBA Night
POR 2	46 dBA Day 46 dBA Evening 46 dBA Night
POR 3	34 dBA Day 34 dBA Evening 34 dBA Night
POR 4	45 dBA Day 45 dBA Evening 45 dBA Night
POR 5	46 dBA Day 46 dBA Evening 46 dBA Night
R1	59 dBA Day 59 dBA Evening 59 dBA Night
R2	51 dBA Day 51 dBA Evening 51 dBA Night
R3	55 dBA Day 55 dBA Evening 55 dBA Night
R4	50 dBA Day 50 dBA Evening 50 dBA Night
R5	35 dBA Day 35 dBA Evening 35 dBA Night
R6	42 dBA Day 42 dBA Evening 42 dBA Night
R7	35 dBA Day 35 dBA Evening 35 dBA Night
R8	43 dBA Day 43 dBA Evening 43 dBA Night

In conclusion, the unattenuated sound levels are predicted to exceed the MOECC criteria for the selected receptors. Therefore, outdoor noise control measures will be required unless consideration is given by the project consultants to these issues during the detailed design stage.

Figure 7 illustrates the predicted unmitigated sound levels.

6. Impact Assessment and Findings

For this assumed scenario, typical recommendations include implementing a silencer and louvres onto the rooftop cooling tower or installing a quieter cooling tower, and acoustic liner for the garage exhaust fan shaft. In reviewing the stationary sound levels, it was concluded the excess noise stems from the garage exhaust fan, in which an acoustic liner will likely be recommended. The cooling tower sound rating should not exceed the assumed emission levels discussed in Section 4.7.2 of the report. The following sound levels are the sound levels predicted assuming these noise control measures are implemented:

Point of Reception ID	Predicted Sound Levels Leq(1h)
POR 1	42 dBA Day 42 dBA Evening 42 dBA Night
POR 2	34 dBA Day 34 dBA Evening 34 dBA Night
POR 3	34 dBA Day 34 dBA Evening 34 dBA Night
POR 4	34 dBA Day 34 dBA Evening 34 dBA Night
POR 5	34 dBA Day 34 dBA Evening 34 dBA Night
R1	45 dBA Day 45 dBA Evening 45 dBA Night
R2	42 dBA Day 42 dBA Evening 42 dBA Night
R3	41 dBA Day 41 dBA Evening 41 dBA Night
R4	42 dBA Day 42 dBA Evening 42 dBA Night
R5	34 dBA Day 34 dBA Evening 34 dBA Night
R6	42 dBA Day 42 dBA Evening 42 dBA Night
R7	35 dBA Day 35 dBA Evening 35 dBA Night

R8	43 dBA Day 43 dBA Evening 43 dBA Night

Figure 8 illustrates the sound level contours with the inclusion of typical noise control mitigation measures.

Conclusions and Recommendation

Residential apartment building such as the one under consideration will certainly require the installation of HVAC equipment, which is predicted to exceed the applicable MECP sound level criteria without the application of noise control measures to suit. Accordingly, this issue should be addressed in more details during the issuance of the building permit stage, at which time more information would become available regarding the details of the proposed building construction and the type of mechanical systems to be used in such building. In reviewing the sound levels predicted at the nearest receptors as well as the type of noise emitted from the source, it is our professional opinion that it is feasible to attenuate the stationary noise sources to meet the specified criteria, with the following typical noise mitigation measures:

1. Incorporate acoustic liner within the garage exhaust fan shaft.
2. Not exceed a sound level rating of 67 dBA at 10m for the rooftop cooling tower unit, or incorporate a silencer and acoustic louvres onto the rooftop cooling tower unit.
3. It is technically feasible to control the noise emitted from the generator set to meet the applicable sound level criteria. Though, it is recommended to conduct detailed analysis of the generator set when the information is made available.

Therefore, it is recommended that detailed considerations be given by the project professionals to this issue prior to the issuance of the building permit.

4.8 Abbreviations

Basic Descriptor	Measurement Weighting	Time Weighting Characteristics **F**(Fast). **S**(Slow). **I**(Impulse).
L_p Sound pressure level	A-Weighted sound pressure level	L_{AF}, L_{AS}, L_{AI}
	C-Weighted sound pressure level	L_{CF}, L_{CS}, L_{CI}
	Z-Weighted sound pressure level(Flat)	L_{ZF}, L_{ZS}, L_{ZI}
L_{eq} Equivalent continuous sound level	Equivalent continuous A-weighted sound level	L_{Aeq}, L_{AIeq}
	Equivalent continuous C-weighted sound level	L_{Ceq}, L_{CIeq}
	Equivalent continuous Z-weighted(Flat) sound level	L_{Zeq}, L_{ZIeq}
L_E Sound Exposure Level	A-Weighted sound exposure Level	L_{AE}, L_{AIE}
	C-Weighted sound exposure Level	L_{CE}, L_{CIE}
	Z-Weighted sound exposure Level(Flat)	L_{ZE}, L_{ZIE}
L_{max}, L_{min}	Maximum A-weighted sound level	L_{AFmax}, L_{ASmax}, L_{AImax}
Maximum Sound Level	Maximum C-weighted sound level	L_{CFmax}, L_{CSmax}, L_{CImax}
	Maximum Z- weighted sound level(Flat)	L_{ZFmax}, L_{ZSmax}, L_{ZImax}
L_N Percentile Sound Level	Percentile A-weighted sound level	L_{AFNn}, L_{ASN}, L_{AIN}
	Percentile C-weighted sound level	L_{CFNn}, L_{CSN}, L_{CIN}
	Percentile Z-weighted sound level(Flat)	L_{ZFNn}, L_{ZSN}, L_{ZIN}
L_{peak}	A-Weighted peak sound level	L_{Apeak}
Peak Sound Level	C-Weighted peak sound level	L_{Cpeak}
	Z-Weighted peak sound level(Flat)	L_{Zpeak}

TABLES

TABLE 1

SUMMARY OF MINIMUM REQUIRED NOISE CONTROL MEASURES

RECEPTOR	SOUND BARRIER	CENTRAL AIR CONDITIONING	PROVISION FOR CENTRAL AIR CONDITIONING	WARNING CLAUSE
COLA 10th Floor	Yes 1.1m High Parapet/Rooftop Barrier	--	--	--
All Residential dwellings and Offices	--	Yes	--	Yes

N6 Leq-AIF Master- 2019-05-16

SS WILSON ASSOCIATES

2019

10/30/2019 0:00

SUMMARY- OUTDOOR SOUND LEVEL CALCULATIONS

File Number :	WA19-025
Project Name :	1854 & 1858 Liverpool Rd
Description :	Pickering
Description :	Condo Building

OUTDOORS

Table 2

(Using NRC/MOE Pocedures)

Any Heavy Rail Line ? No

Record Number	1	2	3	4	5	6	7	8	9	10	11	12
Consider Record	Y	N	N	N	N	N	N	N	N	N	N	N
LOCATION	COLA-10th Floor											
FACE/DIRECTION	West											
.....	xxxxxxx											
Source 1: Roads	**Road Traffic**		**OUTDOOR DAYTIME LEVELS**			OUTDOOR DAYTIME LEVELS			OUTDOOR DAYTIME LEVELS			
Leq Outdoors	57.00											
Partial angle of exposure, degrees	180											
Partial exposure adjust., dB												
Barrier Adjustment, dB	-8.00											
Additional Adjustment, dB												
Sub-Total Leq, dBA	**49.00**											
Source 2:	**Road Traffic**		**OUTDOOR DAYTIME LEVELS**			OUTDOOR DAYTIME LEVELS			OUTDOOR DAYTIME LEVELS			
Leq Daytime												
Partial angle of exposure, degrees	180											
Partial exposure adjust., dB												
Barrier Adjustment, dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Source 3:	**Road Traffic**		**OUTDOOR DAYTIME LEVELS**			OUTDOOR DAYTIME LEVELS			OUTDOOR DAYTIME LEVELS			
Leq Daytime												
Partial angle of exposure, degrees	180											
Partial exposure adjust., dB												
Barrier Adjustment, dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Source 4:	**Road Traffic**		**OUTDOOR DAYTIME LEVELS**			OUTDOOR DAYTIME LEVELS			OUTDOOR DAYTIME LEVELS			
Leq Daytime												
Partial angle of exposure, degrees	180											
Partial exposure adjust., dB												
Barrier Adjustment, dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Sub-Tot. 4 Sources Leq, dBA	**49.00**											
Aircraft noise NEF/NEP												
Adjust.1												
Adjust.2												
Adjusted NEF/NEP												
Approx. Overall Combined Leq	*49*											
Overall Road and/or Rail and/or Stationary Sources, Leq (dBA)	***49***											
Aircraft Noise Only, NEF												
Additional Requirements	1.1m High Acoustic Parapet/ Barrier											

	N6 Leq-AIF Master- 2019-05-16		**SS WILSON ASSOCIATES**						(Using NRC/MOE Pocedures)			
10/30/2019 14:51			**Leq- AIF CALCULATIONS AND TYPICAL WINDOW GLAZING REQUIREMENTS**									
File Number :	WA19-025				**DAYTIME**				NOTES	. . . . .	. . . . .	. . . . .
Project Name :	1854 & 1858 Liverpool Rd				**Table 2**					. . . . .	. . . . .	. . . . .
Description :	Pickering									. . . . .	. . . . .	. . . . .
Description :	Condo Building											
Record Number	1	2	3	4	5	6	7	8	9	10	11	12
Consider Record	Y	Y	N	N	N	N	N	N	N	N	N	N
LOCATION	BUILDING FAÇADE	BUILDING FAÇADE										
FACE/ DIRECTION	EAST	SOUTH										
ROOM CLASSIFICATION	Living / Dining	Living / Dining										
Manual Adjust. to Criterion,												
MOE Transportation Sources Daytime Leq Indoor Criteria, dBA	45	45	45	45	45	45	45	45	45	45	45	45
Aircraft Indoor Criteria, NEF	5	5	5	5	5	5	5	5	5	5	5	5
Source 1: Roads	**Road Traffic**		DAYTIME LEVELS			DAYTIME LEVELS			DAYTIME LEVELS			
Leq Daytime	71.00	67.00										
Partial angle of exposure, 1-180°	180	180	180	180	180	180	180	180	180	180	180	180
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA	**71.00**	**67.00**										
Angular range of incidence Case(0,1,2,3)												
Adjusted AIF	33	29	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
Source 2:	**Road Traffic**		DAYTIME LEVELS			DAYTIME LEVELS			DAYTIME LEVELS			
Leq Daytime												
Partial angle of exposure, 1-180°	180	180	180	180	180	180	180	180	180	180	180	180
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Angular range of incidence Case(0,1,2,3)												
Adjusted AIF	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
Source 3:	**Road Traffic**		DAYTIME LEVELS			DAYTIME LEVELS			DAYTIME LEVELS			
Leq Daytime												
Partial angle of exposure, 1-180°	180	180	180	180	180	180	180	180	180	180	180	180
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Angular range of incidence Case(0,1,2,3)												
Adjusted AIF	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
Source 4:	**Road Traffic**		DAYTIME LEVELS			DAYTIME LEVELS			DAYTIME LEVELS			
Leq Daytime												
Partial angle of exposure, 1-180°	180	180	180	180	180	180	180	180	180	180	180	180
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Angular range of incidence Case(0,1,2,3)												
Adjusted AIF	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38	-38
Sub-Tot. 4 Sources Leq, dBA	**71.00**	**67.00**										
Aircraft noise NEF/NEP												
Adjust.1												
Adjust.2												
Adjusted NEF/NEP												
Approx. Overall Combined Leq	*71*	*67*										
Assume 32% W/F ratio for Living/Dining rooms in the absence of specific data	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Assumed Total # of Components (Road, Rail, and Other Sources)	3	3	3	3	3	3	3	3	3	3	3	3
Assumed Total # of Components Aircraft ONLY	3	3	3	3	3	3	3	3	3	3	3	3
AIF of 4 Sources	*33*	*29*										
Aircraft AIF												
Combined AIF	33	29										
Openable or Fixed windows ?	Openable	Openable										
Adjustment, dB/ AIF												
Regular or Laminated Glass	Laminated	Laminated	Regular	Regular	Regular	Regular	Regular	Regular	Regular	Regular	Regular	Regular
Other Adjustment (dB,AIF), Specify												
Final Adjusted AIF	30	26										
Minimum STC (Approx)	***34***	***30***										
Typical Minimum Double Glazing Alternatives	3(6)6 6(6)6	3(6)6 6(6)2	X(6)X	X(6)X	X(6)X	X(6)X	X(6)X	X(6)X	X(6)X	X(6)X	X(6)X	X(6)X
NOTES	A/C Required	A/C Required										

SS WILSON ASSOCIATES

SUMMARY TABLE OF **Leq- AIF CALCULATIONS AND TYPICAL WINDOW GLAZING REQUIREMENTS**

WA19-025

NOTES . . . . . **1854 & 1858 Liverpool Rd**

. . . . . **Pickering**

. . . . . **Condo Building**

. . . . . **DAYTIME**

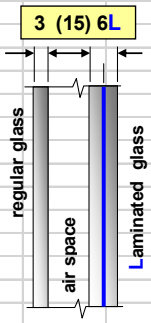
. . . . . **Table 2**

- Windows must be well-fitted weatherstripped units.
- The interpane spacing shown in the tables are the minimum acceptable.
- Larger spacing for a given glazing thickness normally improves the performance.

LOCATION	FACE/ DIRECTION	ROOM CLASSIFICATION		Openable or Fixed Window	Regular Strength or Laminated Glass	Combined AIF	Approx. Overall Combined Leq	Double Glazing Alternatives, mm			Triple Glazing Alternatives, mm	***Minimum STC (Approx)***
BUILDING FAÇADE	EAST	Living /Dining		Openable	Laminated	33	71	3(6)6 6(6)6				***34***
BUILDING FAÇADE	SOUTH	Living /Dining		Openable	Laminated	29	67	3(6)6 6(6)2				***30***

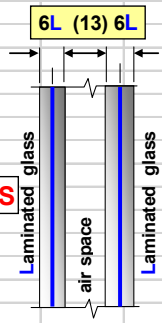
ABBREVIATIONS SPECIFIC TO THIS PROJECT : FF(Front Face), RF(Rear Face), RS(Right Side face), LS(Left Side face)

Double Glazing- regular glass

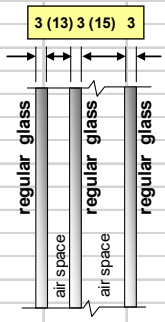


Double Glazing- *single laminated glass*

EXAMPLES



Double Glazing- *double laminated glass*



Triple Glazing- regular glass

	N6 Leq-AIF Master- 2019-05-16		SS WILSON ASSOCIATES						(Using NRC/MOE Pocedures)			
10/30/2019 14:51			Leq- AIF CALCULATIONS AND TYPICAL WINDOW GLAZING REQUIREMENTS									
File Number :	WA19-025				NIGHT TIME			NOTES	. . . . .	. . . . .	. . . . .	
Project Name :	1854 & 1858 Liverpool Rd				Table 3				. . . . .	. . . . .	. . . . .	
Description :	Pickering								. . . . .	. . . . .	. . . . .	
Description :	Condo Building											
Record Number	1	2	3	4	5	6	7	8	9	10	11	12
Consider Record	Y	Y	N	N	N	N	N	N	N	N	N	N
LOCATION	BUILDING FAÇADE	BUILDING FAÇADE										
FACE/ DIRECTION	EAST	SOUTH										
ROOM CLASSIFICATION	Bedroom	Bedroom										
Manual Adjust. to Criterion,												
MOE Transportation Sources Night Leq Indoor Criteria, dBA	40	40										
Aircraft Indoor Criteria, NEF												
Source 1: Roads	**Road Traffic**		NIGHT TIME LEVELS			NIGHT TIME LEVELS			NIGHT TIME LEVELS			
Leq Night Time	64.00	60.00										
Partial angle of exposure, degrees	180	180										
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA	**64.00**	**60.00**										
Angular range of incidence (0,12,3)												
Adjusted AIF	31	27	37	37	37	37	37	37	37	37	37	37
Source 2:	**Road Traffic**		NIGHT TIME LEVELS			NIGHT TIME LEVELS			NIGHT TIME LEVELS			
Leq Night Time												
Partial angle of exposure, degrees	180	180										
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Angular range of incidence (0,12,3)												
Adjusted AIF	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33
Source 3:	**Road Traffic**		NIGHT TIME LEVELS			NIGHT TIME LEVELS			NIGHT TIME LEVELS			
Leq Night Time												
Partial angle of exposure, degrees	180	180										
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Angular range of incidence (0,12,3)												
Adjusted AIF	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33
Source 4:	**Road Traffic**		NIGHT TIME LEVELS			NIGHT TIME LEVELS			NIGHT TIME LEVELS			
Leq Night Time												
Partial angle of exposure, degrees	180	180										
Partial exposure adjust., dB												
Additional Adjustment, dB												
Sub-Total Leq, dBA												
Angular range of incidence (0,12,3)												
Adjusted AIF	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33	-33
Sub-Tot. 4 Sources Leq, dBA	**64.00**	**60.00**										
Aircraft noise NEF/NEP												
Adjust.1												
Adjust.2												
Adjusted NEF/NEP												
Approx. Overall Combined Leq	*64*	*60*										
Assume 20% W/F ratio for Living/Dining rooms in the absence of specific data	20.0	20.0										
Assumed Total # of Components (Road, Rail, and Other Sources)	3	3										
Assumed Total # of Components Aircraft ONLY	3	3										
AIF of 4 Sources	*31*	*27*										
Aircraft AIF												
Combined AIF	31	27										
Openable or Fixed windows ?	Openable	Openable										
Adjustment, dB/ AIF												
Regular or Laminated Glass	Laminated	Laminated										
Other Adjustment												
Final Adjusted AIF	28	24										
Minimum STC (Approx)	*30*	*26*										
Typical Minimum Double Glazing Alternatives	3(6)6 6(6)2	3(6)6 6(6)2										
NOTES	A/C Required	A/C Required										

SS WILSON ASSOCIATES

SUMMARY TABLE OF **Leq- AIF CALCULATIONS AND TYPICAL WINDOW GLAZING REQUIREMENTS**

WA19-025

NOTES . . . . . **1854 & 1858 Liverpool Rd**

. . . . . **Pickering**

. . . . . **Condo Building**

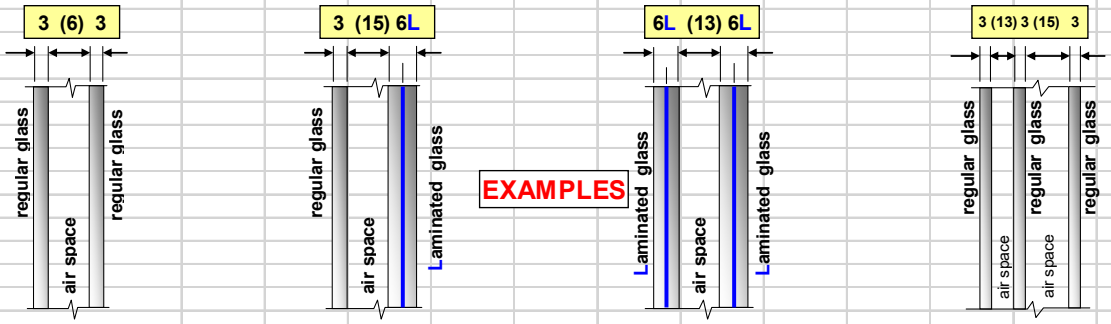
. . . . . **NIGHT TIME**

. . . . . **Table 3**

- Windows must be well-fitted weatherstripped units.
- The interpane spacing shown in the tables are the minimum acceptable.
- Larger spacing for a given glazing thickness normally improves the performance.

LOCATION	FACE/ DIRECTION	ROOM CLASSIFICATION		Openable or Fixed Window	Regular Strength or Laminated Glass	Combined AIF	Approx. Overall Combined Leq	Double Glazing Alternatives, mm		Triple Glazing Alternatives, mm	***Minimum STC (Approx)***
BUILDING FAÇADE	EAST	Bedroom		Openable	Laminated	31	64	3(6)6 6(6)2			***30***
BUILDING FAÇADE	SOUTH	Bedroom		Openable	Laminated	27	60	3(6)6 6(6)2			***26***

ABBREVIATIONS SPECIFIC TO THIS PROJECT : FF(Front Face), RF(Rear Face), RS(Right Side face), LS(Left Side face)



FIGURES

FIGURE 1
KEY PLAN

FIGURE 2
SITE PLAN

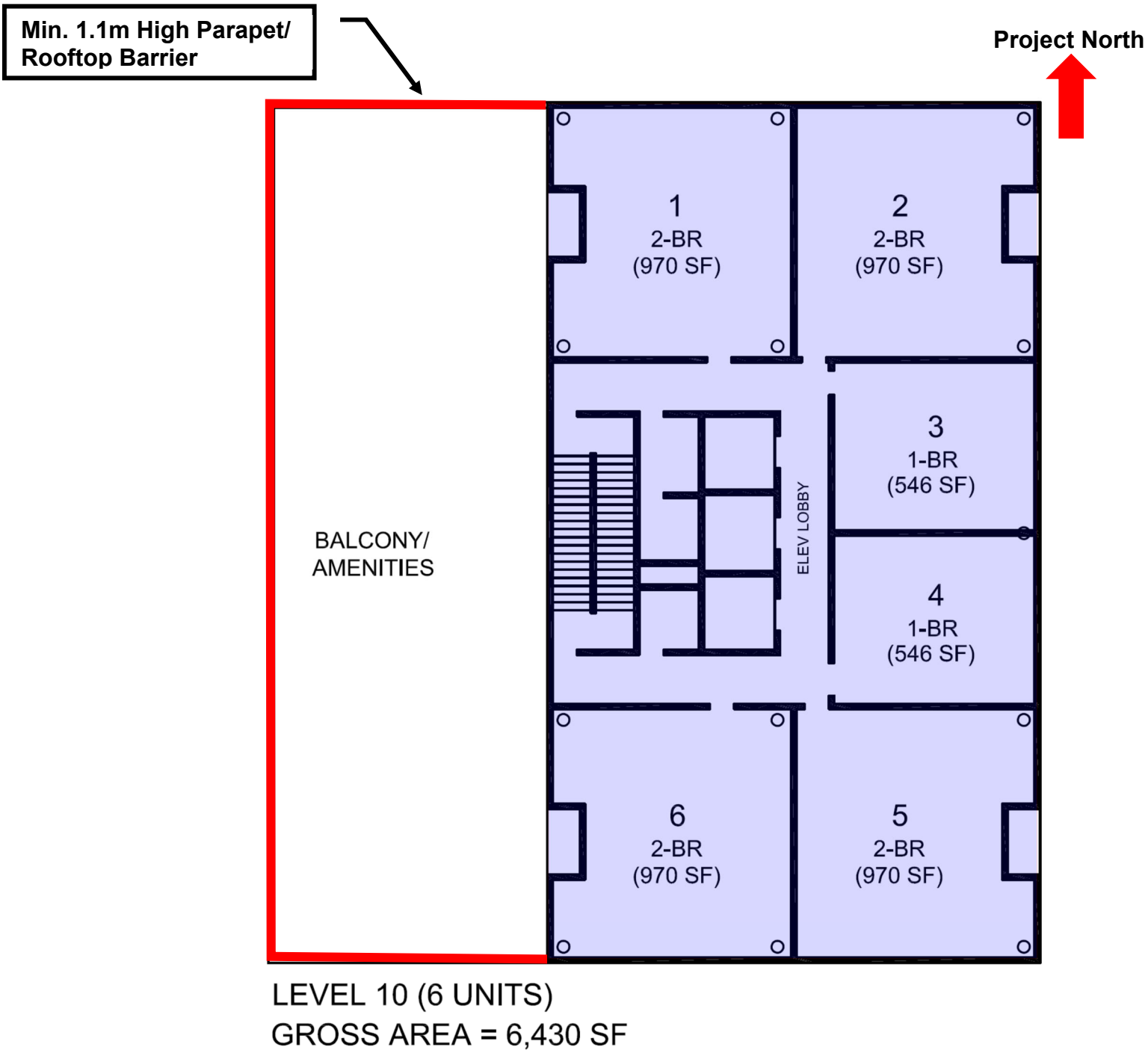


FIGURE 3
SCHEMATIC BARRIER/PARAPET ALIGNMENT

FIGURE 4
STATIONARY SOURCES OF NOISE

FIGURE 5
RECEPTOR AND POINTS OF RECEPTION FOR STATIONARY SOURCES OF NOISE

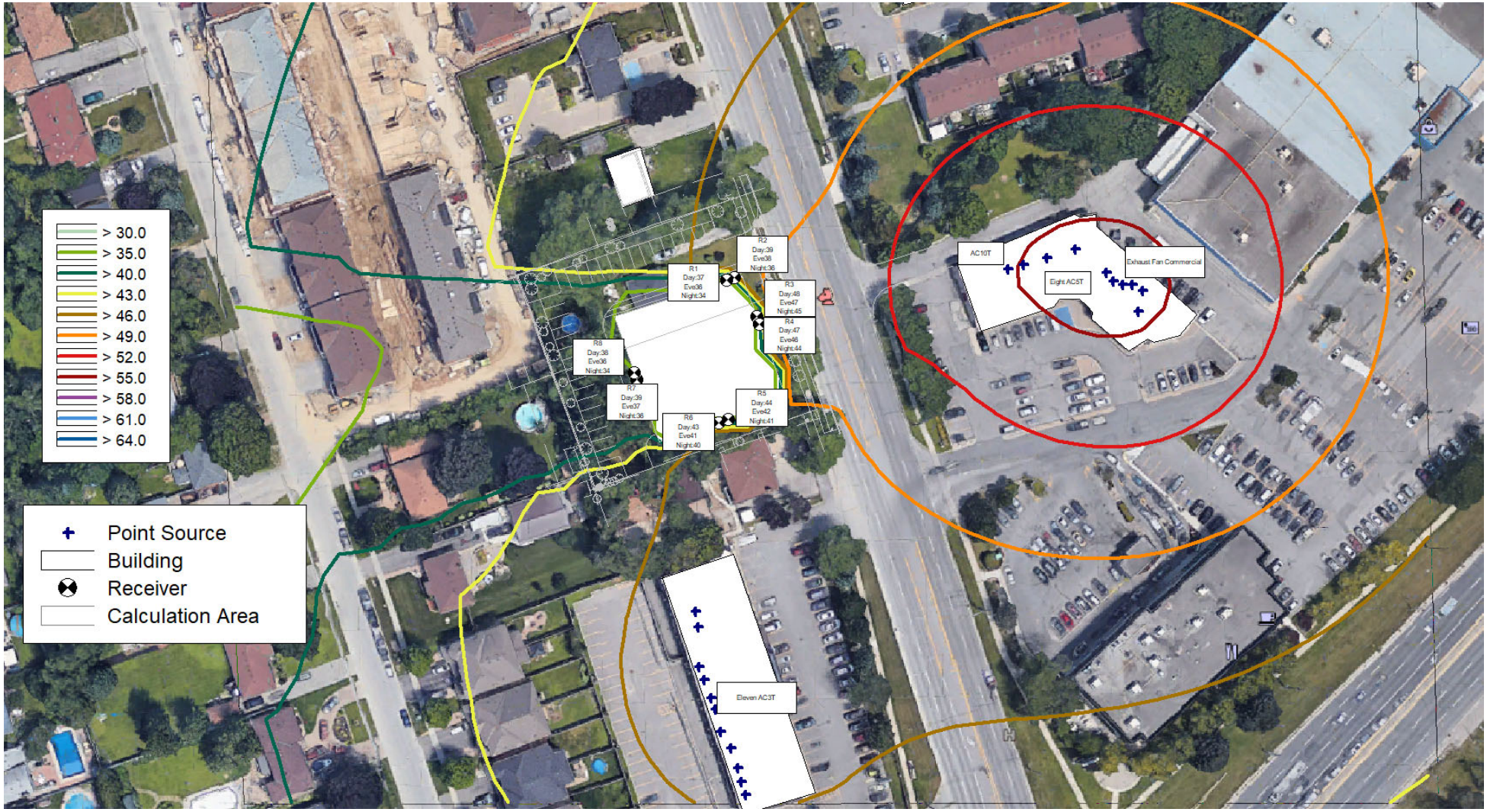


FIGURE 6
UNMITIGATED EXTERNAL STATIONARY SOURCES OF NOISE

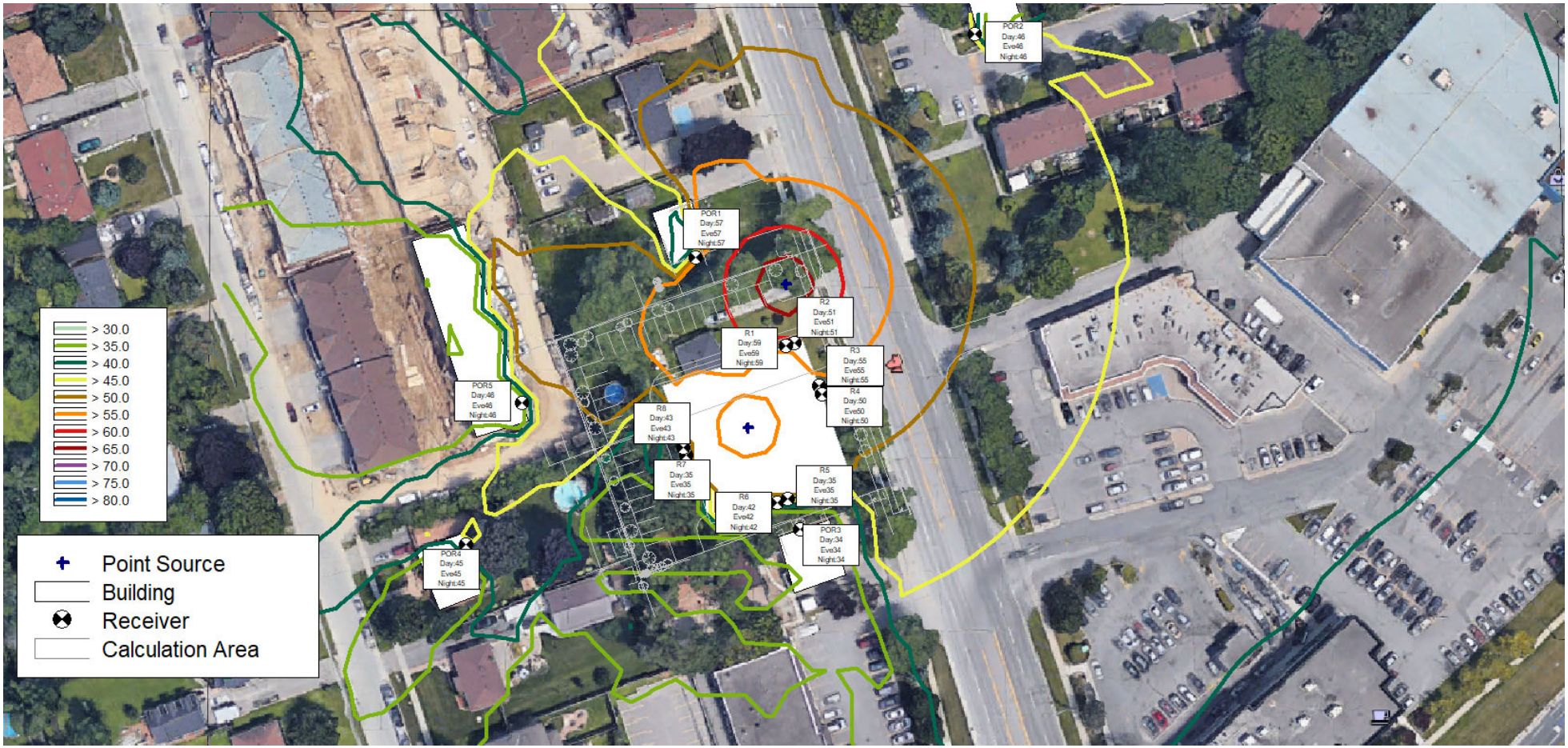


FIGURE 7
UNMITIGATED INTERNAL STATIONARY SOURCES OF NOISE

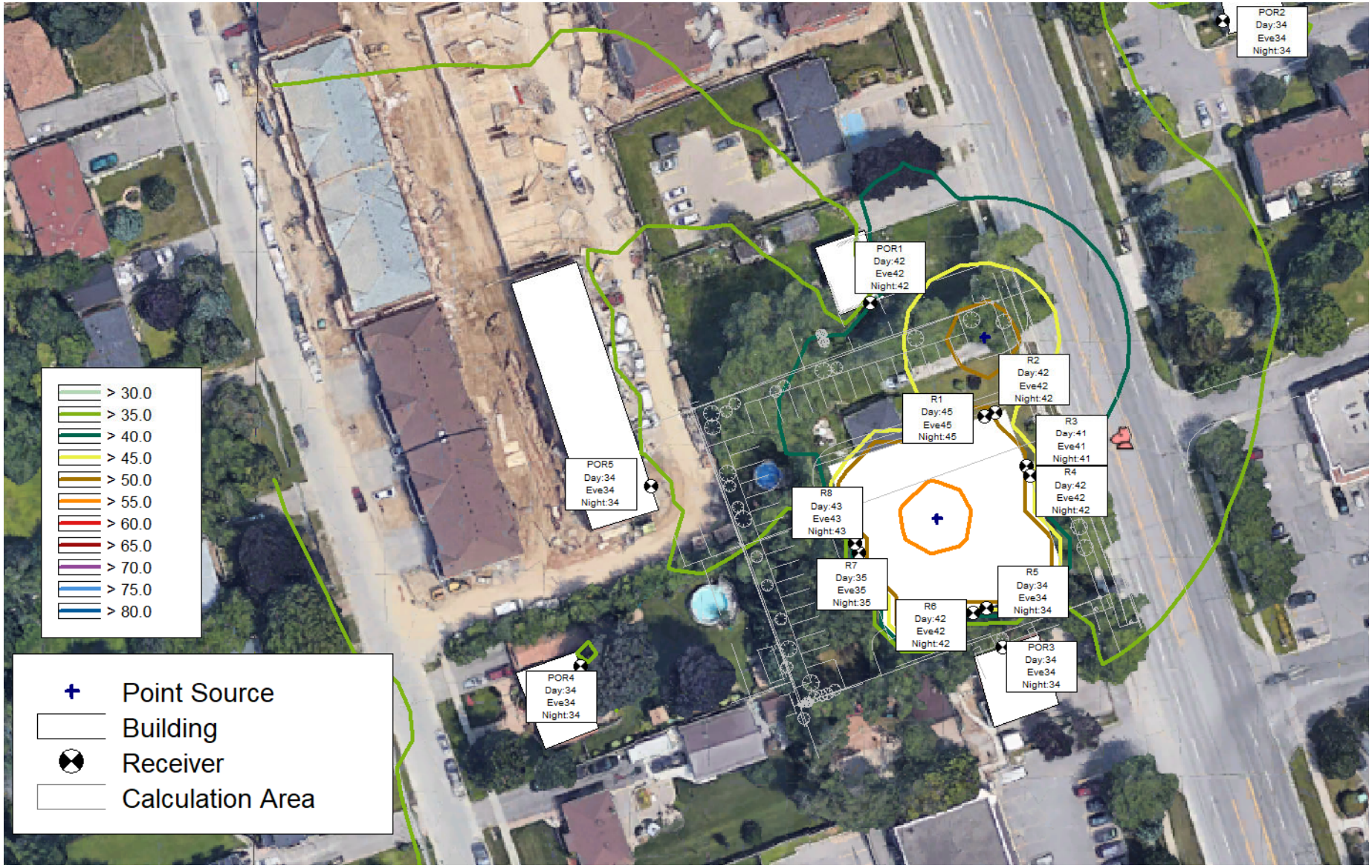


FIGURE 8
MITIGATED INTERNAL STATIONARY SOURCES OF NOISE

APPENDIX A

ROAD TRAFFIC DATA

Planning and Economic
Development Department

Planning Division

605 ROSSLAND RD. E.
4TH FLOOR
P.O. BOX 623
WHITBY, ON L1N 6A3
CANADA
905-668-7711
1-800-372-1102
Fax: 905-666-6208
E-Mail: planning@durham.ca

www.durham.ca

Brian Bridgeman, MCIP, RPP
Commissioner of Planning and
Economic Development

The Regional Municipality of Durham

ROAD SEGMENT TRAFFIC FORECASTS FOR NOISE ANALYSES

This information is to be used as the basis for assessing the potential impacts of noise, generated by traffic on Provincial Highways and arterial roads, on proposed land uses that are sensitive (e.g., residential subdivisions). Arterial roads include existing and future Type A, B and C, as designated in the Durham Regional Official Plan.

Noise assessment reports recommend specific measures to be integrated into the design of sensitive developments to reduce road noise impacts to acceptable levels.

Provided For:

Name / Name of Firm: Cheryl McMurter

Address: 15 Wertheim Court, 211

Telephone: (905) 707-5800 Fax:

Location of Proposal:

Liverpool Road and Kingston Road, Pickering

Municipality: Pickering Lot(s): Concession:

Durham Region File No. (if available):

Name of Property Owner (if available):

Date Request Received: Tuesday, June 25, 2019 Received By: Brad Holmes

Date Forecast Sent: Friday, June 28, 2019

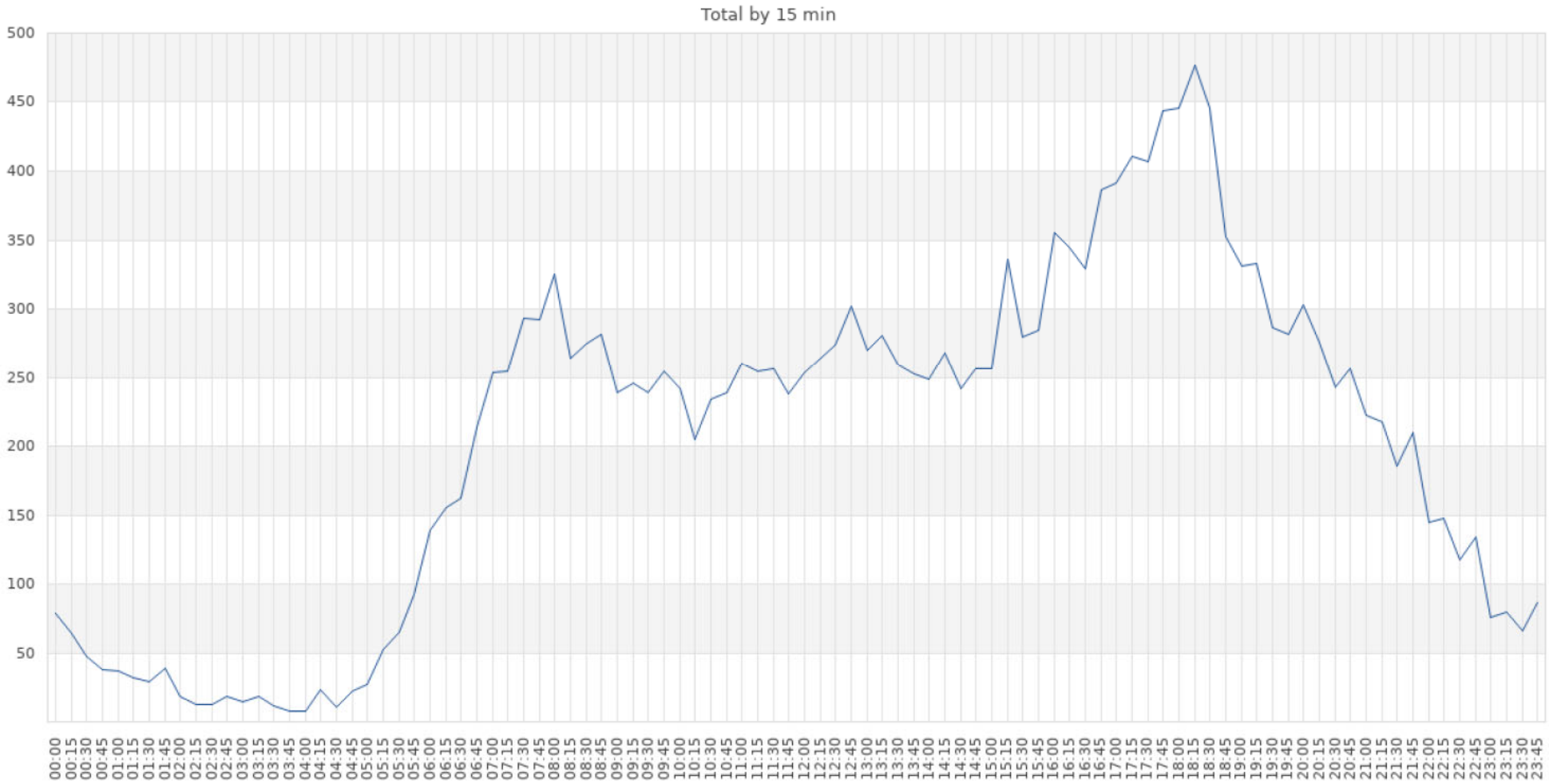
Name of Road Segment	Forecasted AADT*	No. of Lanes	% of Trucks	Heavy : Medium Truck Ratio		Speed (km/h)
Liverpool Road	20,000	4	7	30	70	60
Kingston Road	35,000	4	8	30	70	60
	0	0	0	0	0	0
	0	0	0	0	0	0

* Average Annual Daily Traffic. Forecast based on ultimate development according to the Durham Regional Official Plan.

ATR No: 2901 **Affiliated PCS No:** 274 **Start Date:** 07/05/2018 **End Date:** 07/05/2018

Start	2018-Jul-05		Fri		Sat		Sun		Mon		Tue		Wed		Average Day	
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	79	253	0	0	0	0	0	0	0	0	0	0	0	0	79	253
12:15	64	264	0	0	0	0	0	0	0	0	0	0	0	0	64	264
12:30	48	274	0	0	0	0	0	0	0	0	0	0	0	0	48	274
12:45	38	302	0	0	0	0	0	0	0	0	0	0	0	0	38	302
01:00	37	270	0	0	0	0	0	0	0	0	0	0	0	0	37	270
01:15	32	281	0	0	0	0	0	0	0	0	0	0	0	0	32	281
01:30	29	259	0	0	0	0	0	0	0	0	0	0	0	0	29	259
01:45	39	252	0	0	0	0	0	0	0	0	0	0	0	0	39	252
02:00	18	249	0	0	0	0	0	0	0	0	0	0	0	0	18	249
02:15	13	268	0	0	0	0	0	0	0	0	0	0	0	0	13	268
02:30	13	242	0	0	0	0	0	0	0	0	0	0	0	0	13	242
02:45	18	256	0	0	0	0	0	0	0	0	0	0	0	0	18	256
03:00	15	256	0	0	0	0	0	0	0	0	0	0	0	0	15	256
03:15	18	336	0	0	0	0	0	0	0	0	0	0	0	0	18	336
03:30	12	280	0	0	0	0	0	0	0	0	0	0	0	0	12	280
03:45	8	284	0	0	0	0	0	0	0	0	0	0	0	0	8	284
04:00	8	355	0	0	0	0	0	0	0	0	0	0	0	0	8	355
04:15	23	345	0	0	0	0	0	0	0	0	0	0	0	0	23	345
04:30	11	329	0	0	0	0	0	0	0	0	0	0	0	0	11	329
04:45	22	386	0	0	0	0	0	0	0	0	0	0	0	0	22	386
05:00	27	391	0	0	0	0	0	0	0	0	0	0	0	0	27	391
05:15	52	411	0	0	0	0	0	0	0	0	0	0	0	0	52	411
05:30	65	407	0	0	0	0	0	0	0	0	0	0	0	0	65	407
05:45	92	444	0	0	0	0	0	0	0	0	0	0	0	0	92	444
06:00	139	446	0	0	0	0	0	0	0	0	0	0	0	0	139	446
06:15	155	477	0	0	0	0	0	0	0	0	0	0	0	0	155	477
06:30	162	446	0	0	0	0	0	0	0	0	0	0	0	0	162	446
06:45	214	352	0	0	0	0	0	0	0	0	0	0	0	0	214	352
07:00	253	331	0	0	0	0	0	0	0	0	0	0	0	0	253	331
07:15	254	333	0	0	0	0	0	0	0	0	0	0	0	0	254	333
07:30	293	286	0	0	0	0	0	0	0	0	0	0	0	0	293	286
07:45	292	282	0	0	0	0	0	0	0	0	0	0	0	0	292	282
08:00	325	303	0	0	0	0	0	0	0	0	0	0	0	0	325	303
08:15	264	276	0	0	0	0	0	0	0	0	0	0	0	0	264	276
08:30	275	243	0	0	0	0	0	0	0	0	0	0	0	0	275	243
08:45	282	256	0	0	0	0	0	0	0	0	0	0	0	0	282	256
09:00	239	222	0	0	0	0	0	0	0	0	0	0	0	0	239	222
09:15	246	217	0	0	0	0	0	0	0	0	0	0	0	0	246	217
09:30	239	185	0	0	0	0	0	0	0	0	0	0	0	0	239	185
09:45	254	210	0	0	0	0	0	0	0	0	0	0	0	0	254	210
10:00	242	145	0	0	0	0	0	0	0	0	0	0	0	0	242	145
10:15	205	148	0	0	0	0	0	0	0	0	0	0	0	0	205	148
10:30	234	117	0	0	0	0	0	0	0	0	0	0	0	0	234	117
10:45	239	134	0	0	0	0	0	0	0	0	0	0	0	0	239	134
11:00	260	76	0	0	0	0	0	0	0	0	0	0	0	0	260	76
11:15	254	80	0	0	0	0	0	0	0	0	0	0	0	0	254	80
11:30	256	66	0	0	0	0	0	0	0	0	0	0	0	0	256	66
11:45	238	86	0	0	0	0	0	0	0	0	0	0	0	0	238	86

ATR No:	2901	Affiliated PCS No:	274	Start Date:	07/05/2018	End Date:	07/05/2018



HOURLY TRAFFIC COUNTS
REGION OF DURHAM DATA
LIVERPOOL RAD

	TUESEDAY		TUESDAY		WEDNESDAY		THURSDAY		FRIDAY		SATURDAY		SUNDAY		AVERAGES		dB CORRECTION TO Leq24 hr		ENTER 24 HR Leq
Hour End	Liverpool Road	% of 24 hr		% of 24 hr		% of 24 hr		% of 24 hr		% of 24 hr		% of 24 hr		% of 24 hr	Average Week	Average Week-Days	Average Week	Average Week-Days	61
1	229	1.2		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.2	0.2	-14	-13	
2	137	0.7		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.1	0.1	-16	-15	
3	62	0.3		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.1	-20	-18	
4	53	0.3		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.1	-20	-19	
5	64	0.3		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.1	-20	-18	
6	236	1.2		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.2	0.2	-14	-12	
7	670	3.4		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.5	0.7	-9	-8	
8	1092	5.5		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.8	1.1	-7	-6	
9	1146	5.8		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.8	1.2	-7	-6	
10	978	5.0		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.7	1.0	-8	-6	
11	920	4.7		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.7	0.9	-8	-6	
12	1008	5.1		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.7	1.0	-8	-6	
13	1093	5.5		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.8	1.1	-7	-6	
14	1062	5.4		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.8	1.1	-7	-6	
15	1015	5.2		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.7	1.0	-8	-6	
16	1156	5.9		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.8	1.2	-7	-6	
17	1415	7.2		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	1.0	1.4	-6	-5	
18	1653	8.4		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	1.2	1.7	-5	-4	
19	1721	8.7		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	1.2	1.7	-5	-4	
20	1232	6.3		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.9	1.3	-7	-5	
21	1078	5.5		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.8	1.1	-7	-6	
22	834	4.2		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.6	0.8	-8	-7	
23	544	2.8		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.4	0.6	-10	-9	
24	308	1.6		0.0		0.0	0	0.0	0	0.0	0	0.0	0	0.0	0.2	0.3	-13	-11	
	19,706	100	0	0	0	0	0	0	0	0	0	0	0	0	14	20			

HOURLY Leq RESULTS

RESULTS SUMMARY:

Leq 24 Hr =	61
Leq Day =	55
Leq Night =	48

Lmin 24hr	42
Lmin Day	52
Lmin Night	42

APPENDIX B

SAMPLE SOUND LEVEL CALCULATION

STAMSON 5.0 SUMMARY REPORT Date: 31-10-2019 13:41:57
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 10thcola.te Time Period: Day/Night 16/8 hours
Description: 10th Floor-Sound Level at COLA

Road data, segment # 1: Kingston (day/night)

Car traffic volume : 16740/1860 veh/TimePeriod *
Medium truck volume : 828/92 veh/TimePeriod *
Heavy truck volume : 432/48 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 20000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 4.60
Heavy Truck % of Total Volume : 2.40
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Kingston (day/night)

Angle1 Angle2 : -10.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 165.00 / 165.00 m
Receiver height : 31.30 / 40.50 m
Topography : 1 (Flat/gentle slope; no barrier)
Reference angle : 0.00

Result summary (day)
---

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.Kingston	1.24	56.68	56.68
Total			56.68 dBA

Result summary (night)
---

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.Kingston	1.24	50.14	50.14

```
--------------------+---------+---------+---------
                     Total                  50.14 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 56.68
                           (NIGHT): 50.14
```

STAMSON 5.0 SUMMARY REPORT Date: 31-10-2019 13:42:37
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: 10thbar.te Time Period: Day/Night 16/8 hours
Description: 10th Floor-Sound Level at COLA with Barrier

Road data, segment # 1: Kingston (day/night)

Car traffic volume : 16740/1860 veh/TimePeriod *
Medium truck volume : 828/92 veh/TimePeriod *
Heavy truck volume : 432/48 veh/TimePeriod *
Posted speed limit : 60 km/h
Road gradient : 2 %
Road pavement : 1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

24 hr Traffic Volume (AADT or SADT): 20000
Percentage of Annual Growth : 0.00
Number of Years of Growth : 0.00
Medium Truck % of Total Volume : 4.60
Heavy Truck % of Total Volume : 2.40
Day (16 hrs) % of Total Volume : 90.00

Data for Segment # 1: Kingston (day/night)

Angle1 Angle2 : -10.00 deg 90.00 deg
Wood depth : 0 (No woods.)
No of house rows : 0 / 0
Surface : 2 (Reflective ground surface)
Receiver source distance : 165.00 / 165.00 m
Receiver height : 1.50 / 40.50 m
Topography : 2 (Flat/gentle slope; with barrier)
Barrier angle1 : -10.00 deg Angle2 : 90.00 deg
Barrier height : 1.10 m
Barrier receiver distance : 10.00 / 10.00 m
Source elevation : 0.00 m
Receiver elevation : 29.80 m
Barrier elevation : 29.80 m
Reference angle : 0.00

Result summary (day)
---

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.Kingston	1.24	49.05	49.05
Total			49.05 dBA

Result summary (night)
---

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.Kingston	1.24	50.14	50.14 *
Total			50.14 dBA

* Bright Zone !

TOTAL Leq FROM ALL SOURCES (DAY): 49.05
(NIGHT): 50.14

STAMSON 5.0 SUMMARY REPORT Date: 01-11-2019 09:36:13
MINISTRY OF ENVIRONMENT AND ENERGY / NOISE ASSESSMENT

Filename: east.te Time Period: Day/Night 16/8 hours
Description: East-Sound Levels at Building Facade

```
Road data, segment # 1: Liverpool Rd (day/night)
-----------------------------------------------
Car traffic volume  : 29295/3255  veh/TimePeriod  *
Medium truck volume :  1544/172   veh/TimePeriod  *
Heavy truck volume  :   661/74    veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  35000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   4.90
    Heavy Truck  % of Total Volume     :   2.10
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 1: Liverpool Rd (day/night)
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   90.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  :  20.00 / 20.00  m
Receiver height           :  40.50 / 40.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00

Road data, segment # 2: Kingston Rd (day/night)
-----------------------------------------------
Car traffic volume  : 16740/1860  veh/TimePeriod  *
Medium truck volume :   828/92    veh/TimePeriod  *
Heavy truck volume  :   432/48    veh/TimePeriod  *
Posted speed limit  :    60 km/h
Road gradient       :     2 %
Road pavement       :     1 (Typical asphalt or concrete)

* Refers to calculated road volumes based on the following input:

    24 hr Traffic Volume (AADT or SADT):  20000
    Percentage of Annual Growth        :   0.00
    Number of Years of Growth          :   0.00
    Medium Truck % of Total Volume     :   4.60
    Heavy Truck  % of Total Volume     :   2.40
    Day (16 hrs) % of Total Volume     :  90.00

Data for Segment # 2: Kingston Rd (day/night)
```

```
-----------------------------------------------
Angle1   Angle2           : -90.00 deg   0.00 deg
Wood depth                :      0       (No woods.)
No of house rows          :      0 / 0
Surface                   :      2       (Reflective ground surface)
Receiver source distance  : 165.00 / 165.00 m
Receiver height           :  40.50 / 40.50  m
Topography                :      1       (Flat/gentle slope; no barrier)
Reference angle           :   0.00
```

Result summary (day)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.Liverpool Rd	1.20	70.61	70.61
2.Kingston Rd	1.24	56.22	56.22
Total			70.77 dBA

Result summary (night)

	source height (m)	Road Leq (dBA)	Total Leq (dBA)
1.Liverpool Rd	1.21	64.10	64.10
2.Kingston Rd	1.24	49.69	49.69
Total			64.25 dBA

TOTAL Leq FROM ALL SOURCES (DAY): 70.77
(NIGHT): 64.25

Configuration	
Parameter	Value
General	
Country	(user defined)
Max. Error (dB)	0.00
Max. Search Radius (m)	2000.00
Min. Dist Src to Rcvr	0.00
Partition	
Raster Factor	0.50
Max. Length of Section (m)	1000.00
Min. Length of Section (m)	1.00
Min. Length of Section (%)	0.00
Proj. Line Sources	On
Proj. Area Sources	On
Ref. Time	
Reference Time Day (min)	960.00
Reference Time Night (min)	480.00
Daytime Penalty (dB)	0.00
Recr. Time Penalty (dB)	6.00
Night-time Penalty (dB)	10.00
DTM	
Standard Height (m)	0.00
Model of Terrain	Triangulation
Reflection	
max. Order of Reflection	3
Search Radius Src	100.00
Search Radius Rcvr	100.00
Max. Distance Source - Rcvr	1000.00 1000.00
Min. Distance Rvcr - Reflector	1.00 1.00
Min. Distance Source - Reflector	0.10
Industrial (ISO 9613)	
Lateral Diffraction	some Obj
Obst. within Area Src do not shield	On
Screening	Excl. Ground Att. over Barrier
	Dz with limit (20/25)
Barrier Coefficients C1,2,3	3.0 20.0 0.0
Temperature (°C)	10
rel. Humidity (%)	70
Ground Absorption G	0.00
Wind Speed for Dir. (m/s)	3.0
Roads (TNM)	
Railways (Schall 03 (1990))	
Strictly acc. to Schall 03 / Schall-Transrapid	
Aircraft (???)	
Strictly acc. to AzB	

Receiver
Name: R2
ID: R2
X: 17653431.15
Y: 4855582.29
Z: 37.50

Point Source, ISO 9613, Name: "Exhaust Fan Commercial", ID: "EFC"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
1	17653527.88	4855580.74	2.00	0	D	32	64.6	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	12.6
1	17653527.88	4855580.74	2.00	0	D	63	73.8	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	21.2
1	17653527.88	4855580.74	2.00	0	D	125	81.9	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	5.1	0.0	0.0	28.5
1	17653527.88	4855580.74	2.00	0	D	250	83.4	0.0	0.0	0.0	51.3	0.1	-3.0	0.0	0.0	6.0	0.0	0.0	29.0
1	17653527.88	4855580.74	2.00	0	D	500	85.8	0.0	0.0	0.0	51.3	0.2	-3.0	0.0	0.0	7.3	0.0	0.0	30.1
1	17653527.88	4855580.74	2.00	0	D	1000	87.0	0.0	0.0	0.0	51.3	0.4	-3.0	0.0	0.0	9.0	0.0	0.0	29.3
1	17653527.88	4855580.74	2.00	0	D	2000	86.2	0.0	0.0	0.0	51.3	1.0	-3.0	0.0	0.0	11.1	0.0	0.0	25.9
1	17653527.88	4855580.74	2.00	0	D	4000	82.0	0.0	0.0	0.0	51.3	3.4	-3.0	0.0	0.0	13.4	0.0	0.0	16.9
1	17653527.88	4855580.74	2.00	0	D	8000	75.9	0.0	0.0	0.0	51.3	12.0	-3.0	0.0	0.0	15.9	0.0	0.0	-0.3
1	17653527.88	4855580.74	2.00	0	N	32	61.6	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	9.6
1	17653527.88	4855580.74	2.00	0	N	63	70.8	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	18.2
1	17653527.88	4855580.74	2.00	0	N	125	78.9	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	5.1	0.0	0.0	25.5
1	17653527.88	4855580.74	2.00	0	N	250	80.4	0.0	0.0	0.0	51.3	0.1	-3.0	0.0	0.0	6.0	0.0	0.0	26.0
1	17653527.88	4855580.74	2.00	0	N	500	82.8	0.0	0.0	0.0	51.3	0.2	-3.0	0.0	0.0	7.3	0.0	0.0	27.0
1	17653527.88	4855580.74	2.00	0	N	1000	84.0	0.0	0.0	0.0	51.3	0.4	-3.0	0.0	0.0	9.0	0.0	0.0	26.3
1	17653527.88	4855580.74	2.00	0	N	2000	83.2	0.0	0.0	0.0	51.3	1.0	-3.0	0.0	0.0	11.1	0.0	0.0	22.8
1	17653527.88	4855580.74	2.00	0	N	4000	79.0	0.0	0.0	0.0	51.3	3.4	-3.0	0.0	0.0	13.4	0.0	0.0	13.9
1	17653527.88	4855580.74	2.00	0	N	8000	72.9	0.0	0.0	0.0	51.3	12.0	-3.0	0.0	0.0	15.9	0.0	0.0	-3.3
1	17653527.88	4855580.74	2.00	0	E	32	63.4	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	11.4
1	17653527.88	4855580.74	2.00	0	E	63	72.6	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	19.9
1	17653527.88	4855580.74	2.00	0	E	125	80.7	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	5.1	0.0	0.0	27.3
1	17653527.88	4855580.74	2.00	0	E	250	82.2	0.0	0.0	0.0	51.3	0.1	-3.0	0.0	0.0	6.0	0.0	0.0	27.8
1	17653527.88	4855580.74	2.00	0	E	500	84.6	0.0	0.0	0.0	51.3	0.2	-3.0	0.0	0.0	7.3	0.0	0.0	28.8
1	17653527.88	4855580.74	2.00	0	E	1000	85.8	0.0	0.0	0.0	51.3	0.4	-3.0	0.0	0.0	9.0	0.0	0.0	28.1
1	17653527.88	4855580.74	2.00	0	E	2000	85.0	0.0	0.0	0.0	51.3	1.0	-3.0	0.0	0.0	11.1	0.0	0.0	24.6
1	17653527.88	4855580.74	2.00	0	E	4000	80.8	0.0	0.0	0.0	51.3	3.4	-3.0	0.0	0.0	13.4	0.0	0.0	15.7
1	17653527.88	4855580.74	2.00	0	E	8000	74.7	0.0	0.0	0.0	51.3	12.0	-3.0	0.0	0.0	15.9	0.0	0.0	-1.6

Point Source, ISO 9613, Name: "AC10T", ID: "AC10T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
2	17653497.64	4855584.49	10.00	0	D	32	-39.4	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-88.2
2	17653497.64	4855584.49	10.00	0	D	63	-26.2	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-75.6
2	17653497.64	4855584.49	10.00	0	D	125	59.9	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	9.8
2	17653497.64	4855584.49	10.00	0	D	250	70.4	0.0	0.0	0.0	48.1	0.1	-3.0	0.0	0.0	5.6	0.0	0.0	19.6
2	17653497.64	4855584.49	10.00	0	D	500	80.8	0.0	0.0	0.0	48.1	0.1	-3.0	0.0	0.0	6.7	0.0	0.0	28.9
2	17653497.64	4855584.49	10.00	0	D	1000	83.0	0.0	0.0	0.0	48.1	0.3	-3.0	0.0	0.0	8.1	0.0	0.0	29.5
2	17653497.64	4855584.49	10.00	0	D	2000	80.2	0.0	0.0	0.0	48.1	0.7	-3.0	0.0	0.0	10.0	0.0	0.0	24.4
2	17653497.64	4855584.49	10.00	0	D	4000	74.0	0.0	0.0	0.0	48.1	2.4	-3.0	0.0	0.0	12.2	0.0	0.0	14.3
2	17653497.64	4855584.49	10.00	0	D	8000	64.9	0.0	0.0	0.0	48.1	8.4	-3.0	0.0	0.0	14.6	0.0	0.0	-3.3
2	17653497.64	4855584.49	10.00	0	N	32	-42.4	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-91.2
2	17653497.64	4855584.49	10.00	0	N	63	-29.2	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-78.6
2	17653497.64	4855584.49	10.00	0	N	125	56.9	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	6.8
2	17653497.64	4855584.49	10.00	0	N	250	67.4	0.0	0.0	0.0	48.1	0.1	-3.0	0.0	0.0	5.6	0.0	0.0	16.5
2	17653497.64	4855584.49	10.00	0	N	500	77.8	0.0	0.0	0.0	48.1	0.1	-3.0	0.0	0.0	6.7	0.0	0.0	25.8
2	17653497.64	4855584.49	10.00	0	N	1000	80.0	0.0	0.0	0.0	48.1	0.3	-3.0	0.0	0.0	8.1	0.0	0.0	26.5
2	17653497.64	4855584.49	10.00	0	N	2000	77.2	0.0	0.0	0.0	48.1	0.7	-3.0	0.0	0.0	10.0	0.0	0.0	21.4
2	17653497.64	4855584.49	10.00	0	N	4000	71.0	0.0	0.0	0.0	48.1	2.4	-3.0	0.0	0.0	12.2	0.0	0.0	11.3
2	17653497.64	4855584.49	10.00	0	N	8000	61.9	0.0	0.0	0.0	48.1	8.4	-3.0	0.0	0.0	14.6	0.0	0.0	-6.3
2	17653497.64	4855584.49	10.00	0	E	32	-40.6	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-89.5
2	17653497.64	4855584.49	10.00	0	E	63	-27.4	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-76.9
2	17653497.64	4855584.49	10.00	0	E	125	58.7	0.0	0.0	0.0	48.1	0.0	-3.0	0.0	0.0	4.9	0.0	0.0	8.6
2	17653497.64	4855584.49	10.00	0	E	250	69.2	0.0	0.0	0.0	48.1	0.1	-3.0	0.0	0.0	5.6	0.0	0.0	18.3

Point Source, ISO 9613, Name: "AC10T", ID: "AC10T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
2	17653497.64	4855584.49	10.00	0	E	500	79.6	0.0	0.0	0.0	48.1	0.1	-3.0	0.0	0.0	6.7	0.0	0.0	27.6
2	17653497.64	4855584.49	10.00	0	E	1000	81.8	0.0	0.0	0.0	48.1	0.3	-3.0	0.0	0.0	8.1	0.0	0.0	28.2
2	17653497.64	4855584.49	10.00	0	E	2000	79.0	0.0	0.0	0.0	48.1	0.7	-3.0	0.0	0.0	10.0	0.0	0.0	23.1
2	17653497.64	4855584.49	10.00	0	E	4000	72.8	0.0	0.0	0.0	48.1	2.4	-3.0	0.0	0.0	12.2	0.0	0.0	13.0
2	17653497.64	4855584.49	10.00	0	E	8000	63.7	0.0	0.0	0.0	48.1	8.4	-3.0	0.0	0.0	14.6	0.0	0.0	-4.5

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
4	17653501.55	4855585.57	2.00	0	D	32	-39.4	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-89.1
4	17653501.55	4855585.57	2.00	0	D	63	-26.2	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-76.4
4	17653501.55	4855585.57	2.00	0	D	125	50.9	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	0.1
4	17653501.55	4855585.57	2.00	0	D	250	63.4	0.0	0.0	0.0	48.9	0.1	-3.0	0.0	0.0	5.5	0.0	0.0	11.9
4	17653501.55	4855585.57	2.00	0	D	500	73.8	0.0	0.0	0.0	48.9	0.2	-3.0	0.0	0.0	6.5	0.0	0.0	21.3
4	17653501.55	4855585.57	2.00	0	D	1000	76.0	0.0	0.0	0.0	48.9	0.3	-3.0	0.0	0.0	7.8	0.0	0.0	22.0
4	17653501.55	4855585.57	2.00	0	D	2000	74.2	0.0	0.0	0.0	48.9	0.8	-3.0	0.0	0.0	9.6	0.0	0.0	17.9
4	17653501.55	4855585.57	2.00	0	D	4000	69.0	0.0	0.0	0.0	48.9	2.6	-3.0	0.0	0.0	11.7	0.0	0.0	8.8
4	17653501.55	4855585.57	2.00	0	D	8000	59.9	0.0	0.0	0.0	48.9	9.2	-3.0	0.0	0.0	14.1	0.0	0.0	-9.4
4	17653501.55	4855585.57	2.00	0	N	32	-42.4	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-92.1
4	17653501.55	4855585.57	2.00	0	N	63	-29.2	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-79.4
4	17653501.55	4855585.57	2.00	0	N	125	47.9	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-2.9
4	17653501.55	4855585.57	2.00	0	N	250	60.4	0.0	0.0	0.0	48.9	0.1	-3.0	0.0	0.0	5.5	0.0	0.0	8.9
4	17653501.55	4855585.57	2.00	0	N	500	70.8	0.0	0.0	0.0	48.9	0.2	-3.0	0.0	0.0	6.5	0.0	0.0	18.2
4	17653501.55	4855585.57	2.00	0	N	1000	73.0	0.0	0.0	0.0	48.9	0.3	-3.0	0.0	0.0	7.8	0.0	0.0	19.0
4	17653501.55	4855585.57	2.00	0	N	2000	71.2	0.0	0.0	0.0	48.9	0.8	-3.0	0.0	0.0	9.6	0.0	0.0	14.9
4	17653501.55	4855585.57	2.00	0	N	4000	66.0	0.0	0.0	0.0	48.9	2.6	-3.0	0.0	0.0	11.7	0.0	0.0	5.7
4	17653501.55	4855585.57	2.00	0	N	8000	56.9	0.0	0.0	0.0	48.9	9.2	-3.0	0.0	0.0	14.1	0.0	0.0	-12.4
4	17653501.55	4855585.57	2.00	0	E	32	-40.6	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-90.3
4	17653501.55	4855585.57	2.00	0	E	63	-27.4	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-77.7
4	17653501.55	4855585.57	2.00	0	E	125	49.7	0.0	0.0	0.0	48.9	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-1.2
4	17653501.55	4855585.57	2.00	0	E	250	62.2	0.0	0.0	0.0	48.9	0.1	-3.0	0.0	0.0	5.5	0.0	0.0	10.6
4	17653501.55	4855585.57	2.00	0	E	500	72.6	0.0	0.0	0.0	48.9	0.2	-3.0	0.0	0.0	6.5	0.0	0.0	20.0
4	17653501.55	4855585.57	2.00	0	E	1000	74.8	0.0	0.0	0.0	48.9	0.3	-3.0	0.0	0.0	7.8	0.0	0.0	20.7
4	17653501.55	4855585.57	2.00	0	E	2000	73.0	0.0	0.0	0.0	48.9	0.8	-3.0	0.0	0.0	9.6	0.0	0.0	16.7
4	17653501.55	4855585.57	2.00	0	E	4000	67.8	0.0	0.0	0.0	48.9	2.6	-3.0	0.0	0.0	11.7	0.0	0.0	7.5
4	17653501.55	4855585.57	2.00	0	E	8000	58.7	0.0	0.0	0.0	48.9	9.2	-3.0	0.0	0.0	14.1	0.0	0.0	-10.6

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6	17653507.17	4855587.16	2.00	0	D	32	-39.4	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-89.6
6	17653507.17	4855587.16	2.00	0	D	63	-26.2	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-76.9
6	17653507.17	4855587.16	2.00	0	D	125	50.9	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-0.4
6	17653507.17	4855587.16	2.00	0	D	250	63.4	0.0	0.0	0.0	49.5	0.1	-3.0	0.0	0.0	5.4	0.0	0.0	11.4
6	17653507.17	4855587.16	2.00	0	D	500	73.8	0.0	0.0	0.0	49.5	0.2	-3.0	0.0	0.0	6.3	0.0	0.0	20.9
6	17653507.17	4855587.16	2.00	0	D	1000	76.0	0.0	0.0	0.0	49.5	0.3	-3.0	0.0	0.0	7.5	0.0	0.0	21.7
6	17653507.17	4855587.16	2.00	0	D	2000	74.2	0.0	0.0	0.0	49.5	0.8	-3.0	0.0	0.0	9.2	0.0	0.0	17.7
6	17653507.17	4855587.16	2.00	0	D	4000	69.0	0.0	0.0	0.0	49.5	2.8	-3.0	0.0	0.0	11.3	0.0	0.0	8.5
6	17653507.17	4855587.16	2.00	0	D	8000	59.9	0.0	0.0	0.0	49.5	9.8	-3.0	0.0	0.0	13.6	0.0	0.0	-10.0
6	17653507.17	4855587.16	2.00	0	N	32	-42.4	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-92.6
6	17653507.17	4855587.16	2.00	0	N	63	-29.2	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-79.9
6	17653507.17	4855587.16	2.00	0	N	125	47.9	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-3.4
6	17653507.17	4855587.16	2.00	0	N	250	60.4	0.0	0.0	0.0	49.5	0.1	-3.0	0.0	0.0	5.4	0.0	0.0	8.4
6	17653507.17	4855587.16	2.00	0	N	500	70.8	0.0	0.0	0.0	49.5	0.2	-3.0	0.0	0.0	6.3	0.0	0.0	17.9
6	17653507.17	4855587.16	2.00	0	N	1000	73.0	0.0	0.0	0.0	49.5	0.3	-3.0	0.0	0.0	7.5	0.0	0.0	18.7
6	17653507.17	4855587.16	2.00	0	N	2000	71.2	0.0	0.0	0.0	49.5	0.8	-3.0	0.0	0.0	9.2	0.0	0.0	14.7
6	17653507.17	4855587.16	2.00	0	N	4000	66.0	0.0	0.0	0.0	49.5	2.8	-3.0	0.0	0.0	11.3	0.0	0.0	5.5
6	17653507.17	4855587.16	2.00	0	N	8000	56.9	0.0	0.0	0.0	49.5	9.8	-3.0	0.0	0.0	13.6	0.0	0.0	-13.1
6	17653507.17	4855587.16	2.00	0	E	32	-40.6	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-90.8
6	17653507.17	4855587.16	2.00	0	E	63	-27.4	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-78.2
6	17653507.17	4855587.16	2.00	0	E	125	49.7	0.0	0.0	0.0	49.5	0.0	-3.0	0.0	0.0	4.8	0.0	0.0	-1.6
6	17653507.17	4855587.16	2.00	0	E	250	62.2	0.0	0.0	0.0	49.5	0.1	-3.0	0.0	0.0	5.4	0.0	0.0	10.2
6	17653507.17	4855587.16	2.00	0	E	500	72.6	0.0	0.0	0.0	49.5	0.2	-3.0	0.0	0.0	6.3	0.0	0.0	19.6

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
6	17653507.17	4855587.16	2.00	0	E	1000	74.8	0.0	0.0	0.0	49.5	0.3	-3.0	0.0	0.0	7.5	0.0	0.0	20.4
6	17653507.17	4855587.16	2.00	0	E	2000	73.0	0.0	0.0	0.0	49.5	0.8	-3.0	0.0	0.0	9.2	0.0	0.0	16.5
6	17653507.17	4855587.16	2.00	0	E	4000	67.8	0.0	0.0	0.0	49.5	2.8	-3.0	0.0	0.0	11.3	0.0	0.0	7.2
6	17653507.17	4855587.16	2.00	0	E	8000	58.7	0.0	0.0	0.0	49.5	9.8	-3.0	0.0	0.0	13.6	0.0	0.0	-11.3

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
8	17653514.12	4855589.34	2.00	0	D	32	-39.4	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	3.6	0.0	0.0	-90.2
8	17653514.12	4855589.34	2.00	0	D	63	-26.2	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-77.5
8	17653514.12	4855589.34	2.00	0	D	125	50.9	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	-1.0
8	17653514.12	4855589.34	2.00	0	D	250	63.4	0.0	0.0	0.0	50.1	0.1	-3.0	0.0	0.0	5.3	0.0	0.0	10.9
8	17653514.12	4855589.34	2.00	0	D	500	73.8	0.0	0.0	0.0	50.1	0.2	-3.0	0.0	0.0	6.0	0.0	0.0	20.5
8	17653514.12	4855589.34	2.00	0	D	1000	76.0	0.0	0.0	0.0	50.1	0.3	-3.0	0.0	0.0	7.2	0.0	0.0	21.4
8	17653514.12	4855589.34	2.00	0	D	2000	74.2	0.0	0.0	0.0	50.1	0.9	-3.0	0.0	0.0	8.7	0.0	0.0	17.5
8	17653514.12	4855589.34	2.00	0	D	4000	69.0	0.0	0.0	0.0	50.1	3.0	-3.0	0.0	0.0	10.7	0.0	0.0	8.2
8	17653514.12	4855589.34	2.00	0	D	8000	59.9	0.0	0.0	0.0	50.1	10.6	-3.0	0.0	0.0	13.0	0.0	0.0	-10.8
8	17653514.12	4855589.34	2.00	0	N	32	-42.4	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	3.6	0.0	0.0	-93.2
8	17653514.12	4855589.34	2.00	0	N	63	-29.2	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-80.5
8	17653514.12	4855589.34	2.00	0	N	125	47.9	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	-4.0
8	17653514.12	4855589.34	2.00	0	N	250	60.4	0.0	0.0	0.0	50.1	0.1	-3.0	0.0	0.0	5.3	0.0	0.0	7.9
8	17653514.12	4855589.34	2.00	0	N	500	70.8	0.0	0.0	0.0	50.1	0.2	-3.0	0.0	0.0	6.0	0.0	0.0	17.5
8	17653514.12	4855589.34	2.00	0	N	1000	73.0	0.0	0.0	0.0	50.1	0.3	-3.0	0.0	0.0	7.2	0.0	0.0	18.4
8	17653514.12	4855589.34	2.00	0	N	2000	71.2	0.0	0.0	0.0	50.1	0.9	-3.0	0.0	0.0	8.7	0.0	0.0	14.5
8	17653514.12	4855589.34	2.00	0	N	4000	66.0	0.0	0.0	0.0	50.1	3.0	-3.0	0.0	0.0	10.7	0.0	0.0	5.2
8	17653514.12	4855589.34	2.00	0	N	8000	56.9	0.0	0.0	0.0	50.1	10.6	-3.0	0.0	0.0	13.0	0.0	0.0	-13.8
8	17653514.12	4855589.34	2.00	0	E	32	-40.6	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	3.6	0.0	0.0	-91.4
8	17653514.12	4855589.34	2.00	0	E	63	-27.4	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	4.2	0.0	0.0	-78.8
8	17653514.12	4855589.34	2.00	0	E	125	49.7	0.0	0.0	0.0	50.1	0.0	-3.0	0.0	0.0	4.7	0.0	0.0	-2.2
8	17653514.12	4855589.34	2.00	0	E	250	62.2	0.0	0.0	0.0	50.1	0.1	-3.0	0.0	0.0	5.3	0.0	0.0	9.7
8	17653514.12	4855589.34	2.00	0	E	500	72.6	0.0	0.0	0.0	50.1	0.2	-3.0	0.0	0.0	6.0	0.0	0.0	19.2
8	17653514.12	4855589.34	2.00	0	E	1000	74.8	0.0	0.0	0.0	50.1	0.3	-3.0	0.0	0.0	7.2	0.0	0.0	20.1
8	17653514.12	4855589.34	2.00	0	E	2000	73.0	0.0	0.0	0.0	50.1	0.9	-3.0	0.0	0.0	8.7	0.0	0.0	16.3
8	17653514.12	4855589.34	2.00	0	E	4000	67.8	0.0	0.0	0.0	50.1	3.0	-3.0	0.0	0.0	10.7	0.0	0.0	7.0
8	17653514.12	4855589.34	2.00	0	E	8000	58.7	0.0	0.0	0.0	50.1	10.6	-3.0	0.0	0.0	13.0	0.0	0.0	-12.1

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
10	17653521.66	4855583.65	2.00	0	D	32	-39.4	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-90.8
10	17653521.66	4855583.65	2.00	0	D	63	-26.2	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-78.3
10	17653521.66	4855583.65	2.00	0	D	125	50.9	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-1.8
10	17653521.66	4855583.65	2.00	0	D	250	63.4	0.0	0.0	0.0	50.8	0.1	-3.0	0.0	0.0	5.8	0.0	0.0	9.8
10	17653521.66	4855583.65	2.00	0	D	500	73.8	0.0	0.0	0.0	50.8	0.2	-3.0	0.0	0.0	6.9	0.0	0.0	19.0
10	17653521.66	4855583.65	2.00	0	D	1000	76.0	0.0	0.0	0.0	50.8	0.4	-3.0	0.0	0.0	8.5	0.0	0.0	19.4
10	17653521.66	4855583.65	2.00	0	D	2000	74.2	0.0	0.0	0.0	50.8	0.9	-3.0	0.0	0.0	10.4	0.0	0.0	15.1
10	17653521.66	4855583.65	2.00	0	D	4000	69.0	0.0	0.0	0.0	50.8	3.2	-3.0	0.0	0.0	12.7	0.0	0.0	5.4
10	17653521.66	4855583.65	2.00	0	D	8000	59.9	0.0	0.0	0.0	50.8	11.4	-3.0	0.0	0.0	15.1	0.0	0.0	-14.3
10	17653521.66	4855583.65	2.00	0	N	32	-42.4	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-93.9
10	17653521.66	4855583.65	2.00	0	N	63	-29.2	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-81.3
10	17653521.66	4855583.65	2.00	0	N	125	47.9	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-4.9
10	17653521.66	4855583.65	2.00	0	N	250	60.4	0.0	0.0	0.0	50.8	0.1	-3.0	0.0	0.0	5.8	0.0	0.0	6.8
10	17653521.66	4855583.65	2.00	0	N	500	70.8	0.0	0.0	0.0	50.8	0.2	-3.0	0.0	0.0	6.9	0.0	0.0	16.0
10	17653521.66	4855583.65	2.00	0	N	1000	73.0	0.0	0.0	0.0	50.8	0.4	-3.0	0.0	0.0	8.5	0.0	0.0	16.4
10	17653521.66	4855583.65	2.00	0	N	2000	71.2	0.0	0.0	0.0	50.8	0.9	-3.0	0.0	0.0	10.4	0.0	0.0	12.1
10	17653521.66	4855583.65	2.00	0	N	4000	66.0	0.0	0.0	0.0	50.8	3.2	-3.0	0.0	0.0	12.7	0.0	0.0	2.4
10	17653521.66	4855583.65	2.00	0	N	8000	56.9	0.0	0.0	0.0	50.8	11.4	-3.0	0.0	0.0	15.1	0.0	0.0	-17.4
10	17653521.66	4855583.65	2.00	0	E	32	-40.6	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-92.1
10	17653521.66	4855583.65	2.00	0	E	63	-27.4	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	4.3	0.0	0.0	-79.5
10	17653521.66	4855583.65	2.00	0	E	125	49.7	0.0	0.0	0.0	50.8	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-3.1
10	17653521.66	4855583.65	2.00	0	E	250	62.2	0.0	0.0	0.0	50.8	0.1	-3.0	0.0	0.0	5.8	0.0	0.0	8.5
10	17653521.66	4855583.65	2.00	0	E	500	72.6	0.0	0.0	0.0	50.8	0.2	-3.0	0.0	0.0	6.9	0.0	0.0	17.7
10	17653521.66	4855583.65	2.00	0	E	1000	74.8	0.0	0.0	0.0	50.8	0.4	-3.0	0.0	0.0	8.5	0.0	0.0	18.2

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
10	17653521.66	4855583.65	2.00	0	E	2000	73.0	0.0	0.0	0.0	50.8	0.9	-3.0	0.0	0.0	10.4	0.0	0.0	13.9
10	17653521.66	4855583.65	2.00	0	E	4000	67.8	0.0	0.0	0.0	50.8	3.2	-3.0	0.0	0.0	12.7	0.0	0.0	4.1
10	17653521.66	4855583.65	2.00	0	E	8000	58.7	0.0	0.0	0.0	50.8	11.4	-3.0	0.0	0.0	15.1	0.0	0.0	-15.6

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
18	17653523.31	4855581.60	2.00	0	D	32	-39.4	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-91.0
18	17653523.31	4855581.60	2.00	0	D	63	-26.2	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-78.5
18	17653523.31	4855581.60	2.00	0	D	125	50.9	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-2.1
18	17653523.31	4855581.60	2.00	0	D	250	63.4	0.0	0.0	0.0	50.9	0.1	-3.0	0.0	0.0	5.9	0.0	0.0	9.5
18	17653523.31	4855581.60	2.00	0	D	500	73.8	0.0	0.0	0.0	50.9	0.2	-3.0	0.0	0.0	7.2	0.0	0.0	18.6
18	17653523.31	4855581.60	2.00	0	D	1000	76.0	0.0	0.0	0.0	50.9	0.4	-3.0	0.0	0.0	8.9	0.0	0.0	18.9
18	17653523.31	4855581.60	2.00	0	D	2000	74.2	0.0	0.0	0.0	50.9	1.0	-3.0	0.0	0.0	10.9	0.0	0.0	14.5
18	17653523.31	4855581.60	2.00	0	D	4000	69.0	0.0	0.0	0.0	50.9	3.2	-3.0	0.0	0.0	13.2	0.0	0.0	4.6
18	17653523.31	4855581.60	2.00	0	D	8000	59.9	0.0	0.0	0.0	50.9	11.5	-3.0	0.0	0.0	15.7	0.0	0.0	-15.2
18	17653523.31	4855581.60	2.00	0	N	32	-42.4	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-94.0
18	17653523.31	4855581.60	2.00	0	N	63	-29.2	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-81.5
18	17653523.31	4855581.60	2.00	0	N	125	47.9	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-5.1
18	17653523.31	4855581.60	2.00	0	N	250	60.4	0.0	0.0	0.0	50.9	0.1	-3.0	0.0	0.0	5.9	0.0	0.0	6.5
18	17653523.31	4855581.60	2.00	0	N	500	70.8	0.0	0.0	0.0	50.9	0.2	-3.0	0.0	0.0	7.2	0.0	0.0	15.5
18	17653523.31	4855581.60	2.00	0	N	1000	73.0	0.0	0.0	0.0	50.9	0.4	-3.0	0.0	0.0	8.9	0.0	0.0	15.9
18	17653523.31	4855581.60	2.00	0	N	2000	71.2	0.0	0.0	0.0	50.9	1.0	-3.0	0.0	0.0	10.9	0.0	0.0	11.5
18	17653523.31	4855581.60	2.00	0	N	4000	66.0	0.0	0.0	0.0	50.9	3.2	-3.0	0.0	0.0	13.2	0.0	0.0	1.6
18	17653523.31	4855581.60	2.00	0	N	8000	56.9	0.0	0.0	0.0	50.9	11.5	-3.0	0.0	0.0	15.7	0.0	0.0	-18.2
18	17653523.31	4855581.60	2.00	0	E	32	-40.6	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-92.3
18	17653523.31	4855581.60	2.00	0	E	63	-27.4	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-79.7
18	17653523.31	4855581.60	2.00	0	E	125	49.7	0.0	0.0	0.0	50.9	0.0	-3.0	0.0	0.0	5.0	0.0	0.0	-3.3
18	17653523.31	4855581.60	2.00	0	E	250	62.2	0.0	0.0	0.0	50.9	0.1	-3.0	0.0	0.0	5.9	0.0	0.0	8.2
18	17653523.31	4855581.60	2.00	0	E	500	72.6	0.0	0.0	0.0	50.9	0.2	-3.0	0.0	0.0	7.2	0.0	0.0	17.3
18	17653523.31	4855581.60	2.00	0	E	1000	74.8	0.0	0.0	0.0	50.9	0.4	-3.0	0.0	0.0	8.9	0.0	0.0	17.6
18	17653523.31	4855581.60	2.00	0	E	2000	73.0	0.0	0.0	0.0	50.9	1.0	-3.0	0.0	0.0	10.9	0.0	0.0	13.2
18	17653523.31	4855581.60	2.00	0	E	4000	67.8	0.0	0.0	0.0	50.9	3.2	-3.0	0.0	0.0	13.2	0.0	0.0	3.4
18	17653523.31	4855581.60	2.00	0	E	8000	58.7	0.0	0.0	0.0	50.9	11.5	-3.0	0.0	0.0	15.7	0.0	0.0	-16.5

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
32	17653525.56	4855580.61	2.00	0	D	32	-39.4	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-91.2
32	17653525.56	4855580.61	2.00	0	D	63	-26.2	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-78.7
32	17653525.56	4855580.61	2.00	0	D	125	50.9	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	5.1	0.0	0.0	-2.3
32	17653525.56	4855580.61	2.00	0	D	250	63.4	0.0	0.0	0.0	51.1	0.1	-3.0	0.0	0.0	6.0	0.0	0.0	9.2
32	17653525.56	4855580.61	2.00	0	D	500	73.8	0.0	0.0	0.0	51.1	0.2	-3.0	0.0	0.0	7.3	0.0	0.0	18.2
32	17653525.56	4855580.61	2.00	0	D	1000	76.0	0.0	0.0	0.0	51.1	0.4	-3.0	0.0	0.0	9.0	0.0	0.0	18.5
32	17653525.56	4855580.61	2.00	0	D	2000	74.2	0.0	0.0	0.0	51.1	1.0	-3.0	0.0	0.0	11.1	0.0	0.0	14.0
32	17653525.56	4855580.61	2.00	0	D	4000	69.0	0.0	0.0	0.0	51.1	3.3	-3.0	0.0	0.0	13.5	0.0	0.0	4.1
32	17653525.56	4855580.61	2.00	0	D	8000	59.9	0.0	0.0	0.0	51.1	11.8	-3.0	0.0	0.0	15.9	0.0	0.0	-15.9
32	17653525.56	4855580.61	2.00	0	N	32	-42.4	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-94.2
32	17653525.56	4855580.61	2.00	0	N	63	-29.2	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-81.7
32	17653525.56	4855580.61	2.00	0	N	125	47.9	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	5.1	0.0	0.0	-5.3
32	17653525.56	4855580.61	2.00	0	N	250	60.4	0.0	0.0	0.0	51.1	0.1	-3.0	0.0	0.0	6.0	0.0	0.0	6.2
32	17653525.56	4855580.61	2.00	0	N	500	70.8	0.0	0.0	0.0	51.1	0.2	-3.0	0.0	0.0	7.3	0.0	0.0	15.2
32	17653525.56	4855580.61	2.00	0	N	1000	73.0	0.0	0.0	0.0	51.1	0.4	-3.0	0.0	0.0	9.0	0.0	0.0	15.5
32	17653525.56	4855580.61	2.00	0	N	2000	71.2	0.0	0.0	0.0	51.1	1.0	-3.0	0.0	0.0	11.1	0.0	0.0	11.0
32	17653525.56	4855580.61	2.00	0	N	4000	66.0	0.0	0.0	0.0	51.1	3.3	-3.0	0.0	0.0	13.5	0.0	0.0	1.1
32	17653525.56	4855580.61	2.00	0	N	8000	56.9	0.0	0.0	0.0	51.1	11.8	-3.0	0.0	0.0	15.9	0.0	0.0	-18.9
32	17653525.56	4855580.61	2.00	0	E	32	-40.6	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-92.4
32	17653525.56	4855580.61	2.00	0	E	63	-27.4	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-79.9
32	17653525.56	4855580.61	2.00	0	E	125	49.7	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	5.1	0.0	0.0	-3.6
32	17653525.56	4855580.61	2.00	0	E	250	62.2	0.0	0.0	0.0	51.1	0.1	-3.0	0.0	0.0	6.0	0.0	0.0	8.0
32	17653525.56	4855580.61	2.00	0	E	500	72.6	0.0	0.0	0.0	51.1	0.2	-3.0	0.0	0.0	7.3	0.0	0.0	17.0
32	17653525.56	4855580.61	2.00	0	E	1000	74.8	0.0	0.0	0.0	51.1	0.4	-3.0	0.0	0.0	9.0	0.0	0.0	17.3
32	17653525.56	4855580.61	2.00	0	E	2000	73.0	0.0	0.0	0.0	51.1	1.0	-3.0	0.0	0.0	11.1	0.0	0.0	12.8

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
32	17653525.56	4855580.61	2.00	0	E	4000	67.8	0.0	0.0	0.0	51.1	3.3	-3.0	0.0	0.0	13.5	0.0	0.0	2.9
32	17653525.56	4855580.61	2.00	0	E	8000	58.7	0.0	0.0	0.0	51.1	11.8	-3.0	0.0	0.0	15.9	0.0	0.0	-17.2

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
34	17653529.40	4855574.26	2.00	0	D	32	-39.4	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-91.6
34	17653529.40	4855574.26	2.00	0	D	63	-26.2	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	4.5	0.0	0.0	-79.1
34	17653529.40	4855574.26	2.00	0	D	125	50.9	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	5.4	0.0	0.0	-2.9
34	17653529.40	4855574.26	2.00	0	D	250	63.4	0.0	0.0	0.0	51.4	0.1	-3.0	0.0	0.0	6.5	0.0	0.0	8.3
34	17653529.40	4855574.26	2.00	0	D	500	73.8	0.0	0.0	0.0	51.4	0.2	-3.0	0.0	0.0	8.1	0.0	0.0	17.1
34	17653529.40	4855574.26	2.00	0	D	1000	76.0	0.0	0.0	0.0	51.4	0.4	-3.0	0.0	0.0	10.1	0.0	0.0	17.1
34	17653529.40	4855574.26	2.00	0	D	2000	74.2	0.0	0.0	0.0	51.4	1.0	-3.0	0.0	0.0	12.4	0.0	0.0	12.4
34	17653529.40	4855574.26	2.00	0	D	4000	69.0	0.0	0.0	0.0	51.4	3.4	-3.0	0.0	0.0	14.8	0.0	0.0	2.3
34	17653529.40	4855574.26	2.00	0	D	8000	59.9	0.0	0.0	0.0	51.4	12.2	-3.0	0.0	0.0	17.3	0.0	0.0	-18.0
34	17653529.40	4855574.26	2.00	0	N	32	-42.4	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-94.6
34	17653529.40	4855574.26	2.00	0	N	63	-29.2	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	4.5	0.0	0.0	-82.2
34	17653529.40	4855574.26	2.00	0	N	125	47.9	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	5.4	0.0	0.0	-6.0
34	17653529.40	4855574.26	2.00	0	N	250	60.4	0.0	0.0	0.0	51.4	0.1	-3.0	0.0	0.0	6.5	0.0	0.0	5.3
34	17653529.40	4855574.26	2.00	0	N	500	70.8	0.0	0.0	0.0	51.4	0.2	-3.0	0.0	0.0	8.1	0.0	0.0	14.1
34	17653529.40	4855574.26	2.00	0	N	1000	73.0	0.0	0.0	0.0	51.4	0.4	-3.0	0.0	0.0	10.1	0.0	0.0	14.1
34	17653529.40	4855574.26	2.00	0	N	2000	71.2	0.0	0.0	0.0	51.4	1.0	-3.0	0.0	0.0	12.4	0.0	0.0	9.4
34	17653529.40	4855574.26	2.00	0	N	4000	66.0	0.0	0.0	0.0	51.4	3.4	-3.0	0.0	0.0	14.8	0.0	0.0	-0.7
34	17653529.40	4855574.26	2.00	0	N	8000	56.9	0.0	0.0	0.0	51.4	12.2	-3.0	0.0	0.0	17.3	0.0	0.0	-21.0
34	17653529.40	4855574.26	2.00	0	E	32	-40.6	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	3.8	0.0	0.0	-92.8
34	17653529.40	4855574.26	2.00	0	E	63	-27.4	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	4.5	0.0	0.0	-80.4
34	17653529.40	4855574.26	2.00	0	E	125	49.7	0.0	0.0	0.0	51.4	0.0	-3.0	0.0	0.0	5.4	0.0	0.0	-4.2
34	17653529.40	4855574.26	2.00	0	E	250	62.2	0.0	0.0	0.0	51.4	0.1	-3.0	0.0	0.0	6.5	0.0	0.0	7.1
34	17653529.40	4855574.26	2.00	0	E	500	72.6	0.0	0.0	0.0	51.4	0.2	-3.0	0.0	0.0	8.1	0.0	0.0	15.8
34	17653529.40	4855574.26	2.00	0	E	1000	74.8	0.0	0.0	0.0	51.4	0.4	-3.0	0.0	0.0	10.1	0.0	0.0	15.8
34	17653529.40	4855574.26	2.00	0	E	2000	73.0	0.0	0.0	0.0	51.4	1.0	-3.0	0.0	0.0	12.4	0.0	0.0	11.1
34	17653529.40	4855574.26	2.00	0	E	4000	67.8	0.0	0.0	0.0	51.4	3.4	-3.0	0.0	0.0	14.8	0.0	0.0	1.1
34	17653529.40	4855574.26	2.00	0	E	8000	58.7	0.0	0.0	0.0	51.4	12.2	-3.0	0.0	0.0	17.3	0.0	0.0	-19.3

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
55	17653530.39	4855579.16	2.00	0	D	32	-39.4	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-91.6
55	17653530.39	4855579.16	2.00	0	D	63	-26.2	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-79.1
55	17653530.39	4855579.16	2.00	0	D	125	50.9	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	5.2	0.0	0.0	-2.8
55	17653530.39	4855579.16	2.00	0	D	250	63.4	0.0	0.0	0.0	51.5	0.1	-3.0	0.0	0.0	6.1	0.0	0.0	8.7
55	17653530.39	4855579.16	2.00	0	D	500	73.8	0.0	0.0	0.0	51.5	0.2	-3.0	0.0	0.0	7.5	0.0	0.0	17.7
55	17653530.39	4855579.16	2.00	0	D	1000	76.0	0.0	0.0	0.0	51.5	0.4	-3.0	0.0	0.0	9.3	0.0	0.0	17.9
55	17653530.39	4855579.16	2.00	0	D	2000	74.2	0.0	0.0	0.0	51.5	1.0	-3.0	0.0	0.0	11.4	0.0	0.0	13.3
55	17653530.39	4855579.16	2.00	0	D	4000	69.0	0.0	0.0	0.0	51.5	3.5	-3.0	0.0	0.0	13.8	0.0	0.0	3.3
55	17653530.39	4855579.16	2.00	0	D	8000	59.9	0.0	0.0	0.0	51.5	12.3	-3.0	0.0	0.0	16.3	0.0	0.0	-17.2
55	17653530.39	4855579.16	2.00	0	N	32	-42.4	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-94.6
55	17653530.39	4855579.16	2.00	0	N	63	-29.2	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-82.1
55	17653530.39	4855579.16	2.00	0	N	125	47.9	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	5.2	0.0	0.0	-5.8
55	17653530.39	4855579.16	2.00	0	N	250	60.4	0.0	0.0	0.0	51.5	0.1	-3.0	0.0	0.0	6.1	0.0	0.0	5.7
55	17653530.39	4855579.16	2.00	0	N	500	70.8	0.0	0.0	0.0	51.5	0.2	-3.0	0.0	0.0	7.5	0.0	0.0	14.6
55	17653530.39	4855579.16	2.00	0	N	1000	73.0	0.0	0.0	0.0	51.5	0.4	-3.0	0.0	0.0	9.3	0.0	0.0	14.8
55	17653530.39	4855579.16	2.00	0	N	2000	71.2	0.0	0.0	0.0	51.5	1.0	-3.0	0.0	0.0	11.4	0.0	0.0	10.3
55	17653530.39	4855579.16	2.00	0	N	4000	66.0	0.0	0.0	0.0	51.5	3.5	-3.0	0.0	0.0	13.8	0.0	0.0	0.3
55	17653530.39	4855579.16	2.00	0	N	8000	56.9	0.0	0.0	0.0	51.5	12.3	-3.0	0.0	0.0	16.3	0.0	0.0	-20.2
55	17653530.39	4855579.16	2.00	0	E	32	-40.6	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	3.7	0.0	0.0	-92.8
55	17653530.39	4855579.16	2.00	0	E	63	-27.4	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	4.4	0.0	0.0	-80.3
55	17653530.39	4855579.16	2.00	0	E	125	49.7	0.0	0.0	0.0	51.5	0.0	-3.0	0.0	0.0	5.2	0.0	0.0	-4.0
55	17653530.39	4855579.16	2.00	0	E	250	62.2	0.0	0.0	0.0	51.5	0.1	-3.0	0.0	0.0	6.1	0.0	0.0	7.5
55	17653530.39	4855579.16	2.00	0	E	500	72.6	0.0	0.0	0.0	51.5	0.2	-3.0	0.0	0.0	7.5	0.0	0.0	16.4
55	17653530.39	4855579.16	2.00	0	E	1000	74.8	0.0	0.0	0.0	51.5	0.4	-3.0	0.0	0.0	9.3	0.0	0.0	16.6
55	17653530.39	4855579.16	2.00	0	E	2000	73.0	0.0	0.0	0.0	51.5	1.0	-3.0	0.0	0.0	11.4	0.0	0.0	12.1
55	17653530.39	4855579.16	2.00	0	E	4000	67.8	0.0	0.0	0.0	51.5	3.5	-3.0	0.0	0.0	13.8	0.0	0.0	2.0

Point Source, ISO 9613, Name: "AC5T", ID: "AC5T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
55	17653530.39	4855579.16	2.00	0	E	8000	58.7	0.0	0.0	0.0	51.5	12.3	-3.0	0.0	0.0	16.3	0.0	0.0	-18.4

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
57	17653421.74	4855501.32	2.00	0	D	32	-39.4	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	9.5	0.0	0.0	-95.9
57	17653421.74	4855501.32	2.00	0	D	63	-26.2	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	13.3	0.0	0.0	-86.4
57	17653421.74	4855501.32	2.00	0	D	125	46.9	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	17.1	0.0	0.0	-17.2
57	17653421.74	4855501.32	2.00	0	D	250	57.4	0.0	0.0	0.0	50.0	0.1	-3.0	0.0	0.0	20.4	0.0	0.0	-10.1
57	17653421.74	4855501.32	2.00	0	D	500	66.8	0.0	0.0	0.0	50.0	0.2	-3.0	0.0	0.0	22.2	0.0	0.0	-2.5
57	17653421.74	4855501.32	2.00	0	D	1000	71.0	0.0	0.0	0.0	50.0	0.3	-3.0	0.0	0.0	23.4	0.0	0.0	0.3
57	17653421.74	4855501.32	2.00	0	D	2000	69.2	0.0	0.0	0.0	50.0	0.9	-3.0	0.0	0.0	24.1	0.0	0.0	-2.7
57	17653421.74	4855501.32	2.00	0	D	4000	63.0	0.0	0.0	0.0	50.0	2.9	-3.0	0.0	0.0	24.5	0.0	0.0	-11.4
57	17653421.74	4855501.32	2.00	0	D	8000	51.9	0.0	0.0	0.0	50.0	10.4	-3.0	0.0	0.0	24.8	0.0	0.0	-30.2
57	17653421.74	4855501.32	2.00	0	N	32	-42.4	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	9.5	0.0	0.0	-98.9
57	17653421.74	4855501.32	2.00	0	N	63	-29.2	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	13.3	0.0	0.0	-89.5
57	17653421.74	4855501.32	2.00	0	N	125	43.9	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	17.1	0.0	0.0	-20.2
57	17653421.74	4855501.32	2.00	0	N	250	54.4	0.0	0.0	0.0	50.0	0.1	-3.0	0.0	0.0	20.4	0.0	0.0	-13.1
57	17653421.74	4855501.32	2.00	0	N	500	63.8	0.0	0.0	0.0	50.0	0.2	-3.0	0.0	0.0	22.2	0.0	0.0	-5.5
57	17653421.74	4855501.32	2.00	0	N	1000	68.0	0.0	0.0	0.0	50.0	0.3	-3.0	0.0	0.0	23.4	0.0	0.0	-2.7
57	17653421.74	4855501.32	2.00	0	N	2000	66.2	0.0	0.0	0.0	50.0	0.9	-3.0	0.0	0.0	24.1	0.0	0.0	-5.7
57	17653421.74	4855501.32	2.00	0	N	4000	60.0	0.0	0.0	0.0	50.0	2.9	-3.0	0.0	0.0	24.5	0.0	0.0	-14.4
57	17653421.74	4855501.32	2.00	0	N	8000	48.9	0.0	0.0	0.0	50.0	10.4	-3.0	0.0	0.0	24.8	0.0	0.0	-33.2
57	17653421.74	4855501.32	2.00	0	E	32	-40.6	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	9.5	0.0	0.0	-97.1
57	17653421.74	4855501.32	2.00	0	E	63	-27.4	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	13.3	0.0	0.0	-87.7
57	17653421.74	4855501.32	2.00	0	E	125	45.7	0.0	0.0	0.0	50.0	0.0	-3.0	0.0	0.0	17.1	0.0	0.0	-18.5
57	17653421.74	4855501.32	2.00	0	E	250	56.2	0.0	0.0	0.0	50.0	0.1	-3.0	0.0	0.0	20.4	0.0	0.0	-11.3
57	17653421.74	4855501.32	2.00	0	E	500	65.6	0.0	0.0	0.0	50.0	0.2	-3.0	0.0	0.0	22.2	0.0	0.0	-3.8
57	17653421.74	4855501.32	2.00	0	E	1000	69.8	0.0	0.0	0.0	50.0	0.3	-3.0	0.0	0.0	23.4	0.0	0.0	-0.9
57	17653421.74	4855501.32	2.00	0	E	2000	68.0	0.0	0.0	0.0	50.0	0.9	-3.0	0.0	0.0	24.1	0.0	0.0	-4.0
57	17653421.74	4855501.32	2.00	0	E	4000	61.8	0.0	0.0	0.0	50.0	2.9	-3.0	0.0	0.0	24.5	0.0	0.0	-12.7
57	17653421.74	4855501.32	2.00	0	E	8000	50.7	0.0	0.0	0.0	50.0	10.4	-3.0	0.0	0.0	24.8	0.0	0.0	-31.5

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
83	17653422.37	4855497.64	2.00	0	D	32	-39.4	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	9.3	0.0	0.0	-96.0
83	17653422.37	4855497.64	2.00	0	D	63	-26.2	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	13.1	0.0	0.0	-86.6
83	17653422.37	4855497.64	2.00	0	D	125	46.9	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	17.0	0.0	0.0	-17.4
83	17653422.37	4855497.64	2.00	0	D	250	57.4	0.0	0.0	0.0	50.3	0.1	-3.0	0.0	0.0	20.3	0.0	0.0	-10.3
83	17653422.37	4855497.64	2.00	0	D	500	66.8	0.0	0.0	0.0	50.3	0.2	-3.0	0.0	0.0	22.1	0.0	0.0	-2.8
83	17653422.37	4855497.64	2.00	0	D	1000	71.0	0.0	0.0	0.0	50.3	0.3	-3.0	0.0	0.0	23.3	0.0	0.0	0.0
83	17653422.37	4855497.64	2.00	0	D	2000	69.2	0.0	0.0	0.0	50.3	0.9	-3.0	0.0	0.0	24.1	0.0	0.0	-3.1
83	17653422.37	4855497.64	2.00	0	D	4000	63.0	0.0	0.0	0.0	50.3	3.0	-3.0	0.0	0.0	24.5	0.0	0.0	-11.8
83	17653422.37	4855497.64	2.00	0	D	8000	51.9	0.0	0.0	0.0	50.3	10.8	-3.0	0.0	0.0	24.8	0.0	0.0	-30.9
83	17653422.37	4855497.64	2.00	0	N	32	-42.4	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	9.3	0.0	0.0	-99.0
83	17653422.37	4855497.64	2.00	0	N	63	-29.2	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	13.1	0.0	0.0	-89.6
83	17653422.37	4855497.64	2.00	0	N	125	43.9	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	17.0	0.0	0.0	-20.4
83	17653422.37	4855497.64	2.00	0	N	250	54.4	0.0	0.0	0.0	50.3	0.1	-3.0	0.0	0.0	20.3	0.0	0.0	-13.3
83	17653422.37	4855497.64	2.00	0	N	500	63.8	0.0	0.0	0.0	50.3	0.2	-3.0	0.0	0.0	22.1	0.0	0.0	-5.8
83	17653422.37	4855497.64	2.00	0	N	1000	68.0	0.0	0.0	0.0	50.3	0.3	-3.0	0.0	0.0	23.3	0.0	0.0	-3.0
83	17653422.37	4855497.64	2.00	0	N	2000	66.2	0.0	0.0	0.0	50.3	0.9	-3.0	0.0	0.0	24.1	0.0	0.0	-6.1
83	17653422.37	4855497.64	2.00	0	N	4000	60.0	0.0	0.0	0.0	50.3	3.0	-3.0	0.0	0.0	24.5	0.0	0.0	-14.8
83	17653422.37	4855497.64	2.00	0	N	8000	48.9	0.0	0.0	0.0	50.3	10.8	-3.0	0.0	0.0	24.8	0.0	0.0	-33.9
83	17653422.37	4855497.64	2.00	0	E	32	-40.6	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	9.3	0.0	0.0	-97.3
83	17653422.37	4855497.64	2.00	0	E	63	-27.4	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	13.1	0.0	0.0	-87.8
83	17653422.37	4855497.64	2.00	0	E	125	45.7	0.0	0.0	0.0	50.3	0.0	-3.0	0.0	0.0	17.0	0.0	0.0	-18.6
83	17653422.37	4855497.64	2.00	0	E	250	56.2	0.0	0.0	0.0	50.3	0.1	-3.0	0.0	0.0	20.3	0.0	0.0	-11.6
83	17653422.37	4855497.64	2.00	0	E	500	65.6	0.0	0.0	0.0	50.3	0.2	-3.0	0.0	0.0	22.1	0.0	0.0	-4.0
83	17653422.37	4855497.64	2.00	0	E	1000	69.8	0.0	0.0	0.0	50.3	0.3	-3.0	0.0	0.0	23.3	0.0	0.0	-1.2
83	17653422.37	4855497.64	2.00	0	E	2000	68.0	0.0	0.0	0.0	50.3	0.9	-3.0	0.0	0.0	24.1	0.0	0.0	-4.3
83	17653422.37	4855497.64	2.00	0	E	4000	61.8	0.0	0.0	0.0	50.3	3.0	-3.0	0.0	0.0	24.5	0.0	0.0	-13.1
83	17653422.37	4855497.64	2.00	0	E	8000	50.7	0.0	0.0	0.0	50.3	10.8	-3.0	0.0	0.0	24.8	0.0	0.0	-32.2

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
85	17653422.58	4855487.88	2.00	0	D	32	-39.4	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	9.0	0.0	0.0	-96.5
85	17653422.58	4855487.88	2.00	0	D	63	-26.2	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	12.7	0.0	0.0	-87.1
85	17653422.58	4855487.88	2.00	0	D	125	46.9	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	16.6	0.0	0.0	-17.9
85	17653422.58	4855487.88	2.00	0	D	250	57.4	0.0	0.0	0.0	51.1	0.1	-3.0	0.0	0.0	20.1	0.0	0.0	-10.9
85	17653422.58	4855487.88	2.00	0	D	500	66.8	0.0	0.0	0.0	51.1	0.2	-3.0	0.0	0.0	22.0	0.0	0.0	-3.5
85	17653422.58	4855487.88	2.00	0	D	1000	71.0	0.0	0.0	0.0	51.1	0.4	-3.0	0.0	0.0	23.3	0.0	0.0	-0.8
85	17653422.58	4855487.88	2.00	0	D	2000	69.2	0.0	0.0	0.0	51.1	1.0	-3.0	0.0	0.0	24.1	0.0	0.0	-3.9
85	17653422.58	4855487.88	2.00	0	D	4000	63.0	0.0	0.0	0.0	51.1	3.3	-3.0	0.0	0.0	24.5	0.0	0.0	-12.9
85	17653422.58	4855487.88	2.00	0	D	8000	51.9	0.0	0.0	0.0	51.1	11.8	-3.0	0.0	0.0	24.7	0.0	0.0	-32.8
85	17653422.58	4855487.88	2.00	0	N	32	-42.4	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	9.0	0.0	0.0	-99.5
85	17653422.58	4855487.88	2.00	0	N	63	-29.2	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	12.7	0.0	0.0	-90.1
85	17653422.58	4855487.88	2.00	0	N	125	43.9	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	16.6	0.0	0.0	-20.9
85	17653422.58	4855487.88	2.00	0	N	250	54.4	0.0	0.0	0.0	51.1	0.1	-3.0	0.0	0.0	20.1	0.0	0.0	-13.9
85	17653422.58	4855487.88	2.00	0	N	500	63.8	0.0	0.0	0.0	51.1	0.2	-3.0	0.0	0.0	22.0	0.0	0.0	-6.6
85	17653422.58	4855487.88	2.00	0	N	1000	68.0	0.0	0.0	0.0	51.1	0.4	-3.0	0.0	0.0	23.3	0.0	0.0	-3.8
85	17653422.58	4855487.88	2.00	0	N	2000	66.2	0.0	0.0	0.0	51.1	1.0	-3.0	0.0	0.0	24.1	0.0	0.0	-7.0
85	17653422.58	4855487.88	2.00	0	N	4000	60.0	0.0	0.0	0.0	51.1	3.3	-3.0	0.0	0.0	24.5	0.0	0.0	-15.9
85	17653422.58	4855487.88	2.00	0	N	8000	48.9	0.0	0.0	0.0	51.1	11.8	-3.0	0.0	0.0	24.7	0.0	0.0	-35.8
85	17653422.58	4855487.88	2.00	0	E	32	-40.6	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	9.0	0.0	0.0	-97.8
85	17653422.58	4855487.88	2.00	0	E	63	-27.4	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	12.7	0.0	0.0	-88.3
85	17653422.58	4855487.88	2.00	0	E	125	45.7	0.0	0.0	0.0	51.1	0.0	-3.0	0.0	0.0	16.6	0.0	0.0	-19.1
85	17653422.58	4855487.88	2.00	0	E	250	56.2	0.0	0.0	0.0	51.1	0.1	-3.0	0.0	0.0	20.1	0.0	0.0	-12.2
85	17653422.58	4855487.88	2.00	0	E	500	65.6	0.0	0.0	0.0	51.1	0.2	-3.0	0.0	0.0	22.0	0.0	0.0	-4.8
85	17653422.58	4855487.88	2.00	0	E	1000	69.8	0.0	0.0	0.0	51.1	0.4	-3.0	0.0	0.0	23.3	0.0	0.0	-2.0
85	17653422.58	4855487.88	2.00	0	E	2000	68.0	0.0	0.0	0.0	51.1	1.0	-3.0	0.0	0.0	24.1	0.0	0.0	-5.2
85	17653422.58	4855487.88	2.00	0	E	4000	61.8	0.0	0.0	0.0	51.1	3.3	-3.0	0.0	0.0	24.5	0.0	0.0	-14.2
85	17653422.58	4855487.88	2.00	0	E	8000	50.7	0.0	0.0	0.0	51.1	11.8	-3.0	0.0	0.0	24.7	0.0	0.0	-34.0

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
87	17653423.74	4855484.73	2.00	0	D	32	-39.4	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	8.9	0.0	0.0	-96.6
87	17653423.74	4855484.73	2.00	0	D	63	-26.2	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	12.6	0.0	0.0	-87.2
87	17653423.74	4855484.73	2.00	0	D	125	46.9	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	16.5	0.0	0.0	-18.0
87	17653423.74	4855484.73	2.00	0	D	250	57.4	0.0	0.0	0.0	51.3	0.1	-3.0	0.0	0.0	20.0	0.0	0.0	-11.0
87	17653423.74	4855484.73	2.00	0	D	500	66.8	0.0	0.0	0.0	51.3	0.2	-3.0	0.0	0.0	22.0	0.0	0.0	-3.8
87	17653423.74	4855484.73	2.00	0	D	1000	71.0	0.0	0.0	0.0	51.3	0.4	-3.0	0.0	0.0	23.3	0.0	0.0	-1.0
87	17653423.74	4855484.73	2.00	0	D	2000	69.2	0.0	0.0	0.0	51.3	1.0	-3.0	0.0	0.0	24.0	0.0	0.0	-4.2
87	17653423.74	4855484.73	2.00	0	D	4000	63.0	0.0	0.0	0.0	51.3	3.4	-3.0	0.0	0.0	24.5	0.0	0.0	-13.3
87	17653423.74	4855484.73	2.00	0	D	8000	51.9	0.0	0.0	0.0	51.3	12.2	-3.0	0.0	0.0	24.7	0.0	0.0	-33.4
87	17653423.74	4855484.73	2.00	0	N	32	-42.4	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	8.9	0.0	0.0	-99.6
87	17653423.74	4855484.73	2.00	0	N	63	-29.2	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	12.6	0.0	0.0	-90.2
87	17653423.74	4855484.73	2.00	0	N	125	43.9	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	16.5	0.0	0.0	-21.0
87	17653423.74	4855484.73	2.00	0	N	250	54.4	0.0	0.0	0.0	51.3	0.1	-3.0	0.0	0.0	20.0	0.0	0.0	-14.0
87	17653423.74	4855484.73	2.00	0	N	500	63.8	0.0	0.0	0.0	51.3	0.2	-3.0	0.0	0.0	22.0	0.0	0.0	-6.8
87	17653423.74	4855484.73	2.00	0	N	1000	68.0	0.0	0.0	0.0	51.3	0.4	-3.0	0.0	0.0	23.3	0.0	0.0	-4.0
87	17653423.74	4855484.73	2.00	0	N	2000	66.2	0.0	0.0	0.0	51.3	1.0	-3.0	0.0	0.0	24.0	0.0	0.0	-7.2
87	17653423.74	4855484.73	2.00	0	N	4000	60.0	0.0	0.0	0.0	51.3	3.4	-3.0	0.0	0.0	24.5	0.0	0.0	-16.3
87	17653423.74	4855484.73	2.00	0	N	8000	48.9	0.0	0.0	0.0	51.3	12.2	-3.0	0.0	0.0	24.7	0.0	0.0	-36.4
87	17653423.74	4855484.73	2.00	0	E	32	-40.6	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	8.9	0.0	0.0	-97.9
87	17653423.74	4855484.73	2.00	0	E	63	-27.4	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	12.6	0.0	0.0	-88.4
87	17653423.74	4855484.73	2.00	0	E	125	45.7	0.0	0.0	0.0	51.3	0.0	-3.0	0.0	0.0	16.5	0.0	0.0	-19.2
87	17653423.74	4855484.73	2.00	0	E	250	56.2	0.0	0.0	0.0	51.3	0.1	-3.0	0.0	0.0	20.0	0.0	0.0	-12.3
87	17653423.74	4855484.73	2.00	0	E	500	65.6	0.0	0.0	0.0	51.3	0.2	-3.0	0.0	0.0	22.0	0.0	0.0	-5.0
87	17653423.74	4855484.73	2.00	0	E	1000	69.8	0.0	0.0	0.0	51.3	0.4	-3.0	0.0	0.0	23.3	0.0	0.0	-2.2
87	17653423.74	4855484.73	2.00	0	E	2000	68.0	0.0	0.0	0.0	51.3	1.0	-3.0	0.0	0.0	24.0	0.0	0.0	-5.4
87	17653423.74	4855484.73	2.00	0	E	4000	61.8	0.0	0.0	0.0	51.3	3.4	-3.0	0.0	0.0	24.5	0.0	0.0	-14.5
87	17653423.74	4855484.73	2.00	0	E	8000	50.7	0.0	0.0	0.0	51.3	12.2	-3.0	0.0	0.0	24.7	0.0	0.0	-34.6

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
94	17653425.52	4855480.32	2.00	0	D	32	-39.4	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	8.7	0.0	0.0	-96.8

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
94	17653425.52	4855480.32	2.00	0	D	63	-26.2	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	12.4	0.0	0.0	-87.3
94	17653425.52	4855480.32	2.00	0	D	125	46.9	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	16.3	0.0	0.0	-18.1
94	17653425.52	4855480.32	2.00	0	D	250	57.4	0.0	0.0	0.0	51.7	0.1	-3.0	0.0	0.0	19.8	0.0	0.0	-11.2
94	17653425.52	4855480.32	2.00	0	D	500	66.8	0.0	0.0	0.0	51.7	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-4.0
94	17653425.52	4855480.32	2.00	0	D	1000	71.0	0.0	0.0	0.0	51.7	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-1.3
94	17653425.52	4855480.32	2.00	0	D	2000	69.2	0.0	0.0	0.0	51.7	1.0	-3.0	0.0	0.0	24.0	0.0	0.0	-4.5
94	17653425.52	4855480.32	2.00	0	D	4000	63.0	0.0	0.0	0.0	51.7	3.5	-3.0	0.0	0.0	24.5	0.0	0.0	-13.7
94	17653425.52	4855480.32	2.00	0	D	8000	51.9	0.0	0.0	0.0	51.7	12.6	-3.0	0.0	0.0	24.7	0.0	0.0	-34.1
94	17653425.52	4855480.32	2.00	0	N	32	-42.4	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	8.7	0.0	0.0	-99.8
94	17653425.52	4855480.32	2.00	0	N	63	-29.2	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	12.4	0.0	0.0	-90.3
94	17653425.52	4855480.32	2.00	0	N	125	43.9	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	16.3	0.0	0.0	-21.1
94	17653425.52	4855480.32	2.00	0	N	250	54.4	0.0	0.0	0.0	51.7	0.1	-3.0	0.0	0.0	19.8	0.0	0.0	-14.2
94	17653425.52	4855480.32	2.00	0	N	500	63.8	0.0	0.0	0.0	51.7	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-7.0
94	17653425.52	4855480.32	2.00	0	N	1000	68.0	0.0	0.0	0.0	51.7	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-4.3
94	17653425.52	4855480.32	2.00	0	N	2000	66.2	0.0	0.0	0.0	51.7	1.0	-3.0	0.0	0.0	24.0	0.0	0.0	-7.6
94	17653425.52	4855480.32	2.00	0	N	4000	60.0	0.0	0.0	0.0	51.7	3.5	-3.0	0.0	0.0	24.5	0.0	0.0	-16.7
94	17653425.52	4855480.32	2.00	0	N	8000	48.9	0.0	0.0	0.0	51.7	12.6	-3.0	0.0	0.0	24.7	0.0	0.0	-37.2
94	17653425.52	4855480.32	2.00	0	E	32	-40.6	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	8.7	0.0	0.0	-98.0
94	17653425.52	4855480.32	2.00	0	E	63	-27.4	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	12.4	0.0	0.0	-88.5
94	17653425.52	4855480.32	2.00	0	E	125	45.7	0.0	0.0	0.0	51.7	0.0	-3.0	0.0	0.0	16.3	0.0	0.0	-19.4
94	17653425.52	4855480.32	2.00	0	E	250	56.2	0.0	0.0	0.0	51.7	0.1	-3.0	0.0	0.0	19.8	0.0	0.0	-12.4
94	17653425.52	4855480.32	2.00	0	E	500	65.6	0.0	0.0	0.0	51.7	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-5.3
94	17653425.52	4855480.32	2.00	0	E	1000	69.8	0.0	0.0	0.0	51.7	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-2.5
94	17653425.52	4855480.32	2.00	0	E	2000	68.0	0.0	0.0	0.0	51.7	1.0	-3.0	0.0	0.0	24.0	0.0	0.0	-5.8
94	17653425.52	4855480.32	2.00	0	E	4000	61.8	0.0	0.0	0.0	51.7	3.5	-3.0	0.0	0.0	24.5	0.0	0.0	-15.0
94	17653425.52	4855480.32	2.00	0	E	8000	50.7	0.0	0.0	0.0	51.7	12.6	-3.0	0.0	0.0	24.7	0.0	0.0	-35.4

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
116	17653426.57	4855477.59	2.00	0	D	32	-39.4	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	8.6	0.0	0.0	-96.9
116	17653426.57	4855477.59	2.00	0	D	63	-26.2	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	12.3	0.0	0.0	-87.4
116	17653426.57	4855477.59	2.00	0	D	125	46.9	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	16.2	0.0	0.0	-18.2
116	17653426.57	4855477.59	2.00	0	D	250	57.4	0.0	0.0	0.0	51.9	0.1	-3.0	0.0	0.0	19.7	0.0	0.0	-11.3
116	17653426.57	4855477.59	2.00	0	D	500	66.8	0.0	0.0	0.0	51.9	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-4.2
116	17653426.57	4855477.59	2.00	0	D	1000	71.0	0.0	0.0	0.0	51.9	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-1.5
116	17653426.57	4855477.59	2.00	0	D	2000	69.2	0.0	0.0	0.0	51.9	1.1	-3.0	0.0	0.0	24.0	0.0	0.0	-4.8
116	17653426.57	4855477.59	2.00	0	D	4000	63.0	0.0	0.0	0.0	51.9	3.6	-3.0	0.0	0.0	24.5	0.0	0.0	-14.0
116	17653426.57	4855477.59	2.00	0	D	8000	51.9	0.0	0.0	0.0	51.9	12.9	-3.0	0.0	0.0	24.7	0.0	0.0	-34.6
116	17653426.57	4855477.59	2.00	0	N	32	-42.4	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	8.6	0.0	0.0	-99.9
116	17653426.57	4855477.59	2.00	0	N	63	-29.2	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	12.3	0.0	0.0	-90.4
116	17653426.57	4855477.59	2.00	0	N	125	43.9	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	16.2	0.0	0.0	-21.2
116	17653426.57	4855477.59	2.00	0	N	250	54.4	0.0	0.0	0.0	51.9	0.1	-3.0	0.0	0.0	19.7	0.0	0.0	-14.3
116	17653426.57	4855477.59	2.00	0	N	500	63.8	0.0	0.0	0.0	51.9	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-7.2
116	17653426.57	4855477.59	2.00	0	N	1000	68.0	0.0	0.0	0.0	51.9	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-4.5
116	17653426.57	4855477.59	2.00	0	N	2000	66.2	0.0	0.0	0.0	51.9	1.1	-3.0	0.0	0.0	24.0	0.0	0.0	-7.8
116	17653426.57	4855477.59	2.00	0	N	4000	60.0	0.0	0.0	0.0	51.9	3.6	-3.0	0.0	0.0	24.5	0.0	0.0	-17.0
116	17653426.57	4855477.59	2.00	0	N	8000	48.9	0.0	0.0	0.0	51.9	12.9	-3.0	0.0	0.0	24.7	0.0	0.0	-37.7
116	17653426.57	4855477.59	2.00	0	E	32	-40.6	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	8.6	0.0	0.0	-98.1
116	17653426.57	4855477.59	2.00	0	E	63	-27.4	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	12.3	0.0	0.0	-88.6
116	17653426.57	4855477.59	2.00	0	E	125	45.7	0.0	0.0	0.0	51.9	0.0	-3.0	0.0	0.0	16.2	0.0	0.0	-19.5
116	17653426.57	4855477.59	2.00	0	E	250	56.2	0.0	0.0	0.0	51.9	0.1	-3.0	0.0	0.0	19.7	0.0	0.0	-12.5
116	17653426.57	4855477.59	2.00	0	E	500	65.6	0.0	0.0	0.0	51.9	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-5.4
116	17653426.57	4855477.59	2.00	0	E	1000	69.8	0.0	0.0	0.0	51.9	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-2.7
116	17653426.57	4855477.59	2.00	0	E	2000	68.0	0.0	0.0	0.0	51.9	1.1	-3.0	0.0	0.0	24.0	0.0	0.0	-6.0
116	17653426.57	4855477.59	2.00	0	E	4000	61.8	0.0	0.0	0.0	51.9	3.6	-3.0	0.0	0.0	24.5	0.0	0.0	-15.2
116	17653426.57	4855477.59	2.00	0	E	8000	50.7	0.0	0.0	0.0	51.9	12.9	-3.0	0.0	0.0	24.7	0.0	0.0	-35.9

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
117	17653427.83	4855472.13	2.00	0	D	32	-39.4	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	8.4	0.0	0.0	-97.1
117	17653427.83	4855472.13	2.00	0	D	63	-26.2	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	12.1	0.0	0.0	-87.6

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
117	17653427.83	4855472.13	2.00	0	D	125	46.9	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	16.0	0.0	0.0	-18.4
117	17653427.83	4855472.13	2.00	0	D	250	57.4	0.0	0.0	0.0	52.3	0.1	-3.0	0.0	0.0	19.5	0.0	0.0	-11.5
117	17653427.83	4855472.13	2.00	0	D	500	66.8	0.0	0.0	0.0	52.3	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-4.5
117	17653427.83	4855472.13	2.00	0	D	1000	71.0	0.0	0.0	0.0	52.3	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-1.9
117	17653427.83	4855472.13	2.00	0	D	2000	69.2	0.0	0.0	0.0	52.3	1.1	-3.0	0.0	0.0	24.0	0.0	0.0	-5.2
117	17653427.83	4855472.13	2.00	0	D	4000	63.0	0.0	0.0	0.0	52.3	3.8	-3.0	0.0	0.0	24.5	0.0	0.0	-14.5
117	17653427.83	4855472.13	2.00	0	D	8000	51.9	0.0	0.0	0.0	52.3	13.5	-3.0	0.0	0.0	24.7	0.0	0.0	-35.6
117	17653427.83	4855472.13	2.00	0	N	32	-42.4	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	8.4	0.0	0.0	-100.1
117	17653427.83	4855472.13	2.00	0	N	63	-29.2	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	12.1	0.0	0.0	-90.6
117	17653427.83	4855472.13	2.00	0	N	125	43.9	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	16.0	0.0	0.0	-21.5
117	17653427.83	4855472.13	2.00	0	N	250	54.4	0.0	0.0	0.0	52.3	0.1	-3.0	0.0	0.0	19.5	0.0	0.0	-14.5
117	17653427.83	4855472.13	2.00	0	N	500	63.8	0.0	0.0	0.0	52.3	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-7.6
117	17653427.83	4855472.13	2.00	0	N	1000	68.0	0.0	0.0	0.0	52.3	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-4.9
117	17653427.83	4855472.13	2.00	0	N	2000	66.2	0.0	0.0	0.0	52.3	1.1	-3.0	0.0	0.0	24.0	0.0	0.0	-8.2
117	17653427.83	4855472.13	2.00	0	N	4000	60.0	0.0	0.0	0.0	52.3	3.8	-3.0	0.0	0.0	24.5	0.0	0.0	-17.5
117	17653427.83	4855472.13	2.00	0	N	8000	48.9	0.0	0.0	0.0	52.3	13.5	-3.0	0.0	0.0	24.7	0.0	0.0	-38.6
117	17653427.83	4855472.13	2.00	0	E	32	-40.6	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	8.4	0.0	0.0	-98.3
117	17653427.83	4855472.13	2.00	0	E	63	-27.4	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	12.1	0.0	0.0	-88.8
117	17653427.83	4855472.13	2.00	0	E	125	45.7	0.0	0.0	0.0	52.3	0.0	-3.0	0.0	0.0	16.0	0.0	0.0	-19.7
117	17653427.83	4855472.13	2.00	0	E	250	56.2	0.0	0.0	0.0	52.3	0.1	-3.0	0.0	0.0	19.5	0.0	0.0	-12.8
117	17653427.83	4855472.13	2.00	0	E	500	65.6	0.0	0.0	0.0	52.3	0.2	-3.0	0.0	0.0	21.9	0.0	0.0	-5.8
117	17653427.83	4855472.13	2.00	0	E	1000	69.8	0.0	0.0	0.0	52.3	0.4	-3.0	0.0	0.0	23.2	0.0	0.0	-3.1
117	17653427.83	4855472.13	2.00	0	E	2000	68.0	0.0	0.0	0.0	52.3	1.1	-3.0	0.0	0.0	24.0	0.0	0.0	-6.4
117	17653427.83	4855472.13	2.00	0	E	4000	61.8	0.0	0.0	0.0	52.3	3.8	-3.0	0.0	0.0	24.5	0.0	0.0	-15.8
117	17653427.83	4855472.13	2.00	0	E	8000	50.7	0.0	0.0	0.0	52.3	13.5	-3.0	0.0	0.0	24.7	0.0	0.0	-36.9

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
119	17653430.25	4855468.24	2.00	0	D	32	-39.4	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	8.2	0.0	0.0	-97.2
119	17653430.25	4855468.24	2.00	0	D	63	-26.2	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	11.9	0.0	0.0	-87.7
119	17653430.25	4855468.24	2.00	0	D	125	46.9	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	15.8	0.0	0.0	-18.5
119	17653430.25	4855468.24	2.00	0	D	250	57.4	0.0	0.0	0.0	52.5	0.1	-3.0	0.0	0.0	19.4	0.0	0.0	-11.6
119	17653430.25	4855468.24	2.00	0	D	500	66.8	0.0	0.0	0.0	52.5	0.2	-3.0	0.0	0.0	21.8	0.0	0.0	-4.7
119	17653430.25	4855468.24	2.00	0	D	1000	71.0	0.0	0.0	0.0	52.5	0.4	-3.0	0.0	0.0	23.1	0.0	0.0	-2.1
119	17653430.25	4855468.24	2.00	0	D	2000	69.2	0.0	0.0	0.0	52.5	1.2	-3.0	0.0	0.0	24.0	0.0	0.0	-5.4
119	17653430.25	4855468.24	2.00	0	D	4000	63.0	0.0	0.0	0.0	52.5	3.9	-3.0	0.0	0.0	24.4	0.0	0.0	-14.9
119	17653430.25	4855468.24	2.00	0	D	8000	51.9	0.0	0.0	0.0	52.5	14.0	-3.0	0.0	0.0	24.7	0.0	0.0	-36.3
119	17653430.25	4855468.24	2.00	0	N	32	-42.4	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	8.2	0.0	0.0	-100.2
119	17653430.25	4855468.24	2.00	0	N	63	-29.2	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	11.9	0.0	0.0	-90.7
119	17653430.25	4855468.24	2.00	0	N	125	43.9	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	15.8	0.0	0.0	-21.6
119	17653430.25	4855468.24	2.00	0	N	250	54.4	0.0	0.0	0.0	52.5	0.1	-3.0	0.0	0.0	19.4	0.0	0.0	-14.6
119	17653430.25	4855468.24	2.00	0	N	500	63.8	0.0	0.0	0.0	52.5	0.2	-3.0	0.0	0.0	21.8	0.0	0.0	-7.8
119	17653430.25	4855468.24	2.00	0	N	1000	68.0	0.0	0.0	0.0	52.5	0.4	-3.0	0.0	0.0	23.1	0.0	0.0	-5.1
119	17653430.25	4855468.24	2.00	0	N	2000	66.2	0.0	0.0	0.0	52.5	1.2	-3.0	0.0	0.0	24.0	0.0	0.0	-8.5
119	17653430.25	4855468.24	2.00	0	N	4000	60.0	0.0	0.0	0.0	52.5	3.9	-3.0	0.0	0.0	24.4	0.0	0.0	-17.9
119	17653430.25	4855468.24	2.00	0	N	8000	48.9	0.0	0.0	0.0	52.5	14.0	-3.0	0.0	0.0	24.7	0.0	0.0	-39.3
119	17653430.25	4855468.24	2.00	0	E	32	-40.6	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	8.2	0.0	0.0	-98.4
119	17653430.25	4855468.24	2.00	0	E	63	-27.4	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	11.9	0.0	0.0	-88.9
119	17653430.25	4855468.24	2.00	0	E	125	45.7	0.0	0.0	0.0	52.5	0.0	-3.0	0.0	0.0	15.8	0.0	0.0	-19.8
119	17653430.25	4855468.24	2.00	0	E	250	56.2	0.0	0.0	0.0	52.5	0.1	-3.0	0.0	0.0	19.4	0.0	0.0	-12.9
119	17653430.25	4855468.24	2.00	0	E	500	65.6	0.0	0.0	0.0	52.5	0.2	-3.0	0.0	0.0	21.8	0.0	0.0	-6.0
119	17653430.25	4855468.24	2.00	0	E	1000	69.8	0.0	0.0	0.0	52.5	0.4	-3.0	0.0	0.0	23.1	0.0	0.0	-3.3
119	17653430.25	4855468.24	2.00	0	E	2000	68.0	0.0	0.0	0.0	52.5	1.2	-3.0	0.0	0.0	24.0	0.0	0.0	-6.7
119	17653430.25	4855468.24	2.00	0	E	4000	61.8	0.0	0.0	0.0	52.5	3.9	-3.0	0.0	0.0	24.4	0.0	0.0	-16.2
119	17653430.25	4855468.24	2.00	0	E	8000	50.7	0.0	0.0	0.0	52.5	14.0	-3.0	0.0	0.0	24.7	0.0	0.0	-37.6

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
139	17653432.03	4855463.41	2.00	0	D	32	-39.4	0.0	0.0	0.0	52.9	0.0	-3.0	0.0	0.0	8.1	0.0	0.0	-97.4
139	17653432.03	4855463.41	2.00	0	D	63	-26.2	0.0	0.0	0.0	52.9	0.0	-3.0	0.0	0.0	11.7	0.0	0.0	-87.8
139	17653432.03	4855463.41	2.00	0	D	125	46.9	0.0	0.0	0.0	52.9	0.1	-3.0	0.0	0.0	15.7	0.0	0.0	-18.7

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
139	17653432.03	4855463.41	2.00	0	D	250	57.4	0.0	0.0	0.0	52.9	0.1	-3.0	0.0	0.0	19.2	0.0	0.0	-11.8
139	17653432.03	4855463.41	2.00	0	D	500	66.8	0.0	0.0	0.0	52.9	0.2	-3.0	0.0	0.0	21.7	0.0	0.0	-5.0
139	17653432.03	4855463.41	2.00	0	D	1000	71.0	0.0	0.0	0.0	52.9	0.5	-3.0	0.0	0.0	23.1	0.0	0.0	-2.4
139	17653432.03	4855463.41	2.00	0	D	2000	69.2	0.0	0.0	0.0	52.9	1.2	-3.0	0.0	0.0	23.9	0.0	0.0	-5.8
139	17653432.03	4855463.41	2.00	0	D	4000	63.0	0.0	0.0	0.0	52.9	4.1	-3.0	0.0	0.0	24.4	0.0	0.0	-15.4
139	17653432.03	4855463.41	2.00	0	D	8000	51.9	0.0	0.0	0.0	52.9	14.5	-3.0	0.0	0.0	24.7	0.0	0.0	-37.2
139	17653432.03	4855463.41	2.00	0	N	32	-42.4	0.0	0.0	0.0	52.9	0.0	-3.0	0.0	0.0	8.1	0.0	0.0	-100.4
139	17653432.03	4855463.41	2.00	0	N	63	-29.2	0.0	0.0	0.0	52.9	0.0	-3.0	0.0	0.0	11.7	0.0	0.0	-90.8
139	17653432.03	4855463.41	2.00	0	N	125	43.9	0.0	0.0	0.0	52.9	0.1	-3.0	0.0	0.0	15.7	0.0	0.0	-21.7
139	17653432.03	4855463.41	2.00	0	N	250	54.4	0.0	0.0	0.0	52.9	0.1	-3.0	0.0	0.0	19.2	0.0	0.0	-14.8
139	17653432.03	4855463.41	2.00	0	N	500	63.8	0.0	0.0	0.0	52.9	0.2	-3.0	0.0	0.0	21.7	0.0	0.0	-8.0
139	17653432.03	4855463.41	2.00	0	N	1000	68.0	0.0	0.0	0.0	52.9	0.5	-3.0	0.0	0.0	23.1	0.0	0.0	-5.4
139	17653432.03	4855463.41	2.00	0	N	2000	66.2	0.0	0.0	0.0	52.9	1.2	-3.0	0.0	0.0	23.9	0.0	0.0	-8.8
139	17653432.03	4855463.41	2.00	0	N	4000	60.0	0.0	0.0	0.0	52.9	4.1	-3.0	0.0	0.0	24.4	0.0	0.0	-18.4
139	17653432.03	4855463.41	2.00	0	N	8000	48.9	0.0	0.0	0.0	52.9	14.5	-3.0	0.0	0.0	24.7	0.0	0.0	-40.2
139	17653432.03	4855463.41	2.00	0	E	32	-40.6	0.0	0.0	0.0	52.9	0.0	-3.0	0.0	0.0	8.1	0.0	0.0	-98.6
139	17653432.03	4855463.41	2.00	0	E	63	-27.4	0.0	0.0	0.0	52.9	0.0	-3.0	0.0	0.0	11.7	0.0	0.0	-89.1
139	17653432.03	4855463.41	2.00	0	E	125	45.7	0.0	0.0	0.0	52.9	0.1	-3.0	0.0	0.0	15.7	0.0	0.0	-20.0
139	17653432.03	4855463.41	2.00	0	E	250	56.2	0.0	0.0	0.0	52.9	0.1	-3.0	0.0	0.0	19.2	0.0	0.0	-13.1
139	17653432.03	4855463.41	2.00	0	E	500	65.6	0.0	0.0	0.0	52.9	0.2	-3.0	0.0	0.0	21.7	0.0	0.0	-6.3
139	17653432.03	4855463.41	2.00	0	E	1000	69.8	0.0	0.0	0.0	52.9	0.5	-3.0	0.0	0.0	23.1	0.0	0.0	-3.6
139	17653432.03	4855463.41	2.00	0	E	2000	68.0	0.0	0.0	0.0	52.9	1.2	-3.0	0.0	0.0	23.9	0.0	0.0	-7.0
139	17653432.03	4855463.41	2.00	0	E	4000	61.8	0.0	0.0	0.0	52.9	4.1	-3.0	0.0	0.0	24.4	0.0	0.0	-16.6
139	17653432.03	4855463.41	2.00	0	E	8000	50.7	0.0	0.0	0.0	52.9	14.5	-3.0	0.0	0.0	24.7	0.0	0.0	-38.4

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
141	17653432.87	4855459.95	2.00	0	D	32	-39.4	0.0	0.0	0.0	53.1	0.0	-3.0	0.0	0.0	8.0	0.0	0.0	-97.5
141	17653432.87	4855459.95	2.00	0	D	63	-26.2	0.0	0.0	0.0	53.1	0.0	-3.0	0.0	0.0	11.6	0.0	0.0	-88.0
141	17653432.87	4855459.95	2.00	0	D	125	46.9	0.0	0.0	0.0	53.1	0.1	-3.0	0.0	0.0	15.6	0.0	0.0	-18.8
141	17653432.87	4855459.95	2.00	0	D	250	57.4	0.0	0.0	0.0	53.1	0.1	-3.0	0.0	0.0	19.1	0.0	0.0	-12.0
141	17653432.87	4855459.95	2.00	0	D	500	66.8	0.0	0.0	0.0	53.1	0.2	-3.0	0.0	0.0	21.7	0.0	0.0	-5.2
141	17653432.87	4855459.95	2.00	0	D	1000	71.0	0.0	0.0	0.0	53.1	0.5	-3.0	0.0	0.0	23.0	0.0	0.0	-2.6
141	17653432.87	4855459.95	2.00	0	D	2000	69.2	0.0	0.0	0.0	53.1	1.2	-3.0	0.0	0.0	23.9	0.0	0.0	-6.0
141	17653432.87	4855459.95	2.00	0	D	4000	63.0	0.0	0.0	0.0	53.1	4.2	-3.0	0.0	0.0	24.4	0.0	0.0	-15.7
141	17653432.87	4855459.95	2.00	0	D	8000	51.9	0.0	0.0	0.0	53.1	14.9	-3.0	0.0	0.0	24.7	0.0	0.0	-37.8
141	17653432.87	4855459.95	2.00	0	N	32	-42.4	0.0	0.0	0.0	53.1	0.0	-3.0	0.0	0.0	8.0	0.0	0.0	-100.5
141	17653432.87	4855459.95	2.00	0	N	63	-29.2	0.0	0.0	0.0	53.1	0.0	-3.0	0.0	0.0	11.6	0.0	0.0	-91.0
141	17653432.87	4855459.95	2.00	0	N	125	43.9	0.0	0.0	0.0	53.1	0.1	-3.0	0.0	0.0	15.6	0.0	0.0	-21.9
141	17653432.87	4855459.95	2.00	0	N	250	54.4	0.0	0.0	0.0	53.1	0.1	-3.0	0.0	0.0	19.1	0.0	0.0	-15.0
141	17653432.87	4855459.95	2.00	0	N	500	63.8	0.0	0.0	0.0	53.1	0.2	-3.0	0.0	0.0	21.7	0.0	0.0	-8.2
141	17653432.87	4855459.95	2.00	0	N	1000	68.0	0.0	0.0	0.0	53.1	0.5	-3.0	0.0	0.0	23.0	0.0	0.0	-5.6
141	17653432.87	4855459.95	2.00	0	N	2000	66.2	0.0	0.0	0.0	53.1	1.2	-3.0	0.0	0.0	23.9	0.0	0.0	-9.1
141	17653432.87	4855459.95	2.00	0	N	4000	60.0	0.0	0.0	0.0	53.1	4.2	-3.0	0.0	0.0	24.4	0.0	0.0	-18.7
141	17653432.87	4855459.95	2.00	0	N	8000	48.9	0.0	0.0	0.0	53.1	14.9	-3.0	0.0	0.0	24.7	0.0	0.0	-40.8
141	17653432.87	4855459.95	2.00	0	E	32	-40.6	0.0	0.0	0.0	53.1	0.0	-3.0	0.0	0.0	8.0	0.0	0.0	-98.8
141	17653432.87	4855459.95	2.00	0	E	63	-27.4	0.0	0.0	0.0	53.1	0.0	-3.0	0.0	0.0	11.6	0.0	0.0	-89.2
141	17653432.87	4855459.95	2.00	0	E	125	45.7	0.0	0.0	0.0	53.1	0.1	-3.0	0.0	0.0	15.6	0.0	0.0	-20.1
141	17653432.87	4855459.95	2.00	0	E	250	56.2	0.0	0.0	0.0	53.1	0.1	-3.0	0.0	0.0	19.1	0.0	0.0	-13.2
141	17653432.87	4855459.95	2.00	0	E	500	65.6	0.0	0.0	0.0	53.1	0.2	-3.0	0.0	0.0	21.7	0.0	0.0	-6.5
141	17653432.87	4855459.95	2.00	0	E	1000	69.8	0.0	0.0	0.0	53.1	0.5	-3.0	0.0	0.0	23.0	0.0	0.0	-3.9
141	17653432.87	4855459.95	2.00	0	E	2000	68.0	0.0	0.0	0.0	53.1	1.2	-3.0	0.0	0.0	23.9	0.0	0.0	-7.3
141	17653432.87	4855459.95	2.00	0	E	4000	61.8	0.0	0.0	0.0	53.1	4.2	-3.0	0.0	0.0	24.4	0.0	0.0	-16.9
141	17653432.87	4855459.95	2.00	0	E	8000	50.7	0.0	0.0	0.0	53.1	14.9	-3.0	0.0	0.0	24.7	0.0	0.0	-39.0

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
149	17653433.82	4855456.90	2.00	0	D	32	-39.4	0.0	0.0	0.0	53.3	0.0	-3.0	0.0	0.0	7.9	0.0	0.0	-97.6
149	17653433.82	4855456.90	2.00	0	D	63	-26.2	0.0	0.0	0.0	53.3	0.0	-3.0	0.0	0.0	11.6	0.0	0.0	-88.1
149	17653433.82	4855456.90	2.00	0	D	125	46.9	0.0	0.0	0.0	53.3	0.1	-3.0	0.0	0.0	15.5	0.0	0.0	-19.0
149	17653433.82	4855456.90	2.00	0	D	250	57.4	0.0	0.0	0.0	53.3	0.1	-3.0	0.0	0.0	19.0	0.0	0.0	-12.1

Point Source, ISO 9613, Name: "AC3T", ID: "AC3T"																			
Nr.	X	Y	Z	Refl.	DEN	Freq.	Lw	l/a	K0	Dc	Adiv	Aatm	Agr	Afol	Ahous	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
149	17653433.82	4855456.90	2.00	0	D	500	66.8	0.0	0.0	0.0	53.3	0.3	-3.0	0.0	0.0	21.6	0.0	0.0	-5.4
149	17653433.82	4855456.90	2.00	0	D	1000	71.0	0.0	0.0	0.0	53.3	0.5	-3.0	0.0	0.0	23.0	0.0	0.0	-2.8
149	17653433.82	4855456.90	2.00	0	D	2000	69.2	0.0	0.0	0.0	53.3	1.3	-3.0	0.0	0.0	23.9	0.0	0.0	-6.3
149	17653433.82	4855456.90	2.00	0	D	4000	63.0	0.0	0.0	0.0	53.3	4.3	-3.0	0.0	0.0	24.4	0.0	0.0	-16.0
149	17653433.82	4855456.90	2.00	0	D	8000	51.9	0.0	0.0	0.0	53.3	15.2	-3.0	0.0	0.0	24.7	0.0	0.0	-38.3
149	17653433.82	4855456.90	2.00	0	N	32	-42.4	0.0	0.0	0.0	53.3	0.0	-3.0	0.0	0.0	7.9	0.0	0.0	-100.6
149	17653433.82	4855456.90	2.00	0	N	63	-29.2	0.0	0.0	0.0	53.3	0.0	-3.0	0.0	0.0	11.6	0.0	0.0	-91.1
149	17653433.82	4855456.90	2.00	0	N	125	43.9	0.0	0.0	0.0	53.3	0.1	-3.0	0.0	0.0	15.5	0.0	0.0	-22.0
149	17653433.82	4855456.90	2.00	0	N	250	54.4	0.0	0.0	0.0	53.3	0.1	-3.0	0.0	0.0	19.0	0.0	0.0	-15.1
149	17653433.82	4855456.90	2.00	0	N	500	63.8	0.0	0.0	0.0	53.3	0.3	-3.0	0.0	0.0	21.6	0.0	0.0	-8.4
149	17653433.82	4855456.90	2.00	0	N	1000	68.0	0.0	0.0	0.0	53.3	0.5	-3.0	0.0	0.0	23.0	0.0	0.0	-5.8
149	17653433.82	4855456.90	2.00	0	N	2000	66.2	0.0	0.0	0.0	53.3	1.3	-3.0	0.0	0.0	23.9	0.0	0.0	-9.3
149	17653433.82	4855456.90	2.00	0	N	4000	60.0	0.0	0.0	0.0	53.3	4.3	-3.0	0.0	0.0	24.4	0.0	0.0	-19.0
149	17653433.82	4855456.90	2.00	0	N	8000	48.9	0.0	0.0	0.0	53.3	15.2	-3.0	0.0	0.0	24.7	0.0	0.0	-41.3
149	17653433.82	4855456.90	2.00	0	E	32	-40.6	0.0	0.0	0.0	53.3	0.0	-3.0	0.0	0.0	7.9	0.0	0.0	-98.9
149	17653433.82	4855456.90	2.00	0	E	63	-27.4	0.0	0.0	0.0	53.3	0.0	-3.0	0.0	0.0	11.6	0.0	0.0	-89.3
149	17653433.82	4855456.90	2.00	0	E	125	45.7	0.0	0.0	0.0	53.3	0.1	-3.0	0.0	0.0	15.5	0.0	0.0	-20.2
149	17653433.82	4855456.90	2.00	0	E	250	56.2	0.0	0.0	0.0	53.3	0.1	-3.0	0.0	0.0	19.0	0.0	0.0	-13.3
149	17653433.82	4855456.90	2.00	0	E	500	65.6	0.0	0.0	0.0	53.3	0.3	-3.0	0.0	0.0	21.6	0.0	0.0	-6.6
149	17653433.82	4855456.90	2.00	0	E	1000	69.8	0.0	0.0	0.0	53.3	0.5	-3.0	0.0	0.0	23.0	0.0	0.0	-4.0
149	17653433.82	4855456.90	2.00	0	E	2000	68.0	0.0	0.0	0.0	53.3	1.3	-3.0	0.0	0.0	23.9	0.0	0.0	-7.5
149	17653433.82	4855456.90	2.00	0	E	4000	61.8	0.0	0.0	0.0	53.3	4.3	-3.0	0.0	0.0	24.4	0.0	0.0	-17.2
149	17653433.82	4855456.90	2.00	0	E	8000	50.7	0.0	0.0	0.0	53.3	15.2	-3.0	0.0	0.0	24.7	0.0	0.0	-39.6