

AUGUST 24, 2023



**BS4142:2014 ASSESSMENT OF
PROPOSED DAIRY BUILDING ON THE
BROOK, EGIWYS CROSS, WHITCHURCH,
SHROPSHIRE, SY13 2JT**



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1.0 Introduction

- 1.0.1 This report has been commissioned to determine the noise impact of the construction of a new dairy building and cattle shed to the north of the existing dairy farm at The Brook, Whitchurch, Shropshire.
- 1.0.2 The assessment has been conducted in line with the BS4142:2014 as this is an industrial-based noise source being introduced to an area containing residential properties.

2.0 Site Details

- 2.0.1 The site is located to the North of the existing farm on Egiwys Cross, approximately 7km West of the town of Whitchurch.
- 2.0.2 The development includes the erection of a steel-frame barn area with concrete walls that will also act as the milking dairy to upgrade the existing processes on the site. There will be 2 x Copeland compressors and 2 x Fullwood Q4 pumps in the main plant room in the North-West Corner of the plans.
- 2.0.3 The closest Noise Sensitive Receptors (NSRs) are located to the North of the designated site in a cottage further along the existing farm track.
- 2.0.5 The noise sources are not currently active and therefore background noise levels were taken for the assessment without the specific noise level present. The specific noise will then be modelled based on the proposed plant and the data provided from the manufacturers of said plant.

2.1 Location of Monitors

- 2.1.1 The noise location was chosen based on the proximity to the closest NSR.

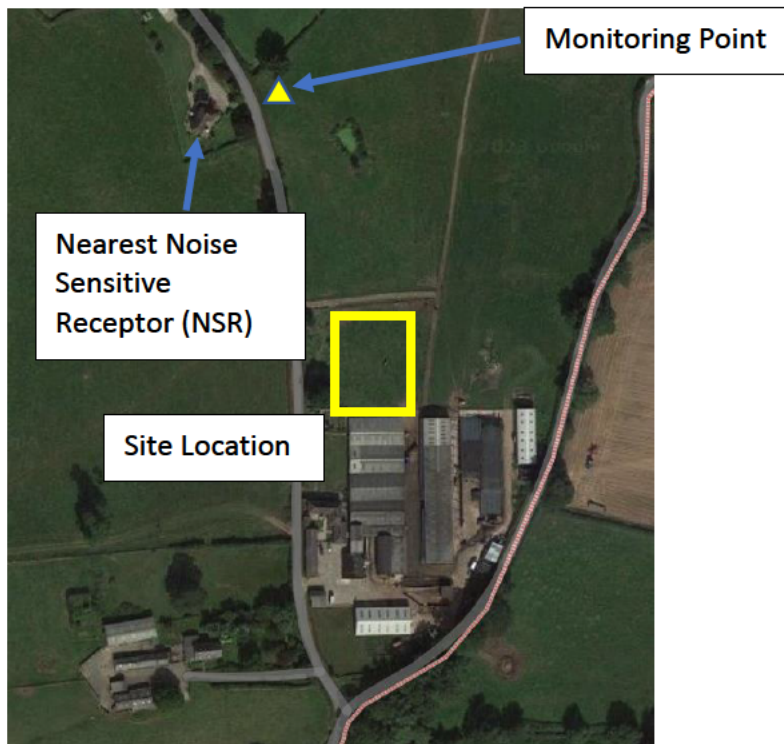
Figure 1



- 2.1.2 Measurements were made in 15 minute periods, on 1 second averaging, to allow for the removal of anomalies and increased accuracy. The data was averaged into L_{Aeq1hr} daytime and $L_{Aeq15min}$ night-time with data also recorded for L_{AMax} in both day and night periods for the BS4142:2014 assessment.
- 2.1.3 The monitoring was conducted using 1 x Type 1 Svantek sound level with batteries and outdoor microphone protection.
- 2.1.4 All measurements were taken after a field calibration was undertaken to ensure accuracy and repeatability of measurements.
- 2.1.5 Further data such as wind speed, wind direction, rainfall intensity, temperature and cloud cover were all recorded at the beginning and end of the assessment at the monitoring location.
- 2.1.6 Any anomalies (such as noise by the engineer during setup and collection of the kit) were removed from the survey for a true reflection of the ambient levels in the vicinity. This was done by recording audio throughout the survey at each location and listening back through the files during the analysis process to confirm what was recorded manually during the survey.

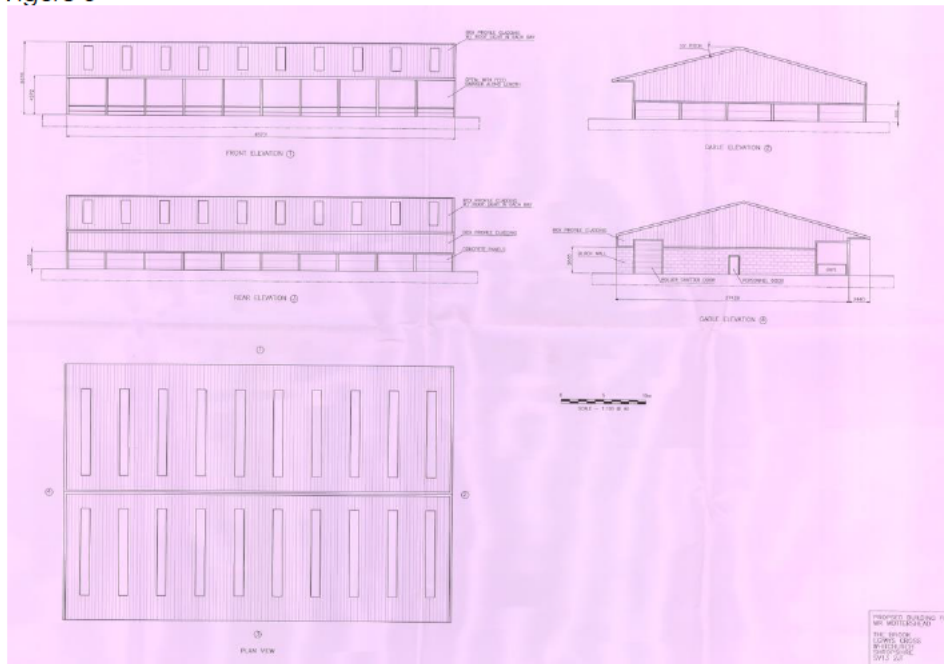
2.2 Plan Views of Site with Designated Work Areas

Figure 3



2.2 Proposed Development

Figure 3



3.0 Legislation

3.0.1 The National Planning Policy Framework (NPPF) sets out the Government's economic, environmental and social planning policies for England and "these policies articulate the Government's vision of sustainable development." In respect of noise, Paragraph 174 of the NPPF states the following:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution...."

Paragraph 185 goes on to mention:

"Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:

- a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;
- b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason;"

3.0.2 The NPPF reinforces the March 2010 DEFRA publication, "Noise Policy Statement for England" (NPSE), which states three policy aims, as follows:

"Through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development:

- avoid significant adverse impacts on health and quality of life;
- mitigate and minimise adverse impacts on health and quality of life;

- and where possible, contribute to the improvement of health and quality of life."

3.0.3 Together, the first two aims require that no significant adverse impact should occur and that, where a noise level which falls between a level which represents the lowest observable adverse effect and a level which represents a significant observed adverse effect, then according to the explanatory notes in the statement:

"... all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life whilst also taking into consideration the guiding principles of sustainable development. This does not mean that such effects cannot occur."

3.1 BS4142:2014 +A1 (2019)

- 3.1.1 Noise effects on residential properties due to the current operational hours and extended hours have been assessed according to the guidance in BS 4142:2014. This standard primarily provides a numerical method by which to determine the significance of sound of an industrial nature (i.e. the 'specific sound' from the proposed development) at residential sensitive receptors.
- 3.1.2 The specific sound level may then be corrected for the character of the sound (e.g. perceptibility of tones and/or impulses), if appropriate, and it is then termed the 'rating level', whether or not a rating penalty is applied. The 'residual sound' is defined as the ambient sound remaining at the assessment location when the specific sound source is suppressed to such a degree that it does not contribute to the ambient sound.
- 3.1.3 According to BS 4142:2014, the background sound levels adopted for the assessment should be representative of the periods being assessed. The standard recommends that the background sound level should be collected from continuous measurements of normally not less than 15-minute intervals. However, the Standard states that there is no 'single' background sound level that can be derived from such measurements. It is particularly difficult to determine what is 'representative' of the night-time period because it can be subject to a wide variation in background sound levels between the shoulder night periods.
- 3.1.4 The method chosen for this section of the report is to use the data collected at the nearest NSR for the day and night periods to

provide the ambient and background noise levels. The mode $L_{Aeq_1hr(Day)}$ and $L_{Aeq_15min(Night)}$ value will then be used for each time period over the course of the measurement as the most appropriate way of creating a representative value.

- 3.1.5 The specific sound levels have been determined separately in terms of the L_{Aeq_1hr} during the daytime L_{Aeq_15min} during the night-time. Daytime is typically between 07:00 and 23:00 hours and night-time is typically between 23:00 and 07:00 hours, so these periods have been adopted for this assessment.
- 3.1.6 At each of the most likely sensitive receptor locations, the rating level has been determined from the predicted specific sound level. Where it has considered it to be appropriate, a rating penalty has been applied for tonality, impulsivity and/or intermittent specific sounds as described in the commentary to paragraph 9.2 of BS4142:2014. This has been applied with consideration for the main sound sources from site that contribute to the level of specific sound at the receptor location.
- 3.1.7 As per the requirements of the standard, an initial estimate of the impact of the specific sound has been obtained by subtracting the measured background sound level from the rating level of the specific sound. Table 2 provides the initial evaluation of impact following this method.

Table 1

Magnitude	Difference Between rating Level and Background Level	Comments
High	+10dB	Significant Adverse impact Likely
Medium	+5 to +10dB	Adverse impact Likely
Low	0 to +5 dB	Adverse impact unlikely
Negligible	Less than 0dB	Adverse impact unlikely
No Change	-10 dB	No adverse impact

- 3.1.8 Following the initial evaluation of impact, the context of the sound has also been considered, which is a key requirement of the Standard. In evaluation of the context, the following factors have been considered:

- the absolute level of the sound;
- the character and level of the residual sound compared to the character and level of the specific sound and
- the sensitivity of the receptor and whether dwellings or other premises used for residential purposes will already incorporate design measures that secure good internal and/or outdoor acoustic conditions.

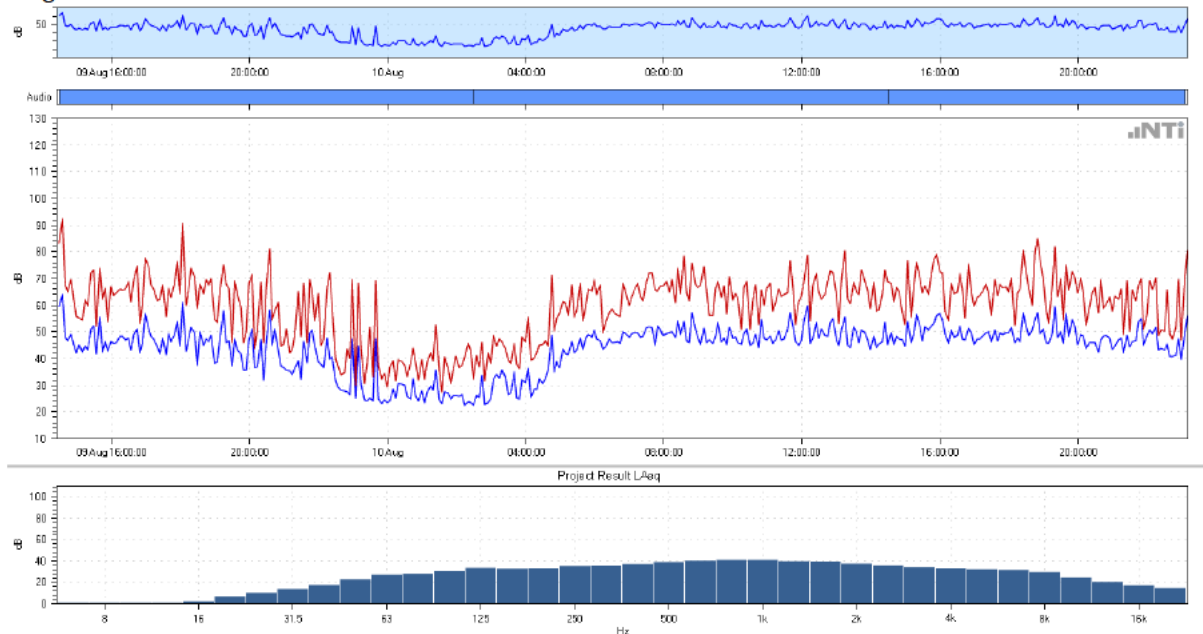
4.0 Results

4.1

Table 2

Location	Start Date/Time	L _{Amax}	L _{Aeq1hr} (Mode)	L _{Aeq15min} (Mode)	L _{A90}
Day (0700-2300)	09/08/23- 10/08/23				
	14.28pm	103.1dBA	48.4dBA		35.2dBA
	23.00pm	90.2dBA		34.2dBA	22.2dBA
Night (2300-0700)					

Figure 4



Comments

Low background noise – mainly passing farm traffic and birds

*based on Appendix C

Cloud Cover	Temperature (Celcius)	Presence of fog/snow/ice	Wind Speed (m/s)	Wind Direction
2	18.5 (1hr mode)	No	0.2	NE
3	12 (1hr mode)	No	0.9	E

5.0 Analysis of Results

5.1 Calculated Results

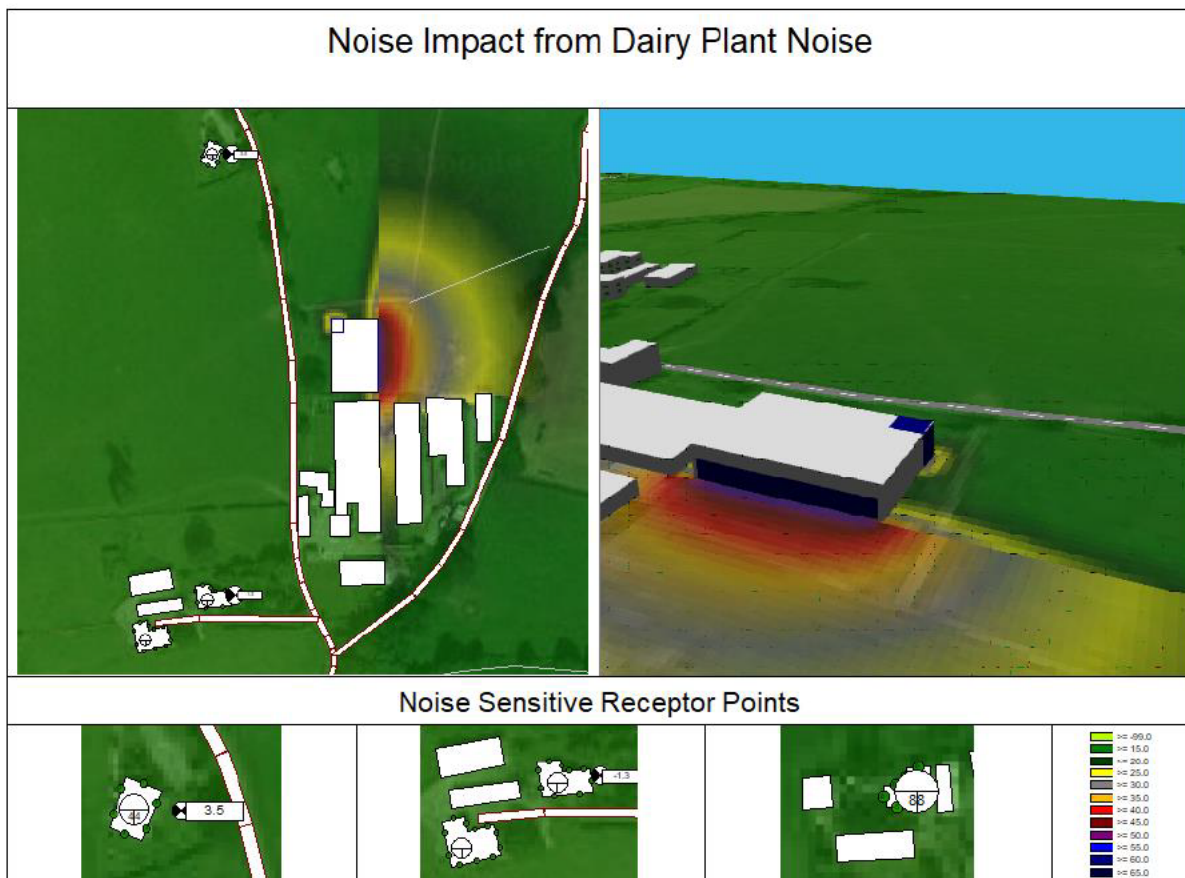
5.1.1 The specific noise level for the two compressors and the two vacuum pump units has been calculated using the CadnaA noise modelling software. This is based on the input details provided from the manufacturer's specification sheet (Appendix D). Table 3 below illustrates the input data used.

Table 3

Type	No. of	Manufacturer	Lw	Lspl (@1m)
Compressor ZB38KCE	2	Copeland	72dBA	61dBA
Q4 Vacuum Pump	2	Fullwood	-	76dBA

5.1.2 Figure 5 below shows the calculated value for the nearest NSR. Appendix E shows the full calculation spec to include barrier attenuation, ground attenuation and reflections.

Figure 5



5.1.4 With the calculated specific noise level being at a maximum of 4dBA at the closest NSR window, and 8dBA at the next; 8dBA has been used in the calculations in table 4 to assess the noise impact of the units.

Table 4

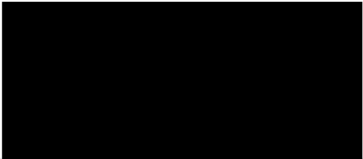
<i>Measurement Type</i>	<i>Parameter</i>	<i>Result</i>	<i>Comment</i>
Day			
<i>Ambient sound</i>	L_{Aeq}	48dBA	Measured at NSR-Source present
<i>Residual sound level</i>	L_{Aeq1hr}		
<i>Background sound level</i>	L_{A901hr}	35dBA	Measured at NSR-Source present
<i>Specific Sound Level</i>	L_{Aeq1hr}	8dBA	Modelled
<i>Acoustic Feature Correction</i>	dBA	+4 (tone) +6 (impulse)	Possibility of tonal and impulsive noise characteristic
<i>Rating Level</i>	dBA	18dBA	
<i>Difference of Background vs Rating level</i>	dBA	-17dB	
<i>Likelihood of complaints</i>			No Adverse impact
Night			
<i>Ambient sound</i>	L_{Aeq}	34dBA	Measured at NSR-Source not present
<i>Residual sound level</i>	L_{Aeq15mins}		
<i>Background sound level</i>	L_{A9015mins}	22dBA	Measured at NSR
<i>Specific Sound Level</i>	L_{Aeq15mins}	8dBA	Modelled
<i>Acoustic Feature Correction</i>	dBA	+4 (tone) +6 (impulse)	Possibility of tonal and impulsive noise characteristic
<i>Rating Level</i>	dBA	18dBA	
<i>Difference of Background vs Rating level</i>	dBA	-4dB	
<i>Likelihood of complaints</i>			No Adverse impact

6.0 Conclusion and Further Comments

6.1 Discussion of Levels

- 6.1.1 The specific noise level of the new compressor and pump units are below the required levels, in accordance with BS4142:2014, for there to be the likelihood of adverse impact on the nearest NSR.
- 6.1.2 The new machinery is also a major upgrade on the existing dairy machinery which will improve the noise generated by the dairy form against the current processing noise.
- 6.1.3 The report also assumes that the process of milking uses all 4 noise sources simultaneously through the measured time periods. As this is not the case there should be less of an overall impact. This is, however, also why the penalty figures have been added to the specific noise rating. As the background levels are often very low, the introduction of any 'distinctive' noise source may be audible at the nearest noise sensitive receptor points (NSRs). Despite all of this; the noise levels remain beneath the limits required by BS4142:2014 and the local council planning conditions.
- 6.1.4 Night values have also been included for any use of the plant machinery that may occur outside of the 7am-11pm daytime hours. The plant machinery would still be below the required limits to prevent adverse impact on the nearest NSRs at night.

7.0 Credentials

Name	Title	Credentials
James Flitton BSc AMIOA	Acoustic Consultant	CSCS Professionally Qualified person
		Associate Member Institute of Acoustics
		Affiliate Member of IDE
		Affiliate Member of IOR
Signed		

Appendix A – Acoustic Terminology

Parameter	Description
Ambient Noise Level	The totally encompassing sound in a given situation at a given time, usually composed of a sound from many sources both distant and near ($L_{Aeq T}$).
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s_1 and s_2 is given by $20 \log_{10} (s_1/s_2)$. The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is $20 \mu\text{Pa}$. The threshold of normal hearing is in the region of 0 dB and 140 dB is the threshold of pain. A change of 1 dB is only perceptible under controlled conditions.
dB(A), L_{Ax}	Decibels measured on a sound level meter incorporating a frequency weighting (A weighting) which differentiates between sounds of different frequency (pitch) in a similar way to the human ear. Measurements in dB(A) broadly agree with people's assessment of loudness. A change of 3 dB(A) is the minimum perceptible under normal conditions, and a change of 10 dB(A) corresponds roughly to halving or doubling the loudness of a sound. The background noise in a living room may be about 30 dB(A); normal conversation about 60 dB(A) at 1 metre; heavy road traffic about 80 dB(A) at 10 metres; the level near a pneumatic drill about 100 dB(A).
Fast Time Weighting	Setting on sound level meter, denoted by a subscript F, that determines the speed at which the instrument responds to changes in the amplitude of any measured signal. The fast time weighting can lead to higher values than the slow time weighting when rapidly changing signals are measured. The average time constant for the fast response setting is 0.125 (1/8) seconds.
Free-field	Sound pressure level measured outside, far away from reflecting surfaces (except the ground), usually taken to mean at least 3.5 metres
Façade	Sound pressure level measured at a distance of 1 metre in front of a large sound reflecting object such as a building façade.
$L_{Aeq T}$	A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
$L_{max T}$	A noise level index defined as the maximum noise level recorded during a noise event with a period T. L_{max} is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall L_{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
$L_{10 T}$	A noise level index. The noise level exceeded for 10% of the time over the period T. L_{10} can be considered to be the "average maximum" noise level. Generally used to describe road traffic noise. $L_{A10 18h}$ is the A-weighted arithmetic average of the 18 hourly $L_{A10 1h}$ values from 06:00-24:00.
$L_{90 T}$	A noise level index. The noise level exceeded for 90% of the time over the period T. Generally used to describe background noise level.

Appendix B – Survey Instrumentation



Manufacturer Calibration Certificate

The sound level meter submitted for testing successfully completed the periodic tests of IEC 61672-3. All tests are traceable in accordance with ISO/IEC 17025.

This model of sound level meter submitted for periodic testing successfully completed the applicable pattern-evaluation tests given in IEC 61672-2. The pattern approval certificate is available at www.nti-audio.com/XL2.

Sound Level Meter

Manufacturer	NTi Audio		
Type	XL2-TA	S/N	A2A-22077-F0
Firmware	V4 71		
Microphone Model	M2230		
Preamplifier	MA220	S/N	11392
Microphone Capsule	MC230A	S/N	A24696
Performance class	Class 1		
Customer Inventory Nr			

Customer

Crimson Remote Services Ltd
7 Hicks Grove
Thoresby Vale
Edwinstowe
Nottinghamshire

Date 07 February 2023

Certificate UK-23-018

Results PASSED
(for detailed report see next pages)

Operator



NTi Audio UK Ltd • Office 33C Julians Road • Stevenage
Hertfordshire, SG1 3ES, UK • uk@nti-audio.com



Manufacturer Calibration Certificate

The following instrument has been tested and calibrated to the manufacturer specifications.
The calibration is traceable in accordance with ISO/IEC 17025 covering all instrument functions.

- Device Type: **Class 1 Sound Calibrator CAL200**
- Serial Number: **19829**

-
- Date of Calibration: **30 November 2022**
 - Certificate Number: **44895-19829-CAL200**
 - Results: **PASSED**
(for detailed report see next page)

Tested by: **D.Young**

Signature:



Appendix C – Weather Conditions Chart Used

(Blank Version)

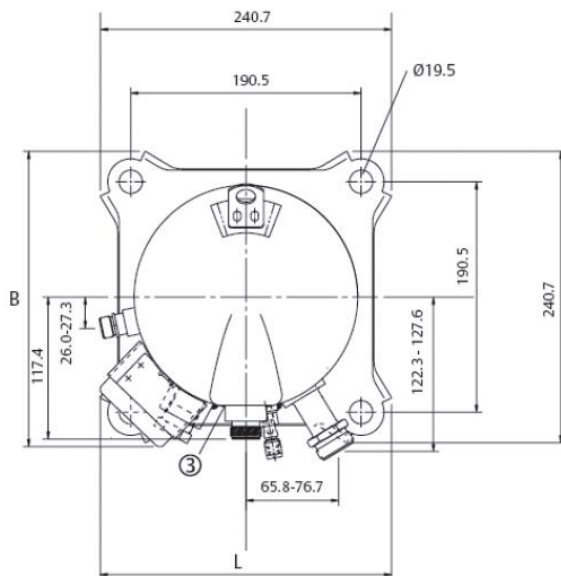
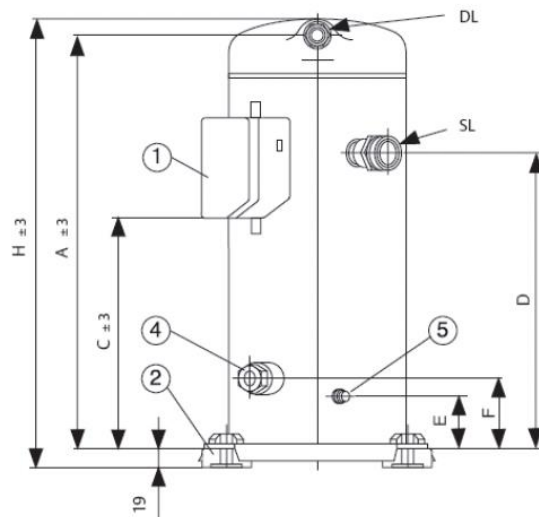
Weather Conditions				
Measurement Location	Date/Time	Description	Beginning of Survey	End of Survey
As indicated on Error! Reference source not found.		Temperature:		
Cloud Cover Symbol Scale in oktas (eighths)  0 Sky completely clear  1  2  3  4 Sky half cloudy  5  6  7  8 Sky completely cloudy  (9) Sky obstructed from view		Precipitation:		
		Cloud cover (oktas - see guide)		
		Presence of fog/snow/ice		
		Presence of damp roads/wet ground		
		Wind Speed (m/s)		
		Wind Direction		
		Conditions that may cause temperature inversion (i.e. calm nights with no cloud)		

Appendix D – Compressor & Pump Data

Specialist Distributors of Compressors and Refrigeration Spares

Model: ZB38KCE-TFD

Dimensions & Image



A	410 mm
B	242 mm
C	233 mm
D	297 mm
E	48 mm
F	81 mm
H	438 mm
L	242 mm

Richmonds Earl Shilton Limited

Specialist Distributors of Compressors and Refrigeration Spares

Model: ZB38KCE-TFD

Data

Type: Hermetic scroll compressors
Producer: Copeland
Series: ZB

Technical data

Displacement [m ³ /h]:	14,4
Sound power [dBA]:	72
Sound pressure level [dB]:	61
Net Weight [kg]:	37,4
Oil charge [dm ³]:	1,9
Maximum high pressure [bar]:	28,8
Maximum standstill pressure [bar]:	21
Minimal lowside temperature [°C]:	-35
Maximum lowside temperature [°C]:	50
PED category:	1

Electrical data

Power supply [V/~ /Hz]:	380-420V/3/50Hz
Locked rotor current [A]:	65,5
Max. operating current [A]:	12,8
Winding resistance [Ω]:	2,7

Connections

	<u>inches</u>
Suction Rotolock valve connection:	1 1/4"
Discharge Rotolock valve connection:	1"
Suction connection with supplied sleeve:	7/8"
Discharge connection with supplied sleeve:	1/2"



Produced by a leading British manufacturer the Dairy Spares vacuum pump is designed to generate optimum performance at lower motor speeds.

The reduction in pump running speed while enhancing performance, provides the user with several additional advantages:

- A quieter running level.
- Excellent pump capacity.
- Lower power requirement for the electric drive motor.
- Prolonged life of consumable parts.

This most versatile of vacuum pumps is capable of producing up to 2100 ltr/min at 44 kPa. A quiet performer suitable for most modern parlours.

DS Code	Model	Speed R.P.M	50 kPa		44 kPa		37 kPa		Pulley Diameter				Noise dB
			ltr/min	kW	ltr/min	kW	ltr/min	kW	Electric Motor		Vacuum Pump		
	DS4	1200	1800	4	2100	4	2500	3	127mm	5"	152mm	6"	76
		1028	1500	3	1700	3	2000	3	127mm	5"	178mm	7"	74
		809	1150	3	1350	3	1500	3	100mm	3.937"	178mm	7"	71

Appendix E – CadnaA Data Calcs

Receiver
Name: North NSR
ID:
X: 30514157.98m
Y: 5868758.49m
Z: 4.00 m

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
1	30514246.72	5868621.63	2.67	0	DEN	500	51.3	10.3	0.0	3.0	0.0	55.3	0.3	0.5	0.0	0.0	20.8	0.0	0.0	-12.2
4	30514246.69	5868642.65	2.67	0	DEN	500	51.3	14.9	0.0	3.0	0.0	54.3	0.3	0.5	0.0	0.0	19.1	0.0	0.0	-4.9
8	30514246.72	5868621.63	3.67	0	DEN	500	51.3	10.3	0.0	3.0	0.0	55.2	0.3	0.0	0.0	0.0	21.0	0.0	0.0	-11.9
11	30514246.69	5868642.65	3.67	0	DEN	500	51.3	14.9	0.0	3.0	0.0	54.3	0.3	0.0	0.0	0.0	19.2	0.0	0.0	-4.5
14	30514246.72	5868621.63	4.67	0	DEN	500	51.3	10.3	0.0	3.0	0.0	55.2	0.3	0.0	0.0	0.0	21.0	0.0	0.0	-11.9
18	30514246.69	5868642.65	4.67	0	DEN	500	51.3	14.9	0.0	3.0	0.0	54.3	0.3	0.0	0.0	0.0	19.2	0.0	0.0	-4.5
22	30514246.72	5868621.63	1.67	0	DEN	500	51.3	10.3	0.0	3.0	0.0	55.3	0.3	3.7	0.0	0.0	19.1	0.0	0.0	-13.7
25	30514246.69	5868642.65	1.67	0	DEN	500	51.3	14.9	0.0	3.0	0.0	54.3	0.3	3.7	0.0	0.0	17.9	0.0	0.0	-6.9
28	30514246.72	5868621.63	0.67	0	DEN	500	51.3	10.3	0.0	3.0	0.0	55.3	0.3	11.0	0.0	0.0	13.5	0.0	0.0	-15.4
30	30514246.69	5868642.65	0.67	0	DEN	500	51.3	14.9	0.0	3.0	0.0	54.3	0.3	10.8	0.0	0.0	13.3	0.0	0.0	-9.4

Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB	dB(A)
33	30514220.23	5868656.83	8.58	0	DEN	500	31.3	14.3	0.0	0.0	0.0	52.5	0.2	0.0	0.0	0.0	4.8	0.0	0.0	-12.0
36	30514222.48	5868654.18	8.58	0	DEN	500	31.3	14.3	0.0	0.0	0.0	52.8	0.2	0.0	0.0	0.0	4.8	0.0	0.0	-12.3

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
39	30514221.36	5868659.58	6.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.4
41	30514221.36	5868659.58	5.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.4
42	30514221.36	5868659.58	8.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.4
44	30514221.36	5868659.58	7.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.4
46	30514221.36	5868659.58	2.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	1.8	0.0	0.0	0.0	0.0	0.0	-16.2
50	30514221.36	5868659.58	1.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	7.4	0.0	0.0	0.0	0.0	0.0	-21.9
52	30514221.36	5868659.58	4.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.4
57	30514221.36	5868659.58	3.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	-14.6
150	30514221.36	5868659.58	0.29	0	DEN	500	26.8	6.1	0.0	3.0	0.0	52.4	0.2	12.2	0.0	0.0	0.0	0.0	0.0	-29.0

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
59	30514217.88	5868655.50	6.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.5
60	30514217.88	5868655.50	5.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.5
62	30514217.88	5868655.50	8.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.5
66	30514217.88	5868655.50	7.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.5
68	30514217.88	5868655.50	3.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	0.2	0.0	0.0	0.0	0.0	0.0	-14.7
70	30514217.88	5868655.50	4.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-14.5
76	30514217.88	5868655.50	2.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	1.8	0.0	0.0	0.0	0.0	0.0	-16.3
79	30514217.88	5868655.50	1.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.5	0.2	7.5	0.0	0.0	0.0	0.0	0.0	-22.0
152	30514217.88	5868655.50	0.29	0	DEN	500	26.1	6.7	0.0	3.0	0.0	52.5	0.2	12.2	0.0	0.0	0.0	0.0	0.0	-29.1

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	I/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
81	30514224.83	5868655.51	8.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	14.0	0.0	0.0	-28.8
84	30514224.83	5868655.51	4.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	23.4	0.0	0.0	-38.2
87	30514224.83	5868655.51	7.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	18.8	0.0	0.0	-33.6
91	30514224.83	5868655.51	5.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	22.4	0.0	0.0	-37.2
94	30514224.83	5868655.51	6.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	20.9	0.0	0.0	-35.8
99	30514224.83	5868655.51	1.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	7.5	0.0	0.0	17.4	0.0	0.0	-39.8

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Alol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
103	30514224.83	5868655.51	2.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	1.8	0.0	0.0	23.1	0.0	0.0	-39.6
105	30514224.83	5868655.51	3.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	52.8	0.2	0.2	0.0	0.0	24.1	0.0	0.0	-39.0
155	30514224.83	5868655.51	0.29	0	DEN	500	26.1	6.7	0.0	3.0	0.0	52.8	0.2	12.3	0.0	0.0	12.7	0.0	0.0	-42.2

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Agr	Alol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
108	30514221.39	5868651.43	4.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	0.0	0.0	0.0	24.2	0.0	0.0	-39.2
111	30514217.92	5868651.43	4.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-34.3
113	30514221.39	5868651.43	5.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	0.0	0.0	0.0	23.1	0.0	0.0	-38.1
115	30514217.92	5868651.43	5.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-34.3
119	30514221.39	5868651.43	1.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	7.5	0.0	0.0	17.4	0.0	0.0	-39.9
122	30514217.92	5868651.43	1.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	7.5	0.0	0.0	0.0	0.0	0.0	-41.8
124	30514221.39	5868651.43	7.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	0.0	0.0	0.0	19.7	0.0	0.0	-34.6
128	30514217.92	5868651.43	7.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-34.3
129	30514221.39	5868651.43	8.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	0.0	0.0	0.0	14.9	0.0	0.0	-29.9
131	30514217.92	5868651.43	8.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-34.3
134	30514221.39	5868651.43	6.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	0.0	0.0	0.0	21.7	0.0	0.0	-36.7
136	30514217.92	5868651.43	6.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	0.0	0.0	0.0	0.0	0.0	0.0	-34.3
139	30514221.39	5868651.43	3.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	0.2	0.0	0.0	24.6	0.0	0.0	-39.7
142	30514217.92	5868651.43	3.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	0.2	0.0	0.0	0.0	0.0	0.0	-34.5
144	30514221.39	5868651.43	2.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	52.9	0.2	1.8	0.0	0.0	23.1	0.0	0.0	-39.8
146	30514217.92	5868651.43	2.08	0	DEN	500	26.8	-11.1	0.0	3.0	0.0	52.8	0.2	1.8	0.0	0.0	0.0	0.0	0.0	-36.1
161	30514221.39	5868651.43	0.29	0	DEN	500	26.8	6.0	0.0	3.0	0.0	52.9	0.2	12.4	0.0	0.0	12.6	0.0	0.0	-42.3
163	30514217.92	5868651.43	0.29	0	DEN	500	26.8	-13.4	0.0	3.0	0.0	52.8	0.2	12.3	0.0	0.0	0.0	0.0	0.0	-49.0

Receiver
Name: West NSR
ID:
X: 30514160.32m
Y: 5868493.16m
Z: 4.00 m

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																		
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet
	(m)	(m)	(m)			(Hz)	(dB(A))	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
2	30514246.72	5868623.94	3.67	0	DEN	500	51.3	11.9	0.0	3.0	0.0	54.9	0.3	0.0	0.0	0.0	24.3	0.0
6	30514246.89	5868644.96	3.67	0	DEN	500	51.3	14.2	0.0	3.0	0.0	55.8	0.3	0.0	0.0	0.0	24.6	0.0
10	30514246.72	5868623.94	4.67	0	DEN	500	51.3	11.9	0.0	3.0	0.0	54.9	0.3	0.0	0.0	0.0	22.9	0.0
13	30514246.89	5868644.96	4.67	0	DEN	500	51.3	14.2	0.0	3.0	0.0	55.8	0.3	0.0	0.0	0.0	23.3	0.0
16	30514246.72	5868623.94	0.67	0	DEN	500	51.3	11.9	0.0	3.0	0.0	54.9	0.3	10.9	0.0	0.0	14.0	0.0
20	30514246.89	5868644.96	0.67	0	DEN	500	51.3	14.2	0.0	3.0	0.0	55.8	0.3	11.1	0.0	0.0	13.9	0.0
24	30514246.72	5868623.94	2.67	0	DEN	500	51.3	11.9	0.0	3.0	0.0	54.9	0.3	0.5	0.0	0.0	23.9	0.0
27	30514246.89	5868644.96	2.67	0	DEN	500	51.3	14.2	0.0	3.0	0.0	55.8	0.3	0.5	0.0	0.0	23.8	0.0
29	30514246.72	5868623.94	1.67	0	DEN	500	51.3	11.9	0.0	3.0	0.0	54.9	0.3	3.7	0.0	0.0	21.0	0.0
32	30514246.89	5868644.96	1.67	0	DEN	500	51.3	14.2	0.0	3.0	0.0	55.8	0.3	3.8	0.0	0.0	20.9	0.0

Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																		
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet
	(m)	(m)	(m)			(Hz)	(dB(A))	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
35	30514221.20	5868656.83	8.58	0	DEN	500	31.3	11.9	0.0	0.0	0.0	55.8	0.3	0.0	0.0	0.0	4.8	0.0
38	30514218.95	5868656.83	8.58	0	DEN	500	31.3	10.6	0.0	0.0	0.0	55.8	0.3	0.0	0.0	0.0	4.8	0.0
40	30514222.48	5868654.18	8.58	0	DEN	500	31.3	14.3	0.0	0.0	0.0	55.7	0.3	0.0	0.0	0.0	4.8	0.0

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																		
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet
	(m)	(m)	(m)			(Hz)	(dB(A))	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
43	30514221.38	5868651.43	1.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	8.0	0.0	0.0	10.6	0.0
45	30514217.91	5868651.43	1.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	7.9	0.0	0.0	0.0	0.0
47	30514221.38	5868651.43	2.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	1.9	0.0	0.0	15.6	0.0
49	30514217.91	5868651.43	2.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	1.9	0.0	0.0	0.0	0.0
53	30514221.38	5868651.43	6.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	0.0	0.0	0.0	10.5	0.0
55	30514217.91	5868651.43	6.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	0.0	0.0	0.0	0.0	0.0
58	30514221.38	5868651.43	7.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	0.0	0.0	0.0	7.7	0.0
61	30514217.91	5868651.43	7.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	0.0	0.0	0.0	0.0	0.0
64	30514221.38	5868651.43	8.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	0.0	0.0	0.0	5.2	0.0
67	30514217.91	5868651.43	8.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	0.0	0.0	0.0	0.0	0.0
72	30514221.38	5868651.43	3.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	0.2	0.0	0.0	16.0	0.0
74	30514217.91	5868651.43	3.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	0.2	0.0	0.0	0.0	0.0
78	30514221.38	5868651.43	4.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	0.0	0.0	0.0	14.7	0.0
80	30514217.91	5868651.43	4.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	0.0	0.0	0.0	0.0	0.0
83	30514221.38	5868651.43	5.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	55.6	0.3	0.0	0.0	0.0	12.8	0.0
86	30514217.91	5868651.43	5.08	0	DEN	500	26.8	-12.3	0.0	3.0	0.0	55.5	0.3	0.0	0.0	0.0	0.0	0.0
184	30514221.38	5868651.43	0.29	0	DEN	500	26.8	6.0	0.0	3.0	0.0	55.6	0.3	13.0	0.0	0.0	6.3	0.0
185	30514217.91	5868651.43	0.29	0	DEN	500	26.8	-14.7	0.0	3.0	0.0	55.5	0.3	13.0	0.0	0.0	0.0	0.0

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																		
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abar	Cmet
	(m)	(m)	(m)			(Hz)	(dB(A))	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)
89	30514217.88	5868655.50	2.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	1.9	0.0	0.0	0.0	0.0
92	30514217.88	5868655.50	1.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	8.0	0.0	0.0	0.0	0.0
95	30514217.88	5868655.50	6.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	0.0	0.0
97	30514217.88	5868655.50	7.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	0.0	0.0
100	30514217.88	5868655.50	8.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	0.0	0.0
102	30514217.88	5868655.50	3.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	0.2	0.0	0.0	0.0	0.0
104	30514217.88	5868655.50	4.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	0.0	0.0
108	30514217.88	5868655.50	5.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	0.0	0.0
186	30514217.88	5868655.50	0.29	0	DEN	500	26.1	6.7	0.0	3.0	0.0	55.7	0.3	13.1	0.0	0.0	0.0	0.0

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adi	Aatm	Ag	Aol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	(dB(A))	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
109	30514224.83	5868855.59	6.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	22.7	0.0	0.0	-40.0
112	30514224.82	5868851.52	6.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	8.4	0.0	0.0	-42.9
114	30514224.83	5868855.59	5.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.8	0.3	0.0	0.0	0.0	23.9	0.0	0.0	-42.0
117	30514224.82	5868851.52	5.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	10.4	0.0	0.0	-44.9
120	30514224.83	5868855.59	7.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	20.4	0.0	0.0	-38.5
123	30514224.82	5868851.52	7.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	6.4	0.0	0.0	-40.9
125	30514224.83	5868855.59	8.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	15.3	0.0	0.0	-33.4
127	30514224.82	5868851.52	8.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	5.0	0.0	0.0	-39.5
130	30514224.83	5868855.59	2.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.9	0.3	1.9	0.0	0.0	22.9	0.0	0.0	-42.8
133	30514224.82	5868851.52	2.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	1.9	0.0	0.0	13.0	0.0	0.0	-49.4
135	30514224.83	5868855.59	1.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.9	0.3	8.0	0.0	0.0	17.0	0.0	0.0	-43.0
138	30514224.82	5868851.52	1.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	8.0	0.0	0.0	8.0	0.0	0.0	-50.5
141	30514224.83	5868855.59	4.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.8	0.3	0.0	0.0	0.0	24.6	0.0	0.0	-42.8
143	30514224.82	5868851.52	4.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	0.0	0.0	0.0	12.1	0.0	0.0	-46.8
145	30514224.83	5868855.59	3.08	0	DEN	500	26.1	9.0	0.0	3.0	0.0	55.8	0.3	0.2	0.0	0.0	24.7	0.0	0.0	-42.9
148	30514224.82	5868851.52	3.08	0	DEN	500	26.1	-7.8	0.0	3.0	0.0	55.7	0.3	0.2	0.0	0.0	13.4	0.0	0.0	-48.1
187	30514224.83	5868855.59	0.29	0	DEN	500	26.1	6.7	0.0	3.0	0.0	55.9	0.3	13.1	0.0	0.0	11.9	0.0	0.0	-45.4
188	30514224.82	5868851.52	0.29	0	DEN	500	26.1	-10.0	0.0	3.0	0.0	55.7	0.3	13.1	0.0	0.0	3.7	0.0	0.0	-53.6

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adi	Aatm	Ag	Aol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	(dB(A))	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB(A))
154	30514219.40	5868859.58	6.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	13.9	0.0	0.0	-35.5
157	30514222.87	5868859.58	6.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	0.0	0.0	0.0	18.1	0.0	0.0	-38.7
159	30514219.40	5868859.58	5.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	14.1	0.0	0.0	-35.8
162	30514222.87	5868859.58	5.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	0.0	0.0	0.0	18.4	0.0	0.0	-39.1
165	30514219.40	5868859.58	8.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	11.3	0.0	0.0	-33.0
167	30514222.87	5868859.58	8.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	0.0	0.0	0.0	14.3	0.0	0.0	-35.0
169	30514219.40	5868859.58	7.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	13.3	0.0	0.0	-35.0
171	30514222.87	5868859.58	7.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	0.0	0.0	0.0	17.2	0.0	0.0	-37.8
173	30514219.40	5868859.58	4.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	0.0	0.0	0.0	14.2	0.0	0.0	-35.9
175	30514222.87	5868859.58	4.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	0.0	0.0	0.0	18.6	0.0	0.0	-39.3
177	30514219.40	5868859.58	2.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	1.9	0.0	0.0	14.2	0.0	0.0	-37.8
179	30514222.87	5868859.58	2.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	1.9	0.0	0.0	18.2	0.0	0.0	-40.6
180	30514219.40	5868859.58	1.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	8.0	0.0	0.0	12.8	0.0	0.0	-42.4
181	30514222.87	5868859.58	1.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	8.0	0.0	0.0	15.2	0.0	0.0	-43.8
182	30514219.40	5868859.58	3.08	0	DEN	500	26.8	4.8	0.0	3.0	0.0	55.9	0.3	0.2	0.0	0.0	14.3	0.0	0.0	-36.2
183	30514222.87	5868859.58	3.08	0	DEN	500	26.8	5.9	0.0	3.0	0.0	56.0	0.3	0.2	0.0	0.0	18.7	0.0	0.0	-39.5
189	30514219.40	5868859.58	0.29	0	DEN	500	26.8	2.4	0.0	3.0	0.0	55.9	0.3	13.1	0.0	0.0	10.1	0.0	0.0	-47.2
190	30514222.87	5868859.58	0.29	0	DEN	500	26.8	3.6	0.0	3.0	0.0	56.0	0.3	13.1	0.0	0.0	11.2	0.0	0.0	-47.3

Receiver
Name: South NSR
ID:
X: 30514405.27m
Y: 5868251.11m
Z: 4.00 m

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abas	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
3	30514246.70	5868634.90	3.67	0	DEN	500	51.3	15.7	0.0	3.0	0.0	63.4	0.8	0.0	0.0	0.0	4.7	0.0	0.0	1.1
5	30514246.68	5868655.92	3.67	0	DEN	500	51.3	6.7	0.0	3.0	0.0	63.8	0.8	0.0	0.0	0.0	4.7	0.0	0.0	-8.3
7	30514246.70	5868634.90	4.67	0	DEN	500	51.3	15.7	0.0	3.0	0.0	63.4	0.8	0.0	0.0	0.0	4.6	0.0	0.0	1.2
9	30514246.68	5868655.92	4.67	0	DEN	500	51.3	6.7	0.0	3.0	0.0	63.8	0.8	0.0	0.0	0.0	4.7	0.0	0.0	-8.2
12	30514246.70	5868634.90	0.67	0	DEN	500	51.3	15.7	0.0	3.0	0.0	63.4	0.8	11.4	0.0	0.0	0.0	0.0	0.0	-5.5
15	30514246.68	5868655.92	0.67	0	DEN	500	51.3	6.7	0.0	3.0	0.0	63.8	0.8	11.4	0.0	0.0	0.0	0.0	0.0	-15.0
17	30514246.70	5868634.90	2.67	0	DEN	500	51.3	15.7	0.0	3.0	0.0	63.4	0.8	0.5	0.0	0.0	4.2	0.0	0.0	1.1
19	30514246.68	5868655.92	2.67	0	DEN	500	51.3	6.7	0.0	3.0	0.0	63.8	0.8	0.5	0.0	0.0	4.2	0.0	0.0	-8.3
21	30514246.70	5868634.90	1.67	0	DEN	500	51.3	15.7	0.0	3.0	0.0	63.4	0.8	3.9	0.0	0.0	1.2	0.0	0.0	0.8
23	30514246.68	5868655.92	1.67	0	DEN	500	51.3	6.7	0.0	3.0	0.0	63.8	0.8	3.9	0.0	0.0	0.9	0.0	0.0	-8.4

Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abas	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
26	30514222.48	5868654.18	8.58	0	DEN	500	31.3	14.3	0.0	0.0	0.0	63.9	0.9	0.0	0.0	0.0	4.8	0.0	0.0	-24.0
31	30514220.23	5868656.83	8.58	0	DEN	500	31.3	14.3	0.0	0.0	0.0	64.0	0.9	0.0	0.0	0.0	4.8	0.0	0.0	-24.1

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abas	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
34	30514221.35	5868651.43	1.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	8.2	0.0	0.0	1.7	0.0	0.0	-36.5
37	30514221.35	5868651.43	2.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	1.9	0.0	0.0	6.8	0.0	0.0	-35.3
48	30514221.35	5868651.43	6.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	0.0	0.0	0.0	5.0	0.0	0.0	-31.5
51	30514221.35	5868651.43	7.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	0.0	0.0	0.0	4.8	0.0	0.0	-31.3
54	30514221.35	5868651.43	8.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	0.0	0.0	0.0	4.8	0.0	0.0	-31.3
56	30514221.35	5868651.43	3.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	0.2	0.0	0.0	7.4	0.0	0.0	-34.1
63	30514221.35	5868651.43	4.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	0.0	0.0	0.0	6.4	0.0	0.0	-32.9
65	30514221.35	5868651.43	5.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	63.9	0.8	0.0	0.0	0.0	5.5	0.0	0.0	-32.0
170	30514221.35	5868651.43	0.29	0	DEN	500	26.8	6.0	0.0	3.0	0.0	63.9	0.8	13.5	0.0	0.0	0.0	0.0	0.0	-42.4

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abas	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
69	30514224.83	5868655.51	2.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	1.9	0.0	0.0	6.3	0.0	0.0	-34.8
71	30514224.83	5868655.51	1.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	8.2	0.0	0.0	1.1	0.0	0.0	-35.9
73	30514224.83	5868655.51	6.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	0.0	0.0	0.0	4.9	0.0	0.0	-31.5
75	30514224.83	5868655.51	8.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	0.0	0.0	0.0	4.8	0.0	0.0	-31.3
77	30514224.83	5868655.51	7.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	0.0	0.0	0.0	4.8	0.0	0.0	-31.3
82	30514224.83	5868655.51	3.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	0.2	0.0	0.0	6.9	0.0	0.0	-33.6
85	30514224.83	5868655.51	4.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	0.0	0.0	0.0	6.1	0.0	0.0	-32.6
88	30514224.83	5868655.51	5.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	63.9	0.9	0.0	0.0	0.0	5.3	0.0	0.0	-31.9
172	30514224.83	5868655.51	0.29	0	DEN	500	26.1	6.7	0.0	3.0	0.0	63.9	0.9	13.5	0.0	0.0	0.0	0.0	0.0	-42.4

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	l/a	Optime	K0	Di	Adiv	Aatm	Ag	Afol	Ahaus	Abas	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
90	30514217.88	5868655.50	6.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	18.6	0.0	0.0	-45.3
93	30514217.88	5868655.50	5.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	19.0	0.0	0.0	-45.6
96	30514217.88	5868655.50	8.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	15.1	0.0	0.0	-41.8
98	30514217.88	5868655.50	7.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	20.3	0.0	0.0	-46.9
101	30514217.88	5868655.50	2.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	1.9	0.0	0.0	22.5	0.0	0.0	-51.0
107	30514217.88	5868655.50	1.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	8.2	0.0	0.0	16.6	0.0	0.0	-51.5

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	I/a	Opérime	K0	Di	Adiv	Aatm	Agr	Afol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
110	30514217.88	5868655.50	4.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	19.3	0.0	0.0	-45.9
116	30514217.88	5868655.50	3.08	0	DEN	500	26.1	9.1	0.0	3.0	0.0	64.0	0.9	0.2	0.0	0.0	24.4	0.0	0.0	-51.2
174	30514217.88	5868655.50	0.29	0	DEN	500	26.1	6.7	0.0	3.0	0.0	64.0	0.9	13.5	0.0	0.0	11.5	0.0	0.0	-53.9

vert. Area Source, ISO 9613, Name: "Milking Plant Room", ID: ""																				
Nr.	X	Y	Z	Ref.	DEN	Freq.	Lw	I/a	Opérime	K0	Di	Adiv	Aatm	Agr	Afol	Ahaus	Abar	Cmet	RL	Lr
	(m)	(m)	(m)			(Hz)	dB(A)	dB	dB	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	(dB)	dB(A)
118	30514221.32	5868659.58	6.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	20.6	0.0	0.0	-47.3
121	30514224.80	5868659.58	6.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	20.6	0.0	0.0	-67.1
128	30514221.32	5868659.58	5.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	21.4	0.0	0.0	-48.1
132	30514224.80	5868659.58	5.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	21.4	0.0	0.0	-67.9
137	30514221.32	5868659.58	8.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	15.7	0.0	0.0	-42.4
140	30514224.80	5868659.58	8.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	15.2	0.0	0.0	-61.7
147	30514221.32	5868659.58	7.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	20.5	0.0	0.0	-47.2
149	30514224.80	5868659.58	7.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	20.3	0.0	0.0	-66.8
151	30514221.32	5868659.58	4.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	21.8	0.0	0.0	-48.5
153	30514224.80	5868659.58	4.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	0.0	0.0	0.0	21.9	0.0	0.0	-68.4
156	30514221.32	5868659.58	2.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	1.9	0.0	0.0	22.7	0.0	0.0	-51.3
158	30514224.80	5868659.58	2.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	1.9	0.0	0.0	22.6	0.0	0.0	-71.0
160	30514221.32	5868659.58	1.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	8.2	0.0	0.0	16.6	0.0	0.0	-51.5
164	30514224.80	5868659.58	1.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	8.2	0.0	0.0	16.6	0.0	0.0	-71.3
166	30514221.32	5868659.58	3.08	0	DEN	500	26.8	8.4	0.0	3.0	0.0	64.0	0.9	0.2	0.0	0.0	24.2	0.0	0.0	-51.1
168	30514224.80	5868659.58	3.08	0	DEN	500	26.8	-11.4	0.0	3.0	0.0	64.0	0.9	0.2	0.0	0.0	24.2	0.0	0.0	-70.8
176	30514221.32	5868659.58	0.29	0	DEN	500	26.8	6.0	0.0	3.0	0.0	64.0	0.9	13.5	0.0	0.0	11.5	0.0	0.0	-54.0
178	30514224.80	5868659.58	0.29	0	DEN	500	26.8	-13.8	0.0	3.0	0.0	64.0	0.9	13.5	0.0	0.0	11.5	0.0	0.0	-73.8