Connetts Farm Compost
Land to West of Flightways Business Park
Dunkeswell
EX14 4RD

50.866627 -3.225663

Noise Assessment

S21-628/NA
May 2021

Prepared by :

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On behalf of :

Connetts Farm Compost
Land to West of Flightways Business Park
Dunkeswell
EX14 4RD

Connects Farm Compost
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APPENDICES

1.0 Introduction

Southwest Environmental have been instructed by Connects Farm Compost to conduct a Noise Assessment at Land to West of Flightways Business Park. Background Noise Levels were recorded at nearest accessible residential receptor, Greenway Gardens.

1.1 Site Address

Address	Connects Farm Compost Land to West of Flightways Business Park Dunkeswell
Postcode	EX14 4RD
Grid Reference	50.866627 -3.225663

1.2 Site Description

Connets Farm Compost is Operated by Nick Stevens And Heather Stevens near Dunkeswell, Devon. The site forms part of an old runway, constructed during the Second World War. There are some live/work buildings to the south of site, and solar panels and open countryside to the north.

The site has been run as a composting operation under an exemption for a number of years.

1.3 Proposed Development

The proposed development would see the upscaling and broadening of current operations.

In order to meet fiscal demands of maintaining an environmental permit, the compost operation will be required to be expanded. Diversification of waste is also planned with soils, soil substitutes and aggregates.

2.0 Assessing Noise

There are various regulations, guides and standards that relate to the assessment of noise in residential and commercial buildings.

2.1 Planning Practice Guidance

In March 2012 the Department for Communities and Local Government released the National Planning Policy Frame Work[1], is available in a slightly altered form for accessibility as “planning Practice Guidance”. These officially replace PPG 24[2] (Planning and Noise), despite leaving various shortfalls; the availability of NECs etc.

For the most part British Standards are now used to define noise levels, and impacts.

[1] http://www.communities.gov.uk/documents/planningandbuilding/pdf/2116950.pdf
[2] http://www.communities.gov.uk/documents/planningandbuilding/pdf/156558.pdf

2.2 British Standard 8233

BS 8233: 2014 presents methodology and noise values which can aid in the assessment of noise, key limits established are 30 dB (L_{AeqT}) for night time noise level inside bedrooms, and 40 dB (L_{AeqT}) in living rooms at all times.

2.3 British Standard 4142

BS 4142: 2014 Provides a "rating" level for noise characteristics proposed commercial sources. This "rating level" should be used when stipulating the level of noise that can be permitted. The likelihood of complaints is indicated by the difference between the noise from the new development (expressed in terms of the rating level) and the existing background noise. The Standard states that: "A difference of around 10 dB or higher indicates that complaints are likely. A difference of around 5 dB is of marginal significance."

3.0 Baseline Conditions

Automated noise monitoring was undertaken at the position shown in Site Plan. The choice of this position was based both on accessibility and on collecting representative noise data in relation to the nearest noise sensitive receiver. Continuous automated monitoring was undertaken.

Weather was representative of the local climate with light winds, ranging from WSW to NNW. These conditions are representative of the local climate when considering long term trends collected at RAF Yeovilton [EDGY].

Initial inspection of the site revealed that the background noise profile at the monitoring location was interspersed by distant traffic noise from nearby road, and occasional industrial type noises from surround business uses.

Also not operating at time of visit it is worth nothing that Dunkeswell Aerodrome, operates regular light aircraft flight, include larger twin engine air craft. To the north of site is also an outdoor go cart track.

The weather during the course of the survey was generally dry, and with wind speeds within acceptable tolerances and therefore suitable for the measurement of environmental noise.

The measurement procedure generally complied with ISO1996-2:2007 “Description, measurement and assessment of environmental noise Part 2- Determination of environmental noise levels”.

3.1 Equipment

The equipment calibration was verified before and after the survey and no calibration irregularities were observed. The equipment used was as follows.

- 1 No. Pulsar 84 Sound Level Meter
- 1 No Pulsar 4231 Calibrator

3.2 Environmental Noise

Noise Measurements Undertaken 17th May to 18th of May. Anticipated noise levels are as monitored. The noise monitoring location was the western site boundary. Time constraints left this as the remaining option for positioning. British Stands would deem build façade to be appropriate however, we would consider site boundary a conservative location as it is further removed from industrial noise sources at flight ways business park, no noisy operations (shredding, screening) was carried out during monitoring period. The baseline noise level should therefore be lower than a measurement carried out at building façade.

Period	Noise Level LA90 db(A)
Day (07:00-23:00)	42

Night time noise measurement were not undertaken. The site will not run at night. The operation of plant will be Monday to Friday between 0800hrs – 1700hrs.

4.0 Proposed Noise Levels

Proposed noises level would be that of typical light industrial vehicle movement, for the majority of year. However, on (for example) 50 days through a given year, noisy processes will be performed.

The proposed noise levels will depend largely on the equipment that is used for noisy processes. We envisage:

- Crushing – Mobile Crusher or Bucket Crusher.
- Shredding – Hammer Mill Shredded
- Screening – Star Screener, Trommel or Wind Sifter.

From the above noise sources we would predict a concrete crusher to be a worst case scenario and have extracted a reference value from BS-5228 Part 1. Of 84 dB LAeqt at 10m.

In term of duration we envisage that the above noisy plant would be run for 5 working days a month, during hours of operation. When on site the equipment will be run from 09:00 to 17:00 in consideration for neighbours. Hours of operation are often used on construction sites, to minimise impacts.

We have then applied an attenuation over distance calculations, which results in the following sound pressure levels:

Receptor	Sound Pressure Level dBLAeqT	Distance (m)	Receptor Type
10 Flighway	39.9	(10 + 95) 105	Industrial
1 The Laurels	32.8	(10 + 200) 210	Residential

5.0 BS 4142 Assessment

The significance of sound of an industrial and/or commercial nature depends upon both the margin by which the rating level of the specific sound source exceeds the background sound level and the context in which the sound occurs. An effective assessment cannot be conducted without an understanding of the reason(s) for the assessment and the context in which the sound occurs/will occur. When making assessments and arriving at decisions, therefore, it is essential to place the sound in context.

Obtain an initial estimate of the impact of the specific sound by subtracting the measured background sound level from the rating level and consider the following criteria:

- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.

The 'Specific Sound Level' of the overall site operation has been calculated at 1m from the closest receiver using the noise levels, and corrected due to different acoustic propagation features such as distance, reflective surfaces, screening elements, etc.

The 'Rating Level' of the overall site operation has been assessed following the guidelines of BS4142 for the daytime period when the plant would be operational, with a subsequent conclusion taking into consideration the above context.

For intermittent sound, it is typical to apply a time weighting factor. However, it is likely that plant will be run for entire working window Monday to Friday 0800 – 1700hrs, for perhaps 6 days a month. This accounts for hired equipment being used to full potential whilst on site, with remaining days in given month being considerably quieter.

6.0 Conclusions

The sound pressure level from considered source is below dBLA90 (background noise levels) when considering attenuation over distance.

7.0 Certification

It should be noted that this assessment is based solely on the plans provided by the client.

This report is produced for the sole use of the Client, and no responsibility of any kind, whether for negligence or otherwise, can be accepted for any Third Party who may rely upon it. This report may suggest an opinion. However, this is for guidance only and no liability can be accepted for its accuracy.

The conclusions and recommendations given in this report are based on our understanding of the future plans for the site.

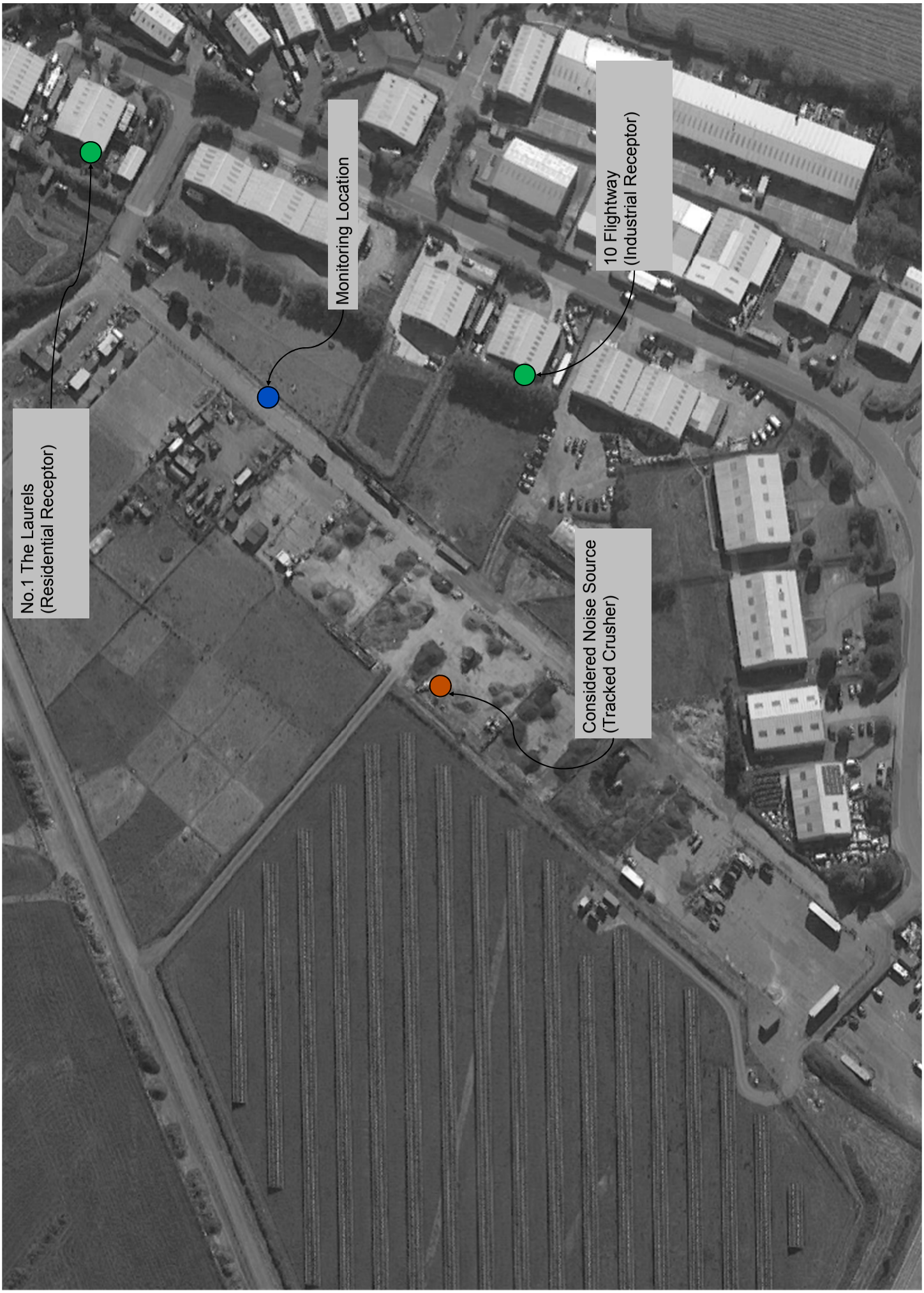
The scope of this Noise Assessment was discussed and agreed with the Client. No responsibility is accepted for conditions not encountered, which are outside of the agreed scope of work. This is a report prepared in support of a planning application. For the avoidance of doubt the consultant states here that the report makes no guarantee against the transmission of unwanted sounds (noise) in to neighbouring properties.

Recommendations are not exhaustive. It is the client's responsibility to ensure noise mitigation measures are installed.

APPENDIX 1

Site Plans

Site Layout & Key Features—PMCL LAN1001682



Connetts Farm Compost

Plan: Layout

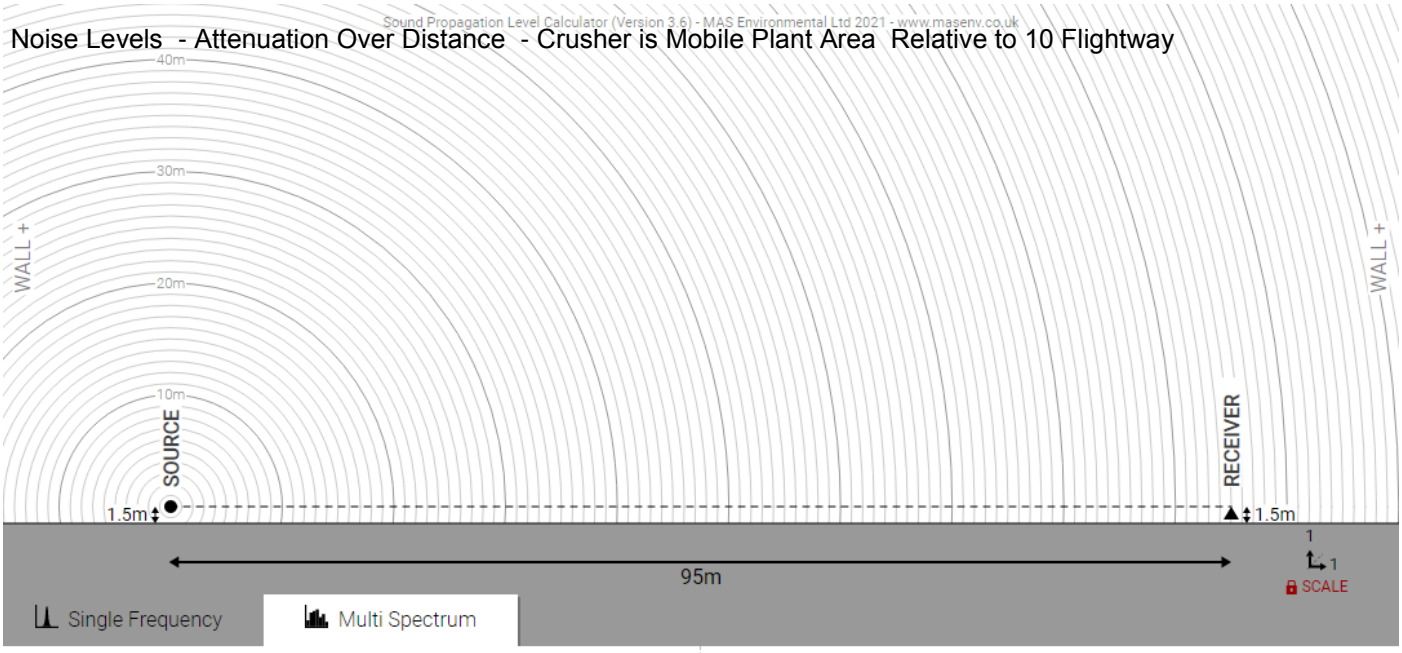
Drawing Ref: S21-628/011

Note: "Mobile Plant" Refers to intermittent use of shredding, crusher and screener for treatment of wastes. This layout must be adopted to ensure noise, dust and bio-aerosol assessment remain valid.

APPENDIX 2

Calculations

Noise Levels - Attenuation Over Distance - Crusher is Mobile Plant Area Relative to 10 Flightway



Source

63	125	250	500	1k	2k	4k	8k	Hz
86	84	84	81	78	75	71	66	dB

Total Sound Power Level 90.6 dB

Receiver A-Weighted

63	125	250	500	1k	2k	4k	8k	Hz
35.4	33.4	33.3	30.2	27	23.6	18.3	8.1	dB

Resulting Sound Pressure Level 39.9 dB

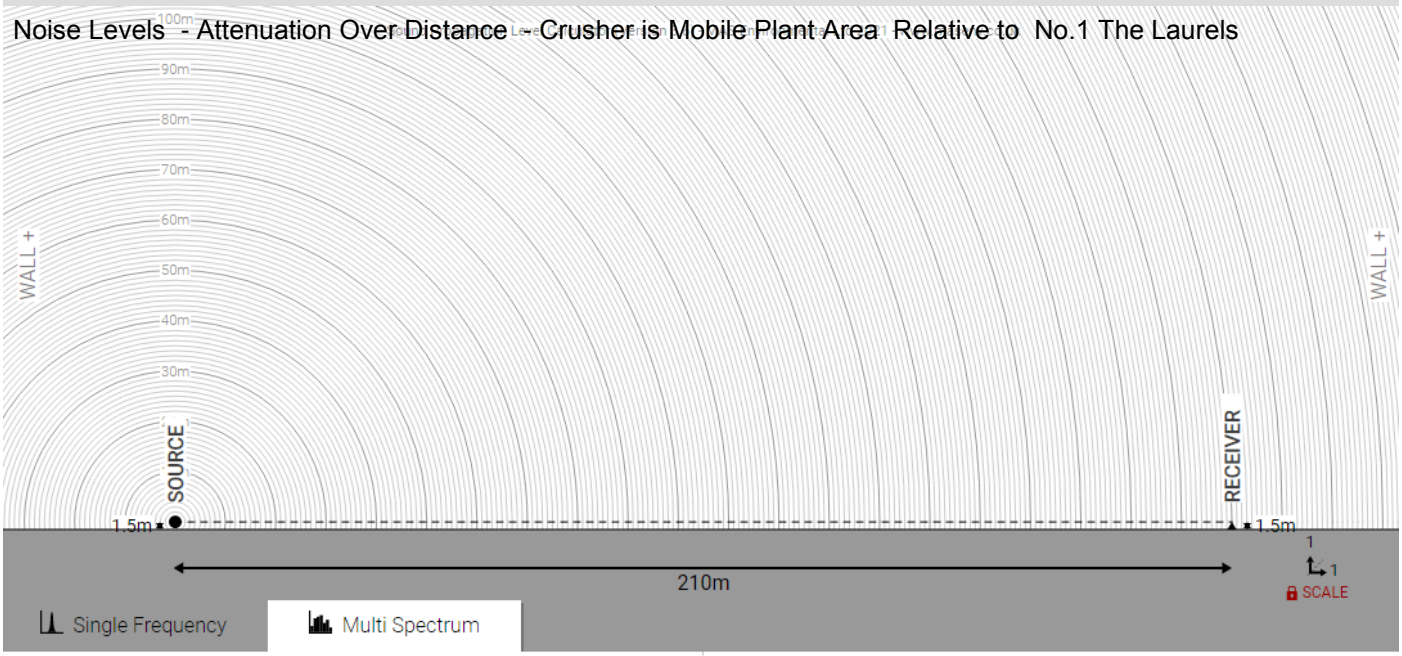
Barriers
- No barriers
- Single barrier
- Double barrier
- Building

Display
- Off
- Grid (m)
- Distance (m)
- Wavelength (λ)

Environmental Parameters
- 20 °C Temperature
- 70 % Humidity
- 1 Ground Factor (G)
- Hard Soft Disable gr

Options
- Reset all values
- Link to this calculation
- Copy results to clipboard
- Save results as an image

Noise Levels - Attenuation Over Distance - Crusher is Mobile Plant Area Relative to No.1 The Laurels



Single Frequency | Multi Spectrum

Source

63	125	250	500	1k	2k	4k	8k	Hz
86	84	84	81	78	75	71	66	dB

Total Sound Power Level 90.6 dB

Receiver A-Weighted

63	125	250	500	1k	2k	4k	8k	Hz
28.5	26.5	26.3	23	19.5	15.7	8.7	-7.7	dB

Resulting Sound Pressure Level 32.8 dB

Barriers

- No barriers
- Single barrier
- Double barrier
- Building

Display

- Off
- Grid (m)
- Distance (m)
- Wavelength (λ)

Environmental Parameters

20 °C Temperature

70 % Humidity

1 Ground Factor (G)

Hard | Soft | Disable gr

Options

- Reset all values
- Link to this calculation
- Copy results to clipboard
- Save results as an image