# **Public Document Pack**



#### LICENSING SUB-COMMITTEE

Wednesday, 22 February 2023 at 10.00 am Council Chamber, Civic Centre, Silver Street, Enfield, EN1 3XA Contact: Democracy@enfield.gov.uk

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Councillors: Esin Gunes (Chair), Jim Steven and Sinan Boztas

# **SUPPLEMENTARY AGENDA**

**4.** SKEWD KITCHEN, 113-115 COCKFOSTERS, ROAD, BARNET, EN4 0DA (Pages 1 - 24)

Review Application – Supplementary representations from local residents.



#### MUNICIPAL YEAR 2022/23 REPORT NO.

**COMMITTEE:** 

**Licensing Sub-Committee** 

**22 February 2023** 

**REPORT OF:** 

Ellie Green, Licensing Team Manager

LEGISLATION: Licensing Act 2003 Agenda - Part

**Item** 

**SUBJECT:** 

**Review Application** 

PREMISES:

**SKEWD KITCHEN, 113-115 COCKFOSTERS** 

**ROAD, BARNET, EN4 0DA** 

WARD:

Cockfosters

# **SUPPLEMENTARY REPORT**

1. On 12<sup>th</sup> February 2023 the residents provided supplementary written representation in relation to the review. A copy of that representation is now produced as Appendix *G* and *H*.

**Background Papers:** 

None other than any identified within the report.

**Contact Officer:** 

Ellie Green on 0208 1322 128



# **Appendix G**

# Skewd Kitchen Review – Representations from Other Persons in Support of the Review

## Additional representation from IP1

Please find below a copy of the Noise Nuisance Record Form for the period 14/1/2023 - 12/2/2023.

I, xxx certify that the following entries are a true record of events:

# Wednesday 18/1/23

Time noise starts: 8pm Time noise ends: 10pm

Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

 Also awoken at 3am by the sound of loud chopping and loud talking downstairs from Skewd Kitchen

Weather conditions: dry and clear

Effects of disturbance: Sleep disturbance

Location recording noise: Bedroom

## Thursday 19/1/23

Time noise starts:8pm Time noise ends:10.30pm Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

Weather conditions: dry and clear

Effects of disturbance: Sleep disturbance

Location recording noise: Bedroom

## Friday 20/1/23

Time noise starts:8pm Time noise ends:11pm

Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

Weather conditions: dry and clear

Effects of disturbance: Sleep disturbance

Location recording noise: Bedroom

# **Saturday 21/1/23**

Time noise starts:8pm Time noise ends:11pm

Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

Weather	conditions:
raining	

Effects of disturbance: Sleep disturbance

Location recording noise: Bedroom

# **Thursday 26/1/23**

Time noise starts:8pm Time noise ends:11pm

Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

Weather conditions: dry and clear

## Friday 27/1/23

Time noise starts:8pm Time noise ends:11pm

Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

Weather conditions: dry and clear

Effects of disturbance: Sleep disturbance

Location recording noise:

Bedroom

Enfield Council Noise Team Officer Ray Allen was contacted but unable to arrive in time to witness the noise nuisance

Reference number 215278

## **Saturday 28/1/23**

Time noise starts:8pm Time noise ends:11pm

Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

Weather conditions: dry and clear

Effects of disturbance: Sleep disturbance

Location recording noise:

Bedroom

Enfield Council Noise Team Officer Ray Allen visited and confirmed that this was an annoyance, he went downstairs to talk with the manager of Skewd Kitchen. Ray phoned me afterwards and informed me that the noise limiter which was promised to be installed on 19th January 2023 (See email to Ellie Greene 17/1/23 from Mahir Kilic) had not been installed.

Reference number 215 855

## **Thursday 2/2/23**

Time noise starts:8pm Time noise ends:10.30pm

Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass

Weather conditions: dry and clear

Effects of disturbance: Sleep disturbance

Location recording noise: Bedroom
Friday 3/2/23
Time noise starts:8pm Time noise ends:11pm
Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass
Weather conditions: dry and clear
Effects of disturbance: Sleep disturbance
Location recording noise: Bedroom
Saturday 4/2/23
Time noise starts:8pm Time noise ends:11pm
Source of disturbance and type of noise: Skewd restaurant - loud techno music with heavy bass
Weather conditions: raining
Effects of disturbance: Sleep disturbance
Location recording noise: Bedroom

From:
Ellie Gree

Cc: Charlotte Palmer; Joynul Islam; Licensing; Victor Ktorakis

Subject: Skewd Kitchen: Summary of Key Points for Upcoming Hearing 22/2/23

**Date:** 12 February 2023 19:27:08

#### SUMMARY OF KEY POINTS

We the residents of Braemore Court whenever possible try to support local businesses and wish them to be successful.

But local businesses have a responsibility to their neighbours by not being an annoyance or a nuisance.

In this case we feel that Skewd Kitchen has failed to do this for the following reasons:

- Having a DJ on the premises at least 3 nights a week and playing very loud techno music with a heavy bass until the early hours
- Because the music volume is so loud this has led to customers shouting to make themselves heard
- The loud music has been an annoyance/nuisance to the residents and their families living above and has disrupted them from sleeping or watching TV
- The residents living above have also been woken up at 6am by traditional Turkish music being played by the kitchen preparation staff. There is also the sounds of loud chopping on wooden boards and loud metal banging and dragging around the restaurant
- Also in addition to excessive music noise levels there have also been numerous issues with rubbish, parking, pungent grilled meat smells and excessive noise levels from the ventilation extraction system at the back of the kitchen

Numerous complaints have been made to Enfield Council, a noise abatement notice was served and a fine was issued. This has triggered the attention of Licensing proposing withdrawing the entitlement for regulated entertainment (please refer to Joynul Islam's representation - Enfield Council commercial noise officer).

#### POSSIBLE SOLUTIONS IN ORDER OF EFFECTIVENESS

Withdraw the entitlement but install noise limiter

In summary we welcome and support licensing's proposal to withdraw the entitlement

for regulated entertainment. In fact we would push for no music to be played at all whatsoever as in the past they have evidently been unable or unwilling to lower volume levels. This would go a long way to fixing this problem. If background music is to be allowed then a noise limiter would also need to be fitted to prevent background music levels getting too loud. This would be the best of both worlds and is a 'belt and braces' approach.

It is similar to visiting a dentist with a tooth abscess, you can take painkillers when necessary (noise limiter) but it's better to deal with the cause by removing the infected nerve by extraction (withdrawing the entitlement to regulated entertainment).

This is the most sustainable long term solution for both the residents and the restaurant.

We do not feel this will harm their profits, in fact we feel this will increase profits because customers can talk at normal volumes instead of shouting.

This will also protect the hearing of their customers and staff from a health and safety perspective (control of noise at work regulations 2005).

# 2. If Limiter only

We anticipate several issues if only the limiter is installed:

- a.
   The problem of a limiter only is that there is potential for the limiter to be disabled / break down resulting in more complaints and fines.
- Also the limiter can still allow unacceptable high levels of annoying music depending on the how loud the cut off limit is.
- c. When volume reaches a set level the limiter would either cut out or reduce temporarily for a few minutes before resetting, then the music reaches this level again and repeat. This yoyo process can go on all night which is a nuisance/annoyance and therefore unacceptable.
- d. The survey speculates that the limiter will control the sound levels. We have little confidence that this will be effective as all previous attempts in the past have failed. Also previous noise impact surveys have been extremely inaccurate (please refer to report VA 3703.210618.NIA ventilation extraction system) which predicted noise levels to be 30db (table 5.4) but in reality it is nearly double that level.
- e.

  This only deals with the symptoms instead of dealing with causes of this disease.

Prevention is better than cure.

The timing of the limiter installation appears to be only in response to the license review. If there was no review then there would be no announcement. If they were sincerely concerned about the noise nuisance they were causing to the residents then they would have installed it back in October 2022 when the complaints began.

In summary, licensing sub-committee members would need to ask themselves what solution would they find acceptable; if they themselves were the residents living above this restaurant that has a live DJ blasting loud music several nights a week whilst they and their families were trying to sleep?

Considering the above evidence the only logical and sustainable solution is to go ahead with withdrawing the entitlement for regulated entertainment.



# Report VA3703.210618.NIA

# Skewd Kitchen, 113-115 Cockfosters Road

Noise Impact Assessment

18 June 2021

Fan Rescue
Unit 129, Ability House

# 121 Brooker Road Waltham Abbey EN9 1JH



VA3703.210618.NIA 18 June 2021

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#### **Attachments**

VA3703/SP1 Indicative Site Plan VA3703/TH1-TH4 Environmental Noise Time Histories

Appendix A Acoustic Terminology Appendix B Acoustic Calculations



# 1. Introduction

It is proposed to install a new kitchen supply and extract system for the premises at Skewd Kitchen, 1135-115 Cockfosters Road.

Venta Acoustics has been commissioned by Fan Rescue to undertake an assessment of the potential noise impact of these proposals in support of an application for planning permission.

An environmental noise survey has been undertaken to determine the background noise levels at the most affected noise sensitive receptors. These levels are used to undertake an assessment of the likely impact with reference to the planning requirements of London Borough of Enfield.

# 2. Design Criterion and Assessment

Methodology 2.1 London Borough of Enfield

## Requirements

London Borough of Enfield have confirmed that their planning policy requirements that noise emissions from plant is at least 10dB below the local background noise level as assessed at the most affected noise sensitive receivers.

The assessment is to be undertaken with reference to BS4142:2014.

#### 2.2 BS4142:2014

British Standard BS4142:2014 *Methods for rating and assessing industrial and commercial sound* describes a method for rating and assessing sound of an industrial and/or commercial nature, which includes sound from fixed installations comprising mechanical and/or electrical plant and equipment;

The assessment methodology considers the Specific Sound Level, as measured or calculated at a potential noise sensitive receptor, due to the source under investigation. A correction factor is added to this level to account for the acoustic character of the sound as follows:

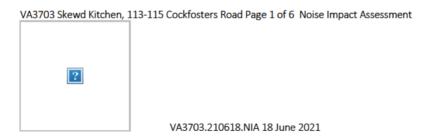
**Tonality** – A correction of up to 6dB depending on the prominence of

tones; **Impulsivity** - A correction of up to 9dB depending on the prominence of impulsivity;

**Other sound characteristics -** A 3dB correction may be applied where a distinctive acoustic character is present that is neither tonal nor impulsive;

**Intermittency** - A 3dB correction may be applied where the specific sound has identifiable on/off conditions.

An estimate of the impact of the source is obtained by subtracting the typical background noise level from the corrected Specific Sound Level.



- Typically, the greater this difference, the greater the magnitude of the impact. A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
  - $\cdot$  A difference of around +5 dB could be an indication of an adverse impact, depending on the  $\,$  context.

• The lower the rating level is relative to the measured background sound level, the less likely it is that there will be an adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound having a low impact, depending on the context.

#### 2.3 BS8233:2014

BS8233 *Guidance on sound insulation and noise reduction for buildings* provides guidance as to suitable internal noise levels for different areas within residential buildings.

The relevant section of the standard is shown below in Table 2.1.

Activity	Location 07:00 to 23:00		23:00 to 07:00	
Resting	Living Room	35 dB LAeq, 16 hour	1	
Dining	Dining Room	40 dB Laeq, 16 hour	-	
Sleeping (daytime resting)	Bedroom	35 dB LAeq, 16 hour	30 dB LAeq, 8 hour	

# Table 2.1 - Excerpt from BS8233: 2014 [dB ref. 20μPa] 3. Site Description

As illustrated on attached site plan VA3703/SP1, the site building is located in a parade of shops with apartments above.

The most affected noise sensitive receivers are expected to be the apartment above

the premises. Existing building services plant was noted on several of the

neighbouring buildings. 4. Environmental Noise Survey

## 4.1 Survey Procedure & Equipment

In order to establish the existing background noise levels at the site, a noise survey was carried out between Friday 28<sup>th</sup> May and Tuesday 1<sup>st</sup> June 2021 at the location shown in site plan VA3703/SP1. This location was chosen to be representative of the background noise level at the most affected noise sensitive receivers.

Continuous 5-minute samples of the  $L_{Aeq}$ ,  $L_{Amax}$ ,  $L_{A10}$  and  $L_{A90}$  sound pressure levels were undertaken at the measurement location.

VA3703 Skewd Kitchen, 113-115 Cockfosters Road Page 2 of 6 Noise Impact Assessment



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The weather during the survey period was generally dry with light winds. The background noise data is not considered to have been compromised by these conditions.

Measurements were made generally in accordance with ISO 1996 2:2017 *Acoustics - Description, measurement and assessment of environmental noise – Part 2: Determination of sound pressure levels.* 

The following equipment was used in the course of the survey:

Manufacturer	Model Type	Serial No	Calibration	
			Certificate No.	Date
NTi Class 1 Integrating SLM	XL2	A2A-11586-E0	UCRT20/1565	29/6/20
Larson Davis calibrator	CAL200	13049	UCRT21/1385	22/3/21

#### Table 4.1 - Equipment used for the survey

The calibration of the sound level meter was verified before and after use with no significant calibration drift observed.

#### 4.2 Results

The measured sound levels are shown as time-history plots on the attached charts

VA3703/TH1-4. The background noise level is determined by

The typical background noise levels measured were:

Monitoring Period	Typical LA90,5min
07:00 – 23:00 hours	40 dB
23:00 – 07:00 hours	30 dB

**Table 4.2 – Typical background noise levels [dB ref. 20 \muPa]** <sup>1</sup> The typical Lago value is taken as the 10<sup>th</sup> percentile of all Lago values measured during the relevant period.

#### **4.3 Plant Noise Emission Limits**

On the basis of the measured noise levels and the planning requirements of the Local Authority, and considering that it is not expected that tonal noise will be generated by the proposed plant units, the following plant specific sound levels should not be exceeded at the most affected noise sensitive receivers:

Monitoring Period	Design Criterion (Laeq)
07:00 – 23:00 hours	30 dB
23:00 – 07:00 hours	20 dB

Table 4.3 - Specific sound pressure levels not to be exceeded at most affected noise sensitive receivers

VA3703 Skewd Kitchen, 113-115 Cockfosters Road Page 3 of 6 Noise Impact Assessment

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# 5. Predicted Noise Impact

# **5.1 Proposed plant**

The following plant is proposed for installation with the fan motors located internally, and the extract duct terminating at high ground floor level to the rear of the building, with the supply grille located at high ground floor level at the front of the building at the locations indicated on site plan VA3703/SP1.

Plant Item	Quantity	Proposed Model	Notes
Extract Fan	1	Helios GBW 560/4	Only operate during daytime hours
Supply Fan	1	Airflow 102 H2WL	

Table 5.1 - Indicative plant selections assumed for this assessment.

Consulting the manufacturer's datasheets, the following noise emissions levels are attributed to the proposed plant items:

Plant Item		Octave Band Centre Frequency (Hz) Sound Power Level, Lw (dB)							dB(A)
	63	125	250	500	<b>1</b> k	2k	4k	8k	
Helios GBW 560/4 - Exhaust	95	87	82	79	77	73	69	62	82
Airflow 102 H2WL - Inlet	62	<b>7</b> 2	67	63	62	61	59	58	68

Table 5.2 - Advised plant noise data used for the assessment

# **5.2 Recommended Mitigation Measures**

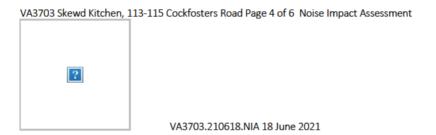
The atmospheric side duct work of the fans will need to be fitted with attenuators providing the following minimum insertion losses.

Attenuation Component	Octave Band Centre Frequency (Hz) Silencer Insertion Loss (dB)							
	63	125	250	500	1k	2k	4k	8k
Extract – Attenuator 1	7	13	20	29	30	32	29	27
Extract – Attenuator 2	7	13	20	29	30	32	29	27
Supply - Attenuator	2	3	6	7	12	14	11	10

Table 5.3 - Minimum silencer insertion losses

Should the above insertion loss by achieved using multiple silencers, these should be separated from each other by a distance of minimum 3-4 x D, where D is the largest internal dimension of the duct work (e.g. D is 0.5m, so a minimum of 1.5-2m apart). Attenuators should be fitted as close to the fan as possible, and attached to the ductwork using flexible connections.

For the extract attenuator, it is recommended that a Melinex lined silencer is used to prevent grease impregnation into the acoustic media which may degrade the performance realised over time.



Please note that the above recommendations relate to acoustic issues only. It is recommended that professional advice confirming the suitability of these measures be sought from others with regards to issues such as airflow, structural stability and visual impact.

#### 5.3 Predicted noise levels

The noise levels at the most affected noise sensitive receivers have been calculated on the basis of the above information and assuming the recommended mitigation measures, with reference to the guidelines set out in ISO 9613-2:1996 Attenuation of sound during propagation outdoors - Part 2: General method of calculation.

A summary of the calculations are shown in Appendix B.

Receiver Location	Predicted Noise Level	Design Criterion
Rear	LAeq 30 dB	LAeq 30 dB
Front	LAeq 30 dB	

Table 5.4 - Predicted noise levels at most affected noise sensitive receivers and

### design criterion 5.4 Structureborne Noise

All plant and ductwork should be fitted with anti-vibration mounts in accordance with the manufacturer guidelines.

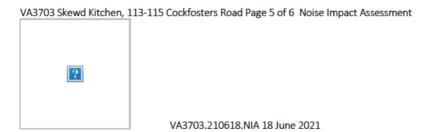
The extract fan will have a dominant case frequency of 50-60Hz. To mitigate this and ensure there is no tonal transfer of structureborne noise, the fan motor should be mounted on rubber or neoprene mounts with a minimum deflection of 5mm, which would provide 95% isolation efficiency, considerably more than the recommended minimum of 90% isolation.

The fan should be attached to the ductwork on either side using flexible coupling to minimise vibration transfer to the ductwork. Ductwork should be attached to the building using isolated fixings, with either a rubber or neoprene isolator with a minimum deflection of 1mm, which would provide 90% isolation, considerably more than would be required considering the reduced energy transmitted to the ductwork.

The above measures are to control structureborne noise and re-radiated noise to other areas of the building to considerably below current internal noise levels and hence would be considered acceptable.

## 5.5 Comparison to BS8233:2014 Criteria

BS8233 assumes a loss of approximately 15dB for a partially open window. The external noise level shown in Table 5.4 would result in internal noise levels that achieve the guidelines shown in Table 2.1.



#### 6. Conclusion

A baseline noise survey has been undertaken by Venta Acoustics to establish the background noise climate in the locality of Skewd Kitchen, 1135-115 Cockfosters Road, Barnet in support of a planning application for the proposed introduction of new building services plant.

This has enabled noise emission limits to be set at the most affected noise sensitive receiver such that the proposed installation meets the requirements of London Borough of Enfield.

The cumulative noise emission levels from the proposed plant have been assessed to be compliant with the plant noise emission limits, with necessary mitigation measures specified.

The proposed scheme is not expected to have a significant adverse noise impact and the relevant plant noise requirements have been shown to be met.

## **Jamie Duncan MIOA**

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Sound Pressure Level dB(A).

# **APPENDIX A**



Acoustic Terminology & Human Response to Broadband Sound

# 1.1 Acoustic Terminology

The human impact of sounds is dependent upon many complex interrelated factors

such as 'loudness', its frequency (or pitch) and variation in level. In order to have some objective measure of the annoyance, scales have been derived to allow for these subjective factors.

**Sound** Vibrations propagating through a medium (air, water, etc.) that are detectable by the auditory system.

**Noise** Sound that is unwanted by or disturbing to the perceiver. The rate per second of vibration constituting a wave, measured in Hertz (Hz), where 1Hz = 1

Frequency dB(A):	1		
Leq:			

#### L10 & L90: R

vibration cycle per second. The human hearing can generally detect sound having frequencies in the range 20Hz to 20kHz. Frequency corresponds to the perception of 'pitch', with low frequencies producing low 'notes' and higher frequencies producing high 'notes'. Human hearing is more susceptible to mid-frequency sounds than those at high and low frequencies. To take account of this in measurements and predictions, the 'A' weighting scale is used so that the level of sound corresponds roughly to the level as it is typically discerned by humans. The measured or calculated 'A' weighted sound level is designated as dB(A) or LA. A notional steady sound level which, over a stated period of time, would contain the same amount of acoustical energy as the actual, fluctuating sound measured over that period (e.g. 8 hour, 1 hour, etc).

The concept of Leq (equivalent continuous sound level) has primarily been used in assessing noise from industry, although its use is becoming more widespread in defining many other types of sounds, such as from amplified music and environmental sources such as aircraft and construction.

Because Leq is effectively a summation of a number of events, it does not in itself limit the magnitude of any individual event, and this is frequently used in conjunction with an absolute sound limit.

Statistical  $L_{\rm h}$  indices are used to describe the level and the degree of fluctuation of non-steady sound. The term refers to the level exceeded for n% of the time. Hence,  $L_{\rm 10}$  is the level exceeded for 10% of the time and as such can be regarded as a typical maximum level. Similarly,  $L_{\rm 90}$  is the typical minimum level and is often used to describe background noise.

It is common practice to use the L10 index to describe noise from traffic as, being a high average, it takes into account the increased annoyance that results from the non-steady nature of traffic flow.

Sound Reduction Index. Effectively the Level Difference of a building element when measured in an accredited laboratory test suite in accordance with the procedures laid down in BS EN ISO 10140- 2:2010 and corrected for its size and the reverberant characteristics of the receive room.

## 1.2 Octave Band Frequencies

In order to determine the way in which the energy of sound is distributed across the frequency range, the International Standards Organisation has agreed on "preferred" bands of frequency for sound measurement and analysis. The widest and most commonly used band for frequency measurement and analysis is the Octave Band. In

these bands, the upper frequency limit is twice the lower frequency limit, with the band being described by its "centre frequency" which is the average (geometric mean) of the upper and lower limits, e.g. 250 Hz octave band extends from 176 Hz to 353 Hz. The most commonly used octave bands are:

Octave Band Centre Frequency Hz 63 125 250 500 1000 2000 4000 8000 **1.3 Human** 

# **Perception of Broadband Noise**



#### Acoustic Terminology & Human Response to Broadband Sound

Because of the logarithmic nature of the decibel scale, it should be borne in mind that sound levels in dB(A) do not have a simple linear relationship. For example, 100dB(A) sound level is not twice as loud as 50dB(A). It has been found experimentally that changes in the average level of fluctuating sound, such as from traffic, need to be of the order of 3dB before becoming definitely perceptible to the human ear. Data from other experiments have indicated that a change in sound level of 10dB is perceived by the average listener as a doubling or halving of loudness. Using this information, a guide to the subjective interpretation of changes in environmental sound level can be given.

Change in Sound Level dB	Subjective Impression	Human Response
0 to 2	Imperceptible change in loudness	Marginal
3 to 5	Perceptible change in loudness	Noticeable
6 to 10	Up to a doubling or halving of loudness	Significant
11 to 15	More than a doubling or halving of loudness	Substantial
16 to 20	Up to a quadrupling or quartering of loudness	Substantial
21 or more	More than a quadrupling or quartering of loudness	Very Substantial



VA3703 Appendix B 18 June 2021

# **APPENDIX B**

# VA3703 - Skewd, 113-115 Cockfosters Road

# Noise Impact Assessment - Rear of Building

Extract Fan	63 Hz 125 Hz 250 Hz 500 Hz 1 kHz 2 kHz 4 kHz 8 kHz	dB(A)
Helios GBW 560/4 LwAcoustica R02 3- 1200 - Melinex Faced Acoustica R02 3-1200 - Melinex Faced Distance Loss To 7mHemispherical radiation Directivity (Hor:0,Vert:140)	95 87 82 79 77 73 69 62 -7 -13 -20 -29 -30 -32 -29 -27 -7 -13 -20 -29 -30 -32 -29 -27 -17 -17 -17 -17 -17 -17 -17 -17 -8 -8 -8 -8 -8 -8 -8 -8 -8 -1 -2 -3 -7 -9 -8 -8 -8	82
Level at receiver	55 35 14 -11 -16 -24 -22 -25	30

# **Noise Impact Assessment - Front of Building**

Supply Fan	63 Hz 125 Hz 250 Hz 500 Hz 1 kHz 2 kHz 4 kHz 8 kHz	dB(A)
Airflow 102 H2WL LwAcoustica R02-6-600 Distance Loss To 4mScreening loss Hemispherical radiation Directivity (Hor:0,Vert:140)	62 72 67 63 62 61 59 58 -2 -3 -6 -7 -12 -14 -11 -10 -12 -12 -12 -12 -12 -12 -12 -12 -12 -12	68
Level at receiver	34 42 33 24 16 14 15 15	30