



REPORT REFERENCE:

SA - 8482

NOISE IMPACT ASSESSMENT

British Standard 4142:2014+A1: 2019

CLIENT:

1st Chandler's Ford Scout Group, Momentum Fitness Charity & CrossFit Southampton

SITE:

1st Chandler's Ford Scout Group

Brickfield Lane

Chandler's Ford

Hampshire

SO53 4DP

SURVEY DATE:

5th – 7th August 2026

Report By

A handwritten signature in black ink, appearing to be 'B. J. Scrivener'.

Mr. B. J. Scrivener MIOA.

Sound Advice Acoustics Ltd

2 West Links, Tollgate, Chandlers Ford, Hampshire, SO53 3TG

Tel: 02380 641357

soundadviceacoustics.co.uk

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1 EXECUTIVE SUMMARY

1.1 Instruction

Sound Advice Acoustics Ltd have been instructed by 1st Chandler's Ford Scout Group, Momentum Fitness Charity & CrossFit Southampton to undertake a background noise survey at 1st Chandlers Ford Scout Group, Brickfield Lane, Chandlers Ford, Hampshire, SO53 4DP to understand the level of impact at the site in relation to the proposed new building and calculate the resultant noise breakout, patron noise and vehicle movement at the nearest affected windows at the nearest noise sensitive premises and carry out assessments to BS 4142: 2014+A1: 2019 for the proposed ASHP's.

1.2 Scope of Report

The measurements have been undertaken in accordance with British Standard 4142: 2014+A1: 2019 and ISO 1996 – Part 2: 2017 to establish if the proposed site has a demonstrable adverse effect in terms of noise that outweigh the benefits of the development. This report aims to establish the following:

- Existing background noise levels at the residential façade (L_{A90});
- Noise levels from the proposed additional vehicle movements (L_{Aeq});
- Noise levels from the proposed additional patron noise (L_{Aeq});
- Breakout noise from the proposed gym (L_{Aeq});
- Impact on the nearest noise sensitive property from the proposed ASHP's
- Mitigation Levels if Required.

1.3 Summary of Report

1.3.1 Measured Background Noise Levels

Continuous background noise measurements were undertaken between 5th – 7th August 2026 at a representative position. The recorded levels are as follows:

1.3.2 Daytime 07:00 – 23:00

Assessment Position	Date Start	Date Finish	Daytime L_{Aeq}	Daytime L_{A90}
Position 1	05/08/2026	07/08/2026	54.6	46.0

1.4 Proposed Vehicle Movement Assessment

The new building will continue to be used as a scout hut along with a proposed gym. Paul Basham Associates have carried out an assessment and have suggested an additional 71 vehicles will be using the car park. Therefore, calculations have been carried out to demonstrate if the neighbouring properties could be affected by the introduction of these additional vehicle movements.

1.5 Patron Noise

Although people generally arrive and depart without conversing in the car park area, the new café and community space that is proposed, could generate conversations in the car parking and therefore a nominal 10 people, with 5 people talking at the same time has been assessed to demonstrate if the neighbouring properties could be affected by the introduction of these additional people talking.

1.6 Noise Breakout

It is proposed that the new building will provide a new gym facility, this will be for one-to-one sessions and small group sessions for children suffering with cancer. As this is not a commercial gym, an internal noise level has been calculated for a Blaze Intensity Class reduced.

1.7 ASHP's

It is proposed that two ASHP units are to be installed to the rear of the new building to the side of the decking. The ASHP's have the following sound power data supplied by the manufacturer.

Make & Model	Location	Number of Units	Lw dB(A)
Samsung EHS Mono HT Quiet 8kW	Rear of Building	2	46.0

1.8 Accumulative Assessment of Vehicle Movement, Patron Noise, Noise Breakout & Plant

1.8.1 Daytime 07:00 – 23:00

Item	Calculation	Clause	Commentary
Specific Noise Level $L_{Aeq,1\text{ hour}}$	38 dB	7	Calculated using ISO 9613:1996 ^[3] .
Tonality	+2 dB	8.1	Tonality Characteristic
Impulsivity	+3 dB	8.1	Impulsive Characteristic
Rating Level	43 dB	9.1	The acoustic feature correction is added to the specific noise level
Background Noise Level $L_{A90,1\text{ hour}}$	46 dB	8.1	Modal Background Noise Level
Assessment Level	-3 dB	11	The background level is subtracted from the rating level.
Assessment	-3 dB		
Conclusion	The assessment level is 'Low Impact'		

1.9 Conclusions

The operation of the new building and any proposed plant has been assessed to establish if it will have a demonstrable adverse effect in terms of noise that outweighs the benefits of the development. Measurements have been undertaken in accordance with British Standard 4142: 2014+A1: 2019 and ISO 1996 – Part 2: 2017. This report has established the existing background noise levels at a representative position to the site and the assessment of the impact of the site operation and any proposed plant on nearby residential properties. The resulting emissions from the site running on a worst-case scenario show no conflict with 'low impact' criteria and give a strong indication that complaint and impact on the local amenity is unlikely.

1.10 NPPF 2024

National Planning Policy Framework 2024 suggests that planning permission should be granted unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the framework taken as a whole, or specific policies in the framework indicate the application should be restricted.

1.11 Planning Approval Recommendation

Based on the calculations and assessments made within this report it is the professional opinion of Sound Advice Acoustics Ltd that the proposed development can demonstrate compliance with the National Planning Policy Framework 2024, NPPF & NPSE.

2 INTRODUCTION

2.1 Instruction

Sound Advice Acoustics Ltd have been instructed by 1st Chandler's Ford Scout Group, Momentum Fitness Charity & CrossFit Southampton to undertake a background noise survey at 1st Chandlers Ford Scout Group, Brickfield Lane, Chandlers Ford, Hampshire, SO53 4DP to understand the level of impact at the site in relation to the proposed new building and calculate the resultant noise breakout, patron noise and vehicle movement at the nearest affected windows at the nearest noise sensitive premises and carry out assessments to BS 4142: 2014+A1: 2019 for the proposed ASHP's.

The purpose of this assessment is to ensure the acoustic protection of noise sensitive premises closest to the proposed new ASHP's. Noise sensitive premises are not restricted to residential dwellings as offices can be affected by unwanted external noise. In this case, the commercial offices adjacent to the site have been identified as the nearest noise sensitive and therefore all calculations and assessments are to be made to these positions.

2.2 Ambient and Background Measurements

External noise levels are to be recorded over, what has been considered for the site, an average / typical time period in order to assess the daytime and nighttime noise levels. Levels have been recorded over more than one day in order to ensure the uncertainty of measurement aspects of BS 4142: 2014+A1: 2019 have been satisfied and that the data recorded is representative for the purpose of a robust assessment.

2.3 BS 4142: 2014+A1: 2019

British Standard 4142: 2014+A1: 2019 is to be adopted for the basis of this background noise level assessment. A BS 4142: 2014+A1: 2019 noise assessment will be carried out in order to demonstrate the acoustic impact the proposed ASHP's could have on the nearest affected premises and make suitable recommendations in order to demonstrate these units will not have a significant and demonstrable adverse impact on the nearest noise sensitive premises in accordance with the National Planning Policy Framework. BS 4142: 2014+A1: 2019 supersedes the 1997 version and has been developed to move more in-line with the National Planning Policy Framework 2024 (NPPF) and the Noise Policy Statement for England 2010 (NPSE).

2.4 National Planning Policy Framework 2024 & Noise Policy Statement for England 2010

References and evaluations are to be made to the National Planning Policy Framework 2024 (NPPF) and the Noise Policy Statement for England 2010 (NPSE). The purpose of this document is to include all aspects of environmental noise within assessments i.e. environmental noise, neighbour noise and neighbourhood noise. Noise is to be considered alongside other relevant issues relating to the site and should not be considered in isolation, according to the NPSE.

There are several key phrases within the NPSE aims and these are discussed below.

2.5 “Significant adverse” and “adverse”

There are two established concepts from toxicology that are currently being applied to noise impacts, for example, by the World Health Organisation. They are:

2.6 NOEL – No Observed Effect Level

This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

2.7 LOAEL – Lowest Observed Adverse Effect Level

This is the level above which adverse effects on health and quality of life can be detected.

Extending these concepts for the purpose of this NPSE leads to the concept of a significant observed adverse effect level.

2.8 SOAEL – Significant Observed Adverse Effect Level

This is the level above which significant adverse effects on health and quality of life occur.

It is not possible to have a single objective noise-based measure that defines SOAEL that is applicable to all sources of noise in all situations. Consequently, the SOAEL is likely to be different for different noise sources, for different receptors and at different times. It is acknowledged that further research is required to increase our understanding of what may constitute a significant adverse impact on health and quality of life from noise. However, not having specific SOAEL values in the NPSE provides the necessary policy flexibility until further evidence and suitable guidance is available.

3 MEASUREMENT POSITIONS



4 APPARATUS

4.1 Equipment Calibration

The equipment was calibrated using a sound pressure level of 114.0 dB at an octave band centre frequency of 1000Hz with reference to $2 \times 10^{-5} \text{ Nm}^{-2}$ before and after the tests and the equipment set to have no inaccuracy greater than 0.2 dB.

All the following equipment was calibrated in accordance with the laboratory accreditation requirements of the United Kingdom Accreditation Service (UKAS) on the following dates. Calibration schedules are implemented within Sound Advice Acoustics Ltd in accordance with UKAS directive LAB 23.

4.2 Rion NL – 52 s/n 00242696 ENVIRONMENTAL TESTING

Description	Make	Type	Serial No.	Calibration Intervals	Cert No	Last Calibrated	Next Due Calibration
Integrated Sound Level Meter	Rion	Nl-52	242696	2 Years	C00583	26.06.2025	26.06.2027
Microphone (With Windshield)	Rion	Uc-59	6178	2 Years		26.06.2025	26.06.2027
Microphone Pre – Amplifier	Rion	Nh-25	32724	2 Years		26.06.2025	26.06.2027

The noise meter was calibrated before and after the assessment period and found to be within the tolerance of the manufacturer's guidance. Full Calibration certificates are available upon request.

5 RESULTS

5.1 Downloaded results, and averages.

5.1.1 5th – 6th August 2026

NOISE LEVEL SUMMARY ASSESSMENT				Octave Band Centre Frequency (Hz)								
Date / Time	LAeq	LAm _{ax}	LA ₉₀	63	125	250	500	1.0k	2.0k	4.0k	8.0k	16.0k
DAYTIME 07:00 - 23:00 LAeq 16 HOUR & Corresponding LAm_{ax} 16 HOUR	54.6	100.3	47.0	59.0	54.8	53.8	50.1	49.2	47.4	43.6	35.8	28.7
NIGHT TIME 23:00 - 07:00 LAeq 8 HOUR & Corresponding LAm_{ax} 8 HOUR	49.7	85.0	37.0	57.4	52.4	49.1	45.6	44.5	42.9	35.2	24.7	11.3

5.1.2 6th – 7th August 2026

NOISE LEVEL SUMMARY ASSESSMENT				Octave Band Centre Frequency (Hz)								
Date / Time	LAeq	LAm _{ax}	LA ₉₀	63	125	250	500	1.0k	2.0k	4.0k	8.0k	16.0k
DAYTIME 07:00 - 23:00 LAeq 16 HOUR & Corresponding LAm_{ax} 16 HOUR	50.9	87.3	46.0	57.2	52.1	49.8	46.7	45.8	44.2	36.8	26.7	13.2
NIGHT TIME 23:00 - 07:00 LAeq 8 HOUR & Corresponding LAm_{ax} 8 HOUR	49.8	77.4	37.0	57.7	51.9	48.3	45.1	45.1	42.6	37.4	26.1	10.6

6 CALCULATIONS

6.1 Vehicle Movement

6.1.1 Proposed Vehicle Movement Quantity

We have been provided data from the client that there will be 71 additional vehicle movements during daytime (07:00 – 23:00). This has been based on the trip generation data from the client. This has then been inputted into the CADNA A software in order to calculate the noise level at the façade of the closest noise sensitive positions to the South and East of the site.

6.1.2 Daytime Inputted Levels into 3D Model (07:00 – 23:00)

Road

Close

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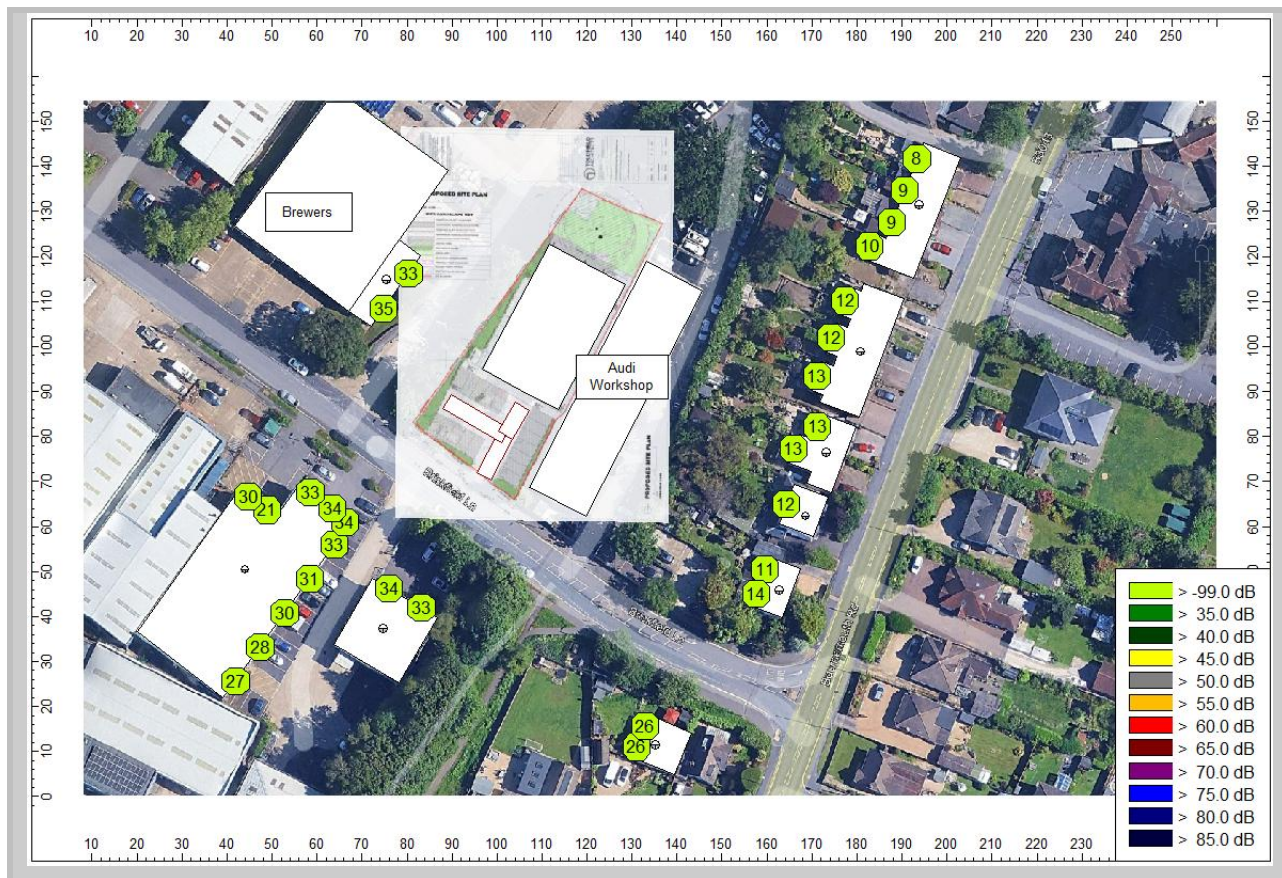
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Help

Name	M.	ID	L10			Count Data		exact Count Data						Traffic Speed	SCS	Surface	Gradi
			Day	Evening	Night	Q	Str.class.	q			p (%)				Dist.	Type	
			(dBA)	(dBA)	(dBA)	(Veh/18h)		Day	Evening	Night	Day	Evening	Night	(km/h)			(%)
			44.8	44.8	44.8	71	HGV00							10	0.0	1	0

DAYTIME INPUTTED VEHICLE MOVEMENTS

6.1.3 Calculated Daytime Vehicle Movements (07:00 – 23:00)



7 Patron Noise

7.1 Calculation of Internal level

The resulting noise source is calculated in accordance with ISO9613-2:1996. The sound data has been taken on the basis of a distributed noise level of 60dBA (LAeq,T) from 20 conversations with normal voices (ref. 60 dB(A) @ 1m BS8233) distributed internally. Noise levels are calculated based on capacity to show worst case scenario. Whilst during a majority of the proposed daytime periods, the external area is not likely to have more than 10 people at any one time, between the hours of 07:00 and 23:00. However, not all 10 people will be speaking at exactly the same point in time, and therefore a worst case scenario and ratio of 1:2 has been assumed and the noise levels from 5 people all speaking at exactly the same moment has been used within our calculations.

A noise level spectrum obtained from real speech recordings of 50% male 50% female voices over 20 languages listed in ITU-T P50 (BS7827:1996) and corrected to 60dBA:

Vocal noise spectrum used for noise breakout calculations (BS7827:1996)	Octave band (Hz) sound pressure level (dB)								
	63	125	250	500	1000	2000	4000	8000	Total
Occupational noise (worst case)	54	61	64	60	52	43	36	32	60

The following values have been inputted into the CADNA A model as a sound power level equivalent.

Sound Power Level Per Child	Octave band (Hz) sound power level (dB)								
	63	125	250	500	1000	2000	4000	8000	Total
Occupational noise (worst case)	65	72	75	71	63	54	47	43	71

This is further reinforced when assessing the noise impact from raised voices; Impact Acoustics have used the values indicated in (Handbook of Acoustical Measurements and Noise Control, Harris, Cyril.):

Type of Communication	Noise Levels LAeq, T at 1m (dBA)	
	Male	Female
Casual	53	50
Normal	58	55
Raised	65	62
Loud	75	71
Shout	88	82

7.2 Proposed Outdoor Area

There is no outdoor area as such. However, the proposed café could generate people talking outside in the car park area as they arrive and depart. The calculations and assessments have been undertaken with 10 people, with only 5 people talking at one time.

7.3 Inputted Noise Levels for 5 people.

The following noise levels have been inputted in to the 3D acoustic model in order to calculate the resultant noise levels at the aforementioned assessment position.

Point Source

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Print...

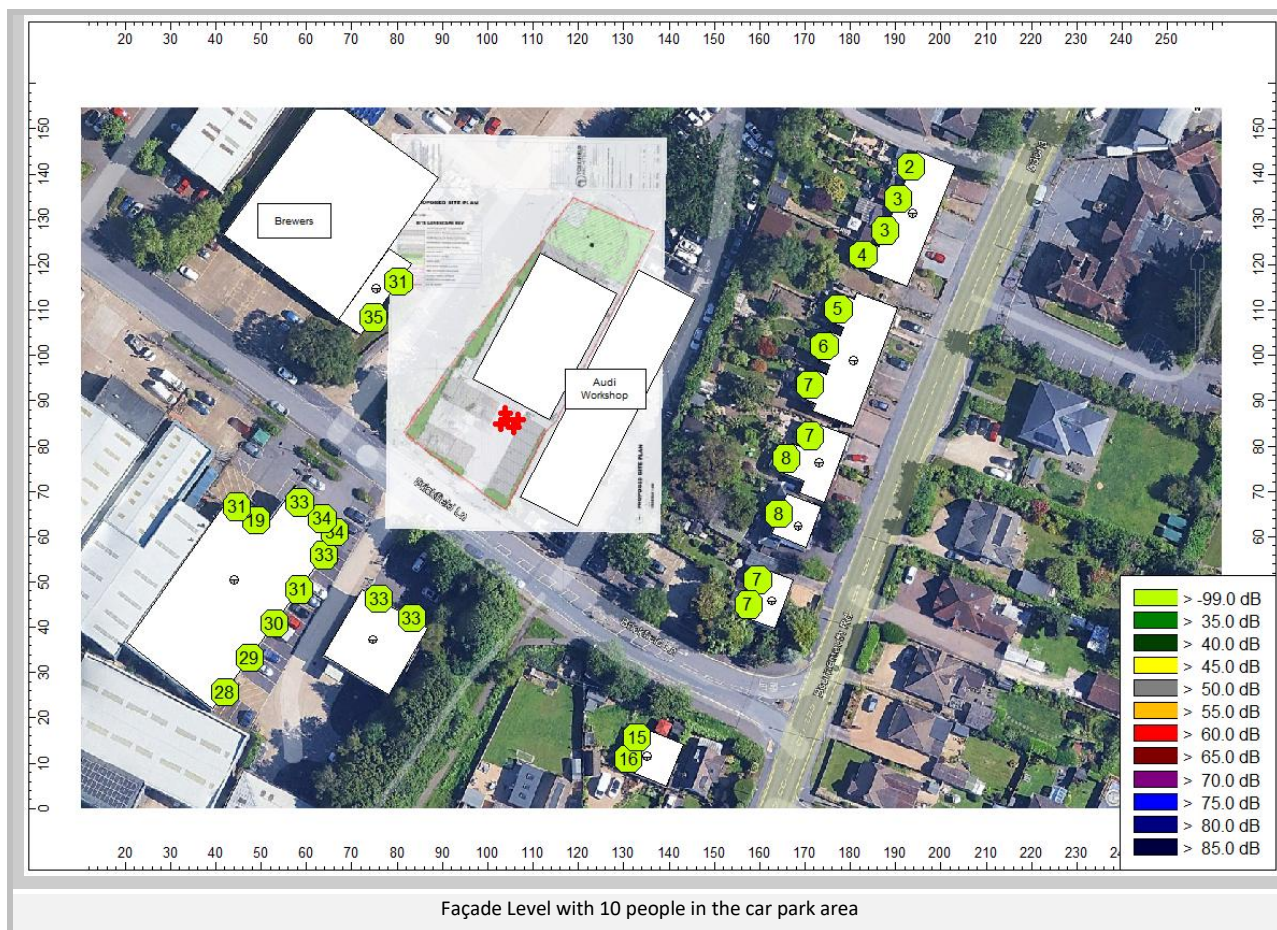
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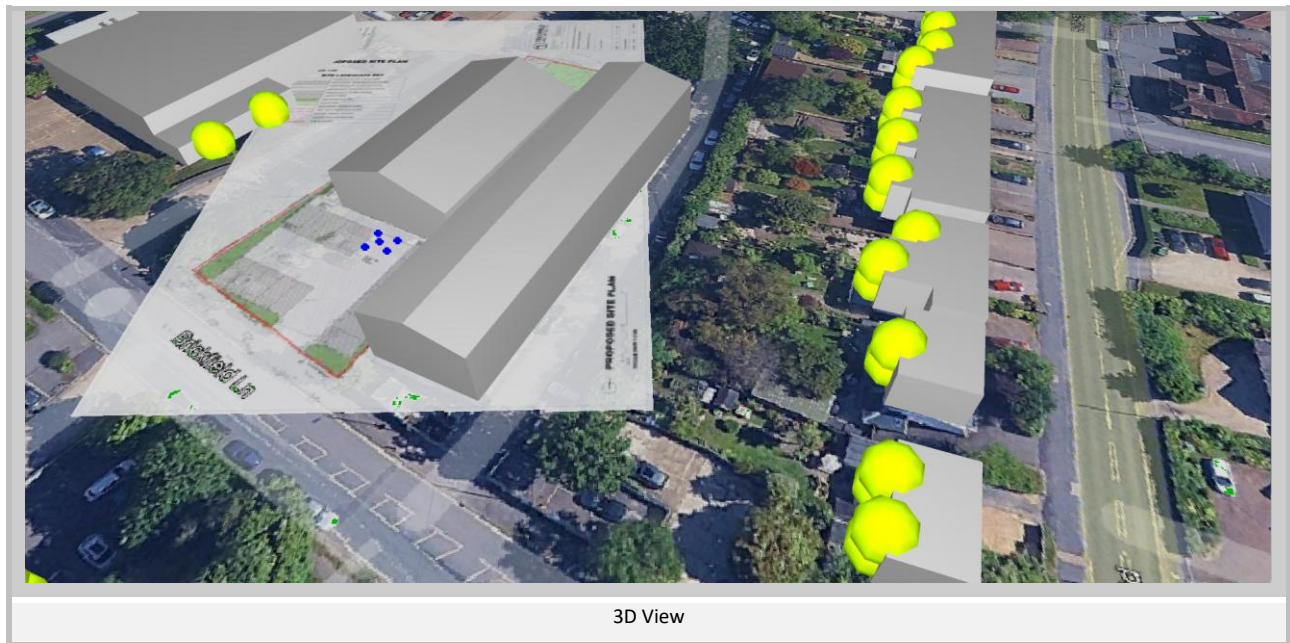
Help

Name	M.	ID	Result. PWL			Lw / Li		Correction			Sound Reduction		Attenuation	Operating Time			K0	Freq.	Direct.	Height		
			Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area		Day	Special	Night					
			(dBA)	(dBA)	(dBA)		(dBA)		(dBA)	(dBA)	(dBA)		(m²)		(min)	(min)	(min)	(dB)	(Hz)	(m)		
			71.2	71.2	71.2	Lw	71.2		0.0	0.0	0.0							0.0	1000	(none)	1.50	r
			71.2	71.2	71.2	Lw	71.2		0.0	0.0	0.0							0.0	1000	(none)	1.50	r
			71.2	71.2	71.2	Lw	71.2		0.0	0.0	0.0							0.0	1000	(none)	1.50	r
			71.2	71.2	71.2	Lw	71.2		0.0	0.0	0.0							0.0	1000	(none)	1.50	r
			71.2	71.2	71.2	Lw	71.2		0.0	0.0	0.0							0.0	1000	(none)	1.50	r

Inputted Noise Levels For 10 people

7.4 Calculated Façade Noise Levels for 10 people





8 NOISE BREAKOUT

8.1 Proposed Operations

It is proposed that the new building will provide a multi-use facility incorporating scout rooms, an ancillary cafe and community space, and a functional fitness gym with rehabilitation space. The gym space is for small and medium group functional fitness and one-to-one and small group sessions for children suffering with cancer. As this is not a commercial gym model, an internal noise level has been calculated for a Blaze Intensity Class reduced. As a worst-case scenario, modelling has been undertaken for this type of building as shown in the table below.

	L _{Aeq}	Octave Band Centre Frequency (Hz)						
		63	125	250	500	1	2	4
Proposed Internal Noise Level	80.0	50.8	63.1	66.6	74.6	75.8	69.5	67.6

8.2 Combined Transmission Loss

The building is constructed of several elements and therefore the following combined transmission loss value calculations have been carried out:-

Roof	Octave Band Centre Frequency (Hz)						
	63	125	250	500	1	2	4
AREA SECTION 1 - Roof	110	110	110	110	110	110	110
SRI SECTION 1 - Roof	14	17	21	23	20	31	43
R TOTAL	14	17	21	23	20	31	43
East	Octave Band Centre Frequency (Hz)						
	63	125	250	500	1	2	4
AREA SECTION 1 - Wall Panel	32	32	32	32	32	32	32
SRI SECTION 1 - Wall Panel	14	17	21	23	20	31	43
R TOTAL	14	17	21	23	20	31	43
North	Octave Band Centre Frequency (Hz)						
	63	125	250	500	1	2	4
AREA SECTION 1 - Wall Panel	64	64	64	64	64	64	64
AREA SECTION 2 - Glazing	18	18	18	18	18	18	18
SRI SECTION 1 – Wall Panel	14	17	21	23	20	31	43
SRI SECTION 2 - Glazing	17	21	17	25	35	37	31
R TOTAL	15	18	20	23	21	32	37
West	Octave Band Centre Frequency (Hz)						
	63	125	250	500	1	2	4
AREA SECTION 1 - Wall Panel	27	27	27	27	27	27	27
AREA SECTION 2 - Glazing	5	5	5	5	5	5	5
SRI SECTION 1 – Wall Panel	14	17	21	23	20	31	43
SRI SECTION 2 - Glazing	17	21	17	25	35	37	31
R TOTAL	14	17	20	23	21	32	38

8.3 Inside to Outside Calculations

Based on the above combined transmission loss calculations, the following inside to outside calculations have been carried out:-

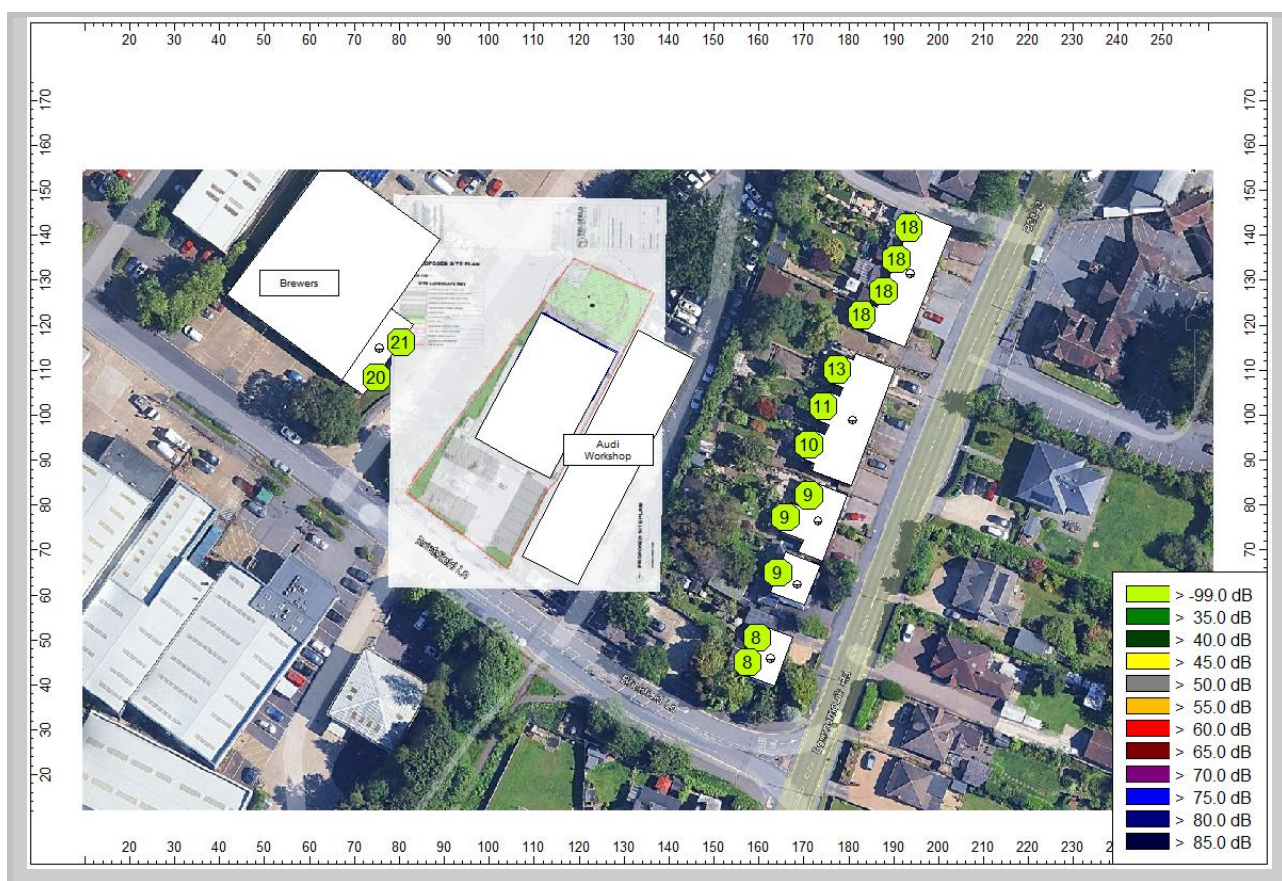
Proposed Constructions	Octave Band Centre Frequency (Hz)							Lw dB
Inside to Outside Roof	63.0	125	250	500	1k	2k	4k	
Inside Sound Power	50.8	63.1	66.6	74.6	75.8	69.5	67.6	
Internal Distance Correction	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Combined R	14.0	17.0	21.0	23.0	20.0	31.0	43.0	
10xLog (S)	20.4	20.4	20.4	20.4	20.4	20.4	20.4	
Free Field Correction	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Calculated Radiating Sound Power	40.2	49.5	49.0	55.0	59.2	41.9	28.0	60.1
Inside to Outside East Façade	63	125	250	500	1k	2k	4k	
Inside Sound Power	50.8	63.1	66.6	74.6	75.8	69.5	67.6	
Internal Distance Correction	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Combined R	14.0	17.0	21.0	23.0	20.0	31.0	43.0	
10xLog (S)	15.1	15.1	15.1	15.1	15.1	15.1	15.1	
Free Field Correction	6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Calculated Radiating Sound Power	34.9	44.2	43.7	49.7	53.9	36.6	22.7	54.8
Inside to Outside North Facade	63	125	250	500	1k	2k	4k	
Inside Sound Power	50.8	63.1	66.6	74.6	75.8	69.5	67.6	
Internal Distance Correction	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Combined R	15	18	20	23	21	32	37	
10xLog (S)	19.2	19.2	19.2	19.2	19.2	19.2	19.2	
Free Field Correction	6	6	6	6	6	6	6	
Calculated Radiating Sound Power	38.5	47.7	49.0	53.4	57.0	39.9	33.1	58.0
Inside to Outside West Façade	63	125	250	500	1k	2k	4k	
Inside Sound Power	50.8	63.1	66.6	74.6	75.8	69.5	67.6	
Internal Distance Correction	11.0	11.0	11.0	11.0	11.0	11.0	11.0	
Combined R	14	17	20	23	21	32	38	
10xLog (S)	15.1	15.1	15.1	15.1	15.1	15.1	15.1	
Free Field Correction	6	6	6	6	6	6	6	
Calculated Radiating Sound Power	34.9	44.2	44.7	49.7	52.9	35.6	27.7	54.0

8.4 Inputted Source Noise Levels

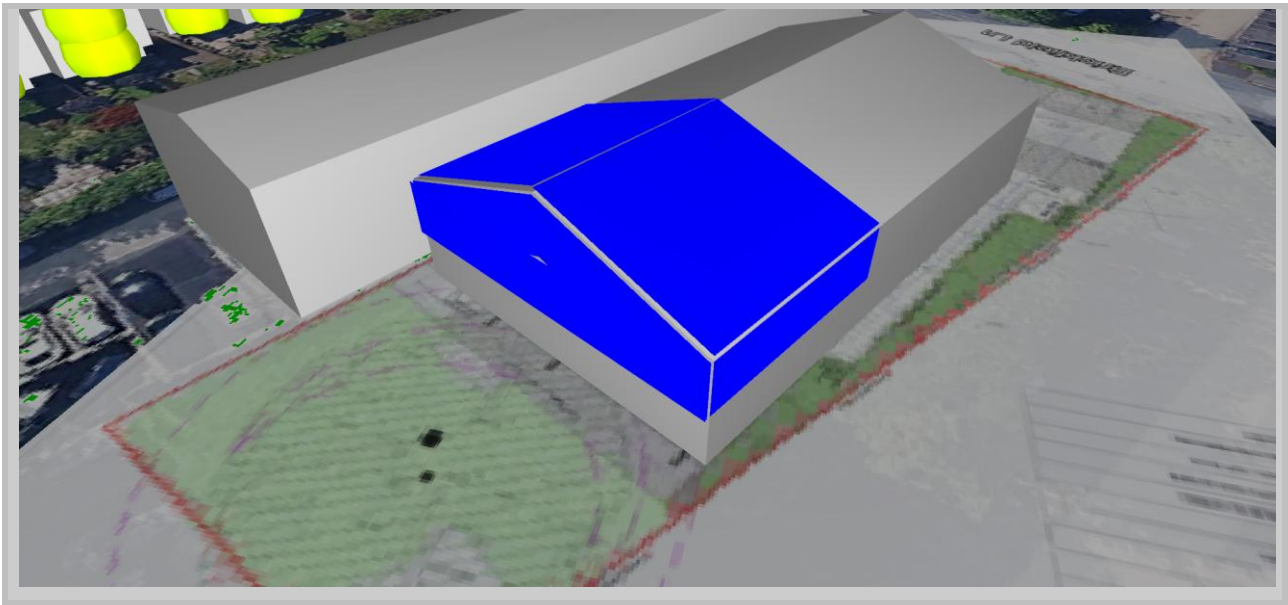
The following levels have been inputted into the CADNA A 3D modelling software in order to calculate the resultant operational noise levels at the nearest noise sensitive premises.

Sound Levels (local)															
OK Cancel Copy... Font... Adjust Col. Width Help															
Name	ID	Type	Oktave Spectrum (dB)												Source
			Weight.	31.5	63	125	250	500	1000	2000	4000	8000	A	lin	
Roof	Roof	Li		0.0	40.2	49.5	49.0	55.0	59.2	41.9	28.0	0.0	60.1	61.3	
East	East	Li		0.0	34.9	44.2	43.7	49.7	53.9	36.6	22.7	0.0	54.8	56.0	
North	North	Li		0.0	38.5	47.7	49.0	53.4	57.0	39.9	33.1	0.0	58.0	59.4	
West	West	Li		0.0	34.9	44.2	44.7	49.7	52.9	35.6	27.7	0.0	54.0	55.5	

8.5 Calculated Façade Noise Levels



8.6 3D View of Site



9 PLANT

It is proposed that two ASHP units are to be installed to the rear of the new building to the side of the decking. The ASHP's have the following sound power data supplied by the manufacturer.

Make & Model	Location	Number of Units	Lw dB(A)
Samsung EHS Mono HT Quiet 8kW	Rear of Building	2	46.0

9.1 Inputted Noise Levels

Based on the above noise levels, the following values have been inputted into the CADNA A 3D modelling software.

Point Source

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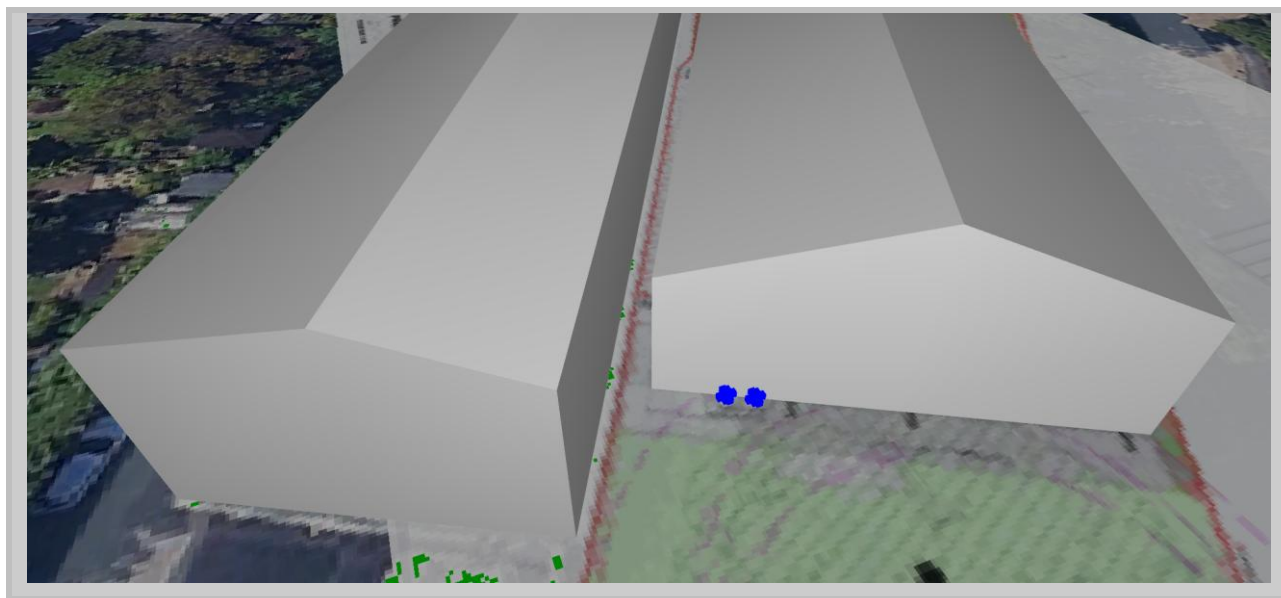
Help

Name	M. ID	Result. PWL			Lw / Li		Correction				Sound Reduction	Attenuation	Operating Time			K0	Freq.	Direct.	Height
		Day	Evening	Night	Type	Value	norm.	Day	Evening	Night	R	Area	Day	Special	Night		(dB)	(Hz)	
		(dBA)	(dBA)	(dBA)				dB(A)	dB(A)	dB(A)	dB(A)	(m²)	(min)	(min)	(min)	(dB)			(m)
Samsung EHS Mono HT Quiet 8kW		46.0	46.0	46.0	Lw	46		0.0	0.0	0.0						0.0	1000	(none)	0.60
Samsung EHS Mono HT Quiet 8kW		46.0	46.0	46.0	Lw	46		0.0	0.0	0.0						0.0	1000	(none)	0.60

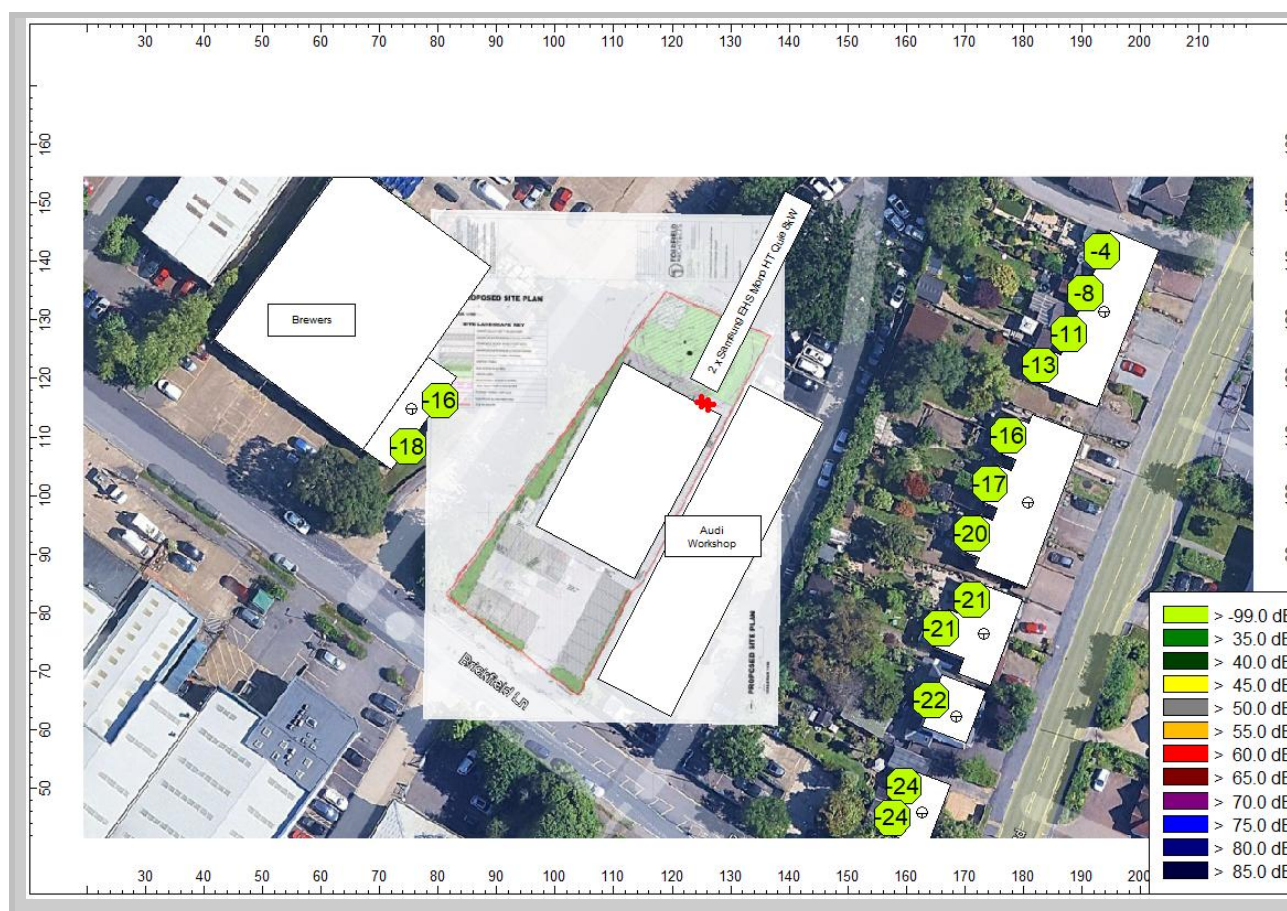
INPUTTED NOISE LEVELS

INPUTTED NOISE LEVELS

9.2 3D View of Plant



9.3 Calculated Façade Noise Levels



Based on these recommendations, the following assessments can be made:-

9.4 Accumulative Impact

Rating Level Calculated Façade Level	Daytime (19:00 – 23:00) L_{Aeq} 1 hour dB
Vehicle Movement	35.0 dB
Patron Noise	35.0 dB
Noise Breakout	21.0 dB
ASHP's	-4 dB
Total Combined Noise Level	38.0 dB

Based on the above being achieved, the following noise assessment can be concluded.

10 BRITISH STANDARD 4142:2014+A1:2019

10.1 Criteria

We have calculated the nearest noise sensitive premises to that of the residential accommodation units nearby with the proposed plant being no closer than 8m away. London City Council's Environmental Health Department will require a criteria of -10 dB below background noise level due to the close proximity of the nearest noise sensitive premises.

10.2 Scope of British Standard 4142: 2014

In the assessment of the existing surrounding commercial premises, consideration has been given to the scope of British Standard 4142:2014+A1:2019, which in section 1, details applicability of this standard to rating assessing sound of an industrial and/or commercial nature. It is considered appropriate that both the background noise levels and the rating noise levels obtained fall within the scope of British Standard 4142:2014+A1:2019 by using outdoor sound levels to assess the effect of sound on local residents.

10.3 Terms and Definitions

Symbol	Term	Definition
AP	Assessment Position	Position externally at the façade property under investigation at which the assessment is undertaken which is usually 1m from the 1 st floor bedroom window.
EP	Equivalent Position	Position at which the background noise levels are measured if there is no access to the assessment position or if source under investigation is audible.
$L_s = L_{Aeq, T}$	Specific Level	The average continuous equivalent sound pressure level of the source at the assessment position.
$L_{A,Tr}$	Rating Level	The average continuous equivalent sound pressure level of the source at the assessment position with a correction to account for the characteristic features.
$L_r = L_{Aeq, T}$	Residual Level	The average continuous equivalent sound pressure level at the assessment position without the source operating.
$L_{A90, T}$	Background Level	The sound pressure level that is not exceeded 90% of the time at the assessment position.
$L_a = L_{Aeq, T}$	Ambient Level	The totally encompassing sound at the assessment position including the residual and specific noise.

10.4 Assessment Position

The assessment position 1 was established as the residential accommodation nearby and no closer than 72m from the proposed ASHP's.

10.5 Rating Levels (Character Correction)

It is appropriate to add a character correction where there is a new source that cannot be measured in line with BS 4142:2014+A1:2019. There are 3 methods for approaching this.

- Subjective method
- Objective method (for tonality)
- Reference method

10.6 Subjective Method

The subjective method establishes a rating penalty that is added to the specific noise level if any of the following is present at the assessment position. If a tone is expected to be present a character correction of 0 dB to 6 dB is added depending on how perceptible it is at noise sensitive locations.

BS 4142:2014+A1:2019 – Section 9.2 Subjective Method	Perceptibility to noise sensitive facades	Correction
Tonality Ranging from not tonal to prominently tonal	Not tonal	+0
	Just perceptible	+2
	Clearly perceptible	+4
	Highly perceptible	+6

If the source is expected to be impulsive a character correction of 0 dB to 9 dB is added depending on how perceptible it is at noise sensitive locations.

BS 4142:2014+A1:2019 – Section 9.2 Subjective Method	Perceptibility to noise sensitive facades	Correction
Impulsivity Considering both the rapidity and any overall change in sound levels	Not impulsive	+0
	Just perceptible	+3
	Clearly perceptible	+6
	Highly perceptible	+9

When the sound features are neither tonal nor impulsive, a character correction of +3 is added for the readily distinctive quality against the acoustic environment or for the intermittency of the source.

BS 4142:2014+A1:2019 – Section 9.2 Subjective Method	Perceptibility to noise sensitive facades	Correction
Readily Distinctive	Is not present	+0
	Is present	+3
Intermittency	Is not present	+0
	Is present	+3

10.7 Assessment Criterion

The significance of the resulting noise on the residential property depends on the margin by which it exceeds the background noise levels. British Standard 4142:2014+A1:2019 provides the following guidance within section 11.

Difference	Assessment of Impact
+10 dB	Indication of a significant adverse impact
+5 dB	Indication of an adverse impact
+0 dB	Indication of low impact

10.8 Accumulative Assessments

10.8.1 Daytime (07:00 – 23:00).

Item	Calculation	Clause	Commentary
Specific Noise Level $L_{Aeq,1 \text{ hour}}$	38 dB	7	Calculated using ISO 9613:1996 ^[3] .
Tonality	+2 dB	8.1	Tonality Characteristic
Impulsivity	+3 dB	8.1	Impulsive Characteristic
Rating Level	43 dB	9.1	The acoustic feature correction is added to the specific noise level
Background Noise Level $L_{A90,1 \text{ hour}}$	46 dB	8.1	Modal Background Noise Level
Assessment Level	-3 dB	11	The background level is subtracted from the rating level.
Assessment	-3 dB		
Conclusion	The assessment level is 'Low Impact'		

10.9 Assessment Conclusion

The background noise levels were measured at the equivalent position, chosen as it most represented the closest noise sensitive façade, located at a representative position between 07:00 on 5th August and 07:00 on 7th August 2026.

It can be seen from the above assessments that with any new plant being installed, an assessment conclusion of Low Impact could be expected. Therefore, no further mitigation measures would be required.

11 NPPF & NPSE

The National Planning Policy Framework 2024 (NPPF) and assessments to the Noise Policy Statement for England 2010 (NPSE) should be made in conjunction with each other. Paragraphs 198 - 201 of the National Planning Policy Framework 2024 (NPPF) states the following:

Paragraph 198 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.

Paragraph 199 Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications.

Paragraph 200 Planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities (such as places of worship, pubs, music venues and sports clubs). Existing businesses and facilities should not have unreasonable restrictions placed on them as a result of development permitted after they were established. Where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or 'agent of change') should be required to provide suitable mitigation before the development has been completed.

Paragraph 201 The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities

The Noise Policy Statement for England gives various levels of effect as detailed within this report.

With the glazing / ventilation specifications achieved within this report, the development can be implemented within the guidelines of the aforementioned documents and ensure a conclusion of **NOEL – No Observed Effect Level**. This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise.

12 CONCLUSIONS

12.1 Summary of Report

12.1.1 Measured Background Noise Levels

Continuous background noise measurements were undertaken between 5th – 7th January 2026 at a representative position. The recorded levels are as follows:

12.1.2 Daytime 07:00 – 23:00

Assessment Position	Date Start	Date Finish	Daytime L _{Aeq}	Daytime L _{A90}
Position 1	05/08/2026	07/08/2026	54.6	46.0

12.2 Proposed Vehicle Movement Assessment

The new building will continue to be used as a scout hut along with a proposed gym. Paul Basham Associates have carried out an assessment and have suggested an additional 71 vehicles will be using the car park. Therefore, calculations have been carried out to demonstrate if the neighbouring properties could be affected by the introduction of these additional vehicle movements.

12.3 Patron Noise

Although people generally arrive and depart without conversing in the car park area, the new café and community space that is proposed, could generate conversations in the car parking and therefore a nominal 10 people, with 5 people talking at the same time has been assessed to demonstrate if the neighbouring properties could be affected by the introduction of these additional people talking.

12.4 Noise Breakout

It is proposed that the new building will provide a new gym facility, this will be for one-to-one sessions and small group sessions for children suffering with cancer. As this is not a commercial gym, an internal noise level has been calculated for a Blaze Intensity Class reduced.

12.5 ASHP's

It is proposed that two ASHP units are to be installed to the rear of the new building to the side of the decking. The ASHP's have the following sound power data supplied by the manufacturer.

Make & Model	Location	Number of Units	L _w dB(A)
Samsung EHS Mono HT Quiet 8kW	Rear of Building	2	46.0

12.6 Accumulative Assessment of Vehicle Movement, Patron Noise, Noise Breakout & Plant

12.6.1 Daytime 07:00 – 23:00

Item	Calculation	Clause	Commentary
Specific Noise Level $L_{Aeq,1\text{ hour}}$	38 dB	7	Calculated using ISO 9613:1996 ^[3] .
Tonality	+2 dB	8.1	Tonality Characteristic
Impulsivity	+3 dB	8.1	Impulsive Characteristic
Rating Level	43 dB	9.1	The acoustic feature correction is added to the specific noise level
Background Noise Level $L_{A90,1\text{ hour}}$	46 dB	8.1	Modal Background Noise Level
Assessment Level	-3 dB	11	The background level is subtracted from the rating level.
Assessment	-3 dB		
Conclusion	The assessment level is 'Low Impact'		

12.7 Conclusions

The operation of the new building and any proposed plant has been assessed to establish if it will have a demonstrable adverse effect in terms of noise that outweighs the benefits of the development. Measurements have been undertaken in accordance with British Standard 4142: 2014+A1: 2019 and ISO 1996 – Part 2: 2017. This report has established the existing background noise levels at a representative position to the site and the assessment of the impact of the site operation and any proposed plant on nearby residential properties. The resulting emissions from the site running on a worst-case scenario show no conflict with 'low impact' criteria and give a strong indication that complaint and impact on the local amenity is unlikely.

12.8 NPPF 2024

National Planning Policy Framework 2024 suggests that planning permission should be granted unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in the framework taken as a whole, or specific policies in the framework indicate the application should be restricted.

12.9 Planning Approval Recommendation

Based on the calculations and assessments made within this report it is the professional opinion of Sound Advice Acoustics Ltd that the proposed development can demonstrate compliance with the National Planning Policy Framework 2024, NPPF & NPSE.

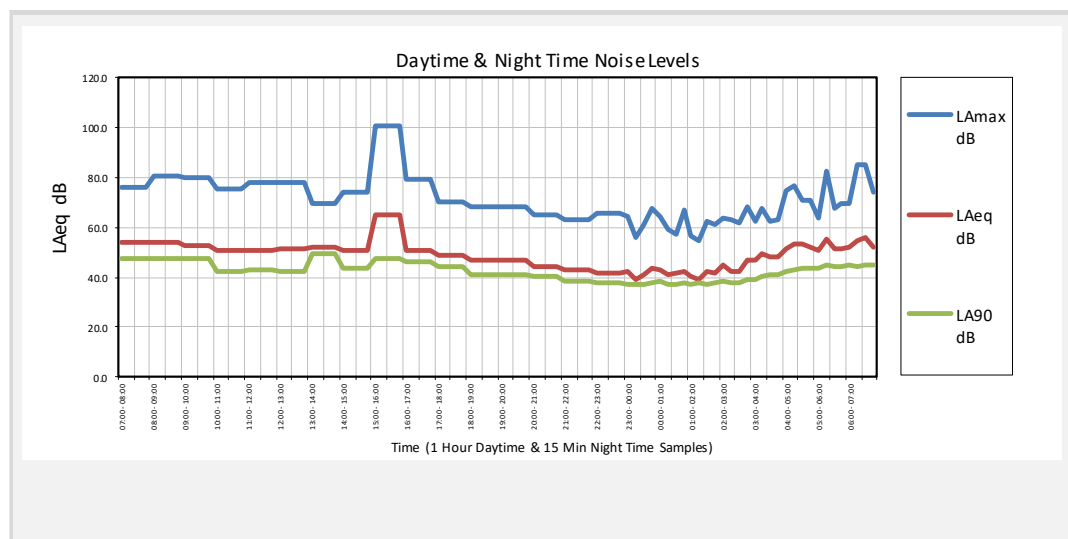
13 APPENDIX A – RESULTS

13.1 5th – 6th August 2026

NOISE LEVEL SUMMARY ASSESSMENT				Octave Band Centre Frequency (Hz)								
Date / Time	LAeq	LAmaz	LA90	63	125	250	500	1.0k	2.0k	4.0k	8.0k	16.0k
DAYTIME 07:00 - 23:00 LAeq 16 HOUR & Cor r esponding LAmaz 16 HOUR	54.6	100.3	47.0	59.0	54.8	53.8	50.1	49.2	47.4	43.6	35.8	28.7
NIGHT TIME 23:00 - 07:00 LAeq 8 HOUR & Cor r esponding LAmaz 8 HOUR	49.7	85.0	37.0	57.4	52.4	49.1	45.6	44.5	42.9	35.2	24.7	11.3

DAYTIME NOISE LEVELS 07:00 - 23:00 1 HOUR SAMPLES				Octave Band Centre Frequency (Hz)								
Date / Time	LAeq	LAmaz	LA90	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	53.8	76.1	47.4	61.1	55.8	51.7	48.4	49.1	46.9	42.4	30.3	12.8
08:00 - 09:00	53.9	80.3	47.5	61.0	53.4	51.1	49.1	49.0	47.2	42.6	31.2	13.9
09:00 - 10:00	52.9	80.1	47.4	58.3	53.3	49.4	47.2	48.3	46.5	41.3	28.6	11.2
10:00 - 11:00	50.9	75.0	42.6	59.4	52.6	50.5	47.3	46.1	43.1	37.1	25.5	10.0
11:00 - 12:00	50.6	78.1	42.8	60.8	52.7	49.8	46.7	46.0	42.9	36.9	25.2	9.5
12:00 - 13:00	51.5	77.7	42.4	59.5	53.5	51.1	48.0	46.4	43.6	38.2	27.5	12.9
13:00 - 14:00	52.3	69.3	49.4	61.4	52.9	49.8	48.3	47.4	45.3	39.0	26.2	10.4
14:00 - 15:00	50.7	74.1	43.4	58.1	53.0	50.5	47.7	45.9	42.6	36.3	24.3	10.7
15:00 - 16:00	64.6	100.3	47.5	65.0	64.3	64.2	60.1	58.8	57.5	54.4	47.3	40.6
16:00 - 17:00	50.9	79.4	46.2	55.9	51.8	48.7	46.3	46.0	43.9	39.5	30.4	13.4
17:00 - 18:00	49.0	69.9	44.5	55.0	49.3	48.2	45.6	44.6	40.8	35.2	26.0	11.4
18:00 - 19:00	46.5	68.1	40.9	54.0	47.1	46.0	42.7	42.6	38.2	31.0	20.5	8.2
19:00 - 20:00	44.5	64.7	40.0	50.8	43.7	44.2	40.4	41.1	35.5	26.7	17.3	7.4
20:00 - 21:00	42.7	62.8	38.7	48.9	44.4	43.7	38.8	38.9	33.2	24.5	15.0	6.9
21:00 - 22:00	41.6	65.8	37.7	47.1	41.7	42.9	37.9	37.9	31.8	23.0	14.1	7.4
22:00 - 23:00	41.7	71.9	37.4	46.6	41.6	43.0	38.7	37.2	32.5	25.7	15.8	7.4

NIGHT TIME NOISE LEVELS 23:00 - 07:00 15 MINUTE SAMPLES				Octave Band Centre Frequency (Hz)								
Date / Time	LAeq	LAmaz	LA90	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 23:15	42.3	64.2	37.3	48.4	41.2	43.6	39.7	36.9	33.6	27.9	16.8	7.8
23:15 - 23:30	38.9	56.0	37.0	46.3	40.3	41.8	35.8	34.0	28.0	20.6	13.8	6.8
23:30 - 23:45	41.2	61.2	37.3	47.6	41.9	43.0	38.5	36.4	31.8	23.5	14.4	6.8
23:45 - 00:00	43.6	67.2	37.6	52.5	44.4	44.4	39.7	38.4	36.1	29.2	18.0	10.5
00:00 - 00:15	43.1	64.0	38.1	55.0	44.2	43.1	39.3	38.5	34.9	28.5	16.1	6.9
00:15 - 00:30	40.9	59.4	37.0	46.5	40.6	42.1	37.3	36.0	32.8	25.1	13.5	6.6
00:30 - 00:45	41.3	57.2	37.2	48.0	41.8	42.9	38.0	35.5	33.5	27.0	14.8	6.7
00:45 - 01:00	42.0	66.6	37.5	54.1	42.4	43.1	38.6	37.1	33.1	25.9	15.3	6.9
01:00 - 01:15	40.6	56.5	37.3	47.2	41.2	43.2	37.6	35.6	30.6	23.1	14.8	6.9
01:15 - 01:30	39.3	54.7	37.5	45.3	40.3	42.6	36.2	34.0	28.7	21.9	14.4	6.9
01:30 - 01:45	42.0	62.3	37.1	51.2	47.2	43.3	38.0	37.3	33.0	24.6	14.2	6.7
01:45 - 02:00	41.6	60.8	37.6	46.6	41.6	42.7	37.8	37.4	33.2	24.2	14.7	6.7
02:00 - 02:15	44.8	63.9	38.1	53.0	44.5	44.8	41.0	40.3	37.0	29.1	18.5	7.6
02:15 - 02:30	42.3	63.0	37.7	49.0	42.2	43.7	38.5	37.7	33.9	26.5	18.7	7.5
02:30 - 02:45	42.2	61.7	38.0	48.7	41.9	43.8	38.1	37.7	33.7	26.6	17.6	7.4
02:45 - 03:00	46.9	68.4	38.8	55.3	46.6	46.9	43.7	42.3	39.2	31.0	19.9	8.2
03:00 - 03:15	46.8	62.2	39.4	58.0	46.4	46.3	42.9	42.2	39.3	30.7	19.6	8.1
03:15 - 03:30	49.1	67.2	40.0	55.2	49.3	48.7	45.0	44.1	42.0	35.4	24.4	9.6
03:30 - 03:45	47.9	62.4	41.3	61.3	48.1	46.0	43.2	44.1	40.3	31.8	24.1	8.7
03:45 - 04:00	48.2	63.1	41.2	57.6	47.9	46.6	43.8	44.3	40.8	33.0	21.9	8.5
04:00 - 04:15	51.4	74.4	42.1	57.7	52.3	52.3	49.0	46.1	43.0	35.8	24.4	9.4
04:15 - 04:30	53.1	76.8	43.0	55.5	53.5	51.5	53.6	46.9	43.6	36.4	24.5	11.1
04:30 - 04:45	53.4	71.0	43.4	61.6	54.8	51.8	48.7	48.9	46.6	39.2	27.6	17.9
04:45 - 05:00	52.0	70.7	43.7	61.3	57.0	50.7	47.4	47.2	44.9	37.6	26.4	12.0
05:00 - 05:15	50.4	63.5	43.5	60.0	53.3	49.4	46.0	46.2	42.7	34.5	23.2	9.5
05:15 - 05:30	55.0	82.1	44.9	63.2	63.9	58.5	50.6	48.5	44.8	37.9	26.7	14.3
05:30 - 05:45	51.4	67.6	44.3	60.7	52.1	49.9	46.6	47.4	44.3	36.1	24.8	19.0
05:45 - 06:00	51.5	69.3	44.4	58.9	53.8	50.8	48.3	46.8	43.5	36.1	25.5	11.2
06:00 - 06:15	51.7	69.6	45.0	61.3	53.3	50.5	48.1	46.9	44.5	37.8	25.6	10.4
06:15 - 06:30	54.8	84.9	44.1	58.2	51.3	50.4	46.6	50.1	50.3	37.9	26.9	10.4
06:30 - 06:45	55.7	85.0	44.7	59.3	52.1	49.8	48.2	48.6	51.8	44.2	32.9	15.1
06:45 - 07:00	52.2	73.8	44.6	59.7	53.5	50.4	47.9	47.2	44.9	40.9	33.4	15.3

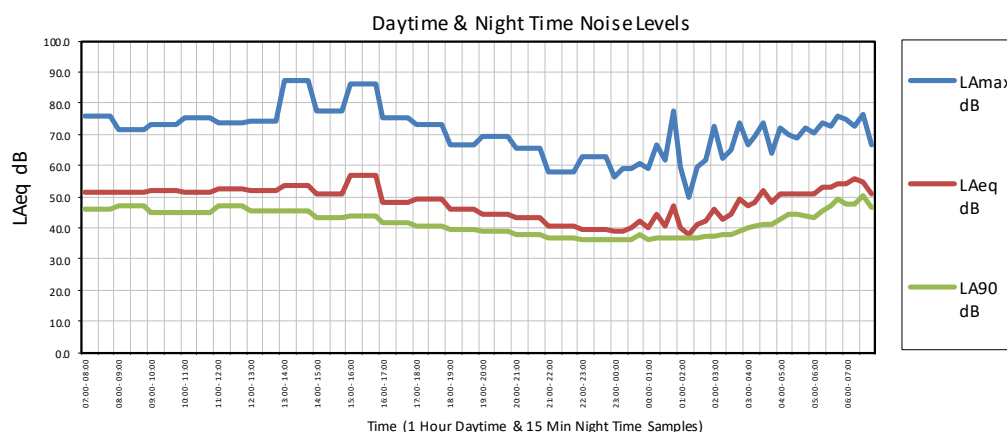


13.2 6th – 7th August 2026

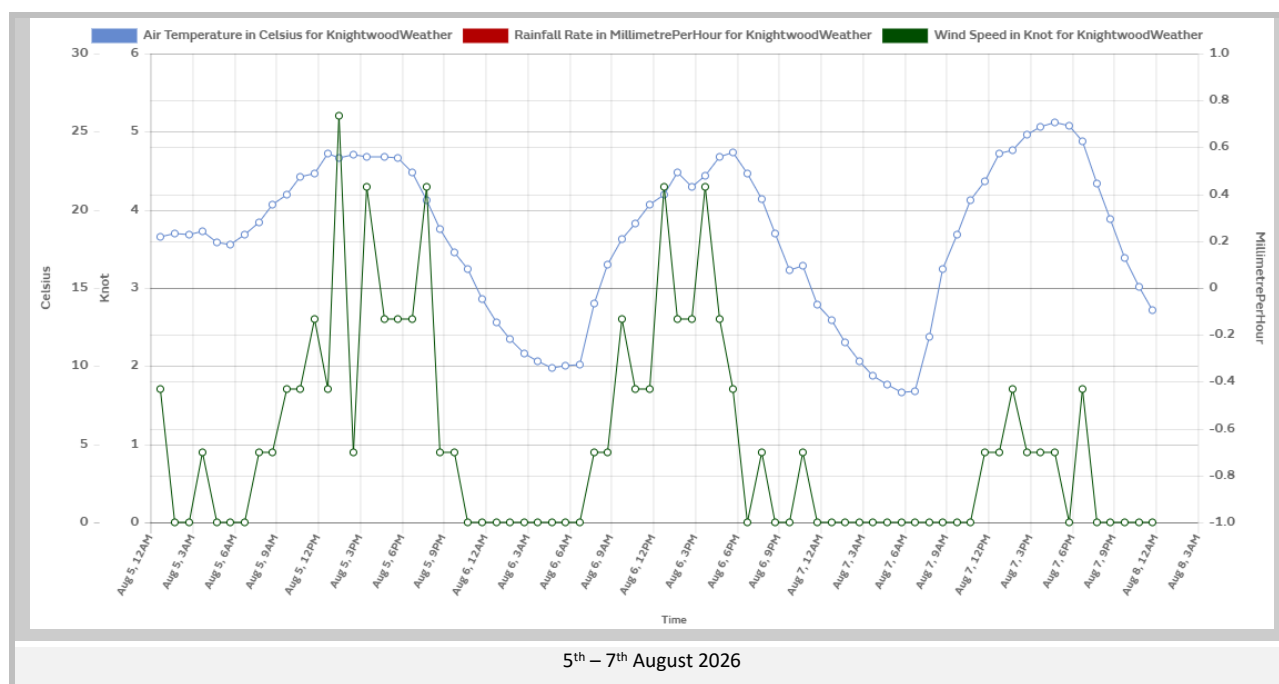
NOISE LEVEL SUMMARY ASSESSMENT				Octave Band Centre Frequency (Hz)								
Date / Time	L _{Aeq}	L _{Amax}	L _{A90}	63	125	250	500	1.0k	2.0k	4.0k	8.0k	16.0k
DAYTIME 07:00 - 23:00 L_{Aeq} 16 HOUR & Corresponding L_{Amax} 16 HOUR	50.9	87.3	46.0	57.2	52.1	49.8	46.7	45.8	44.2	36.8	26.7	13.2
NIGHTTIME 23:00 - 07:00 L_{Aeq} 8 HOUR & Corresponding L_{Amax} 8 HOUR	49.8	77.4	37.0	57.7	51.9	48.3	45.1	45.1	42.6	37.4	26.1	10.6

DAYTIME NOISE LEVELS 07:00 - 23:00 1 HOUR SAMPLES												
Date / Time	L _{Aeq}	L _{Amax}	L _{A90}	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
07:00 - 08:00	516	75.8	45.9	58.5	52.5	517	48.2	46.4	44.0	37.3	26.9	11.8
08:00 - 09:00	514	71.8	47.4	57.4	51.0	52.9	48.3	45.6	42.6	36.7	26.2	10.9
09:00 - 10:00	517	73.4	44.9	59.9	53.6	52.2	48.6	46.5	43.6	37.4	27.3	11.3
10:00 - 11:00	512	75.6	44.9	58.2	51.9	50.5	47.8	46.3	43.8	37.4	28.0	11.3
11:00 - 12:00	52.3	73.6	47.3	60.6	54.8	51.3	48.7	47.2	45.1	39.0	27.4	12.1
12:00 - 13:00	519	74.2	45.6	59.9	54.9	50.7	47.5	46.3	45.4	38.5	27.8	12.5
13:00 - 14:00	53.6	87.3	45.6	59.6	55.0	53.0	50.9	48.4	45.2	40.4	32.3	20.9
14:00 - 15:00	50.8	77.7	43.5	58.2	53.4	50.0	47.5	46.4	42.5	35.6	23.7	9.9
15:00 - 16:00	56.6	86.1	43.7	57.7	54.6	49.9	48.1	51.1	52.5	42.5	32.3	18.5
16:00 - 17:00	48.5	75.5	41.5	55.6	50.3	46.6	44.1	44.3	40.6	35.4	24.5	9.4
17:00 - 18:00	49.1	73.1	40.4	55.1	52.5	49.0	45.4	44.5	41.0	35.2	23.2	8.6
18:00 - 19:00	45.9	66.9	39.5	51.2	47.3	45.3	42.2	42.3	37.1	28.1	16.9	8.7
19:00 - 20:00	44.1	69.4	39.1	50.5	45.3	44.0	39.3	40.7	35.9	26.1	16.0	7.2
20:00 - 21:00	43.5	65.7	37.8	51.0	46.8	44.8	40.1	39.4	33.6	23.8	14.3	7.0
21:00 - 22:00	40.3	57.9	37.0	46.8	42.0	42.6	36.5	36.3	30.2	21.1	13.1	6.8
22:00 - 23:00	39.7	62.6	36.5	45.9	40.5	42.4	35.7	35.2	30.0	21.3	13.3	6.7

NIGHT TIME NOISE LEVELS 23:00 - 07:00 15 MINUTE SAMPLES												
Date / Time	L _{Aeq}	L _{Amax}	L _{A90}	63	125	250	500	1.0 k	2.0 k	4.0 k	8.0 k	16.0 k
23:00 - 23:15	38.7	56.6	36.2	45.8	40.9	419	35.7	33.9	27.0	19.0	13.3	6.9
23:15 - 23:30	38.7	59.2	36.3	47.4	41.1	42.1	34.9	33.2	28.7	22.5	16.2	7.1
23:30 - 23:45	39.9	59.1	36.3	46.1	41.0	42.4	35.6	35.1	31.2	23.3	13.8	6.8
23:45 - 00:00	42.3	60.7	37.7	53.5	43.5	42.5	38.5	37.4	34.3	28.3	15.2	6.7
00:00 - 00:15	40.1	58.8	36.3	48.9	41.0	418	36.3	35.4	31.2	22.8	12.7	6.9
00:15 - 00:30	44.2	66.6	37.0	55.2	47.2	43.9	40.5	39.4	36.2	29.9	19.3	8.3
00:30 - 00:45	40.5	61.8	36.5	47.3	42.4	42.4	36.3	35.8	32.1	23.5	14.6	8.9
00:45 - 01:00	47.2	77.4	37.0	50.7	46.1	47.9	44.2	40.8	39.7	35.2	25.7	10.7
01:00 - 01:15	40.3	59.7	37.0	47.1	41.4	42.4	37.3	35.9	29.9	21.3	13.0	6.6
01:15 - 01:30	38.0	50.0	36.6	45.3	39.8	42.4	35.3	32.1	25.1	17.6	11.6	6.5
01:30 - 01:45	41.0	59.4	36.8	50.0	42.3	42.8	37.2	36.7	31.9	23.1	14.5	7.0
01:45 - 02:00	42.5	61.6	37.2	48.7	42.3	44.1	39.2	37.6	33.8	25.3	16.5	7.3
02:00 - 02:15	46.2	72.5	37.6	52.7	46.3	46.8	42.4	41.2	38.6	32.7	21.5	8.4
02:15 - 02:30	42.8	62.1	37.9	50.5	43.5	44.1	38.8	38.0	34.9	28.0	17.8	7.0
02:30 - 02:45	44.6	64.8	37.9	51.4	44.9	44.1	40.0	40.3	37.2	30.3	20.1	7.5
02:45 - 03:00	49.5	73.7	39.0	55.5	51.1	48.1	44.6	44.4	42.6	37.9	26.8	12.1
03:00 - 03:15	47.1	66.9	39.8	54.2	46.9	46.1	44.1	42.3	39.8	32.9	21.2	9.6
03:15 - 03:30	48.4	69.4	40.6	55.6	53.8	50.5	44.0	43.2	40.0	32.3	21.4	8.9
03:30 - 03:45	51.9	73.8	41.2	56.5	54.1	51.2	48.3	46.8	44.3	39.4	29.1	11.7
03:45 - 04:00	48.4	64.0	41.3	56.0	47.9	46.5	44.1	44.7	40.7	32.8	20.4	9.7
04:00 - 04:15	50.8	72.0	42.9	60.2	52.6	50.8	47.4	45.9	43.1	35.7	25.2	11.1
04:15 - 04:30	51.0	70.1	44.3	61.1	52.1	49.3	46.2	46.8	44.2	36.3	24.0	9.1
04:30 - 04:45	51.1	68.8	44.5	58.9	50.5	49.3	46.7	47.1	43.5	38.0	26.8	14.1
04:45 - 05:00	51.0	72.2	43.9	58.4	51.1	49.6	46.9	47.0	43.6	36.2	24.8	10.9
05:00 - 05:15	51.0	70.5	43.6	62.8	60.1	50.3	45.9	46.1	42.4	34.8	24.5	13.1
05:15 - 05:30	53.1	73.9	45.3	64.1	60.6	54.8	47.6	47.6	45.0	37.3	25.2	10.8
05:30 - 05:45	53.1	72.5	46.9	58.6	52.7	50.6	47.7	48.9	46.5	40.7	28.5	13.8
05:45 - 06:00	54.3	76.1	49.2	58.5	52.1	49.0	47.6	50.1	47.7	44.2	32.1	12.6
06:00 - 06:15	54.1	74.9	47.4	60.7	51.7	49.7	50.0	49.0	47.4	43.6	31.4	12.6
06:15 - 06:30	55.6	72.7	47.6	63.6	55.0	51.0	50.7	50.7	49.0	44.3	33.4	16.1
06:30 - 06:45	54.6	76.3	50.1	61.4	52.9	50.8	48.7	49.9	48.1	44.2	32.7	13.5
06:45 - 07:00	51.1	66.6	46.7	58.1	51.2	49.2	46.2	47.0	43.8	37.7	26.8	10.1



14 APPENDIX B – WEATHER CONDITIONS



15 APPENDIX C – UNCERTAINTY BUDGET

15.1 Scope

British Standard 4142:2014+A1:2019 entitled “*Uncertainty*” requires the following:

“Consider the level of uncertainty in the data and associated calculations. Where the level of uncertainty could affect the conclusion, take reasonably practicable steps to reduce the level of uncertainty. Report the level and potential effects of uncertainty.”

Annex B of British Standard 4142:2014+A1:2019 entitled “consideration of uncertainty and good practice for reducing uncertainty” makes reference to the University of Salford publication entitled “A Good Practice Guide on the Source and Magnitude of Uncertainty arising in the Practical Measurement of Environmental Noise” edition 1a dated May 2007.

15.2 Uncertainty of Measured Values

Ref	Source of Uncertainty Section 10.2 British Standard 4142:2014+A1:2019	Value dB(A)	Distribution (Divisor)	Uncertainty dB(A)
a	Variability and complexity of sound source	0.50	$\sqrt{2}$	0.35
b	Variability and complexity of residual sound	0.00	$\sqrt{3}$	0.00
c	Residual sound present in specific sound	0.00	$\sqrt{3}$	0.00
d	Background noise position selection	0.10	$\sqrt{3}$	0.06
e	Distance between source and receiver	0.15	$\sqrt{2}$	0.11
f	Number of measurements taken (5 Days)	0.10	$\sqrt{3}$	0.06
g	Measurement time interval variation	0.00	$\sqrt{2}$	0.00
h	Range of times measurements taken	0.10	$\sqrt{3}$	0.06
i	Suitable weather conditions during measurements	0.20	$\sqrt{3}$	0.12
j	Application of British Standard 4142:2014+A1:2019	0.10	$\sqrt{2}$	0.07
k	Rounding of each measurement	0.05	$\sqrt{3}$	0.03
l	Instrumentation – Calibration	1.20	$\sqrt{3}$	0.69
Reported Expanded Uncertainty (95% confidence, convergence k = 2)				1.61

15.3 Uncertainty in Calculations

Ref	Source of Uncertainty Section 10.2 British Standard 4142:2014+A1:2019	Value dB(A)	Distribution (Divisor)	Uncertainty dB(A)
a	Impact of measured sound level on calculations	0.00	$\sqrt{2}$	0.00
b	Assumption on sound power level of source	0.00	$\sqrt{3}$	0.00
c	Uncertainty of calculation method (ISO 9613)	0.20	$\sqrt{3}$	0.12
d	Model fit against real world conditions	0.10	$\sqrt{3}$	0.06
e	Error in the calculation process	0.15	$\sqrt{2}$	0.11
Reported Expanded Uncertainty (95% confidence, convergence k = 2)				0.33

15.4 Uncertainty from Other Factors

Ref	Source of Uncertainty Section 10.2 British Standard 4142:2014+A1:2019	Value dB(A)	Distribution (Divisor)	Uncertainty dB(A)
a	Standing waves or interference patterns	0.15	$\sqrt{3}$	0.09
b	Approximation of sound source to a point source	0.10	$\sqrt{3}$	0.06
c	Maintenance and repair of source over 15 years	0.50	$\sqrt{3}$	0.29
Reported Expanded Uncertainty (95% confidence, convergence k = 2)				0.61

15.5 Combined Reported Expanded Uncertainty

Ref	Source of Uncertainty Section 10.2 British Standard 4142:2014+A1:2019	Value dB(A)	Distribution (Divisor)	Uncertainty dB(A)
a	Section 7.1.2. Uncertainty of measured values	2.7	$\sqrt{2}$	1.14
b	Section 7.1.3. Uncertainty of calculations	2.7	$\sqrt{2}$	0.23
c	Section 7.1.4. Uncertainty from other factors	2.7	$\sqrt{2}$	0.43
Combined Reported Expanded Uncertainty (95% confidence, convergence k = 2)				2.55

It should be noted that the uncertainty calculations have assumed a Type B uncertainty.

16 APPENDIX D – BS 4142:2019+A1:2019 INFORMATION

In accordance with BS 4142:2014:A1:2019, section 12, the following information is provided.

16.1 Professional Competence

Acoustic Consultant	Mr Brian Scrivener MIOA
Qualifications	Member of the Institute of Acoustics (MIOA)
Date Certified	June 2003
Time Operating as an active Noise Consultant	Permanently Since June 2003
Professional Position	Owner of Sound Advice Acoustics Ltd & Sound Advice Engineering Managing Director & Share Holder
Professional Status	Noise Consultant
Professional Statement	
I have been active within the field of noise consultancy and noise control engineering since I joined the company in April 1997. Working my way through the company and gaining experience in this specialist field, I qualified as a noise consultant in June 2003 when I passed my Diploma in Noise Control & Engineering from Epsom College under the tutor of Dr Latha Vesudevan. Subsequently I was awarded the status of 'Member of the Institute of Acoustics (MIOA)'. Since then, I have taken over the company and continued to work and develop my professional competence within the field of acoustic consultancy, engineering and noise control.	

16.2 Site Status

Site Attended By	Mr Brian Scrivener MIOA
Baseline Measurements Conducted by	Mr Brian Scrivener MIOA
Site Source Measurements Conducted By	Mr Brian Scrivener MIOA

16.3 Measurement Information – Location 1

Details & Justification	Measurement position 1 was located at the rear of the existing premises, representative of the Nearest Noise Sensitive Premises
Height from Ground	1.5m
Reflective Surfaces	None (Free Field)
Distance to NSP	22m
Distance to Source	82m
Topographical Change (m)	None
Ground between Source and Receiver	100% Hard surface from kitchen extract louvre to residential flats above
Windshield Information	Norsonic Outdoor Microphone Protection Kit Model No: 1212
Distance from Proposed Source to Receiver	72m
NSP* - Noise Sensitive Premises	