

SHARPS REDMORE

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Report

**Francis Court Care Home,
Copthorne**

Plant Noise Assessment

DM/23/2360, Condition 21

Prepared by
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Date 24th April 2026
Project No 2422583

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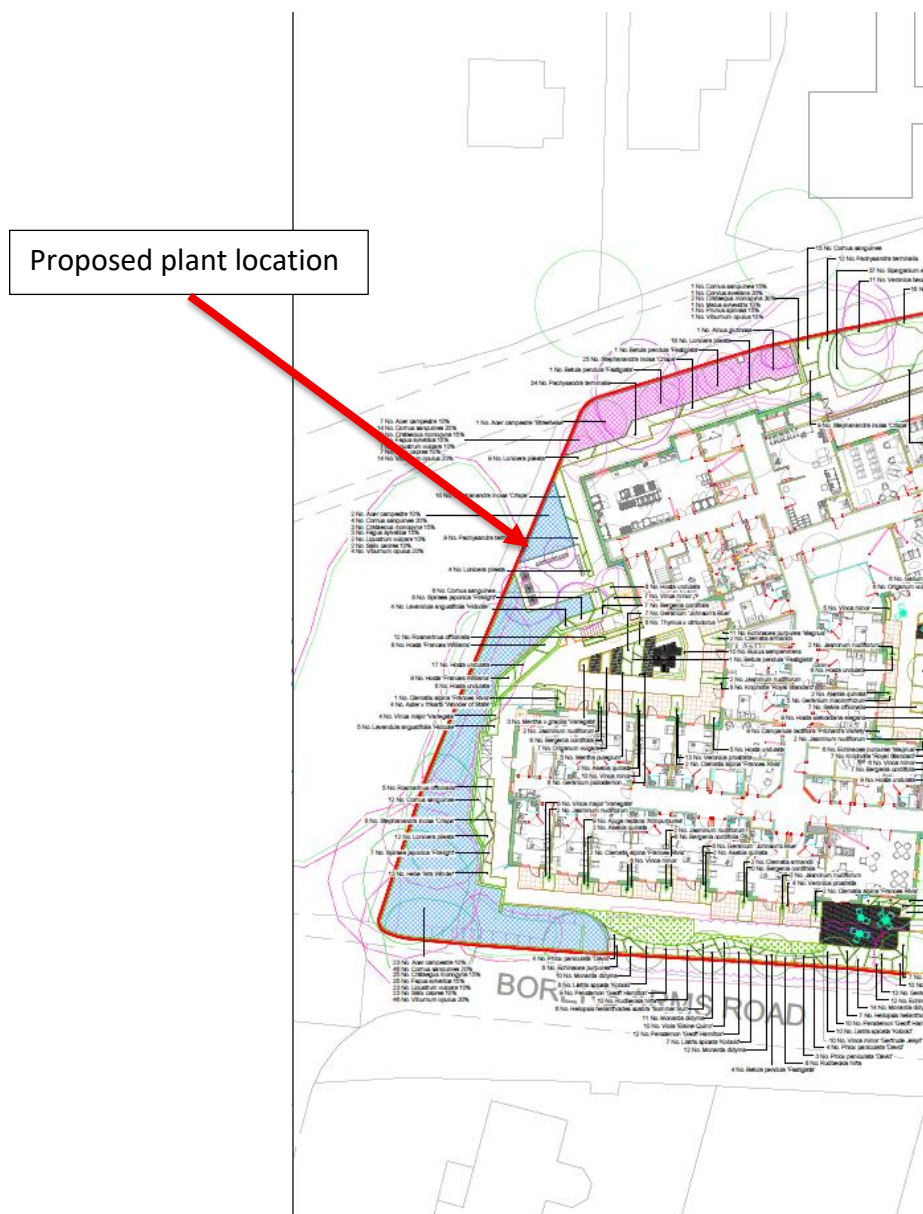
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1.0 Introduction

- 1.1 Sharps Redmore has been instructed to undertake an environmental noise assessment in relation to the proposed installation of mechanical services plant to serve the Care Home, at Francis Court, Copthorne.
- 1.2 The proposal is to install the plant at ground floor, in a plant enclosure on the western boundary of the site - see Figure 1 below:

Figure 1: Proposed plant location



- 1.3 The nearest residential properties are located to the north of the site on Copthorne Bank, and to the south of the site on Bowers Arms Road.
- 1.4 Plant consent has been granted for the development of the site, ref DM/23/2360, subject to a number of planning conditions.

Condition 21 states:

The use hereby permitted shall not come into operation until a scheme has been submitted to the LPA demonstrating that the noise rating level (L_Ar,Tr) of plant and machinery within the build shall be at least 5dB below the background noise level (L_A90,T) at the nearest residential facade. All measurements shall be defined and derived in accordance with BS4142: 2014+A1:2019. The assessment shall be carried out with the plant/machinery operating at its maximum setting. The approved measures shall be implemented before the development is brought into use and thereafter be maintained in accordance with the approved details.

2.0 Assessment methodology and criteria

2.1 The National Planning Policy Framework (NPPF), December 2024, sets out the Government's planning policies for England and "these policies articulate the Government's vision of sustainable development." In respect of noise, Paragraph 198 of the NPPF states the following:

"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; and*
- c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation".*

2.2 Guidance on the interpretation of the policy aims contained within the NPPF is contained within National Planning Policy Guidance (NPPG). The NPPG introduces the concept of a noise exposure hierarchy based on likely average response. The guidance contained in the NPPG is summarised in the table below:

Table 1: Noise Exposure Hierarchy

Perception	Examples of Outcomes	Increasing Effect Level	Action
Not noticeable	No Effect	No Observed Effect	No specific measures required
Noticeable and not intrusive	Noise can be heard, but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No Observed Adverse Effect	No specific measures required
		Lowest Observed Adverse Effect Level	
Noticeable and intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum
		Significant Observed Adverse Effect Level	
Noticeable and disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
Noticeable and very disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

- 2.3 The NPPF and NPPG 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.”*

- 2.4 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.”

- 2.5 Taking an overview of national policy aims and guidance it is clear that when considering the impact of noise, the fact noise can be heard and causes impact, is not a reason to refuse an application as consideration should also be given to the significance of the impact and the mitigation measures available.

Guidance

- 2.6 It is possible to apply objective standards to the assessment of noise and the effect produced by the introduction of a certain noise source may be determined by several methods, as follows:

- i) The effect may be determined by reference to guideline noise values. British Standard (BS) 8233:2014 “Guidance on sound insulation and noise reduction for buildings” and World Health Organisation “Guidelines for Community Noise” contain such guidelines.
- ii) Alternatively, the impact may be determined by considering the change in noise level that would result from the proposal, in an appropriate noise index for the characteristic of the noise in question. There are various criteria linking change in noise level to effect. This is the method that is suited to, for example, the assessment of noise from road traffic because it is capable of displaying impact to all properties adjacent to a road link irrespective of their distance from the road.
- iii) Another method is to compare the resultant noise level against the background noise level (L_{A90}) of the area. This is the method employed by BS 4142:2014+A1:2019 to determine the impact of noise of an industrial or industrial type nature. It is best suited to the assessment of steady or pseudo-steady noise.

Guideline noise values

- 2.7 There are a number of guidance documents that contain recommended guideline noise values. These are discussed below.

- 2.8 British Standard 8233:2014 is principally intended to assist in the design of new dwellings; however, the Standard does state that it may be used in the assessment of noise from new sources being brought to existing dwellings.
- 2.9 The original BS 8233 was based on the advice contained in the draft World Health Organisation document "Guidelines for Community Noise". This document was released in final form in 2000. The World Health Organisation guidance is referenced in the NPSE.
- 2.10 BS 8233:2014 also offers guidance on target noise levels to be achieved within non-residential buildings, depending on use. Detailed below are the typical design noise levels on non-domestic buildings.

Table 2: Extract from BS 8233:2014 Table 6 Typical noise levels in non-domestic buildings

Activity	Location	Design range dB LAeq,T
Speech or telephone communications	Department store Cafeteria, canteen, kitchen	50 - 55
	Concourse Corridor, circulation space	45 - 55
Study and work requiring concentration	Library, gallery, museum	40 - 50
	Staff/meeting room, training room	35 - 45
	Executive office	35 - 40
Listening	Place of worship, counselling, meditation, relaxation	30 - 35

- 2.11 For $L_{Aeq,T}$ criteria the time base (T) given in the document is 16 hours for daytime limits and 8 hours for night time limits. When assessing impact, this has the tendency to smooth out the hourly variations in noise level. As such, our calculations are carried out to a 1 hour time base, which is more stringent assessment than is given in the guidance but is reflective of the actual duration of the delivery process.

Changes in noise level

- 2.12 Changes in noise levels of less than 3 dBA are not perceptible under normal conditions and changes of 10 dB are equivalent to a doubling of loudness. This guidance has been accepted by Inspectors, at Inquiry, to encompass changes in noise levels in the index $L_{Aeq,T}$ in relation to road traffic noise and therefore if of limited use in this case.
- 2.13 The following table shows the response to changes in noise level (known as the Semantic Scale).

Table 3: Changes in noise level

Change in noise level $L_{Aeq,T}$ dB	Response	Impact
<3	Imperceptible	None
3 - 5	Perceptible	Slight
6 - 10	Up to a doubling	Significant
11 - 15	More than a doubling	Substantial
> 15	-	Severe

2.14 As discussed, this BS described a method for rating and assessing sound of industrial and/or commercial nature according to the following summary process:

- i) Carry out a numerical assessment of the noise, taking into the character and areas of uncertainty, by comparing the noise against the existing background noise level. The greater the difference between the two, the greater the impact.
- ii) By considering the noise impact against the context in which it is placed. There are many contextual points to consider when considering an assessment of sound impact including the following:
 - The absolute level of sound;
 - The character and level of the specific sound compared to the existing noise climate;
 - The sensitivity of the receptors;
 - The time and duration that the specific sound occurs. The conclusions of assessments undertaken using alternative assessment methods, for example WHO guideline noise values or change in noise level;
 - The ability to mitigate the specific sound through various methods, for example by screening, the selection of quiet plant equipment, the use of attenuators, through the imposition of noise management plans and good practice, façade design and layout/orientation;
 - The form and scale and scale of a development. For example, does not the proposed development involve a new industrial/commercial premises or is the proposal the installation of new plant or an extension to an existing premises?

2.15 It is therefore entirely possible that whilst the numerical outcome of a BS 4142 assessment is indicative of adverse or even significant adverse impact, when the proposal is considered in context the significance of the impact is reduced to an acceptable level.

Methodologies Selected

2.16 Based on the above guidance, taking into account the above comments, this assessment has been undertaken against the following standards:

- Fixed mechanical plant to residential properties – BS 4142:2014+A1:2019

3.0 Establishing criteria

- 3.1 It is usual in dealing with fixed sources of ventilation and refrigeration noise to use BS 4142:2014+A1:2019 “Method for rating and assessing industrial and commercial sound” as a means of establishing the potential impact from the new sources to the nearest residential properties.
- 3.2 As part of the noise impact assessment undertaken by SLR Consulting Limited, to accompany the original planning application for the development of the site (report ref 414.063432.00001 dated 4th September 2023), an environmental noise survey was undertaken to establish the existing background noise climate. Table E from the SLR report is presented below:

Figure 2: Summary of environmental noise survey data

Table E: Derived Free-Field Period Average Sound Levels, dB

Measurement Details				L _{A90} , 15min		L _{Aeq} , 15min	
Data Range	Location	Period	Time	Range	Typical*	Range	Period Average
Tue 20/09/2023 – Tue 27/09/2023	1	Day	07:00 – 23:00	40 - 61	48	54 - 78	66
		Night	23:00 – 07:00	36 - 52	41	40 - 71	59
	2	Day	07:00 – 23:00	34 - 57	45	49 - 74	64
		Night	23:00 – 07:00	31 - 50	37	32 - 63	54
* Typical values of background sound level have been established from histogram data from Appendix C.							

- 3.3 Based on the above survey data, and the wording of Condition 21, the following criteria has been adopted:

Table 4: Adopted criteria

Receptor location	Adopted criteria L _{Aeq}	
	Daytime (0700-2300)	Night (2300-0700)
Copthorne Bank	43 dB (48-5)	36 dB (41-5)
Borers Arms Road	40 dB (45-5)	32 dB (37-5)

- 3.4 Based on manufacturers noise data and our experience, noise from this type of plant is not impulsive or tonal in character. Whilst individual items of plant may operate intermittently (not all on / off simultaneously) with a target noise level 5 dB below the background noise climate, any individual intermittency will not be readily distinctive against the residual acoustic environment, therefore the specific noise level is considered to be the rating noise level.

4.0 The fixed plant noise control scheme – conclusions and recommendations

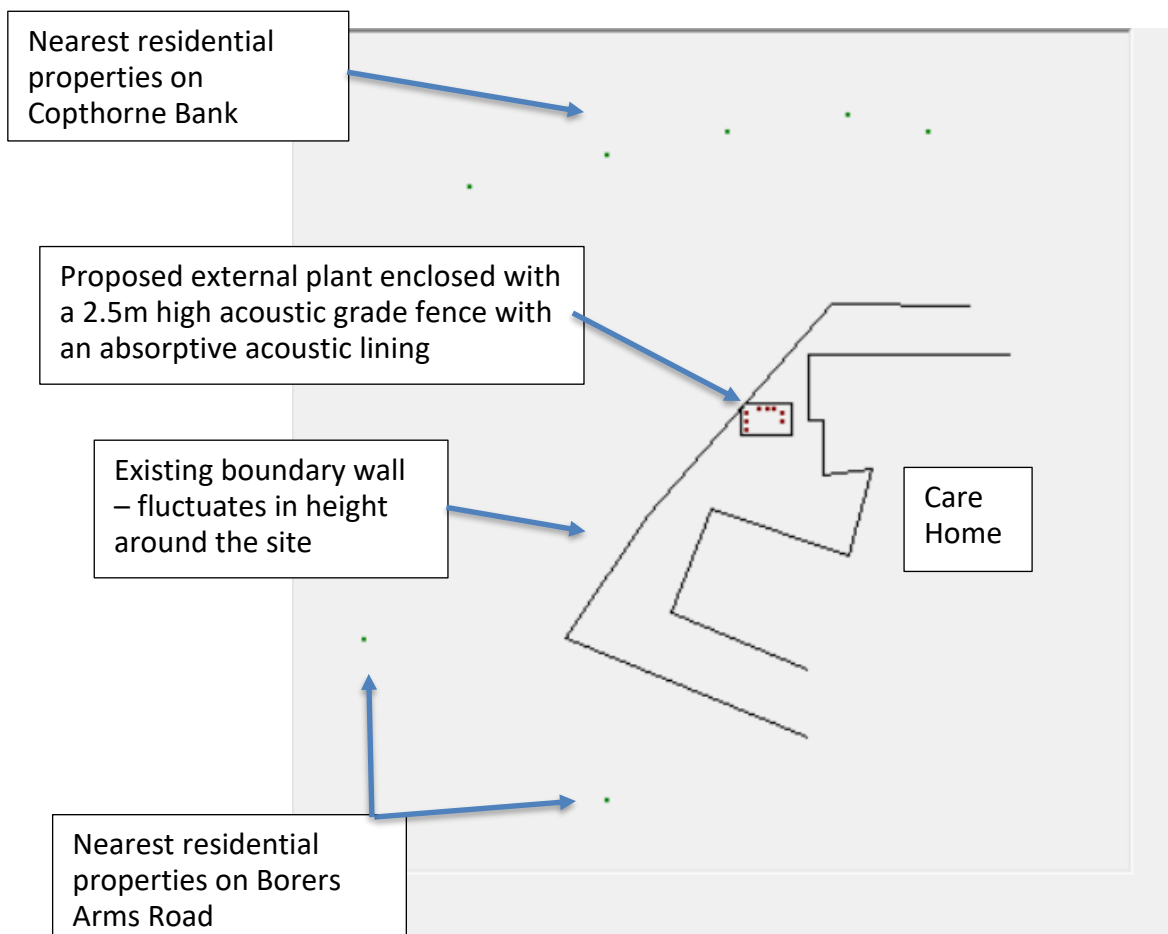
- 4.1 Based on the environmental noise model (see Section 5.0), the predicted noise levels at the nearest residential properties and commercial offices are as follows:

Table 5: Predicted noise levels at nearest residential property

Receptor location	Daytime (0700-2300)		Night (2300-0700)	
	Predicted L _{Aeq}	Criteria L _{Aeq}	Predicted L _{Aeq}	Criteria L _{Aeq}
Copthorne Bank	36 dB	42 dB	36 dB	36 dB
Borers Arms Road	32 dB	40 dB	32 dB	32 dB

- 4.2 The predicted noise levels in Table 5 demonstrate compliance with the adopted criteria.
- 4.3 To achieve the predicted noise levels presented in Table 5, it is proposed that a 2.5m acoustic grade fence with an absorptive inner face (towards the plant) is erected around the plant - see Figure 3.

Figure 3: Sketch from noise model



5.0 The noise model and prediction methodology

5.1 The noise model employed has been written in-house to provide an accurate prediction method for assessing environmental noise from, in particular, plant and equipment items which can be perceived as being point sources. It has been mainly used for the prediction of noise emanating from superstores.

5.2 There are three input spreadsheets containing:

- noise sources data
- receiver data
- acoustic screening data

These are included in Appendix A.

5.3 The noise sources data include one of the following forms for each item of plant:

- either, octave band sound power levels in the range of 63 to 8000Hz – this being available from manufacturer of many of the supply and extract fans.
- or, octave band sound pressure levels in the range of 63 to 8000Hz – this is available usually for the small, externally mounted split units' condenser fans from the manufacturer's product catalogue when measured at one metre in anechoic conditions, thus allowing straight forward calculation of the equivalent sound power levels.
- or, single value sound pressure levels at a stated distance

5.4 The relative location of the plant using X and Y co-ordinates with an arbitrary datum point and a Z (height) co-ordinate based on supporting steel and screening heights from the main contractor and then the equipment heights based, in this case, on the mechanical services contractor drawings.

5.5 Where known, the area and orientation of the noise outlet is entered together with its location adjacent to either one, two or three reflective surfaces so that the calculation can establish the directivity pattern and outlet reflection losses.

5.6 The receiver data needed are the X, Y and Z co-ordinates so that the relative distance and angle can be calculated between the source and the receiver.

5.7 Finally, several types of acoustic screening may be entered. In this case, this is designated "F" meaning a finite barrier used to indicated the store outline, and acoustic screening from the boundary wall / fence.

5.8 The noise model carries out "text book" atmospheric side calculations at each receiver position from each source allowing for the attenuation from such as the calculated distance and screening. The calculations are performed in eight Octave bands from 63 to 8000Hz but can then be summarised as dBA, NR or NC for convenience. In this case, the overall summary levels are in dBA. Calculations for the plant are included in Appendix C. The computer maintains a logarithmic total of the noise +levels in Octave bands.

- 5.9 At the end of each program “run”, the overall day or night time noise level at each receiver position are calculated and ranked in descending order of noise level. Where this ranking shows that the receiver position’s noise level exceeds the noise criterion, each calculation can be interrogated to determine the plant items needing more detailed inspection to establish the attenuation needed. The process is repeated until either the noise level meets the noise criterion or the program demonstrates that other noise control methods are needed. This may take the form of restricting the offending plant’s period of operation or improving the screening or re-selection to give quieter plant.
- 5.10 Plant noise predictions are shown in summary form; full calculations of noise from each source to each receptor are available on request.

6.0 Conclusions

- 6.1 This assessment has been undertaken in accordance with the guidelines in BS 4142:2014+A1:2019, and BS 8233:2014.
- 6.2 The comparison in Table 5 demonstrates compliance with the criteria specified in Condition 21 of the planning consent.
- 6.3 This assessment objectively demonstrates that noise arising from the fixed plant, complies with the requirement of paragraph 198 of the NPPF to avoid significant adverse impact.

APPENDIX A

NOISE SOURCE DATA

CLIENT :				A Sht: 1 of 1							
PROJECT : Francis Court				PROJECT No: 2822583							
CONSULTANT: MT				DATE : 24 April 2026							
SOUND POWER LEVELS (Lw) & SOUND PRESSURE LEVELS (Lp) FOR FANS AND OTHER EQUIPMENT											
EQUIPMENT NAME/REFERENCE	Lw/Lp	DIST. (m)	OP. TIME DNA	MID FREQUENCY OCTAVE BANDS (HZ)							
				63	125	250	500	1k	2k	4k	8k
VRF PURY-P 450	Lp	1	A	84	71	71	69	63	61	56	51
VRF PURY-P 450	Lp	1	A	84	71	71	69	63	61	56	51
VRF PURY-P 450	Lp	1	A	84	71	71	69	63	61	56	51
AC PUZ-ZM35	Lp	1	A	Maximum 46dBA at 1 metres							
AC PUZ-ZM35	Lp	1	A	Maximum 46dBA at 1 metres							
AC PUZ-ZM35	Lp	1	A	Maximum 46dBA at 1 metres							
AC PUZ-ZM35	Lp	1	A	Maximum 46dBA at 1 metres							
AC PUZ-ZM50	Lp	1	A	Maximum 46dBA at 1 metres							
NOTES: 1. Lw/Lp: Lw means sound power level (dB) Lp means sound pressure level at stated distance (dB/m) 2. Operational time (OP.TIME D/N/A): D (Day) - could operate at any time between 0700 & 2300 N (Night) - could operate at any time between 2300 & 0700 A (All) - could operate at any time during the day and night											

APPENDIX B

NOISE MODEL INPUT DATA

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Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Filename : P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noyspl

Date : 24 April 2026

Entries by : MT

Project number : 2822583

Project title : Francis Court

Client's name :

Map/plot details :

Length :3200

Width :3200

Height :250

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Source data - description, coordinates, outlet size, percentage to atmosphere, directivity,
sound levels and running period.

Filename : P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noyspl

Source Description	Coordinates			Outlet details			Run	Lp/ DNA	dBA Lw	Dist. Y/N		Mid frequency octave bands							
	X(m)	Y(m)	Z(m)	A(mm)	B(mm)	Ang. %						63	125	250	500	1k	2k	4k	8k
VRF PURY-P 450	192.5	191.0	1.9	0	0	0 100	1	A	P	N	1.0	84	71	71	69	63	61	56	51
VRF PURY-P 450	192.5	192.0	1.9	0	0	0 100	1	A	P	N	1.0	84	71	71	69	63	61	56	51
VRF PURY-P 450	192.5	193.0	1.9	0	0	0 100	1	A	P	N	1.0	84	71	71	69	63	61	56	51
AC PUZ-ZM35	194.0	193.5	0.7	0	0	0 100	1	A	P	Y	1.0	46	0	0	0	0	0	0	0
AC PUZ-ZM35	195.0	193.5	0.7	0	0	0 100	1	A	P	Y	1.0	46	0	0	0	0	0	0	0
AC PUZ-ZM35	196.0	193.5	0.7	0	0	0 100	1	A	P	Y	1.0	46	0	0	0	0	0	0	0
AC PUZ-ZM35	197.0	193.0	0.7	0	0	0 100	1	A	P	Y	1.0	46	0	0	0	0	0	0	0
AC PUZ-ZM50	197.0	192.0	0.7	0	0	0 100	1	A	P	Y	1.0	46	0	0	0	0	0	0	0

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The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Receptor data - description and coordinates

Filename : P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noyspl

Receptor Description	Coordinates			DNA
	X (m)	Y (m)	Z (m)	
Copthorne Bank A	215.0	228.0	4.5	A
Copthorne Bank B	205.0	230.0	4.5	A
Copthorne Bank C	190.0	228.0	4.5	A
Copthorne Bank D	175.0	225.0	4.5	A
Copthorne Bank E	158.0	221.0	4.5	A
Borers Arms Road A	175.0	145.0	4.5	A
Borers Arms Road B	145.0	165.0	4.5	A

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Barrier data - description and coordinates

Filename : P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noyspl

Barrier type	X (m)	Start Y (m)	Coordinates			Finish Y (m)	Z (m)
			Z (m)	X (m)			
F	225.0	200.0	10.0	200.0	200.0	10.0	
F	200.0	200.0	10.0	200.0	192.0	10.0	
F	200.0	192.0	10.0	202.0	192.0	10.0	
F	202.0	192.0	10.0	202.0	185.0	10.0	
F	202.0	185.0	10.0	208.0	186.0	10.0	
F	208.0	186.0	10.0	205.0	175.0	10.0	
F	205.0	175.0	10.0	188.0	181.0	10.0	
F	188.0	181.0	10.0	183.0	168.0	10.0	
F	183.0	168.0	10.0	200.0	161.0	10.0	
F	220.0	206.0	1.8	203.0	206.5	1.8	
F	203.0	206.5	1.8	180.0	180.0	1.8	
F	180.0	180.0	1.8	170.0	165.0	1.8	
F	170.0	165.0	1.8	200.0	152.5	1.8	
F	198.0	194.0	2.5	192.3	194.0	2.5	
F	192.3	194.0	2.5	191.7	193.3	2.5	
F	191.7	193.3	2.5	191.7	190.0	2.5	
F	191.7	190.0	2.5	198.0	190.0	2.5	
F	198.0	190.0	2.5	198.0	194.0	2.5	

APPENDIX C

PREDICTED NOISE LEVELS –SUMMARY

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Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time overall receptor listings

Filename: P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noysplo

Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
Copthorne Bank C	53	39	38	35	27	23	16	8	36
Copthorne Bank B	51	38	37	34	26	22	15	6	35
Copthorne Bank A	51	38	36	34	26	22	15	6	35
Copthorne Bank D	52	39	37	33	25	21	13	4	34
Borers Arms Road A	50	36	35	31	24	19	11	0	32
Copthorne Bank E	50	37	34	30	22	17	9	0	32
Borers Arms Road B	49	34	33	28	20	15	7	0	30

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Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: Copthorne Bank A

Filename: P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noysplo
Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
VRF PURY-P 450	46	33	32	30	22	19	12	4	31
VRF PURY-P 450	46	33	32	29	21	17	9	1	30
VRF PURY-P 450	47	33	31	27	19	14	7	0	28
AC PUZ-ZM35	22	9	0	0	0	0	0	0	0
AC PUZ-ZM35	22	9	0	0	0	0	0	0	0
AC PUZ-ZM35	22	9	0	0	0	0	0	0	0
AC PUZ-ZM35	16	3	0	0	0	0	0	0	0
AC PUZ-ZM50	16	3	0	0	0	0	0	0	0
Total Free field Lp and dBA	51	38	36	34	26	22	15	6	35

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Night-time source sound pressure levels at receptor: Copthorne Bank B

Filename: P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noysplo
Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
VRF PURY-P 450	47	34	33	30	23	19	12	4	31
VRF PURY-P 450	47	33	33	29	21	17	10	2	30
VRF PURY-P 450	46	32	31	27	19	14	6	0	28
AC PUZ-ZM35	22	9	0	0	0	0	0	0	0
AC PUZ-ZM35	22	9	0	0	0	0	0	0	0
AC PUZ-ZM35	22	9	0	0	0	0	0	0	0
AC PUZ-ZM35	22	10	0	0	0	0	0	0	0
AC PUZ-ZM50	24	12	2	0	0	0	0	0	0
Total Free field Lp and dBA	51	38	37	34	26	22	15	6	35

SHARPS REDMORE PARTNERSHIP

The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: Copthorne Bank C

Filename: P:\24 - Projects\2422583 Care home Francis Court, Bowers Arms Road, Copthorne-HKW\Noysplo
Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
VRF PURY-P 450	49	35	35	32	24	20	13	6	33
VRF PURY-P 450	48	34	33	30	22	18	11	3	31
VRF PURY-P 450	47	33	32	28	19	15	7	0	29
AC PUZ-ZM35	23	10	0	0	0	0	0	0	0
AC PUZ-ZM35	23	10	0	0	0	0	0	0	0
AC PUZ-ZM35	23	10	0	0	0	0	0	0	0
AC PUZ-ZM35	23	11	1	0	0	0	0	0	0
AC PUZ-ZM50	25	13	3	0	0	0	0	0	0
Total Free field Lp and dBA	53	39	38	35	27	23	16	8	36

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Night-time source sound pressure levels at receptor: Copthorne Bank D

Filename: P:\24 - Projects\2422583 Care home Francis Court, Bowers Arms Road, Copthorne-HKW\Noysplo
Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
VRF PURY-P 450	48	34	33	29	21	17	9	1	30
VRF PURY-P 450	48	34	32	29	21	16	9	1	30
VRF PURY-P 450	47	33	32	27	19	14	6	0	29
AC PUZ-ZM35	23	10	0	0	0	0	0	0	0
AC PUZ-ZM35	23	10	1	0	0	0	0	0	0
AC PUZ-ZM35	23	10	0	0	0	0	0	0	0
AC PUZ-ZM35	24	12	2	0	0	0	0	0	0
AC PUZ-ZM50	25	13	4	0	0	0	0	0	0
Total Free field Lp and dBA	52	39	37	33	25	21	13	4	34

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Night-time source sound pressure levels at receptor: Copthorne Bank E

Filename: P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noysplo
Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
VRF PURY-P 450	46	32	30	26	18	13	5	0	27
VRF PURY-P 450	46	32	30	26	18	13	5	0	27
VRF PURY-P 450	45	31	29	25	17	12	4	0	26
AC PUZ-ZM35	21	8	0	0	0	0	0	0	0
AC PUZ-ZM35	21	9	0	0	0	0	0	0	0
AC PUZ-ZM35	22	9	0	0	0	0	0	0	0
AC PUZ-ZM35	22	10	0	0	0	0	0	0	0
AC PUZ-ZM50	23	11	2	0	0	0	0	0	0
Total Free field Lp and dBA	50	37	34	30	22	17	9	0	32

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The White House, London Road, Copdock, Ipswich, IP8 3JH

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Night-time source sound pressure levels at receptor: Borers Arms Road A

Filename: P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noysplo
Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
VRF PURY-P 450	46	32	31	27	20	15	8	0	28
VRF PURY-P 450	45	32	31	27	19	15	7	0	28
VRF PURY-P 450	45	30	29	25	17	12	4	0	26
AC PUZ-ZM35	23	12	2	0	0	0	0	0	0
AC PUZ-ZM35	23	11	2	0	0	0	0	0	0
AC PUZ-ZM35	23	11	2	0	0	0	0	0	0
AC PUZ-ZM35	16	3	0	0	0	0	0	0	0
AC PUZ-ZM50	16	3	0	0	0	0	0	0	0
Total Free field Lp and dBA	50	36	35	31	24	19	11	0	32

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The White House, London Road, Copdock, Ipswich, IP8 3JH

Tel: 44 (0) 1473 730073 Fax: 44 (0) 1473 730030 Email: srp@sharpsredmore.co.uk

Night-time source sound pressure levels at receptor: Borers Arms Road B

Filename: P:\24 - Projects\2422583 Care home Francis Court, Borers Arms Road, Copthorne-HKW\Noysplo
Date: 24/04/2026

	Mid frequency Octave bands (Hz)								dBA
	63	125	250	500	1k	2k	4k	8k	
VRF PURY-P 450	44	30	28	24	15	11	3	0	25
VRF PURY-P 450	44	29	28	24	15	10	2	0	25
VRF PURY-P 450	43	29	28	23	15	10	2	0	25
AC PUZ-ZM35	23	11	2	0	0	0	0	0	0
AC PUZ-ZM35	23	11	2	0	0	0	0	0	0
AC PUZ-ZM35	23	12	3	0	0	0	0	0	0
AC PUZ-ZM35	23	11	3	0	0	0	0	0	0
AC PUZ-ZM50	22	11	2	0	0	0	0	0	0
Total Free field Lp and dBA	49	34	33	28	20	15	7	0	30