PROPOSED DEVELOPMENT ON LAND SOUTH OF CUDWORTH PARKWAY

BARNSLEY, SOUTH YORKSHIRE, S72 8AH

NOISE IMPACT ASSESSMENT

On behalf of:

Sutton CL Limited

Dynamic Response (Reg. Office)
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Report No. DYN210725A/1
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Report Issued by:
Dynamic Response (Noise And Vibration Consultants) Ltd
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On behalf of:
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This Report Is Believed To Be Accurate And True. However, Should A Mistake Be Found, Please Report It To Us As Soon As Possible. Distance Measurements Have Been Used From Online Mapping Solutions Where Necessary. However, The Accuracy Can Not Be Validated By Us.

*In This Report Dynamic Response (Noise And Vibration Consultants) Ltd has been abbreviated to Dynamic Response for ease of reading

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1.0 INTRODUCTION

1.0 Dynamic Response was commissioned by 'Sutton CL Limited' to assess the impact of noise at proposed development land South of 'Cudworth Parkway, Barnsley, South Yorkshire, S72 8AH', in connection with proposals to construct 144 no. new build dwellings/houses.

1.1 Following liaison with the client, and following a site survey, we understand that the main concern of noise at the site is due to existing transportation noise sources in close proximity to the proposed development including road traffic using the 'Cudworth Parkway (A628)' itself, approximately 20m from the nearest proposed development location on the land.

1.2 The proposed site layout plan and our noise measurement positions can be seen in Figure 1 overleaf.

1.3 The assessment has included:

- An inspection of the site and surroundings;
- Daytime and night-time measurements of road/ambient noise at 3 no. fixed survey positions over a 24 hour period;
- An assessment of the noise impact referring to the 'National Planning Policy Framework (NPPF) 2024', Institute Of Acoustics (IOA) ProPG: Planning And Noise, and guidance contained within BS8233:2014 etc.

1.4 Noise levels referred to in this report, with the exception of measurement results where deemed applicable, have been rounded to the nearest whole decibel (dB) as fractions of decibels are imperceptible.

Figure 1 - Proposed Site Plan / Survey Location(s)

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*Plans Provided By The Client (Or Representative) For Use In This Report

Dynamic RESPONSE

2.0 DESCRIPTION OF SITE

2.0 The location of the proposed development site is North of 'Cudworth', and South of 'Shafton' with the 'Cudworth Parkway (A628)' at the immediate Northern site boundary (with flows of traffic moving East to West and vice versa). The East of the site around NM3 is governed by a 40 Mph speed limit which increases to the West of the site adjacent to NM1 to be 60 Mph i.e the national speed limit.

2.1 The development land to the East is on a gradient with a relatively clear line of sight to road traffic noise sources, whereas development land to the West has a relatively clear line of sight to road traffic noise sources nearest to the 'Weetshaw Lane' roundabout, but with increased distance to the West, a reduced line of sight at ground/site level.

2.2 Reduced visibility occurs by nature of the 'Cudworth Parkway (A628)' section of road adjacent to NM1 been formed in a cutting, with the range of development land AOD levels increasing relative to the road level., with land banked down to the A628 ground level.

2.3 The existing site (proposed development regions), and surrounding noise sources can be seen in images 1-5 to follow.

IMG-1: Cudworth Parkway (A628) Adjacent To NM3 (Site Behind Bushes To Right)

IMG-2: Cudworth Parkway (A628) Adjacent To NM1 (Site Top Of Left Bank)

IMG-3: Proposed Development Land Looking West

IMG-4: Proposed Development Land Looking South

IMG-5: Proposed Development Land Looking East

3.0 ACOUSTIC/NOISE DESIGN CRITERIA

3.0 The 'National Planning Policy Framework (NPPF) updated in December 2024' states in section 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[60];

3.1 In conjunction with the 'National Planning Policy Framework (NPPF) 2024', 'The Noise Policy Statement for England (NPSE)', dated March 2010, states the following regarding a long term vision of government noise policy:

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

- *Avoid significant adverse impacts on health and quality of life;*
- *Mitigate and minimise adverse impacts on health and quality of life; and*
- *Where possible, contribute to the improvement of health and quality of life."*

3.2 In terms of the NPSE, the impact of noise can be categorised by the following terms:

- NOEL - No Observed Effect Level - The level where no effect can be detected
- LOAEL - Lowest Observed Adverse Effect Level - The level where adverse effects on health and quality of life can be detected
- SOAEL - Significant Observed Adverse Effect Level - The level where significant adverse effects on health and quality of life may occur.

3.3 The NPSE further states that: *"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."*

3.4 No specific guidance is detailed or given in the 'National Planning Policy Framework (NPPF) 2024', or 'The Noise Policy Statement For England (NPSE)' in terms of acceptable acoustic criteria/noise criteria in order to achieve the 'NOEL, LOAEL or SOAEL'. Therefore, it is considered necessary to refer to alternate national guidance, preferably standardised or regulated. Therefore, it is considered necessary to

refer to alternate national guidance, preferably standardised or regulated such as an appropriate British Standard, or in the absence of this, alternate World Health Organisation (WHO) guidelines etc, whilst considering Local Authority development policies (where applicable and/or developed).

3.5 In terms of new residential development, the Institute Of Acoustics (IOA) have released 'Professional Guidance on Planning and Noise' (ProPG) Dated May 2017, which provides practitioners and Local Authorities with guidance on a recommended procedure or system to assist with the management of noise during the planning process in order to:

- *"Advocate full consideration of the acoustic environment from the earliest possible stage of the development control process;*
- *Encourage the process of good acoustic design in and around new residential developments;*
- *Outline what should be taken into account in deciding planning applications for new noise-sensitive developments;*
- *Improve understanding of how to determine the extent of potential noise impact and effect; and*
- *Assist the delivery of sustainable development."* [3]

3.6 ProPG as a process/system includes two stages;

- ***"Stage 1** – an initial noise risk assessment of the proposed development site: and*
- ***Stage 2** – a systematic consideration of four elements*
    - *Element 1 – demonstrating a "Good Acoustic Design Process";*
    - *Element 2 – observing internal "Noise Level Guidelines";*
    - *Element 3 – undertaking an "External Amenity Area Noise Assessment"; and*
    - *Element 4 – consideration of "Other Relevant Issues"."* [3]

3.7 Considering the stage 1 risk assessment, the following assessment criteria is provided;

Table 1: Stage 1 Criteria For Assessment Of ProPG[3]

Noise Risks Assessment			Pre-planning Application Advice
Daytime Noise Levels $L_{Aeq,16hr}$	**Risk Of Adverse Effect Without Mitigation**	**Night-time Noise Levels $L_{Aeq,8hr}$**	
>70	High	>60 dB	High noise levels indicate that there is an increased risk that development may be refused on noise grounds. This risk may be reduced by following a good acoustic design process that is demonstrated in a detailed ADS. Applicants are strongly advised to seek expert advice.
60-70 dB	Medium	50-60 dB	As noise levels increase, the site is likely to be less suitable from a noise perspective and any subsequent application may be refused unless a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised, and which clearly demonstrate that a significant adverse noise impact will be avoided in the finished development.
50-60 dB	Low	40-50 dB	At low noise levels, the site is likely to be acceptable from a noise perspective provided that a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised in the finished development.
<50 dB	Negligible / No Adverse Effect	<40 dB	These noise levels indicate that the development site is likely to be acceptable from a noise perspective, and the application need not normally be delayed on noise grounds.
More than 10 noise events at night (2300 – 0700) with $L_{Amax,F}$ > 60 dB means the site should not be regarded as negligible risk.			

*ADS = Acoustic Design Statement

3.8 When considering noise levels on a development site, an assessment may be based on measured or predicted levels, and should result in noise (measured or predicted) over a typical 24 hour worst-case period, considering the external free-field noise levels. Industrial or commercial noise may be included provided it is not dominant, and where industrial noise is dominant, alternate guidance as per BS 4142:2014+A1:2019 should be considered to assess any adverse effect.

3.9 Stage 2 of ProPG should be considered by the entire design team (as appropriate), not solely by an acoustic consultant. 'Good Acoustic Design' should be considered from a planning concept to land

release including siting of development on land, building orientation, room layout, incorporation of barriers either as sole entities, or by taking advantage of screening provided by alternate development buildings etc, along with acoustic specific elements likely to influence internal and external noise levels such as the building envelope design, ventilation, glazing and alternate noise control.

3.10 Guidance on acoustic design goals for residential development or 'internal noise level guidelines' and 'amenity area noise' are set out in British Standard 8233: 2014: 'Sound insulation and noise reduction for buildings', with further guidance available with reference to the World Health Organisation 'Guidelines For Community Noise'. ProPG adds additional comments to the standards above but are based upon the guidance, most noticeably expanding on the methodology for amenity areas depending on if the external amenity space is an intrinsic element of the design. These comments and additions can be found in the subsequent sections of this report.

3.11 The final element of stage 2 'Other Relevant Issues' is focused on compliance with relevant planning policies and ProPG, likely occupants of the development, acoustic design vs un-intended consequences and acoustic design vs wider planning objectives. Whilst many aspects of ProPG require input from various design team members, acoustically, the following outcomes and categories are derived and documented in ProPG regarding planning permission; "

- A. Planning consent may be granted without any need for noise conditions;
- B. Planning consent may be granted subject to the inclusion of suitable noise conditions;
- C. Planning consent should be refused on noise grounds in order to avoid significant adverse effects ("avoid"); or
- D. Planning consent should be refused on noise grounds in order to prevent unacceptable adverse effects ("prevent")." [3]

3.12 Our understanding of the statements contained within ProPG have been summarised in Table 2 overleaf, considering the level of adverse effect outlined in Table 1.

Table 2: Outcome Of ProPG Assessment

Where The Outcome Of The Risk Assessment Indicates	Statement Which Corresponds
Unacceptable Adverse Effect	"**D. Recommend refusal – in order to "prevent" unacceptable adverse effects"**, if 1) Internal noise levels are regarded as "unreasonable" AND either there is an unacceptable "external amenity area noise assessment" or an unacceptable "assessment of other relevant issues"; OR (2) Internal noise levels are regarded as "unacceptable" [3].
Medium/High Adverse Effect	**"B. Grant consent with suitable noise conditions"**, **ONLY IF** "a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised, and which clearly demonstrate that a significant adverse noise impact will be avoided in the finished development." [3] Else **"C. Recommend refusal in order to "avoid" significant adverse effects"**
Low Adverse Effect	**"B. Grant consent with suitable noise conditions"**, considering a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised in the finished development. [3]
Negligible / No Adverse Effect	Where ProPG guidance has been followed, and the risk is equivalent to column 1, **"A. Planning consent may be granted without any need for noise conditions"**. In addition "where the ProPG Stage 2 guidance has been followed, and where the submitted development proposal is supported by an ADS that adequately demonstrates good acoustic design, then it should also be possible for the noise practitioner to recommend that planning consent may be granted without the need for additional noise conditions." [3]
"LPAs **should not** grant **'outline planning permission'** for new residential developments at sites considered to pose a **medium or high noise risk** without first being satisfied that good acoustic design will be able to overcome the acoustic challenges." [3]	

*ADS = Acoustic Design Statement

3.13 Therefore to conclude, our assessment considers the appropriate criteria as defined in the various guidance above.

4.0 NOISE LEVEL SURVEY

4.0 Un-attended automated noise measurements were carried out adjacent to the 'Cudworth Parkway (A628)' from the 20th to the 21st of August 2025 at 3 no. locations over a 24-hour period. The measurement locations were representative of the nearest proposed building facades to the 'A628' considering the varying speed limits identified, with the installation location limited to a secure location in each case. At the start and end of the noise survey (including intermediary inspection visits during the evening and night-time periods) the dominant noise source at all locations appeared to be road traffic (including a mixture of cars, motorcycles and HGV's etc.).

4.1 The noise survey was carried out using a Casella CEL-490 Type/Class 1 sound level meter (Serial No. 488999), a Casella CEL633C1 Type/Class 1 sound level meter (Serial No. 2206908), and a Castle GA141 dB Air Type/Class 1 sound level meter (Serial No. 070731). The calibration level of each meter was checked before and after the surveys with a Norsonic Type 1251 sound calibrator (Serial No. 31829), with no significant variation in level observed.

4.2 In each instance, microphones were connected to the associated sound level meter using a manufacturer provided extension cable, with data logging instrumentation secured within a weatherproof peli-case. Each microphone had a windshield and bird spike fitted accordingly. The results have been post processed to determine the presented 15 minute interval results, with short period profile results retained for consideration of L_{Amax} levels during night-time periods.

4.3 The weather conditions at the measurement locations during the daytime were dry, warm (approximately 15-17^{o}C) and with a moderate breeze (3.5 m/s), and dry, cool (ranging down to approximately 12 decrees ^{o}C) with a light breeze (<2.5m/s) during the night-time.

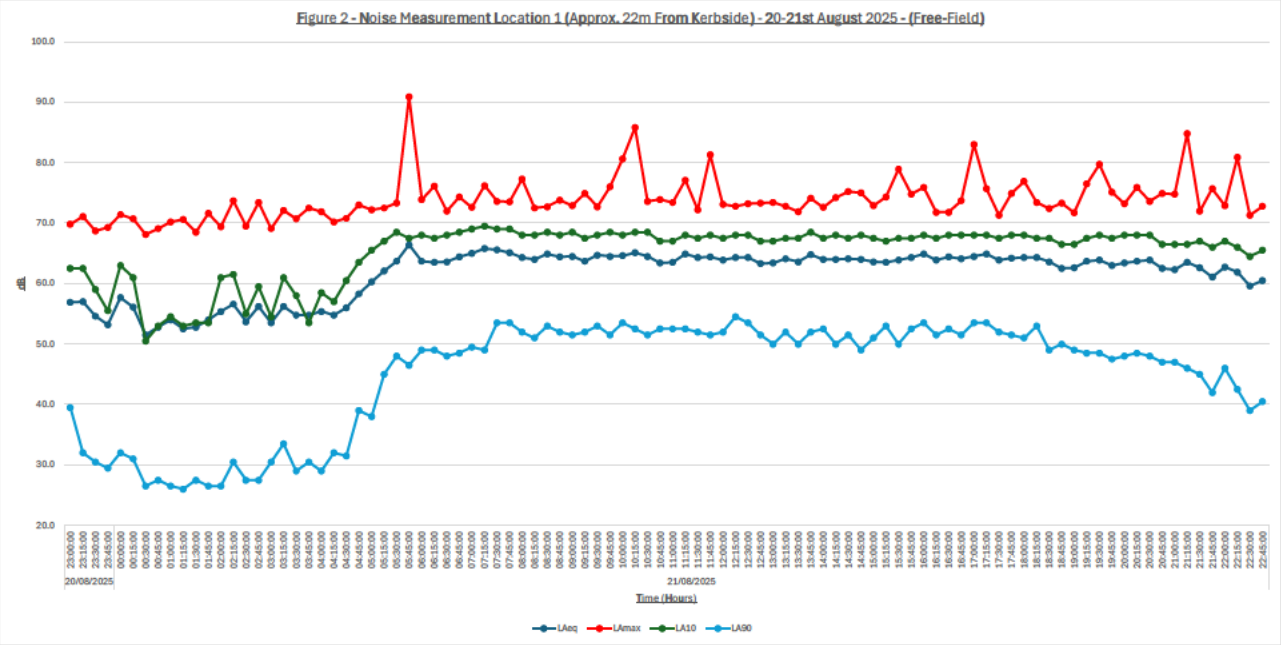
4.4 The results of the noise survey are summarised in Table 3 and are detailed in Appendix II. A summary of the noise levels has been illustrated in Figures 2-4. For ease of assessment and interpretation, the noise measurements undertaken at various secure location distances from the 'A628' have been standardised/corrected in Table 3 to result in free-field ambient noise levels at 20m, which can then be extrapolated to result in more meaningful data at 20m, 40m, 80m, and 160m. Worst-case noise levels have been considered in all regions considering a maximum 2 storey development height, with a mean/mid-way 3.3m ground gradient/height above road level, with additional screening applied only to results with an expected 2 storey façade in a shadow region. This is as final site levels, vertical heights and/or final general proposals are not yet known. All final site proposals must be checked.

Table 3: Noise Survey Results

Measurement Location	Daytime $L_{Aeq(07:00-23:00\ hrs)}$	Night-time $L_{Aeq(23:00-07:00\ hrs)}$
'Measurement Position 1 (NM1)' North West Of Site At Approx. 22m From Kerbside Of 'A628' 60Mph	64 dB L_{Aeq}	59 dB L_{Aeq} 91 dB L_{Amax*}
'Measurement Position 2 (NM2)' North Of Site At Approx. 18m From Kerbside Of 'A628' Roundabout	60 dB L_{Aeq}	55 dB L_{Aeq} 83 dB L_{Amax*}
'Measurement Position 3 (NM3)' North East Of Site At Approx. 35m From Kerbside Of 'A628' 40 Mph	59 dB L_{Aeq}	53 dB L_{Aeq} 72 dB L_{Amax*}
'Measurement Position 1 (NM1)' standardised To 20m	64 dB L_{Aeq}	60 dB L_{Aeq}
'Measurement Position 2 (NM2)' Standardised To 20m	60 dB L_{Aeq}	55 dB L_{Aeq}
'Measurement Position 3 (NM3)' standardised To 20m	61 dB L_{Aeq}	56 dB L_{Aeq}

*L_{AFmax} - Actual 'A-Weighted Fast Response Maximum, Not Repeated L_{Amax} for use within night-time calculations

Figure 2: Noise Survey Results – 'Measurement Position 1' – 15 Minute Samples



Continued Overleaf …

Figure 3: Noise Survey Results – 'Measurement Position 2' – 15 Minute Samples

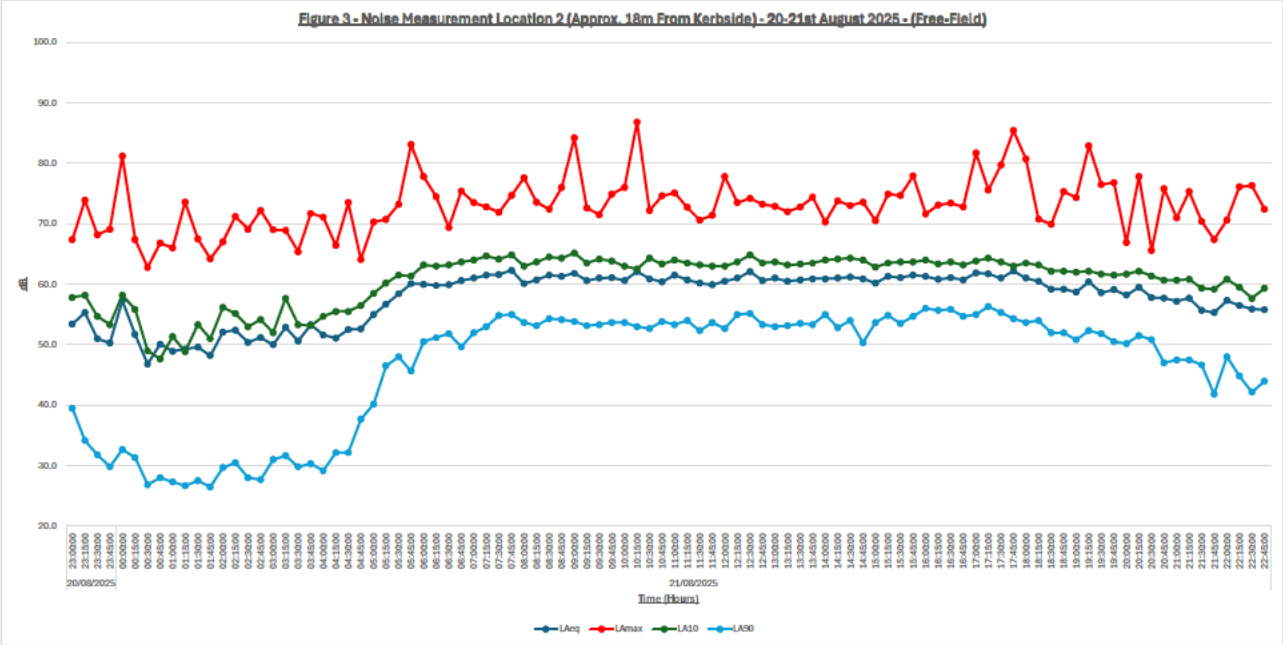
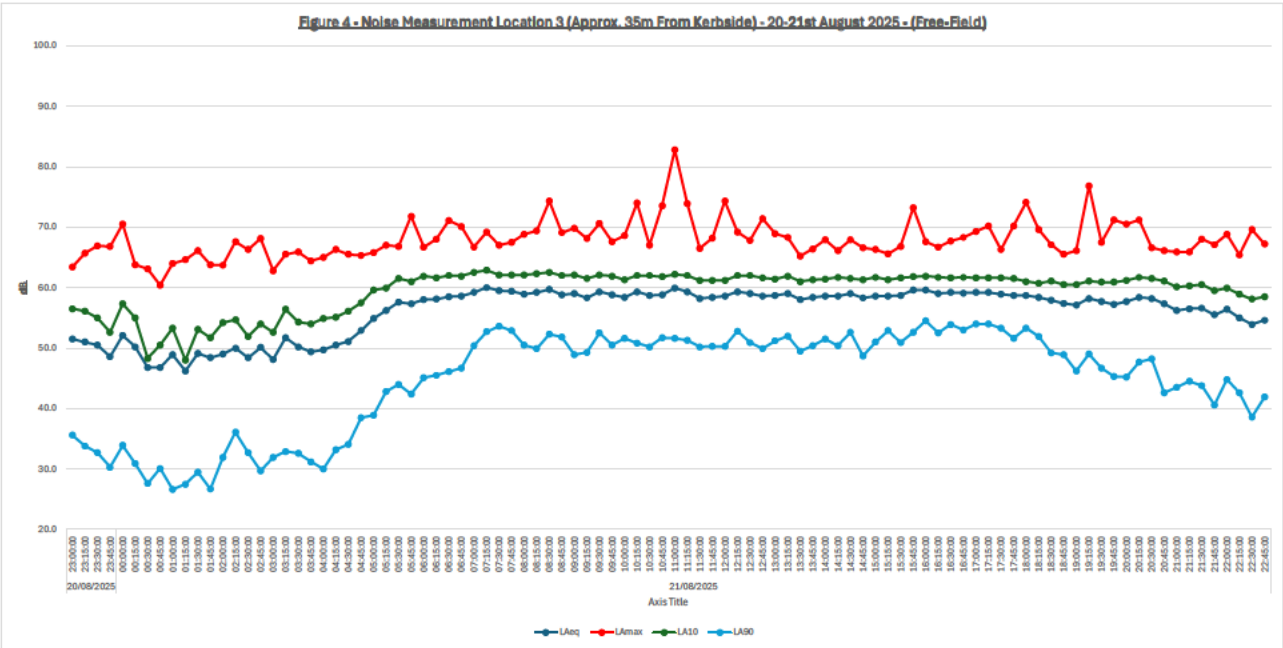


Figure 4: Noise Survey Results – 'Measurement Position 3' – 15 Minute Samples



4.5 The noise levels presented in Section 4.0, have been used as a basis for our assessment in Section 5.0.

5.0 ASSESSMENT OF RISK

Stage 1 Risk Assessment And Noise Impact

5.0 The calculated daytime and night-time L_{Aeq} noise levels in Table 3 fall into the following Noise Exposure Category groups/bands, taking into account the IOA guidance from Table 1, and have been illustrated in Figure 5.

Table 3B: Un-mitigated Noise Risk Assessment)

Development Location	Daytime $L_{Aeq(07:00-23:00\ hrs)}$	Night-time $L_{Aeq(23:00-07:00\ hrs)}$
E1 I 20-40m From 'A628'	61 dB L_{Aeq}	56 dB L_{Aeq}
E2 I 40-80m From 'A628'	58 dB L_{Aeq}	53 dB L_{Aeq}
E3 I 80-160m From 'A628'	55 dB L_{Aeq}	50 dB L_{Aeq}
E4 I >160m From 'A628'	52 dB L_{Aeq}	47 dB L_{Aeq}
W1 I 20-40m From 'A628'	64 dB L_{Aeq}	60 dB L_{Aeq}
W2 I 40-80m From 'A628'	61 dB L_{Aeq}	57 dB L_{Aeq}
W3 I 80-160m From 'A628'	55 dB L_{Aeq}	51 dB L_{Aeq}

5.1 Therefore, without further noise mitigation measures, risk at the proposed development site is expected to range from a Low to Medium risk during both the daytime and night-time periods, depending on the location on site to be assessed.

Figure 5 - Assessment Zones

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*Plans Provided By The Client (Or Representative) For Use In This Report

5.2 As mentioned in Section 3.0, guidance on acoustic design goals for residential development is set out in British Standard 8233: 2014: 'Sound insulation and noise reduction for buildings'. The criteria are summarised in Table 4 with ProPG comments incorporated.

Table 4: BS 8233 Recommended Acoustic Design Criteria[4]

Location	Noise Levels
Living Rooms Dining Rooms	Resting 35 dB $L_{Aeq\ (16\ hour)}$ Dining 40 dB $L_{Aeq\ (16\ hour)}$
Bedrooms	Sleeping (Daytime Resting) 35 dB $L_{Aeq\ (16\ hour)}$ 30 dB $L_{Aeq(8\ hour)}$ / 45 dB $L_{Amax,F}$ (note 4)
Gardens	Upper limit of 55 dB L_{Aeq}

*"**NOTE 1** The Table provides recommended internal L_{Aeq} target levels for overall noise in the design of a building. These are the sum total of structure-borne and airborne noise sources. Ground-borne noise is assessed separately and is not included as part of these targets, as human response to ground-borne noise varies with many factors such as level, character, timing, occupant expectation and sensitivity.*

***NOTE 2** The internal L_{Aeq} target levels shown in the Table are based on the existing guidelines issued by the WHO and assume normal diurnal fluctuations in external noise. In cases where local conditions do not follow a typical diurnal pattern, for example on a road serving a port with high levels of traffic at certain times of the night, an appropriate alternative period, e.g. 1 hour, may be used, but the level should be selected to ensure consistency with the internal L_{Aeq} target levels recommended in the Table.*

***NOTE 3** These internal L_{Aeq} target levels are based on annual average data and do not have to be achieved in all circumstances. For example, it is normal to exclude occasional events, such as fireworks night or New Year's Eve.*

***NOTE 4** Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$, depending on the character and number of events per night. Sporadic noise events could require separate values. In most circumstances in noise sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of acceptability will depend not only on the maximum noise levels but also on factors such as the source, number, distribution, predictability and regularity of noise events.*

***NOTE 5** Designing the site layout and the dwellings so that the internal target levels can be achieved with open windows in as many properties as possible demonstrates good acoustic design. Where it is not possible to meet internal target levels with windows open, internal noise levels can be assessed with windows closed, however any façade openings used to provide whole dwelling ventilation (e.g. trickle ventilators) should be assessed in the "open" position and, in this scenario, the internal L_{Aeq} target levels should not normally be exceeded, subject to the further advice in Note 7.*

***NOTE 6** Attention is drawn to the requirements of the Building Regulations.*

***NOTE 7** Where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal L_{Aeq} target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved. The more often internal L_{Aeq} levels start to exceed the internal L_{Aeq} target levels by more than 5 dB, the more that most people are likely to regard them as "unreasonable". Where such exceedances are predicted, applicants should be required to show how the relevant number of rooms affected has been kept to a minimum. Once internal L_{Aeq} levels exceed the target levels by more than 10 dB, they are highly likely to be regarded as "unacceptable" by most people, particularly if such levels occur more than occasionally. Every effort should be made to avoid relevant rooms experiencing "unacceptable" noise levels at all and where such levels are likely to occur frequently, the development should be prevented in its proposed form.*

External Amenity Areas

***3(i)** "If external amenity spaces are an intrinsic part of the overall design, the acoustic environment of those spaces should be considered so that they can be enjoyed as intended".*

***3(ii)** "The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$."*

***3(iii)** "These guideline values may not be achievable in all circumstances where development might be desirable. In such a situation, development should be designed to achieve the lowest practicable noise levels in these external amenity spaces."*

***3(iv)** Whether or not external amenity spaces are an intrinsic part of the overall design, consideration of the need to provide access to a quiet or relatively quiet external amenity space forms part of a good acoustic design process.*

***3(v)** Where, despite following a good acoustic design process, significant adverse noise impacts remain on any private external amenity space (e.g. garden or balcony) then that impact may be partially off-set if the residents are provided, through the design of the development or the planning process, with access to:*

- *a relatively quiet facade (containing openable windows to habitable rooms) or a relatively quiet externally ventilated space (i.e. an enclosed balcony) as part of their dwelling; and/or*
- *a relatively quiet alternative or additional external amenity space for sole use by a household, (e.g. a garden, roof garden or large open balcony in a different, protected, location); and/or*
- *a relatively quiet, protected, nearby, external amenity space for sole use by a limited group of residents as part of the amenity of their dwellings; and/or*
- *a relatively quiet, protected, publically accessible, external amenity space (e.g. a public park or a local green space designated because of its tranquillity) that is nearby (e.g. within a 5 minutes walking distance). The local planning authority could link such provision to the definition and management of Quiet Areas under the Environmental Noise Regulations."[3]*

5.3 In addition, the World Health Organisation 'Guidelines For Community Noise' suggest the following noise criteria as summarised in Table 5.

Table 5: World Health Organisation (WHO) – Guideline Acoustic Design Criteria[5]

Location	Noise Levels
Dwellings Indoors i.e. Living Rooms	35 dB L_{Aeq}
Inside Bedrooms	30 dB L_{Aeq} (45 dB L_{AFmax})
Gardens	Upper limit of 55 dB L_{Aeq} (Serious Annoyance) Upper limit of 50 dB L_{Aeq} (Moderate Annoyance)

5.4 Therefore, we recommend that the development meet 35 dB L_{Aeq} between 07:00 hours to 23:00 hours within living rooms and bedrooms during the daytime, and 30 dB L_{Aeq} between 23:00 to 07:00 hours within bedrooms during the night-time of the recommended ranges of BS 8233: 2014 and World Health Organisation 'Guidelines For Community Noise'. We further recommend that internal L_{Amax} levels within bedrooms should not normally exceed 45 dB between 23:00 hours and 07:00 hours. Where applicable, for external amenity areas/gardens, noise should be controlled to be between 50-55 dB $L_{Aeq,(16hour),}$ if possible, or as low a level as possible (See guidance in Table 4 notes).

5.5 Based on the concept detailed in BS8233:2014 that any window in a facade left partially open has a weighted sound reduction of approximately 10-15 R_w dB (average 13 dB), the approximate resultant internal noise levels should be as seen in Table 6.

Table 6: Predicted Internal Noise Levels With An Open Window – BS8233:2014

Façade	Predicted/Calculated Noise Levels – Equivalent Continuous Noise Levels					
	External L_{Aeq} (07:00-23:00 hours)	**Predicted Internal Noise Level**	**Daytime 35 dB L_{Aeq} BS8233:2014 Criteria Met?**	**External L_{Aeq} (23:00-07:00 hours)**	**Predicted Internal Noise Level**	**Night-time 30 dB L_{Aeq} BS8233:2014 Criteria Met?**
E1 | 20-40m From 'A628'	61 dB	48 dB	No	56 dB	43 dB	No
E2 | 40-80m From 'A628'	58 dB	45 dB	No	53 dB	40 dB	No
E3 | 80-160m From 'A628'	55 dB	42 dB	No	50 dB	37 dB	No
E4 | >160m From 'A628'	52 dB	39 dB	No	47 dB	34 dB	No

Façade	Predicted/Calculated Noise Levels – Equivalent Continuous Noise Levels					
	External L_{Aeq} (07:00-23:00 hours)	**Predicted Internal Noise Level**	**Daytime 35 dB L_{Aeq} BS8233:2014 Criteria Met?**	**External L_{Aeq} (23:00-07:00 hours)**	**Predicted Internal Noise Level**	**Night-time 30 dB L_{Aeq} BS8233:2014 Criteria Met?**
W1 | 20-40m From 'A628'	64 dB	51 dB	No	60 dB	47 dB	No
W2 | 40-80m From 'A628'	61 dB	48 dB	No	57 dB	44 dB	No
W3 | 80-160m From 'A628'	55 dB	42 dB	No	51 dB	38 dB	No
Lounges, Dining Rooms, Bedrooms Etc.				Bedrooms		

5.6 Therefore, ambient noise levels in living rooms and bedrooms as a result of leaving windows left partially open to allow ventilation may result in indoor ambient noise levels above the required internal ambient noise criteria for applicable room usages, unless mitigated (depending on the final room layout/orientation). Hence this reinforces the outcome of the assessment carried out.

5.7 Taking all survey results into consideration, the result of the Stage 1 noise risk assessment concludes that for development sites with predominantly a medium risk, it should be possible to: **"B. Grant consent with suitable noise conditions"**, considering a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised in the finished development., else **C. Recommend refusal in order to "avoid" significant adverse effects"** [3].

5.8 At our point of commission (our understanding is that), the proposed site layout plan has already been created. However, re-orientation of site and consideration of the internal room layouts may assist in good acoustic design. For example, for the West of the development area where the adjacent road is screened due to land height differences, placement of dwellings with a single storey height (bungalow) nearer to screened, but less screened regions (nearer to the road) than would otherwise be the case with a two storey development, may enable taller buildings towards the South of the Western region, to gain more natural screening. In addition, if orientation for sensitive rooms (and glazing within sensitive rooms) is considered which results in rooms/facades orientated towards the South, and rooms less sensitive (and glazing within less sensitive rooms orientated towards the North) 'good acoustic design' and additional natural screening can be incorporated by default, potentially minimising the level of physical noise control measures which may be needed. In all instances, the points above should be considered by the entire design team, with comments provided for guidance only.

Sound Insulation/Residential Amenity

5.9 In order to assess the likely internal noise levels considering various façade details including glazing etc., British Standard 8233: 2014: 'Sound insulation and noise reduction for buildings' provides two methods for assessing the predicted internal noise levels. In this instance, we are unable to assess noise break-in for the proposed development via the external facades/roof, as detailed construction details, in any form, are not yet available or known (nor are internal layout plans). However, the simple method detailed within BS8233:2014 should allow a basic assessment of the required glazing specifications, to determine if there should be any material constraint regarding residential development due to noise.

5.10 Although the simple method is considered relatively accurate with regard to glazing, all internal noise levels should be checked prior to construction based on the 1/1 whole octave band levels measured, considering existing/proposed final construction details and ventilation requirements/specifications, in order to ensure noise break-in is controlled to a suitable level, and in order to fulfil the requirements of the ProPG assessment.

5.11 It is not unusual that modern properties are built considering a traditional masonry construction. To this extent, BS8233:2014 states that ***"windows, and any trickle ventilators, are normally the weakest part of a brick and block façade"***. However, other high performance timber frame systems do exist.

5.12 In order for living rooms/habitable rooms and bedrooms to achieve the required internal acoustic criteria, we would recommend that glazing be used with a minimum acoustic performance as seen in Table 7.

5.13 Alternate internal noise levels in Dining Rooms (if applicable) may follow the living room criteria (– 5 dB) depending on the Local Authority criteria, and should be discussed with the LPA. For any approved rooms which do not have a subsequent direct line of sight to noise sources, an amended specification (of lower rating) is expected but would be subject to a detailed review (in the ADS) at a later stage. Therefore, our calculations are expected to represent a worst-case scenario for determination of planning.

Table 7: Example Of Acoustic Performance For Glazing

Development Façade(s) In Which Region/Area	Sound Reduction / Acoustic Performance	
	Living Rooms/Hab. Rooms (Daytime)	Bedrooms (Night-time)
E1 I 20-40m From 'A628'	26 dB + Ctr	29 dB + Ctr
E2 I 40-80m From 'A628'	23 dB + Ctr	26 dB + Ctr
E3 I 80-160m From 'A628'	20 dB + Ctr	23 dB + Ctr
E4 I >160m From 'A628'	17 dB + Ctr	20 dB + Ctr
W1 I 20-40m From 'A628'	29 dB + Ctr	30 dB + Ctr
W2 I 40-80m From 'A628'	26 dB + Ctr	27 dB + Ctr
W3 I 80-160m From 'A628'	20 dB + Ctr	23 dB + Ctr

*Subject to room orientation checks, based on worst-case measured noise levels

5.14 In all instances, it will be important to ensure that all glazing is well sealed when closed so there are no air gaps present. However, compliance with the values above should be possible considering readily available thermal double glazing, for example, compliance with 26 dB + C_{tr} could be achieved with a good quality 4mm glass, 16mm air gap, 4mm glass glazing specification, and more onerous 29/30 dB + C_{tr} requirements could be achieved with a good quality 6mm glass, 16mm air gap, 6.4mm laminated glass glazing specification or equivalent alternative. All glass specifications should be checked and data sheets obtained to verify compliance with the above acoustic requirements.

Ventilation

5.15 Since opening the windows would reduce the sound insulation of the building envelope, it is considered that an acoustically treated alternative method of ventilation should be provided for all living rooms and bedrooms affected by noise (along with any other habitable rooms where required).

5.16 We would recommend (subject to façade noise break-in calculations) that standard trickle vents, also known as frame slots, not be used and as such we recommend the following options instead:

- Wall-mounted Acoustic Air Bricks;
- Wall mounted mechanical (i.e. powered) acoustic ventilators such as; or
- A fully ducted ventilation system with duct terminations in the shielded side of the buildings.

5.17 We would recommend that the ventilation requirements are checked with the Local Authority Building Control Officer at an early stage. Again, all ventilator requirements will need to be checked by an acoustic consultant during the detailed review stage.

Other Design Elements/Discussions

5.18 We understand that generally speaking, each plot will have a dedicated external amenity area. Therefore, in order to retain 'Good Acoustic Design' noise should be controlled to be between 50-55 dB $L_{Aeq(16hour)}$, or to as low a level as practically possible (see notes in Table 4).

5.19 Considering the measured dB $L_{Aeq,(16\ hour)}$ noise levels, external amenity areas to the East and West beyond approximately 80m are expected to meet the 50-55 dB $LA_{eq(16hour)}$ criteria with no further acoustic protection. Noise levels in external amenity areas in the 20-80m range are expected to require further screening by means of site orientation, an acoustic fence either at the boundary of the site and/or around the perimeter of each plot garden, but the level of attenuation is not considered unfeasible. However, this will need to be checked when final build/site levels are known.

5.20 To conclude, this report has sought to comply with the relevant national planning policies, considering the relevant aspects contained within the Institute of Acoustic (IOA) ProPG guidance, at this juncture.

Planning Condition(s)

5.21 The development is currently at the pre-application stage. Therefore, detailed development information is not currently available. Therefore, considering this, further reviews of noise mitigation measures are deemed to be required when the final site/internal layout plans, proposed construction details and other detailed parameters are available.

5.22 The results of our noise survey and subsequent assessment have indicated that although residential development of the proposed site should be possible considering the layout proposed, mitigation measures are likely to be required in order to ensure residential amenity, and in order to comply with the requirements of ProPG, BS 8233:2014 and alternate guidance.

5.23 In order to ensure that an adequate scheme of noise mitigation is implemented, "a detailed scheme of noise mitigation measures should be submitted to, and approved in writing by, the Local Planning Authority prior to the commencement of building works and/or with any planning application. However, it should be possible to: **"B. Grant consent with suitable noise conditions"**, considering a good

acoustic design process is followed and is demonstrated in an ADS (acoustic design statement) which confirms how the adverse impacts of noise will be mitigated and minimised in the finished development." [3]

6.0 SUMMARY AND CONCLUSION(S)

6.0 Dynamic Response was commissioned by 'Sutton CL Limited' to assess the impact of noise at proposed development land South of 'Cudworth Parkway, Barnsley, South Yorkshire, S72 8AH', in connection with proposals to construct 144 no. new build dwellings/houses.

6.1 Noise measurements have been carried out over a 24 hour period at three locations representative of the nearest proposed building façades, but also external amenity area locations of the residential development site, in order to determine the ambient noise levels across the site and hence be representative of future occupation. Road traffic noise appeared to dominate the ambient acoustic environment in all areas.

6.2 The results of the noise survey/assessment demonstrate that it should be possible to "Grant consent with suitable noise conditions", considering a good acoustic design process is followed and is demonstrated in an ADS which confirms how the adverse impacts of noise will be mitigated and minimised in the finished development. [3]

6.3 The levels of noise at the site are generally considered to be dominated by the nearby road transport networks. Therefore, it should be possible for a suitable noise mitigation scheme to be created, in order to reduce the resultant noise levels to an acceptable level both inside habitable rooms, and in relation to various external amenity/garden areas. However, further development information is required, in order to verify the above, and all acoustic elements should be reviewed and included in an Acoustic Design Statement (ADS) prior to works on site, and should address STAGE 2 design elements of ProPG guidance (See Section 3.0). However, it is considered that the implementation of suitable noise mitigation measures can be ensured by an appropriately worded planning condition such as:

"An Acoustic Design Statement (ADS) should be should be submitted to, and approved in writing by, the Local Planning Authority prior to the commencement of building works and/or with any planning application for approval, which includes a detailed scheme of noise mitigation measures which ensures acoustic limits both inside and outside proposed development complies with the acoustic criteria detailed within British Standard 8233: 2014: 'Sound insulation and noise reduction for buildings', and the Institute Of Acoustics (IOA) 'Professional Guidance on Planning and Noise' (ProPG)."

APPENDIX I – NOISE UNITS AND INDICES

dB

The dB (decibel) is the logarithmic unit used to describe sound (or noise) levels. When measuring sound (or noise) levels, it usually ranges from 0 dB (the threshold of hearing) to 140 dB (the threshold of pain).

dB(A)

Are decibels measured using a sound level meter using a frequency rating which relates sounds of different frequency (pitch) in a similar way to the human ear. Measurements in dB(A) generally agree with peoples assessment of loudness.

Hz

Is a unit of frequency which is equal to one cycle per second. The frequency is related to the pitch of a sound.

L_{Aeq}

This is the A-weighted 'equivalent continuous noise level' which is an average of the total sound energy measured over a specified time period.

L_{Amax}

This is the maximum A-weighted noise level that was recorded during the monitoring period.

L_{A10}

Is the A-weighted noise level exceeded for 10% of the measurement duration (T).

L_{A90}

Is the A-weighted noise level exceeded for 90% of the measurement duration (T) and is generally used to define the background noise level.

SEL

This is the ‘sound exposure level’ of a single event (such as a passing train) and is the L_{Aeq} value of the whole event normalised to a 1 second period level of a sound.

APPENDIX II – RESULTS OF NOISE SURVEY(S)

Dates: Wednesday 20th/Thursday 21st August 2025 (Daytime/Night-time)

Equipment: See Section 4.0

Weather: See Section 4.0

Measurement Location(s): See Figure 1

'MEASUREMENT POSITION 1 (NM1) – 24 HOUR SURVEY

Date	Time	L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
20/08/2025	23:00:00	56.9	69.8	62.5	39.5
20/08/2025	23:15:00	57.0	71.1	62.5	32.0
20/08/2025	23:30:00	54.6	68.7	59.0	30.5
20/08/2025	23:45:00	53.2	69.3	55.5	29.5
21/08/2025	00:00:00	57.7	71.4	63.0	32.0
21/08/2025	00:15:00	56.1	70.7	61.0	31.0
21/08/2025	00:30:00	51.5	68.1	50.5	26.5
21/08/2025	00:45:00	52.8	69.1	53.0	27.5
21/08/2025	01:00:00	54.0	70.2	54.5	26.5
21/08/2025	01:15:00	52.5	70.6	53.0	26.0
21/08/2025	01:30:00	52.8	68.5	53.5	27.5
21/08/2025	01:45:00	54.0	71.6	53.5	26.5
21/08/2025	02:00:00	55.4	69.4	61.0	26.5
21/08/2025	02:15:00	56.6	73.7	61.5	30.5
21/08/2025	02:30:00	53.7	69.5	55.0	27.5
21/08/2025	02:45:00	56.2	73.4	59.5	27.5
21/08/2025	03:00:00	53.5	69.1	54.5	30.5
21/08/2025	03:15:00	56.2	72.1	61.0	33.5
21/08/2025	03:30:00	54.8	70.7	58.0	29.0
21/08/2025	03:45:00	54.8	72.5	53.5	30.5
21/08/2025	04:00:00	55.4	71.9	58.5	29.0
21/08/2025	04:15:00	54.8	70.2	57.0	32.0
21/08/2025	04:30:00	56.0	70.8	60.5	31.5
21/08/2025	04:45:00	58.3	73.0	63.5	39.0
21/08/2025	05:00:00	60.3	72.2	65.5	38.0
21/08/2025	05:15:00	62.1	72.5	67.0	45.0
21/08/2025	05:30:00	63.7	73.3	68.5	48.0
21/08/2025	05:45:00	66.4	90.9	67.5	46.5
21/08/2025	06:00:00	63.7	73.9	68.0	49.0
21/08/2025	06:15:00	63.5	76.1	67.5	49.0
21/08/2025	06:30:00	63.6	72.0	68.0	48.0
21/08/2025	06:45:00	64.4	74.3	68.5	48.5

21/08/2025	07:00:00	65.0	72.6	69.0	49.5
21/08/2025	07:15:00	65.8	76.2	69.5	49.0
21/08/2025	07:30:00	65.6	73.6	69.0	53.5
21/08/2025	07:45:00	65.1	73.5	69.0	53.5
21/08/2025	08:00:00	64.3	77.3	68.0	52.0
21/08/2025	08:15:00	64.0	72.5	68.0	51.0
21/08/2025	08:30:00	64.9	72.7	68.5	53.0
21/08/2025	08:45:00	64.4	73.8	68.0	52.0
21/08/2025	09:00:00	64.5	72.9	68.5	51.5
21/08/2025	09:15:00	63.7	74.9	67.5	52.0
21/08/2025	09:30:00	64.7	72.7	68.0	53.0
21/08/2025	09:45:00	64.5	76.0	68.5	51.5
21/08/2025	10:00:00	64.6	80.6	68.0	53.5
21/08/2025	10:15:00	65.1	85.8	68.5	52.5
21/08/2025	10:30:00	64.5	73.6	68.5	51.5
21/08/2025	10:45:00	63.4	73.9	67.0	52.5
21/08/2025	11:00:00	63.5	73.4	67.0	52.5
21/08/2025	11:15:00	64.9	77.1	68.0	52.5
21/08/2025	11:30:00	64.3	72.2	67.5	52.0
21/08/2025	11:45:00	64.4	81.3	68.0	51.5
21/08/2025	12:00:00	63.9	73.1	67.5	52.0
21/08/2025	12:15:00	64.3	72.8	68.0	54.5
21/08/2025	12:30:00	64.3	73.2	68.0	53.5
21/08/2025	12:45:00	63.3	73.3	67.0	51.5
21/08/2025	13:00:00	63.4	73.4	67.0	50.0
21/08/2025	13:15:00	64.1	72.8	67.5	52.0
21/08/2025	13:30:00	63.6	71.9	67.5	50.0
21/08/2025	13:45:00	64.8	74.1	68.5	52.0
21/08/2025	14:00:00	64.0	72.6	67.5	52.5
21/08/2025	14:15:00	64.0	74.2	68.0	50.0
21/08/2025	14:30:00	64.1	75.2	67.5	51.5
21/08/2025	14:45:00	64.0	75.0	68.0	49.0
21/08/2025	15:00:00	63.6	72.9	67.5	51.0
21/08/2025	15:15:00	63.5	74.3	67.0	53.0
21/08/2025	15:30:00	63.9	78.9	67.5	50.0
21/08/2025	15:45:00	64.3	74.8	67.5	52.5
21/08/2025	16:00:00	64.9	75.9	68.0	53.5
21/08/2025	16:15:00	63.9	71.8	67.5	51.5
21/08/2025	16:30:00	64.4	71.8	68.0	52.5
21/08/2025	16:45:00	64.1	73.7	68.0	51.5
21/08/2025	17:00:00	64.5	83.0	68.0	53.5
21/08/2025	17:15:00	64.9	75.7	68.0	53.5
21/08/2025	17:30:00	63.9	71.3	67.5	52.0

21/08/2025	17:45:00	64.2	74.9	68.0	51.5
21/08/2025	18:00:00	64.3	76.9	68.0	51.0
21/08/2025	18:15:00	64.3	73.4	67.5	53.0
21/08/2025	18:30:00	63.6	72.4	67.5	49.0
21/08/2025	18:45:00	62.5	73.3	66.5	50.0
21/08/2025	19:00:00	62.6	71.7	66.5	49.0
21/08/2025	19:15:00	63.7	76.5	67.5	48.5
21/08/2025	19:30:00	63.9	79.7	68.0	48.5
21/08/2025	19:45:00	63.0	75.1	67.5	47.5
21/08/2025	20:00:00	63.4	73.2	68.0	48.0
21/08/2025	20:15:00	63.7	75.9	68.0	48.5
21/08/2025	20:30:00	63.9	73.6	68.0	48.0
21/08/2025	20:45:00	62.5	74.9	66.5	47.0
21/08/2025	21:00:00	62.3	74.8	66.5	47.0
21/08/2025	21:15:00	63.5	84.8	66.5	46.0
21/08/2025	21:30:00	62.6	72.0	67.0	45.0
21/08/2025	21:45:00	61.1	75.7	66.0	42.0
21/08/2025	22:00:00	62.7	72.9	67.0	46.0
21/08/2025	22:15:00	61.9	80.9	66.0	42.5
21/08/2025	22:30:00	59.6	71.3	64.5	39.0
21/08/2025	22:45:00	60.5	72.8	65.5	40.5

'MEASUREMENT POSITION 2 (NM2) – 24 HOUR SURVEY

Date	Time	L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
20/08/2025	23:00:00	53.4	67.4	57.8	39.5
20/08/2025	23:15:00	55.3	73.9	58.2	34.2
20/08/2025	23:30:00	51.0	68.2	54.7	31.8
20/08/2025	23:45:00	50.3	69.1	53.3	29.8
21/08/2025	00:00:00	57.3	81.2	58.2	32.7
21/08/2025	00:15:00	51.7	67.4	55.8	31.3
21/08/2025	00:30:00	46.8	62.8	49.0	26.8
21/08/2025	00:45:00	50.1	66.8	47.7	28.0
21/08/2025	01:00:00	48.9	66.0	51.3	27.3
21/08/2025	01:15:00	49.3	73.6	48.8	26.7
21/08/2025	01:30:00	49.6	67.5	53.3	27.5
21/08/2025	01:45:00	48.2	64.2	51.0	26.5
21/08/2025	02:00:00	52.1	67.0	56.2	29.7
21/08/2025	02:15:00	52.4	71.2	55.2	30.5
21/08/2025	02:30:00	50.4	69.1	53.0	28.0
21/08/2025	02:45:00	51.2	72.2	54.2	27.7
21/08/2025	03:00:00	50.0	69.0	52.0	31.0
21/08/2025	03:15:00	52.9	68.9	57.7	31.7
21/08/2025	03:30:00	50.6	65.4	53.3	29.8
21/08/2025	03:45:00	53.3	71.7	53.2	30.3
21/08/2025	04:00:00	51.6	71.1	54.7	29.2
21/08/2025	04:15:00	51.1	66.4	55.5	32.2
21/08/2025	04:30:00	52.5	73.5	55.5	32.2
21/08/2025	04:45:00	52.6	64.1	56.5	37.7
21/08/2025	05:00:00	55.0	70.3	58.5	40.2
21/08/2025	05:15:00	56.7	70.7	60.2	46.5
21/08/2025	05:30:00	58.4	73.2	61.5	48.0
21/08/2025	05:45:00	60.1	83.1	61.3	45.7
21/08/2025	06:00:00	60.0	77.8	63.2	50.5
21/08/2025	06:15:00	59.8	74.5	63.0	51.2
21/08/2025	06:30:00	59.9	69.4	63.2	51.8
21/08/2025	06:45:00	60.6	75.4	63.7	49.7
21/08/2025	07:00:00	61.0	73.5	64.0	52.0
21/08/2025	07:15:00	61.5	72.8	64.7	53.0
21/08/2025	07:30:00	61.6	71.9	64.2	54.8
21/08/2025	07:45:00	62.3	74.7	64.8	55.0
21/08/2025	08:00:00	60.1	77.6	63.0	53.7
21/08/2025	08:15:00	60.7	73.6	63.7	53.2
21/08/2025	08:30:00	61.5	72.4	64.5	54.3
21/08/2025	08:45:00	61.3	76.0	64.3	54.2

21/08/2025	09:00:00	61.8	84.2	65.2	53.8
21/08/2025	09:15:00	60.6	72.6	63.5	53.2
21/08/2025	09:30:00	61.0	71.5	64.2	53.3
21/08/2025	09:45:00	61.1	74.9	63.8	53.7
21/08/2025	10:00:00	60.6	76.0	63.0	53.7
21/08/2025	10:15:00	62.1	86.8	62.5	53.0
21/08/2025	10:30:00	60.9	72.2	64.3	52.7
21/08/2025	10:45:00	60.4	74.6	63.3	53.8
21/08/2025	11:00:00	61.5	75.1	64.0	53.3
21/08/2025	11:15:00	60.7	72.7	63.5	54.0
21/08/2025	11:30:00	60.2	70.6	63.2	52.3
21/08/2025	11:45:00	59.9	71.4	63.0	53.7
21/08/2025	12:00:00	60.5	77.8	63.0	52.7
21/08/2025	12:15:00	61.0	73.5	63.7	55.0
21/08/2025	12:30:00	62.1	74.2	64.8	55.2
21/08/2025	12:45:00	60.6	73.2	63.5	53.3
21/08/2025	13:00:00	61.0	72.9	63.7	53.0
21/08/2025	13:15:00	60.5	72.0	63.2	53.2
21/08/2025	13:30:00	60.7	72.8	63.3	53.5
21/08/2025	13:45:00	60.9	74.4	63.5	53.3
21/08/2025	14:00:00	60.9	70.3	64.0	55.0
21/08/2025	14:15:00	61.0	73.8	64.2	52.8
21/08/2025	14:30:00	61.2	73.0	64.3	54.0
21/08/2025	14:45:00	60.9	73.6	64.0	50.3
21/08/2025	15:00:00	60.2	70.5	62.8	53.7
21/08/2025	15:15:00	61.3	74.9	63.5	54.8
21/08/2025	15:30:00	61.1	74.7	63.7	53.5
21/08/2025	15:45:00	61.5	77.9	63.7	54.7
21/08/2025	16:00:00	61.3	71.6	64.0	56.0
21/08/2025	16:15:00	60.8	73.1	63.3	55.7
21/08/2025	16:30:00	61.1	73.4	63.7	55.8
21/08/2025	16:45:00	60.7	72.8	63.2	54.7
21/08/2025	17:00:00	61.9	81.7	63.8	55.0
21/08/2025	17:15:00	61.7	75.6	64.3	56.3
21/08/2025	17:30:00	61.0	79.7	63.7	55.3
21/08/2025	17:45:00	62.2	85.4	63.0	54.3
21/08/2025	18:00:00	61.0	80.7	63.5	53.7
21/08/2025	18:15:00	60.5	70.8	63.2	54.0
21/08/2025	18:30:00	59.2	69.9	62.2	52.0
21/08/2025	18:45:00	59.2	75.3	62.2	52.0
21/08/2025	19:00:00	58.7	74.3	62.0	50.8
21/08/2025	19:15:00	60.4	82.9	62.2	52.3
21/08/2025	19:30:00	58.6	76.5	61.7	51.8

21/08/2025	19:45:00	59.1	76.8	61.5	50.5
21/08/2025	20:00:00	58.2	66.9	61.7	50.2
21/08/2025	20:15:00	59.5	77.8	62.2	51.5
21/08/2025	20:30:00	57.8	65.6	61.3	50.8
21/08/2025	20:45:00	57.7	75.8	60.7	47.0
21/08/2025	21:00:00	57.2	71.0	60.7	47.5
21/08/2025	21:15:00	57.7	75.3	60.8	47.5
21/08/2025	21:30:00	55.7	70.4	59.3	46.7
21/08/2025	21:45:00	55.3	67.4	59.2	41.8
21/08/2025	22:00:00	57.3	70.6	60.8	48.0
21/08/2025	22:15:00	56.5	76.1	59.5	44.8
21/08/2025	22:30:00	55.9	76.3	57.7	42.2
21/08/2025	22:45:00	55.8	72.4	59.3	44.0

'MEASUREMENT POSITION 3 (NM3) – 24 HOUR SURVEY

Date	Time	L_{Aeq}	L_{Amax}	L_{A10}	L_{A90}
20/08/2025	23:00:00	51.5	63.4	56.5	35.6
20/08/2025	23:15:00	51.0	65.7	56.1	33.8
20/08/2025	23:30:00	50.5	66.9	55.0	32.7
20/08/2025	23:45:00	48.6	66.8	52.6	30.3
21/08/2025	00:00:00	52.1	70.5	57.3	33.9
21/08/2025	00:15:00	50.2	63.8	55.0	30.9
21/08/2025	00:30:00	46.8	63.1	48.3	27.6
21/08/2025	00:45:00	46.8	60.4	50.5	30.1
21/08/2025	01:00:00	48.9	64.0	53.3	26.6
21/08/2025	01:15:00	46.2	64.6	48.0	27.5
21/08/2025	01:30:00	49.1	66.1	53.1	29.5
21/08/2025	01:45:00	48.4	63.8	51.7	26.7
21/08/2025	02:00:00	49.0	63.7	54.2	31.9
21/08/2025	02:15:00	50.0	67.6	54.7	36.1
21/08/2025	02:30:00	48.4	66.3	51.9	32.7
21/08/2025	02:45:00	50.1	68.1	54.0	29.7
21/08/2025	03:00:00	48.1	62.8	52.6	31.9
21/08/2025	03:15:00	51.7	65.5	56.4	32.9
21/08/2025	03:30:00	50.2	65.9	54.3	32.6
21/08/2025	03:45:00	49.4	64.4	54.0	31.2
21/08/2025	04:00:00	49.7	65.0	54.9	30.0
21/08/2025	04:15:00	50.5	66.3	55.1	33.2
21/08/2025	04:30:00	51.1	65.5	56.1	34.1
21/08/2025	04:45:00	52.9	65.3	57.5	38.5
21/08/2025	05:00:00	54.9	65.8	59.6	38.9
21/08/2025	05:15:00	56.2	67.0	59.9	42.8
21/08/2025	05:30:00	57.6	66.8	61.5	44.0
21/08/2025	05:45:00	57.3	71.8	61.0	42.4
21/08/2025	06:00:00	58.0	66.7	61.9	45.1
21/08/2025	06:15:00	58.1	68.0	61.6	45.5
21/08/2025	06:30:00	58.5	71.1	62.0	46.1
21/08/2025	06:45:00	58.6	70.1	61.9	46.7
21/08/2025	07:00:00	59.2	66.7	62.5	50.4
21/08/2025	07:15:00	60.0	69.2	62.9	52.7
21/08/2025	07:30:00	59.5	67.0	62.1	53.6
21/08/2025	07:45:00	59.4	67.5	62.1	52.9
21/08/2025	08:00:00	58.9	68.8	62.1	50.5
21/08/2025	08:15:00	59.2	69.4	62.3	49.9
21/08/2025	08:30:00	59.7	74.3	62.5	52.3
21/08/2025	08:45:00	58.8	69.1	62.0	51.8

21/08/2025	09:00:00	59.0	69.8	62.1	48.9
21/08/2025	09:15:00	58.3	68.1	61.5	49.3
21/08/2025	09:30:00	59.3	70.6	62.1	52.5
21/08/2025	09:45:00	58.8	67.6	61.9	50.5
21/08/2025	10:00:00	58.4	68.6	61.3	51.6
21/08/2025	10:15:00	59.3	74.0	62.0	50.8
21/08/2025	10:30:00	58.7	67.0	62.0	50.2
21/08/2025	10:45:00	58.8	73.5	61.8	51.7
21/08/2025	11:00:00	59.9	82.8	62.2	51.6
21/08/2025	11:15:00	59.3	73.9	62.0	51.3
21/08/2025	11:30:00	58.2	66.5	61.2	50.2
21/08/2025	11:45:00	58.4	68.2	61.2	50.3
21/08/2025	12:00:00	58.6	74.3	61.2	50.3
21/08/2025	12:15:00	59.3	69.2	62.0	52.8
21/08/2025	12:30:00	59.0	67.8	62.0	50.9
21/08/2025	12:45:00	58.6	71.4	61.6	49.9
21/08/2025	13:00:00	58.7	68.9	61.4	51.2
21/08/2025	13:15:00	59.0	68.3	61.9	52.0
21/08/2025	13:30:00	58.0	65.2	61.0	49.5
21/08/2025	13:45:00	58.4	66.4	61.3	50.4
21/08/2025	14:00:00	58.6	67.9	61.4	51.5
21/08/2025	14:15:00	58.6	66.1	61.7	50.4
21/08/2025	14:30:00	59.0	67.9	61.5	52.6
21/08/2025	14:45:00	58.3	66.6	61.3	48.7
21/08/2025	15:00:00	58.6	66.3	61.7	51.0
21/08/2025	15:15:00	58.6	65.6	61.3	52.9
21/08/2025	15:30:00	58.7	66.8	61.6	50.9
21/08/2025	15:45:00	59.6	73.2	61.8	52.6
21/08/2025	16:00:00	59.6	67.6	61.9	54.5
21/08/2025	16:15:00	59.0	66.7	61.7	52.5
21/08/2025	16:30:00	59.2	67.7	61.6	53.9
21/08/2025	16:45:00	59.1	68.3	61.7	53.0
21/08/2025	17:00:00	59.2	69.3	61.6	54.0
21/08/2025	17:15:00	59.2	70.2	61.6	54.0
21/08/2025	17:30:00	58.9	66.3	61.6	53.3
21/08/2025	17:45:00	58.7	70.2	61.5	51.6
21/08/2025	18:00:00	58.7	74.1	61.0	53.3
21/08/2025	18:15:00	58.4	69.6	60.7	51.9
21/08/2025	18:30:00	57.9	67.1	61.1	49.2
21/08/2025	18:45:00	57.4	65.5	60.5	48.9
21/08/2025	19:00:00	57.1	66.1	60.5	46.2
21/08/2025	19:15:00	58.2	76.8	61.1	49.0
21/08/2025	19:30:00	57.7	67.5	60.9	46.7

21/08/2025	19:45:00	57.2	71.2	60.9	45.3
21/08/2025	20:00:00	57.7	70.5	61.2	45.2
21/08/2025	20:15:00	58.4	71.2	61.7	47.7
21/08/2025	20:30:00	58.2	66.6	61.5	48.2
21/08/2025	20:45:00	57.3	66.1	61.1	42.6
21/08/2025	21:00:00	56.2	65.9	60.1	43.5
21/08/2025	21:15:00	56.5	65.9	60.3	44.5
21/08/2025	21:30:00	56.6	68.0	60.5	43.8
21/08/2025	21:45:00	55.5	67.1	59.5	40.6
21/08/2025	22:00:00	56.4	68.8	59.9	44.8
21/08/2025	22:15:00	55.0	65.4	58.9	42.6
21/08/2025	22:30:00	53.9	69.6	58.1	38.6
21/08/2025	22:45:00	54.6	67.2	58.5	41.9

APPENDIX III – REFERENCES

[1]Ministry of Housing, Communities & Local Government: National Planning Policy Framework (December 2024)

[2]Department for Environment, Food and Rural Affairs (Defra): Noise Policy Statement For England (NPSE), (March 2010)

[3]Institute of Acoustics (IOA): ProPG: Planning And Noise "New Residential Development" (May 2017) Guidance

[4]BSI Standards Publication, BS 8233:2014: Guidance on sound insulation and noise reduction for buildings (February 2014)

[5]World Health Organisation (WHO): Guidelines For Community Noise (April 1999)