

NOISE ASSESSMENT



Unit 17 – 18 Prince Consort
Industrial Estate

JUNE 2026

Client: Mick Ash Services Ltd

Reference: NJD26-0105-001R

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FIGURES

Figure 1 – Specific Noise Level, LAeq,1 hour

APPENDICES

Appendix 1 – Noise Measurements

1 INTRODUCTION

- 1.1.1 NJD Environmental Associates Ltd was instructed by Mick Ash Services Ltd to undertake a noise assessment to accompany a retrospective planning application for a storage yard at Unit 17 – 18 Prince Consort Industrial Estate in Hebburn. The site location is provided below in Drawing 1



Drawing 1: Site Location

- 1.1.2 A noise report has been prepared, with measurements taken of noise levels impacting the site, calculations performed using noise modelling software and the results interpreted in accordance with the relevant standards.

2 LEGISLATION, POLICY AND GUIDANCE

2.1 National Planning Policy Framework (NPPF)

- 2.1.1 The revised NPPF published in December 2024 provides the following with regards to noise, set out at paragraph 187 and 198:

'187: Planning policies and decisions should contribute to and enhance the natural and local environment by: ...

(e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of solid, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans.'

and

"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."

- 2.1.2 It is clear that the NPPF seeks to limit the exposure of new development to unacceptable levels of noise, although the policy does not seek to prescribe what constitutes an unacceptable level of noise.

2.2 Noise Policy Statement for England (NPSE)

- 2.2.1 The Department for Environment, Food and Rural Affairs (DEFRA) published the NPSE in March 2010.

- 2.2.2 The explanatory note of NPSE defines the terms used in the NPPF:

"2.19 There are several key phrases within the NPSE aims and these are

discussed below.

‘Significant adverse’ and ‘adverse;

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

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.

LOAEL – Lowest Observed Adverse Effect Level

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

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

SOAEL – Significant Observed Adverse Effect Level

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

2.2.3 The NPSE does not define the SOAEL numerically, stating at paragraph 2.22:

“2.22 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.”

2.2.4 There is no local or national guidance on how the three terms should be defined numerically, it is for the assessor to collate and interpret appropriate guidance on noise, such as may be found in British Standards, and correlate the guidance with the concepts of NOEL, LOAEL and SOAEL.

2.3 Planning Practice Guidance: Noise (PPGN)

2.3.1 In March 2014, the Government released the PPG on noise, revised July 2019. This document sets out a number of principles and reinforces the guidance set

out in the NPPF and NPSE.

2.3.2 Paragraph 001 of PPGN notes that:

“Noise needs to be considered when new development may create additional noise and when new developments would be sensitive to the prevailing acoustic environment.”

2.3.3 It goes on to note in paragraph 003 that:

“Local planning authorities’ plan-making and decision taking should take account of the acoustic environment and in doing so consider:

- whether or not a significant adverse effect is occurring or likely to occur;*
- whether or not an adverse effect is occurring or likely to occur; and*
- whether or not a good standard of amenity can be achieved.”*

2.3.4 The PPGN broadly repeats the NPSE definitions of the NOEL, LOAEL and SOAEL and it provides a summary table to explain how the terms relate to each other and to typical human response to sound. The table is replicated below in Table 1.

Table 1: PPGN Noise Exposure Hierarchy			
Perception	Examples of Outcome	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 small changes in behaviour and/or attitude, e.g. turning up volume of televisions; 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 areas 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 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 or non-auditory	Unacceptable Adverse Effect	Prevent

- 2.3.5 The PPGN provides advice on how to mitigate the effects of noise, noting that there are options to reduce noise at source, to optimise site layouts and to use planning conditions.

3 ASSESSMENT METHODOLOGY

3.1 BS8233:2014 and WHO:1999 Guidance Levels

- 3.1.1 BS8233:2014 'Guidance on sound insulation and noise reduction for buildings' provides guidance for the control of noise in and around buildings. It applies to

the design of new buildings, or refurbished buildings undergoing a change of use.

- 3.1.2 BS8233 refers to the World Health Organisation research and recommendations when defining acceptable and upper guidance noise levels within gardens during the day, and within habitable rooms in dwellings during the day and night-time periods as follows:

Table 2: Summary of BS8233 and WHO guidance noise levels			
Activity	Location	0700 to 2300h	2300 to 0700h
Resting	Living room	35dB LAeq,16h	-
Relaxing	Gardens	55dB LAeq,16h	-
Dining	Dining room	40dB LAeq,16h	-
Sleeping (daytime resting)	Bedroom	35dB LAeq,16h	30dB LAeq,8h 45dB LAmax

- 3.1.3 The above levels have been adopted for the purpose of this assessment.

3.2 BS4142:2014+A1:2019 Industrial and Commercial Sound Guidance

- 3.2.1 Where industrial or commercial noise is present or proposed and likely to impact a residential receptor, the guidance contained within BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound' should be followed. The guidance enables the effects of such noise on people nearby to be assessed and the associated risks to be minimised.
- 3.2.2 The guidance provides a methodology for determining an initial estimate of significance through subtracting the measured background noise level from the rating level (the specific sound level of the source corrected for any distinctive acoustic characteristics).
- 3.2.3 Typically, the greater the difference, the greater the magnitude of the impact.
- A difference of around +10dB or more is likely to be an indication of a significant adverse impact, depending on the context.
 - A difference of around +5dB is likely to be an indication of an adverse impact, depending on the context.
 - The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact, depending on the context.
- 3.2.4 The context, as defined within BS4142, relates to the following factors:
- The absolute level of sound.

- Character and level of the residual sound compared to the character and level of the specific sound.
- Acoustic design measures.

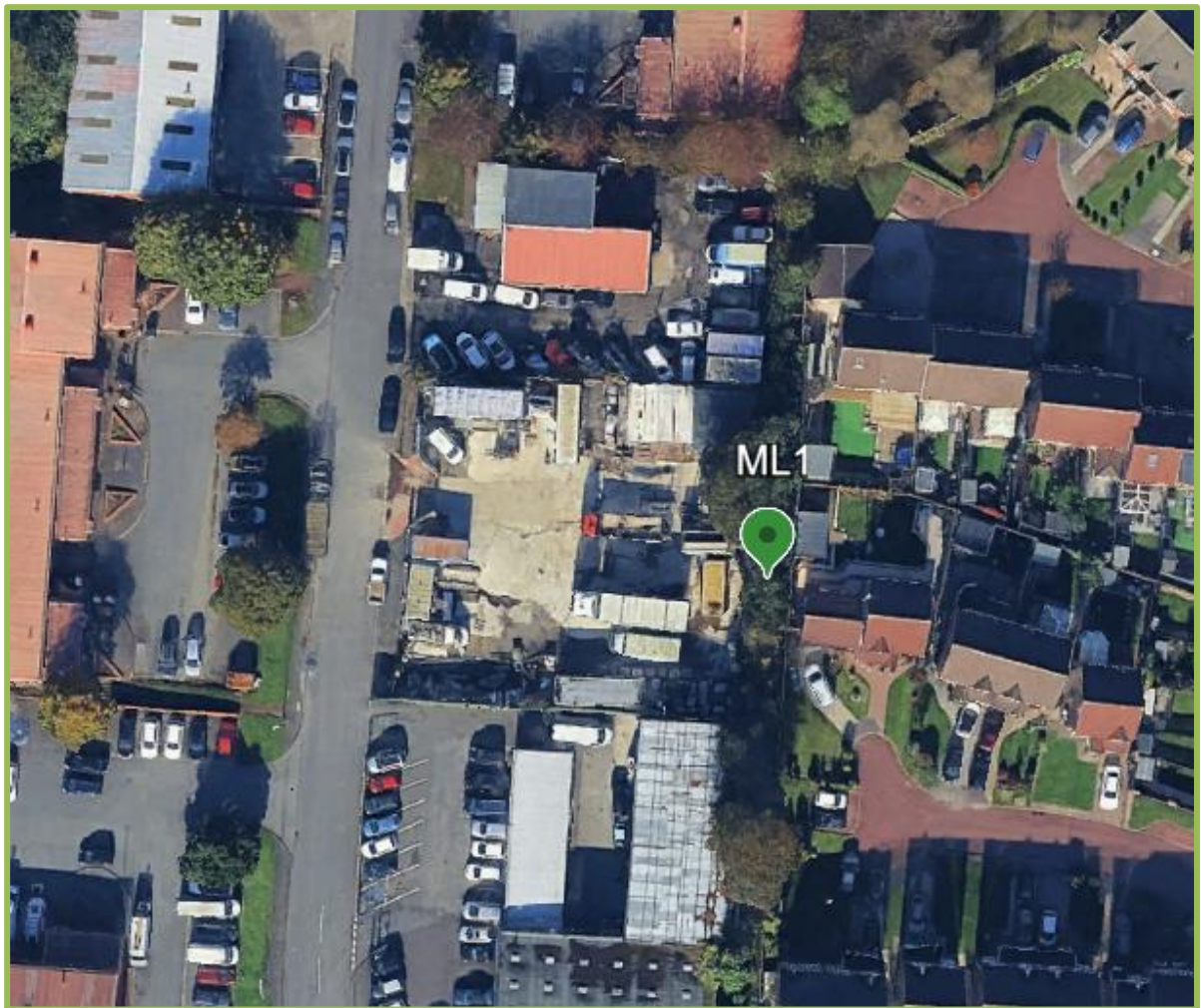
4 NOISE SURVEY

4.1 Introduction

- 4.1.1 Between the 14th and 19th May 2026, noise measurements were taken in the vicinity of the development site, in order to quantify noise from existing operations at the storage yard and also to establish background noise levels at the closest sensitive receptor location.
- 4.1.2 Measurements were taken using an Acoem Fusion sound level meter. The Class 1 instrument logged 1/3 octave levels throughout the measurements, in addition to audio recordings to aid subsequent analysis. The instrument was calibrated before and after the measurements to a reference level of 94dB, with no notable drift observed.
- 4.1.3 The sound level meter (SN: 16313) and field calibrator (SN: 34675377) both hold valid calibration certificates traceable to national standards, compliant with the requirements of BS7445. All calibration certificates can be made available upon request.

4.2 Monitoring Location

4.2.1 Measurements were taken at the location shown in Drawing 2 below.



Drawing 2: Noise monitoring location

4.2.2 The monitoring location was as follows:

- **ML1:** To the east of the site at the most favourable and secure position to quantify both noise levels from the storage yard activities and existing background at the closest sensitive receptor location.

The measurement took place during the following dates and times:

- o 1100h on the 14th May, to 1010h on the 19th May 2026.

4.2.3 Weather conditions throughout the survey were favourable; with no rainfall noted and windspeeds typically between 1 to 3ms⁻¹ from variable directions.

Uncertainties

4.2.4 Noise measurements have been undertaken with high precision Class 1 instruments calibrated before and after the survey by an appropriately qualified and experienced technician.

4.2.5 Noise monitoring was undertaken over a number of days which included weekday periods and a full weekend period.

4.2.6 Whilst an element of uncertainty will inherently exist in any noise assessment due to the large number of potential variables, all reasonable steps have been taken to reduce this.

4.2.7 As such, the level of uncertainty should not be significant and the results and conclusions should be considered robust.

4.3 Existing Noise Levels

4.3.1 The noise levels from the identified monitoring location are summarised in Table 3 below, with analysis of noise from different sources discussed in detail in Section 5.

Table 3: Summary of measured noise levels (dBA) – ML1

Date	LAeq	LA90
Daytime (0700 to 2300h)		
Thursday 14/05/2026	54	42
Friday 15/05/2026	53	42
Saturday 16/05/2026	47	35
Sunday 17/05/2026	47	37
Monday 18/05/2026	48	36
Tuesday 19/05/20216	51	44
Night-time (2300 to 0700h)		
Thursday 14/05/2026	50	39
Friday 15/05/2026	43	38
Saturday 16/05/2026	44	38
Sunday 17/05/2026	40	32
Monday 18/05/2026	43	33

4.3.2 Full details of the measurements are presented in Appendix 1.

5 BS4142 ASSESSMENT

5.1 Identification of Potential Sources

5.1.1 This retrospective planning application relates to the storage yard at Unit 17 – 18 Prince Consort Industrial Estate. A general site layout is shown below in Drawing 3.



Drawing 3: General Site Arrangement

5.1.2 The operational hours of the storage yard are as follows:

- Monday to Friday: 0800 – 1800h; and
- Saturday: 0800 – 1200h.

5.1.3 The site is composed of 4 separate operations, these include:

- A haulage company, comprising of 2no HGVs;
- A car haulage company, comprising of 1no HGV; and
- 2no. Scaffold Companies, comprising of storage of materials.

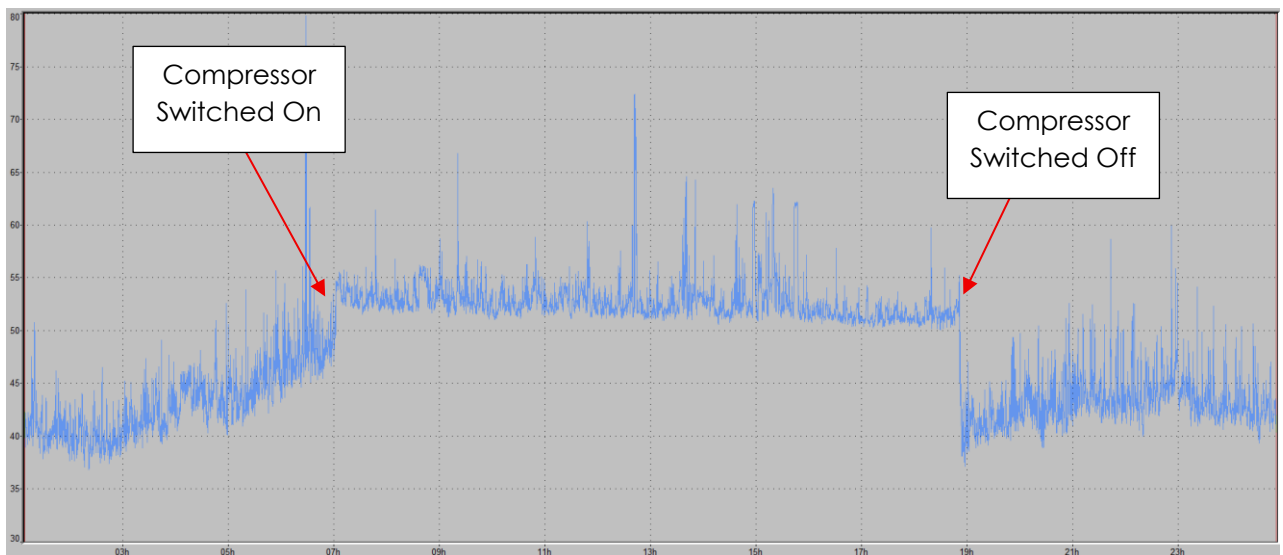
5.1.4 Generally, the majority of activities occur in the morning period (between 0800 – 1000) when staff arrive at the site, load cars or scaffolding and then leave the site.

5.1.5 Staff will then arrive back to the compound in the afternoon to drop off work vehicles / occasionally unload materials.

- 5.1.6 For the large majority of time during the day, there is little to no activity in the compound.
- 5.1.7 Given the nature of the businesses in the yard, the time spent in the yard and the location varies day-to-day.
- 5.1.8 Also noted during the survey were various activities in neighbouring businesses. Notably, there was a compressor readily audible from 'Banks of the Tyne / ID Coach Works Specialists' directly to the south. Furthermore, general workshop noise and a forklift operating at DWH Engineering to the east and general workshop noise from 'Advance AutoShop' to the north were also audible.
- 5.1.9 A scheme a monitoring was undertaken in order to identify representative ambient, residual and background noise levels over an extended period at the eastern boundary of the site.

5.2 Analysis of Data

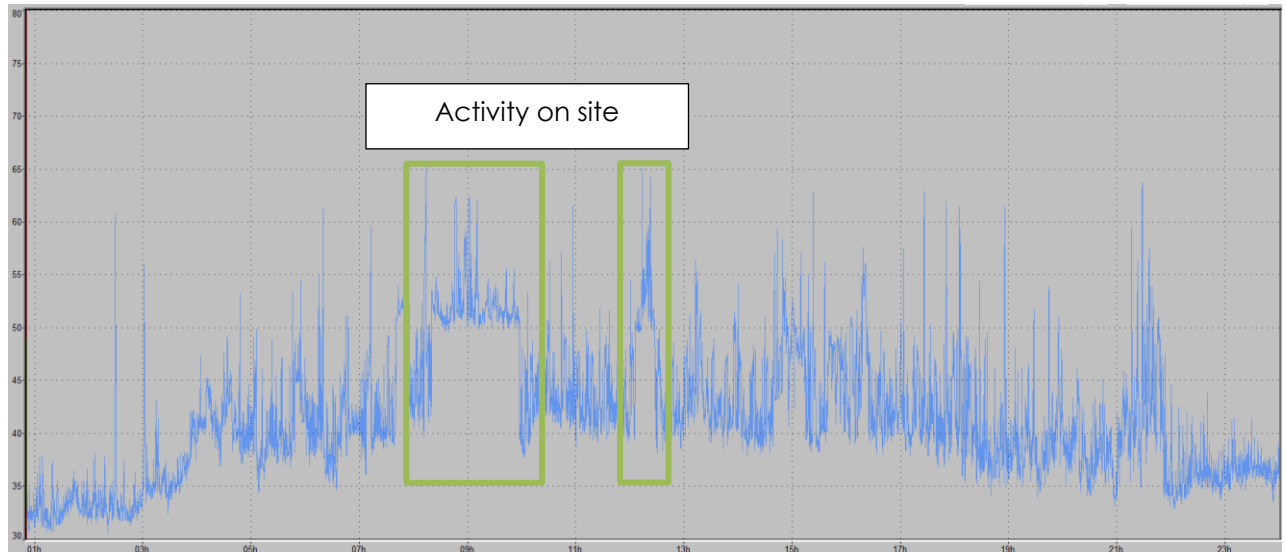
- 5.2.1 During Friday 15th May 2026, on review of the sound files it was identified that the compressor at the compound (separate, adjacent operational facility) to the south was switched on at 0700h and switched off at 1900h. This is demonstrated in the time history graph of averaged levels shown below.



Graph 1: Time history log Friday 15th May 2026 demonstrating compressor operation at adjacent site.

- 5.2.2 Although activities from the compound were audible during this period, the source noise levels as measured were artificially raised by the compressor on the neighbouring activity being operational and dominant.
- 5.2.3 The same exercise has been undertaken for Monday 18th May 2026, which demonstrated the compressor was not operational and therefore the measured

noise levels are considered to be more representative of day-to-day activities on site.



Graph 2: Time history log Monday 18th May 2026

- 5.2.4 As demonstrated from the Monday period evaluated, the compressor at the adjacent facility is not audible.
- 5.2.5 As previously outlined, the majority of activities take place during the morning period and early afternoon, and this can be seen in the graph above. The area marked (between 0800 – 1000h and around 1300h) show higher operational noise levels where activities described previously on site are taking place.
- 5.2.6 The audio recordings from the various spikes were analysed and the data, in each instance, was found to relate to different process which are related to activities on site (vehicle movements, the unloading of materials, etc).
- 5.2.7 However, given the variations of activities and different locations on a day-to-day basis, it would be difficult to capture an accurate sound power level and location of each activity to replicate in the model.
- 5.2.8 Therefore, it is considered to be a more robust approach to identify at the highest hourly average across the operational period (0800 – 1800) on Monday 18th May 2026. This exercise is presented below.

Periods	1h
Start	18/05/2026 08:00:00
End	18/05/2026 18:00:00
Location	ML1
Weighting	A
Data type	Leq
Unit	dB
Period start	Leq
18/05/2026 08:00:00	53.1
18/05/2026 09:00:00	53.1
18/05/2026 10:00:00	45.3
18/05/2026 11:00:00	43.9
18/05/2026 12:00:00	50.5
18/05/2026 13:00:00	45.4
18/05/2026 14:00:00	46.9
18/05/2026 15:00:00	48.1
18/05/2026 16:00:00	47.0
18/05/2026 17:00:00	46.5
Overall	49.1

Table 4: Hourly Average Noise Levels (Monday 18th May 2026).

- 5.2.9 As demonstrated, the highest measured noise level of 53 dBA was measured between 0800 – 1000h, and these source levels have been used within the modelling exercise.

6 CADNAA NOISE MODELS

6.1 Input Data

- 6.1.1 Topographic data of the site and surrounding land has been incorporated into the noise models using LIDAR 1m data, with buildings positioned to reflect the proposed development of the site.
- 6.1.2 For the purpose of these calculations, the ground absorption has been set to $G=0.5$ (which represents a mixture of acoustically soft and absorptive ground around the site) and buildings and roads have been set to $G=0$ (acoustically hard and reflective), with two orders of reflection considered.
- 6.1.3 The models have been programmed to assess scenarios based on the Daytime LAeq,1hr with receiver and grid calculation height set to 1.5m.

6.2 Unit 17 – 18 Source Data

- 6.2.1 Given the nature of the storage yard, operational on-times and precise source

locations can vary from day to day. Therefore, to assess robustly, the external operational area has been represented in the noise model as a single area source, calibrated to the highest hourly daytime period as discussed in section 5 above.

- 6.2.2 In practice, on-site activities would likely be more localised and behave acoustically as point or hemispherical sources. This would typically result in reduced propagation compared to the area-source approach adopted; therefore, the assessment is considered conservative.
- 6.2.3 On this basis, the highest hourly measured noise level at ML1 during the operational hours on Monday 18th May 2026 was 53 dB LAeq,1hr and this has been replicated within the model as an area source.

6.3 Noise Model Results

- 6.3.1 The results are shown in Figure 1 and summarised within Table 5 below, with the assessment and interpretation of the results discussed in the following sections.

Table 5: Resultant Noise Levels	
ESR Location:	LAeq,1hour
ESR1	36
ESR2	38
ESR3	40

7 BS4142:2014+A1:2019 ASSESSMENT

- 7.1.1 The noise data from ML1 has been analysed to determine representative LA90 background noise levels in the absence of noise from site.
- 7.1.2 To ensure no noise is included from the site, the background has been sourced from the evening period (1900 – 2300) when it was known the site was not operational.
- 7.1.3 The modal average has been taken from the evening of Monday 18th May 2026. These are summarised within Table 6 below.
- 7.1.4 The full modal average summary is presented within Appendix 1.

Table 6: Summary of Background Noise Levels (dBA)	
Location:	Evening (1900 – 2300h)
ML1	42

- 7.1.5 Table 7 below presents the findings of the BS4142 assessment. The highest predicted specific noise level at ESR3 has been used within the assessment.

Table 7: BS4142 Assessment

Results	Noise level (dB)	Commentary
Specific sound level	40	Based on the calculated levels from Figure 1 (ESR3)
Acoustic feature correction	+6	+ 3dB correction to account for any potential impulsivity associated with the operations. +3 dB correction to account for the intermittent nature of the operations on site
Rating level	46	Specific noise level corrected for acoustic features
Background sound level	42	Reference Table 6
Excess of rating over background sound level	+4	Rating level minus background level
Initial assessment of impact	M/A	Negligible (N); Low (L); Minor Adverse (M/A); Adverse (A); Significant Adverse (S/A)
Assessment of Context	The initial assessment indicates that noise associated with the storage yard may result in a minor adverse impact during the operational hours, depending on the context. The context is assessed below: The specific noise level is predicted to be up to 40dB LAeq,T during the daytime. Assuming 15dB of attenuation for a partially open window (WHO 1999), internal noise levels would therefore be significantly below the BS8233 internal guidance levels during both the daytime and night time periods. Furthermore, this is below the desirable and upper external guidance level of 50dB and 55dB in gardens as outlined within BS8233. Other important context is discussed in section 7.2 below.	
Conclusion	It is concluded that noise from the storage yard is unlikely to be of a level that causes a change in behaviour or attitude to the receptor and likely to reside at or around the LOAEL.	

7.2 Other Important Context

- 7.2.1 The application site has a long-established history of industrial use, having operated as a storage yard serving a scaffolding business for in excess of 20 years. Whilst operations were temporarily suspended during the COVID-19 pandemic, the use subsequently resumed and continues in a manner consistent with its historical operation.
- 7.2.2 Furthermore, the wider industrial estate has been in active industrial use for more than 30 years and has historically accommodated a range of commercial and industrial activities, some of which generate higher levels of noise than those associated with the current site operations. The existing acoustic environment is

therefore characterised by a long-standing industrial influence, and the operation of the storage yard is an established component of this environment.

- 7.2.3 In relation to historic noise complaints relating to the site. These are understood to have originated from a single neighbouring resident within the residential area, with complaints being submitted on a recurring basis over a period of time (not only about noise but other disciplines also). The site operator has sought to engage constructively and adopt a neighbourly approach in response to these concerns; however, these efforts have not resolved the complainant's dissatisfaction.
- 7.2.4 Notwithstanding the complaints received, it is understood that the Local Authority Environmental Health department has undertaken their own investigations on multiple occasions and has consistently concluded that the site operations do not give rise to a statutory nuisance. These findings suggest that the existing operations are within acceptable limits and support the conclusions of this assessment that the ongoing operations are unlikely to result in a statutory nuisance or unacceptable adverse effects on residential amenity.

8 CONCLUSION

8.1 Introduction

- 8.1.1 NJD Environmental Associates has undertaken a noise assessment to accompany a retrospective planning application for the use of a storage yard at Unit 17 – 18 Prince Consort Industrial Estate.
- 8.1.2 The assessment considers noise from on-site operations; with measurements taken, the data analysed and the results interpreted in accordance with the relevant standards.

8.2 BS4142 Assessment

- 8.2.1 Assessment of noise sources associated with the use of the site has been undertaken in accordance with BS4142.
- 8.2.2 Including the context of the noise and with reference to the Noise Policy Statement for England (NPSE) and Planning Practice Guidance (PPG); noise from the premises may at times be perceptible, but should not be at a level, frequency or character that is likely to result in an adverse impact.
- 8.2.3 Noise from the use of the storage yard is similar to the prevailing character of the area, and should not result in any change in quality of life. The impact will therefore likely reside at the 'LOAEL' (Lowest Observed Adverse Effect Level).

8.3 Summary

- 8.3.1 It is concluded that noise should not be a prohibitive factor in the determination of this planning application.



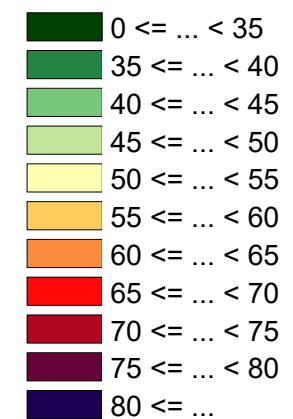
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Appendix 1: Noise Measurements

File	20260514_105648_000000_1.CMG											
Location	ML1											
Data type	Leq											
Weighting	A											
Unit	dB											
Start	14/05/2026 00:00:00											
End	20/05/2026 00:00:00											
Period	Day (Ld)											
Time slots	Day	07:00	23:00	Kd = 0 dBA	Mon	Tue	Wed	Thu	Fri	Sat	Sun	
Day	Ld dB	Leq dB	Lmin dB	Lmax dB		L90 dB		L10 dB				
Thu 14/05/2026	54.3	54.3	38.0	76.9		41.6		54.7				
Fri 15/05/2026	52.6	52.6	35.4	79.1		42.1		53.8				
Sat 16/05/2026	47.1	47.1	30.5	75.8		35.3		50.6				
Sun 17/05/2026	46.5	46.5	31.0	81.7		37.4		47.7				
Mon 18/05/2026	47.9	47.9	32.1	70.3		35.8		51.4				
Tue 19/05/2026	50.6	50.6	39.9	71.0		43.9		52.9				
Period	Night (Ln)											
Time slots	Night	23:00	07:00	Kn = 0 dBA								
Day	Ln dB	Leq dB	Lmin dB	Lmax dB		L90 dB		L10 dB				
Thu 14/05/2026	49.5	49.5	36.0	84.2		38.8		47.1				
Fri 15/05/2026	43.0	43.0	33.2	60.8		38.2		45.2				
Sat 16/05/2026	43.7	43.7	35.0	62.3		37.6		47.5				
Sun 17/05/2026	39.9	39.9	29.9	69.4		32.2		42.1				
Mon 18/05/2026	42.8	42.8	30.1	72.5		32.9		46.2				
Tue 19/05/2026												

ML1	Date/Time	P1 (A, Lin)	
		LA90	
	15/05/2026 19:00	38.6	39
	15/05/2026 19:15	39.3	39
	15/05/2026 19:30	39.9	40
	15/05/2026 19:45	40	40
	15/05/2026 20:00	40.9	41
	15/05/2026 20:15	39.3	39
	15/05/2026 20:30	40.4	40
	15/05/2026 20:45	40.6	41
	15/05/2026 21:00	41.7	42
	15/05/2026 21:15	41.9	42
	15/05/2026 21:30	41.5	42
	15/05/2026 21:45	41.4	41
	15/05/2026 22:00	41.6	42
	15/05/2026 22:15	40.8	41
	15/05/2026 22:30	42.1	42
	15/05/2026 22:45	43.4	43
Period Count		16	
Log Averages			41
Modal Average			42

