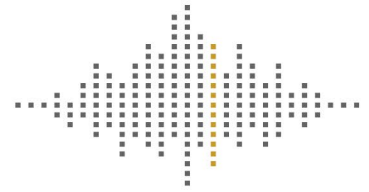


SHARPS REDMORE

ACOUSTIC CONSULTANTS ▪ Established 1990



Report

Billinghurst Business Park

Environmental Noise
Assessment

Prepared by

Gary King MIOA MCIEH

Date 6 October 2025

Project No 1818019

Head Office

Sharps Redmore

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

T 01473 730073

E contact@sharpsredmore.co.uk

W sharpsredmore.co.uk

Regional Locations

South England (Head Office),

South West England,

North England, Wales, Scotland

Sharps Redmore Partnership Limited

Registered in England No. 2593855

Directors

RD Sullivan BA(Hons), PhD, CEng, MIOA, MAAS, MASA;

KJ Metcalfe BSc(Hons), MIOA;

N Durup BSc(Hons), MSc, PhD, CEng, FIOA, MInstP, MASA, MAES;

GJ King MIOA, MCIEH

Company Consultant

TL Redmore BEng, MSc, PhD, MIOA



Contents

- 1.0 Introduction
- 2.0 Assessment Methodology and Criteria
- 3.0 Noise Survey Details
- 4.0 Impact of noise on residential properties – Site Suitability
- 5.0 Impact of noise from business units
- 6.0 Conclusions

Appendices

- A. Indicative site layout
- B. SoundPLAN Figures
- C. Acoustic Terminology

This report has been prepared with all reasonable skill, care and diligence commensurate with an acoustic consultancy practice under the terms and brief agreed with our client at that time. Sharps Redmore provides no duty or responsibility whatsoever to any third party who relies upon its content, recommendations or conclusions.

1.0 Introduction

- 1.1 Sharps Redmore (SR) have been instructed by the Dunmoor Group ('Dunmoor' the current landowner and developer), to carry out an environmental noise survey and assessment for at land North of Hilland Farm, Billinghamurst, RH14 9HN.
- 1.2 Planning permission is being sought for a hybrid application comprising of mixed-use development, including detailed permission for means of access and 1,338 sqm business floorspace with the remainder of the development in outline, comprising up to 102no. homes and up to 5,605 sqm of business floorspace (Classes E g (iii)/B2/B8). A copy of the masterplan is shown in Appendix A to this report.
- 1.3 The site has extensive planning history and SR has carried out numerous noise assessments including in relation to the original 2019 applications and subsequent applications, including Lidl superstore and most recently the current live application (Ref.DC/25/0458) submitted jointly by Dunmoore and EVM.
- 1.4 The purpose of this report is to consider the impact of noise on and from the hybrid application, including the following:
 - I. Impact of noise on proposed residential properties – Site Suitability
 - II. Impact of noise from proposed business units.
- 1.5 The assessment has regard to both national and local policy, relevant noise guidance and the existing permitted use of the site. This are discussed in detail within Section 2 of the report.
- 1.6 Section 3.0 of the report includes details of survey work carried out.
- 1.7 Section 4.0 includes and assessment of the impact of noise on proposed residential element of the scheme, Section 5.0 considers the impact of the new business units. The reports conclusions are presented in section 6.0.
- 1.8 A guide to the acoustic terminology used within the report is included in Appendix C.

2.0 Assessment Methodology and Criteria

National Policy

- 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." 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"*

- 2.2 Guidance on the interpretation of the policy aims contained within the NPPF is contained within National Planning Practice 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

Response	Examples of Outcomes	Increasing Effect Level	Action
No Observed Effect Level			
Not present	No Effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present 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			
Present 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			
Present 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	Significant Observed Adverse Effect	Avoid

Response	Examples of Outcomes	Increasing Effect Level	Action
	getting back to sleep. Quality of life diminished due to change in acoustic character of the area.		
Present 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 reinforce 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 It is clear from a review of national policy that the fact a noise can be heard is not reason to refuse planning permission. Regard must be had to the significance of the impact.
- 2.6 Policy 200 of the NPPF refers to the impact of introducing new noise sensitive properties on existing commercial use and requires that *‘existing businesses and facilities should not have unreasonable restrictions placed upon them as a result of a development permitted after they were established.’*

Local Policy

- 2.7 In terms of local policy regard is had to Horsham District Planning Framework – November 2015, Policy 24 ‘Environmental Protection’ and Policy 33 ‘Development Principles’ which state the following:

Policy 24 – Environmental Protection

“The high quality of the district’s environment will be protected through the planning process and the provision of local guidance documents. Taking into account any relevant Planning Guidance Documents, developments will be expected to minimise exposure to and the emission of pollutants including noise, odour, air and light pollution.”

Policy 33 – Development Principles

“In order to conserve and enhance the natural and built environment developments shall be required to:

- 2.8 *Ensure that it is designed to avoid unacceptable harm to the amenity of occupiers/users of nearby property and land, for example through noise, whilst having regard to the sensitivities of surrounding development."*
- 2.9 Further guidance on the assessment of noise is provided within the Sussex Planning Noise Advice Document (November 2023). The guidance within this document is discussed in more detail below.
- 2.10 Taking an overview of strategic national and local policy it is clear that when considering the impact of noise, the significance of any impact should be considered. The presence of an adverse impact in itself is not sufficient to refuse permission.

Design Guidance

- 2.11 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 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.
- 2.12 A discussion of the relevant design standards in relation to industrial/commercial sites has been included within the noise assessments with accompanied the previous applications and is included as Appendix A to this report.

Guidance on residential developments

BS 8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings.

- 2.13 The current nationally recommended internal noise levels for dwellings are given in BS 8233:2014 'Guidance on Sound Insulation & Noise Reduction for Buildings'. BS 8233 recommends the following internal noise standards:

TABLE 2: Guideline noise values

BS 8233:2014 Table 4 – Indoor ambient noise levels for dwellings			
Activity	Location	0700 to 2300	2300 to 0700
Resting	Living room	35 dB $L_{Aeq,16hour}$	-
Dining	Dining room/area	40 dB $L_{Aeq,16hour}$	-
Sleeping (daytime resting)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

- 2.14 There is no longer a L_{MAX} standard for bedrooms in BS 8233. However, footnote 4 to Table 4 states that *“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 this case, it is proposed that the previous BS8233 internal standard (also referenced in World Health Organisation Guidelines for Community Noise) is applied. This is 45 dB L_{MAX} , inside bedrooms.

External Areas (Garden and Balconies)

- 2.15 For outdoor areas (i.e. balconies), BS 8233:2014 recommends that *“it is desirable that the external noise level does not exceed 50 dB L_{AeqT} , with an upper guideline value of 55 dB L_{AeqT} ”* However, the document recognises that these guideline values are not achievable in all circumstances and in higher noise areas, a compromise might be warranted. In such circumstances, development should be designed to achieve the lowest practicable levels in these external amenity spaces.
- 2.16 The Planning Practice Guidance on Noise, published on planningportal.gov.uk, gives further consideration relating to mitigating the impact of noise on residential developments and considers that noise may be partially offset if residents of the dwellings have access to:
- A relatively quiet façade (containing windows to habitable rooms as part of their dwelling;
 - A relatively quiet external amenity space for their sole use such as a balcony which is generally considered as desirable.
 - A relatively quiet nearby external space for use by a number of residents as part of the amenity of their dwellings, and/or;
 - A relatively quiet external, publicly accessible amenity space that is nearby (e.g. within a 5-minute walk)

ProPG: Planning and Noise – New Residential Development

- 2.17 The ProPG professional practice guidance on planning and noise has been jointly produced by the Chartered Institute of Environmental Health (CIEH), Institute of Acoustic (IOA) and Association of Noise Consultants (ANC).
- 2.18 The ProPG recommends a 2-stage approach; an initial assessment which identifies the risk of noise on the proposed planning application, and where the results indicate that noise requires further consideration a full assessment in the form of an Acoustic Design Statement (ADS) which would include four key elements as follows:
- Element 1 – demonstrating a “Good Acoustic Design Process”;
 - Element 2 – observing internal “Noise Level Guidelines.”
 - Element 3 – Undertaking an “External Amenity Area Noise Assessment”
 - Element 4 – Consideration of “Other Relevant Issues.”
- 2.19 The advice contained within ProPG is based on the policy objectives contained within the NPPF and the objective noise guidelines within BS 8233:2014. However, the ProPG does not constitute an official government code of practice.

Local Design Guidance

2.20 As referred to above the Sussex Noise Advice Document (November 2023) provides further guidance on the assessment of noise. This document compliments the advice contained within the NPPF and NPSE and also contains guidance on objective noise criteria for various types of development. In relation to Industrial and commercial sites and plant, the following noise thresholds are recommended:

1. The rating level of the plant should, where practicable, be no greater than the existing background levels, when measured in accordance with BS 4142.
2. Where background noise levels are very low, discussions should be had with the LPA on the objectives to be agreed;
3. Apply the indoor ambient noise levels in Tables 4 and 6 of BS 8233:2014.

2.21 The principle of commercial development (Phase 2) has previously been consented by Horsham District Council. The original application was accompanied by a noise assessment which considered the impact of noise from the outline scheme. Although the Environmental Health Officer has concerns regarding the layout of the scheme, particularly on the eastern boundary, outline planning permission was granted subject planning conditions. The conditions are summarised below:

Condition 14 – Pre-Occupation Condition – Submission of a Noise Management Plan

Condition 19 – Pre-Occupation Condition – Noise from plant, machinery, and equipment

Condition 20 – Pre Occupation Condition – Post completion noise assessment of noise break out from industrial units.

Conditions 31 – 33 – Regulatory Condition – Restricting hours of operation

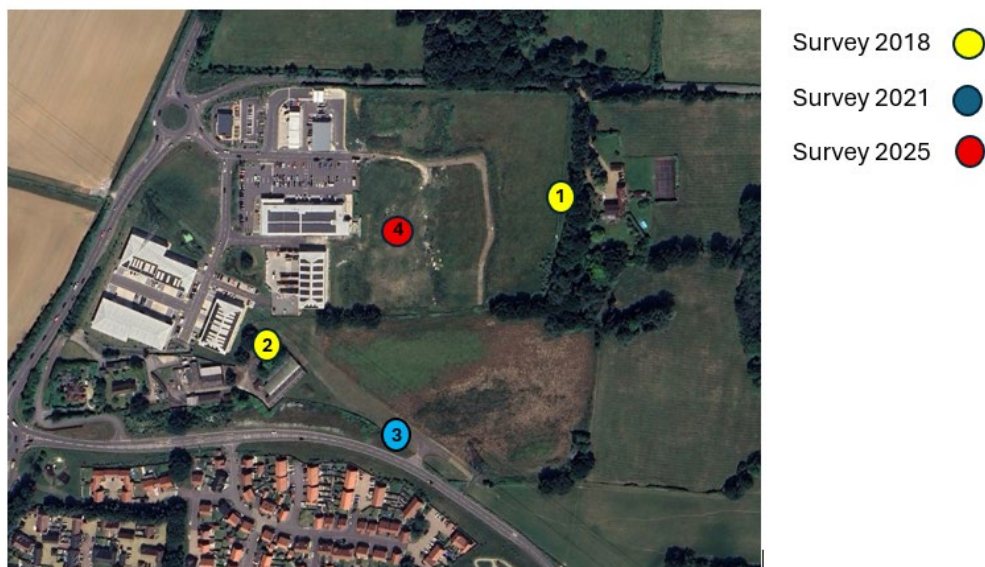
Condition 58 – Regulatory Condition – Restriction on hours of operation of petrol filling station and drive-thru unit.

2.22 The above conditions were imposed to safeguard the amenities of neighbouring properties and the existing industrial/commercial units at the site have been developed in accordance with the above conditions. The impact of this is that there is very little activity at the existing business units' site during the night time period (2300 – 0700 hrs).

3.0 Noise Survey Details

- 3.1 Sharps Redmore has undertaken several surveys at the site in relation to the previous applications, including as survey in 2018 prior to any development taking place and a further survey in 2021 to take into account the new residential properties to the south of the site. A further survey has been carried out in May 2025 to determine noise levels at a location considered representative of the proposed residential properties. The survey locations are shown in Figure 1 below:

FIGURE 1: Monitoring Locations



Survey 2018 and 2021

- 3.2 Full details of the surveys were submitted to and accepted by the local authority in relation to the previous planning applications. The survey results are summarised below:

TABLE 2: Survey Results – July 2018

	Location	Day (0700 – 2300 hrs)		Night (2300 – 0700 hrs)		
		L _{Aeq15min}	L _{A90,15min}	L _{Aeq15min}	L _{A9015min}	L _{Afmax}
July 2018	1	51 - 62	37 - 43	35 - 59	19 - 42	49 - 85
		61 – 67 ¹	41 - 45	--	--	--
	2	44 - 54	35 - 49	35 - 51	21 - 45	53 – 69
		50 - 53	45 - 48	--	--	--
Jan 2021	1	39 - 52	27 - 48	28 - 51	23 - 47	43 – 69
		50 - 55	44 – 50	--	--	--
	3	38 - 55	26 – 57	27 - 51	23 - 47	43 – 69
		52 - 55	44 - 48	--	--	--

¹Results affected by unknown source between 0700 and 1000 hrs when measurements stopped

- 3.3 On both occasions it was noted that existing noise levels are dominated by localised traffic on the A29, with occasional noise from aircraft. Overall, noise levels were low especially during the night time period when road traffic on A29 reduces.

Survey May 2025

- 3.4 As advised above a further survey was carried out in May 2025 to determine noise levels at the proposed residential properties. Measurements were carried out at location representative of the proposed properties (Figure 1 – Location 4) between 17:20 on 13 May until 07:30 hours on 14 May 2025. In addition, site observations were carried out between 17:30 and 18:00 hours, 21:30 and 22:30 hours and during early morning period 06:00 and 08:00 hrs.
- 3.5 Measurements were taken using a Norsonic type 1 sound level meter which was calibrated before and after the survey with no drift in accuracy noted. Weather conditions during the survey were dry, warm with light winds and were suitable for taking sound level measurements. The results of the survey are shown in Figure 2 below with daytime (0700 – 2300 hrs) and night time (2300 – 0700 hrs) presented in Table 3 :

Figure 2: Survey Results – 13 to 14 May 2025

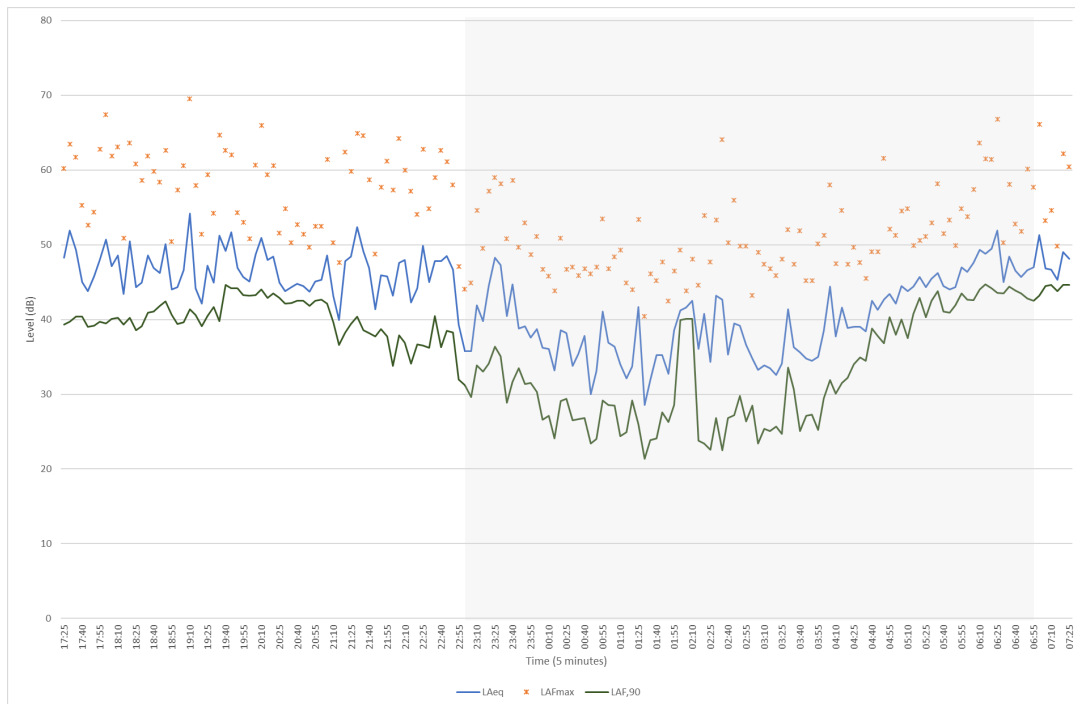


Table 3: Survey Results – May 2025

Day time (0700 – 2300 hrs)		Night time (2300 – 0700 hrs)		
$L_{Aeq,16hr}^{[1]}$	$L_{A90,T}^{[2]}$	$L_{Aeq,8hr}$	$L_{A90,T}^{[2]}$	$L_{Af,max}^{[3]}$
48 dB	44 dB	42 dB	24 dB	58 dB

^[1] Based on measurements between 1700 – 2300 hrs and 0700 – 0730 hrs

^[2] Determined from modal analysis of the data

^[3] Typical $L_{Af,max}$ determined from 90% percentile

- 3.6 Noise levels measured were similar to those measured prior to development in 2018, with background noise levels within 1 dB of those determined previously. The existing commercial units have therefore had very little impact on the measured noise levels.

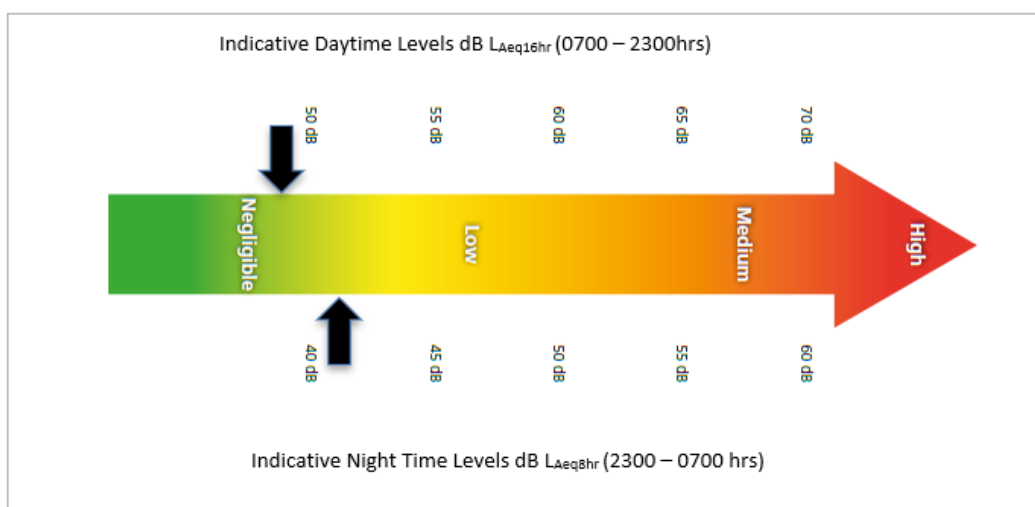
Site observations

- 3.7 As advised above a series of site observations were undertaken at various time of the day, including afternoon 17:30 to 18:00 hour, evening 21:30 to 22:30 hrs and early morning period 06:00 to 08:30 hrs.
- 3.8 At 21:30 hours it was noted that a delivery was taking place at the Lidl store, however whilst just audible it did not make any difference to the measured noise levels. The delivery was off site by 22:45 hrs and from this time no noise was heard from the industrial units. During the early morning period at 06:00 hours noise was heard coming from a road sweeper, with a dust cart collecting waste at the PFS noted at 06:30 hours. At 07:00 hours the Builders Merchants opened. Noise from industrial/commercial units was not considered intrusive and did not impact on the measured noise levels.
- 3.9 The existing noise climate is dominated by road traffic noise, whilst some noise from industrial/business units was noticeable, it did not impact on measured noise level nor was considered intrusive. This is surprising taking into account the planning restrictions imposed by the local authority on the site to control

4.0 Impact of noise on proposed residential properties – Site Suitability

- 4.1 Using the noise levels in Table 3 above an initial site risk assessment has been carried out in accordance with the ProPG guidance discussed in section 2.0 of this report. The initial site noise assessment does not include the impact of any mitigation measures that can be incorporated into the design of the project but is intended to give an indication to the extent of the acoustic issues that will be faced and suitability of the site for residential use.
- 4.2 Based on the guidance in ProPG, the initial assessment indicates there is a negligible risk during the day and negligible/low risk during the night time period. The advice in ProPG is that *‘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.’*

FIGURE 3: ProPG Initial site risk assessment



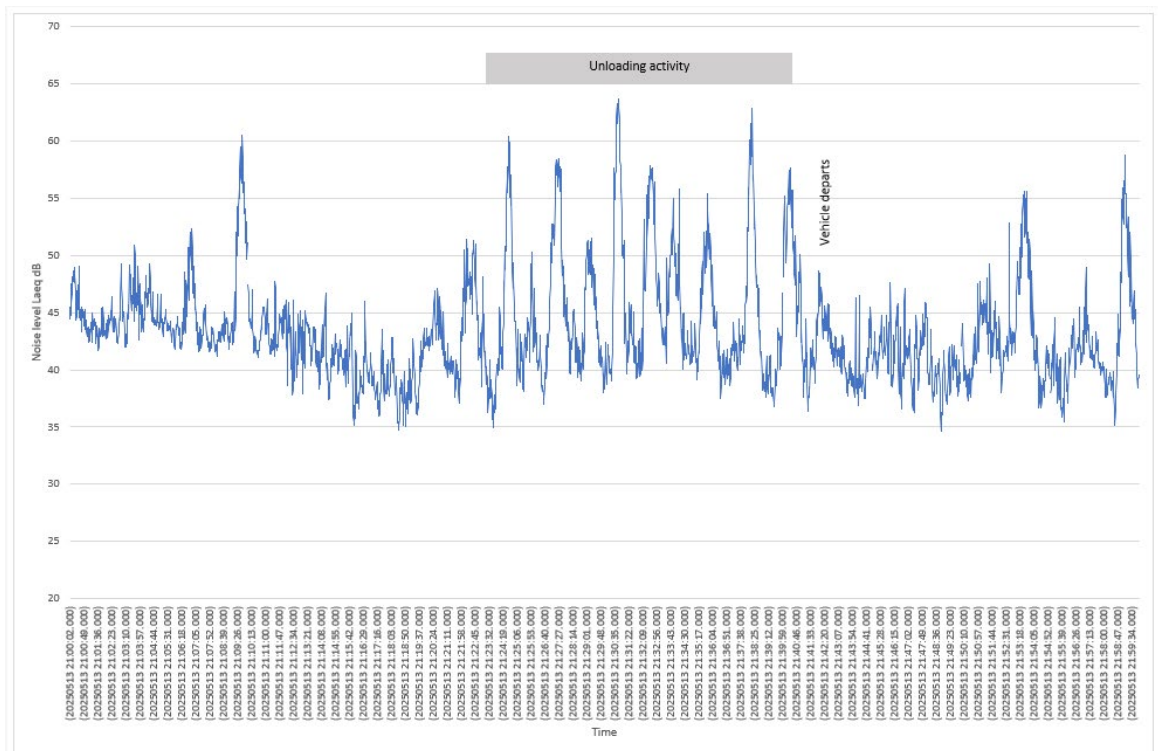
Noise impact from existing business/commercial units

- 4.2 As advised above noise from existing industrial/commercial activity is minimal, this is surprising taking into account the planning restrictions imposed on the site. Notwithstanding, SR has considered the impact of noise from the existing Lidl store and PFS at the site on the proposed residential properties.

Noise from Lidl

- 4.3 The store currently trades between 0800 and 2200 hours, with deliveries restricted to between 0700 to 2300 hrs (Monday to Saturdays) and 09:00 – 20:00 on Sundays and Bank Holidays. No activity is permitted during the night time period (2300 to 0700 hrs) and based on site observations and survey results (Figure 2), with the exception of noise from delivery activity, no other noise was noted (including from plant) was noticeable. With regard to delivery activity this was just noticeable. Figure 4 presents a 1-second trace of delivery activity at Lidl.

FIGURE 4: Delivery activity – Lidl (Monitoring location 4)



- 4.4 Based on experience of delivery activity at Lidl store deliveries take approximately 30 mins. The ambient noise levels measured during the period was 50 dB $L_{Aeq30min}$. Using this level an assessment in accordance BS 4142 has been carried out in Table 4 below:

TABLE 4: BS 4142 Assessment – Delivery activity

Measured Level $L_{Aeq30mins}$	50 dB
Residual Level $L_{Aeq30mins}$ (between 2100 – 2120 hrs)	46 dB
Specific Level (Measured Level corrected for Residual Level) $L_{Aeq30min}$	47 dB
Corrected for 1-hour reference period L_{Aeq1hr}	44 dB
Rating Level (Feature correction +3dB for impulsivity) L_{Ar}	47 dB
Background level L_{A90} (measured between 2100 and 2120 hrs)	40 dB
Difference	+7 dB
Assessment Conclusions – Potential adverse impact subject to context	

- 4.5 Based on the above assessment noise from delivery activity a Lidl will not cause significant adverse impact in line with policy aims of the NPPF, this was confirmed by site observations that although just audible noise from delivery activity was not considered intrusive.
- 4.6 The number of deliveries to the store are low and as advised are restricted to daytime hours only (0700 – 2300 hours). During this period residents would have the opportunity to close windows for short periods of time to reduce any impact of noise, without impacting on the quality of life, however alternative means of ventilation such as acoustic trickle vents should be provided to rooms facing the Lidl so than windows can be closed should residents choose to do so.

Noise from petrol filling station/Morrisons Local

- 4.7 Unlike the rest of the business units the Morrisons local and Shell PFS operate 24-hours a day. The layout of the site is such that noise from car parking activity and forecourt activity is screened from proposed residential properties. The main consideration is therefore noise from vehicles using the access road which runs along the rear of the site, which is predominantly used by HGV's to exit the site.
- 4.8 SR has measured noise from HGV's moving at low speeds, with the typical sound exposure level (SEL) of an HGV driving past found to be around 80 dB at a distance of 10m. The SEL is the L_{Aeq} level normalised to one second, and is the constant dBA which lasting for one second has the same amount of energy as a given A weighted noise event lasting for a period of time. This unit allows the prediction of the L_{Aeq} level over any period and for any number of events using the equation; $L_{AeqT} = SEL + 10\log(n) - 10\log(T)$ dB, where (n) is the number of events and (T) is the total sample period in seconds.
- 4.9 Assuming that there will be 6 HGV movements in any one hour the predicted noise level at the nearest properties (Plots 1 and 13) will be around 42 dB L_{Aeq1hr} . This level is below the existing ambient noise levels (L_{AeqT}) and also the recommended WHO daytime guideline level of 50 dB $L_{Aeq16hr}$. At night, the critical factor will be peak noise levels from vehicle leaving the site, which are likely to exceed the recommended night time criteria of 60 dB L_{Amax} . In accordance with the 'agent of change principle' it is recommended that mitigation measures are included within the design of these properties to reduce the potential impact of 24-hour operation of the PFS. These measures include the provision of acoustic screening along the boundary of the site with the PFS, and alternative means of ventilation provided to Plots 1, 2, 13 and 14 so that windows may be closed to mitigate impact of noise.
- 4.10 Having regard to the mitigation measures available to control noise it is not considered that noise from existing commercial units will cause significant adverse impact on future residents. As a result, the introduction of new noise sensitive properties adjacent to the existing units will not cause unreasonable restrictions on the continued operation of the existing commercial units in accordance with policy 200 of the NPPF.

Noise from proposed business units

- 4.11 The interface between the commercial and residential elements of the scheme was raised at pre-application discussions with HDC. The arrangement of the development has been given careful consideration with the design team to take into account good acoustic design principles. The business units have been designed with servicing areas screened from the proposed properties by the built form of the development. Taking this into account it is not considered that noise from the proposed units will cause impact on the proposed residential properties. The impact of noise from proposed business units is considered in more detail in section 5.0 of this report.

5.0 Impact of noise from business units.

- 5.1 The nearest noise sensitive properties to the proposed units are the residential properties to the south of the site. The following assessment considers the impact of noise on these properties.
- 5.2 SR has previously carried out a noise assessment for Phase 3 of the development which included an assessment of the commercial units in a similar location to those proposed. The assessment considered the impact of noise from external activity, car parking and servicing, noise break-out from units and noise from mechanical services plant. It was concluded that subject to conditions, similar to those imposed on the existing outline consent, that the site can be developed as proposed in line with the policy aims of NPPF and planning practice guidance. No objections were received from the Environmental Health Officer at HDC, and although the application was refused, the reasons for refusal did not include impact of noise on the amenity of the surrounding area.

Noise from mechanical services plant

- 5.3 As with previous phases of the development, the choice and selection of plant will not be made until a later stage in the design process and therefore the precise details of the mechanical services plant and refrigeration equipment (type and noise signature) are not known at this stage. However, the fixed plant may consist of refrigeration and condenser units, air handling units, extract fans, boilers and emergency generators. It is therefore likely that, similar to the existing outline application, details of the any plant will be required to be submitted and approved by the local planning authority prior to installation to ensure that noise levels do not exceed specified criteria i.e. 5 dB below background.
- 5.4 As discussed in section 3.0 of this report existing background noise levels are dictated by road traffic noise on the A29. Based on noise levels measured at location 3 typical background noise levels were 46 dB during the day, which reduced during the evening period and night time period. Typical background noise levels during the night time period to 23 dB.
- 5.5 SR has previously advised that such an approach is unreasonable and onerous, however the local authority has still required that noise levels should be 5dB below background and it is assumed that the same standard will apply in this case. However, in relation to the proposed properties new residents, they will move to the area with no experience of background noise levels. Therefore, in relation to the proposed properties noise from mechanical services plant should not exceed the following criteria:

- Daytime (0700 – 1900 hrs) – The rating level 5dB below background.
- Evening and Night time – Rating level should not exceed 30 dB

Noise from car park activity

- 5.6 Surveys of noise levels at the boundaries of similar car parks have shown that levels range from $L_{Aeq,1hr} = 43$ dB to 48 dB at a distance of 10 metres. The baseline noise value of $L_{Aeq,1hr} = 48$ dB is considered a robust (worse case) baseline maxima to apply to parking activities. Maximum noise levels from car door slams were typically 68 dB L_{Amax} at 10 metres
- 5.7 Based on the proposed layout the nearest properties to parking areas will be at least 60 metres from the nearest noise sensitive properties. At these distances noise from car parking activity will be significantly below the daytime and night time guideline values and it is concluded that noise from parking activity will not cause significant adverse impact to local residents.

Noise break-out from buildings

- 5.8 Similar to other phases of the development the buildings will be constructed of composite metal panels which will typically have a sound reduction performance in excess of 30 dB Rw. Taking into account the likely use of the buildings and the distance to the nearest receptors it is not considered likely the noise break out from the building will cause significant impact to local residents.
- 5.9 The impact of noise break-out from the buildings will depend on the final user of the units, and if likely to cause high levels of internal noise or operate during the noise sensitive periods then it may be necessary to include additional noise mitigation measures to control noise. These may include increased sound insulation to the units or operational measures such as keeping doors closed during noise-sensitive periods. These measures can be implemented as part of a noise management plan which can be submitted once the end-user is known. This is similar to the approach taken in relation to existing outline consent.

Noise from external activity

- 5.10 SR has used computer modelling to predict noise levels at the residential properties to the south of the site. The modelling was based on the following assumptions.
- All models are based on downwind conditions in all directions;
 - Daytime models assume ground floor receptor – 1.5m above ground level;
 - Night time models assumed first floor receptor – 4.5m above ground level;
 - All receptors 1m above ground level;
 - Servicing activity daytime - Each unit will receive, unload, and depart an HGV vehicle at each loading bay every hour.
 - During night servicing activity -50% of daytime capacity
 - HGV unloading: $L_{WA} = 99.8$ dB, $L_{WA(max)} = 105$ dB
 - HGV arrival/departure: $L_{WA} = 106$ dB, $L_{WA(Max)} = 110$ dB
- 5.11 The following scenarios have been considered:
- Daytime (0700 – 2300 hrs) – L_{Aeq1hr}
 - Night time (2300 – 0700 hrs) - $L_{Aeq(1hr)}$ and L_{Amax}
- 5.12 As shown in the SoundPLAN models (Appendix B) predicted noise levels at the most exposed properties will be no greater than 46 dB L_{AeqT} during the day and 47 dB L_{AeqT} during the night. Maximum noise levels from site activity, L_{Amax} will be no greater than 60 dB.
- 5.13 Using the above noise levels the predicted rating level (specific noise level with +3 dB feature correction for impulsivity) has been compared to the existing daytime background noise levels measured previously at ML3. The results are shown in Table 5 below.

TABLE 5: Noise Assessment – Servicing activity

	Specific Noise L_{Aeq1hr}	Rating Level dB	Background Level dB	Difference
Daytime (0700 – 2300 hrs)	46 dB	49 dB	46 dB	+3 dB

- 5.14 Noise from servicing activity will not cause significant adverse impact during the daytime (0700 – 2300 hrs) period.

Night time

- 5.15 During the night time period, due to low background noise levels, there is a potential significant adverse impact subject to context. As discussed in section 2.0 of this report during the night time period the critical factor is the maximum noise level (L_{Amax}) associated with servicing activity rather than the difference between the external background noise level at the receptor and the external rating level of the specific noise source under consideration
- 5.16 Predicted maximum noise levels would be no greater than 60 dB and will meet the recommended criteria for the onset of sleep disturbance as advised in the WHO Guideline for sleep disturbance. For the purposes of the assessment the WHO Guidelines can be considered as the lowest observed adverse effect level (LOAEL). Notwithstanding, if night time activity is required it is recommended that mitigation measures, including acoustic screening along the southern boundary of the site should be implemented as part of a noise management plan. The provision of a noise management plan can be controlled through a planning condition similar to that imposed on the existing outline consent.
- 5.17 Subject to mitigation measures that can be included in the design of the site, and potential restrictions on operating hours it is concluded that noise from proposed business units will not cause significant adverse impacts in line with the policy aims of the NPPF.

Unit 35 – EVM

- 5.18 Unit 35 is subject to a live application (Ref DC/25/0458) submitted jointly by Dunmoore and EVM which is pending determination. EVM are a local passenger vehicle company who are looking to relocate to Billingham Business Park. SR has carried out a separate noise assessment to accompany the application which has considered the impact of this development.

6.0 Summary and Conclusions

6.1 Planning permission is being sought for a hybrid application comprising: Mixed use development, including detailed permission for means of access and 1,338 sqm business floorspace with the remainder of the development in outline, comprising up to 102no. homes and up to 5,605 sqm of business floorspace (Classes E g (iii)/B2/B8) on land to the south of Hillard Farm, known as Billingham Business Park.

6.2 A noise assessment has been undertaken which considers the impact of noise on the proposed residential element of the scheme and also noise from proposed business units.

Noise impact on residential properties

6.3 An assessment of existing noise levels on the proposed residential properties has been undertaken in accordance with relevant guidance including BS8233:2014 and the Professional Practice Guidance (ProPG) on planning noise and residential development. Existing noise levels indicate that there is low/negligible risk in terms of noise.

6.4 The interface between the commercial and residential elements of the scheme has been considered as part of the design of the development to reduce noise impact on the proposed residential properties. In, addition, mitigation measures will be included within the design of the residential properties to enable residents to close windows should they chose to further reduce impact of noise.

Noise impact from business units

6.5 In line the approach taken at the outline planning consent, mitigation measures, including physical and operational measures, can be incorporated into the scheme through a noise management plan which would reduce to a minimum any potential adverse impacts

6.6 It is therefore concluded that subject to conditions, similar to those imposed on the existing outline consent, that the site can be developed as proposed in line with the policy aims of NPPF (paragraph 180) and planning practice guidance.

6.7 Taking into account the above it is therefore concluded that if granted the proposed development will not compromise the Governments' noise policy vision, as stated in the Noise Policy Statement for England and National Planning Policy Framework.

APPENDIX A

INDICATIVE MASTERPLAN



S01 05.03.25 First Issue MD
Mark Date Details

REVISIONS

Client:
Dunmoore Properties Ltd

Project Title :
Land at Billingshurst Trade Park

Scale : 1:500 for the original size of : A1

Drawn by MD Checked by : MD Passed by : MD Date : 05.03.2025

Drawing Status :

For Information

Drawing Originator :

DAVIESLANDSCAPE
ARCHITECTS

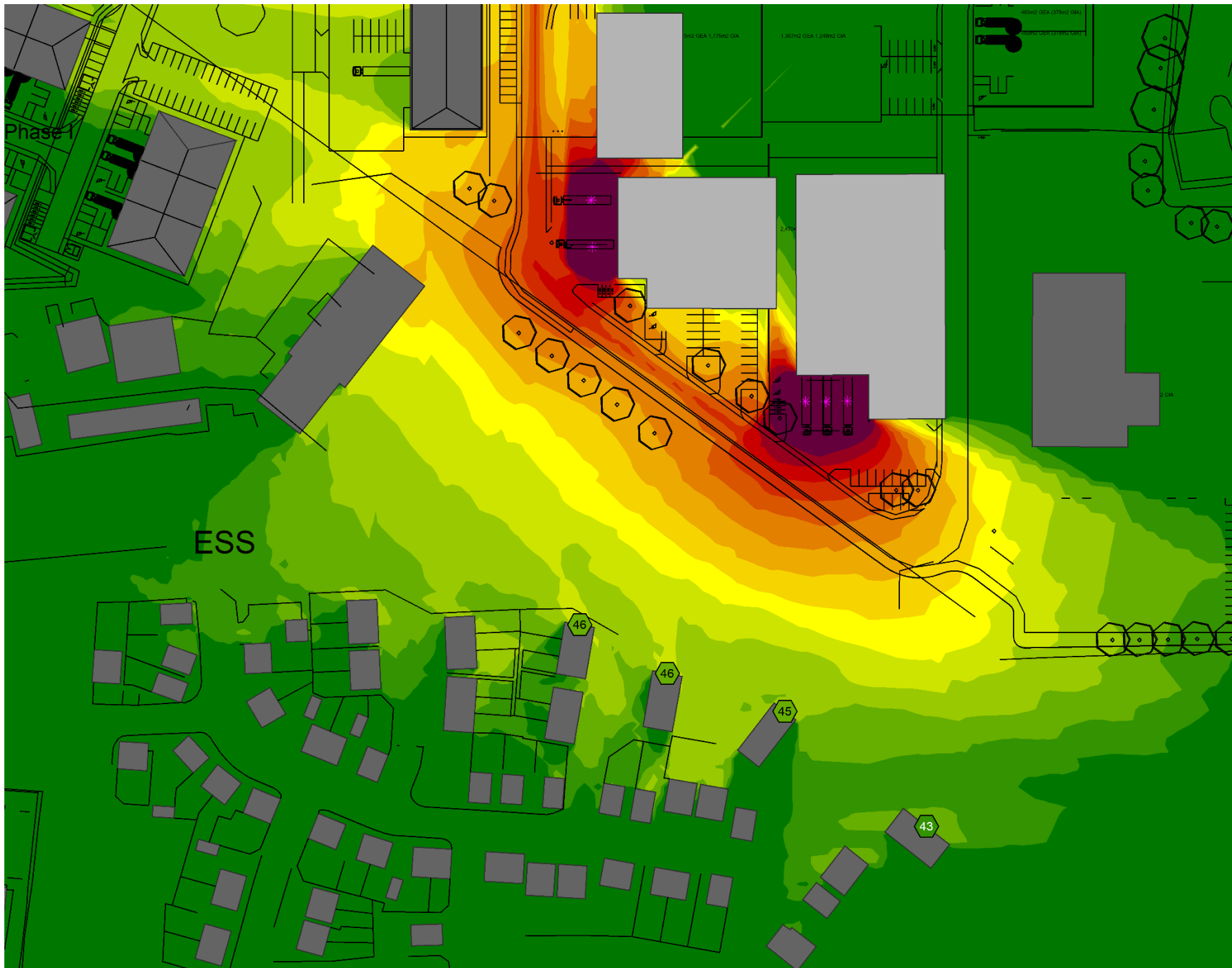
Office 1C: 1-2 King street, Stroud, Gloucestershire, GL5 3BS
w: www.d-ls.co.uk e: info@d-ls.co.uk t: 01453 760380

Drawing Title :
Residential Layout Option

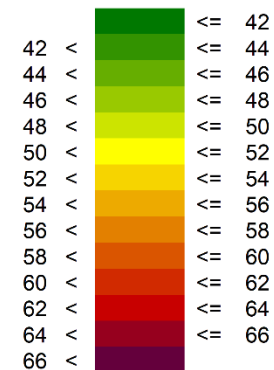
Job No.	Drawing	Project	Origin	Volume	Level	Type	Discp	Number	Revision
2284	2273	DLA	100	-	DR	L	101	505	

APPENDIX B

SOUNDPLAN FIGURES



Noise level
L_{Aeq}(T)
(dB)



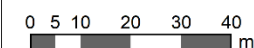
01 Daytime Noise
Contour Plot:

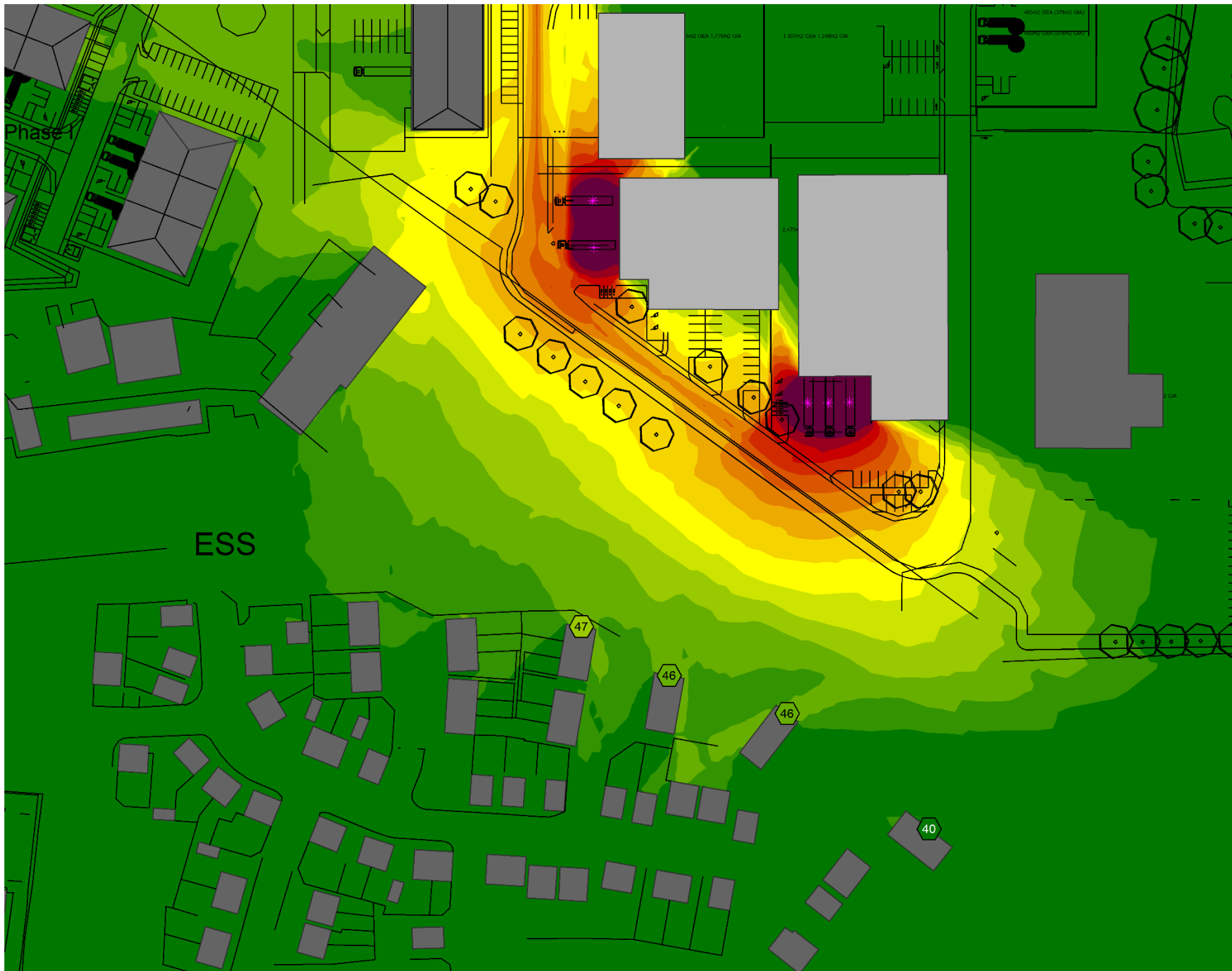
L_{Aeq},16hours
(1.5m above ground)

Date: 11.09.2025

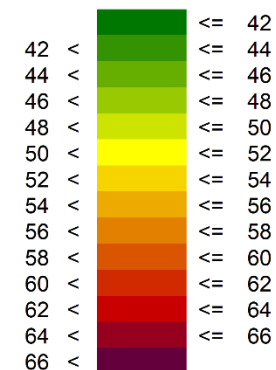
Consultant: G King

Scale 1:1500





Noise level
L_{Aeq}(T)
(dB)



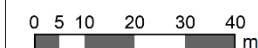
02 Night-time Noise
Contour Plot:

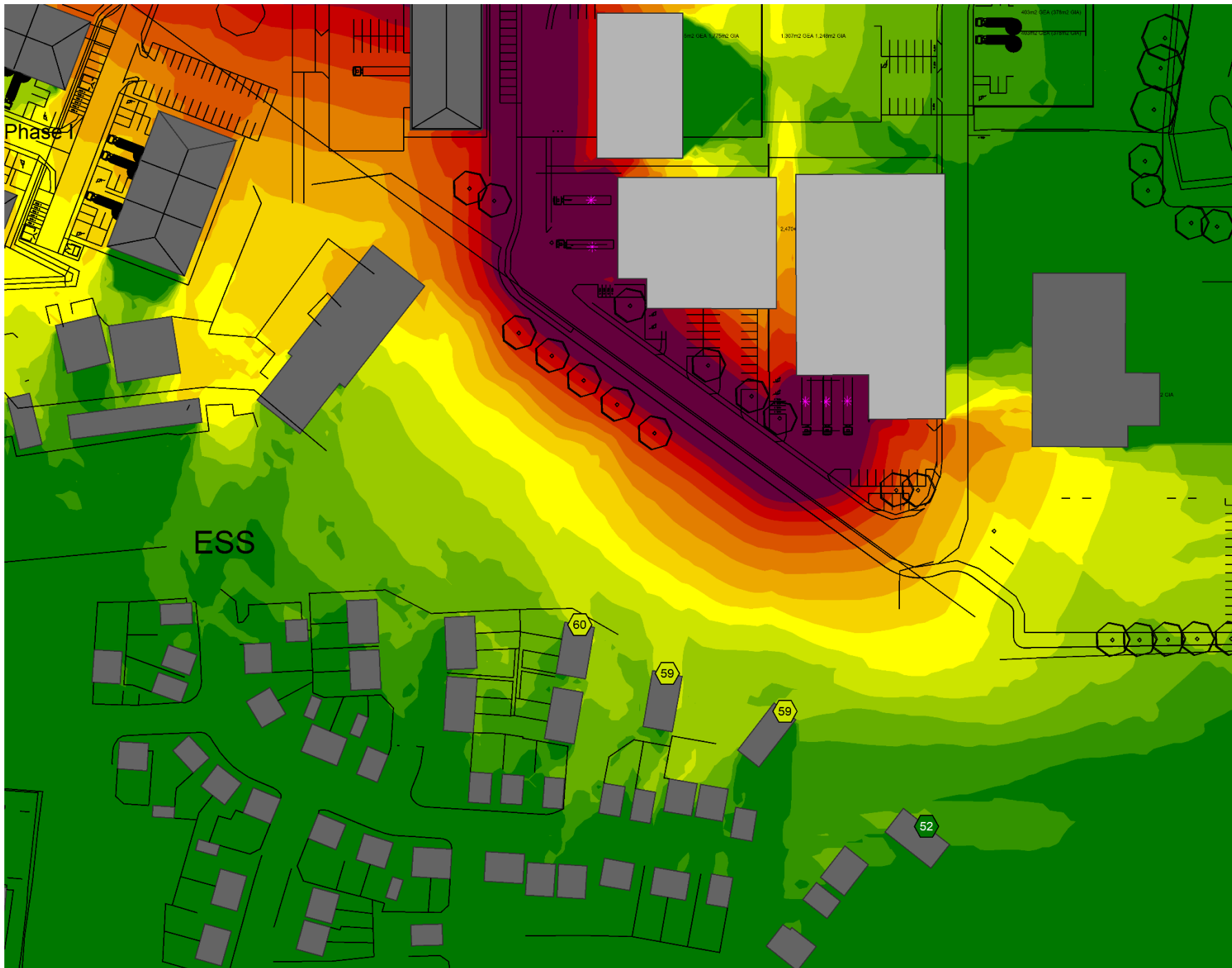
L_{Aeq},8hours
(4.5m above ground)

Date: 11.09.2025

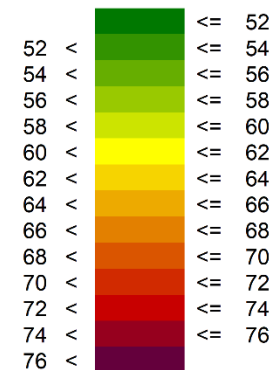
Consultant: G King

Scale 1:1500





Noise level
LMax
(dB)



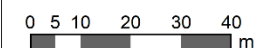
03 Night-time Noise
Contour Plot:

LMax
(4.5m above ground)

Date: 11.09.2025

Consultant: G King

Scale 1:1500



APPENDIX C

ACOUSTIC TERMINOLOGY

Acoustic Terminology

- C1 Noise, defined as unwanted sound, is measured in units of decibels, dB. The range of audible sounds is from 0 dB to 140 dB. Two equal sources of sound, if added together will result in an increase in level of 3 dB, i.e. $50\text{ dB} + 50\text{ dB} = 53\text{ dB}$. Increases in continuous sound are perceived in the following manner:
- 1 dB increase - barely perceptible.
 - 3 dB increase - just noticeable.
 - 10 dB increase - perceived as twice as loud.
- C2 Frequency (or pitch) of sound is measured in units of Hertz. 1 Hertz (Hz) = 1 cycle/second. The range of frequencies audible to the human ear is around 20Hz to 18000Hz (or 18kHz). The capability of a person to hear higher frequencies will reduce with age. The ear is more sensitive to medium frequency than high or low frequencies.
- C3 To take account of the varying sensitivity of people to different frequencies a weighting scale has been universally adopted called "A-weighting". The measuring equipment has the ability automatically to weight (or filter) a sound to this A scale so that the sound level it measures best correlates to the subjective response of a person. The unit of measurement thus becomes dBA (decibel, A-weighted).
- C4 The second important characteristic of sound is amplitude or level. Two units are used to express level, a) sound power level - L_w and b) sound pressure level - L_p . Sound power level is an inherent property of a source whilst sound pressure level is dependent on surroundings/distance/directivity, etc. The sound level that is measured on a meter is the sound pressure level, L_p .
- C5 External sound levels are rarely steady but rise or fall in response to the activity in the area - cars, voices, planes, birdsong, etc. A person's subjective response to different noises has been found to vary dependent on the type and temporal distribution of a particular type of noise. A set of statistical indices have been developed for the subjective response to these different noise sources.
- C6 The main noise indices in use in the UK are:
- L_{A90} : The sound level (in dBA) exceeded for 90% of the time. This level gives an indication of the sound level during the quieter periods of time in any given sample. It is used to describe the "background sound level" of an area.
 - L_{Aeq} : The equivalent continuous sound level in dBA. This unit may be described as "the notional steady noise level that would provide, over a period, the same energy as the intermittent noise". In other words, the energy average level. This unit is now used to measure a wide variety of different types of noise of an industrial or commercial nature, as well as aircraft and trains.

L_{A10} : The sound level (in dBA) exceeded for 10% of the time. This level gives an indication of the sound level during the noisier periods of time in any given sample. It has been used over many years to measure and assess road traffic noise.

L_{AMAX} The maximum level of sound measured in any given period. This unit is used to measure and assess transient noises, i.e. gun shots, individual vehicles, etc.

- C7 The sound energy of a transient event may be described by a term SEL - Sound Exposure Level. This is the L_{Aeq} level normalised to one second. That is the constant level in dBA which lasting for one second has the same amount of acoustic energy as a given A weighted noise event lasting for a period of time. The use of this unit allows the prediction of the L_{Aeq} level over any period and for any number of events using the equation;

$$L_{AeqT} = SEL + 10 \log n - 10 \log T \text{ dB.}$$

Where

n = Number of events in time period T.

T = Total sample period in seconds.

- C8 In the open, known as free field, sound attenuates at a rate of 6 dB per each doubling of distance. This is known as geometric spreading or sometimes referred to as the Inverse Square Law. As noise is measured on a Logarithmic scale, this attenuation in distance = $20 \log$ (ratio of distances), e.g. for a noise level of 60 dB at ten metres, the corresponding level at 160 metres is:

$$60 - 20 \log \frac{160}{10} = 60 - 24 = 36 \text{ dB}$$