

Noise Impact Assessment for Childcare Operation

Sweet Pea Childcare, 80 Whitley Wood Road, Reading

Report Reference 22457.NIA-RPT.01 Rev.B

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1 INTRODUCTION

ES Acoustics Ltd (ESA) have been commissioned by Sweet Pea Childcare Ltd to prepare a noise impact assessment in support of the operation of the childcare facilities at Sweet Pea Childcare, 80 Whitley Wood Road, Reading.

The structure of this report is as follows:

- A review of the site context and background information, including details of the current operation and the identification of the closest noise-sensitive receptor properties relative to the site;
- A review of national planning policy, local planning policy, local authority correspondence, and acoustic guidance relevant to the assessment of noise from the proposal to ensure that a suitable assessment methodology is established;
- Details of the noise survey undertaken, including measured noise levels for childcare, nurseries, and preschool settings captured on similar sites to define the worst-case expected noise levels that would be generated on the site during the current operations; and,
- The noise impact assessment of the operation to assess the likelihood of adverse impact for the current use to inform a retrospective assessment.

2 SITE CONTEXT AND PROPOSAL

2.1 Site Description

The site is located at a in a residential suburb of Reading, within the jurisdiction of Reading Borough Council. The site is bounded by residential properties on all façades.

A satellite view of the site is shown in Figure 1 with the application site boundary highlighted in red, and the closest noise sensitive receivers in green.



Figure 1 Satellite image of the proposed site and surrounding area (Image Reference: Google Earth)

2.2 Current Operation and Context

The current site use facilitates childcare for up to 15 children, Monday to Friday, 7.30am–6.00pm, intended to facilitate much needed childcare facilities as recognised by the Local Authority.

It is understood that no noise complaints have been received as a result of the current use, and indeed the local community are supportive of the operation.

The current capacity of 15 children are cared for both in an outdoor play setting in the formerly residential garden, and in 2 no. purpose-built timber outbuildings along the north garden boundary as shown in Figure 2.

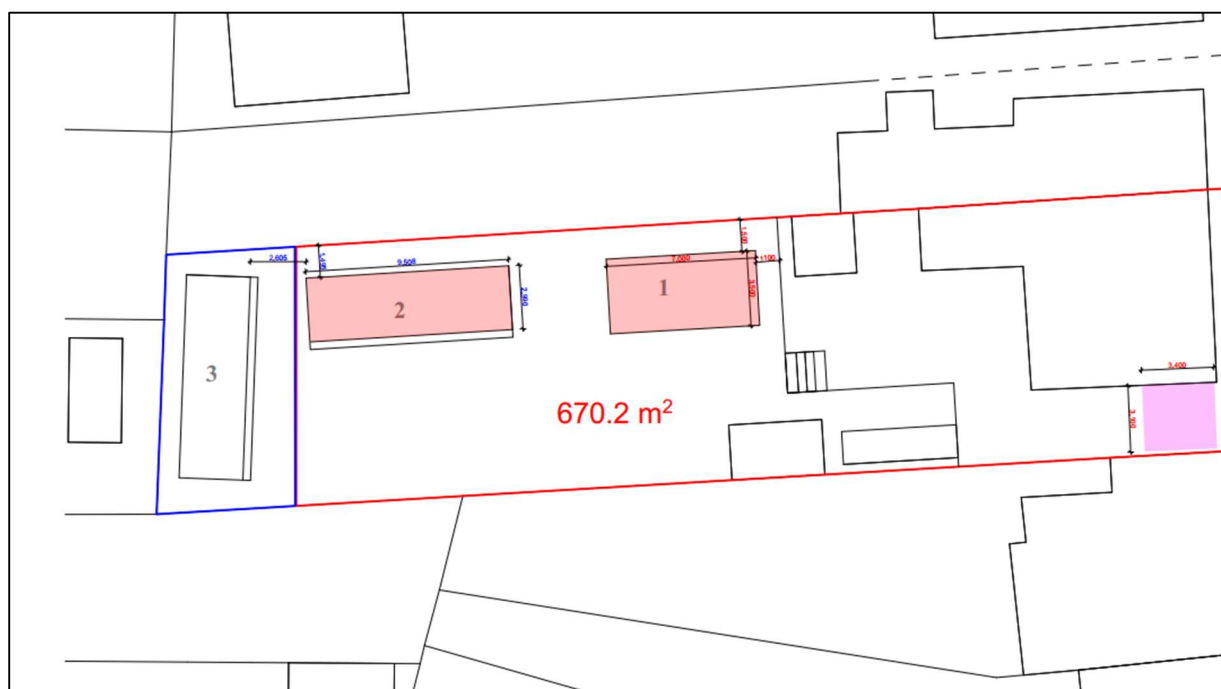


Figure 2 Site layout plan (Image Reference: Adapt Architecture Limited)

3 RELEVANT NOISE IMPACT ASSESSMENT GUIDANCE

A full review of relevant National Policy has been undertaken, as outlined in Appendix B. For ease of reference, the following documentation has been reviewed:

- *National Planning Policy Framework (NPPF)*
- *Noise Policy Statement for England (NPSE)*
- *National Planning Practice Guidance (NPPG)*
- *World Health Organization; Guidelines for Community Noise 1999*

In addition to the guidance above, more specific Local Planning Policy and Guidance is presented below.

3.1 Reading Borough Council – Pre-Planning Application Enquiry Response

Further to the correspondence between the Applicant and the Local Authority, Chukwudi Onwudinanti (Reading Borough Council, Planning) has issued a formal response. The response outlines that the current use does not have permission, however recognises the requirement for increased childcare facilities in the area.

Key points relating to the potential for noise impacts from the development have been identified as follows. Note, references to 25 children relate to previous proposals and do not relate to this scheme:

“Environmental Protection

Information regarding how the noise impact on neighbours will be managed, in terms of noise from the cabins and noise from the outdoor play space should be submitted.

25 children is a lot for a domestic setting, it is unclear what mitigation would be possible other than not increasing the numbers or restricting the use of the outdoor play.

...

b) Residential Amenity

Policy CC8 states that “development will not cause a detrimental impact on the living environment of existing residential properties or unacceptable living conditions for new residential properties...” and the key consideration in this case is with respect to noise and disturbance.

The proposal would introduce a far greater frequency of comings and goings and noise and disturbance compared to a residential use. As stated above, it is considered that it would be extremely difficult to demonstrate that the noise and disturbance created by the childcare use for this number of children could be adequately addressed. Should a formal application be submitted then it should include a Noise Impact Assessment demonstrating that the noise generated as a result of the change in use will not have a negative impact on the neighbourhood.”

In addition to the above key points regarding noise itself, the response also includes useful context in terms of what could typically be considered acceptable in any residential setting:

"It is widely considered in case law and appeal decisions that up to 6 children under the age of 8 playing in a residential garden and any noise arising would likely be characteristic of a residential use within a residential surrounding area. However, more than 6 children may not. The site is currently used for childcare for up to 15 children aged 0-3 years, which would already be considered to be a change to the character of the property due to the intensification of the use and no longer being considered ancillary to the C3 use."

The above implies that the noise emissions of up to 6 children up to 8 years of age can be accepted by default in a residential setting. In itself, this defines a level of noise which would be acceptable as a fixed threshold in any instance.

3.2 Suitable Assessment Methodology and Criteria

It should be noted that there is no specific legislation or guidance pertaining to the assessment of noise emissions associated with a childcare setting or outdoor play area.

However, it is possible to apply objective standards to the assessment of noise and the potential effects produced by the introduction of a new noise source by assessing either:

1. The absolute noise level of the proposal – A potential effect may be determined by reference to guideline noise level in documents such as BS 8233:2014 and the World Health Organization's 'Guidelines for Community Noise'.
2. A comparative noise assessment of the proposal – A potential 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 method is best suited to situations where the noise sources in question are comparable e.g. the introduction of a new slip road adjacent to an existing road, where the new noise source (road traffic on the slip road) is being added to the existing noise source (road traffic on the existing highway). Furthermore, a comparative assessment is particularly relevant in cases where existing noise levels already exceed the WHO guideline values, in addition to the noise sources being comparable.

To assess the noise impact of the proposed use, a comparative assessment is considered appropriate in this instance. While conventional comparative assessments for new noise sources to an existing noise sensitive area would be assessed to BS 4142 requirements, BS 4142 is specifically designed for assessing noise from commercial and industrial sources, typically continuous, mechanical, or tonal in nature, and is therefore not directly relevant to the current proposal. The noise associated with childcare settings is intermittent and typically includes human vocalisations and play, which do not exhibit the characteristics that BS4142 seeks to address. A suitable approach would be a comparative assessment as identified above, which offers a balanced and contextually accurate evaluation of the potential noise impact in comparison to both the ambient noise profile without any childcare activity taking place, and the noise levels expected with up to 6 children in the space, as would be acceptable by default.

To ensure that the proposal does not harm the surrounding residential properties with regard to noise, a relevant standard or guidance document should be referenced to determine values for LOAEL (Lowest Observed Adverse Effect Level) and SOAEL (Significant Observed Adverse Effect Level).

The most relevant British Standards and Good Practice documents for the described scenario have been reviewed below in order to set appropriate noise emission limits to ensure noise impact does not result in adverse effects.

3.2.1 IEMA - Guidelines for Environmental Noise Impact Assessment

The ultimate aim of any noise assessment is to determine the effect of the expected change in the acoustic environment arising from the proposed development. The Institute of Environmental Management and Assessment (IEMA) have developed a comparative assessment methodology that involves comparing a 'noise scenario' against the existing ambient noise levels in an area.

The comparative assessment determines the noise level change as follows:

Case	Level
Before (noise emissions of current scenario)	A
After (noise emissions of proposed scenario + existing scenario)	B
Change	B minus A

Table 1 IEMA Noise level change

The judgement that is required is whether or not the change in level of B – A, i.e. the noise impact, causes a noise effect – and if so, the degree of that effect and whether or not that effect is significant. Typically, that judgement has been made solely on the basis of that difference (B – A), deciding:

- Whether the noise change is small enough such that it is likely to be unnoticeable or barely noticeable; or
- Whether it is large enough to be noticed and hence cause a noise impact, but not so large as to cause that impact to be significant; or
- Whether it is so large that the noise impact causes a significant noise effect.

Despite previous established practice, the noise impact and the consequential effect can only rarely be properly determined solely by the simple numerical difference in the value of a particular noise indicator. Determining the simple numerical change of a particular noise indicator is only a starting point in describing the consequential effect on a receptor, and, where relevant, evaluating the significance of that effect. When identifying the noise impact and the degree of the consequential effect, it is also necessary to consider, in qualitative terms, what might be the effect of any differences between the future and existing situations in either:

- the type of noise source, or
- the nature of the change, or
- other factors

on the question of whether or not the conclusions initially drawn from the numerical change in noise level remain valid.

It is only by taking account of these factors that the magnitude of the effect of a given noise impact on sensitive receptors can be properly identified. The various factors that have been identified as influencing this process are:

- Averaging period;
- Time of day;
- Nature of the noise source (intermittency, etc);
- Frequency of occurrence;
- Spectral characteristics;
- Absolute level of the noise indicator; and
- Influence of the noise indicator used.

Finally, to determine the overall noise impact, the magnitude and sensitivity criteria are combined into a Degree of Effect matrix as shown in Table 2, with the corresponding descriptors in Table 3.

Degree of Effect Matrix		Importance / Sensitivity of the Receptor			
		High	Medium	Low	Negligible
Magnitude / Scale of Change	Large	Very Substantial	Substantial	Moderate	None
	Medium	Substantial	Substantial	Moderate	None
	Small	Moderate	Moderate	Slight	None
	Negligible	None	None	None	None

Table 2 IEMA 'degree of effect' matrix

Very Substantial	Greater than 10 dB LAeq change in sound level perceived at a receptor of great sensitivity to noise
Substantial	Greater than 5 dB LAeq change in sound level at a noise-sensitive receptor, or a 5 to 9.9 dB LAeq change in sound level at a receptor of great sensitivity to noise
Moderate	A 3 to 4.9 dB LAeq change in sound level at a sensitive or highly sensitive noise receptor, or a greater than 5 dB LAeq change in sound level at a receptor of some sensitivity
Slight	A 3 to 4.9 dB LAeq change in sound level at a receptor of some sensitivity
None/Not Significant	Less than 2.9 dB LAeq change in sound level and/or all receptors are of negligible sensitivity to noise or marginal to the zone of influence of the proposals

Table 3 IEMA 'effect descriptors' table

The primary noise source at the site which may generate concern would be child-generated activity, particularly during outdoor activities. This typically consists of energetic but broadly consistent sound profiles such as raised speech, laughter, and general play.

The closest noise-sensitive receptors have been identified as the residential houses to the west of the site, however the residences to the north and south would also be considered as noise sensitive receptors. All residential receivers would generally be classified as having 'High' Sensitivity under the

Degree of Effect Matrix (see Table 2). In accordance with the matrix, for the 'Magnitude / Scale of Change' to be considered 'Negligible', the increase in noise level at receptor locations must fall within the 'None / Not Significant' category of the effect descriptors (Table 3). Typically, this corresponds to an increase of less than 2.9 dB L_{Aeq} .

An increase in ambient noise levels corresponding with the 'Slight' category of the effect descriptors (Table 3), even if slightly perceptible, may still be considered acceptable in context. This corresponds to an increase of between 3 to 4.9 dB L_{Aeq} , which, in consideration of the above context, would target the following effect level, defined by National Planning Practice Guidance, as follows:

"Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life."

This would be considered to correspond to the LOAEL (Lowest Observed Adverse Effect Level) in accordance with the Noise Policy Statement for England (NPSE).

The approach as defined above would ensure that both quantitative impacts and broader planning context are considered in line with IEMA guidance, providing a balanced and proportionate assessment of potential noise impacts associated with the proposed use of the outdoor areas on site.

4 IEMA NOISE IMPACT ASSESSMENT

4.1 Establishing 'Level A – Existing Scenario'

4.1.1 Existing Noise Levels

The existing ambient noise level for the site in pure residential use, ie with no childcare activities can be measured in the current setting by means of a weekend noise survey when the childcare facilities are not in operation.

4.1.2 Noise Survey Measurement Location and Procedure

In order to define the first variant of "Level A", an environmental noise survey has been undertaken on site over a weekend period, when no childcare activities were taking place.

Automated noise measurement equipment was deployed at the location indicated in Figure 3 to capture sound levels at a position representative of the closest noise sensitive receptors. In practice, this is representative of all receptors in the area as determined through site observations, which confirmed no significant change in noise levels across the site.



Figure 3 Noise survey measurement location

The survey was conducted between 15:10 on Friday 16th January and 14:50 on Monday 19th January 2026.

The key acoustic descriptor measured for this assessment is $L_{Aeq,T}$ (the continuous equivalent A-weighted noise level over a given time period, T).

Measurements were conducted in full free field conditions, with the main measurement microphone (position 1) located at a height of 4m overlooking the childcare facility. As site maintenance works including drilling and hammering were taking place on the Monday from 09:00 onward, representative source levels for the use of the facility have been taken from both the Friday afternoon (15:10-18:00) and the Monday morning (07:30-09:00). These are used to define noise levels from the site during pickup and drop-off times, as well as childcare noise breakout from the existing timber outbuildings.

Measurements taken at position 2 overlooking Whitley Wood Road have been used to facilitate a later assessment for potential changes to vehicle movements associated with the increased capacity and child drop-off/collection.

4.1.3 Equipment

The table below presents the equipment used for the baseline noise survey. The equipment calibration was verified before and after use, and no significant drift was observed.

Equipment	Make and Model	Serial Number
Sound Level Meter	Svantek 977 Class 1 Sound Level Meter	97547
Microphone Capsule	MTG MK 255	21272
Microphone Preamplifier	Svantek SV 12L	108454
Sound Level Meter	Svantek 958 Class 1 Sound Level Meter	59143
Microphone Capsule	PCB 377B02	359418
Microphone Preamplifier	PCB 426E01	170796
Calibrator	Svantek SV36 Class 1 Calibrator	163808

Table 4 Noise survey equipment

4.1.4 Weather Conditions

Weather conditions at the time of the site visits were observed to be suitable for environmental noise measurement, with light winds and dry weather.

4.2 Survey Results

A summary of the results is presented below, full survey data is presented within the attached Appendix C1-2.

Measurement Position	Period	Ambient Sound Level $L_{Aeq, T}$ (dB)
1	Daytime 07:00-23:00 (Measured Saturday/Sunday)	50
	Night-time 23:00-07:00 (Measured Saturday/Sunday)	46
	Operating Hours 07:30-18:00 (Measured Saturday/Sunday)	51
	Operational Hours measured outside of contractor works (weekdays) Friday 15:10-18:00 Monday 07:30-09:00	55
2	Daytime 07:00-23:00 (Measured Saturday/Sunday)	61
	Night-time 23:00-07:00 (Measured Saturday/Sunday)	54
	Operating Hours 07:30-18:00 (Measured Saturday/Sunday)	61
	Operational Hours measured outside of contractor works (weekdays) Friday 15:10-18:00 Monday 07:30-09:00	63

Table 5 Measured noise levels

For the purposes of an assessment according to IEMA guidelines, the existing ambient sound level during proposed operational hours of $L_{Aeq, T}$ 51 dB would be considered as representative of 'Scenario A' in relation to childcare activity noise to the rear of the site. This level is also comparable to WHO recommendations for external amenity space noise levels, which states:

"To protect the majority of people from being seriously annoyed during the daytime, the outdoor sound level from steady, continuous noise should not exceed 55 dB L_{Aeq} on balconies, terraces and in outdoor living areas. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound level should not exceed 50 dB L_{Aeq} . Where it is practical and feasible, the lower outdoor sound level should be considered the maximum desirable sound level for new development."

4.3 Establishing 'Level B – Proposed Operations'

4.3.1 Proposed Source Noise Levels

To establish source noise levels anticipated from the potential outdoor activities, noise levels would ideally be measured directly on site for all activities, including outdoor play, and times when the cabins are in use. In this case, measurements have been taken whilst the cabins were in normal use, as well as during collection and drop-off times, however outdoor play measurements were not viable due to maintenance works taking place during the survey.

Therefore, noise levels already on record as captured by ES Acoustics for various school playgrounds and playing fields are compared below to define a source noise level for the activities that may be present. For confidentiality reasons, the names of the premises surveyed are omitted.

The nature of outdoor play noise is that the noise sources effectively serve as a range of point sources from an acoustic propagation perspective. Potential distances vary between the noise sources and the measurement locations relative to the microphone positions, ranging from 5-15m for two of the measurement positions. However, considering the levels are drawn from a 30-minute average, the point sources would move around the playgrounds being measured, creating an effective area source. This makes the distance to the measurement microphone less critical to the assessment.

Source	Time Period	Sound Pressure Level at Octave band centre frequency, dB								dB(A)
		63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
External playground operation, measured at 5-15m, Leq:30min	Secondary School in Chislehurst. School field during lunch break. (5-15m from microphone) (full high school capacity, 1-1.5k students, estimated up to 100 in survey area)	54	53	50	54	59	58	51	39	63
	Nursery in Bromley. Nursery play area during outdoor play (10m from microphone) Capacity up to 60 pupils.	53	53	53	53	59	56	53	47	62
	Community playcentre in West Sussex. Outdoor area during outdoor play (5-10m from microphone) Up to 20 children in play area.	54	50	50	55	61	60	50	42	64
	Average of 3 sites	54	52	51	54	60	58	52	44	63

Table 6 Measured noise levels from similar sites

From a review of Table 6, the most significant comparison to be drawn is how similar the spectrums of noise from the different sites are, despite different year groups and pupil numbers. From this, an average has been drawn to estimate source noise levels that may be experienced in the worst-case scenario for the proposed outdoor play use.

For indoor play, environmental noise levels measured at a distance of 4m above from the closest cabin are as shown in Table 7.

Time Period	Sound Pressure Level at Octave band centre frequency, dB								dB(A)
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
Operational Hours measured outside of contractor works (weekdays) Friday 15:10-18:00 Monday 07:30-09:00	56	53	51	51	52	46	42	38	55

Table 7 Measured noise levels from indoor play to site measurement position

4.3.2 Specific Sound Levels of 'Level B – Operations' – Outdoor Play

The table below presents the predicted noise levels at each of the closest noise sensitive receiver residences associated with the proposed outdoor play area use. The calculation considers the distance between a position 2m from the closest perimeter of the outdoor play area and the noise sensitive receiver windows, as well as the distance and screening between a position 2m inside the closest point of the proposed garden and neighbouring noise sensitive gardens.

A position 2m inside the play area is chosen as a realistic location for potential activity in groups, as opposed to the closest possible point on the site boundary, where it is unlikely activity will take place. Distance attenuation is considered in terms of line source propagation, to account for the potential spread of children across the play area and to present the most robust possible assessment.

In all instances, the screening as provided by the garden fences is considered as a nominal element to present a robust assessment. Propagation predictions also consider the presence of the cabins along the north and west boundaries of the garden.

Calculations are shown in Appendix D1.

Noise sensitive receiver	Predicted Level at 1m from Receptor Façade dB LAeq, T	Predicted Level in Receptor Garden dB LAeq, T	Predicted Level at 1m from Receptor Façade + Existing Ambient Level dB LAeq, T	Predicted Level in Receptor Garden + Existing Ambient Level dB LAeq, T
Receiver 1 (North) LAeq,30min	50	51	53.5	54
Receiver 2 (South) LAeq,30min	53	52	55.1	54.5
Receiver 3 (West) LAeq,30min	48	50	52.8	53.5

Table 8 Predicted received noise levels, LAeq,30min

In addition to noise emissions from the play area, noise levels as a result of breakout from the cabins is also calculated, considering the distance attenuation in relation to the neighbouring windows and gardens, from the measurement position. Calculations are shown in Appendix D2.

Noise sensitive receiver	Predicted Level at 1m from Receptor Façade dB L _{Aeq, T}	Predicted Level in Receptor Garden dB L _{Aeq, T}	Predicted Level at 1m from Receptor Façade + Existing Ambient Level dB L _{Aeq, T}	Predicted Level in Receptor Garden + Existing Ambient Level dB L _{Aeq, T}
Receiver 1 (North) L _{Aeq, T}	46	50	52.2	53.5
Receiver 2 (South) L _{Aeq, T}	43	43	51.6	51.6
Receiver 3 (West) L _{Aeq, T}	43	47	51.6	52.5

Table 9 Predicted received noise levels, L_{Aeq, T}

4.4 Assessment of Impacts – Outdoor Play

A comparison of the predicted noise emissions against the existing ambient noise profile of the area is presented in Tables 10-11 below. This is determined through adding the predicted level from outdoor play area use (B), to the existing measured noise profile of the area.

Noise sensitive receiver	Predicted Level at 1m from Receptor Façade + Existing Ambient Level 'B' dB L _{Aeq, T}	Existing Ambient Noise Level 'A' dB L _{Aeq, T}	Change against existing noise profile 'B'-'A' dB L _{Aeq, T}
Receiver 1 (North) L _{Aeq, 30min}	53.5	51	+2.5
Receiver 2 (South) L _{Aeq, 30min}	55.1	51	+4.1
Receiver 3 (West) L _{Aeq, 30min}	52.8	51	+1.8

Table 10 Numerical assessment of impacts at receiver windows

Noise sensitive receiver	Predicted Level at 1m from Receptor Façade + Existing Ambient Level 'B' dB L _{Aeq, T}	Existing Ambient Noise Level 'A' dB L _{Aeq, T}	Change against existing noise profile 'B'-'A' dB L _{Aeq, T}
Receiver 1 (North) L _{Aeq, 30min}	54	51	+3
Receiver 2 (South) L _{Aeq, 30min}	54.5	51	+3.5
Receiver 3 (West) L _{Aeq, 30min}	53.5	51	+2.5

Table 11 Numerical assessment of impacts at receiver gardens

As shown in the table above, the predicted noise emissions are expected to result in a maximum change in ambient noise profile of 4.1dB at the closest noise sensitive receivers.

An increase of 4.1dB against the existing ambient noise level, when considering the former uses of the site with prior smaller childcare facilities, and the absence of any complaints throughout the operation, would fall within the 'slight' impact category of IEMA effect descriptors.

Noise levels increases in receiver gardens would range from 2.5-3.5dB, falling within the 'slight' impact category for noise sensitive receivers.

As the first step and as a numerical assessment alone, it would be considered that the noise difference in receiver gardens, and at the south receiver window, would be large enough to be noticed and hence inherently create some potential noise impact, but not so large as to cause that impact to be significant.

In gardens, and at the south receiver window, noise levels may present a 'slight' impact, however this should be addressed in the context of the actual scenario at hand, and not assessed at a purely numerical level.

Furthermore, the applicant is meticulous in the management of the site, including noise control measures which are implemented throughout the operation.

Whilst a worst-case scenario is considered for calculations. The proposed use of the outdoor play area is not intended as a mass synchronised break time for the full group. Garden use would be staged in small groups with close supervision, which helps to control the potential for noise emissions. While group size has been found to be less critical in terms of playground or outdoor play noise, this would have a larger impact for smaller group sizes (5-10, as opposed to 20-100), and would go some way to reducing the noise compared to the predicted levels shown. The proposed noise management plan includes allowing for a maximum of 10 children outside at any given time, which could reduce noise emissions by up to 3dB through logarithmic halving of sound emissions.

Outdoor play activity would only take place for a total of 2 hours per day during opening hours. This means that the potential for exposure to residents is reduced, considering that residents would typically be out at work during these hours. Residents working from home would broadly be expected to be indoors during working hours, and as such would be subject to the noise levels received at windows, rather than in gardens. The noise itself would be comparable in nature to previous use of the gardens by the previous small childcare facility in place prior to any expansion.

This means that while numerically the values received in the gardens and windows may be sufficient to create some impact, the actual impacts on residents would not be expected to be significant.

It is therefore the opinion of ES Acoustics that significant adverse impacts on health and quality of life are avoided, with the resultant impact being commensurate with the LOAEL (Lowest Observed Adverse Effect Level) as discussed in NPSE. The NPSE noise policy aims to "Avoid significant adverse impacts on health and quality of life" which would be addressed in this case, as no significant adverse impact is expected.

With regard to the NPPF, the assessment indicates that noise generated by the proposal is unlikely to cause significant negative effects on health or quality of life, and the proposed use capacity is not expected to result in any adverse noise impacts.

4.5 Assessment of Impacts – Noise Breakout from Cabins

A comparison of the predicted noise emissions from cabin breakout against the existing ambient noise profile of the area is presented in Tables 12-13 below. This is determined through adding the predicted level from outdoor play area use (B), to the existing measured noise profile of the area.

Noise sensitive receiver	Predicted Level at 1m from Receptor Façade + Existing Ambient Level 'B' dB L _{Aeq, T}	Existing Ambient Noise Level 'A' dB L _{Aeq, T}	Change against existing noise profile 'B'-'A' dB L _{Aeq, T}
Receiver 1 (North) L _{Aeq, T}	52.2	51	+1.2
Receiver 2 (South) L _{Aeq, T}	51.6	51	+0.6
Receiver 3 (West) L _{Aeq, T}	51.6	51	+0.6

Table 12 Numerical assessment of impacts at receiver windows

Noise sensitive receiver	Predicted Level at 1m from Receptor Façade + Existing Ambient Level 'B' dB L _{Aeq, T}	Existing Ambient Noise Level 'A' dB L _{Aeq, T}	Change against existing noise profile 'B'-'A' dB L _{Aeq, T}
Receiver 1 (North) L _{Aeq, T}	53.5	51	+2.5
Receiver 2 (South) L _{Aeq, T}	51.6	51	+0.6
Receiver 3 (West) L _{Aeq, T}	52.5	51	+2.5

Table 13 Numerical assessment of impacts at receiver gardens

As shown in Tables 12 and 13, noise emissions from cabin noise breakout as measured would create a maximum increase of 2.5dB at the closest gardens, and 1.2dB at the closest noise sensitive window. In any instance, this would be indicative of none/non-significant change, and would inherently be expected to present a low likelihood of adverse impact.

5 ARRIVALS, DEPARTURES & ASSOCIATED ACTIVITY

For arrivals and departures, parents dropping off children would use the parking spaces on the driveway to the front of the property, where there is parking for up to 6 cars.

As the primary source of noise to the front of the property is road traffic on Whitley Wood Road, there would be limited change in the types of noise sources compared to the existing noise profile. The driveway is a former domestic driveway, with no changes to capacity for parking, meaning there is no increase in the potential number of cars parked or manoeuvring at any given time. The noise sources themselves would also be no different to those associated with a domestic driveway, with cars moving at low speeds and car doors opening and closing.

Current proposals from the applicant include staggered arrival and departure times for children, allowing for a maximum of 4 drop-offs per 30-minute time window, starting from 07:30.

5.1 Car parking noise levels

The key activities associated with car parking defined below:

- Customers vehicles as they enter and exit the site and park within the designated parking spaces
- Vehicle doors and boots opening and closing

Sound pressure levels associated with basic car parking operations have been measured off-site for a representative sequence of events over a 1 minute cycle. This included: car start up, idle, manoeuvring, and door opening/closing. This has been captured for both a small petrol car, and a medium diesel car, to represent a realistic impression of typical cars attending the site.

To present a robust assessment and consider the impulsive nature of car door closures, the L_{max} value as measured over the 1-minute measurement window will be used for the car noise emissions assessment.

Unit	Octave band centre frequency sound pressure levels at 1m, dB								Overall dB(A)
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
Diesel car cycle of events	83	81	79	72	70	71	65	64	77
Petrol car cycle of events	86	79	76	75	66	59	60	60	75

Table 14 Measured car noise levels, Sound Pressure Level $L_{max:1min}$

5.2 Assessment Scenario

The assessment scenario compares the predicted vehicle noise during opening hours, and ambient noise levels as measured during the proposed operational hours. Noise levels are predicted to the closest noise sensitive receiver, which is the adjoining property to the north. Ambient noise levels are considered based on the findings of the survey undertaken in monitoring position 2.

With the arrival and pickup controls in place, up to 8 no. vehicle drop-offs or pickups would occur in any given operational hour, equating to 16 total vehicle movements. As a realistic scenario, the vehicle movements are divided 50/50 into petrol/diesel vehicles. In the event that electric or hybrid vehicles are used, these would inherently present a lower noise profile, and as such would only result in a better result.

Calculations for noise emissions of car movements are shown in Appendix D3.

Receiver	Existing Ambient Noise Level During Proposed Hours dB L _{Aeq, T}	Calculated Level at 1m from Closest Receptor Façade dB L _{Aeq, T}	Combined Noise Level (with L _{Aeq}) dB L _{Aeq, T}	Change against existing noise profile (L _{Aeq}) dB
NSR - North	61	60	63.4	+2.4dB

Table 15 Comparison of the Predicted Level and Ambient Levels

When assessing the potential severity of impact according to the IEMA guidelines, the increase in ambient noise level compared with the noise tolerance of the receiver would indicate None/Not Significant impact at the closest receiver, as a result of vehicle noise in relation to the existing noise climate from road traffic noise.

Furthermore, it should be noted that the above assessment considers the worst-case scenario of all children being dropped off and collected by car. The transport assessment undertaken by Motion confirms that actual vehicle movements are greatly reduced, with the worst case of 17:00-18:00 hours accounting for 5 total vehicle movements. This would further substantially reduce the projected noise impacts of the scheme.

6 CONCLUSION

Automated noise measurements and a noise impact assessment have been undertaken at Sweet Pea Childcare, 80 Whitley Wood Road, Reading, to establish the existing ambient noise levels on site, in order to assess the potential noise impact of the daytime childcare facilities accommodating up to 15 children.

The change in noise level due to the proposed use would range from 0.6-4.1dB, depending upon the receiver in question, which corresponds to the 'non'-'slight' categories of the IEMA 'effect descriptors' table, and in consideration of site specific context and the proposals for operation, would not be expected to present any adverse impact on neighbouring noise sensitive receivers.

It is therefore concluded that significant adverse impacts on health and quality of life are avoided, with the resultant impact being commensurate with the LOAEL (Lowest Observed Adverse Effect Level) of the Noise Policy Statement for England.

7 SUPPLEMENTAL ADDENDUM – FURTHER MEASUREMENTS

Following response from the local planning authority, additional measurements have been conducted on site to capture in-situ noise levels from the nursery operation, with a focus on measuring actual external play time noise levels as opposed to defining these based on measurements from previous similar assessments.

To facilitate this, a survey was conducted from 10:30 on 29th June 2026 to 09:30 on 2nd June 2026. The survey featured warm, dry weather throughout and was therefore ideal for periods of outdoor play, which occurred from 10:00-11:30, and 14:00-15:30.

Measurements were conducted at the monitoring position shown in Figure 4. Located close to the site boundary with direct free field oversight to the outdoor play area. Note, whilst the monitor was located approximately 1m closer to the north perimeter fence than the previous background noise survey position 1, the line of sight and distances involved are fundamentally similar, at approximately 5m from the main outdoor play area.



Figure 4 Noise survey measurement location

To validate the assessment previously conducted with regards to predicted external noise levels, measured noise levels captured during the outdoor play periods can be directly compared to the noise levels captured at other sites, which previously formed the basis of the assessment. This comparison is made in Table 16, below.

Source	Time Period	Sound Pressure Level at Octave band centre frequency, dB								dB(A)
		63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
External playground operation, measured at 5-15m, $L_{eq:30min}$	Secondary School in Chislehurst. School field during lunch break. (5-15m from microphone) (full high school capacity, 1-1.5k students, estimated up to 100 in survey area)	54	53	50	54	59	58	51	39	63
	Nursery in Bromley. Nursery play area during outdoor play (10m from microphone) Capacity up to 60 pupils.	53	53	53	53	59	56	53	47	62
	Community playcentre in West Sussex. Outdoor area during outdoor play (5-10m from microphone) Up to 20 children in play area.	54	50	50	55	61	60	50	42	64
	Average of 3 sites	54	52	51	54	60	58	52	44	63
Average $L_{Aeq:T}$ ($L_{eq:90min}$ x 3 periods measured)	External Play Area Measured Levels, Sweat Pea Childcare	55	52	50	47	47	44	40	35	51
	Variation from previous assessment	+1	0	-1	-7	-13	-14	-12	-9	-12
Measured worst single 30-minute period of outdoor play ($L_{eq:30min}$)	External Play Area Measured Levels, Sweat Pea Childcare	55	51	50	47	49	48	44	40	54
	Variation from previous assessment	+1	-1	-1	-7	-11	-10	-8	-4	-9

Table 16 Measured noise levels from similar sites

As shown in Table 16, measured noise levels during outdoor play times on site are substantially lower than those previously assumed for the assessment of noise transfer, which in turn inherently means that noise impacts previously predicted will be lower than previously concluded.

The evidence gathered by this additional survey also clearly demonstrates the careful method with which noise emissions from children on site are managed. Recorded levels 9-12dB lower than typically expected on similar sites indicates a strong correlation between the meticulous management of the site and noise emissions measured.

Furthermore, the average noise level of 51dB(A) as measured is directly comparable to the existing noise profile of the area as previously measured. With additional attenuation provided by partial screening and distance, the impact of noise levels on nearby receiver properties would be minimal.

GLOSSARY OF ACOUSTIC TERMINOLOGY

Decibel scale - dB

The decibel (dB) is a relative unit of measurement used in acoustics. The dB is a logarithmic ratio between a measured level and a reference level of 0 dB (i.e the threshold of human hearing). Simply put, the decibel compresses the wide range of sounds we hear into more manageable numbers.

Addition of noise from several sources

Sound produced by multiple sound sources are added logarithmically e.g. power ratio of 2 = 3dB, power ratio of 10 = 10dB. Therefore, two equally intense sound sources operating simultaneously produce a sound level which is 3dB higher than a single source e.g. 60dB + 60dB = 63dB.

Subjective impression of noise

Human response to sound is highly individualized and often based on psychological factors such as emotion and expectation. Sensitivity to sound typically depends on the loudness, pitch, duration of the occurrence, and time of occurrence (e.g. a sound source could cause annoyance during the night where it would not during the day). The following table is a guide to explain increases or decreases in sound levels for many scenarios.

Change in sound level	Change in perceived loudness
1 dB	Imperceptible
3 dB	Just barely perceptible
6 dB	Clearly noticeable
10 dB	About twice as loud

'A' Weighted Frequency Filter - dB(A)

The human ear is not equally sensitive in all frequencies. The A-weighting filter was devised to take this into account when undertaking noise measurements and allows a sound level meter to replicate the human ears response to sound.

$L_{Aeq, T}$

Sound can fluctuate widely over a given period. L_{Aeq} is the A-weighted equivalent continuous sound level, with T denoting the time period over which the fluctuating sound levels were averaged e.g. $L_{Aeq, 16h}$ is the equivalent continuous noise level over an 16 hour period.

L_{A90}

A-weighted sound level exceeded for 90% of the measurement period, calculated via statistical analysis. The L_{A90} descriptor is typically used to establish background sound levels for noise impact assessments

L_{A10}

A-weighted sound level exceeded for 10% of the measurement period, calculated via statistical analysis.

L_{AFmax}

A-weighted sound level maximum sound pressure level that has been measured over a given time period

GLOSSARY OF ACOUSTIC TERMINOLOGY

Octave Bands

The audio or frequency spectrum of the human ear is in the range of 20Hz to 20 kHz. The spectrum tells how the energy of the sound signal is distributed in frequency. Octave bands divides the audio spectrum into 10 equal parts. The International Standards Organisation defines the centre frequency of these bands as 31.5Hz, 63 Hz, 125 Hz, 250 Hz, 500 Hz, 1kHz, 2kHz, 4kHz, 8kHz and 16kHz.

Noise Rating (NR) Curves

A method of rating noise using a set of curves relating octave band sound pressure levels. Typically used for building services systems within offices

Airborne sound

Sound radiated from a source into the surrounding air e.g. musical instruments, tv/radio, machinery/equipment. Airborne sound insulation refers to the reduction or attenuation of airborne sound, usually via a solid partition between a source and receiver.

Impact sound

Sound resulting from the impact between colliding objects, e.g. footfall impact upon a floor. Impact sound insulation refers to the resistance of a floor to the transmission of impact sound, typically via the installation of a 'resilient layer'

Flanking sound

The transmission of airborne sound between two adjacent rooms by paths other than via the separating partition between the rooms, e.g. the abutment point of a wall and floor.

Structure-borne noise

Noise caused by the vibration of elements of a structure. This can result in reradiated noise, whereby the vibrating element transmits airborne sound into a space e.g. vibration caused by mechanical plant installed within a plant room which is not adequately isolated from the structure, or construction/demolition work in an adjacent building.

Reverberant sound

Sound in an enclosed space (usually a room), which results from repeated reflections at the boundaries. Reverberation time is the time taken for a steady sound level in an enclosed space to decay by 60dB, measured from the moment the sound source is switched off. A example of a typically reverberant space would be a classic church. Absorptive materials can be used to reduce reflections and reverberation times.

PLANNING POLICY AND RELEVANT ACOUSTIC GUIDANCE REVIEW

1 NATIONAL POLICY

1.1 National Planning Policy Framework (NPPF)

The National Planning Policy Framework (NPPF) covers issues relating to noise and planning in England.

The paragraphs relating to noise state:

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

1.2 Noise Policy Statement for England (NPSE)

The Noise Policy Statement for England (NPSE) was developed by DEFRA and published in March 2010. The long-term vision of the Government noise policy is to '*Promote good health and good quality of life through the effective management of noise within the context of Government policy on sustainable development.*'

The NPSE vision noted above is supported by the following 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;*

PLANNING POLICY AND RELEVANT ACOUSTIC GUIDANCE REVIEW

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

The NPSE outlines observed effect levels relating to the above, as follows:

- *No observed effect level (NOEL): this is the level of noise exposure below which no effect at all on health or quality of life can be detected;*
- *Lowest observed adverse effect level (LOAEL): this is the level of noise exposure above which adverse effects on health and quality of life can be detected;*
- *Significant observed adverse effect level (SOAEL): This is the level of noise exposure above which significant adverse effects on health and quality of life occur;*

Noise effect levels are not set at absolute noise level targets, but instead vary depending on the context and character of the noise and site-specific factors which may impact on the severity of the effect. The NPSE states:

'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.'

1.3 National Planning Practice Guidance (NPPG)

The NPPG provides practical guidance on how the NPPF should be applied as well as and guidance on the factors influencing whether noise may be a concern at the planning stage and how adverse effects can be mitigated. The table below summarises the effect levels presented within the NPSE, as follows:

Response	Examples of Outcomes	Increasing Effect Level	Action
Not present	No Effect	No Observed Effect	No specific measures required
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific Measures required
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, 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 small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate & reduce to a minimum

PLANNING POLICY AND RELEVANT ACOUSTIC GUIDANCE REVIEW

Response	Examples of Outcomes	Increasing Effect Level	Action
Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, 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
Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory	Unacceptable Adverse Effect	Prevent

Table 1 Noise exposure hierarchy

2 OTHER PRACTICE AND GUIDANCE

2.1.1 World Health Organisation 'Guidelines for Community Noise'

The World Health Organisation (WHO) 'Guidelines for Community Noise' published in 1999 gives the following description of community noise:

"Community noise (also called environmental noise, residential noise or domestic noise) is defined as noise emitted from all sources except noise at the industrial workplace. Main sources of community noise include road, rail and air traffic, industries, construction and public work, and the neighbourhood. Typical neighbourhood noise comes from premises and installations related to the catering trade (restaurant, cafeterias, discotheques, etc.); from live or recorded music; sport events including motor sports; playgrounds; car parks; and domestic animals such as barking dogs."

For noise levels internally and externally to dwellings it states:

"To enable casual conversation indoors during daytime, the sound level of interfering noise should not exceed 35 dB L_{Aeq} . The maximum sound pressure level should be measured with the sound pressure meter set at "fast". Based on a 15 dB sound reduction of a partially open window, the noise level outside a residential property during the daytime about 1 metre from façades of living spaces should not exceed 50 dB L_{Aeq} ."

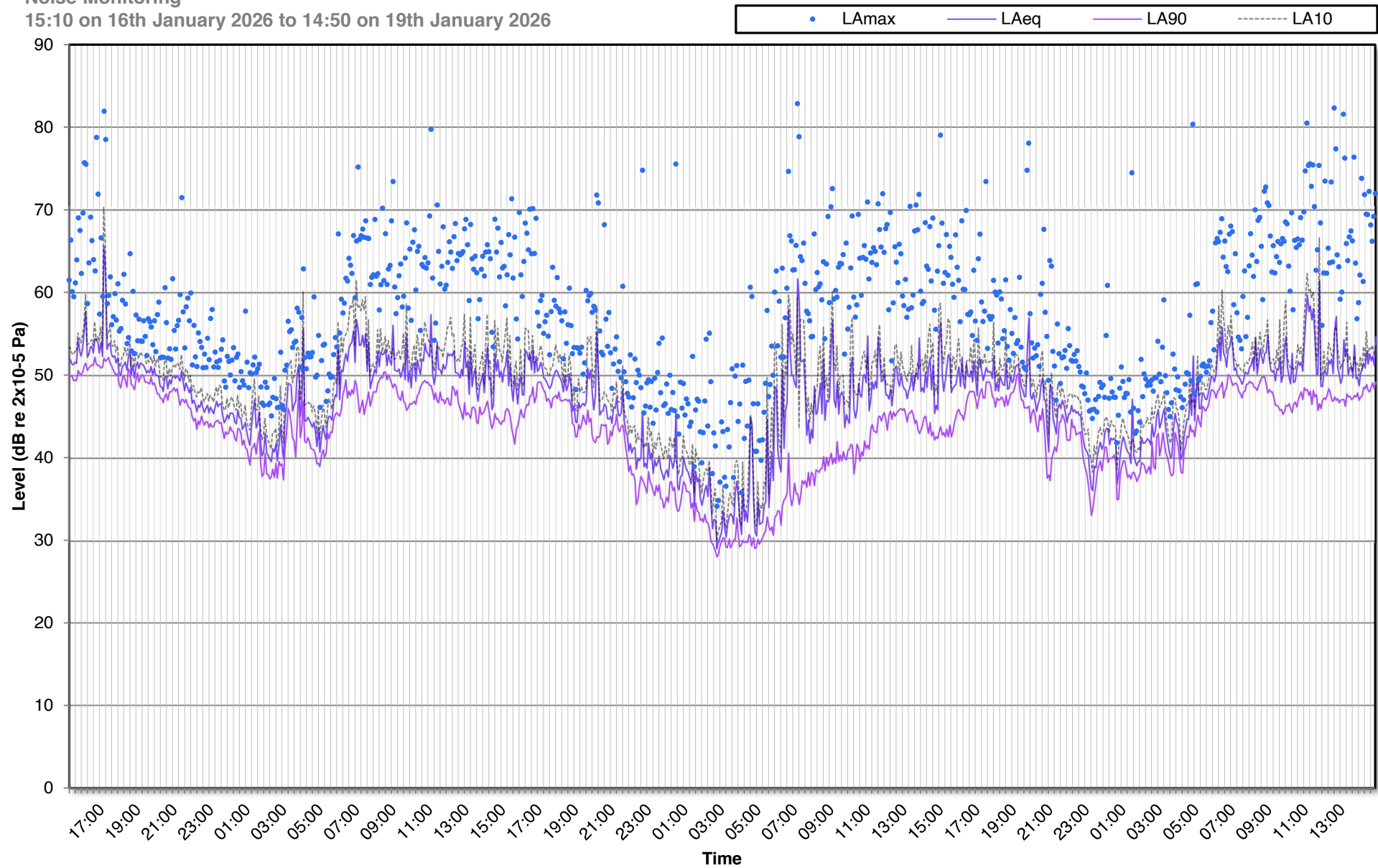
For outdoor living areas, it states:

"To protect the majority of people from being seriously annoyed during the daytime, the outdoor sound level from steady, continuous noise should not exceed 55 dB L_{Aeq} on balconies, terraces and in outdoor living areas. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound level should not exceed 50 dB L_{Aeq} . Where it is practical and feasible, the lower outdoor sound level should be considered the maximum desirable sound level for new development."

APPENDIX C1

ENVIRONMENTAL NOISE TIME HISTORY

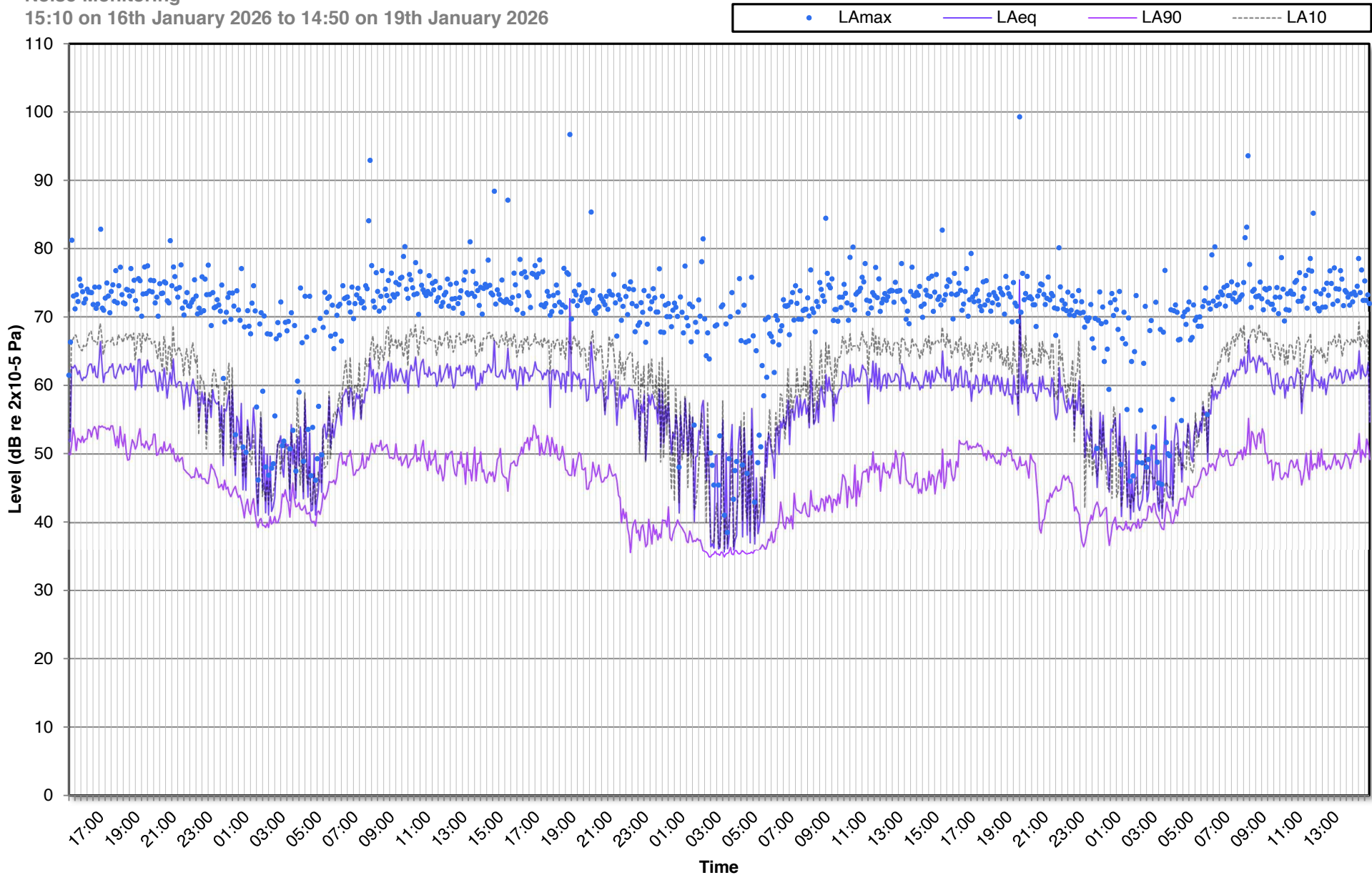
22457.NIA-RPT.01
Noise Monitoring
15:10 on 16th January 2026 to 14:50 on 19th January 2026



APPENDIX C2

ENVIRONMENTAL NOISE TIME HISTORY

22457.NIA-RPT.01
Noise Monitoring
15:10 on 16th January 2026 to 14:50 on 19th January 2026



APPENDIX D1

NOISE EMISSION CALCULATIONS

Source: Outdoor Play Area Receiver: NSR1 - North Receiver Window	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Outdoor play area, sound pressure levels at 5m, dB	54	52	51	54	60	58	52	44	63
Minimum attenuation provided by the timber cabins, and fencing, nominal, dB	-10	-10	-10	-10	-10	-10	-10	-10	
Minimum attenuation provided by distance (12m), considering $10 \cdot \log(r1/r2)$ dB	-4	-4	-4	-4	-4	-4	-4	-4	
Specific Sound Level from outdoor play, dB	40	38	37	40	46	44	38	30	50
Total Noise Level at Receptor Window, dB	40	38	37	40	46	44	38	30	50

Source: Outdoor Play Area Receiver: NSR1 - North Receiver Garden	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Outdoor play area, sound pressure levels at 5m, dB	54	52	51	54	60	58	52	44	63
Minimum attenuation provided by the timber cabins, and fencing, nominal, dB	-10	-10	-10	-10	-10	-10	-10	-10	
Minimum attenuation provided by distance (9m), considering $10 \cdot \log(r1/r2)$ dB	-3	-3	-3	-3	-3	-3	-3	-3	
Specific Sound Level from outdoor play, dB	41	39	38	41	47	45	39	31	51
Total Noise Level at Receptor Garden, dB	41	39	38	41	47	45	39	31	51

Source: Outdoor Play Area Receiver: NSR2 - South Receiver Window	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Outdoor play area, sound pressure levels at 5m, dB	54	52	51	54	60	58	52	44	63
Minimum attenuation provided by the fencing and foliage, nominal, dB	-5	-5	-5	-5	-5	-5	-5	-5	
Minimum attenuation provided by distance (19m), considering $10 \cdot \log(r1/r2)$ dB	-6	-6	-6	-6	-6	-6	-6	-6	
Specific Sound Level from outdoor play, dB	43	41	40	43	49	47	41	33	53
Total Noise Level at Receptor Window, dB	43	41	40	43	49	47	41	33	53

Source: Outdoor Play Area Receiver: NSR2 - South Receiver Garden	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Outdoor play area, sound pressure levels at 5m, dB	54	52	51	54	60	58	52	44	63
Minimum attenuation provided by the fencing and foliage, nominal, dB	-10	-10	-10	-10	-10	-10	-10	-10	
Minimum attenuation provided by distance (6m), considering $10 \cdot \log(r1/r2)$ dB	-1	-1	-1	-1	-1	-1	-1	-1	
Specific Sound Level from outdoor play, dB	43	41	40	43	49	47	41	33	52
Total Noise Level at Receptor Garden, dB	43	41	40	43	49	47	41	33	52

Source: Outdoor Play Area Receiver: NSR3 - West Receiver Window	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Outdoor play area, sound pressure levels at 5m, dB	54	52	51	54	60	58	52	44	63
Minimum attenuation provided by the timber cabins, and fencing, nominal, dB	-8	-8	-8	-8	-8	-8	-8	-8	
Minimum attenuation provided by distance (25m), considering $10 \cdot \log(r1/r2)$ dB	-7	-7	-7	-7	-7	-7	-7	-7	
Specific Sound Level from outdoor play, dB	39	37	36	39	45	43	37	29	48
Total Noise Level at Receptor Window, dB	39	37	36	39	45	43	37	29	48

Source: Outdoor Play Area Receiver: NSR3 - West Receiver Garden	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Outdoor play area, sound pressure levels at 5m, dB	54	52	51	54	60	58	52	44	63
Minimum attenuation provided by the timber cabins, and fencing, nominal, dB	-10	-10	-10	-10	-10	-10	-10	-10	
Minimum attenuation provided by distance (12m), considering $10 \cdot \log(r1/r2)$ dB	-4	-4	-4	-4	-4	-4	-4	-4	
Specific Sound Level from outdoor play, dB	40	38	37	40	46	44	38	30	50
Total Noise Level at Receptor Garden, dB	40	38	37	40	46	44	38	30	50

APPENDIX D2

NOISE EMISSION CALCULATIONS

Source: Cabin noise breakout Receiver: NSR1 - North Receiver Window	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Cabin noise breakout, sound pressure levels at 4m, dB	56	53	51	51	52	46	42	38	55
Minimum attenuation provided by fencing, nominal, dB	-5	-5	-5	-5	-5	-5	-5	-5	
Minimum attenuation provided by distance (10m), considering $10 \cdot \log(r1/r2)$ dB	-4	-4	-4	-4	-4	-4	-4	-4	
Specific Sound Level from outdoor play, dB	47	44	42	42	43	37	33	29	46
Total Noise Level at Receptor Window, dB	47	44	42	42	43	37	33	29	46

Source: Cabin noise breakout Receiver: NSR1 - North Receiver Garden	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Cabin noise breakout, sound pressure levels at 4m, dB	56	53	51	51	52	46	42	38	55
Minimum attenuation provided by fencing, nominal, dB	-5	-5	-5	-5	-5	-5	-5	-5	
Minimum attenuation provided by distance (4m), considering $10 \cdot \log(r1/r2)$ dB	0	0	0	0	0	0	0	0	
Specific Sound Level from outdoor play, dB	51	48	46	46	47	41	37	33	50
Total Noise Level at Receptor Garden, dB	51	48	46	46	47	41	37	33	50

Source: Cabin noise breakout Receiver: NSR2 - South Receiver Window	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Cabin noise breakout, sound pressure levels at 4m, dB	56	53	51	51	52	46	42	38	55
Minimum attenuation provided by the fencing and foliage, nominal, dB	-5	-5	-5	-5	-5	-5	-5	-5	
Minimum attenuation provided by distance (20m), considering $10 \cdot \log(r1/r2)$ dB	-7	-7	-7	-7	-7	-7	-7	-7	
Specific Sound Level from outdoor play, dB	44	41	39	39	40	34	30	26	43
Total Noise Level at Receptor Window, dB	44	41	39	39	40	34	30	26	43

Source: Cabin noise breakout Receiver: NSR2 - South Receiver Garden	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Cabin noise breakout, sound pressure levels at 4m, dB	56	53	51	51	52	46	42	38	55
Minimum attenuation provided by the fencing and foliage, nominal, dB	-10	-10	-10	-10	-10	-10	-10	-10	
Minimum attenuation provided by distance (7m), considering $10 \cdot \log(r1/r2)$ dB	-2	-2	-2	-2	-2	-2	-2	-2	
Specific Sound Level from outdoor play, dB	44	41	39	39	40	34	30	26	43
Total Noise Level at Receptor Garden, dB	44	41	39	39	40	34	30	26	43

Source: Cabin noise breakout Receiver: NSR3 - West Receiver Window	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Cabin noise breakout, sound pressure levels at 4m, dB	56	53	51	51	52	46	42	38	55
Minimum attenuation provided by the fencing and foliage, nominal, dB	-5	-5	-5	-5	-5	-5	-5	-5	
Minimum attenuation provided by distance (22m), considering $10 \cdot \log(r1/r2)$ dB	-7	-7	-7	-7	-7	-7	-7	-7	
Specific Sound Level from outdoor play, dB	44	41	39	39	40	34	30	26	43
Total Noise Level at Receptor Window, dB	44	41	39	39	40	34	30	26	43

Source: Cabin noise breakout Receiver: NSR3 - West Receiver Garden	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Cabin noise breakout, sound pressure levels at 4m, dB	56	53	51	51	52	46	42	38	55
Minimum attenuation provided by fencing, nominal, dB	-5	-5	-5	-5	-5	-5	-5	-5	
Minimum attenuation provided by distance (8m), considering $10 \cdot \log(r1/r2)$ dB	-3	-3	-3	-3	-3	-3	-3	-3	
Specific Sound Level from outdoor play, dB	48	45	43	43	44	38	34	30	47
Total Noise Level at Receptor Garden, dB	48	45	43	43	44	38	34	30	47

APPENDIX D3

NOISE EMISSIONS CALCULATIONS



Source: Cars parking during drop off/pickup Receiver: NSR - North	Frequency, Hz								dB(A)
	63	125	250	500	1k	2k	4k	8k	
Car operation cycle, diesel cars (Sound pressure level, LAFmax:1min, at 1m)	83	81	79	72	70	71	65	64	77
Correction for number of events over 1 hour period (assumed to be 8 no. for 4 cars)	9	9	9	9	9	9	9	9	
Correction for total event time over 1 hour period (8 mins)	-9	-9	-9	-9	-9	-9	-9	-9	
Minimum attenuation provided by distance (10m), dB	-20	-20	-20	-20	-20	-20	-20	-20	58
Total Noise Emissions from diesel vehicle movements, dB	63	61	59	52	50	51	45	44	
Car operation cycle, petrol cars (Sound pressure level, LAFmax:1min, at 1m)	86	79	76	75	66	59	60	60	75
Correction for number of events over 1 hour period (assumed to be 8 no. for 4 cars)	9	9	9	9	9	9	9	9	
Correction for total event time over 1 hour period (8 mins)	-9	-9	-9	-9	-9	-9	-9	-9	
Minimum attenuation provided by distance (10m), dB	-20	-20	-20	-20	-20	-20	-20	-20	55
Total Noise Emissions from petrol vehicle movements, dB	66	59	56	55	46	39	40	40	
Total Rating Noise Level of evening car activities at Receiver	68	63	61	57	52	52	47	46	60

Existing Ambient Noise Level	61
Combined New Ambient Noise Level	63.4
Ambient Noise Level Increase	2.4

APPENDIX E

NOISE MANAGEMENT PLAN

1. Site & Context

- Residential semi-detached in a predominantly residential street
- Large rear garden with established boundary treatment
- No history of statutory or informal noise complaints since operation commenced in 2023

2. Childcare Operation (Actual Use)

- Maximum 15 children, all under 3 years old
- No school-aged children
- EYFS ratios apply at all times
- Calm, supervised play model

3. Building Fabric & Acoustic Measures

- Childcare accommodation is contained within thick log cabins
- Cabins are:
 - Fully insulated
 - Double glazed
 - Designed to contain internal noise
- Boundary fencing includes batten fencing with sound-absorbing backing material along the garden perimeter

4. Outdoor Play (Critical – Please Base Assessment on This)

Outdoor play is structured and limited, not free-flow:

- Total outdoor play: approximately 1–2 hours per day
- Typical outdoor periods:
 - 10:00–11:00
 - 15:00–16:00
- Maximum of 10 children outdoors at any one time
- Remaining children are indoors during outdoor sessions
- No outdoor play:
 - Early morning
 - During lunch
 - During nap times
 - Late afternoon / evening
- All children are indoors:
 - From 11:30am for lunch
 - Sleeping/resting between 12:00–14:00

APPENDIX E

NOISE MANAGEMENT PLAN

5. Arrivals, Departures & Associated Activity

Arrivals are fully staggered to avoid clustering and disturbance:

- 4 children at 07:30
- 4 children at 08:00
- 4 children at 08:30
- 4 children at 09:00
- 4 children at 10:30

Collections are similarly staggered across the afternoon. There are:

- 6 on-site parking spaces
- Dedicated drop-off bays
- Limiting any on-street waiting or queuing

6. Reduced On-Site Activity

Children attend off-site playgroups and activities 2–3 times per week, reducing on-site presence and activity during the day