

CHURCH OF SCIENTOLOGY, EAST
GRINSTEAD

Noise Impact Assessment

Document History

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1. INTRODUCTION

MZA Acoustics has been appointed by Church of Scientology Religious Education College Inc (the Client) to undertake a noise impact assessment related to the proposed site infrastructure upgrades to facilitate the annual events held at Church of Scientology Advanced Organization & Saint Hill, Saint Hill Road, East Grinstead, RH19 4JY ('The Site').

This report has been prepared to accompany a planning application to be submitted to Mid Sussex District Council (MSDC).

It is proposed to expand the existing site and infrastructure to support the operation of large annual events. The development land encompasses approximately 25,000m² and will accommodate approximately 750 new car parking spaces. The land is currently open space which is already used for events parking, and it is understood that a number of large events already occur at the site throughout the year, and the changes proposed are designed to make the setup and operation of the events easier for the organisers, rather than increase capacity or undertake changes which would increase noise emissions.

As such the development of the land is not proposed to provide any impact upon the existing road network or introduce any new noise sources to the area. This assessment is therefore undertaken to determine the impact as it stands and not to predict noise levels from new noise sources or events.

Furthermore, the assessment will consider requirements for new plant proposed to serve the Proposed Development. Plant selections have not yet been made and as such noise level limits will be put in place, which should be used to steer the design of any new items of plant during the design process.

A baseline environmental noise survey has been undertaken at a location representative of the nearest noise sensitive receptors to the proposed Site to establish the prevailing background and ambient sound levels.

This report occasionally employs technical terminology. In order to assist the reader, a glossary of terms is presented in Appendix A.

2. SITE DESCRIPTION

The Site is located at the Church of Scientology Advanced Organization & Saint Hill, Saint Hill Road, East Grinstead, RH19 4JY, and is set within a predominantly rural environment approximately 2.5km southwest of East Grinstead town centre. It is located approximately 0.75km south of the B2110 and 3.7km west of the A22, which are the most significant traffic routes in proximity to the Site. Immediately adjacent to the Site is Saint Hill Road, which runs south along the eastern Site boundary, with this road eventually adjoining West Hoathly Road approximately 350m to the east of the Site boundary.

Beyond this, the surrounding area is mostly greenfield with interspersed residential areas. There is a small area of light industrial use on West Hoathly road, approximately 350m southeast of the Site boundary. This industrial area comprises a bicycle workshop, timber frame builders, and a lightweight metal sheetworks. There appears to be no significant items of plant serving the units and, as such, it is not considered to be a significant source of noise in the area.

There are sports fields immediately to the north (East Grinstead Sport Club) and approximately 150m to the east of the development Site (East Grinstead Rugby Football Club).

Residential development is scattered throughout the surrounding area, with the closest noise sensitive receptors (NSRs) taken to be Rockwood Park and Saint Hill House, both of which are located east of the Site, on Saint Hill Road. Rockwood Park (NSR1) is the closest being approximately 50m from the development Site, with Saint Hill House (NSR2) being approximately 90m from the development Site.

The nearest noise-sensitive receptors (NSRs) to the site are the residential buildings highlighted in **Figure 1**.

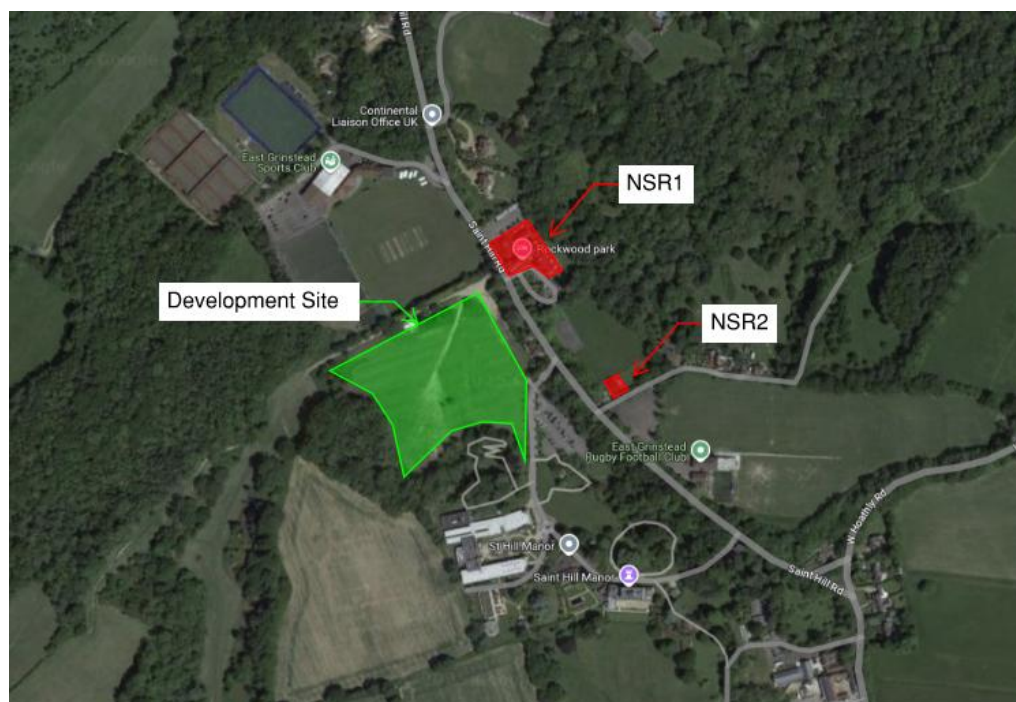


Figure 1 - Site location with development boundary (green); nearest noise-sensitive receptors (red)

2.1 Development Proposals

The proposal sees the development of the greenfield land as highlighted in Figure 1. This is land that is currently used for car parking during events and as such the development proposes to reinforce the land for this purpose.

The proposed site plan is illustrated in **Figure 2**.



Figure 2 - Proposed site plan

3. ASSESSMENT GUIDANCE

This section details the guidance that will be used in the assessment which follows.

There is no standard means of quantitative assessment for such a development and, therefore, the assessment is made against existing planning frameworks and guidance for general noise impact.

3.1 National Planning Guidance

3.1.1 National Planning Policy Framework (NPPF) December 2024

The NPPF determines the government's planning policy for England. The document was first published in March 2012, revised in July 2018, updated in 2019, 2021 and 2023.

The current version (issued 12/12/24) of the policy document remains largely unchanged with regards to noise which is considered in Chapter 15 – 'Conserving and enhancing the natural environment', specifically in terms of pollution.

Paragraph **187** states that planning policies and decisions should contribute to and enhance the natural and local environment by "*...preventing new and existing development from contributing to, being put at 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...*".

Paragraph **198** states that:

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 by 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 amenity value for this reason; and*
- c) **Limit the impact** of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.*

Furthermore, Paragraph **200** continues:

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.

The guidance contained within the NPPF reference the Noise Policy Statement for England (Department for Environment, Food & Rural Affairs, 2010).

3.1.2 Noise Policy Statement for England (NPSE, March 2010)

The NPSE attends to three types of noise;

- *“Environmental noise” which includes noise from transportation sources;*
- *“Neighbour noise” which includes noise from inside and outside people’s homes; and*
- *“Neighbourhood noise”, which includes noise arising from within the community such as industrial and entertainment premises, trade and business premises, construction sites and noise in the street.*

In line with the aims determined in the NPPF, the NPSE determines three aims;

- Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development;
- Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development; and,
- Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

The guidance detailed within the NPSE relates a number of key phrases with regards to adverse effects which can be applied to noise impacts as used by the World Health Organisation.

- **NOEL – No Observed Effect Level** - The level below which no health effect or detrimental impact on the quality of life is observed.
- **LOAEL – Lowest Observed Adverse Effect Level** - The level at which adverse effects on health and quality of life can be detected
- **SOAEL – Significant Observed Adverse Effect Level** - The level above which significant adverse effects on health and quality of life occur.

The guidance indicates that it is not possible to have a single objective noise-based measure that defines SOAEL, and as such the SOAEL is likely to be different for different noise sources and receptors. The document indicates that further research is required to establish what may constitute a significant adverse impact on health and quality of life from noise.

While the NPSE determines the NOEL, LOAEL and SOAEL descriptions, the document indicates that, unlike other environmental disciplines, there are currently no European or national noise limits which have to be met, although the NPSE states that *“there can be specific local limits for specific developments”* allowing for negotiation.

3.1.3 Planning Practice Guidance – Noise

The Planning Practice Guidance for noise (published in March 2014 and updated July 2019) broadly considers the same issues as demonstrated within both the NPPF and the NPSE with regards to noise within the planning realm.

The information detailed within the PPG indicates that noise should be considered when:

- New developments may create additional noise; and/ or,
- New developments would be sensitive to the prevailing acoustic environment.

The guidance indicates that Local Planning Authorities should take account of the acoustic environment and in doing so consider:

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

The impact of noise is rated within the policy document in terms of the relative 'Observed Effect Level', defined in line with the guidance within the NPSE. Based upon this, the Planning Practice Guidance provides the following matrix of likely average response:

Table 1: PPG observed effect levels

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

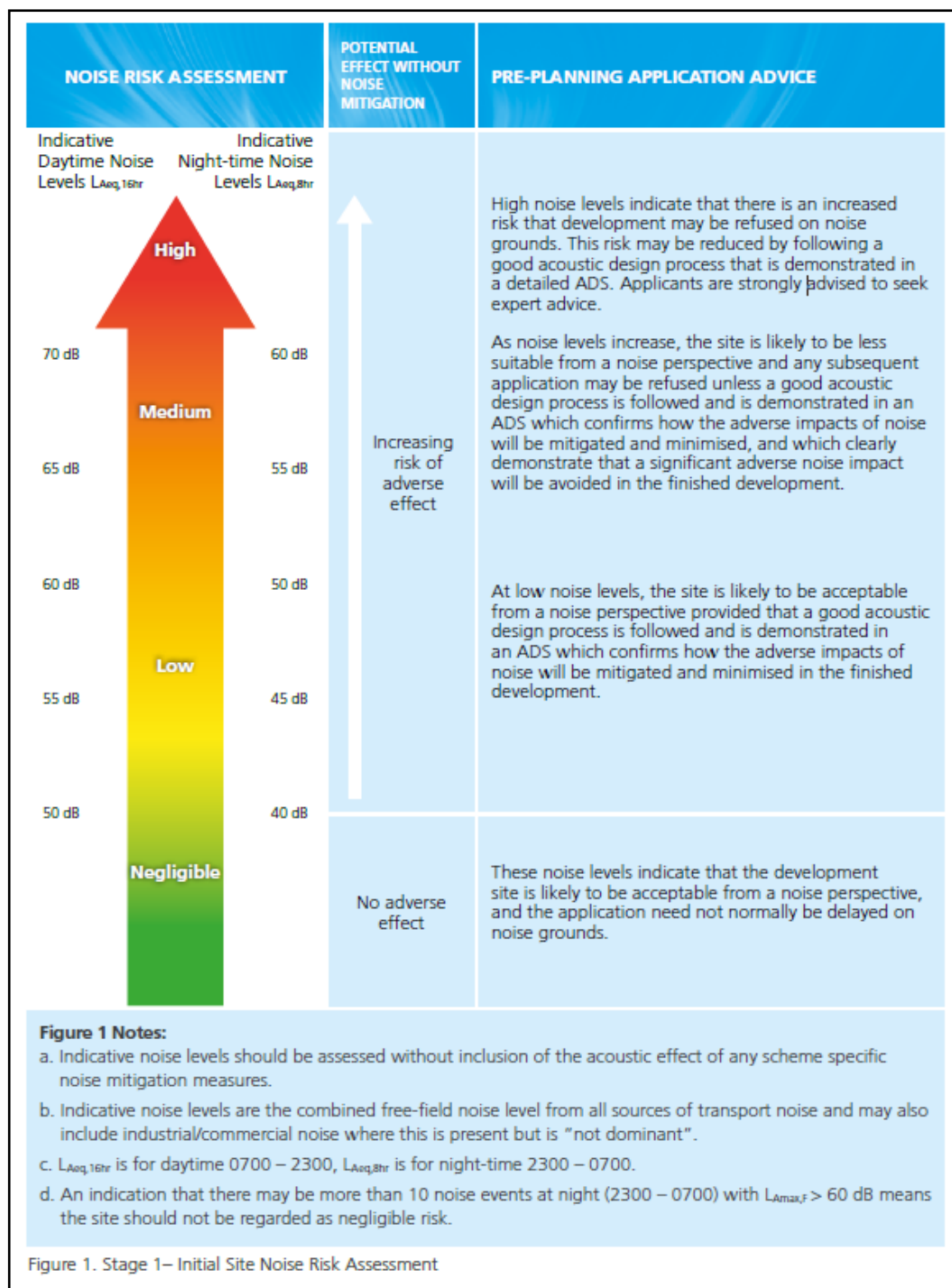


Figure 3 - PPG Stage 1 Risk Assessment

Figure 3 presents absolute noise levels and how these reflect the potential effect level. Note that daytime noise levels below 55 dB $L_{Aeq,16hour}$ are considered to have a low impact, depending on the context. Levels below 50 dB $L_{Aeq,16hour}$ are considered to have a negligible impact, depending upon the context.

3.2 Noise Policy Statement for England (NPSE), 2010

The NPSE provides more detail than the NPPF setting out the long-term vision of the Government noise policy and applying to all forms of noise excluding occupational noise. The NPSE repeatedly refers to the management and control of noise within the context of Government Policy on sustainable development.

The NPSE also stresses that noise impact should not be treated in isolation from other related factors. At paragraph 2.7 for example it states:

'...the application of the NPSE should enable noise to be considered alongside other relevant issues and not to be considered in isolation. In the past, the wider benefits of a particular policy, development or other activity may not have been given adequate weight when assessing the noise implications.'

The NPSE introduces and describes three categories, or levels, describing the presence or absence of noise effects but does not quantify those categories, stating that the corresponding objective levels are likely to be different for different noise sources, receptors and times of the day or night. These categories are:

- **NOEL** – No Observed Effect Level – This is the level below which no effect can be detected. In simple terms, below this level, there is no detectable effect on health and quality of life due to the noise
- **LOAEL** – Lowest Observed Adverse Effect Level – This is the level above which adverse effects on health and quality of life can be detected
- **SOAEL** – Significant Observed Adverse Effect Level – This is the level above which significant adverse effects on health and quality of life occur.

The NPSE recognised that, at the time of publication, further research was needed into how these categories might be quantified for different scenarios. There is still no robust, universally accepted method of deriving suitable values and a variety of approaches are adopted in different circumstances. The subjective guidance provided in the Planning Practice Guidance (PPG) for noise can be of assistance in deriving suitable values.

The three aims of the NPSE are:

- Avoid significant adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- Mitigate and minimise adverse impacts on health and quality of life from environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.
- Where possible, contribute to the improvement of health and quality of life through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development.

3.3 BS 4142:2014 + A1:2019 Methods for rating and assessing industrial and commercial sound

BS 4142 provides a methodology for rating and assessing sound associated with both industrial and commercial premises. The purpose of the Standard is clearly outlined in

the opening section where it states that the method is appropriate for the consideration of:

- Sound from industrial and manufacturing processes;
- Sound from fixed installations which comprise mechanical and electrical plant and equipment;
- Sound from the loading and unloading of goods and materials at industrial and/or commercial premises; and
- Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from premises or processes, such as that from forklift trucks, or that from train movements on or around an industrial and/or commercial site.

The Standard is based around the premise that the significance of the noise impact of an industrial/commercial facility can be derived from the numerical subtraction of the background noise level (not necessarily the lowest background level measured, but the typical background of the receptor) from the measured/calculated rating level of the specific sound under consideration. This comparison will enable the impact of the specific sound to be concluded based upon the premise that typically “the greater this difference, the greater the magnitude of the impact”. This difference is then considered as follows:

- A difference of around +10 dB or more is likely to be an indication of a **significant adverse impact**, depending on the context.
- A difference of around +5 dB is likely to be an indication of an **adverse impact**, depending on the context.
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact or a significant adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a **low impact**, depending on the context."

BS 4142 further states that “where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact” again depending upon the specific context of the site. The Standard further qualifies the assessment protocol by outlining conditions to the comparative assessment and stating that “not all adverse impacts will lead to complaints and not every complaint is proof of an adverse impact”, thus implying that all sites should be assessed on their own merits and specifics.

The Standard quantifies the typical reference periods to be used in the assessment of noise, namely:

- Typical Daytime 07:00 – 23:00 1-hr assessment period
- Typical Night-time 23:00 – 07:00 15-min assessment period

The Standard also outlines methods for defining appropriate “character corrections” within the rating levels to account for tonal qualities, impulsive qualities, other sound characteristics and/or intermittency. These are:

- a. the Subjective Method,
- b. the Objective Methods for tonality; and,
- c. the Reference Method.

It is noted by the Standard that where multiple features are present the corrections should be added in a linear fashion to the specific level.

Table 2 - BS 4142 Subjective Method Rating Correction

Level of Perceptibility	Tonal Correction dB	Impulsivity Correction dB	Correction for 'other sound characteristics' dB	Intermittency Correction dB
No Perceptibility	+0	+0	Where neither tonal nor impulsive but clearly identifiable +3	If intermittency is readily identifiable +3
Just Perceptible	+2	+3		
Clearly perceptible	+4	+6		
Highly perceptible	+6	+9		

4. BASELINE NOISE SURVEY

A noise survey has been undertaken at the site to establish the prevailing acoustic conditions, which will be used to set noise emission limits from the proposed scheme, as well as to predict the impact of any new noise sources/emissions.

4.1 Measurement Locations

Continuous unattended monitoring was undertaken at two locations between 18:00 hours on Friday 4th October to 11:00 Monday 7th October 2024 to establish the prevailing noise levels during the daytime and night-time as follows:

- MP1: Located within the ground of the development area, approx. 20 m west of the kerb of saint Hall Road, 1.5 m above ground level;
- MP2: Located adjacent to the junction between Saint Hill Road and west Hoathly Road. Approximately 5m west of the kerb of Saint Hill Road, at a height of approximately 1.5 m above ground level.

Both measurements were considered to be in free-field conditions and are shown on plan in Figure 4 below).

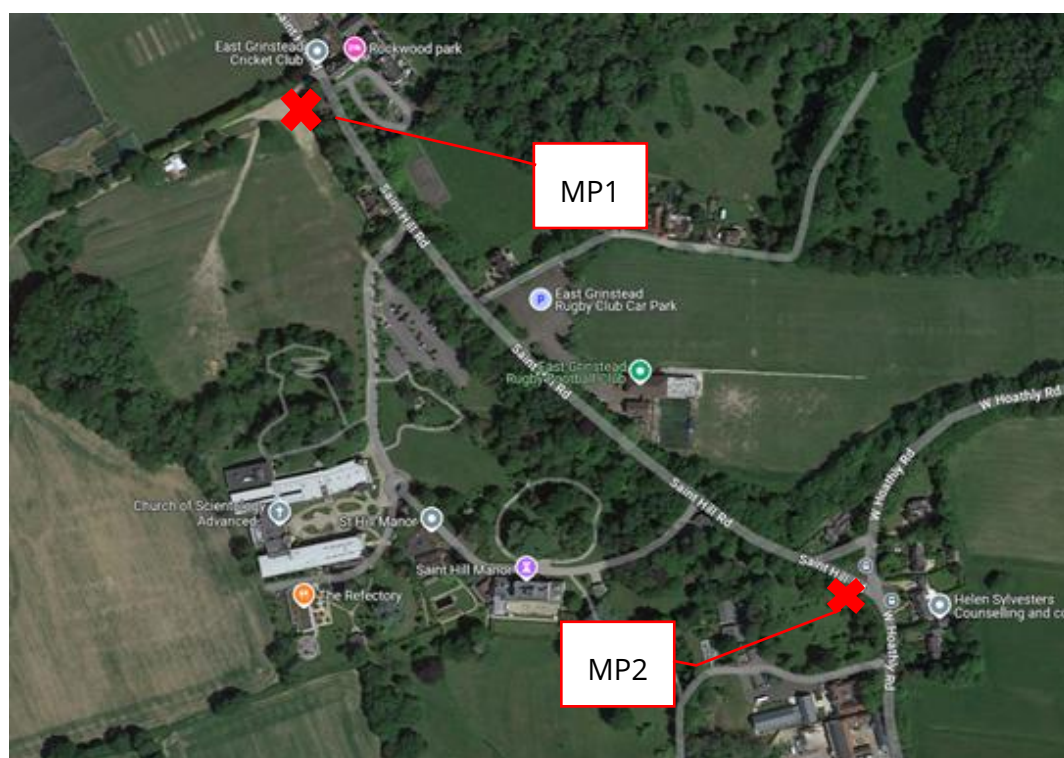


Figure 4 – Unattended noise monitoring Locations (MP1 & MP2)

4.1.1 Observations

Being a rural area, the measurement locations were both, generally, very quiet – with the noise climate mainly featuring rustling of trees and other vegetation in the wind. Road traffic was infrequent but traffic pass-bys did occur occasionally.

East Grinstead Sport Club is located a short distance to the north. This was not observed to have made any significant noise during the survey. It appears as though the sports club comprises a cricket oval and lacrosse pitches. Neither of these are considered to be particularly noisy and/or frequently used spaces and as such is not likely to be a consistent feature of the noise climate.

East Grinstead Rugby Football Club features full-size football and rugby pitches, and is located approximately 150m east of the development area. There was activity on most days, with the most significant being competitive games on Sunday 6th October. However, this activity was not noted to significantly impact the noise climate at the Site, with typical noise levels on Sunday being similar to those seen during the other days of the survey. It should be noted, however, that sports events at these clubs, which are typically during the weekend, do have the potential to increase road traffic and introduce noise from spectators before, during and after sports events.

4.2 Equipment

The equipment used to undertake the noise surveys is listed in Appendix B.

Microphones and sound level meters have been calibrated at UKAS accredited laboratories within the preceding two years, whilst field calibrators have been laboratory calibrated within the preceding 12 months.

The equipment was field calibrated prior to, and on completion of, measurement and no significant drift (<0.5 dB) in calibration was detected.

4.3 Weather Conditions

Weather throughout the survey was generally appropriate for the measurement of environmental noise, i.e. dry with windspeeds generally below 5 m/s, with some gusts exceeding this for a short period on the morning of Monday 7th October. There was no precipitation throughout, and temperatures were generally between 10°C and 15°C.

4.4 Measurement Results

The free-field unattended measured monitoring results are presented in Table 3. The long-term measurement data is presented in graphical format in Appendix C.

Note that the events proposed are to run only during daytime hours and as such the car parking noise will only be assessed against these noise levels. Fixed plant has the potential to run anytime (depending upon its intended use) and as such fixed plant limits will be applied for daytime and night-time.

Table 3 - Unattended survey results (free-field, dB)

Location	Period	Equivalent Continuous Sound Level (Free-field, dB L _{Aeq,T})	Typical Background Sound Level (Free-field, dB L _{AF90,T}) ¹
MP1	Daytime (07:00 – 23:00)	52	39
	Night Time (23:00 – 07:00)	44	31
MP2	Daytime (07:00 – 23:00)	53	40
	Night Time (23:00 – 07:00)	44	29
¹ The typical background noise level has been determined by analysing the measured data and selecting the lowest modal value, in accordance with the guidance in BS 4142:2014.			

5. CAR PARK NOISE IMPACT ASSESSMENT

5.1 Introduction

This section presents the assessment of the predicted noise impact from the noise sources associated with the Proposed Development.

We understand that these events currently take place and have been doing so for several years. As such, the modifications to the car park will not impact upon the surrounding road network and, therefore, no assessment of noise levels from these roads will be undertaken.

Furthermore, the noise climate in the vicinity of the car park itself is not anticipated to worsen with the development, but is likely to remain much the same, if not improve slightly due to the more suitable ground conditions.

Nonetheless, an assessment is made of noise from the car park below.

5.2 Operating Hours

Based on information provided by the Client, it is known that the events at the development Site will take place during the daytime only – with typical events taking place between the hours of 10:00 and 20:30.

As such the assessment of car parking noise will be done so against the prevailing typical ambient noise levels at the development site during the daytime (07:00 - 23:00).

Table 4 presents the number of movements for each event and the time periods during which the events take place.

It is assumed that most vehicle movements would take place slightly before and slightly after the periods stated and, as such, will be assessed against the entire daytime period (07:00 - 23:00).

It is anticipated that no (or very limited) movements would happen during the night time period (23:00 - 07:00).

Table 4 – Number of vehicle movements per event

Event Name	Month	Time	Total Car Trips by Event
Saint Hill Family Day	December	2pm-7pm	540
Christmas Light Switch-On	November	2pm-8:30pm	540
Bonfire Night	November	4pm-8pm	540
The Jive Aces, Saint Hill Manor	October	7pm	190
IAS Event	October	7pm	990
The Jive Aces, Saint Hill Manor	August	2pm-7pm	190
Easter Egg Hunt	March	1pm-5pm	540
The Jive Aces, Saint Hill Manor	March	2pm-7pm	190
South East England Group Visits Fair, Saint Hill Castle	March	10am-1pm	190
Wedding and Conference Events, Saint Hill Castle	All Year	9am-5pm	190

5.3 Car Park Noise Assessment

As part of the development, 759 carparking spaces are proposed. Not all of these spaces will be used for every event.

However, in the worst-case, up to 990 movements may take place within the car park during an event. It is assumed, on the basis that there are more movements than available spaces, that this is because there are vehicles which would arrive/leave throughout the day.

Three scenarios are assessed:

- “Regular” wedding use (190 movements, year-round)
- Typical family/community events (540 movements, specific dates)
- Worst-case IAS event (990 movements, once per year)

As noted above, these events occur across several hours and, accordingly, it is likely that the movements would be spread across the day. However, as a worst-case, the assessment considers that the majority of movements are undertaken across two hour-long periods at the start and end of the event.

In order to assess the noise emissions the car park area has been divided into three sections, or groups.

The proposed car parking layout is illustrated in **Figure 5**.

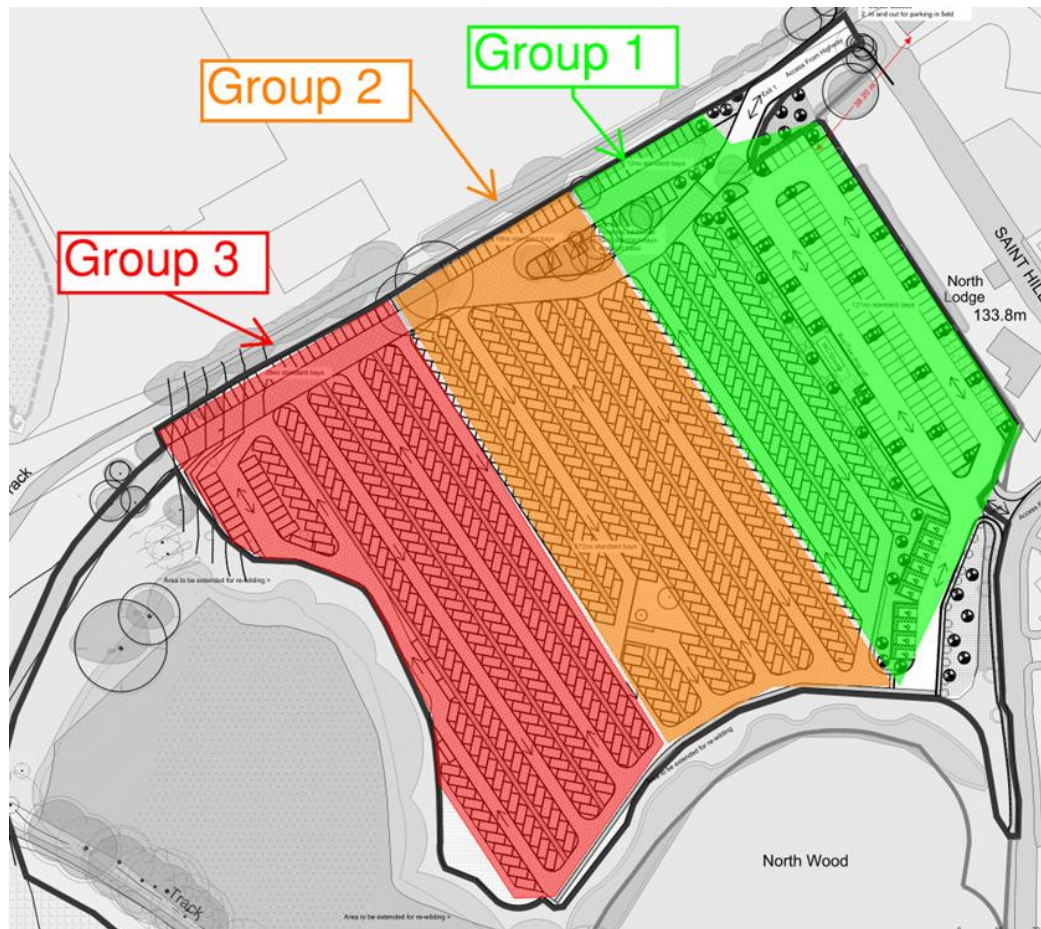


Figure 5 - Proposed car parking

An assessment of the noise from the car park operations is presented in Table 6. This has been made on the following basis:

- Noise data for vehicle movements has been taken from MZA Acoustics has library data for the movement of cars within car parks, taken at a 10 m distance, these are summarised below.
- For each assessment, arrival and departure are assessed separately, with an assumed 70% of vehicles arriving within the hour period prior to, or departing within the hour period following, an event.
- The movements have been split across the three groups. For the regular use these are split across the two closest groups to the entrance, while for the higher occupancy uses it is assumed that an even number of vehicles use each area of the car park across the entire assessment period. This, in reality, is impossible to control but is considered a fair assessment methodology in this case.
- As NSR1 is closer to the development than NSR2, assessing the level at NSR1 is a worst case. The level at NSR2 will likely be lower and as such the impact will be less significant.
- The respective distances of the groups from the nearest receptor (NSR1 – Rockwood Park) are 50m, 100m, and 150m, which is the closest point for each assessment area distance corrected back to NSR1. In reality the noise will be

spread throughout the car parking area and noise levels at the NSRs are likely to be slightly lower than predicted.

- It is assumed that the movements, which include both the arrival and departure of a vehicle, would not take place within a single hour, but is instead split across 2-hours at the start and end of the event. In reality, this is likely to be spread across a larger period of the day.
- The noise levels can be seen to be very similar at both MP1 and MP2, although they do vary slightly, which is to be expected given the noise climate is generally driven by distant road traffic with relatively little local noise. As such, the noise levels measured at MP1 are considered representative of NSR1 Rockwood Park as this measurement was located a short distance away. The levels measured at MP2 will be taken as representative of those at NSR2 Saint Hill House.

The noise levels used in the assessment are summarised in Table 5.

Table 5 – Noise data used in the assessment

Description	Duration	Sound Pressure Level at 10 m (dB L _{Aeq,T})
Car pass by	2 seconds	68
Car manoeuvring	10 seconds	61
Car door slam	1 second	63
Starting car engine	2 seconds	59
Car accelerating away	3 seconds	70

It should be noted that the noise levels from the car park will be variable (due to difference in vehicle types, idling times, arrival/departures times etc.) so the following assessments should serve as indicative only.

The results of the assessment are summarised in Table 6, with full calculations included in Appendix D.

Table 6 – Assessment results

Use Case	Period	Predicted Sound Pressure Level at NSR 1	Existing Ambient Noise Level
“Regular” use (e.g weddings/conference) 190 movements	Arrival	42 dB L _{Aeq,1hr}	52 dB L _{Aeq,16hr}
	Departure	45 dB L _{Aeq,1hr}	52 dB L _{Aeq,16hr}
“Typical” higher occupancy use (e.g Family Day) 540 movements	Arrival	47 dB L _{Aeq,1hr}	52 dB L _{Aeq,16hr}
	Departure	49 dB L _{Aeq,1hr}	52 dB L _{Aeq,16hr}
“Worst-case” occupancy use (e.g IAS Event) 990 movements	Arrival	50 dB L _{Aeq,1hr}	52 dB L _{Aeq,16hr}
	Departure	52 dB L _{Aeq,1hr}	52 dB L _{Aeq,16hr}

5.3.1 Discussion

Noise levels from car park activity, when considering the worst-case event, are predicted to be **no more than equal to the existing ambient level of 52dB L_{Aeq, T}**, which was the lowest measured daytime ambient noise level measured through the noise survey.

More frequent uses of the car park (for weddings, conferences) are significantly below the existing ambient noise levels.

As discussed in Section 3.1.3, PPG states that daytime noise levels below 55 dB L_{Aeq,16hour} are considered to have a low impact, depending on the context, and levels below 50 dB L_{Aeq,16hour} are considered to have a negligible impact, depending upon the context. Table 6 shows that for “regular” use and “typical” use, noise levels fall below 50 dB L_{Aeq,1hour}. Noise of this level, as experienced in the context of the existing noise environment, is likely to be audible, but is not likely to be particularly intrusive and would not likely result in material changes in behaviours of residents at the nearest NSRs. As such, it is recommended that the outcome would align with a NOEL (No Adverse Effect Level) when assessed in accordance with the NPSE (2010), **which reflects a negligible impact due to noise from the car park.**

It should be noted that the worst-case use (990 movements across the entire day, and assuming 70% of movements take place within a 1-hour period) predicts a noise level of 52 dB L_{Aeq,1hour}. When considering that this assessment makes a number of worst-case assumptions, and that events of this magnitude happen very infrequently (currently only once a year), it is considered not unreasonable to suggest that the impact should be further reduced.

When considering these factors, and the fact that these events currently are ongoing so there should be no practical change experienced at the receptors, the assessment predicts that the development is not likely to adversely impact the surrounding area and its residents.

6. BS 4142 NOISE EMISSIONS LIMITS

With respect to the control of noise which falls under the remit of BS 4142 (primarily mechanical services noise from fixed plant and equipment), at this stage the details of all plant and equipment are not known.

It is understood that there will be mechanical ventilation and cooling to elements of the scheme and, therefore, noise will need to be controlled to meet appropriate levels at the nearest noise-sensitive receptors.

In the absence of specific guidance from the Local Planning Authority, noise limits have been set at the nearest noise-sensitive receptors such that **the rating sound level from equipment and operations would not exceed the existing background noise level at the most-affected noise sensitive receptors** in accordance with the guidance of BS 4142.

The noise levels measured at MP1 are considered to be representative of the nearest noise-sensitive receptors. As such, the long-term measurement data has been used to establish the noise limits at these dwellings.

The noise limits below are presented as free-field limits. If the assessment is undertaken to a façade location, then appropriate corrections should be made.

Table 6 – BS 4142 noise emissions limits (free-field)

Location	Period	Equivalent Continuous Sound Level (Free-field, dB L _{Aeq,T})	Rating Noise Level Limit (dB L _{Ar,Tr})
All noise sensitive receptors	Daytime (07:00 – 23:00)	39	39
	Night-time (07:00 – 23:00)	31	31

Note that this noise limit is a rating noise level, in line with the guidance contained within BS4142:2014. This accounts for any acoustic features such as tonality, intermittency and impulsivity. If the noise emissions feature these characteristics then appropriate penalties should be applied, meaning that this limit does not correlate directly to a specific noise level.

It is recommended that a suitably qualified acoustician reviews any plant selections and layout plans to make sure that these limits are to be achieved.

7. CONCLUSIONS

MZA Acoustics Ltd has been appointed by Church of Scientology Religious Education College Inc (the Client) to undertake a noise impact assessment related to the proposed site infrastructure upgrades to facilitate the annual events held at Church of Scientology Advanced Organization & Saint Hill, Saint Hill Road, East Grinstead, RH19 4JY.

This report presents a noise impact assessment for the proposed car park, which replaces an existing car park at the same site.

A baseline environmental noise survey has been undertaken at a location representative of the nearest noise sensitive receivers to the proposed Site to establish the prevailing background and ambient sound levels.

An assessment of noise from the car park has been undertaken and it is shown that the predicted noise from the parking is equal to or less than the existing ambient noise level at the nearest noise-sensitive receptor, using worst-case assumptions.

The worst-case use (990 movements across the entire day, assuming 70% of movements take place within a 1-hour period) predicts a noise level of 52 dB $L_{Aeq,1\text{hour}}$, with more regular uses being significantly lower than this. When considered in the context of the existing noise environment, and in line with the classifications proposed by the PPG, this is considered to relate to a low-to-negligible impact. When considering that this assessment makes a number of worst-case assumptions, and that this event only takes place once a year, it is likely that the impact would be further reduced.

When considering these factors, and the fact that these events currently are ongoing, the assessment predicts that the development is not likely to adversely impact the surrounding area and its residents.

Limits for noise emissions from mechanical plant and equipment (and other operations that fall within the scope of BS 4142) have been established based on the baseline noise survey measurements.

The limitations to this report are included in Appendix E.

Appendices

Appendix A - Glossary of Acoustic Terminology

Airborne Sound	Sound that reaches the point of interest by propagation through air.
Ambient Sound:	Sound from all sources at any given time, from both near and far. Usually measured in terms of L_{Aeq} .
A-Weighting	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies.
Background Sound Level	The A-weighted sound pressure level that can be considered the baseline in the absence of any noise from a specific source of sound under assessment. Measured in terms of $L_{A90, T}$.
Calibration	The measurement system/ chain should be periodically calibrated, within a laboratory, against traceable calibration instrumentation, to either National Standards or as UKAS-Accredited, as required. The calibration of the system should also be checked in the field using a portable calibrator before and after each short term measurements, and periodically for longer term monitoring.
Class 1	The Class of a sound level meter describes its accuracy as defined by the relevant international standards – Class 1 is more accurate than Class 2. The older standard IEC 60651 referred to the grade as "Type", whereas the new standard IEC 61672 refers to it as the "Class". The most accurate meters used in the field (as opposed to a laboratory) are Class 1. Class 2 meters can be used in some instances; however MZA Acoustics use Class 1 (or Type 1) meters by default, as required by BS 4142:2014, for example.
Decibel	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds (s_1 and s_2) is given by $20 \log_{10} (s_1/s_2)$. The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20 Pa.
Fast time Weighting (F)	Averaging time used in sound level meters. Defined in BS EN 61672-2:2013 Electroacoustics. Sound level meters. Pattern evaluation tests.
Free-field / Façade	Far from the presence of sound reflecting objects (except the ground), usually taken to mean at least 3.5 m away.
$L_{AF90, T}$	The A-weighted sound pressure level that is exceeded by the residual sound at the assessment location for 90% of a given time interval, T, measured using time fast time-weighting (F). Generally used to describe the 'background' sound conditions.
L_{AFmax}	The maximum A-weighted sound pressure level during a given time period. L_{max} is sometimes used for the assessment of occasional loud sounds, which may have little effect on the overall L_{eq} noise level, but could still affect the sound environment. Unless described otherwise, it is measured using the fast time-weighting (F).
$L_{eq, T}$	A sound level index called the equivalent continuous sound level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded. Where the value is A-weighted, it will be presented ' $L_{Aeq, T}$ ' or 'dBA $L_{eq, T}$ ', otherwise it should be an un-weighted (or linear) value.
L_p	See Sound Pressure Level.
Noise	Related to human response to sound. Unwanted sound, or sound that is considered undesirable or disruptive.

Octave Band	Frequency ranges in which the upper limit of each band is twice the lower limit. Octave bands are identified by their geometric mean frequency, or centre frequency.
Sound Absorption Coefficient	A measure of how effective a material is at absorbing sound incident to its surface. The index range is between 0 and 1, where 1 indicates a perfectly absorbent material and 0 indicates a perfectly reflective one.
Sound Power	In a specified frequency band, the rate at which acoustic energy is radiated from a source. In general, the rate of flow of sound energy, whether from a source, through an area, or into an absorber.
Sound Power Level	Of airborne sound, ten times the common logarithm of the ratio of the sound power under consideration of the standard reference power of 1 pW. Expressed in decibels.
Sound Pressure	Sound, or sound pressure, is a fluctuation in air pressure over the static ambient pressure.
Sound Pressure Level	The sound level is the sound pressure relative to a standard reference pressure of 20 Pa (20×10^{-6} Pascals) on a decibel scale.
Weighted Sound Reduction Index (R_w)	A single-figure quantity which characterises the airborne sound insulating properties of a material or element over a range of frequencies.

Appendix B – Noise Survey Measurement Equipment

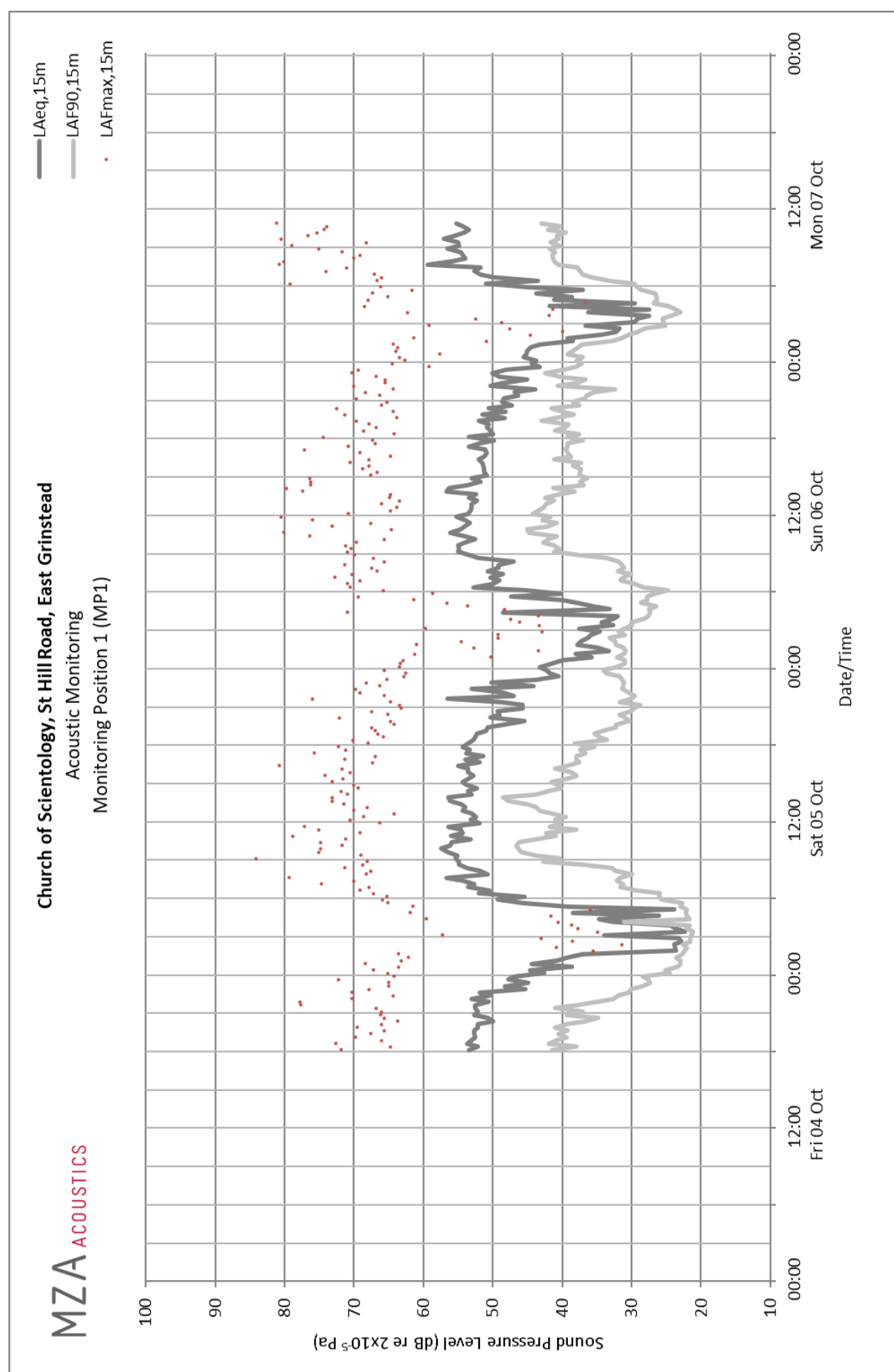
MP1

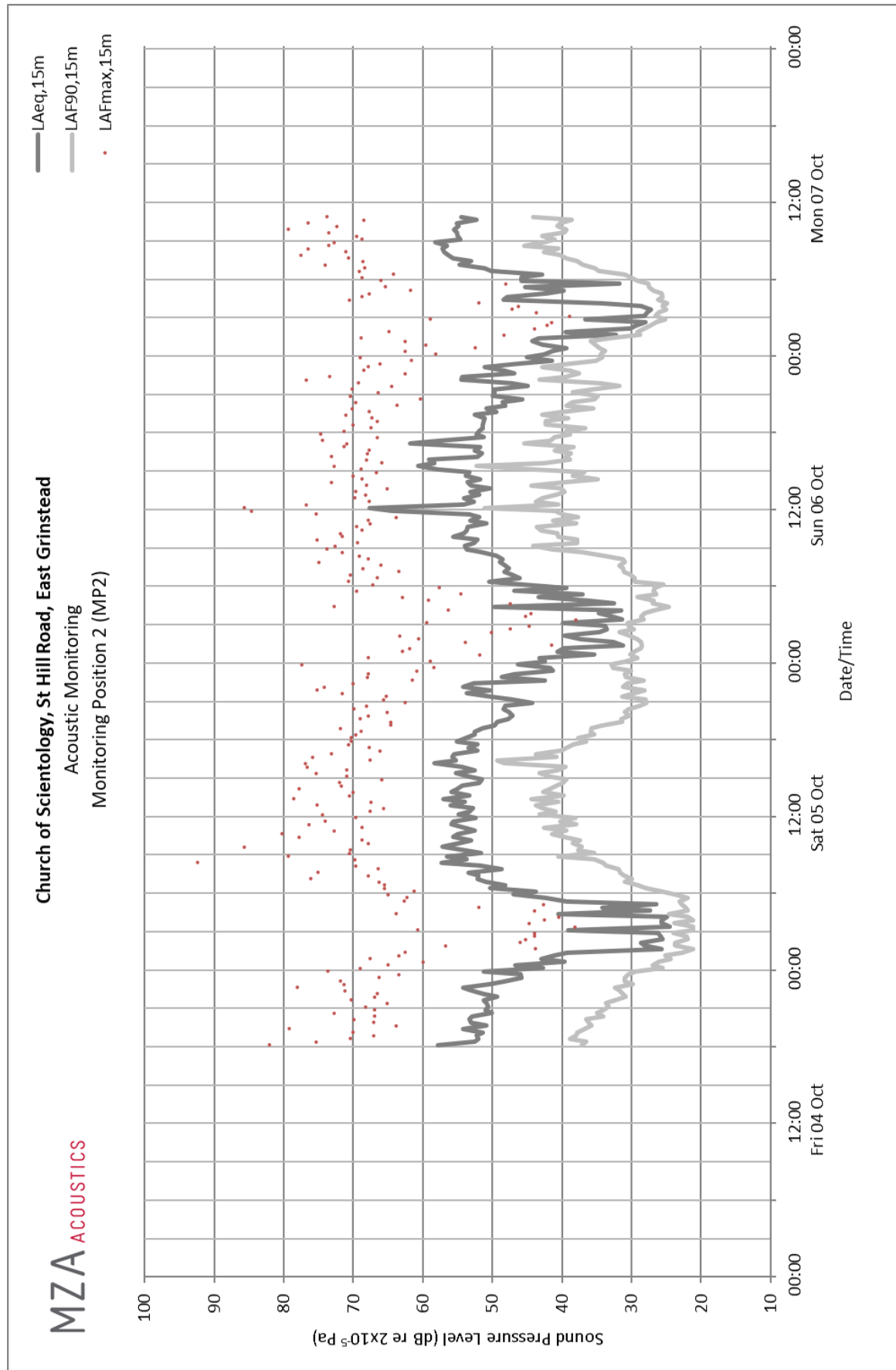
KIT E External Preamp	Equipment	Model Type	Serial Number	Calibration Due Date
	Sound Level Meter	01dB Metravib FUSION	14087	19/10/2025
	Pre-amplifier	01dB Metravib PRE22	2113049	
	Microphone	GRAS 40CD 1/2" Pre-polarised free-field	446548	
	Calibrator	01dB Metravib CAL31	87801	03/04/2025

MP2

KIT B External Preamp	Equipment	Model Type	Serial Number	Calibration Due Date
	Sound Level Meter	01dB Metravib FUSION	11703	01/07/2026
	Pre-amplifier	01dB Metravib PRE22	2138123	
	Microphone	GRAS 40CD 1/2" Pre-polarised free-field	470866	
	Calibrator	01dB Metravib CAL31	82793	30/06/2025

Appendix C – Noise Survey Results Time Trace





Appendix D – Car Park Noise Predictions

Car park movements assessment: “Regular” case (190 movements total) – Arrival

Calculation Step	
Car pass-by at 10 m (duration 2s)	68 dB $L_{Aeq,T}$
Car manoeuvring at 10 m (duration 10s)	61 dB $L_{Aeq,T}$
Car door slam at 10 m (duration 1s)	63 dB $L_{Aeq,T}$
SEL of car movement (duration 1s)	74 dBA
Conversion SEL single vehicle to 1 hour L_{Aeq} ($-10\log(3600)$)	39 dBA
Group 1 – Number of movements in 1 hour (44) ($+10\log(44)$)	55 dB $L_{Aeq,1hr}$
Group 1 – Level corrected for distance from 10 m to 50 m ($-20\log(50/10)$)	41 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (44) ($+10\log(44)$)	55 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 100 m ($-20\log(100/10)$)	35 dB $L_{Aeq,1hr}$
Total noise level at receptor during arrival (all groups)	42 dB $L_{Aeq,1hr}$

Car park movements assessment: "Regular" case (190 movements total) – Departure

Calculation Step	
Car door slam at 10 m (duration 1s)	63 dB $L_{Aeq,T}$
Starting engine at 10 m (duration 2s)	59 dB $L_{Aeq,T}$
Car manoeuvring at 10 m (duration 10s)	61 dB $L_{Aeq,T}$
Car accelerating away at 10 m (duration 3s)	70 dB $L_{Aeq,T}$
SEL of car movement (duration 1s)	77 dBA
Conversion SEL single vehicle to 1 hour L_{Aeq} ($-10\log(3600)$)	42 dBA
Group 1 – Number of movements in 1 hour (44) ($+10\log(44)$)	58 dB $L_{Aeq,1hr}$
Group 1 – Level corrected for distance from 10 m to 50 m ($-20\log(50/10)$)	44 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (44) ($+10\log(44)$)	58 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 100 m ($-20\log(100/10)$)	38 dB $L_{Aeq,1hr}$
Total noise level at receptor during departure (all groups)	45 dB $L_{Aeq,1hr}$

Car park movements assessment: "Typical high occupancy" case (540 movements total) – Arrival

Calculation Step	
Car pass-by at 10 m (duration 2s)	68 dB $L_{Aeq,T}$
Car manoeuvring at 10 m (duration 10s)	61 dB $L_{Aeq,T}$
Car door slam at 10 m (duration 1s)	63 dB $L_{Aeq,T}$
SEL of car movement (duration 1s)	74 dBA
Conversion SEL single vehicle to 1 hour L_{Aeq} ($-10\log(3600)$)	39 dBA
Group 1 – Number of movements in 1 hour (126) ($+10\log(126)$)	60 dB $L_{Aeq,1hr}$
Group 1 – Level corrected for distance from 10 m to 50 m ($-20\log(50/10)$)	46 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (126) ($+10\log(126)$)	60 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 100 m ($-20\log(100/10)$)	40 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (126) ($+10\log(126)$)	60 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 150 m ($-20\log(150/10)$)	36 dB $L_{Aeq,1hr}$
Total noise level at receptor during arrival (all groups)	47 dB $L_{Aeq,1hr}$

Car park movements assessment: "Typical high occupancy" case (540 movements total) – Departure

Calculation Step	
Car door slam at 10 m (duration 1s)	63 dB $L_{Aeq,T}$
Starting engine at 10 m (duration 2s)	59 dB $L_{Aeq,T}$
Car manoeuvring at 10 m (duration 10s)	61 dB $L_{Aeq,T}$
Car accelerating away at 10 m (duration 3s)	70 dB $L_{Aeq,T}$
SEL of car movement (duration 1s)	77 dBA
Conversion SEL single vehicle to 1 hour L_{Aeq} ($-10\log(3600)$)	42 dBA
Group 1 – Number of movements in 1 hour (126) ($+10\log(126)$)	62 dB $L_{Aeq,1hr}$
Group 1 – Level corrected for distance from 10 m to 50 m ($-20\log(50/10)$)	48 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (126) ($+10\log(126)$)	62 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 100 m ($-20\log(100/10)$)	42 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (126) ($+10\log(126)$)	62 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 150 m ($-20\log(150/10)$)	39 dB $L_{Aeq,1hr}$
Total noise level at receptor during departure (all groups)	49 dB $L_{Aeq,1hr}$

Car park movements assessment: "Worst-case occupancy" case (990 movements total) – Arrival

Calculation Step	
Car pass-by at 10 m (duration 2s)	68 dB $L_{Aeq,T}$
Car manoeuvring at 10 m (duration 10s)	61 dB $L_{Aeq,T}$
Car door slam at 10 m (duration 1s)	63 dB $L_{Aeq,T}$
SEL of car movement (duration 1s)	74 dBA
Conversion SEL single vehicle to 1 hour L_{Aeq} ($-10\log(3600)$)	39 dBA
Group 1 – Number of movements in 1 hour (231) ($+10\log(231)$)	62 dB $L_{Aeq,1hr}$
Group 1 – Level corrected for distance from 10 m to 50 m ($-20\log(50/10)$)	48 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (231) ($+10\log(231)$)	62 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 100 m ($-20\log(100/10)$)	42 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (231) ($+10\log(231)$)	62 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 150 m ($-20\log(150/10)$)	39 dB $L_{Aeq,1hr}$
Total noise level at receptor during arrival (all groups)	50 dB $L_{Aeq,1hr}$

Car park movements assessment: "Worst-case occupancy" case (990 movements total) – Departure

Calculation Step	
Car door slam at 10 m (duration 1s)	63 dB $L_{Aeq,T}$
Starting engine at 10 m (duration 2s)	59 dB $L_{Aeq,T}$
Car manoeuvring at 10 m (duration 10s)	61 dB $L_{Aeq,T}$
Car accelerating away at 10 m (duration 3s)	70 dB $L_{Aeq,T}$
SEL of car movement (duration 1s)	77 dBA
Conversion SEL single vehicle to 1 hour L_{Aeq} ($-10\log(3600)$)	42 dBA
Group 1 – Number of movements in 1 hour (231) ($+10\log(231)$)	65 dB $L_{Aeq,1hr}$
Group 1 – Level corrected for distance from 10 m to 50 m ($-20\log(50/10)$)	51 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (231) ($+10\log(231)$)	65 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 100 m ($-20\log(100/10)$)	45 dB $L_{Aeq,1hr}$
Group 2 – Number of movements in 1 hour (231) ($+10\log(231)$)	65 dB $L_{Aeq,1hr}$
Group 2 – Level corrected for distance from 10 m to 150 m ($-20\log(150/10)$)	41 dB $L_{Aeq,1hr}$
Total noise level at receptor during departure (all groups)	52 dB $L_{Aeq,1hr}$

Appendix E – Limitations

This report has been prepared for the titled project or named part thereof and should not be used in whole or part and relied upon for any other project without the written authorisation of MZA Acoustics Limited. MZA Acoustics Limited accepts no responsibility or liability for the consequences of this document if it is used for a purpose other than that for which it was commissioned. Persons wishing to use or rely upon this report for other purposes must seek written authority to do so from the owner of this report and/ or MZA Acoustics Limited and agree to indemnify MZA Acoustics Limited for any and all loss or damage resulting therefrom. MZA Acoustics Limited accepts no responsibility or liability for this document to any other party other than the person by whom it was commissioned.

The findings and opinions expressed are relevant to the dates of the site works and should not be relied upon to represent conditions at substantially later dates. Opinions included therein are based on information gathered during the study and from our experience. If additional information becomes available which may affect our comments, conclusions or recommendations MZA Acoustics Limited reserve the right to review the information, reassess any new potential concerns and modify our opinions accordingly.

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