MAX FORDHAM

Lanwades Park, Kentford, Newmarket

Noise Impact Assessment - Hybrid Application

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ISSUE HISTORY

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1.0 INTRODUCTION

Lochailort Kentford Ltd. has identified a strategic opportunity to redevelop the area formerly occupied by the Animal Research Trust (ART) in Kentford, Newmarket.

Figure 1.1 indicates the extent of the land subject of the current hybrid application. The zone limited by a red line is the subject of a detailed planning application whereas the zone limited by a blue line is the subject of an outline application. The site is located to the south of Bury Road (B1506) and surrounds Lanwades Hall on the east, south and west.

The proposed works consist of the demolition of existing buildings on the eastern site, and phased redevelopment to provide residential units alongside a retail and commercial/ employment building (Use Class E), conversion of the existing listed stable block to community/ commercial/ employment use (Use Class F2/ E), provision of open space, woodland walks, play space, and associated infrastructure and car parking.

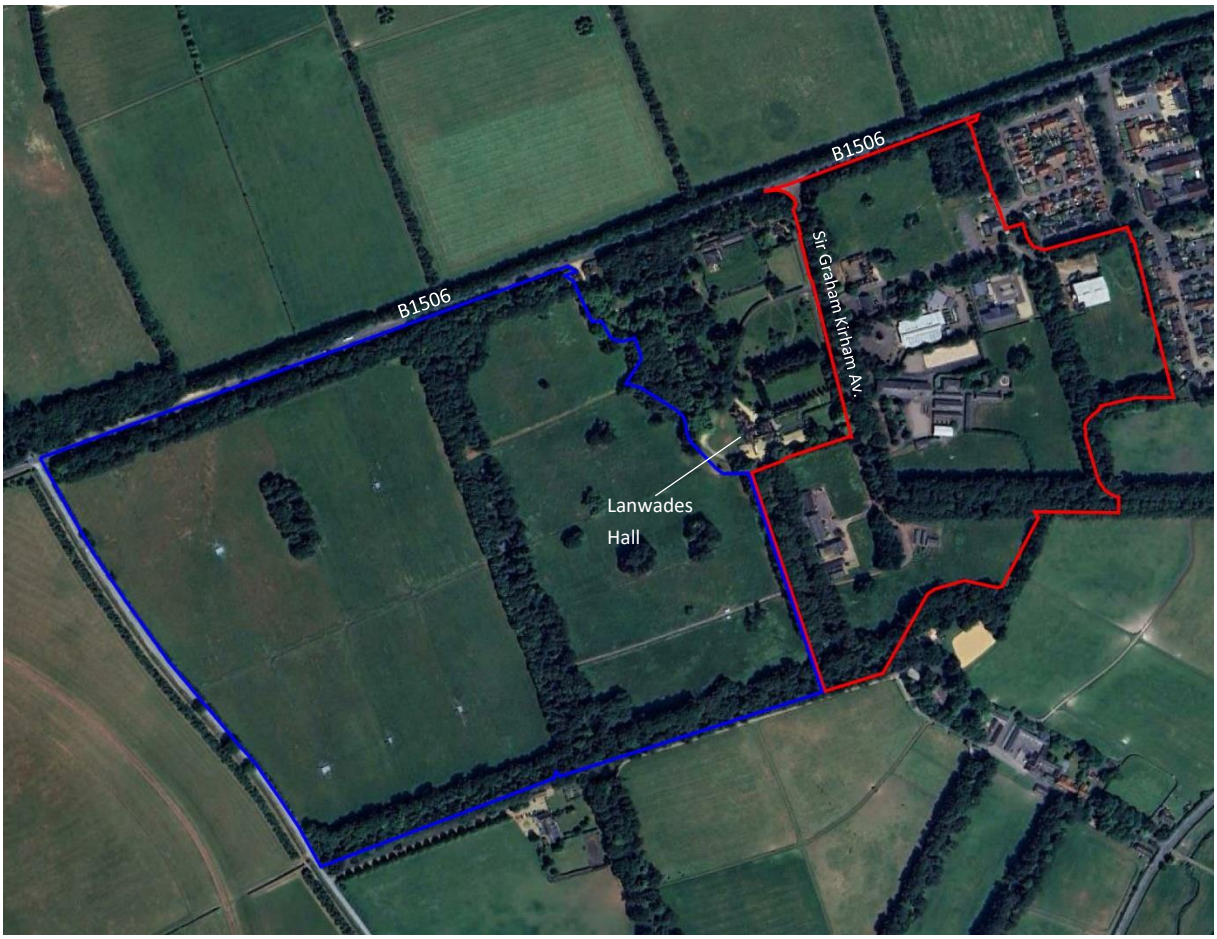


Figure 1.1 Lanwades Park - Hybrid Application - detailed application boundary – red line ; outline application boundary – blue line.

2.0 PLANNING POLICY AND GUIDANCE

2.1 National Planning Policy

National Planning Policy Framework, 2024
Planning Policy Guidance Note 24 (PPG24), which was generally used for overall guidance to planners regarding environmental noise, particularly for residential sites, was replaced in March 2012 by the more general advice given in the National Planning Policy Framework (NPPF).

The NPPF (last update, December 2024) states in paragraph 187e), 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 unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability". Furthermore, it states in paragraphs 198 and 200 that planning policies and decisions should:

- 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 [paragraph 198 a)]
- identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason [paragraph 198 b)]
- 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 [paragraph 200].

Noise Policy Statement for England, 2010
The Noise Policy Statement for England (NPSE) sets out (paragraph 1.6) the long term vision of Government noise policy: "Promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development." NPSE also states: "Excessive noise can have wide-ranging impacts on the quality of human life, health (for example owing to annoyance or sleep disturbance) and use and enjoyment of areas of value such as quiet places and areas with high landscape quality."

The NPSE also cites (in the Explanatory Note section) the following three aims:

- First aim of the NPSE: 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.
- Second aim of the NPSE: 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.
- Third aim of the NPSE: 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 NPSE also states (paragraph 2.2) that "examples of noise management can be found in many areas including reducing noise source; the use of the land use and transport planning systems, compensation measures, the statutory nuisance and licensing regimes and other related legislation." The NPSE (in the Explanatory Note section) also introduces guidance to assist in defining the adverse impacts:

- No Observed Effect Level (NOEL) – the level below which no effect can be detected. Below this level, no detectable effect on health and quality of life due to noise can be established;
- Lowest Observed Adverse Effect Level (LOAEL) – the level above which adverse effects on health and quality of life can be detected;
- Significant Observed Adverse Effect Level (SOAEL) – the level above which significant adverse effects on health and quality of life occur.

The NPSE acknowledges (paragraph 2.15) that it is not possible to have a single objective noise-based measure that is mandatory and applicable to all sources of noise in all situations.

Planning Practice Guidance, 2014
The Planning Practice Guidance (2014) (PPG) is a web-based resource (https://www.gov.uk/guidance/noise--2) that replaced previous planning guidance, and supports the National Planning Policy Framework, providing clarity on the practical application of the policy.

The advice (March 2014, latest update July 2019) also includes the use of 'Lowest observed adverse effect level' (LOAEL) and 'Significant observed adverse effect level' (SOAEL), and explores how actions such as a requirement for noise mitigation, or prevention of a development, might be assessed with respect to whether noise levels are considered above these LOAEL and SOAEL thresholds.

The PPG advises that noise needs to be considered when new developments may create additional noise and when new developments would be sensitive to the prevailing acoustic environment. It also acknowledges that neither the NPSE nor the NPPF expects noise to be considered in isolation, separately from the economic, social and other environmental dimensions of the Proposed Development. The PPG also outlines considerations for the planning process: 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; whether or not a good standard of amenity can be achieved.

2.2 Local Authority - Planning Conditions and Premises License

Planning Condition 5
Forest Heath District Council approved on the 27th June 2017 the change of use of Lanwades Hall Weddings and Events (LHWE) under planning submission DC/17/0870/FUL, subject to conditions. Condition 5 mandates that '*Any amplified live and recorded music played at the site shall be inaudible at the façade of any noise sensitive residential premises or within neighbouring business /commercial premises during the opening hours of those business / commercial premises'.*

For the purpose of this assessment the East and West Lodges, residential units located at approximately 200m to the north of Lanwades Hall, have been selected as the noise sensitive residential premises.

Figure 2.1 East and West Lodges (residential units) located at approximately 200m to the north of Landwades Hall. Boundary of the detailed and outline application is indicated, respectively, by a red line and by a blue line.

Premises License Condition 12

Condition 12 of Lanwades Hall Premises License (PL295) states that '*The music noise level during all licensed events shall not exceed the specified values at the locations defined in figure X of the attached annex at any time during the event. Location 1: 60dB, LAeq, 15 minutes and Location 2: 65dB, LAeq,15 minutes. These levels shall be assessed at a height of 1.5m above ground and in free field conditions'.* Location 1 and Location 2 are indicated in Figure 2.2.

Figure 2.2 Location 1 and Location 2 (Condition 12 of Lanwades Hall Premises License) where music noise level should not exceed, respectively, 60 dB LAeq,15min and 65 dB LAeq,15min at any time during events. Boundary of the detailed and outline application is indicated, respectively, by a red line and by a blue line

2.3 British Standards and Guidance

BS 8233:2014

BS 8233:2014 *Guidance on sound insulation and noise reduction for buildings* provides guidance on sound insulation, indoor ambient noise levels and room acoustics.

Internal noise levels generated by environmental noise shall not exceed the limits given in Table 2.1. These noise levels shall be achieved under background ventilation conditions (Building Regulations Part F), with windows closed.

Location	$L_{Aeq,16hr}$ Daytime (7am – 11pm)	$L_{Aeq,8hr}$ / L_{AFmax} Night Time (11pm – 7am)
Living Room	35dB	-
Bedroom	-	30dB / 45dB[1]
NOTE[1]: Not normally exceeded – 10 to15 times per night		

Table 2.1: BS8233 recommended internal noise levels to be met under background ventilation conditions (Building Regulations Part F).

It is also noted in the standard that 'where a development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5dB and reasonable internal conditions still achieved'.

The standard does not recommend any specific maximum limits for individual noise events but notes that 'a guideline value may be set in terms of SEL or L_{AFmax}, depending on the character and number of events per night'.

In addition, BS 8233 provides guidance on desirable noise levels in areas that are intended to be used for external residential amenity space (such as gardens and patios). It states it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$, which would be acceptable in noisier environments. However, it also recognises that these guidelines are not achievable in all circumstances where development might be desirable, such as higher noise areas in cities, where a compromise between elevated noise levels and other factors may be warranted.

BS 4142:2014

BS 4142:2014+A1:2019 "Methods for Rating and Assessing Industrial and Commercial Sound" addresses the likelihood of adverse impact from noise generated by plant equipment. In the standard, a noise rating is determined and compared with the existing local background sound level, and several cumulative acoustic feature corrections to the noise rating are available to apply where appropriate. For example, if the noise includes a distinguishable tone, impulse, intermittency or other readily distinguishable sound characteristic, then additional cumulative penalties individually ranging from 0 to 9 dB may be applied depending on the type of noise.

BS 4142:2014 seeks to determine a "representative" background sound level, stating that "…the objective is not simply to ascertain a lowest measured background sound level, but rather to quantify what is typical during particular time periods".

The assessment of the impact depends upon the margin by which the rating level of the specific sound source exceeds the background sound level but also promotes a consideration of the context in which the sound occurs when making an assessment. BS 4142:2014 states that an initial estimate of the impact of the specific sound is made by subtracting the measured background sound level from the rating level, while considering the following points:

a) Typically, the greater this difference, the greater the magnitude of the impact.
b) A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
c) A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context.
d) 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.

Note then, a BS 4142:2014 assessment may deduce a low impact where the specific sound level is approaching the background sound level and thus may conclude that the specific noise is acceptable.

3.0 NOISE SURVEYS

3.1 Introduction

A long-term noise survey has been undertaken at 2 no. locations adjacent to Lanwades Hall (indicated by MP1 and MP2 in Figure 3.1) from the 13th May 2024 to the 17th October 2024. These locations were chosen to be as close as possible to Licensing Condition 12 Location 1 and Location 2 (see Figure 2.2). The aim was to characterize activity noise associated with events at Lanwades Hall and to measure site background noise levels. It should be noted that whereas Location 1 and MP1 are approximately coincident, Location 2 and MP2 are approximately 10m apart as the sound level meter was installed within the proposed development boundaries.

A further long term noise survey was undertaken at MP3 from 29th April 2024 to the 6th May 2024 with the aim of measuring traffic noise at B1506.

A description of the equipment used in the noise surveys is included in Appendix B.

Figure 3.1 Noise survey locations: MP1, MP2 and MP3.

3.2 Noise Survey - MP1 and MP2

Background Noise Level

Table 3.1 presents the average background noise levels (dB LA90) measured at MP1 and MP2 for the duration of the survey. The full 24h graph of the average background noise levels (at 15min. intervals) is presented in Figure C.1 (Appendix C).

	dB LA90 (40th percentile)
Day (07:00h – 23:00h)	40.1
Night (23:00h – 07:00h)	34.0

Table 3.1 Average background noise levels (dB LA90) measured at MP1 and MP2 for the duration of the survey.

The values presented in Table 3.1 are taken as representative of background noise levels throughout the proposed development. This is a conservative approach as at locations nearer to B1506 / Bury Road background noise levels are expected to be slightly higher.

Events Noise Level
During the long term measurements undertaken from 13th May to 17th October 2024 nineteen events were identified at Lanwades Hall (information provided by Lochailhort Kentford Ltd based on information supplied by on-site 24h security team). Music noise levels during events is discussed in detail in section 7. Graphs of measured data are included in Appendix D.

3.3 Noise Survey - MP3

Road traffic noise was measured at location MP3 (see Figure 3.1) from 29th April 2024 to the 6th May 2024. The results for day and night time periods are presented in Table 3.2.

	dB LAeq	dB LAFmax
Day (07:00h – 23:00h)	54.4	-
Night (23:00h – 07:00h)	50.4	64.9

Table 3.2 Summary of traffic noise measurements at MP3 for the period 29th April 2024 to the 6th May 2024.

Time history of the measured data for the duration of the survey is presented in Figure E.1 (Appendix E).

4.0 NOISE MAPS

4.1 Introduction

This section presents the methodology used to create the noise maps, which predict noise levels at the facades and at external amenity spaces of the proposed development.

4.2 Methodology

A noise map illustrates in graphic format the predicted noise levels over a specified area.

The noise maps presented in this report were created using SoundPlan 8.1 and make use of the following elements:

- Topography of the terrain
- Location, footprint and height of proposed buildings and noise barriers (where relevant)
- Music noise sources at Lanwades Hall located at:
    - Sunken Garden
    - Lawn
- Traffic noise source at:
    - B1506 – Bury Road

Music noise sources (at Sunken Garden and Lawn) were calibrated such that the resulting noise levels at relevant reference locations meet planning and licensing requirements.

Traffic noise levels at B1506 were calibrated such that the resulting predicted noise levels coincide with measured noise levels at MP3.

5.0 LANWADES HALL EVENTS – PLANNING CONDITION 5

5.1 Introduction

This section assesses the noise impact from Lanwades Hall events under Planning Condition 5 (see section 2.2).

5.2 Planning Condition 5

Planning Condition 5 requires that '*Any amplified live and recorded music played at the site shall be inaudible at the façade of any noise sensitive residential premises or within neighbouring business /commercial premises during the opening hours of those business / commercial premises'.*

It should be noted that there is no universally accepted criteria for inaudibility as, among other factors, it varies among people and between sound sources. A possible definition of inaudibility is that mentioned in *'Manchester City Council - Planning and Noise - Technical Guidance, 2022, Section 3.7.1.2*': '*Noise is considered to be inaudible when it is at a sufficiently low level such that it is not recognisable as emanating from the source in question and it does not alter the perception of the ambient noise environment that would prevail in the absence of the source in question.*'

The criterion proposed in the current assessment consists in requiring that sound emitted at Lanwades Hall events does not exceed 10 dBA below the typical background noise levels, LA90,15min, at the noise sensitive receivers (NSR).

5.3 Noise Map – Detailed and Outline Applications

Noise Levels Predictions

The noise map below (Figure 5.1) was created with music noise source located at Lanwades Hall Sunken Garden, calibrated to generate 30 dB LAeq at the East and West Lodges (selected as noise sensitive receivers, NSR). 30 dB LAeq corresponds to 10 dB below day-time background noise levels (see Table 3.1).

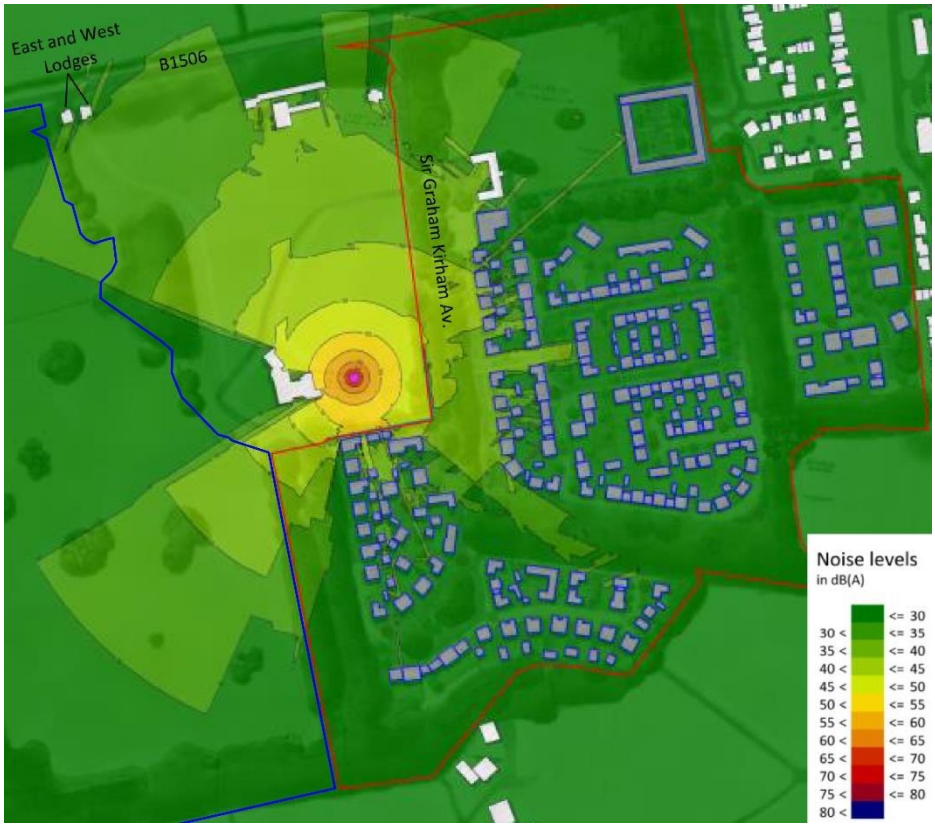


Figure 5.1 Planning Condition 5 Prediction of noise levels at the proposed development as generated by events at Lanwades Hall Sunken Garden. Noise map 1.5m above ground level. Boundaries of the areas relative to the detailed and the outline applications are indicated, respectively, by a red line and by a blue line.

5.4 Noise Map Analysis – Detailed and Outline Application

Noise Levels at External Amenity Spaces

Detailed Application
From Figure 5.1 it can be observed that the noise levels at external amenity spaces do not exceed 40 dB LAeq,15 min on most of the proposed development (see Appendix F for a rendering of the proposed detailed development).

Outline Application
The noise levels in the outline application area of the proposed development are generally significantly below 40 dB LAeq.

Noise Levels at Internal Residential Spaces

Detailed Application
Façade noise levels do not generally exceed 40 dB LAeq at the eastern section of the development and 45 dB LAeq at the southern section of the proposed development.

An external noise level of 45 dB LAeq may result in internal noise levels of approximately 30 dB LAeq in bedrooms and living rooms when windows are partially open. This is based on a typical noise reduction of 15 dB for a partially open window, as referenced in BS 8233:2014. These internal levels comply with the guideline targets of 30 dB LAeq for bedrooms and 35 dB LAeq for living rooms (see Section 2.3).

Outline Application
The noise levels in the outline application area of the proposed development are generally significantly below 40dB LAeq. Calculations similar to those presented above for the detailed application result in maximum internal noise levels of approximately 25 dB LAeq in bedrooms and living rooms when windows are partially open, therefore also complying with the guideline targets of 30 dB LAeq for bedrooms and 35 dB LAeq for living rooms (see Section 2.3).

6.0 LANWADES HALL EVENTS – LICENSING CONDITION 12

6.1 Introduction

This section presents the noise impact assessment of Lanwades Hall events based on Licensing Condition 12.

6.2 Licensing Condition 12

Licensing Condition 12 specifies that noise levels at Location 1 and Location 2 must not exceed respectively 60 dB LAeq,15min and 65 dB LAeq,15min, during events at Lanwades Hall.

The noise maps in this section were created taking into account the above conditions and by locating the music noise sources at both the Sunken Garden and the Lawn.

6.3 Noise Maps – Detailed Application

Ground Level
Figures 6.1 and 6.2 display noise maps at a height of 1.5 meters above ground level using the noise licensing limits for Location 1 and Location 2 and music noise source located, respectively, at the Sunken Garden and at the Lawn.

Figure 6.1 Noise map generated assuming 65 dB LAeq,15min at Location 2 which corresponds to the Licensing limit during Lanwades Hall events at this location. Noise source located at the Sunken Garden and noise map at 1.5m above ground level. Boundary of the detailed application is indicated by a red line.

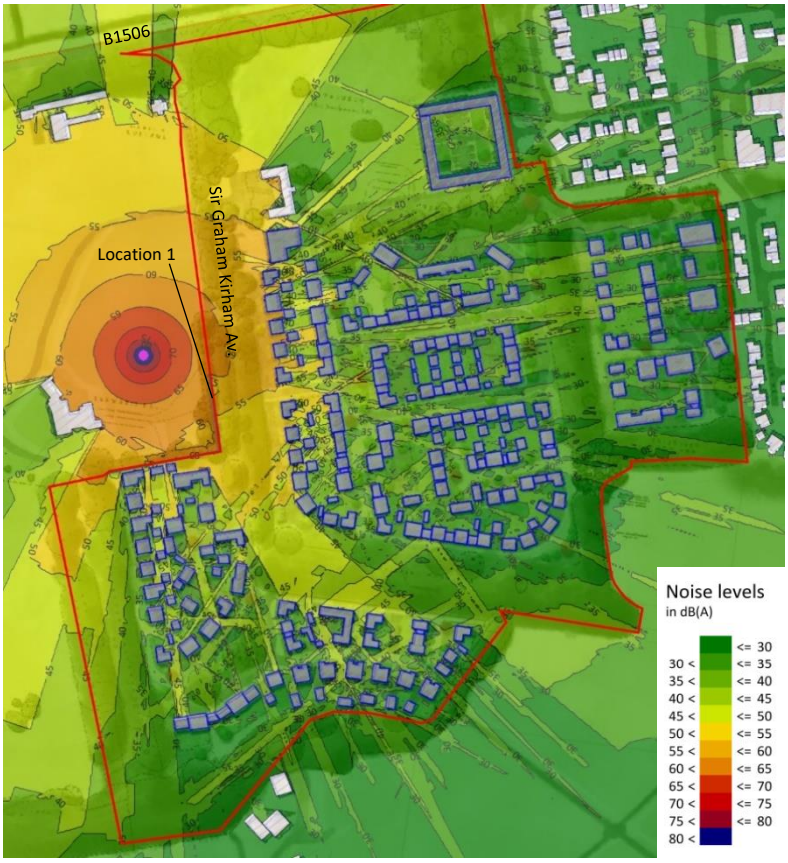


Figure 6.2 Noise map generated assuming 60 dB LAeq,15min at Location 1 which corresponds to the Licensing limit during Lanwades Hall events at this location. Noise source located at the Lawn and noise map at 1.5m above ground level. Boundary of the detailed application is indicated by a red line.

First Floor Level

Figures 6.3 and 6.4 display noise maps at a height of 4m above ground level using the noise licensing limits for Location 1 and Location 2 and music noise source located, respectively, at the Sunken Garden and at the Lawn.

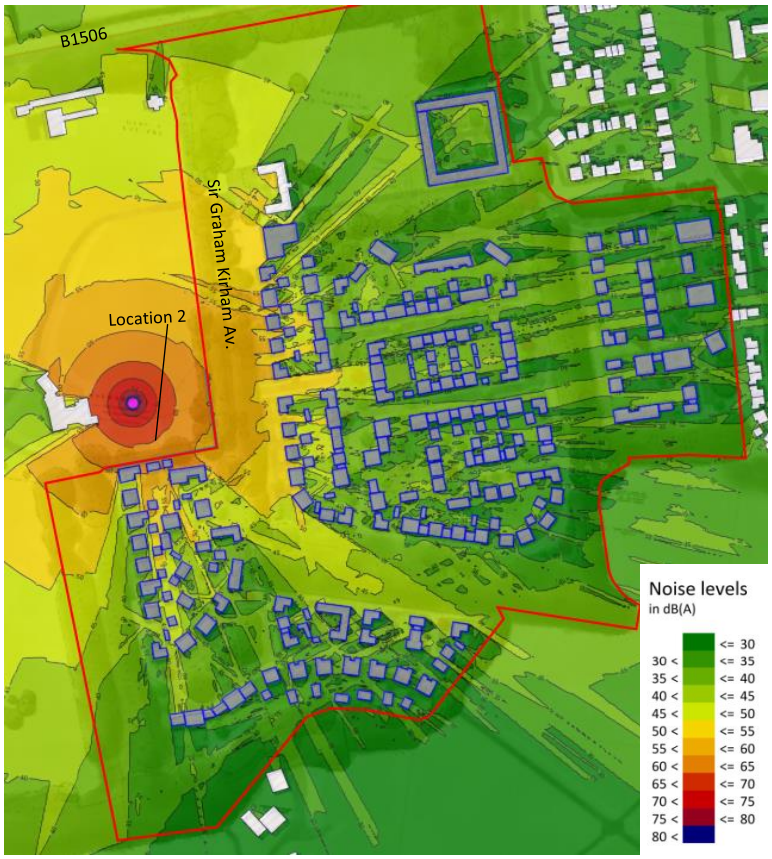


Figure 6.3 Noise map generated assuming 65 dB LAeq,15min at Location 2, which corresponds to the Licensing limit during Lanwades Hall events at this location. Noise source located at the Sunken Garden and noise map at 4m above ground level. Boundary of the detailed application is indicated by a red line.

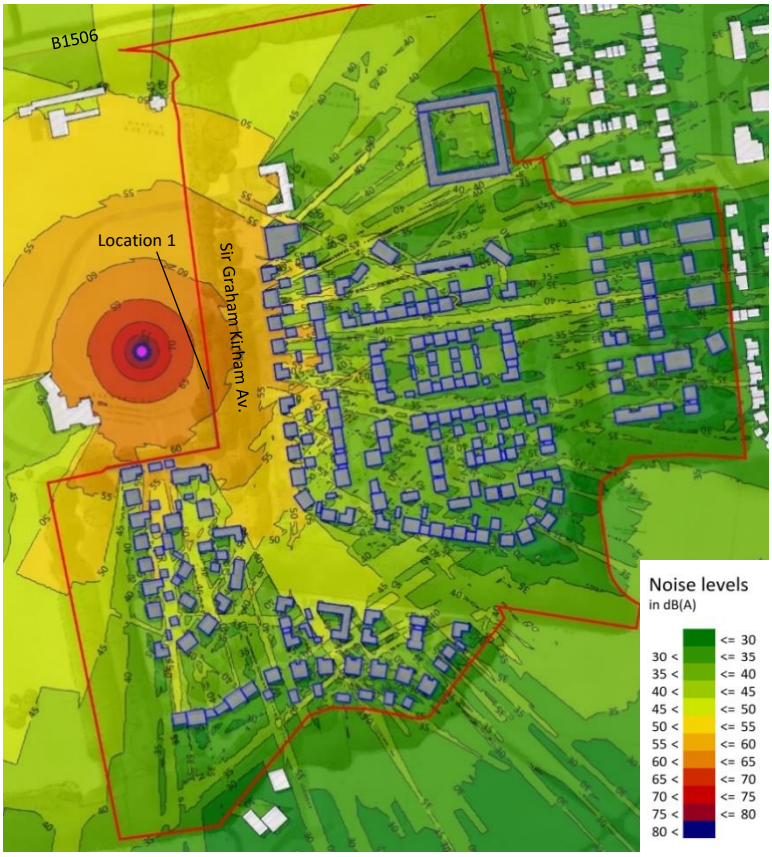


Figure 6.4 Noise map generated assuming 60 dB LAeq,15min at Location 1 which corresponds to the Licensing limit during Lanwades Hall events at this location. Noise source located at the Lawn and noise map at 4m above ground level. Boundary of the detailed application is indicated by a red line.

6.4 Noise Maps Analysis – Detailed Application

Noise Levels at External Amenity Spaces

From Figure 6.1 and Figure 6.2 it can be concluded that the noise levels at external amenity spaces do not generally exceed 50 dB LAeq,15 min on most of the proposed development. At amenity areas associated with the first two rows of the proposed buildings (on both the eastern and southern sections of the development) the noise levels exceed 50 dB LAeq,15 min only in small, limited areas.

Noise Levels at Internal Residential Spaces

Figures 6.3 and 6.4 display noise maps at a height of 4 meters above ground level, based on calculations using the noise licensing limits for Location 1 and Location 2. At 4m height the noise levels at the facades are less affected by the proposed noise barriers, therefore representing the worst case (i.e., highest noise levels) that the facades of the proposed buildings are expected to be exposed to.

Figures 6.3 and 6.4 show that noise levels at the facades located nearest to Lanwades Hall are approximately 55 dB LAeq on the eastern section and 60 dB LAeq on the southern section of the proposed development.

6.5 Noise Maps – Outline Application

Figures 6.5 display noise map at a height of 1.5 meters above ground level using the noise licensing limits for Location 1 and the music noise source located at the Lawn.

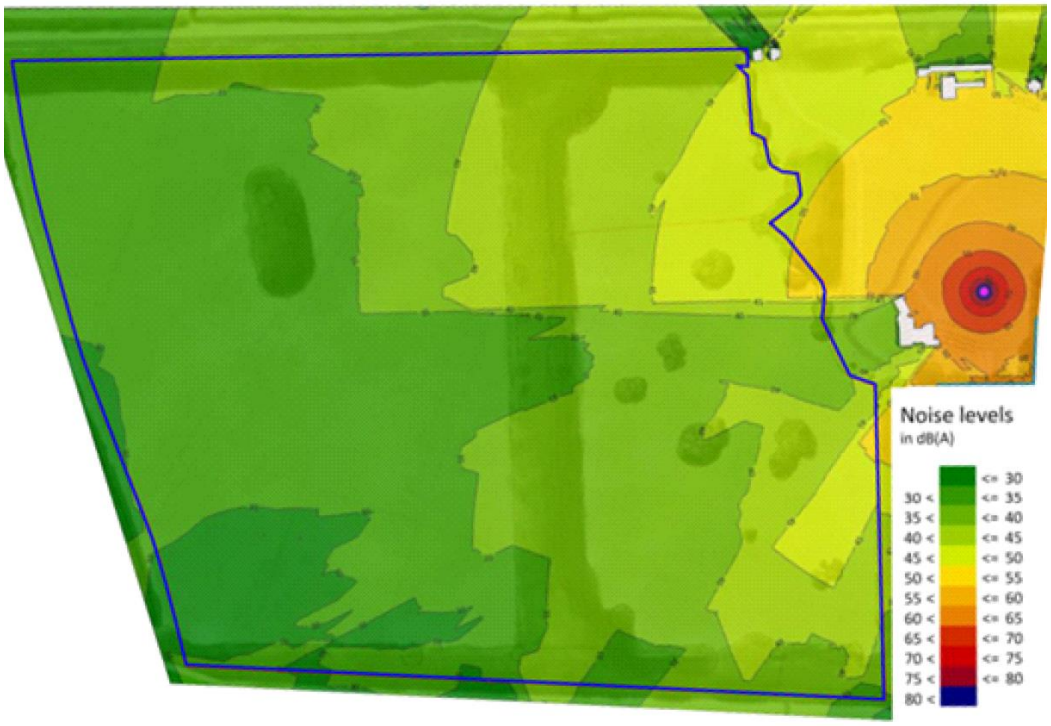


Figure 6.5 Noise map generated assuming 60 dB LAeq,15min at Location 1 which corresponds to the Licensing limit during Lanwades Hall events at this location. Noise source located at the Lawn and noise map at 1.5m above ground level. Boundary of the outline application is indicated by a blue line.

6.6 Noise Maps Analysis – Outline Application

From Figure 6.5 it can be concluded that the music noise levels at the outline application site do not exceed 50 dB LAeq,15 min. The music noise levels are predicted to be below 40 dB LAeq for approximately half of the outline application site.

7.0 LANWADES HALL EVENTS – MEASURED NOISE LEVELS

7.1 Introduction

In this section the noise levels measured during events at Lanwades Hall at MP1 and MP2 are presented and reviewed.

Whereas Licensing Location 1 is approximately coincident with MP1, Licensing Location 2 and MP2 are approximately 10m apart (as the sound level meter was installed inside the proposed development boundaries rather than at Lanwades Hall).

7.2 Noise Levels During Events at Lanwades Hall

During the long term measurements undertaken from May to October 2024 (see Section 3.2) nineteen events were identified as occurring at Lanwades Hall.

The noise levels during ten of the events held at Lanwades Hall are reproduced below (Figure 7.1). These were selected (from the nineteen identified) as there were no other significant noise events occurring simultaneously (such as lawn mowing), which makes the graphs more difficult to read. The graphs only show the time period from 12:00h to 24:00h for each event/day as activity noise tends to be more pronounced after midday. The full 24h measured data is included in Appendix D for each of the nineteen events.

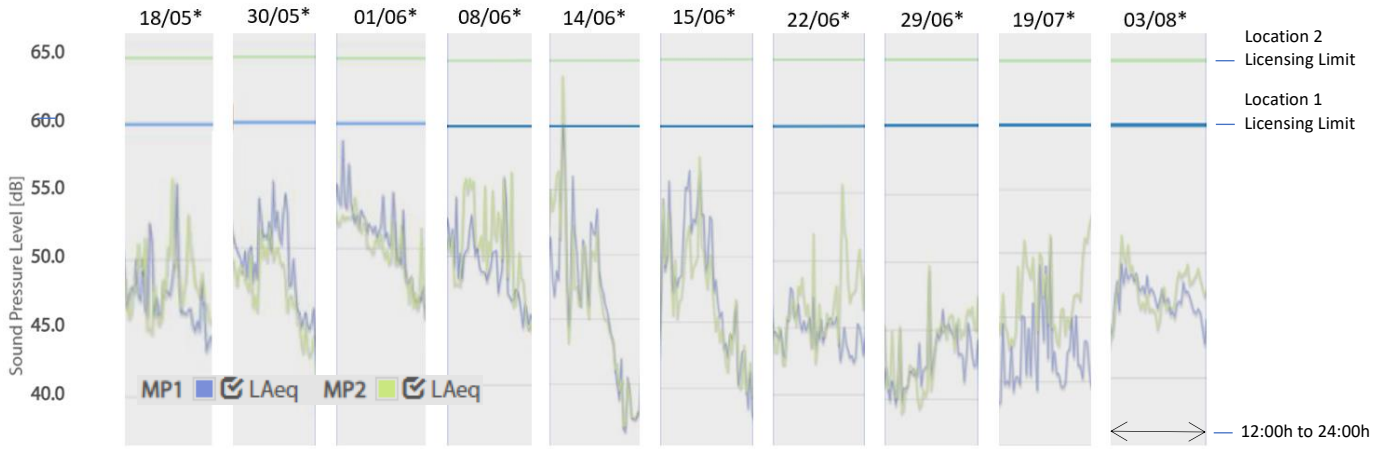


Figure 7.1 Noise graphs corresponding to ten events held at Lanwades Hall measured at MP1 and MP2 (extracted from the graphs included in Appendix D). *For each day/event the graph shows noise measurements for the period from 12:00h to 24:00h.

The following conclusions can be taken from Figure 7.1:

- Noise levels do not generally exceed 55 dB LAeq,15min. at either MP1 or MP2. When noise levels exceed 55 dB LAeq, 15min., this occurs for a short duration.
- Between 22:00h and 24:00h noise levels at MP1 and MP2 do not generally exceed 50 dB LAeq.

The graphs in Appendix D present the full time history of the Lanwades Hall events shown in Figure 7.1 as well as the remaining nine events identified at Lanwades Hall during the survey period. This data further supports the above conclusions.

It is, therefore, proposed to adopt the level of 55 dB LAeq,15min as representative of the typical maximum noise levels during events at Lanwades Hall at both MP1 and MP2. This corresponds to a noise level that is 5 dB below Licensing Condition 12 Location 1, and 10+ dB below Licensing Condition 12 Location 2 (as MP2 is further away from the music noise source than Location 2).

Of the nineteen events identified at Landwades Hall during the survey period the licensing limits were exceeded on two occasions:

- 25th May 2024 at 20:45h, 61.8 dB LAeq,15min was measured at MP1.
- 2nd September 2024 at 16:15h, 67.8 dB LAeq, 15min was measured at MP2.

The graphs and data analysis presented in Appendix D also indicate that there are a variety of noise sources, which generate noise levels consistently higher than those typically observed during Lanwades Hall events. These include birds, rain and site maintenance (often involving lawn mowing).

8.0 LANWADES HALL EVENTS – REVIEW OF SECTIONS 5, 6 AND 7

8.1 Introduction

This section presents a comparison of the assessment undertaken in sections 5, 6 and 7, where, respectively, implications of Planning Condition 5, Licensing Condition 12 and Lanwades Hall events noise measurements have been analysed.

8.2 Comparison of Noise Impact Assessments – Detailed Application

A comparison of the noise levels calculated based on the conditions stipulated in Planning Condition 5, Licensing Permission 12 and noise measurements during Lanwades Hall events is presented below. Table 8.1 and 8.2 present, respectively, the noise levels at the 1st row of residential units (i.e., the row closest to Lanwades Hall) on the eastern and on the southern sections of the proposed development (see Appendix F for proposed development layout).

Proposed Development, Eastern Section	Planning Condition 5 dB, LAeq	Licensing Permission 12 dB, LAeq	Lanwades Hall Events Noise Levels dB, LAeq
1st Row Façade - Ground Floor	40-45	50-55	45-50
1st Row façade - First Floor	45-50	55-60	50-55
1st Row External Amenity Space	35-40	45-50	40-45

Table 8.1 Noise levels predicted at the 1st row of residential units of the proposed development eastern section. Three different conditions (Planning Condition 5, Licensing Permission 12 and Lanwades Hall Events measured noise levels) are presented.

Proposed Development, Southern Section	Planning Condition 5 dB, LAeq	Licensing Permission 12 dB, LAeq	Lanwades Hall Events Noise Levels dB, LAeq
1st Row Façade - Ground Floor	45-50	55-60	45-50
1st Row Façade - First Floor	50-55	60-65	50-55
1st Row External Amenity Space	40-45	50-55	40-45

Table 8.2 Noise levels predicted at the 1st row of residential units of the proposed development southern section. Three different conditions (Planning Condition 5, Licensing Permission 12 and Lanwades Hall Events measured noise levels) are presented.

External Amenity Spaces
Tables 8.1 and 8.2 allow concluding that noise levels at external amenity spaces, which were predicted based on actual measured Lanwades events noise levels fall in between the noise levels associated with Planning Condition 5 and associated with Licensing Permission 12. The actual noise levels are in the range of 40 – 45 dB LAeq, which comfortably meet the proposed targets. External amenity spaces located further away from Lanwades Hall (2nd row and beyond) will be exposed to lower noise levels due to the combined effects of distance and occlusion by the residential units.

Façade and Internal Noise Levels
From Table 8.1 and Table 8.2 it can be concluded that actual Lanwades events noise levels at the facades of the proposed development fall in between the noise levels associated with Planning Condition 5 and Licensing Permission 12.

It is therefore proposed that glazing performance should be based on actual noise measurements rather than on Planning Condition 5 or Licensing Condition 12.

Glazing with a sound reduction index of 35 dB Rw + Ctr is proposed to be installed on the 1st and 2nd row of residential units on the eastern and southern sections of the proposed development as indicated in Figure 8.1.

35 dB Rw + Ctr performance can in principle be achieved with a buildup such as 6mm float glass / 16mm Argon filled void/ 8.8 mm laminated glass. The remaining residential units are proposed to have installed glazing units rated 29 Rw+Ctr (for example, 8mm float glass / 12mm gap / 6mm float glass).

With the above glazing performance, noise levels are expected not to exceed 25 dB LAeq inside residential units, which is deemed to result in suitable internal noise levels.

It should be noted that ASHPs (with the capacity of producing cooling) are planned to be installed at each residential unit, which allows residents to keep windows closed if they wish to do so, while maintaining comfortable internal thermal conditions.

Figure 8.1 Residential units of the proposed development where a higher glazing rating (35 dB Rw+Ctr) is being proposed are encircled by a red line. The remaining units are proposed to have installed 29 dB Rw+Ctr glazing units. Detailed application – Red Line?.

8.3 Comparison of Noise Impact Assessments – Outline Application

Music noise levels on the outline application site are generally lower than those at the detailed application site as the distance from the music noise source location (e.g., Sunken Garden, Lawn) are larger and Lanwades Hall partially shields sound propagation into the outline application site.

It can be concluded that music noise levels at the outline application site are not expected to exceed 45 dB LAeq,15 min and that noise levels are predicted to be below 40 dB LAeq for approximately half of the outline application site.

These noise levels are comparable to those expected in the external amenity spaces in the detailed application site and therefore similar noise control measures to those proposed at the detailed application site are in principle also suitable for the outlook application site.

It should be noted that ASHPs (with the capacity of producing cooling) are planned to be installed at each residential unit, which allows residents to keep windows closed if they wish to do so, while maintaining comfortable internal thermal conditions.

9.0 ROAD TRAFFIC NOISE

9.1 Introduction

This section provides an assessment of the traffic noise impact on the proposed development. The primary source of traffic noise is the B1506, Bury Road, situated to the north of the site.

9.2 Noise Targets

The internal target noise levels associated with the proposed development have been discussed in section 2.3 in the context of BS8233 (reproduced in Table 9.1). It was also discussed in section 2.3 that it is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$, which would be acceptable in noisier environments.

Location	$L_{Aeq,16hr}$ Daytime (7am – 11pm)	$L_{Aeq,8hr}$ / L_{AFmax} Night Time (11pm – 7am)
Living Room	35dB	-
Bedroom	-	30dB / 45dB[1]
NOTE[1]: Not normally exceeded – 10 to 15 times per night		

Table 9.1: BS8233 recommended internal noise levels to be met under background ventilation conditions (Building Regulations Part F).

9.3 Noise Maps – Detailed Application

Noise maps were created based on traffic noise measurements undertaken at MP3 and reported in section 3.3. Figure 9.1 presents the noise map for day time noise levels at 1.5m height above ground level.

Figure 9.1: Day time traffic noise level predictions at the proposed development. Noise map at 1.5m height above ground level. The location of traffic noise survey, MP3 and of the residential building proposed to be built nearest to B1506, 'Building A' are also identified.

9.4 Noise Map Analysis – Detailed Application

Noise Levels at External Amenity Spaces
Noise levels at the external amenity spaces of the residential units proposed to be located nearest to B1506, (Building A in Figure 9.1) are predicted not to exceed:

- 50dB LAeq day time (07:00h-23:00h)

The above noise levels comply with the targets proposed in section 2.3. As the noise levels reduce with distance to B1506, noise levels at external amenity spaces located further away from B1506 will be exposed to levels lower than indicated above.

Therefore, all external amenity spaces of the proposed development are expected to comply with BS8233 noise targets for external amenity spaces.

Façade Noise Levels
Facade noise levels at the residential units proposed to be located nearest to B1506, Building A in Figure 9.1, are predicted not to exceed:

- 55 dB LAeq day time (07:00h-23:00h)
- 51 dB LAeq / 66 dB LAFmax night time (23:00h-07:00h)

Glazing with a sound reduction performance of 29 Rw+ Ctr is deemed sufficient to meet internal noise level targets, as generated by traffic noise. This performance is able to be achieved by standard double glazing units, such as 8mm float glass / 12mm gap / 6mm float glass.

Buildings proposed to be built further away from B1506 will be exposed to noise levels lower than those indicated above and therefore the above glazing performance will also allow achieving internal noise level targets (generated by traffic noise).

9.5 Noise Maps – Outline Application

Noise maps were created based on traffic noise measurements undertaken at MP3 and reported in section 3.3. Figure 9.1 presents the noise map for day time noise levels at 1.5m height above ground level.

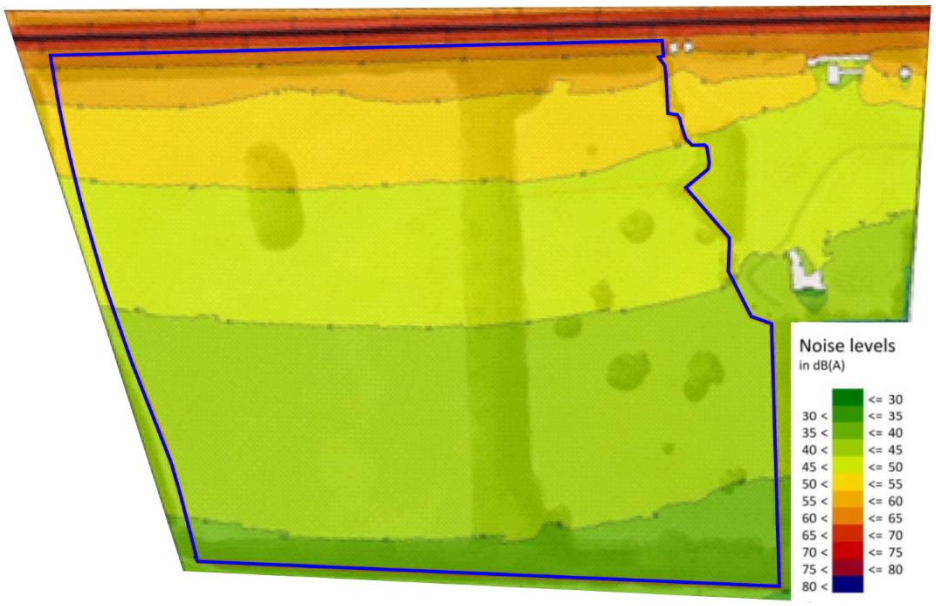


Figure 9.2: Outline Application - Day time traffic noise level predictions at the proposed development. Noise map at 1.5m height above ground level. The location of traffic noise survey, MP3 and of the residential building proposed to be built nearest to B1506, 'Building A' are also identified.

9.6 Noise Map Analysis – Outline Application

Noise Levels
Noise levels at the locations nearest to B1506, where residential units are predicted to be built are expected not to exceed, approximately:

- 59dB LAeq day time (07:00h-23:00h)
- 54dB LAeq / 74 dB LAFmax night time (23:00h-07:00h)

Facade noise levels at the residential units and at the school proposed to be located nearest to B1506, at approximately 30m from this road - see Figure ***, are predicted not to exceed the following noise level during day time:

- 55 dB LAeq day time (07:00h-23:00h)

External amenity spaces will be built as to use the residential buildings to shield traffic noise as much as possible therefore it is expected that the above noise levels

During night time the expected noise levels are expected not to exceed

- 51 dB LAeq / 74 dB LAFmax night time (23:00h-07:00h)

Once the residential buildings, school and other buildings are designed glazing performance will be specified as to meet internal noise level targets (generated by traffic noise) for bedrooms, living rooms, school spaces and other uses. .

10.0 PLANT EQUIPMENT NOISE

10.1 Introduction

This section addresses the noise impact of plant equipment associated with the proposed development.

10.2 Noise Level Targets

The proposed target consists in requiring that the cumulative rating noise level, LAr, of all plant noise does not exceed 5 dB below the existing background noise level at noise sensitive receivers (NSRs). LAr is inclusive of any penalties for tonality, intermittency, impulsivity or other distinctive acoustic characteristics in order to prevent any adverse impact. Targets are summarised in Table 10.1.

	Bachground Noise Level dB LA90	Max. Noise Level at NSR dB LAr
Day (07:00h – 23:00h)	40.1	35
Night (23:00h – 07:00h)	34.0	29

Table 10.1 Maximum cumulative rating noise levels noise levels, LAr, generated by all plant equipment at noise sensitive receivers (NSR).

10.3 Noise Sensitive Receivers – Detailed Application

Noise sensitive receivers (NSR) consist of the existing properties surrounding the proposed development, which predominantly consist of residential units. The exceptions are Lanwades Hall and Lanwades Studs, which have dual commercial and residential use.

Figure 10.1 Existing noise sensitive receivers (NSR) surrounding the proposed development consist mainly of residential units. The exceptions are Lanwades Hall and Lanwades Studs, which have residential and commercial use.

10.4 Plant Equipment Noise Levels – Detailed Application

It is expected that air-source heat pumps (ASHP), capable of providing both heating and cooling, will be installed at each residential unit.

The resulting rating noise levels at each of the noise sensitive receivers will depend on distance, installation details and penalty corrections (see section 2.3). In cases where rating noise levels will exceed noise targets at NSRs (Table 10.1) noise control measures will be implemented. These can include the installation of ASHPs within acoustic enclosures. However, given the (typical) low noise levels generated by ASHP serving individual dwellings and the relatively large distances to the NSRs it is expected that the vast majority of ASHP units will not require noise control measures to be implemented.

10.5 Noise Sensitive Receivers – Outline Application

list

10.6 Plant Equipment Noise Levels – Outline Application

It is expected that air-source heat pumps (ASHP), capable of providing both heating and cooling, will be installed at each residential unit.

Comments regarding mechanical equipment rating noise levels generated by equipment installed at the detailed planning application site are also applicable here.

11.0 SUMMARY

11.1 Overview

Lochailort Kentford Ltd. has identified a strategic opportunity to redevelop the area formerly occupied by the Animal Research Trust (ART) in Kentford, Newmarket.

The site is located to the south of Bury Road (B1506) and to the east and south of Lanwades Hall.

The proposed works consist of the demolition of existing buildings on the eastern site, and phased redevelopment to provide residential units alongside a retail and commercial/ employment building (Use Class E), conversion of the existing listed stable block to community/ commercial/ employment use (Use Class F2/ E), provision of open space, woodland walks, play space, and associated infrastructure and car parking.

This document presents the noise impact assessment of activity noise at Lanwades Hall and road traffic noise on the proposed development as well as the impact of noise generated by plant equipment planned to be installed at the proposed development.

11.2 Noise Impact Assessment Basis

The impact of Lanwades Hall events on the proposed development was evaluated based on three criteria:

i) Planning Condition 5, which requires that noise generated by Lanwades Hall events is inaudible at noise sensitive receivers (NSR).
ii) Premises Licensing Condition 12 (PL295), which requires noise levels not to exceed 60 dB LAeq at Location 1 and 65 dB LAeq at Location 2.
iii) Noise generated by Lanwades events (based on a continuous noise survey over 5 months)

The impact of traffic noise on the proposed development was evaluated based on:

i) Internal and external noise targets as specified in BS8233
ii) Survey of traffic noise data (based on a continuous noise survey over 8 days).

The impact of plant equipment noise on existing noise sensitive receivers (e.g., Lanwades Hall and existing residential units) was evaluated based on:

i) External noise targets based on BS4142

11.3 Noise Surveys

A long term noise survey has been undertaken from the 13th May 2024 to the 17th October 2024 at two locations adjacent to Lanwades Hall, MP1 and MP2, with the aim of characterizing activity noise associated with Lanwades Hall events.

A further survey has been undertaken from the 29th April to the 6th May 2024 at MP3 to measure traffic noise originating at B1506 / Bury Road.

11.4 Noise Impact Assessment – Lanwades Hall Events

Planning condition 5
Detailed Application

A noise map has been created with music noise source located at the Sunken Garden of Lanwades Hall. The music noise source was calibrated such that the resulting noise levels dB LAeq at the East and West Lodges are 10 dBA below measured background noise levels, which is the inaudibility criteria proposed here.
Outline Application

Licensing Condition 12
Detailed Application
A noise map was created, which assumes that the noise levels would be permanently at maximum Licensing limits noise levels (during events at Landwades Hall), that is, 60 dB LAeq,15min at MP1 and 65 dB LAeq,15min at MP2. This is clearly an unrealistic assumption but is included to show the worst case situation.
Outline Application

Lanwades Hall Activity Noise Noise Measurements
Detailed Application
During the long-term noise survey at locations MP1 and MP2 (13th May 2024 to 17th October 2024) nineteen events were identified as having taken place at Lanwades Hall (information provided by Lochairt Kentford Limited based on information provided by security staff based on site 24/7). It was concluded that Lanwades Hall events music noise levels rarely exceed 55 dB LAeq,15min at MP1 or MP2.
Outline Application

11.5 Comparison of Predicted Noise Levels – Detailed Application

A comparison of the noise levels calculated based on the conditions stipulated in Planning Condition 5, Licensing Permission 12 and noise measurements at Lanwades Hall is presented below. Tables 11.1 and 11.2 present, respectively, the noise levels at the 1st row of residential units (i.e., the row closest to Lanwades Hall) on the eastern and to the southern sections of the proposed development (see Appendix F for proposed development layout).

Proposed Development, Eastern Section	Planning Condition 5 dB, LAeq	Licensing Permission 12 dB, LAeq	Lanwades Hall Events Noise Levels dB, LAeq
1st Row Façade - Ground Floor	40-45	50-55	45-50
1st Row façade - First Floor	45-50	55-60	50-55
1st Row External Amenity Space	35-40	45-50	40-45

Table 11.1 Noise levels predicted at the 1st row of residential units of the proposed development eastern section. Three different conditions (Planning Condition 5, Licensing Permission 12 and Lanwades Hall Events measured noise levels) are presented.

Proposed Development, Southern Section	Planning Condition 5 dB, LAeq	Licensing Permission 12 dB, LAeq	Lanwades Hall Events Noise Levels dB, LAeq
1st Row Façade - Ground Floor	45-50	55-60	45-50
1st Row Façade - First Floor	50-55	60-65	50-55
1st Row External Amenity Space	40-45	50-55	40-45

Table 11.2 Noise levels predicted at the 1st row of residential units of the proposed development southern section. Three different conditions (Planning Condition 5, Licensing Permission 12 and Lanwades Hall Events measured noise levels) are presented.

External Amenity Spaces – Detailed Application
Tables 11.1 and 11.2 allow concluding that noise levels at external amenity spaces, which were predicted based on actual measured Lanwades events noise levels fall in between the noise levels associated with Planning

Condition 5 and associated with Licensing Permission 12. The actual noise levels are in the range of 40 – 45 dB LAeq, which comfortably meet the proposed targets. External amenity spaces located further away from Lanwades Hall (2nd row and beyond) will be exposed to lower noise levels due to the combined effects of distance and occlusion by the residential units.

Façade and Internal Noise Levels Detailed Application
From Table 11.1 and Table 11.2 it can be concluded that actual Lanwades events noise levels at the facades of the proposed development fall in between the noise levels associated with Planning Condition 5 and Licensing Permission 12.

It is therefore proposed that glazing performance should be based on actual noise measurements rather than on Planning Condition 5 or Licensing Condition 12.

Glazing with a sound reduction index of 35 dB Rw + Ctr is proposed to be installed on the 1st and 2nd row of residential units on the eastern and southern sections of the proposed development as indicated in Figure 8.1.

35 dB Rw + Ctr performance can in principle be achieved with a buildup such as 6mm float glass / 16mm Argon filled void/ 8.8 mm laminated glass. The remaining residential units are proposed to have installed glazing units rated 29 Rw+Ctr (for example, 8mm float glass / 12mm gap / 6mm float glass).

With the above glazing performance, noise levels are expected not to exceed 25 dB LAeq inside residential units, which is deemed to result in suitable internal noise levels.

It should be noted that ASHPs (with the capacity of producing cooling) are planned to be installed at each residential unit, which allows residents to keep windows closed if they wish to do so, while maintaining comfortable internal thermal conditions.

Overall, it is expected that events at Lanwades Hall will have a minor and manageable impact on the proposed development.

11.6 Comparison of Predicted Noise Levels – Outline Application

11.7 Noise Impact Assessment – Road Traffic – Detailed Application

The noise levels at the proposed residential units located nearest to B1506 / Bury Road are expected not to exceed:

External Amenity Spaces Noise Levels
- 50 dB LAeq day time (07:00h-23:00h)

Facade Noise Levels
- 55 dB LAeq day time (07:00h-23:00h)
- 51 dB LAeq / 66 dB LAFmax night time (23:00h-07:00h)

Glazing with a sound reduction performance of 29 Rw+ Ctr is deemed sufficient to meet internal noise levels, as generated by traffic noise. This performance can, in principle, be achieved by standard double glazing units, such as 8mm float glass / 12mm gap / 6mm float glass.

11.8 Noise Impact Assessment – Road Traffic – Outline Application

11.9 Noise Impact Assessment – Mechanical Plant – Detailed Application

It is expected that each residential unit will have an ASHP installed capable of both heating and cooling. Based on typical noise levels generated by ASHP serving individual dwelling units and on the distance to existing noise sensitive receivers (NSR) the target noise levels are expected to be met in the vast majority of cases without the need to implement further noise control measures. However, if required, noise control measures such as installing the ASHPs within acoustic enclosures can be employed.

11.10 Noise Impact Assessment – Mechanical Plant – Outline Application

APPENDIX A - GLOSSARY

SOUND PRESSURE LEVEL (SPL), L (dB)
The sound level measured on a logarithmic scale, with unit decibel dB. A free-field SPL refers to a level determined far enough from surfaces or facades, apart from the ground, so as not to be influenced by reflections from those surfaces.

A-WEIGHTED SOUND PRESSURE LEVEL, L_A (dBA)
A-weighted sound pressure level values are frequency-weighted in a way that approximates the frequency response of the human ear and allows sound levels to be expressed as a single figure value.

EQUIVALENT CONTINUOUS A-WEIGHTED SPL, $L_{Aeq,T}$ (dBA)
Energy average of the A-weighted sound pressure level over a time period, T. The level of a notional continuous sound that would deliver the same A-weighted sound energy as the actual fluctuating sound over the course of the defined time period, T.

MAXIMUM A-WEIGHTED SPL, L_{AFMax} (dBA)
Maximum A-weighted sound pressure level measured with fast time weighting.

10% NOISE LEVEL, $L_{AF10,T}$ (dBA)
The A-weighted sound pressure level exceeded for 10% of a given time period T. The 'F' subscript indicates the meter used a standard 'fast' time constant of $1/8^{th}$ of a second.

BACKGROUND NOISE LEVEL, $L_{AF90,T}$
The A-weighted sound pressure level exceeded for 90% of a given time period, T. The 'F' subscript indicates the meter used a standard 'fast' time constant of $1/8^{th}$ of a second.

Lday (dBA)
The A-weighted equivalent sound pressure level over the 16-hour day period of 07:00 – 23:00 hours. Can also be expressed as LAeq,16hr(7am-11pm).

Lnight (dBA)
The A-weighted equivalent sound pressure level over the 8-hour night period of 23:00 – 07:00 hours. Can also be expressed as LAeq,8hr(11pm-7am).

APPENDIX B - NOISE SURVEY EQUIPMENT

The sound level meters used in the surveys at positions MP1, MP2 and MP3, consisted of 2 no. Svantek SV307A units (https://acsoft.co.uk/product/sv-307a-outdoor-noise-monitoring-station/).
Serial number of the equipment is shown in Table B.1

Measurement Position	Serial Number	Microphone Serial Number
MP1 / MP3	82050	107358
MP2	75954	82549

Table B.1 Serial numbers of the 2 no. SV307A measurement units employed in the surveys.

SVANTEK UK

SV 307A – Noise Monitoring Station

Technical Specifications

Standards	Class 1: IEC 61672-1:2013, Class 1: IEC 61260-1:2014	
Weighting Filters	A, B, C, Z, LF	
Time Constants	Slow, Fast, Impulse	
RMS Detector	Digital True RMS detector with Peak detection, resolution 0.1 dB	
Microphone	Patented MEMS based design microphone ST 30A in 1/2" housing	
Preamplifier	Integrated	
Linear Operating Range	30 dBA RMS ÷ 128 dBA Peak (in accordance to IEC 61672)	
Dynamic Measurement Range	23 dBA RMS ÷ 128 dBA Peak (typical from noise floor to the maximum level)	
Internal Noise Level	Less than 23 dBA RMS	
Dynamic Range	>100 dB	
Frequency Range	20 Hz ÷ 20 kHz	
Meter Mode Results	Elapsed time, Lxy, Lxeq (LEQ), Lxpeak (PEAK), Lxymax (MAX), Lxymin (MIN), LxyE (SEL), 2 x LR (ROLLING LEQ),10 x LN (LEQ STATISTICS), Lden, LEPd, Ltm3, Ltm5, GPS coordinates	
Measurement Profiles	Simultaneous measurement in three profiles with independent set of filters (x) and detectors (y)	
Statistics	Ln (L1-L99), complete histogram in meter mode	
Data Logger	Logging of summary results (SR) and spectra data with interval step down to 1 s and time history (TH) of selected parameters with shorter interval step down to 100 ms	
1/1 Octave Analysis (option)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 31.5 Hz to 16 kHz	
1/3 Octave Analysis (option)	Real-time analysis meeting Class 1 requirements of IEC 61260, centre frequencies from 20 Hz to 20 kHz	
Audio Recording (option)	Time domain records to wav file format on demand with selectable bandwidth and recording period	
Remote System Check	Real-time system check and Built-in sound source producing level of approx. 100 dB at 1 kHz	
GPS	Time synchronization and localization	
Memory	MicroSD card 32 GB (removable & upgradeable up to 128 GB)	
Display and Keyboard	OLED colour display 128 x 160 px and 10 push-button keyboard	
Communication Interfaces	USB 2.0 4G modem RS 232 for meteo module or dust monitor	
Ingress Protection Rating	IP 54 (significant protection from dust, protection from rain, spraying and splashing)	
Power Supply	Li-Ion rechargeable battery (non-removable) Operation time on battery (7.2 V / 10 Ah): Modem off Modem on Solar Panel (not included) AC power supply (included) External DC source (not included)	 up to 6 days up to 5 days (depends on modem usage) MPPT voltage 17.0 V ÷ 20.0 V Input 100 ÷ 240 VAC output +15 VDC 2.5 A, IP 67 housing voltage range 10.5 V ÷ 24 V e.g. 12 V or 24 V accumulator
Environmental Conditions	Temperature Humidity	from -20 °C to 60 °C up to 99 % RH, non-condensed
Dimensions	680 mm length; 80 mm diameter excluding windscreen (windscreen diameter 130 mm)	
Weight	Approx. 2.2 kg	

Figure B.1 SV307A Technical Specification summary sheet.

Measurement locations, MP1, MP2 and MP3 are shown in Figure B.1.

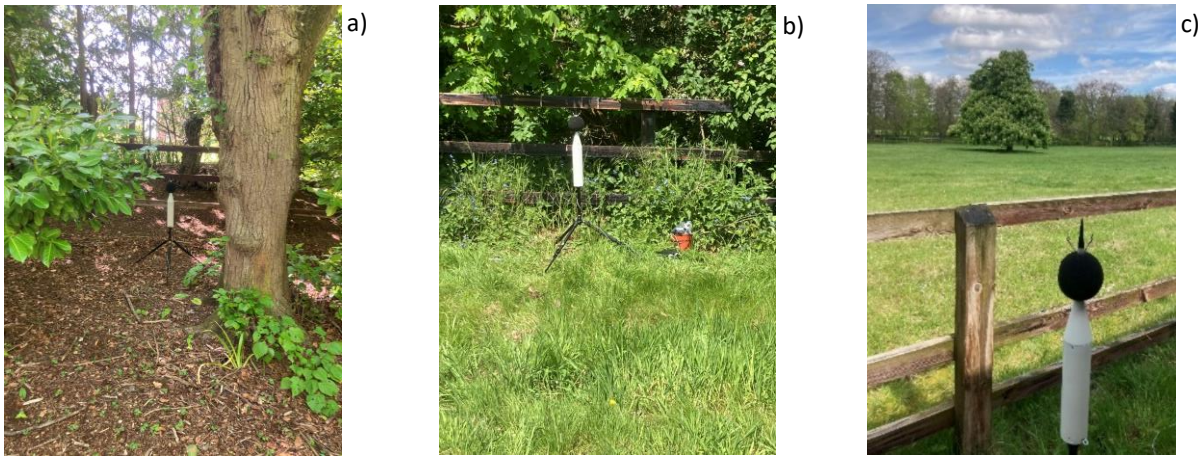


Figure B.2 Sound level meter SV307A at measurement positions a) MP1, b) MP2 and c) MP3.

Sound level meters at MP1 and MP2 were set to trigger 30s sound recordings each time Licensing noise levels were exceeded at these measuring points.

APPENDIX C - BACKGROUND NOISE LEVELS

The graph below presents the calculated average background 24h noise Level for the period between 15/05/2024 to 17/10/2024.

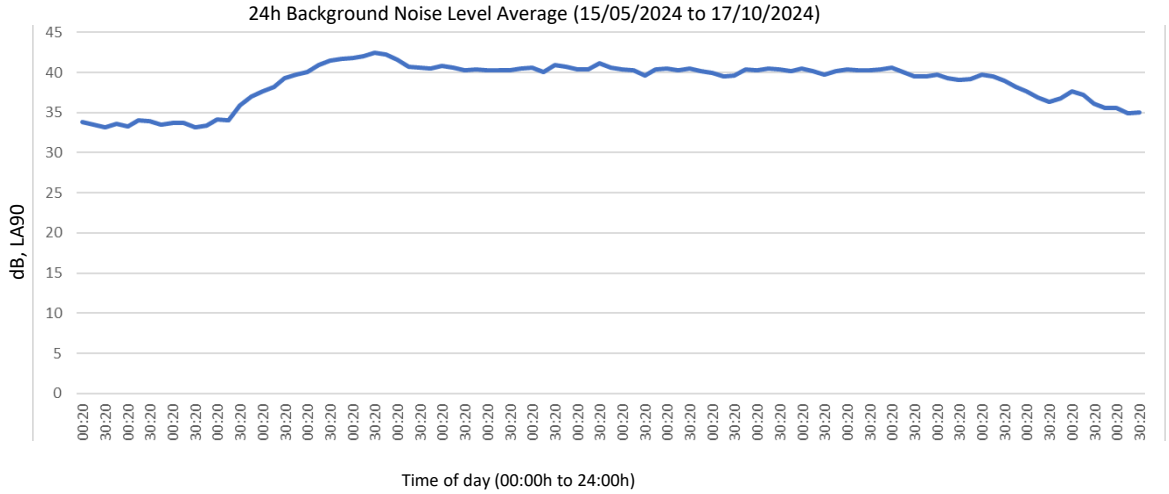


Figure C.1 – Average of the background noise level, LA90, at MP1 and MP2 in 15 min. intervals for the period: 15/05/2024 to 17/10/2024.

The above values were used to calculate day time and night time background noise levels, LA90 dB (40th percentile), as indicated in Table 3.1.

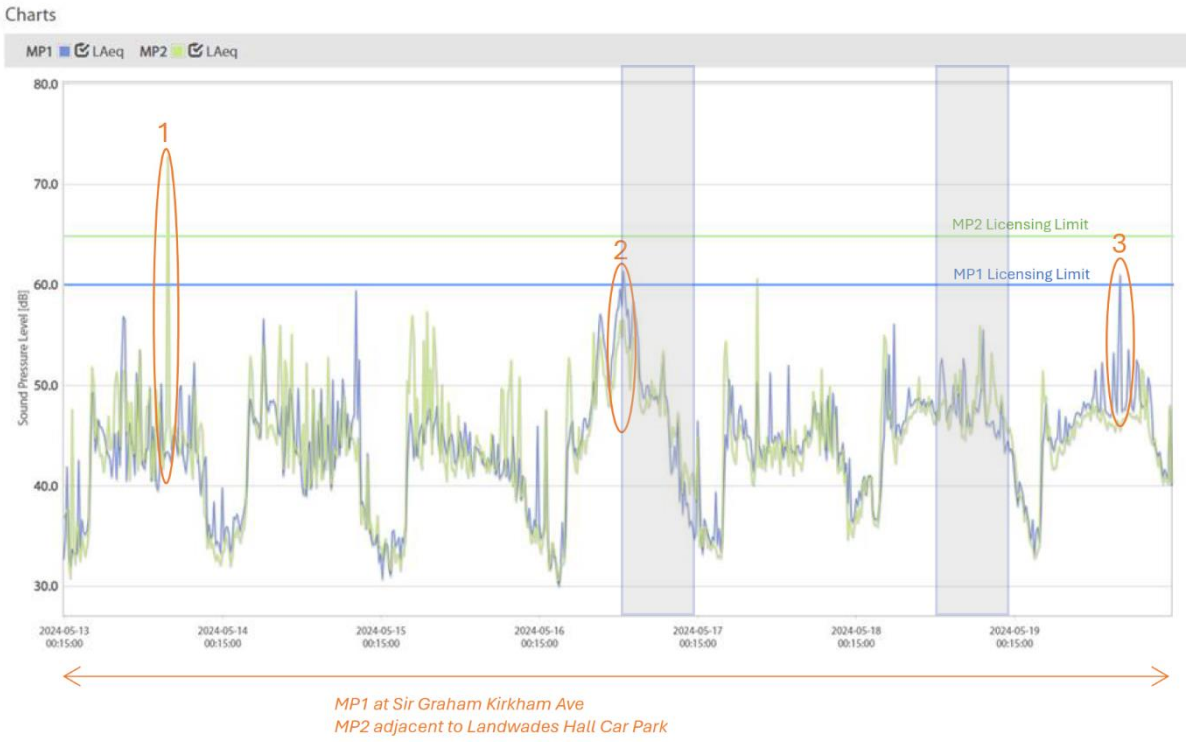
APPENDIX D - LANWADES HALL EVENTS NOISE DATA

Each of the following graphs show weekly noise measurements at positions MP1 and MP2 (see Figure 3.1). Days when an event has taken place at Lanwades Hall are highlighted in grey.

Whereas Licensing Location 1 is approximately coincident with MP1, Licensing Location 2 and MP2 are approximately 10m apart (as th4e sound level meter was installed inside the proposed development boundaries. In the analysis undertaken here it is assumed that MP2 and Licensing Location 2 are approximately at the same location, which is a conservative approach.

The measuring setup was such that if noise levels at MP1 (Licensing Location 1) or MP2 (Licensing Location 2) exceeded Licensing limits an audio recording would be triggered (which would allow identifying noise sources).

W/C 13TH – 19TH MAY 2024



Notes:

1 - MP2: 13th May at 16:00h : 72.9 dB LAeq,15min: onsite kit test.

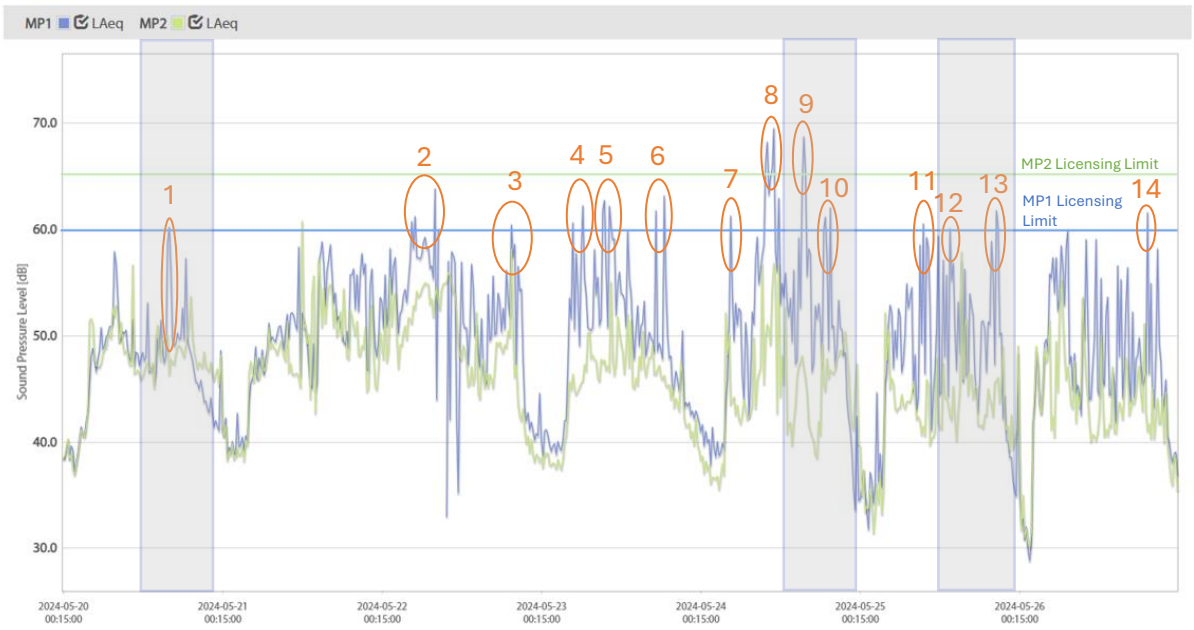
2 - MP1: 16TH May at 13.00 : 61.4 dB LAeq,15min: Source not identified : audio was not set at this point.

3 - MP1: 19TH May at 16.15 : 61 dB LAeq,15min: Airplane.

4. W/C 20TH MAY – 26TH MAY 2024

Event at Landwades Hall (12:00h to 24:00h)

Charts



MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

1- MP1: 20th May at 16:15h : 60.2dB LAeq,15min: Birds.

2 - MP1: 22ND May at 05.15 : 61.2 dB LAeq,15min: Rain.

3 - MP1: 22ND May at 19.45 : 60.5 dB LAeq,15min: Rain.

4 - MP1: 23RD May at 05.30 : 60.7 dB LAeq,15min: Rain.

5 - MP1: 23RD May at 09.30 : 62.8 dB LAeq,15min: Site Maintenance.

6 - MP1: 23RD May at 17.35 : 63.2 dB LAeq,15min: Nature noise / rain.

7 - MP1: 24TH May at 04.45 : 61.3 dB LAeq,15min: Birds.

8 - MP1: 24TH May at 10.15 : 68.2 dB LAeq,15min: Site maintenance.

9 - MP1: 24TH May at 15.45 : 68.8 dB LAeq,15min: MP1 kit maintenance.

10 - MP1: 24TH May at 19.00 : 61.2 dB LAeq,15min: Birds.

11 - MP1: 25TH May at 09.45 : 60.6 dB LAeq,15min: Cars + Birds.

12 - MP1: 25TH May at 13.45 : 60.1 dB LAeq,15min: Cars + Birds.

13 - MP1: 25TH May at 20.45 : 61.8 dB LAeq,15min: Music + Voices.

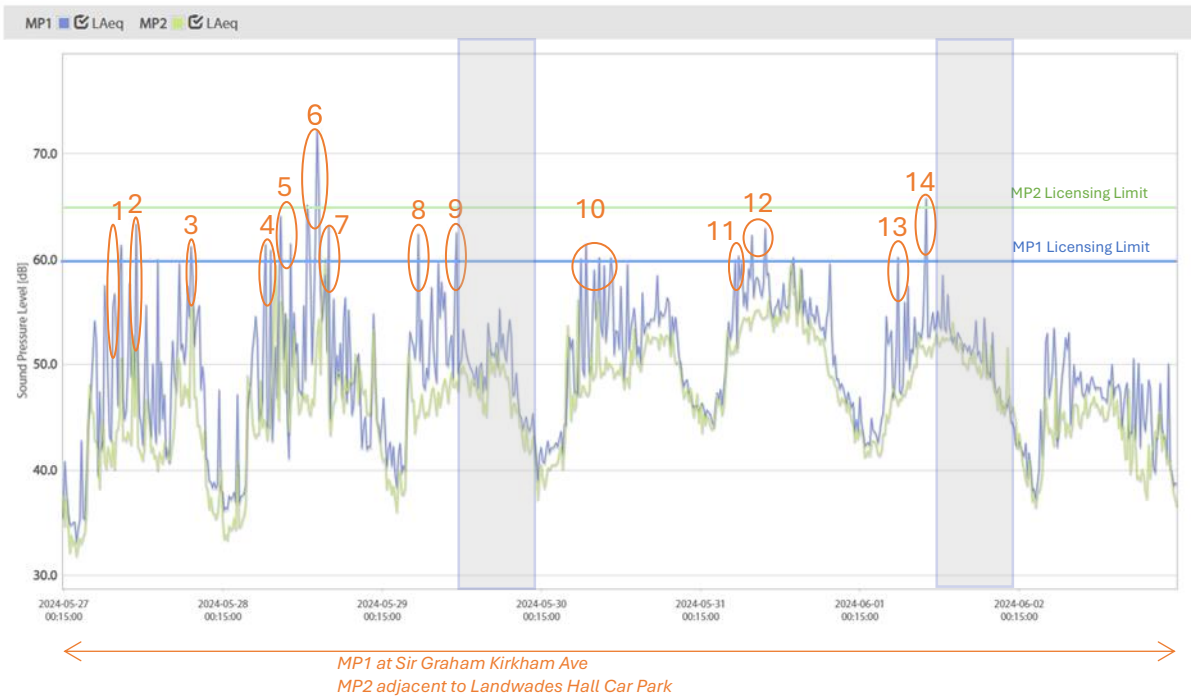
14 - MP1: 26TH May at 19.30 : 61.6 dB LAeq,15min: Birds

MAX FORDHAM

5. W/C 27TH MAY – 2ND JUNE 2024

Event at Landwades Hall (12:00h to 24:00h)

Charts



MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

1- MP1: 27TH May at 09:00h : 61.3dB LAeq,15min: Birds + site maintenance

2 - MP1: 27th May at 11.15 : 63.3 dB LAeq,15min: Airplane.

3 - MP1: 27TH May at 19.30 : 61.2 dB LAeq,15min: Rain.

4 - MP1: 28TH May at 06.45 : 61.4 dB LAeq,15min: Birds.

5 - MP1: 28TH May at 09.00 : 64.1 dB LAeq,15min: Site Maintenance.

6 - MP1: 28TH May at 14.30 : 72.2 dB LAeq,15min: Birds / rain.

7 - MP1: 28TH May at 16.15 : 63.1 dB LAeq,15min: Airplane.

8 - MP1: 29TH May at 05.45 : 62.4 dB LAeq,15min: Birds.

9 - MP1: 29TH May at 11.45 : 62.5 dB LAeq,15min: Birds.

10 - MP1: 30TH May at 07.00 : 61.4 dB LAeq,15min: Birds.

11 - MP1: 31ST May at 06.00 : 60.3 dB LAeq,15min: Birds.

12 - MP1: 31ST May at 08.00 : 62.3 dB LAeq,15min: Birds + rain.

13 - MP1: 1STJune at 06.00 : 60.2 dB LAeq,15min: Birds.

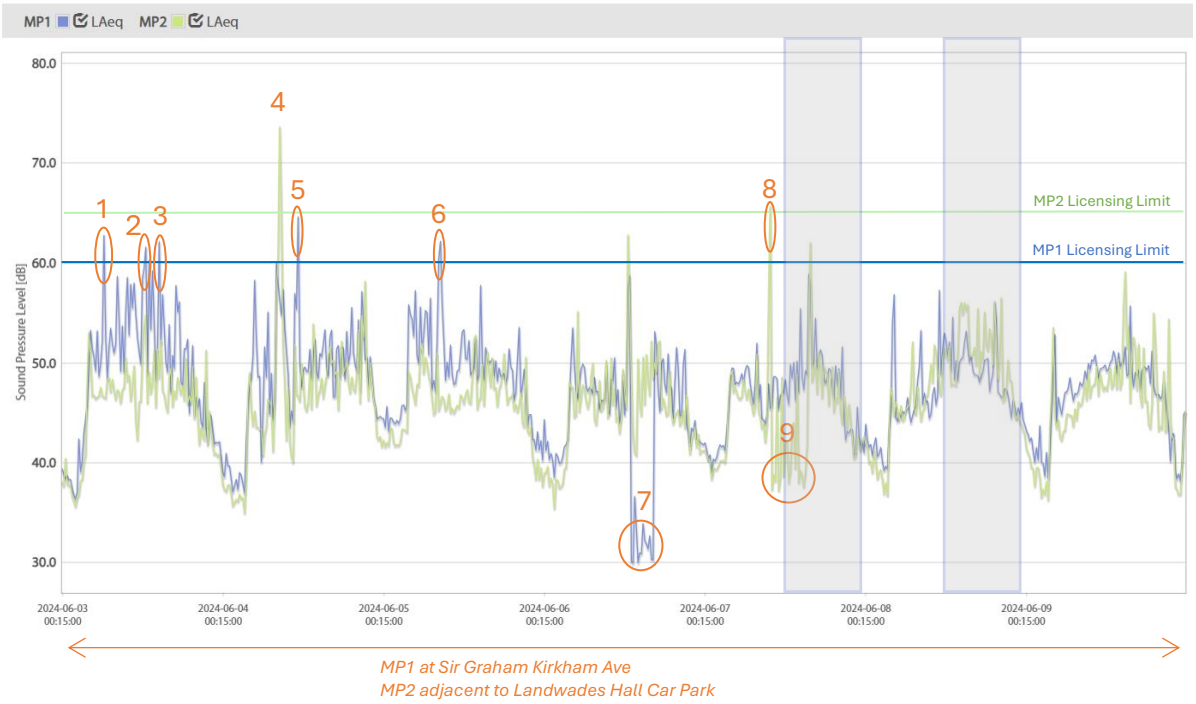
14 - MP1: 1ST June at 10.15 : 65.8 dB LAeq,15min: Birds.

MAX FORDHAM

W/C 3RD JUNE – 9TH JUNE 2024

Event at Landwades Hall (12:00h to 24:00h)

Charts



MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

1- *MP1: 3RD June at 06:30h : 62.8dB LAeq,15min: Birds.*

2 - *MP1: 3RD June at 12.45 : 61.6 dB LAeq,15min: Site Maintenance.*

3 - *MP1: 3RD June at 14.45 : 62.1 dB LAeq,15min: Site Maintenance?*

4 - *MP2: 4TH June at 08.45 : 61.4 dB LAeq,15min: Site Maintenance?*

5 - *MP1: 4TH June at 11:30 : 64.4 dB LAeq,15min: Birds / Site Maintenance.*

6 - *MP1: 5THJune at 08.45 : 62.2 dB LAeq,15min: Site Maintenance.*

7 - *MP1: 6TH June at 13.15 : -.- dB LAeq,15min: Equipment brought inside to recharge (mains power off)*

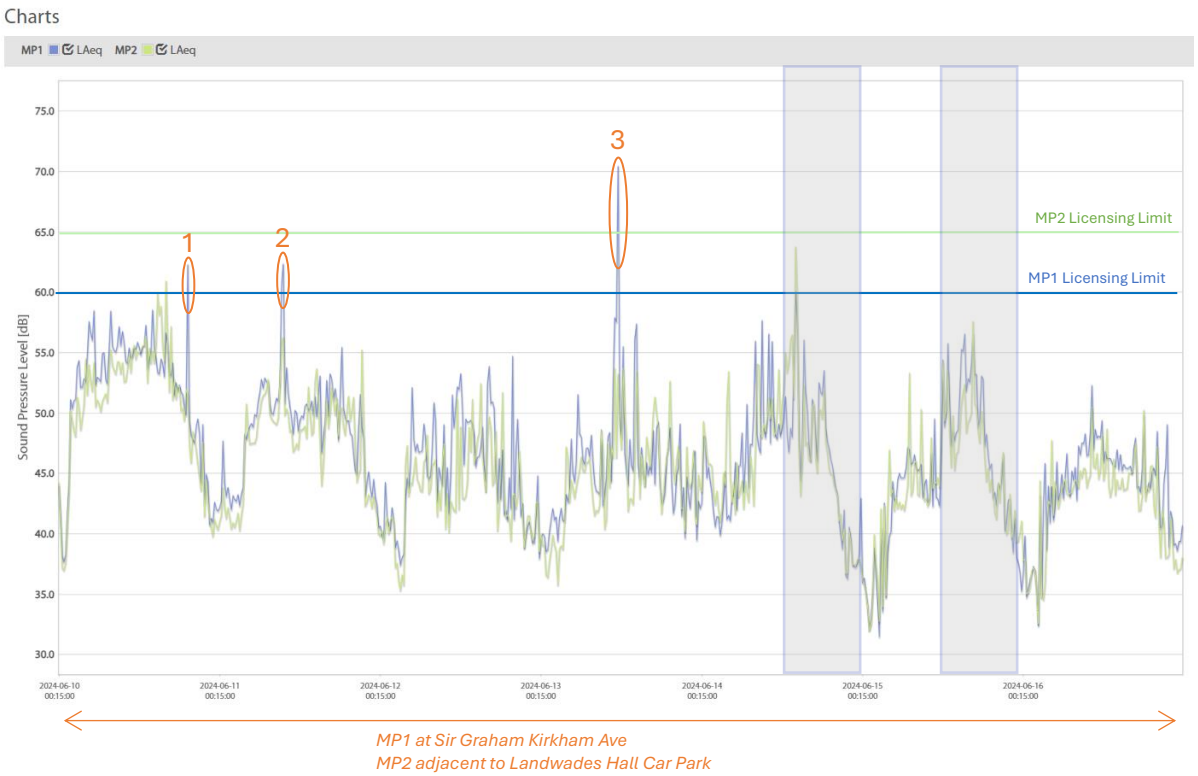
8 - *MP2: 7TH June at 10.00 : 65.6 dB LAeq,15min: Site Maintenance.*

9 - *MP1: 7TH June at 10.15 : -.- dB LAeq,15min: Equipment brought inside to recharge (mains power off)*

MAX FORDHAM

W/C 10TH JUNE – 16TH JUNE 2024

Event at Landwades Hall
(12:00h to 24:00h)



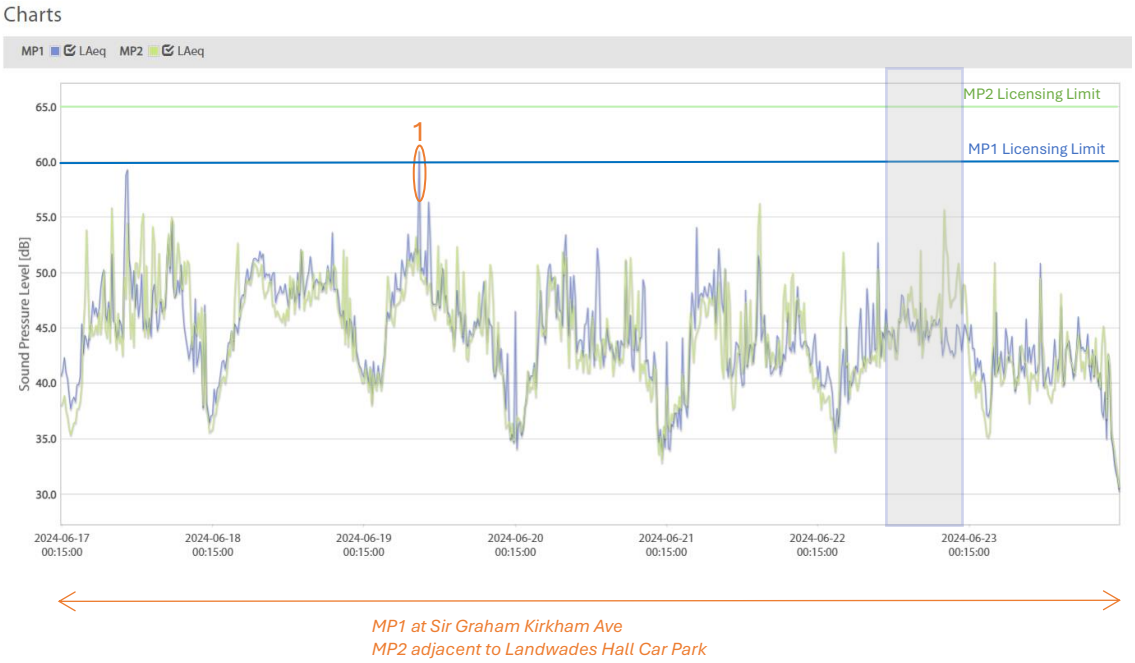
1- MP1: 10TH June at 19:30h : 62.3dB LAeq,15min: Birds.

2 - MP1: 11TH June at 09.45 : 62.5 dB LAeq,15min: Site Maintenance.

3 - MP1: 13TH June at 11.45 :70.4 dB LAeq,15min: Site Maintenance

W/C 17TH JUNE – 23RD JUNE 2024

Event at Landwades Hall
(12:00h to 24:00h)



MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

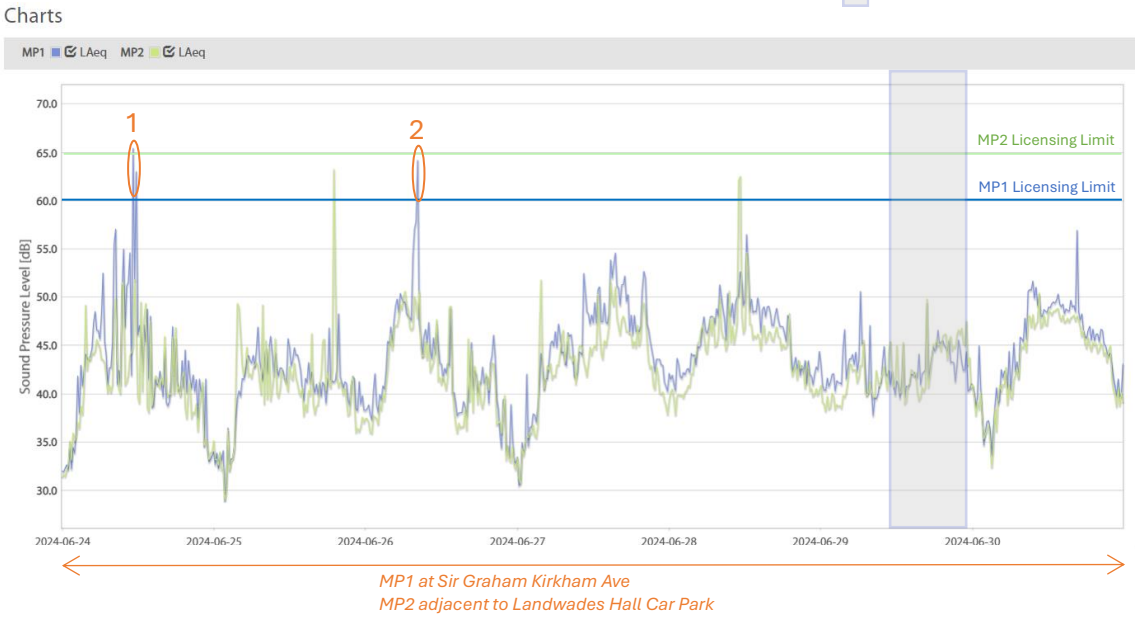
1- *MP1: 19TH June at 9:00h : 61.0dB LAeq,15min: Site Maintenance.*

MAX FORDHAM

MAX FORDHAM

W/C 24TH JUNE – 30TH JUNE 2024

Event at Landwades Hall (12:00h to 24:00h)



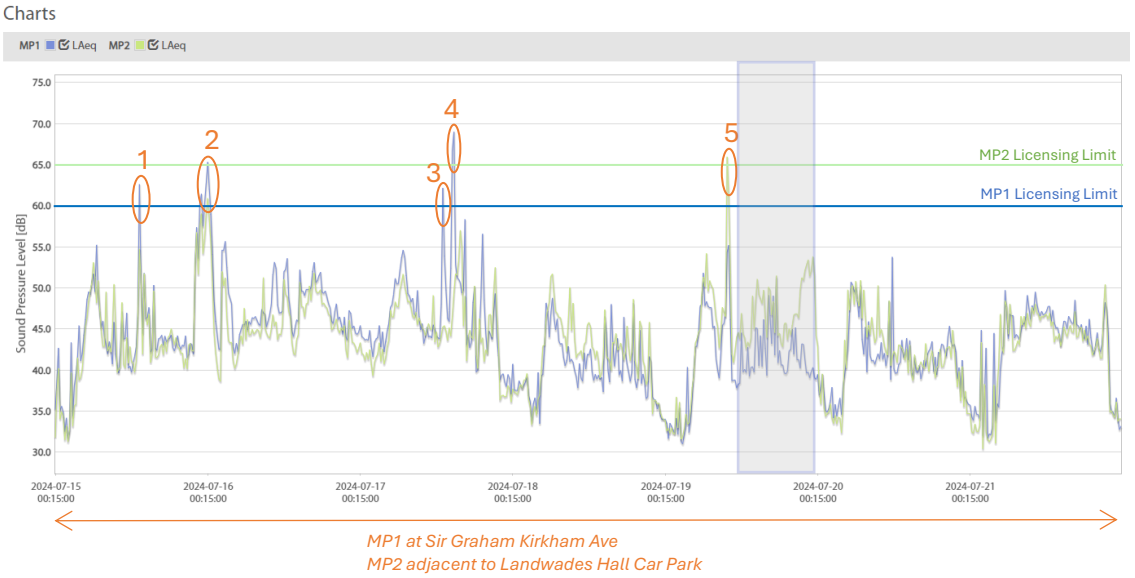
MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

1- *MP1: 24TH June at 11:30h : 65.4dB LAeq,15min: Site Maintenance.*

2- *MP1: 26TH June at 08:30h : 64.2dB LAeq,15min: Site Maintenance.*

W/C 15TH JULY – 21st JULY 2024

Event at Landwades Hall (12:00h to 24:00h)



MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

1- *MP1: 15TH July at 13:30h : 62.6dB LAeq,15min: Site Maintenance.*

2- *MP1: 16TH July at 00:15h : 65.3dB LAeq,15min: Rain.*

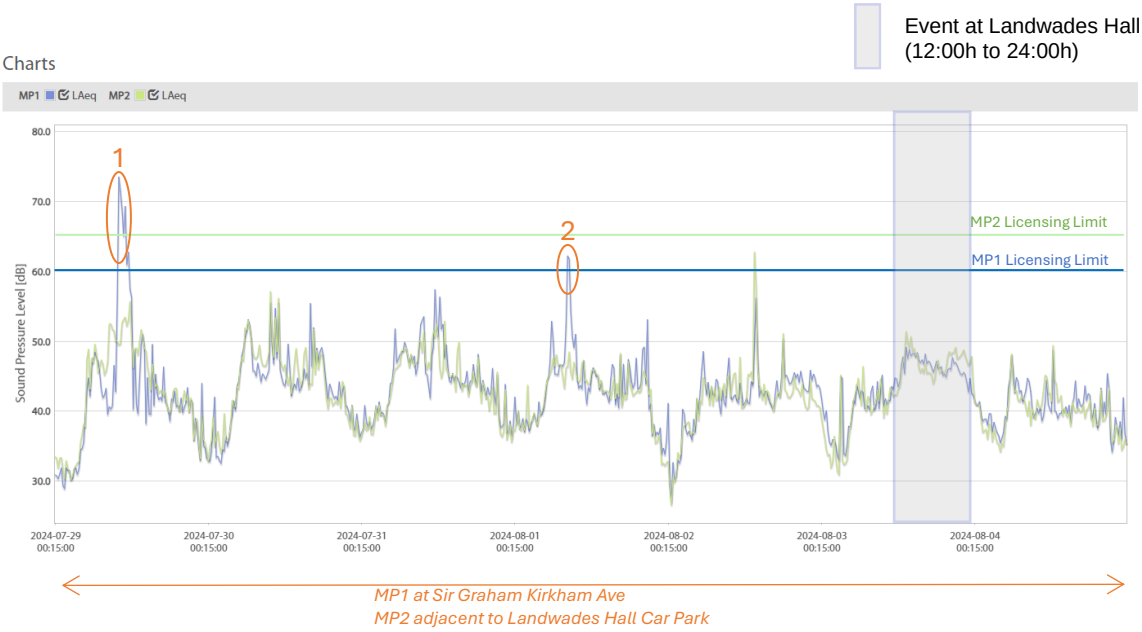
3- *MP1: 17TH July at 13:30h : 62.2dB LAeq,15min: Site Maintenance.*

4- *MP1: 17TH July at 15:00h : 69.0dB LAeq,15min: Site Maintenance.*

5- *MP2: 19TH July at 10:00h : 66.0dB LAeq,15min: Site Maintenance.*

MAX FORDHAM

W/C 29TH JULY – 04TH AUGUST 2024



1- *MP1: 29TH July at 10:15h : 73.5dB LAeq,15min: Site Maintenance.*

2- *MP1: 01ST August at 08:45h : 61.8dB LAeq,15min: Site Maintenance.*

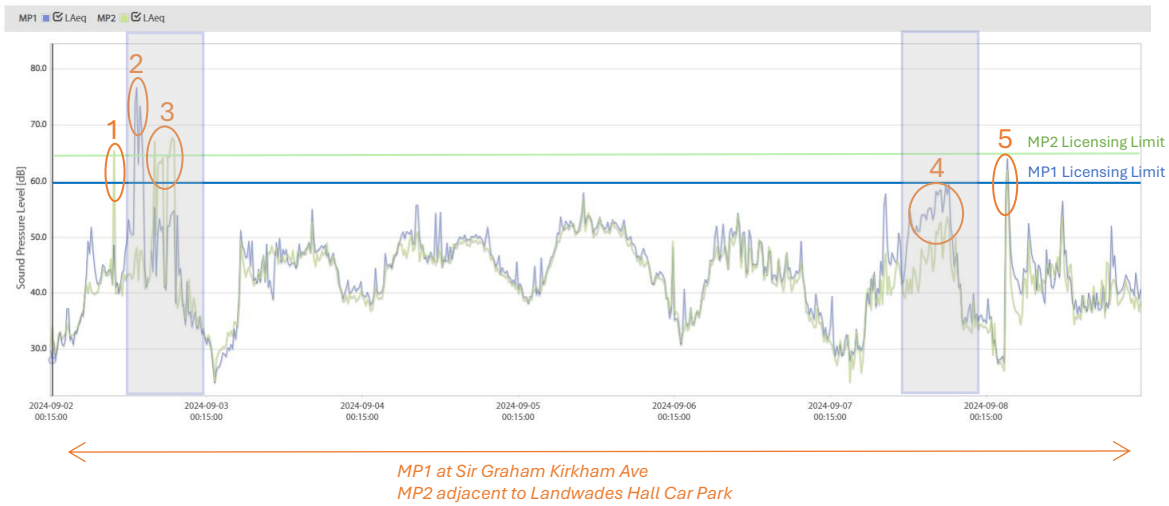
MAX FORDHAM

MAX FORDHAM

W/C 2nd SEPTEMBER- 8th SEPTEMBER 2024

Event at Landwades Hall (12:00h to 24:00h)

Charts

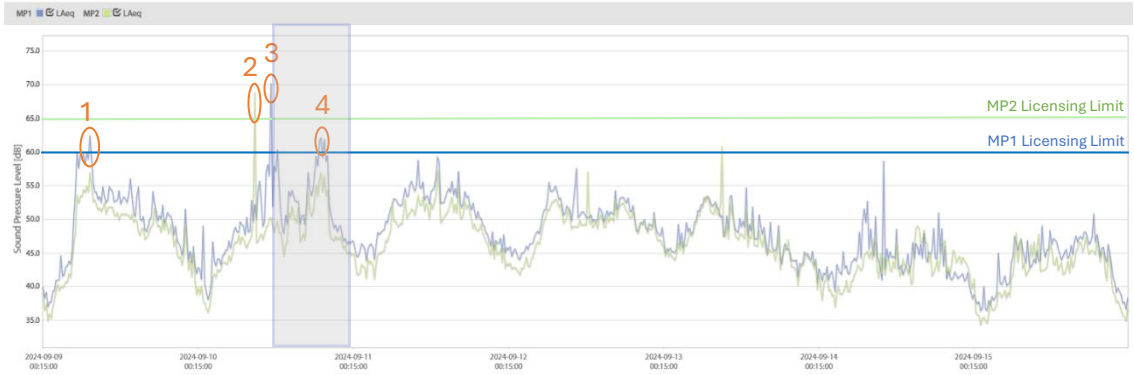


MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

1- *MP2: 2nd September at 10:00h : 65.2dB LAeq,15min: Birds.*
2- *MP1: 2nd September at 13:30h : 76.8dB LAeq,15min: Site Maintenance.*
3- *MP2: 2nd September at 16:15h : 67.8dB LAeq,15min: Piano Music (Sunken Garden)*
4- *MP1: 7th September at 18:30h : 59.5dB LAeq,15min: Music (band with singer)*
5- *MP1: 8th September at 03:30h : 64.0dB LAeq,15min: Rain.*

W/C 9th SEPTEMBER– 15th SEPTEMBER 2024

Event at Landwades Hall (12:00h to 24:00h)



MP1 at Sir Graham Kirkham Ave
MP2 adjacent to Landwades Hall Car Park

1- *MP1: 9th September at 07:30h : 62.4dB LAeq,15min: rain.*
2- *MP2: 10th September at 09:00h : 68.9dB LAeq,15min: birds.*
3- *MP1: 10th September at 11:30h : 70.3dB LAeq,15min: rain.*
4- *MP1: 10th September at 19:15h : 62.2dB LAeq,15min: rain.*

MAX FORDHAM

APPENDIX E - ROAD TRAFFIC NOISE DATA

The following graph show noise measurements results at position MP3 (see Figure 3.1). Noise environment at this location is dominated by traffic noise at B1506.

The measurement period started at 00:00h on the 29th April 2024 and ended at 24:00h on the 6th May 2024.

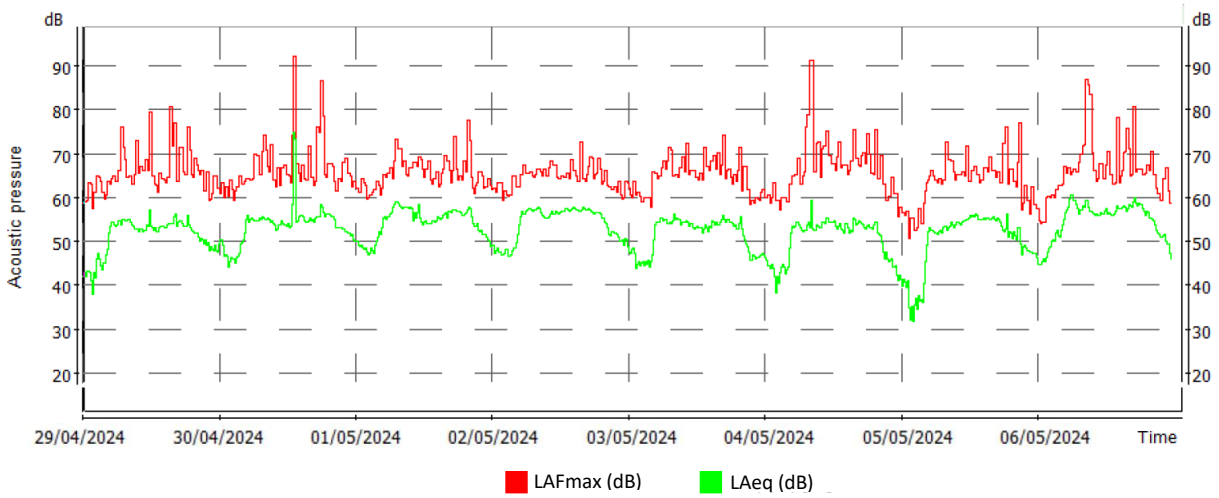


Figure E.1 –Time history of traffic noise measurements at MP3 for the period 29th April 2024 to the 6th May 2024.

APPENDIX F - PROPOSED DEVELOPMENT – DETAILLED APPLICATION

Figure F.1 – Visual Rendering of the detailed application - proposed buildings.