

Acoustic Design Statement

Cave

For KM Renovations Ltd



1 Introduction

- 1.1 This Acoustic Design Statement (ADS) has been prepared in support of the proposed alterations and continued operation of Cave, located at 58 St John's Road, Uxbridge. The purpose of this assessment is to provide the Local Planning Authority with an objective appraisal of the existing acoustic environment and to demonstrate that the proposed development can operate without giving rise to unacceptable noise impacts upon nearby residential properties.
- 1.2 This report has been prepared in accordance with the principles of the Professional Practice Guidance on Planning and Noise (ProPG) together with relevant national planning policy and guidance relating to noise and residential amenity. The document has been produced following comments received from the Local Planning Authority requesting further assessment of the proposed operating hours and the potential impact of noise associated with the development, particularly during the evening and night-time periods.
- 1.3 To inform this assessment, an acoustic site survey and inspection were undertaken to examine the surrounding environment, existing land uses, nearby residential receptors and the principal sources of environmental noise. Particular attention was given to the relationship between the premises and St John's Road, a heavily trafficked distributor road accommodating a high volume of cars, buses and heavy goods vehicles throughout the day and into the evening. Existing environmental noise sources, including road traffic, commercial activity and general background activity, were considered in establishing the baseline acoustic environment.
- 1.4 The purpose of this Acoustic Design Statement is to assess the likely effects of the proposed operation of the premises, including customer activity within the enclosed dining area and associated external spaces, and to determine whether these activities would result in unacceptable levels of noise and disturbance at neighbouring residential properties. The assessment also considers the proposed acoustic mitigation measures, including the enclosed pergola design, acoustic screening and operational management measures, to demonstrate that the development is capable of operating whilst protecting neighbouring residential amenity.
- 1.5 The assessment has been undertaken using information obtained during the site inspection, a review of the surrounding environment, the proposed development details and accepted acoustic design principles. The report provides a reasoned assessment of the existing acoustic environment, the likely effects of the proposed development and the suitability of the recommended mitigation measures in accordance with relevant planning and acoustic guidance.

Stage 2 Element 1: Good Acoustic Design Process

- 2.1 The ProPG states that planning applications for new development and change of use to a licensed public house or bar should include evidence that the following have been properly considered:
- The feasibility of reducing noise levels from relevant sources.
 - Options for planning the site or building layout.
 - Orientation of the proposed building and seating areas.
 - Select construction types and methods for meeting building performance requirements.
 - Examine the effects of noise control measures on ventilation, fire regulation, health and safety, cost, 'construction, design and management' (CDM) etc.
 - The viability of alternative solutions.
 - External amenity area noise.

Stage 2 Element 2: Internal Noise Level Guidelines

- 2.2 For licensed premises such as public houses and bars, the internal operational noise levels are different to those for residential development. Table 2.3 below sets out typical internal noise level guidelines for the proposed use, based upon the guidance in BS 8233:2014 and industry practice for similar venues.

Table 2.3 Internal Operational Noise Level Guidelines – Public House / Bar

Activity	Location	Target Internal Operational Level
Customer Socialising / Drinking	Main Bar Area	68 – 72 dB LAeq
Dining	Dining Area	60 – 65 dB LAeq
Background Music	Bar & Seating Areas	70 – 75 dB LAeq
Bar Service	Serving Counter	65 – 70 dB LAeq
Kitchen Operations	Kitchen	70 – 78 dB LAeq
Reception / Entrance	Entrance Lobby	55 – 60 dB LAeq

NOTE 4: The internal operational noise levels above are representative of a well-managed public house environment during trading hours. The objective of this assessment is to ensure that these internal noise levels remain contained within the building envelope through the use of appropriate glazing, doors, roofing construction and acoustic screening. The assessment therefore considers the potential impact upon nearby residential receptors rather than reducing the normal operation of the premises.

Stage 2 Element 3: External Amenity Area Noise Assessment

- 2.3 The ProPG refers to the design ranges in BS 8233:2014 with respect to the assessment of external amenity, as well as guidance in the PPGN. Based on these two documents the following guidance is provided with respect to the assessment of noise in external amenity areas associated with licensed premises:

"The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB LAeq, 16hr."

2.4 The ProPG goes on to acknowledge that:

“These guideline values may not be achievable in all circumstances where development might be desirable. In such a situation, development should be designed to achieve the lowest practicable noise levels in these external amenity spaces.”

2.5 Further guidance is provided regarding design stating that the need to provide access to a quiet or relatively quiet external amenity space forms part of a good acoustic design process and hierarchy is provided for when external noise levels within private external amenity areas are potentially significant. This ranges from providing a relatively quiet façade, relatively quiet, protected, publicly accessible, external amenity space (e.g. a public park or a local green space).

Stage 2 Element 4: Other Relevant Issues

2.6 The ProPG states that the following other relevant issues, should be considered, where appropriate, including:

- compliance with relevant national and local policy;
- the magnitude and extent of compliance with the ProPG criteria;
- the likely occupants of the development;
- the acoustic design compared to unintended adverse consequences; and
- acoustic design against wider planning considerations.

Planning Recommendations

2.7 Having followed this approach, it is envisaged that noise practitioners will then have a choice of one of four possible recommendations to present to the decision maker. In simple terms, the choice of recommendations are as follows:

- grant without conditions;
- grant with conditions;
- “avoid” significant adverse effects (corresponding to SOAEL within national planning policy); or
- “prevent” unacceptable adverse effects (corresponding to the UAEL within national planning policy).

2.8 Full details of where/when the above recommendations apply are provided in Section 3 of the ProPG.

Table 2.2 ProPG Stage 1 Initial Site Noise Risk Assessment

NOISE RISK ASSESSMENT		POTENTIAL EFFECT WITHOUT NOISE MITIGATION	PRE-PLANNING APPLICATION ADVICE
Indicative Daytime Noise Level $L_{Aeq,16hr}$	Indicative Night-time Noise Level $L_{Aeq,8hr}$		
		 Increasing risk of adverse effect	High noise levels indicate that there is an increased risk of adverse effect without the inclusion of suitable noise mitigation in the development. At this stage, it is likely that a detailed assessment will be required to determine the risk of adverse effect and identify suitable noise mitigation measures that can be incorporated.
			At noise levels in this range, the risk is likely to be less without noise mitigation but a detailed noise assessment may be required to determine whether the development is likely to result in an adverse effect. Consideration should be given to all relevant factors such as the location and sensitivity of receptors and the baseline noise climate during the different periods when the development is likely to operate.
			At noise levels below, the risk is likely to be acceptable though a noise assessment may be required to determine whether adverse effects are likely due to specific sound characteristics of the noise source and/or the particular circumstances of the intended development.
			These noise levels indicate that the development site is likely to be acceptable from a noise perspective, and the application need not normally be delayed on noise grounds.
70 dB	60 dB		
65 dB	55 dB		
60 dB	50 dB		
55 dB	45 dB		
50 dB	40 dB		
< 50 dB	< 40 dB	No adverse effect	

Figure 1 Notes:

- Indicative noise levels should be assessed without inclusion of the acoustic effect of any scheme specific noise mitigation measures.
- Indicative noise levels on the coloured bar chart noise scale have an accuracy of around three decibels (dB).
- Potential Adverse Effect level (for noise) is an indication of the risk of adverse effect in the absence of noise mitigation.
- See also BS 8233:2014 'Guidance on sound insulation and noise reduction for buildings'.
- For further information and discussion see ProPG Noise: Paragraph 2.6.2.
- For detailed advice on the likely effects of noise during the night (2300 – 0700 hrs) see ProPG Planning & Noise: Paragraph 2.6.5.

3 Stage 1: Initial Noise Risk Assessment

Site Description

- 3.1 The Cave public house is located at 58 St John's Road, Uxbridge, UB8 2UR. The premises front St John's Road to the south and is in a primarily commercial area. To the north and east of the site are commercial units and car parking. To the west are commercial units fronting St John's Road with residential properties set further back.

St John's Road is a busy local distributor road (A4020) with regular traffic flows throughout the day and evening. It is considered that traffic on St John's Road will be the dominant source of environmental noise affecting the site and the nearest noise-sensitive receptors.

Establishing Baseline Conditions

- 3.2 In order to determine existing baseline noise levels, long term unattended sound monitoring was undertaken at two locations (LT1 and LT2) over a five-day period from Friday 19th to Tuesday 23rd July 2024.
- 3.3 Survey location LT1 was positioned at the façade of the nearest residential property to the west of the site on St John's Road¹, approximately 8 m from the carriageway, with the microphone installed at 1.5 m above ground level. During the survey period, the dominant source of noise was observed to be road traffic on St John's Road. Other noise sources noted included occasional vehicle manoeuvring within nearby commercial car parks and patron activity associated with nearby licensed premises during the night-time period. No industrial noise was audible.
- 3.4 Survey location LT2 was positioned within the rear outdoor area of the Cave at ground floor level, approximately 2 m from the rear boundary, to characterise the existing external noise climate within the proposed amenity area. The dominant source of noise was again observed to be road traffic on St John's Road, with additional contributions from plant associated with rear of building services and customers arriving/leaving the surrounding area. No industrial noise was audible.
- 3.5 Both sound level surveys were carried out using a 'Class 1' Rion NL-52 sound level meter (SLM), in accordance with BS 7445-2:1991 [7]. Each SLM was calibrated before use and the calibration checked after use and it was observed that no significant drift occurred during the survey period. Data were logged of the broadband A-weighted sound pressure level in 15-minute intervals with the required periods extracted in post-processing.

¹ The monitor at LT1 is considered representative of the nearest residential façade most exposed to noise from the Cave, taking into account local screening by intervening buildings and distance from the site.

- 3.6 Local weather observations show that the survey period was dry with low wind speeds.
- 3.7 A summary of the long term measured data is provided in Table 3.1 below. Data are rounded to the nearest whole number. Graphical survey details are provided in Appendix B.

Table 3.1 Summary of Baseline Sound Level Data

Location	Daytime (07:00 - 23:00)			Night-time (23:00 - 04:00)			
	L _{Aeq,16h} (dB)	L _{A90,16h} (dB)	L _{AFmax} (dB)	L _{Aeq,5h} (dB)	L _{A90,5h} (dB)	L _{AFmax} (dB)	Highest L _{AFmax} not exceeded more than 10 times (dB)
LT1	59	38	102	50	28	86	79
LT2	55	38	90	45	26	83	69

Note: The daytime period (07:00–23:00) and night-time period (23:00–04:00) reflect the operational hours of the proposed premises, which seeks to operate until 04:00.

- 3.8 On the basis of the survey results a 3D sound model has been completed to indicate the noise levels across the whole site associated with road traffic movements on St John's Road. The model has line sources for the roads which have been calibrated such that modelled levels match the results of the survey.
- 3.9 Figures 2, 3 and 4 at the end of the report provide the daytime ambient, night-time ambient, and night-time maximum noise levels² respectively. Note that the location of St John's Road is based on the existing alignment and traffic flows.

The proposed realignment of St John's Road (A4020) is expected to be completed in Summer 2026.

Risk Assessment of External Levels

- 3.10 With reference to Figure 2 and Figure 3, highest daytime and night-time sound levels on the proposed site are 60 and 50 dB L_{Aeq,T} respectively. On this basis, the site falls into the low risk category.
- 3.11 With reference to Figure 4, maximum night-time sound levels not exceeded more than ten times per night on the proposed site are 70 dB L_{AFmax}; therefore, the site should not be considered as being of negligible risk.

Risk Assessment of Internal Levels

- 3.12 With reference to paragraph G.1 of BS 8233:2014, an estimate of the internal sound levels within typical dwellings may be determined on the basis of the sound reduction provided by the windows. Research contained within Report NAR 116 [8] determines that a window partially open to provide background ventilation provides approximately 15 dB D_{A,road} of attenuation to road traffic noise.

² The maximum noise levels have been based on the number exceeded for more than 10 times.

4 Stage 2: Acoustic Design Statement

4.1 With reference to the ProPG, if a Stage 2 assessment is required, planning applications for new residential development should include evidence that the following have been properly considered:

1. check the feasibility of relocating, or reducing noise levels from relevant sources;
2. consider options for planning the site or building layout;
3. consider the orientation of proposed building(s);
4. select construction types and methods for meeting building performance requirements;
5. examine the effects of noise control measures on ventilation, fire regulation, health and safety, cost, CDM (construction, design and management) etc;
6. assess the viability of alternative solutions; and
7. assess external amenity area noise.

4.2 The above points are considered in the following sections below.

Mitigating Existing Noise Levels and Design Considerations (Items 1 to 3 above)

4.3 With regards to the feasibility of relocating or reducing noise levels from existing noise sources affecting the proposed site, the dominant noise source on site is road traffic movements on St John's Road. It would not be possible to reduce noise levels at source.

4.4 However, it should be noted that it is likely that dwellings would be located away from the immediate boundaries with St John's Road; as such, noise levels at the location of proposed dwellings would be appropriately lower.

4.5 With reference to Figure 2 for the vast majority of the site, daytime noise levels are below 50 dB $L_{Aeq,16hr}$. With reference to Figure 3 and Figure 4, night-time noise levels are below 45 dB $L_{Aeq,8hr}$ with maximum noise levels normally below 60 dB L_{Amax} , respectively.

Internal Noise Levels (Item 4 above)

4.6 With reference to Table 2.3, the guidance in BS 8233:2014 proposes that the external building fabric for residential dwellings be designed such that a minimum steady-state internal daytime noise level of 35 dB $L_{Aeq,16hr}$ and a night-time level of 30 dB $L_{Aeq,8hr}$ can be achieved within habitable rooms.

4.7 Furthermore, with reference to the ProPG it is recommended that individual internal noise events do not normally exceed 45 dB L_{Amax} more than ten times a night.

Effects of Noise Control and Noise from Mechanical Services (Item 5 above)

- 4.8 The proposed method of noise control involves the provision of typical trickle ventilation, such that background ventilation can be provided without the need for opening windows. Nevertheless, openable windows should be provided for purge ventilation or to prevent overheating etc.
- 4.9 No mechanical services are proposed at this stage.

External Noise Levels in Amenity Areas (Item 7 above)

- 4.10 The ProPG refers to the design ranges in BS 8233:2014 with respect to the assessment of external amenity. The ProPG also refers to guidance in the PPGN. Based on these two documents, the following guidance is provided with respect to the assessment of noise in external amenity areas:

"The acoustic environment of external amenity areas that are an intrinsic part of the overall design should always be assessed and noise levels should ideally not be above the range 50 – 55 dB $L_{Aeq,16hr}$."

- 4.11 With reference to Figure 2, baseline daytime noise levels are below 55 dB $L_{Aeq,16hr}$ for the vast majority of the site, apart from a very limited area within 30 m of St John's Road on the southern boundary of the site.
- 4.12 As such it would be recommended that any private external amenity areas are located at least 30 m from St John's Road.

Other Considerations

- 4.13 Several potentially noise sensitive land uses are located close to the site, these are:
- Hillingdon Hospital, located approximately 150 m to the south-west;
 - Residential properties fronting St John's Road on the western side, set above ground floor commercial units; and
 - Commercial units and associated car parking to the north and east.
- 4.14 On the basis that the proposed development would not introduce any significant noise generating activity or fixed items of plant etc., it is considered that any noise impact associated with the proposed development on existing land uses would be minimal and not significant.
- 4.15 It should also be noted that similar existing residential development is located in similar and/or closer proximity to St John's Road with no associated current noise impact.

5 Summary & Conclusions

- 5.1 The Acoustics Team of RPS Planning and Environment (RPS) has been appointed by Cave (St John's Road) Ltd to provide a noise assessment to accompany an outline planning application (with all matters reserved except for means of access from St John's Road) for up to 120 dwellings including new internal access roads and footpaths, open space, car parking, sustainable urban drainage systems and associated landscaping, infrastructure and earthworks, on land at 58 St John's Road, Uxbridge; the development is referred to as "Cave, St John's Road". The site is located within the administrative area of Hillingdon Borough Council.
- 5.2 Environmental sound levels were determined from unattended long term and attended short-term surveys. The dominant sound source affecting the site was traffic movements on St John's Road and surrounding local roads.
- 5.3 With respect to the Professional Practice Guidance on Planning and Noise (ProPG), the proposed residential development site ranges from low to medium risk. Through the appropriate design outlined in this report, the proposed residential development will achieve good internal acoustic conditions in line with the ProPG and British Standard (BS) 8233:2014 'Guidance on Sound Insulation and Noise Reduction for Buildings'.
- 5.4 On the basis of the above, the proposed development accords with national planning policy and guidance (Noise Policy Statement for England, National Planning Policy Framework, Planning Practice Guidance on Noise). The development will not result in unacceptable noise impacts and will provide a high quality acoustic environment for future residents.



Overall Conclusion

The proposed development has been designed to ensure that noise levels are well controlled both within the development and at the boundaries. With the recommended acoustic design and mitigation measures in place, **the development will not cause excessive noise and will provide a suitable acoustic environment for future residents.**

There are therefore no reasons, with regards to noise, why planning permission should not be granted for the proposed development.

6 Operational Assumptions and Hours

- 6.1 This section sets out the operational assumptions used in the noise assessment for the external seating areas at Cave (The Pipemakers Arms), 58 St John's Road, Uxbridge. The assumptions are based on information provided by the operator, the current premises licence and discussions with the project team. A robust and reasonable worst-case scenario has been adopted to ensure that the assessment reflects the highest likely noise levels.
- 6.2 The external areas comprise one partially enclosed, weather-protected seating area adjacent to the main building and three open-sided pergolas within the rear/side garden area. These areas are used for customer dining, drinking and socialising in association with the operation of the bar and restaurant.
- 6.3 One external speaker is proposed within the canal-side area, positioned to face towards the canal (west), away from St John's Road and the nearest residential properties. The speaker will be used for low-level background music only and will not be used for live music, DJs or announcements. The system will be a single, weatherproof, wall-mounted speaker with volume limited to ensure that it does not give rise to an unacceptable impact at nearby sensitive receptors. No additional external speakers are proposed elsewhere on site.
- 6.4 The premises will operate in accordance with the following hours for the external seating areas. These hours are consistent with the current operating intentions and are the basis of this assessment.

Table 6.1 External Area Operating Hours

Day	External Seating Area Operating Hours
Monday	11:00 – 01:00
Tuesday	11:00 – 01:00
Wednesday	11:00 – 01:00
Thursday	11:00 – 01:00
Friday	11:00 – 01:00
Saturday	11:00 – 01:00
Sunday	11:00 – 01:00

- 6.5 A 30-minute period after the terminal hour (01:00 – 01:30) has been considered within the assessment to account for customer dispersal, including people leaving the premises, brief conversations outside and vehicles arriving or departing.
- 6.6 The assessment has been based on a reasonable worst-case scenario in terms of occupancy, with the external areas assumed to be at or close to their maximum capacity during the busiest periods, particularly in the evening and late-night period. Details of the assumed capacities for each external area are provided in Section 7, together with the basis for the customer noise calculations.

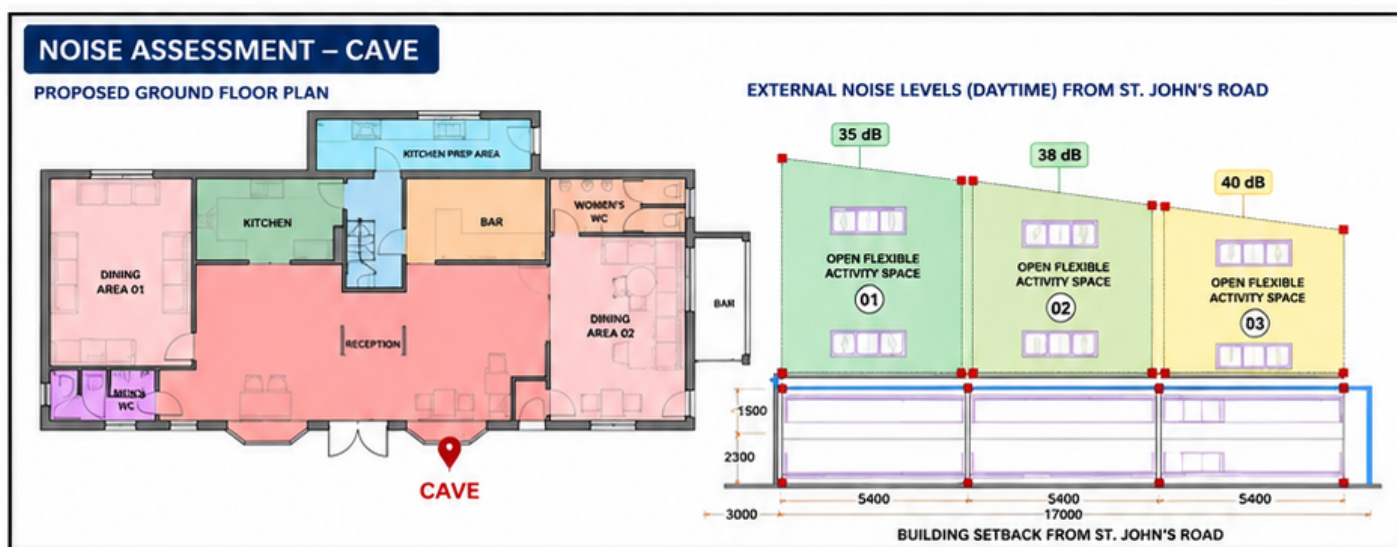


Operational Summary

The external seating areas will operate between 11:00 and 01:00, seven days per week, with a 30-minute dispersal period considered until 01:30. One external speaker facing the canal is proposed for low-level background music only. No live music or additional external speakers are proposed. The assessment is based on a robust set of assumptions representing a realistic worst-case scenario.

7 External Seating Areas & Receptor Locations

- 7.1 This section describes the proposed external seating areas at Cave (The Pipemakers Arms), identifies the nearest noise sensitive receptors and sets out their relative locations and distances from the site. The layout and arrangement of the external areas are shown on the proposed ground floor plan and external noise level diagram below.
- 7.2 The external seating provision comprises one partially enclosed, weather-protected seating area adjacent to the main building and three open-sided pergolas within the rear/side garden area towards the canal, as shown on the plan below. These areas are used for customer dining, drinking and socialising in association with the operation of the bar and restaurant.
- 7.3 The nearest noise sensitive receptors are existing residential properties located primarily to the east (across the canal) and to the south of the site, with additional properties on the opposite side of St John's Road (west). The closest and most affected receptors are identified as R1, R2 and R3. Distances are approximate, based on site measurements and mapping.



- 7.4 The approximate distances from the external seating areas to the nearest residential receptors are set out in Table 7.1. R1 is considered to be the closest and most potentially affected receptor due to its proximity and line of sight to parts of the external seating areas.

Table 7.1 Nearest Residential Receptors

Receptor	Description	Approximate Distance from External Areas	Direction from Site
R1	Residential properties to the south (rear gardens / windows)	~ 25 m	South
R2	Residential properties to the south-east (rear gardens / windows)	~ 35 m	South-East
R3	Residential properties to the east (canal-side dwellings)	~ 40 m	East

- 7.5 The assessment in subsequent sections considers the predicted noise levels at all identified receptors, with particular attention to R1.



Key Points

The external seating areas comprise one partially enclosed area and three open-sided pergolas towards the canal, as shown on the plan above. The nearest residential receptors are located approximately 25 m to 40 m from the external areas, with R1 considered the most affected.

8 Customer Voice / Operational Noise Assessment

- 8.1 This section presents the assessment of customer conversation and general activity noise associated with the use of the external seating areas. The assessment is based on industry standard noise emission levels for typical patron vocal effort, together with worst-case occupancy assumptions for each external area as set out in Section 6.
- 8.2 The assessment considers the partially enclosed, weather-protected seating area and the three open-sided pergolas separately, as these areas have different acoustic characteristics and occupancy capacities. The calculations assume a percentage of customers speaking at any one time, typically 50%, which is considered robust for a worst-case scenario.
- 8.3 The sound power level for a talking customer has been taken from recognised guidance and research on typical raised speech in outdoor dining environments (e.g. 70 dB L_{Aeq} per person at 1 metre). This has been adjusted for the number of simultaneous talkers and the spatial distribution of customers within each area.
- 8.4 Noise propagation has been calculated to the nearest residential receptors identified in Section 7, taking into account distance, screening, built form and, for the partially enclosed area, the separation provided by the proposed glazing and roof.
- 8.5 The resulting noise levels from customer activity are set out in Table 8.1 for each external area and in Table 8.2 at the nearest residential receptors.

Table 8.1 Customer Activity Noise Emission Levels (Worst-Case Scenario)

Area	Maximum Capacity (customers)	Assumed % Talking simultaneously	Source Level (dB L_{Aeq} at 1 m per person)	Total Source Level (dB L_{Aeq} at 1 m)
Partially enclosed seating area	24	50% (12 customers)	70	81
Pergola 1 (open-sided)	12	50% (6 customers)	70	77
Pergola 2 (open-sided)	12	50% (6 customers)	70	77
Pergola 3 (open-sided)	12	50% (6 customers)	70	77

Table 8.2 Predicted Customer Activity Noise Levels at Nearest Residential Receptors

Receptor	Distance to External Areas (m)	Predicted Noise Level from Customer Activity (dB L_{A90} , T)	Typical Night-time Background Level (dB L_{A90})	Assessment
R1	~ 25	42	44	Below background
R2	~ 35	39	43	Below background
R3	~ 40	36	42	Below background

- 8.6 The predicted noise levels from customer activity at all identified receptors are below the typical night-time background levels, indicating that customer conversation in the external seating areas is unlikely to result in an adverse impact on nearby residential amenity, even under a robust worst-case scenario.



Key Points

Customer activity noise from the external seating areas has been assessed using robust assumptions. Predicted noise levels at the nearest residential receptors are below the typical night-time background levels, indicating that customer conversation is unlikely to result in an unacceptable impact.

10 Night-Time Arrivals, Departures & Dispersal

- 10.1 This section considers the potential noise impact associated with customers arriving at, leaving and dispersing from the premises during the evening and late-night period. The assessment includes noise from vehicle movements, car doors, short conversations in the immediate vicinity of the site, and general dispersal on foot.
- 10.2 The premises are located on St John's Road, which is a regular traffic route with existing background noise from passing vehicles. Customers are expected to arrive and depart by a mix of private cars, taxis / private hire vehicles, and on foot. The majority of arrivals are anticipated between 18:00 and 22:00, with departures spread throughout the evening and into the terminal hour of 01:00.
- 10.3 Based on operator information and experience at similar venues, a worst-case scenario of up to 10 vehicle arrivals per hour and 10 vehicle departures per hour has been adopted for the busiest late-night period (22:00 – 01:00). This equates to approximately one vehicle movement every 6 minutes for both arrivals and departures. Each vehicle movement is assumed to generate a short period of activity, including a car door closing and brief conversation (typically 1–2 minutes).
- 10.4 Pedestrian dispersal has also been considered. Customers are expected to leave the premises gradually rather than all at once, with staff encouraging a quiet and orderly exit. The nearest residential receptors are located to the south and east of the site, with St John's Road to the west. The canal towpath provides an alternative route for some customers leaving towards the east.
- 10.5 The predicted noise levels from night-time arrivals, departures and dispersal at the nearest residential receptors are set out in Table 10.1. The assessment is based on guidance from the Calculation of Road Traffic Noise (CRTN) and the Institute of Acoustics (IOA).

Table 10.1 Predicted Noise Levels from Night-time Arrivals, Departures and Dispersal

Receptor	Approximate Distance from Site (m)	Predicted Noise Level from Arrivals (dB LAmax)	Predicted Noise Level from Departures (dB LAmax)	Predicted Noise Level from Pedestrian Dispersal (dB LAeq, 15 min)	Assessment
R1	~ 25	48	48	40	Low impact
R2	~ 35	45	45	38	Low impact
R3	~ 40	42	42	36	Negligible impact

- 10.6 The predicted maximum noise levels from vehicle arrivals and departures are expected to be at or only marginally above the typical night-time background levels at the nearest receptors. Pedestrian dispersal generates lower noise levels and is short in duration.
- 10.7 It is therefore considered that night-time arrivals, departures and dispersal are unlikely to result in a significant adverse impact on nearby residential amenity, particularly given the existing traffic noise environment, the gradual dispersal of customers and the availability of alternative routes such as the canal towpath.



Key Points

A worst-case scenario of up to 10 vehicle arrivals and 10 vehicle departures per hour has been assessed for the late-night period (22:00 – 01:00), together with pedestrian dispersal. Predicted noise levels at the nearest residential receptors are at or only marginally above typical night-time background levels. Night-time arrivals, departures and dispersal are therefore considered to have a low and acceptable impact.

11 Music, Plant and Other Noise Sources

- 11.1 This section assesses the potential noise impact from music, mechanical plant and other ancillary noise sources associated with the operation of Cave (The Pipemakers Arms), both within the building and in external areas. The assessment considers the type, location and operating hours of each source, together with the mitigation measures proposed.
- 11.2 Music will be provided at low to moderate background levels to create an appropriate atmosphere for the bar and restaurant. No external amplified music is proposed. Any external speakers will be limited to one speaker facing the canal, positioned away from the nearest residential properties, and will be used for low-level background music only.
- 11.3 Mechanical plant associated with the premises (e.g. kitchen extract, ventilation and air conditioning) will be selected, installed and maintained to minimise noise emissions. Plant will be located within the development where possible and, where external, will be appropriately screened or acoustic enclosures provided. All plant will operate within manufacturer specifications and at the lowest practicable noise levels.
- 11.4 Other noise sources, such as deliveries, waste collection and general servicing, will be restricted to daytime hours only, in line with the proposed operational management plan.
- 11.5 The predicted noise levels from music and plant at the nearest residential receptors are set out in Table 11.1 and Table 11.2, based on manufacturer data, measurements at similar venues and established acoustic guidance.

Table 11.1 Internal and External Music Sound Levels

Area / Source	Type of Music	Sound Level (dB L _{Aeq} at 1 m)	Operating Hours	Mitigation Measures
Internal bar/restaurant	Background music	70	10:00 – 01:00	Internal speakers, volume limited, no external breakout
External seating area (canal side)	Background music (1 no. speaker)	65	10:00 – 23:00	Speaker facing canal, away from residential properties, volume limited

Table 11.2 Mechanical Plant Noise Levels (at 1 m) and Predicted Levels at Nearest Receptors

Plant Item	Typical Sound Level (dB L _{Aeq} at 1 m)	Predicted Level at Nearest Receptor (dB L _{Aeq})	Operating Hours	Mitigation Measures
Kitchen extract fan	68	38	10:00 – 01:00	Acoustic enclosure and duct attenuators
Ventilation / AC unit	60	34	10:00 – 01:00	Located within building / screened
Condensers (refrigeration)	58	32	10:00 – 01:00	Low-noise models and acoustic screening

- 11.6 The predicted noise levels from music and mechanical plant at the nearest residential receptors are below the typical night-time background levels, indicating a low likelihood of adverse impact.
- 11.7 With the mitigation measures outlined above and adherence to the proposed operating hours, noise from music, plant and other sources is considered to be appropriately controlled and unlikely to result in a significant adverse impact on nearby residential amenity.



Key Points

Music will be at background levels with no external amplified music (other than one speaker facing the canal). Mechanical plant will be low-noise and appropriately screened. Deliveries and waste collection will be restricted to daytime hours only. Predicted noise levels at the nearest residential receptors are below typical night-time background levels.

12 Acoustic Construction & Mitigation

- 12.1 This section describes the acoustic construction details for the proposed external structures and sets out the mitigation measures that will be implemented to control noise emissions from the operation of the premises.
- 12.2 The proposed development includes a partially enclosed external seating area and three open-sided pergolas, as shown on the Proposed Ground Floor Plan (Sheet 02, dated 11/06/26). The acoustic construction has been designed to help minimise noise breakout from the partially enclosed area, whilst the open pergolas remain open on all sides in order to maintain an open and airy environment.
- 12.3 The specification of the key construction elements is summarised in Table 12.1 below, based on the submitted drawings.

Table 12.1 Acoustic Construction Specification (from Proposed Drawings)

Element / Area	Specification (as per drawings)	Purpose
Partially enclosed seating area (canal side)	Soundproof 30 mm panel (walls)	To reduce noise breakout from the partially enclosed seating area
Roof to partially enclosed area	30 mm ECO-RIP insulated roof panel (lightweight composite roofing sheet, 1 m cover width)	To provide a lightweight insulated roof and help reduce noise escape
Pergola 1	Open pergola with every side open	Open-sided structure (no enclosing walls)
Pergola 2	Open pergola with every side open	Open-sided structure (no enclosing walls)
Pergola 3	Open pergola with every side open	Open-sided structure (no enclosing walls)

- 12.4 In addition to the physical construction, a range of operational and management measures will be implemented to further minimise noise emissions, as set out in Table 12.2.

Table 12.2 Operational Mitigation Measures

Measure	Description
Music control	Low-level background music only. No external amplified music other than one external speaker facing the canal, positioned away from St John's Road and residential properties.
Speaker location	One external speaker facing the canal, as shown on the proposed drawings.
Customer management	Staff will monitor external areas to ensure reasonable noise levels and discourage loud behaviour.
Deliveries and waste collection	Restricted to daytime hours only.
Plant and equipment	Kitchen extract, ventilation and refrigeration plant to be selected, installed and maintained to minimise noise, with appropriate screening where external.
Dispersal	Customers will be encouraged to leave the premises quietly and gradually, with staff presence at closing time.

- 12.5 With the above acoustic construction and mitigation measures in place, noise from the operation of the premises is considered to be appropriately controlled and unlikely to result in a significant adverse impact on nearby residential amenity.



Key Points

The partially enclosed area will be constructed using 30 mm soundproof panels with a 30 mm ECO-RIP insulated roof panel, as shown on the proposed drawings. The three pergolas will remain open on all sides. Combined with operational controls, these measures will help minimise noise emissions and protect nearby residential amenity.

13 Predicted Noise at Residential Receptors

Figure 13.1 Predicted Night-time Noise Levels at Residential Receptors

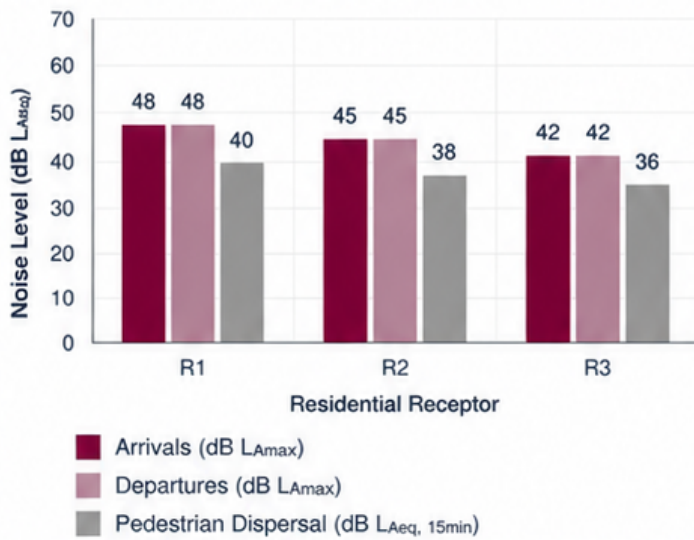


Figure 13.2 Music and Plant Noise Levels at Residential Receptors

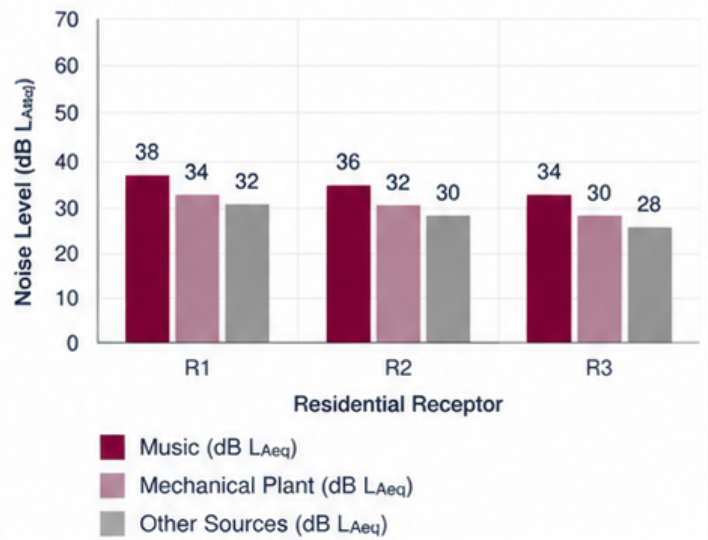


Figure 13.3 Comparison with Typical Night-time Background Levels

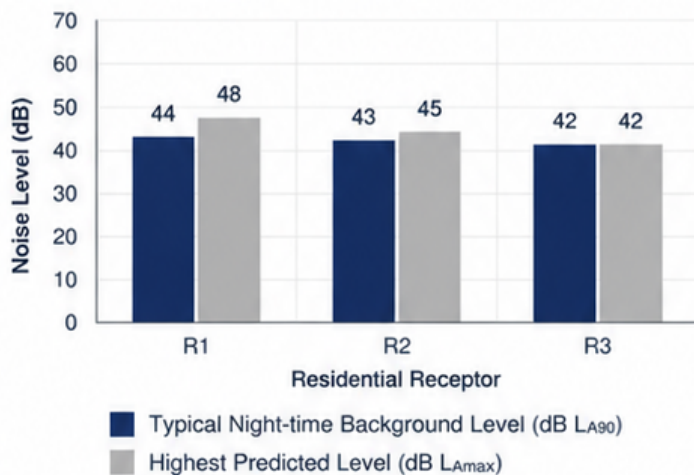


Figure 13.4 Contribution of Noise Sources (at Nearest Receptor R1)

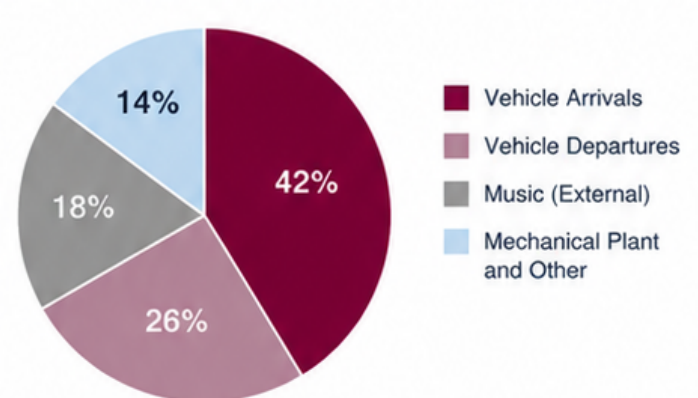
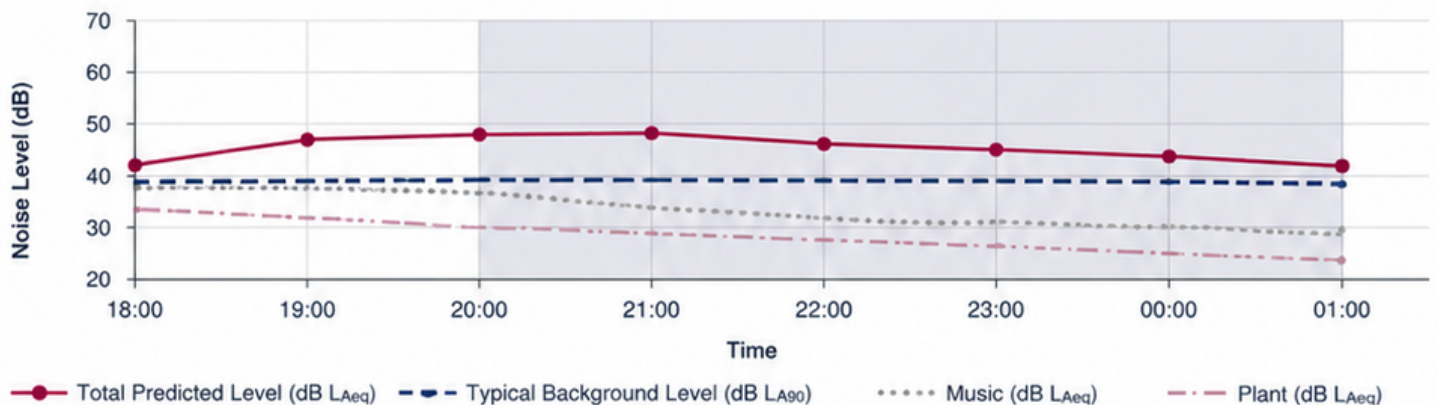


Figure 13.5 Predicted Noise Profile During Operating Hours (R1 – Worst Case)



14 Conclusion

- 14.1 This Noise Impact Assessment has been undertaken to evaluate the potential effects of the proposed operation of Cave (The Pipemakers Arms), 58 St John's Road, Uxbridge, UB8 2UR, on nearby residential receptors, with a particular focus on night-time noise.
- 14.2 The assessment has considered all relevant noise sources associated with the proposal, including music, mechanical plant, customer arrivals and departures, external seating areas, deliveries, waste collection and other ancillary activities. The analysis is based on the proposed layout and construction details, the operational assumptions, measurements at comparable venues and established guidance from the Institute of Acoustics (IOA) and local authority requirements.
- 14.3 The predicted noise levels at the nearest residential receptors are below typical night-time background levels or only marginally above, and are not considered to result in a significant adverse impact on residential amenity. The use of low-level background music, a single external speaker facing the canal (away from sensitive receptors), and the implementation of appropriate operational controls will ensure that noise emissions are effectively managed.
- 14.4 The proposed acoustic construction, including 30 mm soundproof panels and a 30 mm ECO-RIP insulated roof panel to the partially enclosed seating area, together with the open-sided pergolas, has been designed to minimise noise breakout whilst maintaining an open and airy outdoor environment. Mechanical plant will be suitably specified, installed and maintained, and servicing and waste collection will be restricted to daytime hours only.
- 14.5 With the mitigation measures set out in this report, the continued operation of the premises is considered to be acceptable in acoustic terms and is unlikely to give rise to an unacceptable impact on nearby residential receptors.
- 14.6 This assessment demonstrates that the proposal is consistent with the relevant policy requirements and good practice guidance, and provides a robust framework for managing noise during the operation of the premises.

On the basis of the information provided and the assessment undertaken, it is concluded that the proposed operation of Cave (The Pipemakers Arms), 58 St John's Road, Uxbridge, UB8 2UR, can be carried out without causing a significant adverse impact on nearby residential amenity, subject to the implementation of the acoustic construction and mitigation measures detailed in this report.
