



Jacks Pill, Newport

Noise Assessment for Planning Condition Discharge

19th August 2026

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1. INTRODUCTION

1.1. Overview

inacoustic has been commissioned to assess the potential impact of noise at a site adjacent to Usk Way and Jack's Pill, Newport, in respect of the site's suitability for residential development and likely acoustic mitigation requirements.

The site at Usk Way, Newport benefits from an extant planning permission granted in December 2021, which is due to expire within the next year. Tai Hedyd (formerly Newport City Homes) are proposing to make amendments to the approved scheme in response to requirements arising from the Building Safety Act, including reductions in building heights and potential internal reconfiguration of residential units.

Due to the nature and extent of the proposed changes, Newport City Council has advised that the amendments should be regularised via a Section 73 application rather than a non-material amendment.

inacoustic previously undertook the Noise Assessment in support of the original planning application (Report Ref. 21-074). Given the passage of time since the original assessment and the proposed changes to the scheme, it was considered appropriate to undertake a new environmental baseline sound survey and subsequent planning-stage Noise Impact Assessment to support the Section 73 application. The survey data has been used to inform this separate document, but not for this condition discharge assessment.

The following technical noise assessment has been produced to provide supporting information to accompany a s73 planning application to Newport City Council and is based upon environmental noise measurements undertaken at the site.

This noise assessment is necessarily technical in nature; therefore a glossary of terms is included in Appendix A to assist the reader.

1.2. Scope and Objectives

The scope of the noise assessment can be summarised as follows:

- A review of the relevant Planning Policy Framework and Conditions stipulated by Newport City Council
- An assessment of the acoustic performance of proposed separating wall and floor constructions; and
- Comparison against the relevant criterion to identify whether the Condition can be discharged.

2. LEGISLATION AND POLICY FRAMEWORK

The development proposals for the Site are guided by the following legislation, policy directives and guidance:

2.1. Legislation

2.1.1. Well-being of Future Generations (Wales) Act 2015

The Well-being of Future Generations (Wales) Act 2015 has a number of wellbeing goals to achieve through implementing sustainable development. Changes in noise levels can have an impact on the health of habitat and humans, as such the goals to create 'a resilient Wales' and 'a healthier Wales' are applicable.

2.2. National Policy

2.2.1. Future Wales: The National Plan 2040

The National Plan states the following under the heading Developing infrastructure responsibly:

When proposing new transport infrastructure or new development, average population exposure to air and noise pollution should be reduced and soundscapes improved where it is practical and feasible to do so. At the very least, exposure to pollution should be minimised. This will include taking into account the long-term effects of current and predicted levels of air and noise pollution on individuals, society and the environment arising as a result of proposals for transport infrastructure or development.

2.2.2. Planning Policy Wales

The Government's planning policies for Wales are contained in Planning Policy Wales (Edition 12, 7th February 2024). The policy provides overarching requirements for developments to adequately control noise pollution, to provide appropriate soundscapes and to incorporate good acoustic design.

The policy is supplemented by the Noise and Soundscape Action Plan 2018-2023, which provides more detailed guidance on planning for a new development, but does not set out specific assessment methods or criteria. The guidance in this document has been used to inform a qualitative assessment of the effect the proposed development could have on the local soundscape.

2.2.3. Technical Advice Note (Wales) 11 – Noise

Technical Advice Note (Wales) 11 (TAN11) has been referenced in determining the suitability of the Site for residential development. TAN11 sets out the Welsh Assembly Government's policies on noise-related planning issues. It sets out the overarching policy context for the management of noise within the planning system, in terms of how both noise-generating developments and noise-sensitive developments should be considered.

TAN11 gives guidance to local authorities in Wales on the use of their planning powers to minimise the adverse impact of noise. Specifically, TAN11:

- outlines the considerations to be taken into account when determining planning applications for both noise-sensitive developments and for those activities which will generate noise;
- sets out noise exposure categories for residential development, encourages their use and recommends appropriate levels for exposure to different sources of noise; and
- advises on the use of planning conditions to minimise the impact of noise.

The four noise exposure category bands set out in TAN11 (or NECs) are designed to assist local planning authorities in evaluating applications for residential development in noisy areas. Table 1 summarises the noise levels that correspond to each NEC band for mixed noise sources, which are the most relevant to this development.

TABLE 1: NOISE LEVELS CORRESPONDING TO NECs FOR NEW DWELLINGS – $L_{Aeq,T}$ DB

Time Period	Noise Exposure Category (NEC) – Road Traffic			
	A	B	C	D
07:00-23:00	<55	55 – 63	63 – 72	>72
23:00-07:00	<45	45 – 57	57 – 66	>66
N.B. Additionally, during night-time (2300 – 0700), sites where individual noise events exceed 82 dB L_{Amax} (slow time weighting) more than twice in any hour during this period should be treated as being in NEC C, regardless of the $L_{Aeq,8h}$ (except where the $L_{Aeq,8h}$ already puts the site in NEC D).				

The relevant planning advice to the local authority with respect to each NEC is presented in Table 2.

TABLE 2: PLANNING ADVICE CORRESPONDING TO NECs FOR NEW DWELLINGS

NEC	Advice to Local Planning Authority
A	Noise need not be considered as a determining factor in granting planning permission, although the noise level at the high end of the category should not be regarded as a desirable level.
B	Noise should be taken into account when determining planning applications and, where appropriate, conditions imposed to ensure an adequate level of protection against noise.
C	Planning permission should not normally be granted. Where it is considered that permission should be given, for example because there are no alternative quieter sites available, conditions should be imposed to ensure a commensurate level of protection against noise.
D	Planning permission should normally be refused.

In addition to the above, TAN11 also states that during the night, (23:00 to 07:00 hours):

“Sites where individual noise events regularly exceed 82dB L_{Amax} (S time weighting) several times in any hour should be treated as being in NEC C, regardless of the $L_{Aeq,8hr}$ (except where the $L_{Aeq,8hr}$ already puts the site into NEC D).”

The advice within TAN 11 is useful as a planning tool; however, it is quite blunt, so reference is primarily made within this report to British Standards, which offer a greater degree of objective analysis.

2.3. British Standards

2.3.1. BS8233:2014

BS 8233:2014 draws on the results of research and experience to provide information on achieving internal acoustic environments appropriate to their functions. The guideline values provided are in terms of an average (L_{Aeq}) level.

The standard advises that, for steady external noise sources, it is desirable for internal ambient noise levels to not exceed the guidance values, as detailed below in Table 3.

TABLE 3: BS8233:2014 AMBIENT NOISE LEVELS

Activity	Location	07:00 to 23:00	23:00 to 07:00
Resting	Living room	35 dB $L_{Aeq,16hour}$	-
Dining	Dining room	40 dB $L_{Aeq,16hour}$	-
Sleeping	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

BS 8233:2014 goes on to suggest that where development is considered necessary or desirable, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions will still be achieved.

With regard to maximum noise levels, the standard identifies that regular individual noise events (such as passing trains or scheduled aircraft etc) can cause sleep disturbance. The standard does not provide a guideline design target, but simply goes on to suggest that a guideline value may be set in terms of SEL or $L_{Amax,F}$, depending upon the character and number of events per night. It goes on to suggest that more sporadic noise events could require separate values.

In respect of external noise levels, the guidance in BS 8233:2014 suggests that “*it is desirable that the external noise level does not exceed 50dB $L_{Aeq,T}$, with an upper guideline value of 55dB $L_{Aeq,T}$ which would be acceptable in noisier environments*”.

BS 8233:2014 provides a much more detailed narrative on noise levels in external amenity areas and acknowledges that it may not always be necessary or feasible to ensure that noise levels remain within these guideline values.

In respect of gardens and patios, BS 8233:2014 states;

“...it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable.”

BS 8233: 2014 goes on to state, for areas adjoining the strategic transport network:

“...a compromise between elevated noise levels and other factors, such as the convenience of living in these locations or making efficient use of land resources to ensure development needs can be met,

might be warranted. In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces, but should not be prohibited”.

In respect of balconies, roof gardens and terraces, BS 8233:2014 states; “Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses; however, the general guidance on noise in amenity space is still appropriate for larger balconies, roof gardens and terraces, which might be intended to be used for relaxation. In high-noise areas, consideration should be given to protecting these areas by screening or building design to achieve the lowest practicable levels. Achieving levels of 55 dB $L_{Aeq,T}$ or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space”.

It is clear from the narrative of BS 8233:2014, that proposed development within noisy environments should be designed to ensure that the recommended internal design standards are achieved, and that noise levels in external amenity areas are designed to effectively control and reduce noise levels, although it acknowledges that in certain circumstance meeting the external design recommendations may not be feasible, or necessary, especially where the provision of such spaces is desirable for other technical, planning or policy reasons.

2.4. Planning Conditions

2.4.1. Condition 7 – Enhanced Sound Insulation Value

The following condition has been stipulated by Newport City Council:

‘7 Prior to the commencement of the development, details shall be submitted to and approved in writing by the Council, of an enhanced sound insulation value $D_{nT,w}$ [and $L'_{nT,w}$] of at least 5dB above the Building Regulations value, for the floor/ceiling/wall structures separating different types of rooms/uses in adjoining dwellings, namely [e.g. living room and kitchen above bedroom of separate dwelling]. Approved details shall be implemented prior to occupation of the development and thereafter be permanently retained.

Reason: To ensure that the amenity of occupiers of the development site is not adversely affected by noise, in accordance with policies GP2 and GP7 of the Newport Local Development Plan.’

3. SITE DESCRIPTION

3.1. Site and Surrounding Area

The Proposed Development site currently comprises a car park, to the south of Endeavour House; a large student accommodation block serving the University of South Wales.

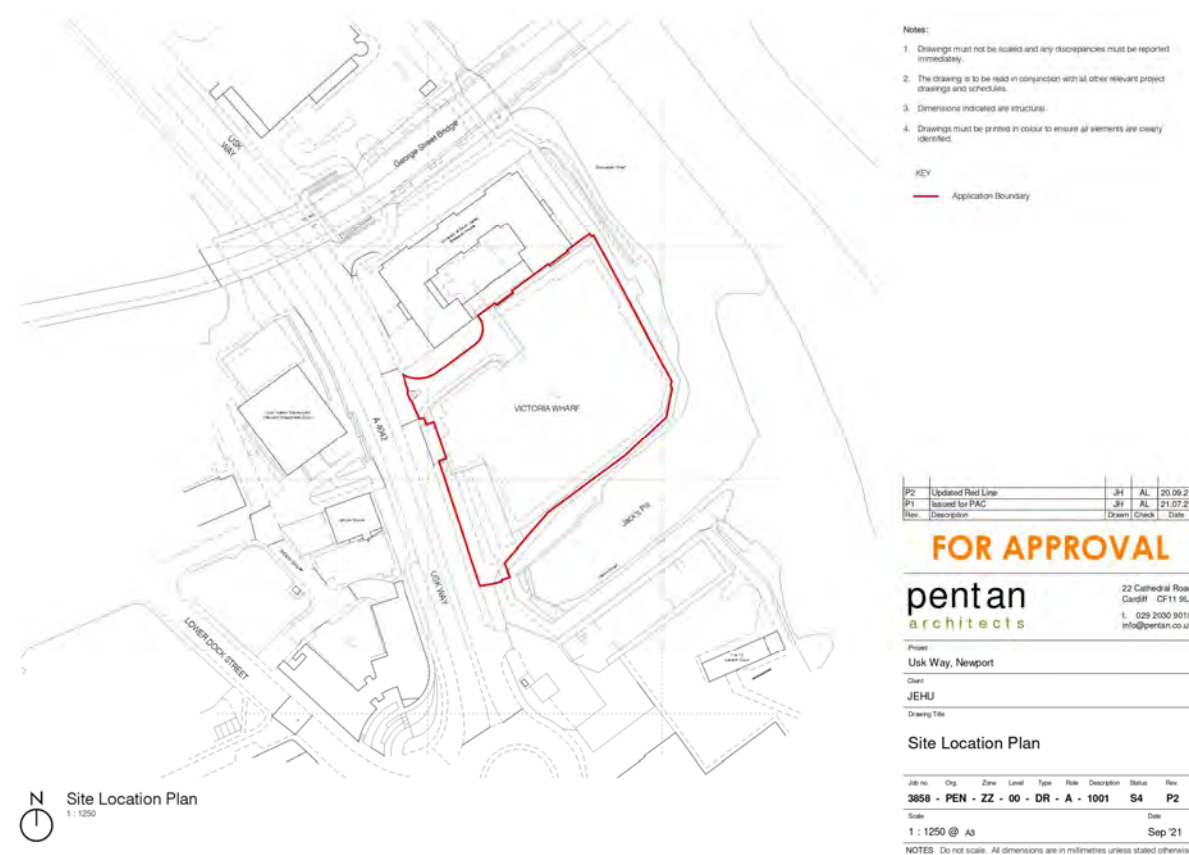
The Proposed Development area can be seen in Figure 1.

The area surrounding the site comprises a mix of residential and employment uses, with the complex including Newport Magistrates Court being located to the west of the site, across Usk Way.

The site is bound to the east and south by the River Usk and a disused dock inlet, known as Jack's Pill; to the west by the A4042 Usk Way and to the north by Endeavour House, which provides effective screening between the site and George Street/George Street Bridge.

The site is entirely acoustically influenced by road traffic, primarily vehicles travelling along Usk Way, with less significant contributions arising from vehicles using George Street/George Street Bridge.

FIGURE 1: PROPOSED DEVELOPMENT SITE AND SURROUNDING AREA



3.2. Proposed Development Overview

The proposals comprise the redevelopment of the site to accommodate a 122-unit apartment complex, extending across five blocks each 5 to 6 storeys in height, as shown in the Figures below and over the subsequent pages.

The proposals will create a communal amenity space, within the courtyard area formed by the shape of the proposed building, which will be supplemented by balconies to some of the apartments.

It is understood that the entirety of the Proposed Development will be equipped with a Mechanical Ventilation Heat Recovery (MVHR) system, with openable windows for purge ventilation.

FIGURE 2: PROPOSED DEVELOPMENT



FIGURE 6: ELEVATIONS – BLOCK D



4. PLANNING CONDITION 7 – ENHANCED SOUND INSULATION

Planning Condition 7 requires that the sound insulation for the floor/ceiling/wall structures separating different types of rooms/uses in adjoining dwellings, namely [e.g. living room and kitchen above bedroom of separate dwelling] be uprated by 5 dB above the requirements of the Approved Document E.

The adopted standard for 'Approved Document E (ADE) Resistance to the Passage of Sound' of the Building Regulations (England and Wales) came into force in 1st July 2003, incorporating 2004, 2010, 2013 and 2015 amendments. This document stipulates minimum requirements for the sound insulation levels within residential dwellings. Approved Document E states:

"In the Secretary of State's view the normal way of satisfying Requirements E1 will be to build separating walls, separating floors and stairs that have a separating function, together with associated flanking construction, in such a way that they achieve the sound insulation values for dwelling-houses and flats set out in Table 1a, and the values for residential purposes set out in Table 1b."

Table 0.1a of ADE 2015 provides the performance standards for purpose built dwelling houses and flats, which is reproduced below.

Table 0.1a Dwelling-houses and flats – performance standards for separating walls, separating floors, and stairs that have a separating function		
	Airborne sound insulation sound insulation $D_{nT,w} + C_{tr}$ dB (Minimum values)	Impact sound insulation $L'_{nT,w}$ dB (Maximum values)
Purpose built dwelling-houses and flats		
Walls	45	-
Floors and stairs	45	62
Dwelling-houses and flats formed by material change of use		
Walls	43	-
Floors and stairs	43	64

As the development is a new build, the minimum airborne sound insulation requirement of the Approved Document E is $D_{nT,w} + C_{tr}$ 45 dB, and the maximum impact sound insulation requirement in $L'_{nT,w}$ 62 dB.

As such, Planning Condition 7 requires that the minimum airborne sound insulation performance between the flats is $D_{nT,w} + C_{tr}$ 50 dB, and the maximum impact sound insulation performance between the flats is $L'_{nT,w}$ 57 dB.

The minimum performance requirements for separating elements within this development in terms of $D_{nT,w} + C_{tr}$ and $L'_{nT,w}$ are in Table 10 and Table 11.

TABLE 4: SUMMARY OF AIRBORNE SOUND INSULATION REQUIREMENTS (LABORATORY PERFORMANCE)

Criteria	Type	ADE (+5dB) Requirement
New Build	Floors	≥ 50 dB $D_{nT,w} + C_{tr}$
New Build	Walls	≥ 50 dB $D_{nT,w} + C_{tr}$

TABLE 5: SUMMARY OF IMPACT SOUND INSULATION REQUIREMENTS (LABORATORY PERFORMANCE)

Criteria	Type	ADE (+5dB) Requirement
Change of Use	Floor	$\leq 57 \text{ dB } L'_{nT,w}$

4.1. Sound Insulation - Separating Floors

The client has provided the following separating floor specification, which can be seen below in Table 6.

TABLE 6 : EXAMPLE FLOOR SPECIFICATION

Separating Element Description	Floor Construction	$D_{nT,w}+C_{tr}$	$L'_{nT,w}$
Party Floor	- Carpet or vinyl with 6mm resilient underlay 160mm MetFloor 80 - MF ceiling grid 12.5mm plasterboard	59	48

It can be seen that the proposed floor build-up will meet the specifications required to achieve the enhancement in sound insulation above the requirements of the Approved Document E, as stipulated in Planning Condition 7. A datasheet for the proposed build-up can be seen in Appendix C of this report.

4.1.1. General Floor Construction Considerations

The above constructions should be capable of achieving the necessary performances. However, the following points should be considered to ensure the performance of the floors is not compromised:

- Ideally downlighters should be avoided. If they are required they should be no more than 1 downlight per 2m² of ceiling area;
- Skirting boards should be fixed so that they loosely sit on top of the flanking isolation strip;
- Ensure all air gaps are sealed with a non-hardening mastic;
- Ensure floor treatment is installed in accordance with the manufacturer's instructions;
- Install flanking strips around the perimeter of the flooring board to isolate floor from walls and skirtings; and
- Ensure that internal walls do not penetrate the sub floor or ceiling plasterboard and is built up to the underside only.

4.2. Sound Insulation - Separating Walls

The client has provided the following separating wall specification, which can be seen below in Table 6.

TABLE 7 : PROPOSED FLOOR SPECIFICATION

Separating Element Description	Wall Construction	$D_{nT,w}+C_{tr}$
Party Wall	100mm LGSF 75mm Rockwool - Resilient bar each side 3no. 15mm FireLine	56

It can be seen that the proposed wall build-up will meet the specifications required to achieve the enhancement in sound insulation above the requirements of the Approved Document E, as stipulated in Planning Condition 7. A datasheet for the proposed build-up can be seen in Appendix C of this report.

It is therefore asserted that the obligations of Planning Condition 7 can be discharged.

5. CONCLUSION

inacoustic has been commissioned to demonstrate that the separating wall and floor elements of the consented development at Usk Way and Jack's Pill, Newport, are sufficient to comply with the enhanced sound insulation requirements as stipulated by Newport City Council.

This technical noise assessment has been produced to provide supporting information to accompany an S73 planning application to Newport City Council.

Specific consideration has been given to the specification of the party floor and wall between the flats, which enhances the sound insulation by 5 dB above the requirements of the Approved Document E, as required by Planning Condition 7.

In light of the above, which demonstrates that the site is predicted to meet the requirements of the relevant British Standard and planning guidance, it is considered that the obligations of Planning Condition 7 have been met, and that these conditions can be discharged.

6. APPENDICES

6.1. Appendix A – Definition of Terms

Sound Pressure	Sound, or sound pressure, is a fluctuation in air pressure over the static ambient pressure.
Sound Pressure Level (Sound Level)	The sound level is the sound pressure relative to a standard reference pressure of 20µPa (20x10 ⁻⁶ Pascals) on a decibel scale.
Decibel (dB)	A scale for comparing the ratios of two quantities, including sound pressure and sound power. The difference in level between two sounds s1 and s2 is given by 20 log10 (s1 / s2). The decibel can also be used to measure absolute quantities by specifying a reference value that fixes one point on the scale. For sound pressure, the reference value is 20µPa.
A-weighting, dB(A)	The unit of sound level, weighted according to the A-scale, which takes into account the increased sensitivity of the human ear at some frequencies.
Noise Level Indices	Noise levels usually fluctuate over time, so it is often necessary to consider an average or statistical noise level. This can be done in several ways, so a number of different noise indices have been defined, according to how the averaging or statistics are carried out.
L _{eq,T}	A noise level index called the equivalent continuous noise level over the time period T. This is the level of a notional steady sound that would contain the same amount of sound energy as the actual, possibly fluctuating, sound that was recorded.
L _{max,T}	A noise level index defined as the maximum noise level during the period T. L _{max} is sometimes used for the assessment of occasional loud noises, which may have little effect on the overall L _{eq} noise level but will still affect the noise environment. Unless described otherwise, it is measured using the 'fast' sound level meter response.
L _{90,T}	A noise level index. The noise level exceeded for 90% of the time over the period T. L ₉₀ can be considered to be the "average minimum" noise level and is often used to describe the background noise.
L _{10,T}	A noise level index. The noise level exceeded for 10% of the time over the period T. L ₁₀ can be considered to be the "average maximum" noise level. Generally used to describe road traffic noise.
Free-Field	Far from the presence of sound reflecting objects (except the ground), usually taken to mean at least 3.5m
Facade	At a distance of 1m in front of a large sound reflecting object such as a building façade.
Fast Time Weighting	An averaging time used in sound level meters. Defined in BS 5969.
Reverberation Time, T	The reverberation time is defined as the time taken for a noise level in an enclosed space to decay by 60 dB from a steady level, once the noise source has stopped. It is measured in seconds.
Sound Insulation	The sound insulation of a building element or system is its ability to reduce the sound transmission through it. The sound insulation is measured at different frequencies, normally 100-3150 Hz.
Airborne Single Number Quantity Weighting	This is a weighting procedure defined in BS EN ISO 717, Part 1 for converting third octave band R, R', D and DnT values to a single number quantity denoted as Rw, R'w, Dw or DnT,w. It is a decibel value.

Impact Single Number Quantity Weighting	This is a weighting procedure defined in BS EN ISO 717, Part 2 for converting third octave band L'nT values to a single number quantity denoted in L'nT,w. It is a decibel value.
Spectrum Adaptation Terms: C and Ctr	The single number rating method defined in BS EN ISO 717 uses a standard reference curve to determine the weighted value of airborne sound insulation. The spectrum adaptation terms C and Ctr may be used to take into account different source spectra as indicated in the standard.

In order to assist the understanding of acoustic terminology and the relative change in noise, the following background information is provided.

The human ear can detect a very wide range of pressure fluctuations, which are perceived as sound. In order to express these fluctuations in a manageable way, a logarithmic scale called the decibel, or dB scale is used. The decibel scale typically ranges from 0 dB (the threshold of hearing) to over 120 dB. An indication of the range of sound levels commonly found in the environment is given in the following table.

TABLE 8: TYPICAL SOUND LEVELS FOUND IN THE ENVIRONMENT

Sound Level	Location
0dB(A)	Threshold of hearing
20 to 30dB(A)	Quiet bedroom at night
30 to 40dB(A)	Living room during the day
40 to 50dB(A)	Typical office
50 to 60dB(A)	Inside a car
60 to 70dB(A)	Typical high street
70 to 90dB(A)	Inside factory
100 to 110dB(A)	Burglar alarm at 1m away
110 to 130dB(A)	Jet aircraft on take off
140dB(A)	Threshold of Pain

The ear is less sensitive to some frequencies than to others. The A-weighting scale is used to approximate the frequency response of the ear. Levels weighted using this scale are commonly identified by the notation dB(A).

In accordance with logarithmic addition, combining two sources with equal noise levels would result in an increase of 3 dB(A) in the noise level from a single source.

A change of 3 dB(A) is generally regarded as the smallest change in broadband continuous noise which the human ear can detect (although in certain controlled circumstances a change of 1 dB(A) is just perceptible). Therefore, a 2 dB(A) increase would not be normally be perceptible. A 10 dB(A) increase in noise represents a subjective doubling of loudness.

A noise impact on a community is deemed to occur when a new noise is introduced that is out of character with the area, or when a significant increase above the pre-existing ambient noise level occurs.

For levels of noise that vary with time, it is necessary to employ a statistical index that allows for this variation. These statistical indices are expressed as the sound level that is exceeded for a percentage of the time period of interest. In the UK, traffic noise is measured as the L_{A10} , the noise level exceeded for 10% of the measurement period. The L_{A90} is the level exceeded for 90% of the time and has been adopted to represent the background noise level in the absence of discrete events. An alternative way of assessing the time varying noise levels is to use the equivalent continuous sound level, L_{Aeq} .

This is a notional steady level that would, over a given period of time, deliver the same sound energy as the actual fluctuating sound.

To put these quantities into context, where a receiver is predominantly affected by continuous flows of road traffic, a doubling or halving of the flows would result in a just perceptible change of 3 dB, while an increase of more than 25%, or a decrease of more than 20%, in traffic flows represent changes of 1 dB in traffic noise levels (assuming no alteration in the mix of traffic or flow speeds).

Note that the time constant and the period of the noise measurement should be specified. For example, BS 4142 specifies background noise measurement periods of 1 hour during the day and 15 minutes during the night. The noise levels are commonly symbolised as $L_{A90,1\text{hour}}$ dB and $L_{A90,15\text{mins}}$ dB. The noise measurement should be recorded using a 'FAST' time response equivalent to 0.125 ms.

6.2. Appendix B – Sound Measurement Results

FIGURE 8: MEASURED TIME HISTORY – MP1

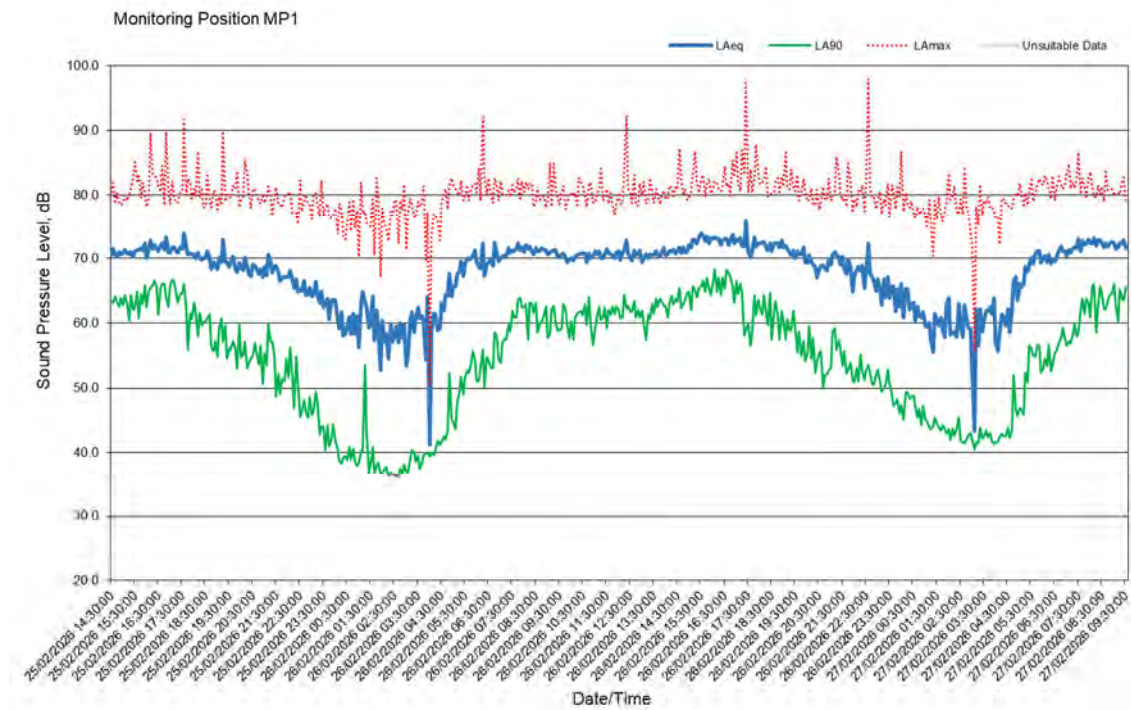
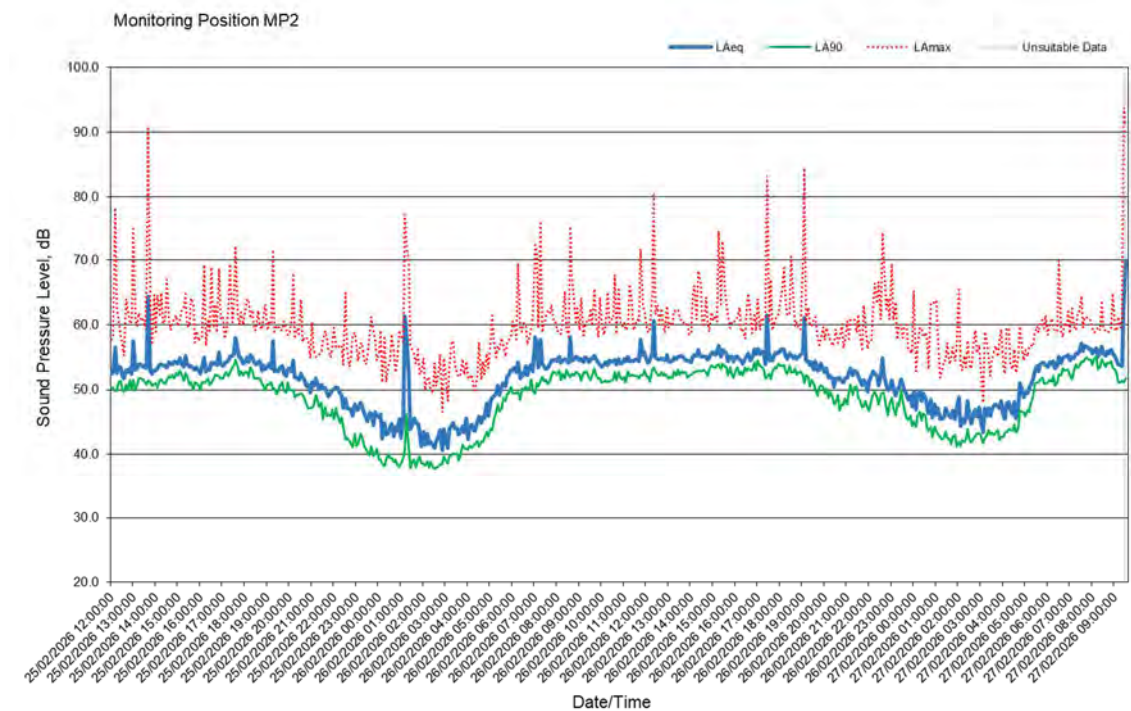


FIGURE 9: MEASURED TIME HISTORY – MP2



6.3. Appendix C – Floor/Wall Specification

If there is a minimum enhancement of 5 dB above Building Regulations i.e. $D_{nt,w} + C_{tr} > 50$ dB you will require our following LGSF wall make-up:

Construction	Project Sector, Location	Requirement	Test Results
	Residential, County	$\geq 45dB$ (Minimum $D_{nT,w} + C_{tr}$)	PASS Range: 51 to 60dB Mean: 59.4dB

If there is a minimum enhancement of 5 dB above Building Regulations i.e. $D_{nt,w} + C_{tr} > 50$ dB & $L_nTw < 57$ dB you will require our following composite concrete floor make-up. Floor finishes can vary as long as there is a 6mm resilient layer on top of the concrete slab or timber floating floor.

Construction	Project Sector, Location	Requirement	Test Results
	Student Accommodation, Durham	$\geq 45dB$ (Minimum $D_{nT,w} + C_{tr}$)	PASS Range: 51 to 60dB Mean: 59.4dB
		$\geq 45dB$ (Minimum L_nTw)	PASS Range: 45 to 49dB Mean: 47.7dB

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