Appendix 9.2 – Relevant Legislation, Policy & Guidance

Legislation

Control of Pollution Act, 1974	This Act contains powers for local authorities to deal with noise and vibration from construction and demolition sites. Prior consent for demolition and construction activities can be granted under Section 61 of the Act.
Planning and Compulsory Purchase Act, 2004	This Act requires local authorities to draw up local development plans, setting the broad framework for acceptable development in their area and reconciling any potential conflicts. Under the Town and Country Planning Act 1990, and in their development management role, local planning authorities may attach conditions to Planning Consents which may include controls on the emission of noise. Advice on the use of these powers is given to English authorities in the light of the Governments Noise Policy Statement for England in the National Planning Policy Framework.
Environmental Protection Act, 1990	This Act provides the principal controls over so-called 'statutory nuisances', including noise emitted from premises so as to be prejudicial to health or a nuisance. Under the Act, local authorities have a duty to inspect their areas from time-to-time to detect nuisances and, subject to a discretion to defer for seven days, when satisfied that a statutory nuisance exists or is likely to occur or recur, to serve an abatement notice on the person responsible. They also have a duty to investigate any complaint made by a person living within their area. Businesses are able to rely on the provision of 'best practicable means' to attenuate noise sources, but failure to comply with a notice is a criminal offence. Local authorities have a power of entry to private premises, power to seize noisemaking equipment and powers to carry out works in default of Notices.
Licensing Act, 2003	This Act establishes a scheme administered by local authorities for licensing premises which are used for the supply of alcohol, to provide 'regulated entertainment' or to provide 'late night refreshment'. Licensing authorities are obliged to prevent public nuisance, e.g. through noise, via the use of appropriate conditions.
Building Regulations, 2010	The development will need to be built in such a way that it conforms to the Building Regulations 2010. In relation to noise and acoustics, the key documents to consider are: • Approved Document E: 2003 Edition (incorporating amendments to 2015) – Resistance to the Passage of Sound [ADE]; • Approved Document F: 2021 Edition – Ventilation [ADF]; • Approved Document O: 2021 Edition – Overheating [ADO]. **ADE** relates to the design of the building's internal building fabric and primarily considers the control sound transfer between adjacent spaces. In planning terms, this development will contain party floors separating new homes from non-residential (e.g. commercial or amenity) spaces. These vertical adjacencies will need to be designed in such a way that they achieve, as a minimum, the below ADE on-site sound insulation performance.

Description	Minimum Performance
Minimum airborne sound level difference *Party Floors separating dwellings from other parts of the building*	45 dB $D_{nT,w}$ + C_{tr}

ADF includes a section on controlling noise from ventilation systems. It states that "account should be taken of outside noise when considering whether openable windows are appropriate for purge ventilation" and that noise from mechanical ventilation systems operating under normal conditions

	(not boost rates) should not exceed 30 dB $L_{Aeq,T}$ for noise sensitive rooms (e.g. bedrooms) and 45 dB $L_{Aeq,T}$ in less sensitive rooms. **ADO** took effect on 15 June 2022 and does not apply to work subject to a building notice, full plans application or initial notice submitted before that date, provided the building work is started before 15 June 2023. It requires noise to be considered as part of the development's overheating strategy in locations where external noise may be an issue. It states that the overheating strategy should take account of the likelihood that windows will be closed during sleeping hours if noise within bedrooms exceeds the following limits. • 40 dB $L_{Aeq,T}$, averaged over 8 hours (between 11pm and 7am). • 55 dB L_{AFmax}, more than 10 times a night (between 11pm and 7am).

Policy

Noise Policy Statement for England, 2010	The NPSE launched in March 2010 states the long-term vision of Government noise policy is to "promote good health and a good quality of life through the effective management of noise within the context of Government policy on sustainable development". The long-term vision is supported by the following aims; through the effective management and control of environmental, neighbour and neighbourhood noise within the context of Government policy on sustainable development: • Avoid significant adverse impacts on health and quality of life; • Mitigate and minimise adverse impacts on health and quality of life; • Where possible, contribute to the improvement of health and quality of life. The intention is that the NPSE should apply to all types of noise apart from noise in the workplace (occupational noise). The NPSE introduces a three-tier concept for the assessment of noise impacts onto a receptor: • **NOEL – No Observed Effect Level:** The level below which no effect can be detected and below which there is no detectable effect on health and quality of life due to noise. • **LOAEL – Lowest Observable Adverse Effect Level:** The level above which adverse effects on health and quality of life can be detected. • **SOAEL – Significant Observed Adverse Effect Level:** The level above which significant adverse effects on health and quality of life occur. There are no numeric thresholds relating to each of the above. The NPSE acknowledges that the severity of noise impacts vary depending upon the type of noise, the type of receptor, the duration (on-time) of the noise, the characteristics of the noise, the time of day, the day of the week, etc.. As a result, the definition of what constitutes an SOAEL is somewhat flexible.
National Planning Policy Framework, 2023 (NPPF)	The National Planning Policy Framework (NPPF) was first published in 2012 and sets out the government's planning policies for England and how these are expected to be applied. The latest revision (2023) states that the planning decisions should ensure that new development is "*appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environmental, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development*". In doing so, Paragraph 185 states they should (amongst other considerations):

- *"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; and,*
- *identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason."*

The expressive inclusion of noise in the NPPF means that it is a material planning consideration for local planning decisions.

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

Planning Practical Guidance – Noise, 2019 (PPG-N)

The PPG is a web-based resource, launched by the Department for Communities and Local Government (DCLG) in March 2014 to support the NPPF and make it more accessible. It advises on how planning can manage potential noise impacts in new development. The guidance is regularly reviewed and updated and noise is listed as a specific category. The guidance is for ad hoc developments, as major infrastructure is covered by overarching National Policy Statements.

PPG-N (Noise) was last updated in 2019 and states that "*noise needs to be considered when development may create additional noise, or would be sensitive to the prevailing acoustic environment (including any anticipated changes to that environment from activities that are permitted but not yet commenced). When preparing plans, or taking decisions about new development, there may also be opportunities to make improvements to the acoustic environment. Good acoustic design needs to be considered early in the planning process to ensure that the most appropriate and cost-effective solutions are identified from the outset*".

It provides the following tabulated summary of the effects of noise exposure (in terms of health and quality of life) associated with noise generating and sensitive developments.

Response	Examples of Outcomes	Increasing Effect Level	Action
No Observed Effect Level			
Not present	No effect	No Observed Effect	No specific measures required
No Observed Adverse Effect Level			
Present and not intrusive	Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life.	No Observed Adverse Effect	No specific measures required
Lowest Observed Adverse Effect Level			
Present and intrusive	Noise can be heard and causes small changes in behaviour, attitude or other physiological response, e.g. turning up volume of television; speaking more loudly; where there is no alternative ventilation, having to close windows for some of the time because of the noise. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a small actual or perceived change in the quality of life.	Observed Adverse Effect	Mitigate and reduce to a minimum

	Significant Observed Adverse Effect Level			
	Present and disruptive	The noise causes a material change in behaviour, attitude or other physiological response, e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant Observed Adverse Effect	Avoid
	Present and very disruptive	Extensive and regular changes in behaviour, attitude or other physiological response and/or an inability to mitigate effect of noise leading to psychological stress, e.g. regular sleep deprivation/awakening; loss of appetite, significant, medically definable harm, e.g. auditory and non-auditory.	Unacceptable Adverse Effect	Prevent

MCC Core Strategy, 2012

MCC's Core Strategy was adopted on the 11 July 2012 and is the key document in the Manchester Local Plan. It sets the out the long-term strategic policies for Manchester's future development and will form the framework that planning applications will be assessed against.

The Core Strategy requests that all new developments follow the 'Development Principles' and accord with the design guidance set out in the Supplementary Planning Documents. In accordance with Policy DM1, this includes the effects on amenity due to noise generated by a new development and, conversely for noise sensitive uses (e.g. residential), the effects of environmental noise onto the new development.

MCC Planning & Noise Technical Guidance, 2022

MCC's Supplementary Planning Document relating to noise is their 'Planning & Noise, Technical Guidance' published in October 2022 by their Environmental Protection Team. This document provides guidance to applicants and consultants concerning the assessment and prediction of environmental noise associated with a particular development. The key elements relevant to this development are summarised below.

In relation to noise affecting newly proposed residential properties, the council has adopted the following noise limits for sites affected only by environmental noise (e.g. road traffic):

Bedrooms (night time – 23.00 – 07.00) 30 dB L_{Aeq} (individual noise events should not normally exceed 45 dB $L_{Amax,F}$ by more than 10 times)
Living Rooms (daytime – 07.00 – 23.00) 35 dB L_{Aeq}
Gardens and terraces (daytime) 55 dB L_{Aeq}

Where residential developments are affected by 'entertainment' noise, the council set low frequency noise limits in accordance with NANR 45 Revision 1 and advise that "*a criterion that would achieve a condition of 'inaudible' / 'virtually inaudible' which is applicable for new residential developments that are structurally connected to entertainment venues (or vice versa) would be*:

'Music noise levels in the 63Hz and 125Hz octave centre frequency bands (L_{eq}) should be controlled so as not to exceed (in habitable rooms) 47dB and 41dB ($L_{eq,5min}$), respectively'.

"This criterion may also be applicable for new residential developments that are structurally separate from an existing entertainment venue."

In relation to commercial noise, MCC's guidance advises that "BS 4142 should be used to assess the likely impact of noise from industrial and commercial sources at noise sensitive premises".

The Council consider that new developments should contribute and enhance the area in which they are located and where possible, i.e. prevent 'noise creep', contribute to the improvement of

	people's health and quality of life as per the NPSE. With this in mind, the design objective should be: **'The development should be designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location.'** For fixed plant, the Council advises a BS 4142 assessment that demonstrates that: **'Externally mounted ancillary plant, equipment and servicing shall be selected and/or acoustically treated in accordance with a scheme designed so as to achieve a rating level of 5dB (L_{Aeq}) below the typical background (L_{A90}) level at the nearest noise sensitive location'.**
MCC Manchester Residential Quality Guidance, 2017	Section 4 of 'Make It a Home' section of The Manchester Residential Quality Guidance states that 'Homes are places of retreat. Residents should be able to 'shut out' the external world and enjoy sleep without suffering from either external noise generated by traffic or the public realm; or from neighbouring homes, common spaces or other functions in the building'.

Guidance

ProPG: Planning & Noise: Professional Practice Guidance on Planning & Noise, 2017	ProPG: Planning & Noise 'Professional Practice Guidance on Planning & Noise' was issued in May 2017 with the primary goal of assisting the delivery of sustainable residential development by promoting good health and well-being through the effective management of noise. It seeks to do that through encouraging a good acoustic design process in and around proposed new residential development having regard to national policy on planning and noise.
	
	It is applicable to noise from existing transport sources (noting that good professional practice should have regard to any reasonably foreseeable changes in existing and/or new sources of noise). The recommended approach is also considered suitable where some industrial or commercial noise contributes to the acoustic environment provided that is "*not dominant*".
	
	ProPG advocates a systematic, proportionate, risk based, 2-stage, approach. The approach encourages early consideration of noise issues, facilitates straightforward accelerated decision making for lower risk sites, and assists proper consideration of noise issues where the acoustic environment is challenging.
	
	The two sequential stages of the overall approach are:
	
	• **Stage 1** – an initial noise risk assessment of the proposed development site; and
	• **Stage 2** – a systematic consideration of four key elements.
	  o Element 1 – demonstrating a "Good Acoustic Design Process";
	  o Element 2 – observing internal "Noise Level Guidelines";
	  o Element 3 – undertaking an "External Amenity Area Noise Assessment"; and
	  o Element 4 – consideration of "Other Relevant Issues".
	
	The ProPG considers suitable guidance on internal noise levels found in BS 8233 (see below) with the addition of an $L_{Amax,f}$ requirement for bedrooms at night, as below.
	
	"*Regular individual noise events (for example, scheduled aircraft or passing trains) can cause sleep disturbance. A guideline value may be set in terms of SEL or $L_{Amax,F}$, depending on the character and number of events per night. Sporadic noise events could require separate values. In most circumstances in noise-sensitive rooms at night (e.g. bedrooms) good acoustic design can be used so that individual noise events do not normally exceed 45 dB $L_{Amax,F}$ more than 10 times a night. However, where it is not reasonably practicable to achieve this guideline then the judgement of*

acceptability will depend not only on the maximum noise levels but also on factors such as the source, number, distribution, predictability and regularity of noise events."

WHO European Noise Guidelines, 2018

The current WHO Environmental Noise Guidelines 2018 for the European Region supersede the 1999 Guidelines for Community Noise, although it does suggest that the 1999 values for outdoor noise levels for dwellings remain valid, as presented below.

Location	Critical Health Effect(s)	Noise Limit
Outdoor living area (gardens)	Serious annoyance, daytime/evening	55 dB $L_{Aeq,16hr}$
	Moderate annoyance, daytime/evening	45 dB $L_{Aeq,16hr}$
Outside bedroom window	Sleep disturbance, window open	45 dB $L_{Aeq,8hr}$
	30 dB $L_{Aeq,\ 8h}$	60 dB $L_{Amax,f}$

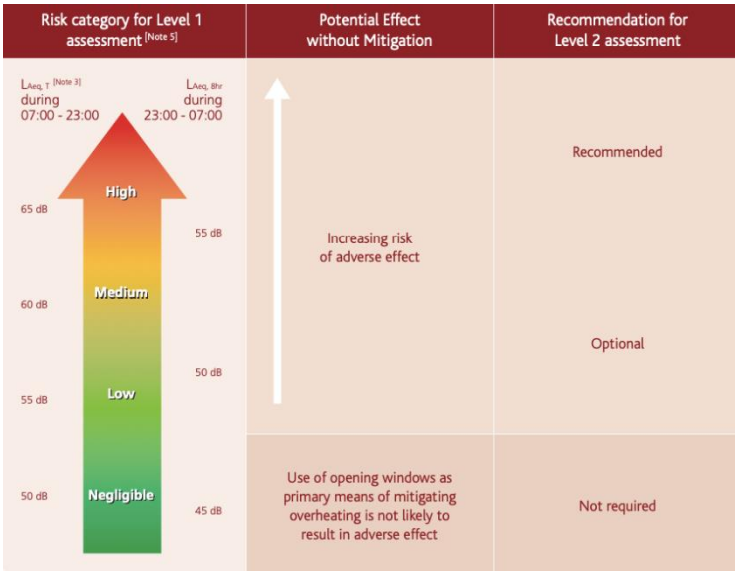
The above guideline values apply as a threshold above which "critical health effects" may occur. The values are therefore at the lowest noise limit to which any psychological or physiological effects may be triggered. With reference to the NPSE, these values are set at the Lowest Observed Adverse Effect Level (LOAEL). The WHO guidelines do not define the level above which effects would be considered significant (SOAEL). Designing for compliance with the LOAEL would, therefore, be considered the 'ideal' robust approach.

Exceedances of the WHO guideline values do not necessarily imply significant noise impact and, indeed, it may be that significant impacts do not occur until much higher degrees of noise exposure are reached.

Acoustics, Ventilation & Overheating Residential Design Guide, 2020

The Acoustics, Ventilation and Overheating Residential Design Guide (Version 1.1) was issued in January 2020 by the Association of Noise Consultants (ANC) and the Institute of Acoustics (IOA). This document provides guidance on the interdependence between acoustics, ventilation and overheating.

The AVO guide recommends a two-level approach to assess the potential impact of noise ingress through windows that have been opened to mitigate overheating and also noise from any mechanical services used to provide comfort cooling. The level 1 assessment relates to incident environmental noise levels across a proposed site, it is used to define "risk categories" for each building façade based on these levels. These categories are set out below:



	At planning stage the level of information required to undertake a level 2 assessment in-line with the AVO guide is often not available and a level 1 assessment, which establishes the risk categories of each proposed façade, is often most suitable.
BS 7445-1: 2003	Part 1 of BS 7445 defines the basic quantities to be used for the description of noise in community environments and describes basic procedures for the determination of these quantities. The methods and procedures described in this British Standard are intended to be applicable to sounds from all sources, individually and in combination, which contribute to the total noise at a site. At the present stage of technology this requirement is best met by adopting the equivalent continuous A-weighted sound pressure level as a basic quantity. Based on the principles described in this British Standard, acceptable limits of noise can be specified and compliance with these limits can be controlled.
ADL 72, 1996	The Environment Advisory Leaflet 72: Noise Control on Building Sides provides some guidance on setting appropriate construction noise limits depending on the site setting and independent of baseline noise conditions. These limits are:- • 70 dB(A) in rural, suburban and urban areas away from main road traffic and industrial noise. • 75 dB(A) in urban areas near main roads and heavy industrial areas.
BS 5228: 2009+A1: 2014	Parts 1 and 2 of BS 5228 provide guidance on the assessment of noise and vibration impacts during construction of a development site. It includes procedures for setting appropriate construction noise limits and estimating noise levels from construction activities as well as vibration attributable to piling activities. Part 1 sets thresholds of significant noise effect at dwellings for different assessment categories, known as the ABC Method. The standard also provides guidance on minimising potential impacts through the use of mitigation and the adoption of Best Practicable Means (BPM). Part 2 provides guidance on levels, in terms of PPV (Peak Particle Velocity), that can cause damage to structures from piling. In addition to the absolute vibration level, other factors to consider in assessing vibration are identified as being the nature of the vibration (transient or continuous), its frequency content and the type and condition of the exposed structures. Guidance is given to understand what the consequences might be of any predicted levels in terms of human perception and disturbance. It also provides guidance on building vibration response limits for structural and cosmetic damage, with reference to BS 7385.
BS 6472-1: 2008	British Standard BS 6472: 2008 “Guide to Evaluation of Human Exposure to Vibration in Buildings” advises that intermittent vibration events should not be judged based on perception alone but using the corresponding vibration dose value over a long period. BS 6472:2008 advises that “the VDV defines a relationship that yields a consistent assessment of continuous, intermittent, occasional and impulsive vibration and correlates well with subjective response” and also “the VDV is much more strongly influenced by vibration magnitude than by duration. A doubling of halving of the vibration magnitude is equivalent to an increase or decrease of exposure duration by a factor of sixteen.” The perception threshold for continuous whole-body vibration varies widely among individuals. Approximately half a typical population, when standing or seated, can perceive a vertical weighted peak acceleration of 0.015 m/s^2. A quarter of the population would perceive a vibration of

0.010 m/s^2 peak, but the least sensitive quarter would only be able to detect a vibration of 0.020 m/s^2 peak or more.

BS 7385-2: 1993

BS 7385: Part 2: 1993 provides guidance on acceptable values of transient vibration for the avoidance of cosmetic damage to buildings such as the formation of hairline cracks on drywall surfaces, or the growth of existing cracks in plaster or drywall surfaces or the formation of hairline cracks in mortar joints of brick, concrete construction. The stated levels below which there is a minimal risk of cosmetic damage are 15mm/s at 4Hz, rising to 20mm/s at 15Hz, further increasing to 50mm/s at 40Hz and above. BS 7385 also suggests that building damage is highly unlikely at vibration levels less than 12.5mm/s.

In addition to the above, BS 7385 gives specific vibration limits that are judged to represent a minimal risk of vibration-induced damage. As shown in the table below these vibration limits can be applied to different types of buildings and structures. It should be noted that the damage threshold is taken as cosmetic damage not structural failure and that in most situations, although cosmetic damage may be possible to buildings located within approximately 20m of piling activities, at greater distances damage is much less likely to arise.

BS 8233: 2014

British Standard 8233: 2014 '*Sound insulation and noise reduction for buildings*' presents the following desirable internal ambient noise levels for dwellings based on steady external noise sources (e.g. road traffic).

Activity	Location	Desirable Internal Ambient Noise Level	
		07:00 – 23:00	23:00 – 07:00
Resting	Living Rooms	35 dB $L_{Aeq,16hour}$	-
Dining	Dining Room/Area	40 dB $L_{Aeq,16hour}$	-
Sleeping (Daytime Resting)	Bedroom	35 dB $L_{Aeq,16hour}$	30 dB $L_{Aeq,8hour}$

BS 8233 states that where development is considered necessary or desirable, despite external noise levels above WHO guidelines, the internal target levels may be relaxed by up to 5 dB and reasonable internal conditions still achieved.

For outdoor living spaces, BS 8233 states:

"For traditional external areas that are used for amenity space, such as gardens and patios, it is desirable that the external noise level does not exceed 50 dB LAeq,T, with an upper guideline value of 55 dB LAeq,T which would be acceptable in noisier environments. However, it is also recognized that these guideline values are not achievable in all circumstances where development might be desirable and 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.

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

	LAeq,T or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space."
BS 4142: 2014+A1: 2019	British Standard BS 4142 looks at the assessment of noise of a commercial / industrial nature. It describes methods for rating and assessing outdoor sound of an industrial and/or commercial nature "on people who might be inside or outside a dwelling or premises used for residential purposes upon which sound is incident". In relation to this development, this includes sound from fixed installations, comprising M&E plant and equipment. The assessment method is based on the difference between the measured 'background sound level' without the influence of any industrial noise source, and the 'rating level' of the industrial source, at the receiver location. A difference of around +10 dB or more is likely to be an indication of a significant adverse impact. A difference of around +5 dB is of marginal significance, and where the rating level does not exceed the background, this is an indication of the specific sound source having a low impact.
Design Manual for Roads & Bridges	Volume 11, Section 3 Part 7 of the Design Manual for Roads and Bridges highlights methods for the assessment of traffic noise levels and advises on the impact magnitude of changes in noise levels.