Acoustic Report Minimum Requirement

# 1. Introduction

Acoustic reports should be submitted as part of the planning application. The information is often essential to allow the Planning and Environmental Health Departments to assess the impact of the proposed development and make recommendations.

It may be that the Council cannot make a decision about the acceptability of the development until a noise survey has been received. Failure to submit an acoustic report with a planning application may therefore delay the application process.

A suitably qualified and experienced acoustic consultant should carry out the noise survey and complete an acoustic report.

The following information MUST as a minimum be included in all acoustic reports:

* A statement of the reason for and scope of the report
* Details of the proposed development to which the report relates
* A location and development plan
* A description of the area and environment surrounding the development site including any noise sources
* The methodology used to carry out the noise survey including the location of any noise monitoring positions, the equipment used, details of its last accredited calibration, and the weather conditions at the time the survey was carried out
* Time and duration of baseline survey
* Full table of survey results. (Please refer to the Excel Proforma in this download pack)
* Assessment of the results in accordance with the relevant standards and policies.
* Recommendations for noise control measures if needed.
* Full calculations of the noise reductions expected to support any suggested
* noise control measures.

# 2. Design Criterion and Assessment Methodology

2.1 **Requirements of London Borough of Tower Hamlets**

Concepts such as ‘LOAEL’ ‘NOAEL and ‘SOAEL’ have been introduced to the assessment, management, and control of noise via the planning system. However, whilst new policy objectives have been introduced, supporting technical advice and guidance is largely missing and Government has advised that it does not intend to provide such technical guidance.

What is clear is that with the Government’s localism agenda and the introduction of the national planning changes, they expect noise policy to be driven by local authorities.

The NPPF document states that planning policies and decisions should aim to:

1. Avoid noise from giving rise to significant adverse impacts on health and quality of life because of new development.
2. Mitigate and reduce to a minimum other adverse impact on health and quality of life arising from noise from new development, including through the use of conditions.
3. Recognise that development will often create some noise and existing businesses wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and
4. Identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

The rating level of noise emitted from proposed plants, determined using the guidance of British Standard BS 4142: 2014 Methods for rating and assessing industrial and commercial sound shall be at least 10 dB (A) (Tower Hamlets local plan) below the existing background LA90T noise level, measured 1m from the nearest noise sensitive façade.

Where access to the nearest sound-sensitive property is not possible, measurements shall be undertaken at an appropriate location and corrected to establish the noise levels at the nearest sound-sensitive property facade.

Any deviations from the LA90 time interval stipulated above shall be agreed in writing with the local planning authority.

This is to ensure that the development does not result in noise disturbance to neighbouring residents in accordance with policies D.14 of the London Plan (2021), D.DH8 and D.ES9 of the Tower Hamlets Local Plan 2031 (2020).

Before any works are begun, a scheme shall be submitted to and approved in writing by the Local Planning Authority which specifies the extract arrangements, materials, and construction methods to be used to avoid noise and/or odour penetration to any floors of the building and/or neighbouring buildings from the Class A use.

Flues must terminate at roof level or an agreed high-level location which will not give rise to nuisance to other occupiers of the building or adjacent buildings. The details approved must be implemented before use takes place.

2.2 **British Standard BS4142:2014+A1:2019** Methods for rating and assessing industrial and commercial sound

Methods for rating and assessing industrial and commercial sound describes a method for rating and assessing sound of an industrial and/or commercial nature, which includes sound from fixed installations comprising mechanical and/or electrical plant and equipment.

The assessment methodology considers the Specific Sound Level, as measured, or calculated at a potential noise sensitive receptor, due to the source under investigation.

A correction factor is added to this level to account for the acoustic character of the sound as follows:

**Tonality** – A correction of up to 6dB depending on the prominence of tones.

**Impulsivity** - A correction of up to 9dB depending on the prominence of impulsivity; Other sound characteristics - A 3dB correction may be applied where a distinctive acoustic character is present that is neither tonal nor impulsive.

**Intermittency** - A 3dB correction may be applied where the specific sound has identifiable on/off conditions. An estimate of the impact of the source is obtained by subtracting the typical background noise level from the corrected Specific Sound Level.

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

2.3 **BS8233:2014 Guidance on sound insulation and noise reduction for buildings**

BS8233 Guidance on sound insulation and noise reduction for buildings provides guidance as to suitable internal noise levels for different areas within residential buildings.

# 3. Site Description and attached site plan

# 4. Environmental Noise Survey

In order to establish the existing background noise levels at the site.

Any deviations from the LA90 time interval stipulated above shall be agreed in writing with the local planning authority. This is to ensure that the development does not result in noise disturbance to neighbouring residents in accordance with policies D.14 of the London Plan (2021), D.DH8 and D.ES9 of the Tower Hamlets Local Plan 2031 (2020).

4.1 **Survey Procedure & Equipment**

4.2 **Results**

Measured sound levels shown as time-history plots. Calculation’s formulas and assumptions made

See Appendix C

4.3 **Plant Noise Emission Limits**

On the basis of the measured noise levels and the planning requirements of the Local Authority

# 5. Predicted Noise Impact

NOEL, LOAEL, SOAEL etc.

5.1 **Proposed plant**

Octave Band Centre Frequency (Hz) i.e., 63 Hz to 8kHz

5.2 **Recommended Mitigation Measures**

For example: Attenuator Insertion Loss (dB) Octave Band Centre Frequency (Hz) including calculations, formulas and assumptions made.

5.3 **Predicted noise levels**

The cumulative noise level at the most affected noise sensitive receivers, including calculations, formulas and assumptions made.

5.4 **BS4142 Assessment**

The context of the site, the immediate surroundings and dominating the background noise level when operating, acoustic character penalties considered.

5.4.1 **Structure borne Noise**

For example: anti-vibration mounts, etc.

5.5 **Comparison to BS8233:2014 Criteria**

BS8233 assumes a loss of approximately 10-15dB for a partially open window. Show that the external noise level would result in internal noise levels that achieve the guidelines

# 6. Conclusion

No adverse noise impact (or, NOEL, LOAEL, SOAEL, UAEL ETC)

**Attachments/ Appendices**

Indicative Site Plan

Environmental Noise Time Histories, calculations

Appendix A Acoustic Terminology

Appendix B Acoustic Calculations

Appendix C Noise Survey Results Table (Proforma)

The following types of development proposals or applications may have additional specific guidance published to review noise impacts or may otherwise be a potential source of noise.

It is recommended that pre-application discussions are held with Environmental Protection Team if any of the following application types are to be submitted: Please note a fee may be incurred

* Motor car/bike tracks
* BMX, skateboard, scooter, mountain bike tracks
* Multi Use Game Aeras (MUGAs)
* Sport stadia
* Various Use Class developments
* Nightclubs
* Wind Turbines
* Gymnasia
* Music venues

The above list is far from exhaustive; however, it highlights some of the applications that have been considered with particular attention to noise in the past.

If there is any doubt over whether noise issues may need to be addressed prior to submitting a planning application, please contact the Planning Department planning@towerhamlets.gov.uk

# Determining planning applications

Consideration of noise will depend upon the development proposal. If a particular development is for a noise-sensitive end use, then consideration of the locality of the proposal is an important aspect of any application.

The review will also consider the operational times of local businesses as well as any noise that they may emit. Transport noise sources may also affect recommendations made, especially if the development proposal is near to a busy road or rail/tram line.

Noise conditions may include recommendations for upgraded sound insulation, which can be a vital means of protecting future occupants from transport noise or industrial /commercial noise sources.

However, upgraded glazing, for example may only protect or mitigate against noise if windows are kept shut. As such, some developments may also need to provide acoustic trickle vents and/or acoustically treated forced ventilation, to help reduce the need to open windows in the first place. (section 5.3)

Consideration for new businesses will typically involve a review of the noise likely to be emitted from the business. This can include hours of operation, plant or equipment associated with that business and its operation but may also consider transport noise from deliveries or dispatched merchandise as well as possible increased traffic flows from visitors or staff arriving or leaving the site.

Certain types of business may also be expected to have similar patterns of operation; for example, bars and hot food takeaways tend to concentrate on afternoon and evening trade, whereas nightclubs, storage and distribution centres are likely to include overnight operations.

All development proposals should consider the ambient noise levels already present in each area. For developments that are likely to have an impact, consideration of appropriate acoustic mitigation measures will be necessary to reduce the impact from the development site to an acceptable level.

# Acoustic design

To achieve good acoustic design, a hierarchal or sequential approach should be encouraged starting early in the development process, with control at source being the most preferable form of mitigation and façade or off-site treatment representing methods of last resort.

The following mitigation measures may be applied

* Distance separation
* Specifying low noise equipment
* Building layout and design
* Acoustic glazing
* Acoustic enclosures
* Acoustic glazing and doors
* Screening and acoustic barriers
* Mechanical ventilation

# The agent of change principle

The 'agent of change principle' encapsulates the position that a person or business (i.e., the agent) introducing a new land use is responsible for managing the impact of that change. The practical issue that has arisen on occasion is that in circumstances where residents move into an area where noise is emanating from e.g., a long-standing music venue, this may have resulted in the Local Planning Authority (LPA) imposing additional licensing restrictions on the established licensed venue. Campaigners on behalf of licensed premises have long advocated support for implementation of an 'agent of change' principle to place the responsibility for noise management measures on the incoming 'agent of change'.