

Guidance

G1374

Management of site noise from construction and maintenance work activities

Applies to all TfL

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1 Purpose

This purpose of this guidance is to provide advice to managers responsible for managing work activities that may create noise to neighbours, customers and contractors.

Details of the specific responsibilities of managers are provided on the Noise Management content page of HSE element of the TfL Management System.

The guidance can be used to aid the completion of noise assessment form F5410.

2 Scope

This guidance applies to construction and maintenance activities carried out across the London Underground and London Rail.

3 Guidance

3.1 Introduction

TfL has a legal obligation under the Control of Pollution Act 1974 and the Environment Protection Act 1990 to ensure that noise from its work activities that may affect neighbours, customers or contractors is minimised using the best practical means (BPM). This means applying all practicable mitigation to reduce noise and vibration produced to as low as possible. Failure to do so may result in the Local Authority imposing regulatory notices of work activities that may result in being restricted or stopped altogether.

3.2 Assessment of Noise and Vibration Risks

It is important to identify works which may generate high noise and/or vibration levels early when planning works, so there is a greater opportunity to determine whether quieter methods can be adopted, to avoid noise and vibration at night and to implement controls that are as cost effective as possible.

An assessment of noise and vibration should be carried out before the works commence, using form F5410. Consider the following when deciding what controls to use to reduce noise and vibration:

- Site location
- Type of receptors (i.e. residential, theatre, school etc.) and their attitude to works
- Distance between source of noise and/or vibration and receptor
- Existing ambient noise and vibration levels
- Length of work
- Periods of operation of plant and equipment
- Any noise screens between sources and receptor
- Whether the receptor is in front of a reflecting surface e.g. building
For vehicles and mobile plant, traffic volume and speed

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3.3 Section 61 Consents and Regulatory Notices

3.3.1 Section 61 Consents

For large-scale construction work, discussing plans and agreeing BPM noise and vibration controls with local councils is necessary. This agreement usually takes the form of Section 61 consent and these offer some protection from regulatory notices. It can take several months to agree consent depending on the size and nature of the works. If consent is needed, you cannot start work until it is in place. It is a criminal offence not to comply with the conditions of the consent once set. Further information on the time-table for completing consents is provided in Appendix 1.

The Pathway, section 61 Consent Application Template, should be used when completing section 61 consents.

3.3.2 Regulatory Notices

Carefully planned works, involving using best practicable means to identify appropriate noise and vibration controls reduce the risk of a Local Authority serving a regulatory notice on work activities. This is important because the serving of a notice may restrict work conditions e.g. prevent certain types of equipment being used, or stop all work activity, resulting in work delays and increased costs.

3.4 Eliminate and reduce noise

Much of our work takes place at night when our neighbours expect and have the right to sleep. So, wherever possible, schedule work during the day when the noise is less likely to cause a nuisance.

Other ways to eliminate noise include:

3.4.1 Selection of Plant

- Where possible use electrical power supply (e.g. from stations) rather than having a standalone power source e.g. diesel generators
- Opt for hydraulic or electrically-controlled units rather than pneumatically-powered units
- Select super-silenced compressors, silenced jackhammers
- Ensure all vehicles, plant and equipment are fitted with effective exhaust silencers where appropriate.
- When purchasing or hiring, request low-noise equipment. Enquire about adding more effective mufflers, enclosures, low-noise tool bits and blades.

3.4.2 Work Programming

- Where space, access and safety considerations permit, seek permission to store materials, equipment, fencing and scaffolding within the station's storage areas or platforms so as to minimise night time noise outside station entrances.
- Seek to establish segregated work areas within stations so as to open the possibility of working (even if on a reduced scale) through day and evening periods.
- Consolidate noisy works to occur on the same nights such that the total number of noisy nights is minimised.
- Program the construction of acoustic hoardings, shrouds and enclosures for the earliest stages of the works program.
- Pre-fabricate scaffolding, fencing and other material off-site during day shifts

3.4.3 Traffic Planning

- Ensuring deliveries of equipment and materials and waste removals occur during the day.
- Assign a specific loading / unloading location for the site and times which these activities will be carried out. Assign staff to police parking and loading / unloading activities for high sensitivity locations.
- Traffic flow and routes to the site should be designed so that no reversing is required. Truck reversing beacons at night are a major source of annoyance.
- Consider alternatives to conventional truck reversing beacons such as fitting "smart alarms" that adjust their volume according to the level of ambient noise, low-frequency quacker alarms, CCTV-equipped trucks or alternatively, using spotters.

3.4.4 Site Behaviour

- Avoid allowing staff and contractors to congregate, shout, curse, use loud radios/stereos or slam vehicle doors in areas near residences. (These issues are a primary – but generally manageable - cause of complaints from the public).
- In the case of night works, consider transporting staff to and from the site from an external meeting point using a staff shuttle service. Encourage staff to car-pool so as to minimise night time vehicle movements.
- Staff should be regularly reminded to avoid excessively revving engines and to gently close rather than slam vehicle doors. Drivers should be reminded regularly of the approved designated parking areas.
- Avoid the use of PA systems for broadcasting calls during night periods.
- Instruct staff that they are to gently set-down rather than drop materials and scaffolding. Ensure that any accidental, loud noise is not left to be repeated.

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- Use rubber mats or old carpet in delivery vans and on hard pavements to minimise noise during loading and unloading.
- Avoid metal-to-metal contact on equipment. Scaffolding should be bound with ties when being moved within the site or transported and carpet attached to the metal corners of harass fencing where applicable.
- Display and regularly update a one-page summary of approved work practices in a central area to remind staff of all noise minimisation responsibilities (e.g. receiving times for materials, details of truck waiting areas, approved vehicle-routes etc).

3.4.5 Site Layout and Set-up

- Locate site offices and welfare facilities as far from residences as possible and orientate doors and access routes away from residences.
- Take advantage of existing barriers (e.g. walls, buildings etc).
- Consolidate noisy equipment in one area such that it may be possible to enclose them all within an acoustically-treated shed or storage area.
- Install noise hoardings, barriers, shrouds and/or enclosures (with no gaps or defects). See Appendix 2 for information on acoustic noise barriers.

3.4.6 Use of Plant and Equipment

- Maintain all plant and equipment in good condition to manufacturer's instructions and shut down when not in use.
- Ensure equipment covers are closed.
- Return or have replaced any hired equipment causing noise not typical to its operation. The increased noise may indicate the need for repair

In extreme cases, where noise levels are expected to adversely affect residents for a long period e.g. during a project, it may be appropriate to consider secondary glazing or temporary re-housing. Always take advice from HSE Adviser, Environment Team, External Relations, and the Noise and Vibration Team before pursuing this route.

3.5 Eliminate and reduce vibration

Typical sources of vibration from LU construction work activity include:

- Piling
- Tunnelling
- Excavation