

Carrying out a good noise assessment

Planning for quieter deliveries



Carrying out a delivery and servicing assessment for noise can benefit both businesses and residents. It can help everyone better understand the impact the activity will have on an area. It also means businesses are better informed and more aware of how they can minimise disruption when planning to change delivery times. This is valuable for creating a noise management plan, especially for proposed changes in more sensitive locations.

This guide outlines a recommended process to follow for a qualitative noise assessment.

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Types of assessment

There are two types of assessments which can be undertaken as part of a risk-based approach. Many locations will have unique challenges so noise assessments should be site-specific.

The first is a quantitative assessment which physically measures the noise from the delivery and servicing activity by using sound monitoring equipment. If you are using noise monitoring equipment, it is recommended that it is placed a appropriate distance away from the noise source whether at the vehicle, on the roadside or at the delivery doors. Where there have been previous issues, noise should also be recorded at the location of the complaint.

The second is a qualitative assessment which observes and reviews the quality of delivery procedures. This is particularly important as it shows how the impact is perceived or felt by others, which can be negative and ultimately lead to complaints. It is also this emotional aspect of noise impact which can often result in barriers or restrictions to delivery times.

The potential for noise nuisance from off-peak deliveries was a concern for the council. However, the technologies employed in our pilot scheme ensured that no noise complaints were received and residents living close to delivery areas were not negatively affected.

London Borough of Brent

Choosing the right time

A noise assessment can be carried out at any time, day or night. The key point is to ensure that you carry out the assessment at the same time, and in the same scenario, as when the activity usually takes place. You should also ensure there is adequate lighting for the assessor/s and delivery staff.

Who should carry out the assessment?

It's important that an assessment is completed by an independent party. It avoids bias and any preconceptions around what is, or what is not, occurring. This is vital when working with local authorities to make changes to a delivery or collection.



The steps to follow

Step 1

Get facts, gain understanding and map the current situation

Get a good understanding of the existing situation. This should include: the location of the site, current delivery times, vehicles used, the local environment, any mitigating measures already taken, and the views of all stakeholders, including the local authority, residents, the business(es) and logistics operator(s), or those supplying the premises.

Find out if there are any historic complaints or any future plans that may affect the area eg new residential developments or schools. Remain objective at all times. Ask open ended questions to collect key information.

The purpose of this phase is not to agree or disagree, but to obtain facts from all parties to help when it comes to making a decision on the proposed delivery changes.

Step 2

Go on site, look, listen and collect data

Go on site at a time when delivery and servicing activity is at its peak. Observe what actually happens. This activity should be conducted by at least two independent persons experienced in completing noise assessments and understanding the acoustic environment.

Observe the delivery from start to finish, taking notes, pictures, and video (if practical) of the typical noisy elements. This should include the equipment in use, managerial and operational activities, and any other relevant noise sources.

If it is not possible to record every single activity through notes and pictures, aim to identify and focus on the activities which are likely to cause the most noise disturbance.

Keep an open mind and remain objective. It is important to assess what actually happens on site compared with the perception.

Step 3

Reporting and recommendations

The report should be structured so it covers the events in the order they take place during the delivery. The main body of the report should focus on what was observed on site. It should also highlight any operational, mechanical, or training deficiencies and make recommendations on how each part of the process could be improved to help cut down noise.

Include details of the buildings, environment, and surroundings as these could affect noise levels. Also, give information about the weather conditions and the road surface. This helps to build an accurate picture of the location.

While a qualitative assessment does not include physical sound measurements, it will provide a solid base of information.

The findings should be shared with all relevant stakeholders and then discussions can take place to find solutions and an agreed way forward.

Noise can have an effect on health, wellbeing, productivity and the natural environment. The government's policy on noise is set out in the Noise Policy Statement for England.

Source: Defra





Noise sources

The table below lists common sources of delivery noise and some recommended measures to mitigate their adverse impacts. This is not an exhaustive list and measures should be relevant to the situation.

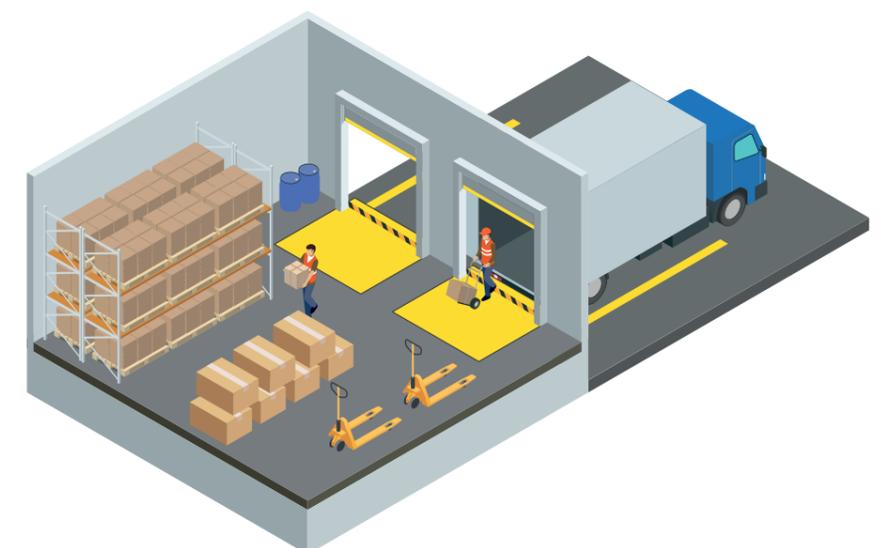
Noise source	Mitigation
Material or goods handling products	Quieter versions or rubber matting
Refrigeration units	Quieter versions
Reversing alarms	Broadband versions
Tail lifts	Hydraulic versions / staff training
Engine noise (idling and revving)	Driver training
Staff behaviour (shouting, doors, radios)	Staff training

Fact

All noise assessments carried out as part of the Transport for London Retiming Deliveries Programme have identified room for improvement in the delivery process. Recommended changes have varied in size – even small changes can have a huge effect on the overall noise impact.

Fact

In almost all cases where noise assessments had been completed, businesses were able to work with local authorities, make small changes and where appropriate, introduce different delivery times.



Why does noise matter?

The World Health Organisation states that 'the health impacts of noise are a growing concern among both the general public and policymakers in Europe – with nearly one million disability-adjusted life years (DALY's) lost every year in Western Europe due to traffic noise alone'. (Source: WHO 2011).

About three per cent of these impacts are in the UK.

Overall, these adverse health effects include:

45,000 years*

lost for cognitive impairment of children



61,000 years*

lost for ischemic heart disease



22,000 years*

lost for tinnitus



903,000 years*

lost for sleep disturbance



*years referred to disability-adjusted life years (DALY's)

Further information:

Transport for London
www.tfl.gov.uk/retime

Noise Abatement Society
www.noiseabatementociety.com

Defra
www.gov.uk/government/organisations/department-forenvironment-food-rural-affairs

Noise Policy Statement for England (NPSE)
www.gov.uk/government/publications/noise-policy-statementfor-england

It's estimated that the annual social cost of urban road noise in England is £7 to £10 billion. This places it at a similar magnitude to road accidents (£9 billion) and significantly greater than the impact on climate change (£1 to £4 billion).

Source: Defra



Noise assessment – example

The example below records observations made by an independent noise specialist (the Noise Abatement Society). The assessment has been carried out in accordance with, and assessed against, the Transport for London (TfL) Code of Practice for quieter deliveries.

Assessment of delivery activity

The delivery point	Assessor notes
Make sure the vehicle driver knows the precise location of your delivery point and is aware of any specific local access issues	Yes
Ensure delivery bay doors are well maintained to minimise noise when moved	N/A
Switch off any external tannoy systems	N/A
Avoid using external bells at delivery points	N/A
Switch off the radio when delivery point doors are open	Achieved
Ensure the delivery point and surrounding areas are clear of all obstructions, helping to make vehicle manoeuvring as simple as possible	N/A as the delivery takes place on the public pavement and parking is only available on the public roadway.
Ensure all doors, gates and shutters at the delivery point are opened and closed as quietly as possible	N/A
Keep doors other than the delivery point closed to ensure noise does not escape	N/A
Where possible, prepare all empty handling units, salvage, returns etc. behind closed doors. Check they are in the correct condition, position and height etc. before taking outside – minimise activity 'out in the open'	Achieved
Think of how to minimise contact between hard surfaces, particularly metal on metal, during the unloading/loading processes – for example, use of rubber matting and buffering material on doors etc.	Not achieved. No buffering material in use on the metal tail lift platform or flanges or on the goods handling equipment.
Service any equipment used in the delivery operation in advance to minimise noise	Not achieved. The goods handling units were extremely noisy.
Make sure the delivery point is ready for the vehicle in advance of arrival – gates and doors should be open in advance, to avoid the vehicle sitting stationary, idling	N/A as the delivery takes place on the public pavement and parking is only available on the public access roadway.
Ensure staff don't shout or whistle to get the attention of the driver	Achieved

Assessment of delivery activity

The driver	Assessor notes
Plan ahead to ensure you know the location of the delivery point and the appropriate access route	Achieved
Where practical, notify staff at the delivery point in advance of arrival to ensure they are ready for you	Achieved
If early for your delivery slot, do not park up/wait near residential property	N/A
Consideration to noise and local residents should be shown as you approach the site and manoeuvre your vehicle into position	Achieved
Do not sound your horn	Achieved
Reversing and audible alarms should be switched off, if not subject to health and safety requirements; use a qualified banksman instead, if available	No audible reversing alarms were in use during the delivery.
Engines are to be switched off immediately when you are not manoeuvring – but try to minimise the number of start-ups and avoid over-revving	Achieved
Refrigeration equipment is to be switched off in advance of arrival at premises	The refrigeration unit was initially turned off and then switched back on for part of the delivery due to operator's standard health and safety procedure. In this location, even when used in the low-noise mode, as observed when the vehicle was stationary, the unit sounded extremely loud against the area's very low ambient background levels.
If sitting in the cab, waiting with the radio on, then ensure windows are closed and the radio is switched off before opening the cab door	Achieved
Minimise the frequency of opening and closing cab and other vehicle doors	Achieved
Take extra time if needed to unload as quietly as possible	Not achieved. Even with sensitive operation by staff, certain mechanical and operational issues caused significant noise (see Key Noise Events table).

Assessment of delivery activity

The driver	Assessor notes
Close cab doors quietly	Achieved
Be mindful of how far your voice can carry when talking outside at night	Achieved
If opening a gate / roller shutter door to gain access, be sure to avoid excessive noise; raise roller shutter doors gently and try to reduce the frequency of door/gate opening	Achieved
Lower flaps on tail-lifts carefully and quietly	Not achieved, but not due to staff error: was outside of their control due to the equipment limitations (eg tail lift not fully hydraulic nor fitted with buffering material).
No whistling or shouting to get the attention of store employees	Achieved
When moving gates, locks and load restraint bars, ensure these are placed gently in their resting position/stowage point – don't drop or drag them on the ground	Achieved
When safe to do so, use sidelights rather than headlights when off-road and manoeuvring, to minimise light intrusion	Achieved
Minimise excessive air brake noise	Achieved, no airbrake noise was heard
When working in the vehicle load space, avoid banging cages etc. into vehicle walls	Partially achieved, but not due to staff error: was outside of their control due to certain equipment limitations (e.g. the noisy goods handling equipment).
Show the same consideration when leaving the site, as when arriving	Achieved

Recommendations

	Noise issue	Mechanical (M) Operational (O) Training (T)	Recommended minimum mitigation measures to lessen disturbance	Recommended long term mitigation measures
1	Refrigeration unit	O / M	If possible, amend operations to allow the unit to be switched off during the delivery and salvage process	Replace with model able to operate quietly during operation and to the required H&S standards
2	Noise from the tail lift and goods/staff movements on the tail lift	M		Replace with quiet, acoustically-coated, fully hydraulic tail lift
3	Goods movements within the truck body	M		Replace goods handling equipment with quiet alternative designed for noise sensitive operations
4	Goods movements on the roadway and pavement	M		Replace goods handling equipment with quiet alternative designed for noise sensitive operations

Note

This document is a general good practice guide only. It is not intended to replace the need to take relevant legal and other professional advice in specific circumstances. Prior advice should also be sought from the appropriate relevant local and other statutory authorities whose consent may be required as practice may vary in particular situations.

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