

Noise and Vibration No.6

To Network management staff/contractors, transport officers and call centre staff

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Subject Engine braking noise

Introduction

A small proportion of older trucks operating in New Zealand have supplementary braking systems (engine brakes) that generate a loud and distinctive noise. When these engine brakes are operated near houses, this noise can cause significant disturbance, particularly at night. The disturbance can be avoided, either by the truck being fitted with effective exhaust silencers, or by the driver switching off the engine brakes when driving near houses. Further information on engine braking noise is provided in an information leaflet (http://acoustics.nzta.govt.nz/sites/default/files/Engine_Braking_v1.1.pdf).

This technical memorandum sets out how the NZ Transport Agency manages noise disturbance from trucks engine braking on State highways. It has previously been found that when engine braking noise disturbance is reported it is generally caused by a small number of trucks. The following procedures are based on identifying those specific trucks and working with the operators to bring about a behavioural change whereby drivers will switch off noisy engine brakes near houses. This is a collaborative process that involves network management staff/contractors liaising with residents, and transport officers liaising with industry bodies and truck operators. This process has been adopted in preference to previous approaches, such as the installation of road-side signs, as these have not proved to be effective.

Criteria

There are no noise limits specifically for truck engine braking. The following two requirements relate to the context in which noisy engine braking occurs and the effect that it has on people:

- Land Transport (Road User) Rule 7.4 requires that vehicles do not produce excessive noise. While this is determined by the Police on a case-by-case basis, unnecessary use of noisy engine brakes near houses could be considered excessive noise.
- The Resource Management Act (Section 16) requires every occupier of land to adopt the best practicable option to avoid unreasonable noise. Road users are not occupiers under section 16, but the Agency as a road controlling authority may be akin to an occupier. The following procedure has been developed to assist the Agency to avoid unreasonable noise from engine braking, while recognising that noise is not directly under the Agency's control.

Process

When a complaint is received from a resident living near the State highway network about engine braking noise it should be entered in the Customer Relationship Management System (CRMS) and assigned to regional network management staff or contractors. The engine braking noise information leaflet should be provided

and a conversation held with the resident to confirm the disturbance is engine brakes rather than another traffic/vehicle noise source.

The affected resident should be asked to keep a diary over a period of approximately two weeks to identify the operating company or companies of the trucks regularly causing noise disturbance. The time and date of each vehicle should be recorded where possible. It is often not practical to obtain truck number plate details, but usually operators can be determined from the vehicle livery, at least for those regularly causing disturbance.

Once details of trucks have been obtained, the network management staff/contractors should pass the information to a local transport officer. The transport officer should in turn pass the details to the relevant industry bodies to liaise with the operators identified. For repeated occurrences the transport officer should contact the operators directly, and pass the details to the Police if necessary. Contact details for industry bodies are:

- National Road Carriers, Grant Turner, grant.turner@natroad.co.nz, 09 636 2953, 021 771 956
- Road Transport Association, regional contacts listed on www.rtanzt.co.nz/contact
- Log Transport Safety Council, Bruce Nairn, ltsc@logtruck.co.nz, 0274 943695

Once the truck operators have been asked to stop engine braking in the location, the affected resident should be informed by the network management staff/contractors and asked to report any further engine braking noise from the identified operators, or details of any other operators. The network management staff/contractors should follow-up with the resident after approximately one month and then take further action or close the interaction in the CRMS as appropriate.

Noise camera

In some instances residents might not be able to identify specific trucks. In these cases the Transport Agency has a specialist 'noise camera' which can be used to identify trucks engine braking. The noise camera is a semi-permanent system and is typically installed for six months in a location, before being moved to the next site. The system was constructed and trialled in 2013/2014 and is now in a 2 year controlled development programme (2015/2016) to streamline management and redeployment of the system.

If a situation is encountered where trucks cannot be identified by residents, network management staff should contact the Environment and Urban Design (EUD) team (environment@nzta.govt.nz). The EUD team will confirm the suitability of a proposed site for the noise camera and prioritise sites in different areas. It is noted there will often be a significant delay (e.g. one or two years) in the availability of the camera for a particular site.

The operation of the camera is managed by an external consultant. When a site is identified by the EUD team the consultant will liaise with the local network management staff/contractors to make arrangements for mounting, power and access. The consultant will then organise the redeployment of the equipment. The consultant will also liaise with the network management staff/contractors and transport officers about informing the community and trucking industry about the deployment of the camera to that location.

Each week the noise camera is operating at a site, the consultant will analyse the recorded data and forward a list of engine braking noise events (date/time, audio file, number plate, photo) to both the network management staff/contractor and the relevant transport officer. Each week the transport officer should pass the details to the relevant industry bodies to liaise with the operators identified. For repeated occurrences the transport officer should contact the operators directly, and pass the details to the Police if necessary. The transport officer will report back to the consultant and the network management staff/contractor after each operator has been contacted. The network management staff/contractor will keep residents informed of progress. When the camera is moved from a site the consultant will circulate a summary of all vehicles identified by the camera at that site and actions taken to the EUD team, network management staff and the transport officer.