

# Reduce Vehicle Noise Signs

## Information to Drivers



# TRAFFIC MANAGEMENT Operational Instructions

## Reduce Vehicle Noise Signs: Information to Drivers - 2.18

### AMENDMENT RECORD

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Manager, Traffic Services  
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## 1. Scope

The purpose of this document is to detail the Department for Infrastructure and Transport (DIT) requirements for use of road signs to advise truck drivers to reduce their vehicle noise.

## 2. Background

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The primary braking system on a vehicle is the service brake system. Many heavy vehicles also have 'auxiliary braking systems' or 'secondary retarders', such as engine brakes, exhaust brakes and transmission brakes to provide additional braking effort. The use of engine brakes saves wear on service brakes reducing vehicle maintenance costs. There is generally little or no wear associated with use of a secondary retarder, making them a cheap and efficient braking device. Importantly, they also reduce the risk of the brakes overheating and becoming ineffective.

The issue of traffic noise is of some concern particularly to residents living on or in the vicinity of a major road. Heavy vehicles are seen as a major contributor to intermittent peak noise events, particularly at night when there are generally low ambient noise levels. The responsibility for managing transport noise is *shared* by homeowners, industry, and State and Federal Governments.

DIT undertakes noise mitigation when constructing *new or substantially upgraded* roads adjacent to areas that are noise sensitive. DIT's 'Road Traffic Noise Guidelines' outline the circumstances where noise mitigation is considered. Homeowners fund noise mitigation for properties that are exposed to *existing* noise or who are not eligible for noise mitigation under the Road Traffic Noise Guidelines.

DIT along with the South Australian Police have an active policy of roadside examination of vehicles for roadworthiness defects. The South Australian Government is conscious of the importance of educating the heavy vehicle transport industry to be aware of the noise that these vehicles make, and the impact on urban and other sensitive areas. With that in mind, the Government is encouraging truck drivers to avoid unnecessary use of their engine brakes in built up areas.

Signs are just one means of trying to reduce noise from heavy vehicles. Other strategies include regulation, enforcement and design rules for heavy vehicles at the State and Federal levels. In addition, media campaigns may be beneficial, for example through RAA, social media, radio, TV etc.

## 3. Safety concerns

The additional braking provided by engine brakes is an important safety feature. Generally, heavy vehicles fitted with a good muffler system cause minimal noise when the engine brake is used. Engine brakes are an integral part of a truck's braking system. It is inappropriate to advise truck drivers not to use a component of their brakes at locations where a safe stop is required.

## 4. Sign installation

### 4.1 Signing for the Greater Metropolitan Adelaide/Rural Townships

Vehicle noise advisory signs shall only be considered on major roads that lead into Adelaide/Rural Townships from a rural environment to the start of the outer built-up areas of Adelaide/Rural townships. The area that abuts the road must be predominantly residential rather than commercial. Note that these signs have no regulatory force and are purely advisory only.

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TES 19483

Signs shall only be used in accordance with the following criteria:

- The road is designated on the restricted access vehicle network. Refer to RAVnet for maps [www.dit.sa.gov.au/ravnet](http://www.dit.sa.gov.au/ravnet) (RAVnet is an interactive online map system that displays approved heavy vehicle route networks in South Australia. Restrictions associated with specific route networks are also included).
- Signs shall only be placed where the speed limit is 80 km/h or less.
- Signs shall not be placed within 300 m of a requirement for traffic to stop or slow for;
  - A signalised intersection
  - A pedestrian crossing
  - A roundabout
  - A rail crossing
  - Any intersection if required to stop or give way
  - An intersection if sight distance is limited
- Signs shall not be placed within 500 m of a substandard curve (especially those incorporating an advisory speed sign).

### 4.2 Signing at specific sites

Signs should only be targeted to the most critical locations on the road network. If these signs are overused, this can lead to the proliferation of signs, thus reducing their effectiveness.

However, there may be instances where there is a requirement to target a location on the road network that directly involves the use of exhaust brakes. If so then the following sign can be used.



TES 14960

Signs shall only be used in accordance with the following criteria:

- The road is designated on the restricted access vehicle network. Refer to RAVnet for maps [www.dit.sa.gov.au/ravnet](http://www.dit.sa.gov.au/ravnet) (RAVnet is an interactive online map system that displays approved heavy vehicle route networks in South Australia. Restrictions associated with specific route networks are also included).
- Truck volumes shall be a minimum of 100 vpd (measured between the hours 7pm to 7am) and comprise 10% or more of the total AADT.
- The built-up area that abuts the road must be predominantly residential rather than commercial.
- Signs shall only be installed on roads that have a downward grade of less than 4%.
- Signs shall not be placed within 300 m of a requirement for traffic to stop or slow;
  - A signalised intersection
  - A pedestrian crossing
  - A roundabout
  - A rail crossing
  - Any intersection if required to stop or give way
  - An intersection if sight distance is limited
- Signs shall not be placed within 500 m of a substandard curve (especially those incorporating an advisory speed sign).

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Sites are not signed based on managing an individual complaint.

#### 4.3 Positioning of signs

Positioning of signs must also comply with the following:

- On the left side of the road only (not in the median).
- Not be installed in a kerb extension or protuberance.
- Signs shall not impact on sight distance requirements at intersections, traffic signs or devices, or visibility to other road users, such as pedestrians.
- Maintain the recommended spacing between the subject sign and other traffic signs (e.g. 50 m at 60 km/h) – precedence must always be given to standard regulatory, warning and guide signs when placing truck noise signs. Refer to Appendix D of Australian Standard *AS 1742.2 Manual of Uniform Traffic Control Devices Part 2: Traffic Control Devices for General Use* (2009).

### 5. Approval

Installation of a sign on DIT roads must be preceded by a written request to the Manager, Traffic Services. A request for an advisory road sign will then require due consideration in determining the true extent of the complaint. Consultation and liaison at the local level (e.g. council staff, police) may be necessary. Ineffective signs reduce their credibility, waste scarce resources, become a maintenance liability, create sign clutter and become unnecessary roadside obstructions.

Installation of TES 19483 and TES 14960 signs on council maintained roads can follow council's standard approval process and do not require approval from DIT provided they are installed in accordance with this OI.

Signs should regularly be reviewed and only left in place if there is a continuing requirement. A separate record of these sign installations including location and date of installation.

## 6. References

Main Roads Western Australia (2010) *Policy for Special Signs: Truck Noise Advisory Signs*

<https://www.mainroads.wa.gov.au/technical-commercial/technical-library/road-traffic-engineering/traffic-management/policy-for-special-signs/truck-noise-advisory-signs/>

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Transport for New South Wales *Reducing Heavy Vehicle Noise*

[www.rta.nsw.gov.au/heavyvehicles/reducingnoise.html](http://www.rta.nsw.gov.au/heavyvehicles/reducingnoise.html)

DIT *Road Traffic Noise Guidelines* (2016) [www.dit.sa.gov.au/?a=156167](http://www.dit.sa.gov.au/?a=156167)

DIT *Reducing Transport Noise Impacts: A Guide to Home Owners* (2016)

[www.dit.sa.gov.au/?a=80079](http://www.dit.sa.gov.au/?a=80079)

DIT RAVnet [www.dit.sa.gov.au/ravnet](http://www.dit.sa.gov.au/ravnet)