



# Dirt Drop Areas

Operational Instruction **20.8**



# ROAD MANAGEMENT Operational Instructions

## Dirt Drop Areas - 20.8

### AMENDMENT RECORD

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## 1. Scope

This Operational Instruction provides guidance for the provision of roadside areas where heavy vehicles may stop to “off-load” excess dust, dirt or mud that has collected on their vehicles as a result of driving over long sections of unsealed roads.

The provision of Dirt Drop Areas may be provided where dirt and dust from these vehicles are causing a concern or hazard to local communities within towns accessed primarily by unsealed roads.

Dirt Drop Areas shall not be considered a standard treatment for all town approaches, nor as the standard treatment for all community dust related problems but is presented as a possible means of minimising the nuisance or hazard which is the direct result of dust and dirt from heavy vehicle activity.

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## 2. Background

Heavy vehicles travelling on an unsealed road have the potential to collect a significant amount of dust, dirt or mud on and under the body of the vehicle and trailer(s). This material can then be dislodged by changes in road surface or roughness or simply by slowing or stopping the vehicle. When this occurs on the approach to, or within a town the material dislodged has the potential to create a significant nuisance, safety hazard or health hazard to local residents.

If heavy vehicle drivers can be encouraged to stop their vehicles prior to entering towns to allow excess material to fall from their vehicles (or be physically removed) the problems caused within townships by this material may be reduced.

## 3. Appropriate Use for Dirt Drop Areas

Transport SA should only consider installing a Dirt Drop Area where the problems and concerns within a township:

- a) are due to heavy vehicles regularly (ie, on a near daily basis) depositing excess dust and dirt within the township near homes or businesses;
- b) are as a result of the heavy vehicles picking up excess dust and dirt from travelling on a Transport SA maintained unsealed road; and
- c) where there is no practical alternative route into or around the township which will alleviate the problem.

Where the problems are being caused by heavy vehicles collecting dust and dirt as a result of using unsealed local collector roads and Transport SA does not maintain any unsealed sections of road along the route taken by these vehicles into the town or community centre, then the issue should be referred to Local Government for action. The construction of a Dirt Drop Area on a sealed Transport SA maintained road in this instance is not appropriate and shall not be catered for by Transport SA.

Where the dust and dirt is being collected by vehicles travelling on both Transport SA and Local Government maintained roads a shared cost arrangement should be sought with Local Government for the construction of a Dirt Drop Area.

Cost sharing may be based on the relative volumes of heavy vehicle traffic on the Transport SA and Local Government maintained roads. The Transport SA Regional

Manager shall be responsible for negotiating and funding any Transport SA contribution which is to be made as part of the cost share arrangement.

Prior to Transport SA contributing funds to construct a Dirt Drop Area on a Local Government maintained road, Local Government must agree to take on the ongoing maintenance responsibility of the Dirt Drop Area, including the environmental controls as per Section 5.1. Where traffic from a Transport SA maintained unsealed road may regularly use a the Dirt Drop Area on a Local Government road (as part of the heavy vehicle route into a town) a financial contribution to the maintenance may be made by Transport SA. This type of agreement shall be made in writing to the satisfaction of both the Regional Manager and Local Government.

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### 3.1 User Awareness of Dirt Drop Areas

A Dirt Drop Area can only be effective if it is being voluntarily used by heavy vehicle operators, particularly local operators. Prior to construction consideration should be given to liaising with local operators to discuss the dust problem and to explain the intended use or appropriateness of a particular Dirt Drop Area, as well as exploring other possible solutions to the dust problem.

## 4. Locating Dirt Drop Areas

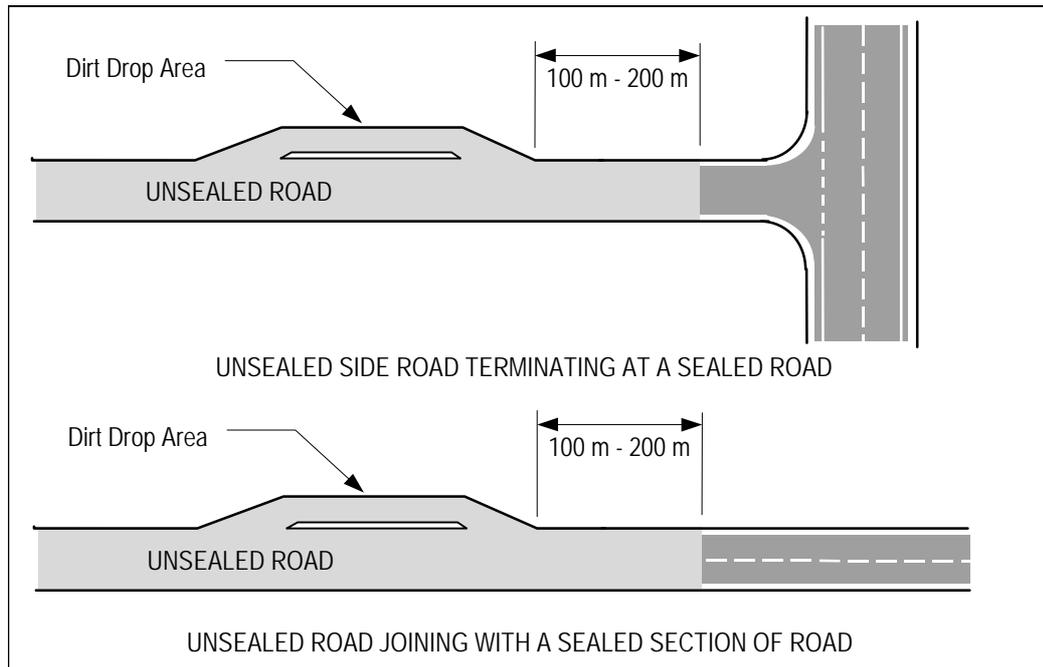
Dirt Drop Areas should be located close to towns so that:

- the act of having to stop is not seen as too onerous by heavy vehicle drivers, as they would normally have to slow for the town anyway; or
- additional material is not picked up between the Dirt Drop Area and the problem area within the township or local community.

However, Dirt Drop Areas should be located:

- at a reasonable distance from potential problem sites so that dust created at the Drop Area does not simply shift the nuisance or hazard; and
- prior to any sections of sealed road through, or approaching the township or local community, in order to minimise the amount of dirt and dust deposited or tracked onto the sealed pavement;
- away from speed restriction or other traffic control signs and devices on the approach to a town;
- in advance of any 80 km/h “buffer” speed zones established on the approach to a town.

Suggested locations of Dirt Drop Areas relative to sealed sections of road are shown in Figure 4.1.



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Figure 4.1: Recommended Locations for Dirt Drop Areas

#### 4.1 Environmental Considerations

Site selection for Dirt Drop Areas needs to take into consideration all of the environmental issues that would be considered when selecting a location for overtaking lanes, roadside rest stops or aggregate stock sites or stock piles.

These issues are likely to include, but may not be limited to:

- dust impacts on vegetation and adjacent land uses;
- noise impacts on adjacent land uses;
- proximity to natural drainage lines;
- impacts on vegetation (a vegetation survey may be necessary); and
- proximity to heritage items (both Aboriginal and non-Aboriginal).

Environmental clearance must be obtained from the Environmental Operations Manager using an Environmental Impact Assessment Report (EIAR). Officers in the Environmental Operations Unit, SOC can assist with site selection considerations (maintenance and operating issues such as silt management) and obtaining environmental clearance.

## 5. Requirements of a Dirt Drop Area

An effective Dirt Drop Area is a roadside parking area with a trafficable surface which will permit drivers of heavy vehicles to pull clear of the roadway and completely stop. The physical layout of the Dirt Drop Area should:

- a) provide sufficient space to allow drivers to move around and inspect their vehicles;
- b) provide sufficient width for a heavy vehicle to pass a stationary vehicle;
- c) provide sufficient length to accommodate at least two vehicles simultaneously (the length of the vehicle will depend on the type of vehicles which typically use the route);
- d) be separated by 2.0 m or more from the edge of the trafficable formation of the unsealed road - any vegetation present in this buffer should be retained to help restrict dust drifting back onto the roadway. It may be necessary or desirable to provide additional planting around the Dirt Drop Area, especially in the buffer between the Dirt Drop Area and the roadway. The buffer should be visually different from the unsealed road pavement to provide some form of delineation;
- e) have a surface which is trafficable by heavy vehicles; and
- f) provide sight distance of at least Safe Intersection Sight Distance, SISD (preferably Entering Sight Distance, ESD) in each direction from each access to the Dirt Drop Area. SISD and ESD shall be as given in Austroads, "Guide to Traffic Engineering Practice, Part 5: Intersections at Grade", typical values are shown in Table 5.1.

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Table 5.1  
Typical Values of ESD and SISD

85 <sup>th</sup> percentile speed (km/h)	ESD (m)	SISD (m)
40	100	70
60	160	115
80	305	175
100	500	250

\*Values extracted from Table 5.3, Austroads Part 5, 1988

A recommended minimum layout is shown in Figure 5.1.

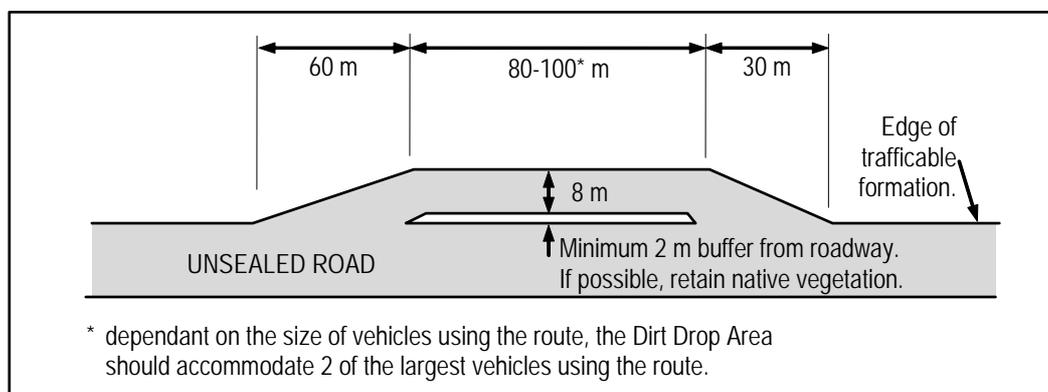


Figure 5.1: General Layout of Dirt Drop Area

Wash-down facilities, running water or other amenities shall not be provided within these roadside Areas.

### 5.1 Drainage and Silt Run-off Provisions

The environmental concerns with silting, contamination and the potential for the spread of weeds must be considered when providing Dirt Drop Areas. As the area will actively be used for the depositing of dirt, dust and silt, the drainage and run-off from the area needs to be carefully controlled.

The pull-off area should be constructed with a cross-fall between 3% to 5% falling away from the roadway. An open table drain should be provided along the full length of the Dirt Drop Area, as shown in Figure 5.2. Silt traps should be installed at the "downstream" end of the table drain and silt loaded water should not be permitted to drain off to the roadside.

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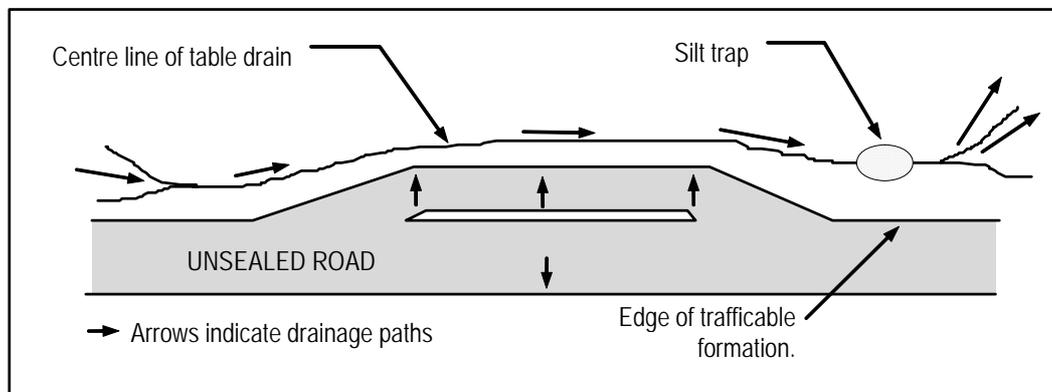


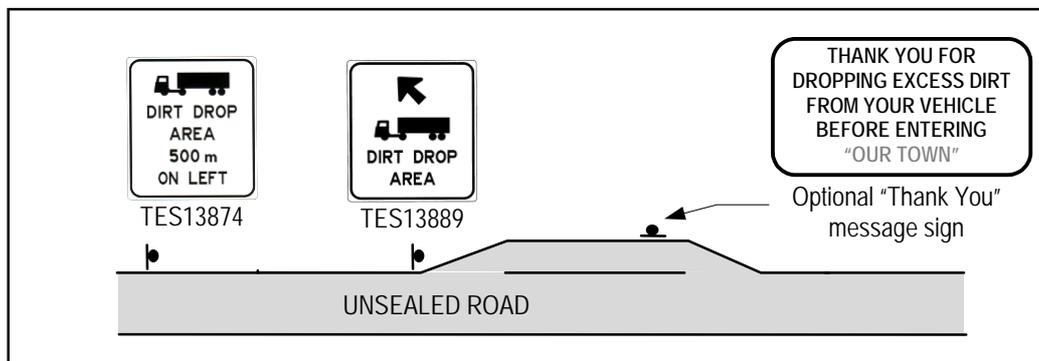
Figure 5.2: Drainage from Dirt Drop Area

Regular maintenance will be required to ensure that drain remains effective and the excess material collected by the silt trap will need to be regularly removed and disposed at a licensed waste depot (due to the risk of spreading weeds). Occasional grading of the Area may be required to remove any build up of material on the parking area. Liaison with Environmental Operations Unit, SOC should be undertaken to develop an appropriate silt management plan for these sites which is practical and appropriate for the location of the Dirt Drop Area.

Transport SA shall only be responsible for the ongoing maintenance of Dirt Drop Areas located alongside Transport SA maintained roads.

## 6. Signing Dirt Drop Areas

Signing of Dirt Drop Areas shall only be for left-in, left-out operation on the approach side of the township or local community, as shown in Figure 6.1.



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Figure 6.1: Signing for Dirt Drop Areas

A "thank you" sign may be installed within the Dirt Drop Area, with the name of the town or community shown on the sign. If used, this sign shall be placed parallel to the road so as not to face passing road users. The Statewide Operational Coordination Group can assist with the design of this sign.