 DISTRICT COUNCIL of TUMBY BAY	<b>POLICY 3.04</b> <b>Roads Level of Service</b> <b>POLICY AREA - Transport</b>	Version No:	<b>1.0</b>
		Issued:	<b>September 2016</b>
		Next Review:	<b>2018 After next election</b>

### **Introduction**

This policy provides guidance to Council staff and ratepayers on the management of the Council road network within the Roads Service Levels and Network Categories adopted by the Council.

### **Documentation**

#### **Roads Service Levels**

In consultation with its Technical Services and Works Committee the Council has developed a desirable standard for road construction and asset management for various categories of roads. The Roads Service Levels documentation is attached to this policy.

#### **Road Categories**

Each constructed road within the Council district is been assigned a category in accordance with the Roads Service Level document. These categories are reviewed and endorsed by the Council's Technical Services and Works Committee prior to adoption by the Council. The current Road Categories map is attached to this policy.

### **Policy Detail**

There is no obligation on the Council to undertake capital improvements on unmade road reserves, or to upgrade the Service Standard of existing constructed roads.

The Council will not consider funding the upgrading of existing or opening of new roads where:

- Alternative access is available either by constructed public road or via the construction of a private road on property of the applicant
- The upgrade/opening is due to the sale of individual parcels of land previously held in contiguous ownership
- The upgrade/opening is to service a residential dwelling constructed after 11 October 2016
- The upgrade/opening is to facilitate a change in land use instigated by the applicant

In these circumstances, the Council may consider approving a road upgrade/opening at the expense of the applicant.

Councils Transport Infrastructure Management Plan identifies planned forward maintenance expenditure, including maintenance, renewal and capital upgrade of assets. Requests for unplanned upgrades not identified in the Asset Management Plan are unfunded, and will be considered in accordance with the processes below.

#### **Requests for Upgrading of Road Category**

A request for upgrade of an existing constructed road to a higher Service Level must be made to the Council in writing.

All such requests will be considered by the Council's Technical Services and Works Committee, who will make a recommendation to Council on a response to the request.

In providing a recommendation, the Technical Services and Works Committee will consider:

- The current classification and condition of the road
- The current purpose and level of usage of the road

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- The future purpose and potential usage of the road
- Alternative access options, either via another constructed road or on the applicants private access roads
- Capital cost of the requested upgrade
- Lifecycle cost of the requested upgrade, including renewal and maintenance costs

In considering a recommendation from the Technical Services and Works Committee, the Council shall have regard to all of the above items, as well as the financial impact on annual budgets, Asset Management Plan forward works programs and Council's Long Term Financial Plan.

Request for Opening of Unconstructed Road Reserve

It is not the intention of Council to increase the length of its existing road assets by opening of currently unconstructed road reserves. However it is acknowledged that in some extenuating circumstances there may be merit in the construction of an extension to the existing constructed road network.

A request for opening of a currently unconstructed road reserve (ie not identified on the Road Categories map as part of the Council constructed road network) must be made to the Council in writing.

All such requests will be considered by the Council's Technical Services and Works Committee, who will make a recommendation to Council on a response to the request.

In providing a recommendation, the Technical Services and Works Committee will consider:

- The future purpose and potential usage of the road
- The required construction standard of the road for the intended purpose
- Alternative access options, either via another constructed road or on the applicants private access roads
- Capital cost of the requested road opening
- Lifecycle cost of the requested upgrade, including renewal and maintenance costs

In considering a recommendation from the Technical Services and Works Committee, the Council shall have regard to all of the above items, as well as the financial impact on annual budgets, Asset Management Plan, forward works programs and Council's Long Term Financial Plan.

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**Strategic Link:**

**Delegation:**

**Documentation:** Road Service Levels  
Road Category Map

**Authority:** Adopted by Council: 11/10/2016 {Motion: 15c/102016}

SIGNED: .....  
Responsible Officer

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

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# Road Service Levels

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District Council of Tumby Bay

July 2014

Ref No. 20130799DR1B



a better approach

# Document History and Status

Rev	Description	Author	Reviewed	Approved	Date
A	Draft for Council Comment	KJS	RKE	RKE	25 July 2014
B	Edits following Council review	KJS	RKE	RKE	31 July 2014

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# 1 Service Levels

## 1.1 Introduction

The purpose of this document is to articulate the current assumptions used in developing construction standards for various road types within the District Council of Tumby Bay (DCTB) to meet required service levels. This is compared to a set of desirable requirements established as part of the LGA Business Partners Program for the Western Eyre Peninsula (WEP), which is relevant for the purpose of comparison.

For comparison the Councils of the Western Eyre Peninsula (WEP) (Ceduna, Streaky Bay, Wudinna and Elliston) have developed the following categories of roads by defining sealed and unsealed roads as follows:

### Category

- 1 Arterial Seal
- 2 Sealed Built Up
- 3 Sealed Not Built Up
- 4 Major Collector (Unsealed)
- 5 Minor Collector (Unsealed)
- 6a Local Access (Sheeted)
- 6b Local Access (Formed Graded Only)
- 7 Unformed
- 8 Road Reserve

This document compares the desirable standards (WEP) and current standards (DCTB) in order to present the current situation in order for Council to validate, accept or modify road categories and associated construction standards.

The road register for the DCTB sealed road network has been categorised as follows:

- Rural Seal High Use
- Township Seal High Use
- Township Seal Medium Use
- Township Seal Low Use

The sheeted road network has been categorised as follows:

- Category 1 - Rural Sheeted Arterial High Use
- Category 2A - Rural Sheeted Collector High Use
- Category 2B - Rural Sheeted Collector Medium Use
- Category 3A - Rural Sheeted Local Access Standard Use
- Category 3B - Rural Sheeted Local Access Low Use

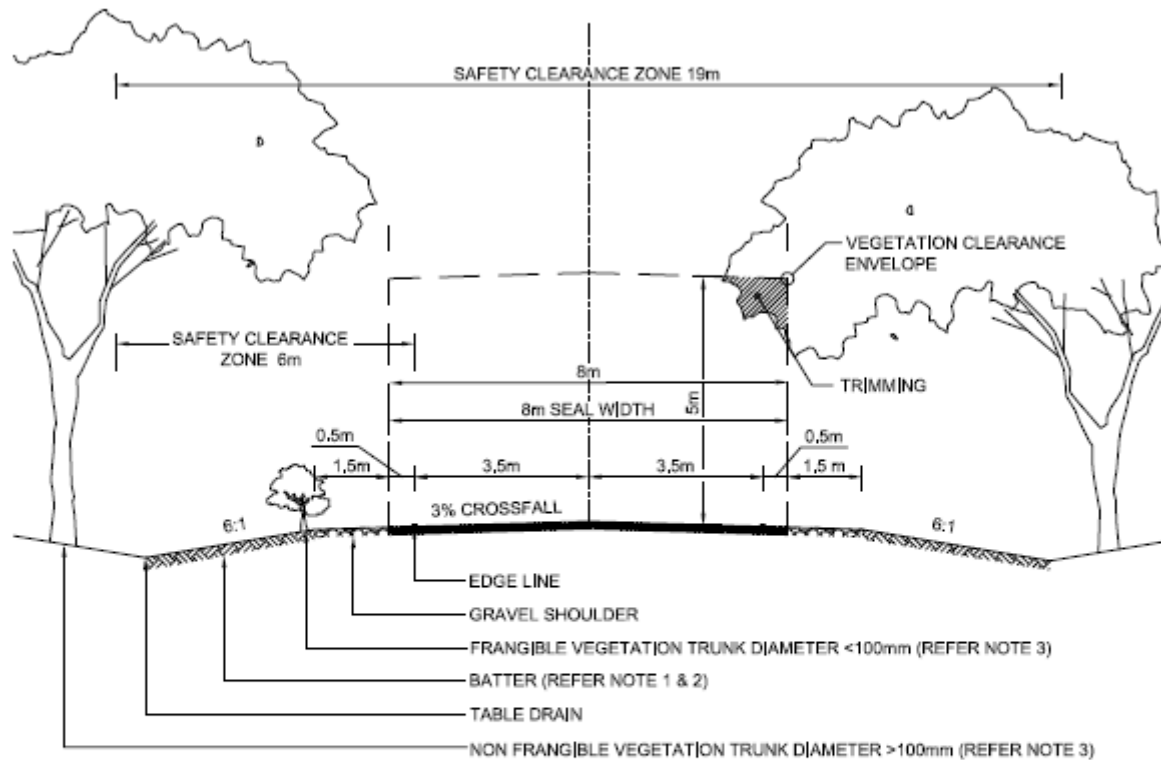
The natural formed (not sheeted) roads have been categorised as follows:

- Category 4A - Natural Formed Standard Surface Type
- Category 4B - Natural Formed Fire Track Surface Type

## 1.2 Arterial Seal

This is equivalent to WEP Category 1 Arterial Seal.

### 1.2.1 Desirable Service Level



#### NOTES

1. Where available safety clearance zone exceeds 23m in open country batters can reduce from 6:1 to 4:1, to reduce earthworks footprint.
2. Where terrain requires batters steeper than 3:1, refer Austroad (2010) Part 6 Guide to Road Design for assessment of safety barriers.
3. Frangible vegetation is permitted in the safety clear zone however should be clear in the vegetation clearance envelope.
4. Determination of safety clearance zone is based on an AADT <math>\leq 750</math>, Design Speed of 110km/hr and fill batter slope of 6:1.

### 1.2.2 Actual Service Level

At present DCTB do not have arterial seal roads under their care and control.

## 1.3 Town Seal

This is equivalent to WEP Category 2 Sealed Built Up. Service level requirements for township sealed roads vary depending on several factors and as such no one desirable service level can be provided.

### 1.3.1 Actual Service Level

#### Current Replacement Cost Assumptions

Seal Width varies

Seal Types cold overlay and spray seal

Pavement Width varies

Pavement depth varies

- Township high use 300mm
- Township medium use 250mm
- Township low use 200mm

Formation included

#### Renewal Method

Reseal

- Two coat spray seal on township high use roads (Spray seal 14/7mm)
- Single coat spray seal on medium and low use roads (Spray seal 10mm)

Note: for purpose of valuation it is assumed Cold Overlays will be replaced with spray seals

Pavement

- For township high use roads, rework existing pavement and sub-base, import 150mm granular material, water and roll, prime surface
- For township medium use roads, pulverise existing sub-base, stabilise recompact and trim, prime surface
- For township low use roads, pulverise existing sub-base, stabilise with wetmix and prime surface

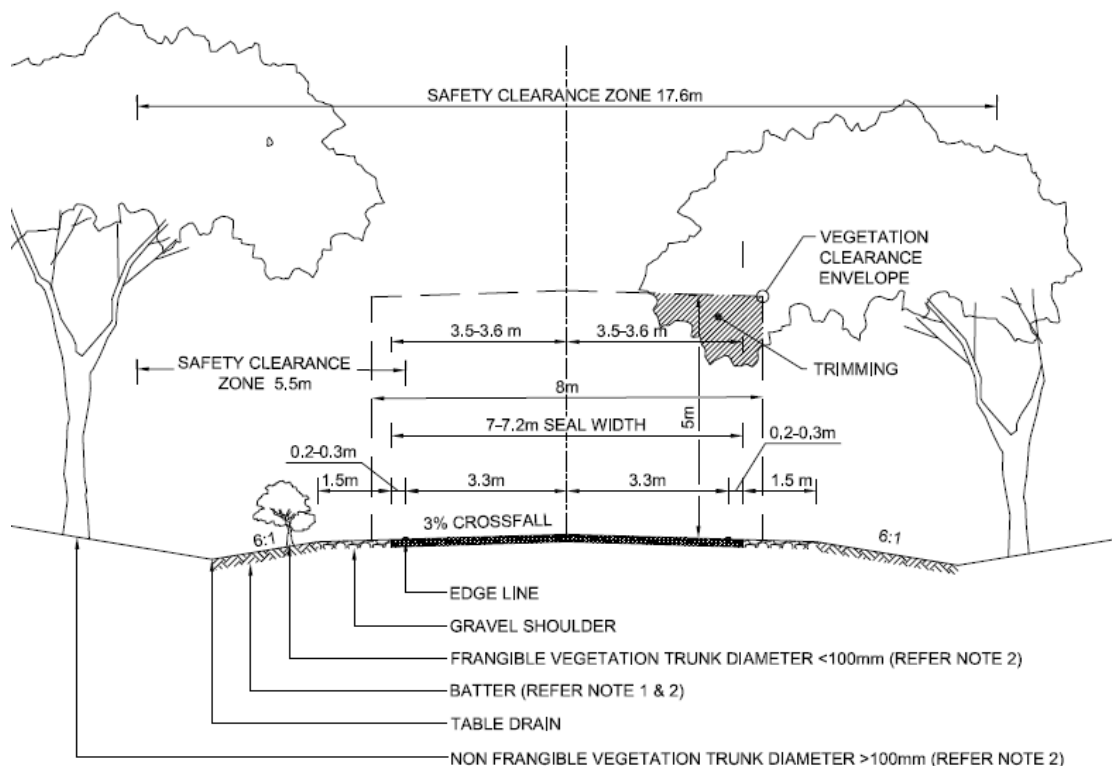
Assume Formation has indefinite life hence no cost incurred at renewal



## 1.4 Rural Seal

This is equivalent to WEP Category 3 Sealed Not Built Up.

### 1.4.1 Desired Service Level



#### NOTES

1. Where available safety clearance zone exceeds 21.6m In open country batters can reduce from 6:1 to 4:1, to reduce earthworks footprint.
2. Where terrain requires batters steeper than 3:1, refer Austroad (2010) Part 6 Guide to Road Design for assessment of safety barriers.
3. Frangible vegetation is permitted in the safety clear zone however should be clear in the vegetation clearance envelope.
4. Determination of safety clearance zone is based on an AADT <750, Design Speed of 100km/hr and fill batter slope of 6:1.

### 1.4.2 Actual Service Level

#### Current Replacement Cost Assumptions

Seal Width varies

Seal Type spray seal

Pavement Width varies

Pavement depth 250mm rural sealed roads

Formation and safety clearances restricted to native vegetation requirements.

### **Renewal Method**

Reseal: Two coat spray seal on rural high use roads (Spray seal 14/7mm)

Pavement: pulverise existing seal and base, import 200mm granular material, water and roll, prime surface.

Assume Formation has indefinite life hence no cost incurred at renewal

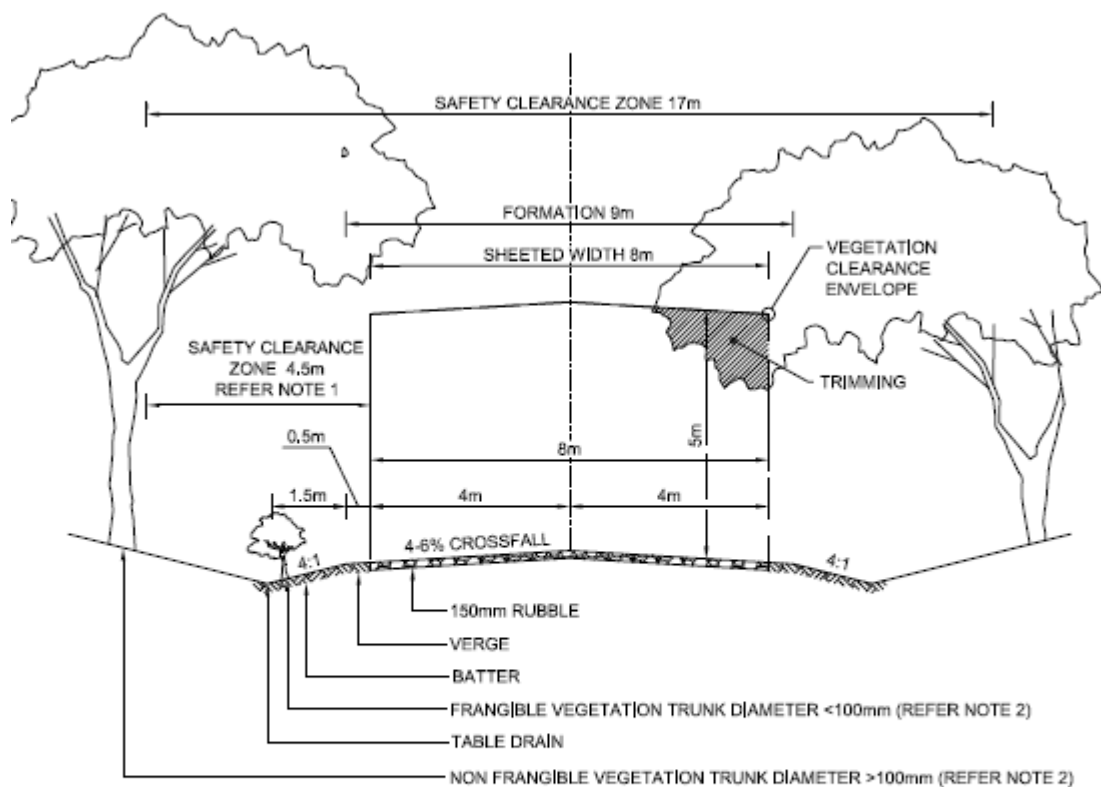
## 1.5 Rural Sheeted Arterial Roads

These DCTB Category 1 roads are equivalent to WEP Category 4 Major Collector (Unsealed) roads which are based on:

- Linking Towns
- Significant and major tourist route
- Commodity route based on ESA (Axle movements)
- Useful lives
  - High wear 10 years
  - Medium wear 15 years
  - Low wear 20 years

### 1.5.1 Desired Service Level

The following provides the desired construction standard for WEP Category 4 Major Collector Unsealed roads.



#### NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice ( March 2009 ) & Austroads Part 8 Guide to Road Design (2010).
2. Frangible vegetation is permitted in the safety clear zone however should be clear in the vegetation clearance envelope.

## 1.5.2 Actual service Level

### Current Replacement Cost Assumptions

Sheeting Width 8m

Sheeting Depth 120mm

Formation and safety clearances restricted to native vegetation requirements.

### Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 120mm crushed material. No allowance made for residual rubble.

Condition at End of Life – 60, assume 50mm rubble left prior to resheeting with no subgrade break through.

Useful Life

- 10 years for poor material
- 12 years for average material
- 15 years for good material

Assume formation has indefinite life hence no cost incurred at renewal.

Note: The Condition score of a road is a measure of the road consumption between 0 and 100 where 0 represents a newly surfaced road and 100 represents a fully deteriorated road. The condition score of each road is based on the sheeting depth, sheeting condition and drainage condition of the road. The Condition at End of Life is the condition at which intervention to maintain road serviceability is required.

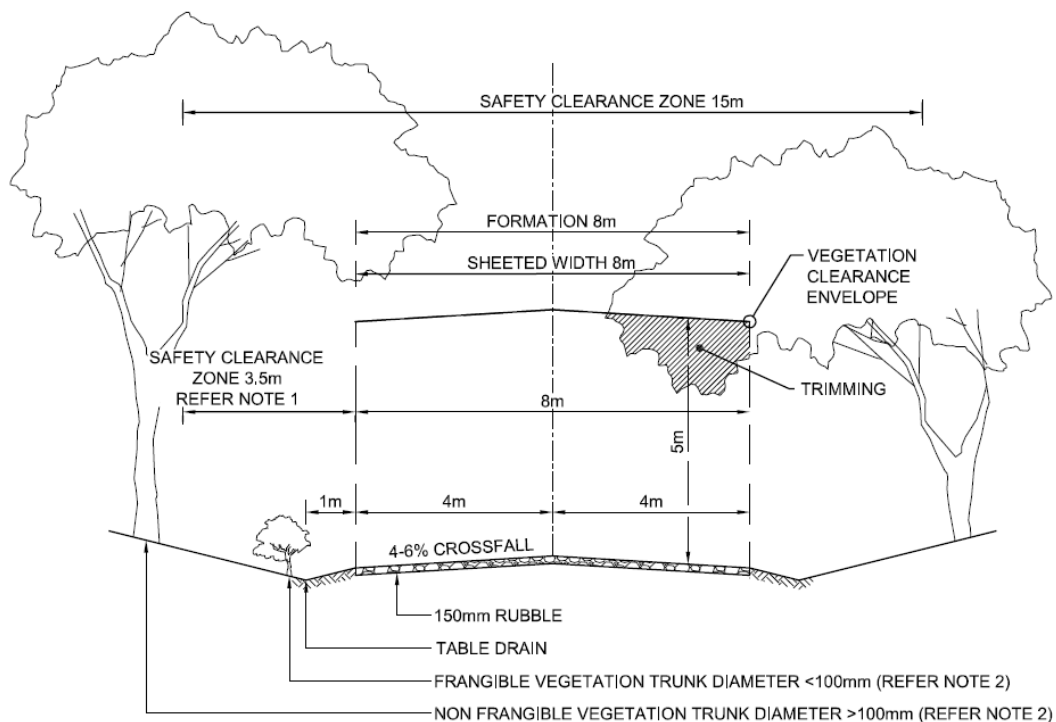
## 1.6 Rural Sheeted Collector Roads High Use

The DCTB Category 2A high use are equivalent to WEP Category 5 Minor Collector (Unsealed) roads which are based on:

- Linking Settlements
- Secondary tourist route
- Commodity route based on ESA axle movements(may be seasonal)
- Useful lives
  - High wear 15 years
  - Medium wear 20 years
  - Low wear 25 years

### 1.6.1 Desired Service Level

The following provides the desired construction standard for WEP Category 5 Minor Collector Unsealed roads.



#### NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice ( March 2009) & Austroads Part 6 Guide to Road Design (2010).
2. Frangible vegetation is permitted in the safety clear zone however should be clear in the vegetation clearance envelope.

## 1.6.2 Actual Service Level

### Current Replacement Cost Assumptions

Sheeting Width 8m

Sheeting Depth 120mm

Formation and safety clearances restricted to native vegetation requirements.

### Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 120mm crushed material. No allowance made for residual rubble.

Condition at end of Life – 65 for high use. Assume 30-40mm rubble left prior to resheeting with no subgrade break through.

Useful Life

- 10 years for poor material
- 12 years for average material
- 15 years for good material

Assume formation has indefinite life hence no cost incurred at renewal.

Note: The Condition score of a road is a measure of the road consumption between 0 and 100 where 0 represents a newly surfaced road and 100 represents a fully deteriorated road. The condition score of each road is based on the sheeting depth, sheeting condition and drainage condition of the road. The Condition at End of Life is the condition at which intervention to maintain road serviceability is required.

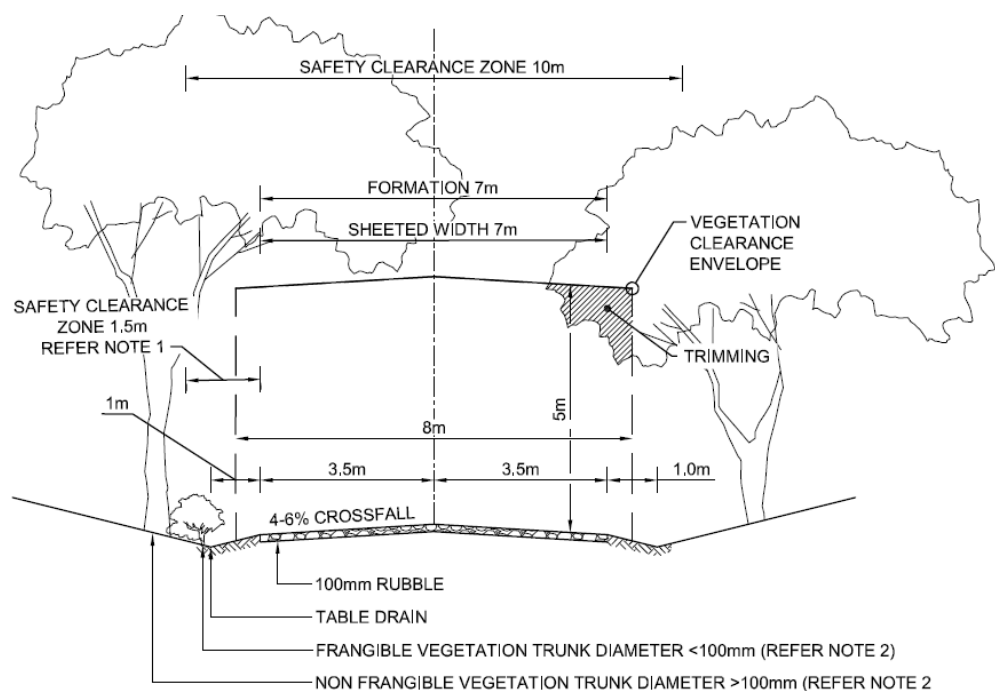
## 1.7 Rural Sheeted Collector Roads Medium Use

These DCTB Category 2B medium use collector roads are equivalent to WEP Category 6a Local Access Sheeted roads which are based on:

- Sheeting to provide all weather access
- Farm Gate to Transport route
- Useful lives
  - High wear 20 years
  - Medium wear 25 years
  - Low wear 30 years

### 1.7.1 Desired Service Level

The following provides the desired construction standard for WEP Category 6a Local Access Sheeted roads.



#### NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice ( March 2009) & Austroads Part 6 Guide to Road Design (2010).
2. For single lane, two way roads the following applies
  - a. 6m vegetation clear envelope width
  - b. 6m sheeted rubble width
  - c. 8.5m safety clear zone

## 1.7.2 Actual Service Level

### Current Replacement Cost Assumptions

Sheeting Width 7m

Sheeting Depth 120mm

Formation and safety clearances restricted to native vegetation requirements.

### Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 120mm crushed material. No allowance made for residual rubble.

Condition at end of Life –70 for medium use. Assume 30-40mm rubble left prior to resheeting with no subgrade break through.

Useful Life

- 20 years for poor material
- 24 years for average material
- 28 years for good material

Assume formation has indefinite life hence no cost incurred at renewal.

Note: The Condition score of a road is a measure of the road consumption between 0 and 100 where 0 represents a newly surfaced road and 100 represents a fully deteriorated road. The condition score of each road is based on the sheeting depth, sheeting condition and drainage condition of the road. The Condition at End of Life is the condition at which intervention to maintain road serviceability is required.



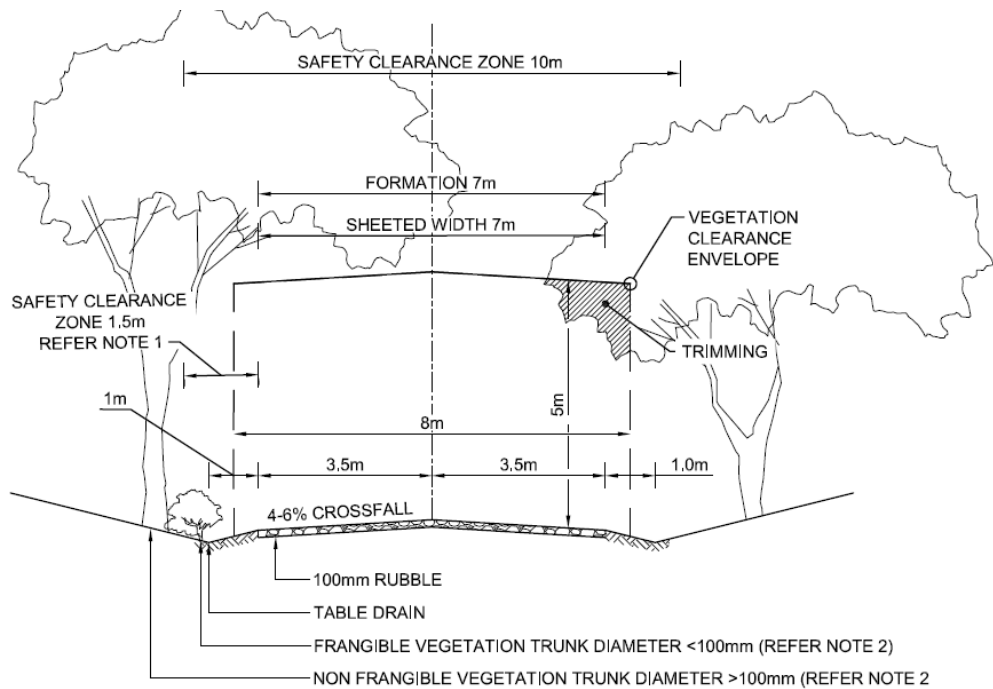
## 1.8 Rural Sheeted Local Access Roads

These DCTB Category 3A standard use & 3B low use roads are equivalent to WEP Category 6a Local Access Sheeted roads which are based on:

- Sheeting to provide all weather access
- Farm Gate to Transport route
- Useful lives
  - High wear 20 years
  - Medium wear 25 years
  - Low wear 30 years

### 1.8.1 Desired Service Level

The following provides the desired construction standard for WEP Category 6a Local Access Sheeted roads.



#### NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice ( March 2009) & Austroads Part 6 Guide to Road Design (2010).
2. For single lane, two way roads the following applies
  - a. 6m vegetation clear envelope width
  - b. 6m sheeted rubble width
  - c. 8.5m safety clear zone

## 1.8.2 Actual Service Level

### Current Replacement Cost Assumptions

Sheeting Width 6m for standard use, 5m for low use

Sheeting Depth 100mm

Formation and safety clearances restricted to native vegetation requirements.

### Renewal Method

Resheet: Reform existing material to create cross fall and shape. Supply, place and compact 100mm crushed material. No allowance made for residual rubble.

Condition at end of Life – 75 for standard use, 80 for low use, assume 20-25mm rubble left prior to resheeting with no subgrade break through.

Useful Life for Standard Use

- 20 years for poor material
- 24 years for average material
- 28 years for good material

Useful Life for Low Use

- 30 years for poor material
- 35 years for average material
- 40 years for good material

Assume formation has indefinite life hence no cost incurred at renewal.

Note: The Condition score of a road is a measure of the road consumption between 0 and 100 where 0 represents a newly surfaced road and 100 represents a fully deteriorated road. The condition score of each road is based on the sheeting depth, sheeting condition and drainage condition of the road. The Condition at End of Life is the condition at which intervention to maintain road serviceability is required.

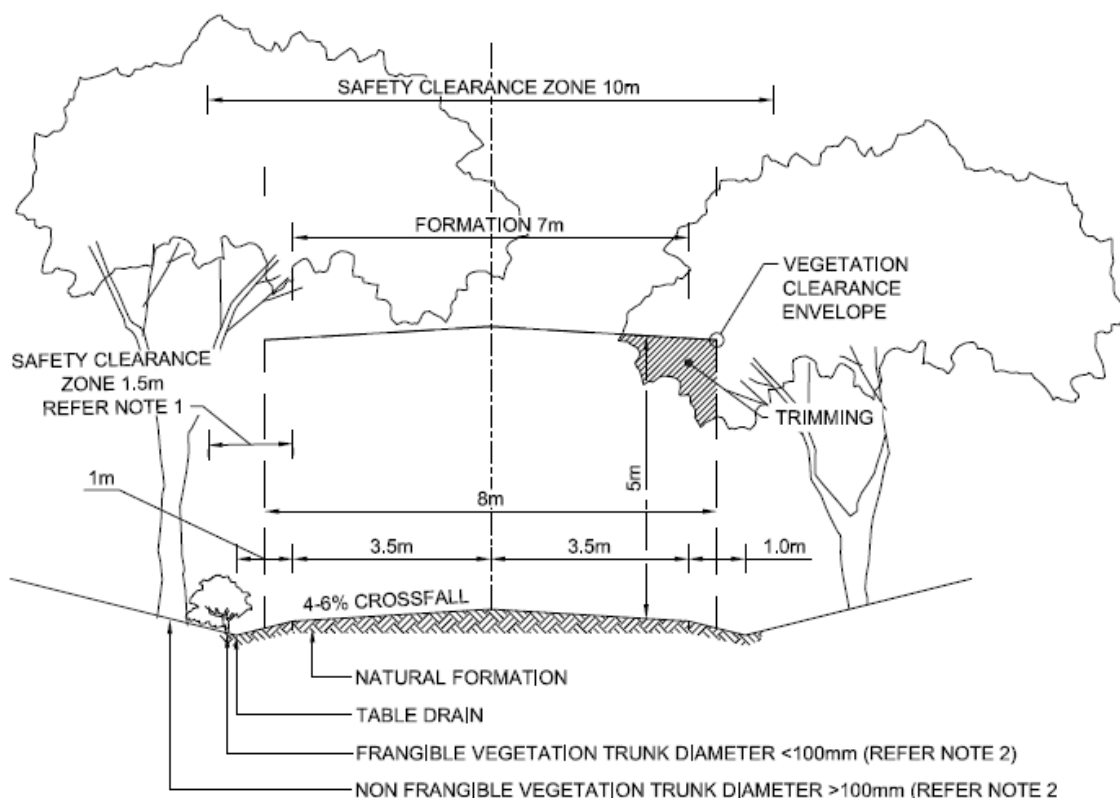
## 1.9 Formed Graded

These DCTB Category 4A Natural Formed Standard surface and 4B Natural Formed Fire Track surface roads are equivalent to WEP Category 6b Local Access Form Graded roads which are based on:

- Farm Gate to Transport route for standard surface type
- Fire access route for fire track surface type
- All weather access not required
- Intervention & maintain grading when programmed or agreed.

### 1.9.1 Desired Service Level

The following provides the desired construction standard for WEP Category 6b Local Access Form Graded roads.



#### NOTES

1. Safety clear zones have been based on practicable considerations with consideration to Unsealed Roads Manual : Guide to good practice ( March 2009 ) & Austroads Part 6 Guide to Road Design (2010).
2. For single lane, two way roads the following applies
  - a. 6m vegetation clear envelope width
  - b. 6m formation
  - c. 8.5m safety clear zone

### **1.9.2 Actual Service Level**

Does not requires all weather access

#### **Current Replacement Cost Assumptions**

Not a valued asset

#### **Renewal Method**

Not a valued asset, maintain by grading.

### **1.10 Unformed and Road Reserve**

At present these roads types are not part of DCTB categorisation.