



SHIRE OF YORK

ROAD DEVELOPMENT STANDARDS
2005-2015

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Reviewed: to be reviewed February 2006



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ROAD DEVELOPMENT STANDARDS 2005-2015

STATEMENT OF INTENT

To determine appropriate standards for the construction, upgrading and maintenance of roads in the Shire of York to:

- Cater for transport efficiencies for rural production
- Cater for road safety for all road users
- Value conservation characteristics associated with road reserves
- Minimise construction and maintenance costs
- Support State & Regional transport routes
- Support tourism

ROAD CATEGORIES

(1) Regional Roads / Roads 2020

Designated roads under this category which are recognised at State Government level and which qualify for funding under the Regional Roads Funding Programme of Main Roads WA at \$2 : Shire \$1 are:

- York – Tammin Road
- Spencers Brook Road
- Talbot West Road
- Talbot Road
- Top Beverley Road
- Qualen West Road
- Quellington Road

(2) State Roads

These roads are the responsibility of the State Government, through Main Roads WA for maintenance and upgrading and are:

- York – Quairading
- Northam – York
- York – Beverley
- Chidlow – York (Lakes Road)

Any works undertaken by the Shire of York on state roads is on a private works, contract or recoup basis.

(3) Heavy Haulage

Other than the State roads designated in item 2 the Shire of York has two (2) gazetted heavy haulage roads (classes 2 & 3 – up to 27 metre vehicle configurations) and these are:

- York – Tammin road
- Marwick Road

Heavy haulage on other local roads is managed through a permit/approval system administered by Main Roads WA.

Currently permit vehicles are not authorized to use;

- Gwambygine East Road
- Top Beverley Road
- Mokine Road
- Talbot Road

Restrictions on these roads will be varied from November 2005.

(4) Local Roads

All other roads and streets in the Shire of York are designated as local roads managed and controlled by the Local government.

TRANSPORT NEEDS

(1) Rural Production

Current and future rural production dictates that increased pavement widths and vegetation clearance will be necessary for efficient and effective farm transport operations involving both trucks and farm machinery.

Contracting of services for grain, livestock and hay to wider, longer and higher vehicle types and combinations also imposes a demand for higher standard road construction and maintenance.

(2) School Bus Routes

Traffic safety is paramount in the management of these roads which continually change as family circumstances alter.

Again economic efficiency has resulted in larger vehicles being used on school bus routes.

(3) Tourism

The Avon Valley and the York region in particular is a very popular tourist route and destination and road standards need to cater for people who are not fully conversant with rural roads.

In addition to the safety factor for visitors there is also the need to plan for rest areas, viewing areas, sight distances, native fauna and straying stock.

(4) Local Use

Within the context of the foregoing local use needs to be incorporated to provide a safe, efficient and effective transport system.

This necessitates the provision of cycleways, footpaths and other needs in addition to roads as not all travel is by vehicle.

(5) Conservation Values

Road reserves can be a vital biodiversity corridor and they often hold the only remnant vegetation where large scale, broad area clearing has occurred in the past.

Planning for road transport needs must include conservation values if a long-term sustainable network is to be achieved.

OTHER FACTORS

Materials

Proximity to and quality of materials is vital in road planning and priority setting as cost effectiveness may not be achievable in some areas and alternative options may be needed.

Drainage

The drainage systems and patterns in York demands a high level of water flow management in road design and management.

Development Nodes

Road upgrading and priority setting needs to give due recognition to growth patterns, traffic increases and specific transport needs.

Duty of Care

In an increasingly litigious society the duty of care factor is of far greater consequence and effect than in the past.

Factors of traffic mix, malfeasance, misfeasance and non-feasance have to be taken into account.

Vehicle Types

While freight transport vehicles are becoming longer, wider and higher, private passenger vehicles are becoming lighter and faster.

ROAD STANDARDS

To assist in priority setting for roads a range of assessment factors need to be included in any equation.

Traffic counts are an obvious measure as is crash data at specific locations or specific sections of roads.

Vehicle types and traffic use is also an important factor. The ratio of heavy to light vehicles can determine road design.

Factors such as dust, sight distances and terrain are also important.

Environmental factors such as vegetation, weeds, water flow, air quality and biodiversity need to be considered.

The effect of legislation is also a factor in determining standards as evidenced by the new Environmental Protection (Clearing of Native Vegetation) Regulations 2004.

RURAL ROADS

Base Standard (Gravel)

A basic principle for road construction is for the pavement width (gravel or seal) to allow for the safe passing of standard vehicles travelling in opposite directions or to allow for overtaking for vehicles traveling in the same direction.

Lane widths of 2.8 metres would be the minimum standard with 3.2 metre lanes being the preferred standard.

In addition to the lane widths a specific shoulder width is necessary for road safety. A minimum shoulder width of 1 metre is proposed.

Drainage requirements would be determined by terrain, soil types, grades and other factors and up to 2 metres on either side of the road is normally required.

Standard	-	Pavement width (including shoulders)	8.4m
	-	Drainage width up to	<u>4.0m</u>
	-	Total formation width	12.4m

Base Standard (Seal)

A basic principle for road construction is for the pavement width (gravel or seal) to allow for the safe passing of standard vehicles traveling in opposite directions or to allow for overtaking for vehicles traveling in the same direction.

Lane widths of 2.8 metres would be the minimum standard with 3.2 metre lanes being the preferred standard.

In addition to the lane widths a specific shoulder width is necessary for road safety. A minimum shoulder width of 1 metre is proposed.

Drainage requirements would be determined by terrain, soil types, grades and other factors and up to 2 metres on either side of the road is normally required.

Standard	-	Pavement width (seal)	6.4m
	-	Shoulder width (each side)	2.0m
	-	Drainage width up to	<u>4.0m</u>
	-	Total formation width	12.4m

Note: This standard applies to roads with annual average daily traffic of up to 100 vehicles per day.

Road use above 100 vehicles per day requires higher standards and the following should apply:

-	100 – 250 VPD	Seal Width	7.0m
-	250 – 500 VPD	Seal Width	8.0m
-	500 upwards VPD	Seal Width	9.0m

Specific individual standards may need to be developed and adopted where there is extensive use of a road or a section of road by heavy haulage / permit vehicles to cater for extra mass, over width, over length, over height vehicles.

The formula for converting heavy vehicle road counts to equivalent standard axles will be used to determine a common denominator of a car when assessing road use and design standards.

ENVIRONMENTAL STANDARDS

Every effort should be made in road upgrading and maintenance planning to provide for protection and enhancement of the environment.

While it is very restrictive to combine traffic needs and environmental needs in a constrained width (normally 20 metres on local roads) the environmental values must be included.

Managed use of roadside vegetation can be used for erosion control, as a windbreak, as a wildlife corridor and for tourist appreciation.

Vegetation can also be used for road safety, as it will indicate a curve in a road, intersections and other road conditions.

Vegetation may increase road danger as it can harbour native animals and straying stock and it can obstruct sight distances.

Based on the standards for traffic use vegetation widths of a maximum of 7 metres may be maintained in road reserves. Unfortunately historic road construction is generally in the centre of the road reserve resulting in narrow verges either side of the pavement, which may be unsustainable in the long term.

Every effort should be made to widen the road reserve and to widen the vegetation corridors for roads.

Objectives

- To minimise clearing widths to those necessary to achieve the pavement standards applied to individual roads
- To offset road widening to one side of the road reserve, where practical, to provide maximum width vegetation corridors on one side of the road

Roadside Amenities

Provision needs to be made in traffic planning and management for travel and safety amenities such as school bus bays, rest areas and viewing areas where particular landscape features are evident.

Passing lanes are normally beyond the accepted need for local roads, however consideration may need to be given to this need for specific heavy haulage routes subject to high traffic volumes.

Speed zoning, white lining, acceleration and deceleration lanes and signage are other traffic management controls, which can be incorporated into the standards.

RECOMMENDATION

That Council adopt the following minimum standards for inclusion in the road construction and maintenance procedures for rural local roads in the Shire of York.

- **Gravel Roads (Base Standard)**

Pavement width including road shoulder	8.4m
Drainage width	up to <u>4.0m</u>
Total formation width	12.4m
- **Sealed Roads (Base Standard)**

Pavement width (Seal)	6.4m
Shoulder width (1 metre each side)	2.0m
Drainage width	up to <u>4.00m</u>
	12.4m
- **Environmental Values**
 - Retention of vegetation corridors on road reserves
 - Linkage of road reserve vegetation to reserves and remnant vegetation areas and defined wildlife corridors
- **Seal Widths**

0-100 vehicles per day	6.4m
101-250 vehicles per day	7.0m
250-500 vehicles per day	8.0m
501 upwards per day	9.0m

TOWN STREETS

These are a more complex issue and standards need to be considered in the context of town planning and development patterns. With the implementation the 50km limit in town sites and the need for kerbing, deliveries, drainage, footpaths, parking, underground services and other factors to be incorporated into the design criteria a street by street approach is required.

Town street standards will be developed and implemented as part of the Town Planning Scheme review and precinct planning.

ROAD RESERVES

The current standard width of 20 metres is a concern in relation to road reserves being used for traffic, services and the environment.

The Environmental Protection Regulations 2004 are not prescriptive at this stage, for minimum and maximum widths for clearing for road construction and maintenance and for services e.g. power and water.

Extracts from the regulations are attached as "APPENDIX A".

A longer term solution is required for environmental sustainability for road reserves and this one of the following;

- (a) Widen the road reserve to a minimum of 40 metres. A vegetation plan and programme would need to be put in place to obtain value. Where subdivisions occur a local government can request a road widening as part of the process and some shires have set this at 10 metres.
- (b) Purchase land from adjacent properties to achieve a designated road reserve width. Most local authorities would have insufficient funds to even consider this except in isolated and specific locations.
- (c) Encourage the re-vegetating of property boundaries to compliment road verge vegetation.
- (d) Where there are pockets of remnant vegetation adjacent to the road reserve the area be purchased or resumed and incorporated into the road reserve.

Should be considered & incorporated into future road planning.

RAY HOOPER
CHIEF EXECUTIVE OFFICER

18 July 2005

Environmental Protection (Clearing of Native Vegetation) Regulations 2004

Schedule 2 Clearing in existing transport corridors

Schedule 2 — Clearing in existing transport corridors

[r. 5(1) item 22]

1. **Terms used in this Schedule**

In this Schedule —

"lateral clearance area", in relation to a stretch of road or railway, means the area (if any) parallel to and immediately adjacent to the stretch of road or railway that is ordinarily cleared;

"public roadside facility" includes a camping area, rest area, information bay, road train assembly area or parking area;

"transport corridor infrastructure" includes barriers, signs, guideposts, drains, levies, embankments, gutters, bridges, overpasses and other similar structures or works;

"sight line area" means an area between the edge of a stretch of road or railway and a line of sight necessary for the safe use of the stretch of road or railway.

2. **Extent of clearing for an area or purpose in relation to a road or railway**

For a stretch of road or railway, the area or purpose and the extent of clearing referred to in item 22 are specified in the Table to this clause.

Table

area or purpose	extent of clearing
lateral clearance area	complete clearing to the width and height previously cleared for that stretch of road or railway.
maintenance and protection of transport corridor infrastructure	clearing to the extent necessary to — (a) maintain the efficacy of the infrastructure; (b) protect the infrastructure (for example, from fire); and (c) provide access to the infrastructure to maintain it.

*Environmental Protection (Clearing of Native Vegetation) Regulations 2004*Clearing in existing transport corridors Schedule 2

area or purpose	extent of clearing
an area that is a public roadside facility	clearing to the extent necessary to maintain (but not extend) the intended use of the area.
sight line area	clearing to the extent previously cleared for that area.

3. **How the clearing^a is to be carried out**

Clearing is to be carried out so that any cleared vegetation or debris —

- (a) is not burnt on the site;
- (b) to the extent to which it is not used on the site, is removed from the site within 21 days of the clearing; and
- (c) if it is to be removed from the site —
 - (i) is not placed in a heap or windrow on uncleared vegetation; and
 - (ii) is left in a heap or windrow (that is secured so that it will not spread) until it is removed.

*Environmental Protection (Clearing of Native Vegetation) Regulations 2004*Schedule 3 Infrastructure maintenance activities**Schedule 3 — Infrastructure maintenance activities**

[r. 5(1) item 23]

1. Infrastructure maintenance activities

- (1) The following activities are infrastructure maintenance activities —
- (a) maintenance of existing infrastructure;
 - (b) construction of infrastructure, if the construction commenced before Part 9 of the *Environmental Protection Amendment Act 2003* came into operation;
 - (c) the use of a site used to extract road or railway building materials if that site was used within the 2 years immediately before the day on which Part 9 of the *Environmental Protection Amendment Act 2003* came into operation;
 - (d) road widening or realignment, or construction of a crossover from a road to private property, and the construction or maintenance of sight line areas associated with any of these, if the road existed before Part 9 of the *Environmental Protection Amendment Act 2003* came into operation.
- (2) In this clause —
- “sight line area” means an area between the edge of a stretch of road and a line of sight necessary for the safe use of the stretch of road.

2. How the activity is to be carried out

An activity referred to in clause 1 is to be carried out so that any cleared vegetation or debris —

- (a) is not burnt on the site;
- (b) to the extent to which it is not used on the site, is removed from the site within 21 days of the clearing; and

Environmental Protection (Clearing of Native Vegetation) Regulations 2004

Infrastructure maintenance activities **Schedule 3**

- (c) if it is to be removed from the site —
 - (i) is not placed in a heap or windrow on uncleared vegetation; and
 - (ii) is left in a heap or windrow (that is secured so that it will not spread) until it is removed.

By Command of the Lieutenant-Governor and Administrator,

M. TRAVERS, Clerk of the Executive Council.
