

TITLE

E710 RURAL ROADS POLICY - NEW CONSTRUCTION PART I - COASTAL ROADS DESIGN AND USAGE

DEPARTMENT

Engineering Services

POLICY DIRECTIVE

- (i) To formulate a policy for the construction of Coastal Rural Roads which will document commitments to be undertaken by the Council and land owners.
- (ii) The placement of covenants on sealed plans for subdivisions in respect to the construction of roadways.

HISTORY

Developers are purchasing land in coastal areas of King Island for the purpose of subdividing land for re-development and sale.

Council Resolution No 383/98 from the Ordinary Meeting held on 20 August 1998

Council Resolution No 176/00 – Ordinary Meeting of 18 April 2000.

Council Resolution No 449/01 – Ordinary Meeting of 16 October 2001.

POLICY

1. USAGE

The road users to which these future public roads will apply are -

- General public
- New residents of the newly subdivided area
- Kelp truck traffic
- Tourist buses.

The road design must take into account the mix between commercial, tourist, and local residential traffic.

2. DESIGN SPEED

The design speed to be between 20km/hr and 40km/hr. Such limits will determine the sight distance requirement, width, and passing opportunities.

3. MATERIALS

Road pavement materials should be locally sourced, so that whatever quarry is located close to the proposed road may be used, providing the material is satisfactory.

4. ROAD RESERVATION

Many existing roads are built within crown reservations. In circumstances where roads are built on private property it may be necessary for adjustments to be made as the situation demands.

It follows that the position of fencing adjacent to the roadways must be taken into account, when fixing the width of the road reservation.

When fencing is placed on the actual reservation, then much useful pasture land can be lost. Verges are unnecessarily wide and will create a maintenance problem while alienating the land for useful purposes.

5. HORIZONTAL ALIGNMENT

For design speeds between 20-40 km/hr a curve radii of 15-20 metres is required.

6. WIDTH OF TRAFFIC LANES

To comply with Annual Average Daily Traffic Volumes the following is to apply:

- Lane width 3 metres
- Shoulder width 0.5 metres each side
- Useable verge width (where practical) 0.5 metres each side.

Such dimensions will allow two vehicles to pass with care.

7. CROSS SECTIONS

- i) Cross Falls are determined by the need to remove water from the road surface only and no other design requirements are necessary.
The minimum to be 4% and the maximum 10%.
- ii) Table Drains. In sand dune country normal table drains will not be required, but where the pavement is fully or partially within a cutting then table drains will need to be provided.
- iii) Verge Width to be 0.5 metres or greater. In situations where it may be difficult to achieve this without substantial vegetation removal, then the requirement may be deleted.

8. SIGHT DISTANCE (VERTICAL ALIGNMENT)

Criteria to be addressed:

- i) Vehicle to vehicle sight distance
- ii) Vehicle to object sight distance.

The sight distance to be between 15 and 30 metres.

Benching may be provided where there is a crest with a horizontal curve.

9. GRADE AND VERTICAL CURVES

- i) A maximum vertical grade of 18% (only to be exceeded if specifically approved) and not to occur over a greater distance than 10 metres to a maximum of 15 metres.
- ii) Where trucks and buses are operating on the roads, grades to be limited to 15% for short sections.
- iii) Normal operating grades not to exceed 10%.

10. PAVEMENT CONSTRUCTION

- i) Depth

For normal public road pavement, depth in clay subgrades is 300mm, and where the subgrade is sand it may be reduced to 250mm.

It may be necessary to decide on a depth which is acceptable to the Council and affordable by a developer. Depending on circumstances a reduction in depth to 150mm may be negotiated, bearing in mind Council may have to add an extra 100mm thickness within five years, because of normal loss of pavement depth.

ii) Type of Materials

Council's own Engineer is well experienced in which gravels are satisfactory. The qualities of the actual pavement material should therefore be consistent with good practice.

Where potential pollution may be caused by the material itself, either avoid using it or limit the potential polluting effects.

11. SAND DUNE PROTECTION

This aspect of road construction within the sand dune zone is critical, once the root mass of the sand is disturbed by the road, then severe erosion problems can occur. Several approaches are needed to ensure protection of the dune integrity.

i) *Keep Excavation to a minimum*

- Generally place pavement within existing tracks.
- Place gravel on top of grass - this will not cause any problem to the road and will be highly beneficial to the dune.
- Alter cross fall, longitudinal grade and width of the road within the guidelines provided in this report to minimise excavation and consequent disturbance to the sand.

ii) *Protect exposed sand*

Inevitably there will be sand exposed as a result of road improvements. Erosion will commence through wind and rain action, and it needs to be immediately prevented.

- Use a proprietary matting which allows grass growth, but prevents sand blowing away.
- Place rock on the face of the exposed sand.
- Place a suitable mulch on the sand, held in place by a semi-permanent steel or plastic mesh.

In all these cases, plant the exposed cut-out with a suitable grass species.

12. PRIVATE SUBDIVISION ROADS

This Roads Policy will generally apply to new subdivision roads and rights-of-way even if not taken over by the Council.

That in respect of those roads and rights-of-way which will not be taken over by the Council, a covenant will be required on each sealed new plan to the effect that maintenance of such roads and rights-of-way is not the responsibility of the Council.

That where applicable, Certificate of Council's Rights In or Powers Over Land will be endorsed accordingly.

ADDITIONAL INFORMATION