

**DEPARTMENT OF INFRASTRUCTURE, ENERGY AND RESOURCES**  
**ROADWORKS SPECIFICATION**

**R80 –MISCELLANEOUS CONCRETE SLABS**

**June 2004**

previously R71

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**R80.1 SCOPE**

This Specification sets out the requirements for:

- Properties of materials
- Surface finish and evenness
- Dimensions and level tolerances

to be achieved in the construction of footpaths, cycleways, paved areas and miscellaneous concrete slabs.

**R80.2 OBJECTIVES**

To ensure that:

- All areas are constructed from durable materials
- Footpaths, cycleways and paved areas are suited for their intended uses
- Maintenance costs are minimised

**R80.3 REFERENCES**

The following Australian Standards and Standard Specifications shall apply:

- AS 3661: Slip Resistance of Pedestrian Surfaces
- AS 3727: Guide to Residential Pavements
- AS 4455: Masonry Units and Segmental Pavers

Standard Specifications

- R22 Earthworks
- R40 Pavement Base and Sub-base
- R41 Unsealed Pavement Base
- R51 Sprayed Bituminous Surfacing
- R55 Dense Graded Asphalt
- R81 Minor Concrete Structures

**R80.4 DEFINITIONS**

For the purposes of this specification, the following definition shall apply:

Paver: A paver is as defined in AS 4455.

**R80.5 MATERIALS****R80.5.1 Paving**

Pavers are to be the size, colour and shape as shown on the Drawings or as specified. Pavers used are to comply with the requirements in AS 4455.

Paver thickness is to be 50mm minimum for non-trafficable areas, and 75mm minimum for trafficable areas.

**R80.5.2 Bedding and Joint Material for Pavers**

Bedding and joint material shall be salt free and comply with Table R80.1.

TABLE R80.1 - BEDDING AND JOINT MATERIAL GRADINGS

A.S. SIEVE SIZE (mm)	PERCENT BY MASS PASSING	
	Bedding Material	Jointing Material
4.75	100	100
2.36	70-100	40-90
0.600	20-60	
0.150	0-15	10-30

### R80.5.3 Sprayed Bituminous Surfacing

Sprayed bituminous surfacing shall be in accordance with Specification R51, and have aggregate size 10mm or less.

### R80.5.4 Asphalt

The asphalt used shall be dense graded asphalt in accordance with Specification R55, and have aggregate size 10mm or less.

### R80.5.5 Concrete

Concrete shall comply with Specification R81.

Patterned concrete, where specified, shall be stamped or stencilled and coloured as shown on the drawings, or as specified.

### R80.5.6 Bedding Material for Sprayed Bituminous Surfacing, Asphalt and Concrete

The bedding material used shall comply with the requirements described in Specification R40 for pavement base and sub base.

### R80.5.7 Gravel

Gravel surfaces shall be constructed using unsealed pavement base type N.

Gravel paved areas shall comply with Specification R41.

## R80.6 CONSTRUCTION

### R80.6.1 General ◆

- (i) Where footpaths, cycleways or paved areas other than concrete do not directly abut a solid restraint such as a kerb or wall, 75 mm x 38 mm treated pine edge strips, secured by 75 mm x 38 mm x 300 mm (minimum length) treated pine pegs at 1200 mm centres, shall be placed.
- (ii) The constructed area shall be weed free. Prior to the placement of the pavers a slow release weed killer shall be applied at the rates recommended by the manufacturer and in accordance with the manufacturer's recommendations.
- (iii) The surface finish of the area shall comply with AS 3661 if it is to be used by pedestrians.
- (iv) All water shall be drained from the surface of the constructed area, with no ponding permitted.

### R80.6.2 Tolerances

#### (i) Horizontal tolerances:

- The tolerance on plan position shall be  $\pm 50$ mm, unless otherwise specified below.
- If the constructed area abuts a pre-existing structure, it shall abut within the gap tolerances given below.
- If the constructed area is adjacent to another part of the works for which a tolerance is specified elsewhere in the specification, then the tolerances for that component of the works shall apply.

- (ii) Width tolerance:
- Where the width of the constructed area is not constrained by a pre-existing structure or another part of the works, the width tolerance shall be  $-0$  mm,  $+100$  mm.
- (iii) Vertical tolerances:
- The tolerance on surface level shall be  $\pm 25$ mm, unless otherwise specified below.
  - Where the constructed area is to drain onto an adjacent structure, the vertical tolerance to the adjacent structure shall be  $-0$  mm,  $+5$  mm (In the case of pavers, the vertical measurement is to be from the bottom of the chamfer or rumbled aris around the paver's surface if present).
  - Surfaces shall not deviate more than 5 mm from a 500mm long straight edge laid anywhere on the surface, and in the case of concrete slabs not more than 2mm.
  - The level difference between adjacent pavers shall not exceed 2mm.
- (iv) Gap tolerance for pavers:
- Pavers shall be placed with a uniform gap of 2-5 mm between pavers, and between pavers and a restraining structure.

#### R80.6.3 Cycleways

Pavers and gravel surfaces shall not be used as the wearing surface for cycleways.

Where cycleways have concrete as the wearing surface, the concrete shall be transverse broomed when plastic to provide a skid resistant wearing surface in accordance with the requirements of AS3661.

Concrete expansion joints shall be installed at  $90^\circ$  to the traffic direction.

#### R80.6.4 Paving

There shall be no movement or cracking of blocks under service conditions. This requirement is to apply throughout the defects liability period of the contract.

#### R80.6.5 Concrete



Concrete shall be placed, compacted and cured in accordance with Specification R81.

Concrete slabs shall be constructed and reinforced to the heavier standard of the relevant Local Government Standard Drawings or this specification.

Patterned concrete island slabs may be reinforced using steel fibre reinforcement.

Concrete shall be 100mm minimum thickness and cast in bays not exceeding 3 metres with F62 reinforcing mesh centrally placed.

Where there is a trafficked crossing over the concrete area, the thickness shall be increased to 150mm minimum with F72 reinforcing mesh centrally placed for light traffic crossings and F81 reinforcing mesh centrally placed for medium traffic crossings.

Expansion joints over the full width and to the full depth shall be placed every 6.0 metres and fitted with 13 mm wide compressible filler. Expansion joints shall be sealed to prevent ingress of water and other deleterious matter. The sealer shall be flush with the adjoining surfaces.

Construction joints shall be formed with either a jointing tool or early sawing at spacings between 0.75 and 1.5 times the width of slab.

**R80.7 PAYMENT**

Payment shall be per square metre at the rate tendered in the Schedule of Rates. The measured area shall not include the kerb or any edge strip surrounds but shall include island kerb noses.

Payment shall include the cost of the supply, cutting and placing of

- Base material, bedding material, joint material, including colouring (as appropriate).
- Supply and application of weed killer.
- Concrete and reinforcing mesh, asphalt, sprayed bituminous surfacing, pavers and expansion joints (as appropriate).
- Treated pine edge strips which may surround constructed areas.
- Forming and placing island kerb noses.

Payment for any earthworks or kerbing necessary shall be at the relevant scheduled rate.