

# 1151 Road Openings and Restorations (General)

Guidelines for compliance with S138 permit for works/activity related to General work

## Objectives

Provide road opening and restoration works for installation of services within public road reserves comprising clearing, excavation, backfilling and restoration of surfaces. This worksection excludes the installation activities of the relevant public utility services.

## Provision for traffic

### Safety

**Traffic obstruction:** Construct the Works in a safe manner with the least possible obstruction to traffic, both vehicular and pedestrian.

**Guidance scheme:** Submit a Traffic Guidance Scheme and carry out all activities for controlling traffic, both vehicular and pedestrian, in conformance with 1101 Control of traffic. This is a HOLD POINT.

### Access

**Properties adjacent to the works:** Provide continuous safe, all weather vehicular and pedestrian access wherever possible.

**Notice:** Provide 48 hours to property owners whose access will be restricted.

### Environmental control measures

**Requirement:** Implement an Environment Management Plan containing erosion and sedimentation control measures, and noise and dust control measures, as required by the relevant Environmental legislation and in accordance with the requirements of the relevant Statutory Authorities

### General

Before commencing earthworks, locate and mark existing underground services in the areas which will be affected by the earthworks operations including clearing, excavating and trenching. Obtain locations of water, sewer, stormwater, gas, electricity and telephone services.

### Disposal of spoil

Legally dispose of all spoil and waste material to an appropriate recycling facility, disposal site or a legal waste management centre.

### Survey marks

**Authority requirements:** Refer any trench or surface work proposed in the vicinity of Permanent or State Survey Marks to the Land Information Centre of the Department of Land and Water.

### Concrete and asphalt pavements

**Method:** Saw cut trench set out lines located on concrete or asphalt footpaths, and asphalt carriageway pavements for the full depths of the bound pavement layers except where the set out line is located along expansion joints.

### Protection during works

**Existing trees:** Protect from all damage during the works.

## Trench backfill

### Bedding, haunch, side and overlay zones

**Installation:** In conformance with the particular utility authority requirements.

**Overlay zone thickness:** Maximum of 300mm immediately over the utility service.

### Backfill

**Extent:** Between the overlay zone and the top of subgrade.

**Material:** As determined by the Superintendent and may comprise 14:1 moist washed river sand/cement mix or non-cohesive backfill material.

### Selected material zone

#### Backfill material:

1. Selected material free from stones larger than 100mm maximum dimension and the fraction passing a 19 mm Australian Standard sieve to have a 4 day soaked CBR value, in conformance with AS 1289.6.1.2, not less than that of the adjacent selected material zone.
2. Crushed rock, DGS20 or DGB20 material, from an approved source and configure in layers and depths as in conformance with 1141 Flexible pavements for carriageways.

### Relative compaction

**Requirements:** To the Compaction table when tested in conformance with AS 1289.5.4.1 for modified compactive effort.

#### Compaction table:

Layer	Relative compaction
Foundations or trench base to a depth of 150mm below foundation levels	92%
Material replacing unsuitable material	92%
Bedding material	92%
Selected backfill and ordinary backfill material	
– below 1.5m of finished surface	92%
– within 1.5m of finished surface	97%
Backfill material within the selected material zone	97%

**Layers:** Compact all material in layers not exceeding 150 mm compacted thickness. Compact each layer to the relative compaction specified before the next layer is commenced.

## Restoration preparation

### Carriageway pavements and pathways

**Make good:** Restore carriageway pavements and pathways in a continuous manner to the equivalent condition.

### Structures

**Levels:** Set the levels of utility service surface pits, access chamber frames and lids and any other affected structures, so that carriageway pavements and footpaths can be restored to original levels.

### Approval

**Before paving:** Prior to the commencement of any paving restoration work, form up and prepare the areas for paved restoration and present the prepared areas to Council's Officer for approval; this is a hold point.

## Surface restoration

### Subbase and base

**Material:** Provide crushed rock, DGS20 or DGB20 material, from a source approved by the Council and configure in layers and depths to 1141 Flexible pavements.

### Carriageway bituminous wearing surface

**Materials and installation:** to 1143 sprayed bituminous surfacing or 1144 asphaltic concrete (roadways), as applicable.

### Pathways and paved public areas

**Materials generally:** Consistent with the surface existing before commencement of the works, Subbase: 150mm crushed stone DGB20

compacted to 100 percent relative compaction in conformance with AS 1289.5.4.1.

## Concrete footpaths

**General:** Include textured and patterned concrete.

**Construction:** Conform to the following:

- **Material:** 100 mm thick 25 MPa concrete with SL 62 mesh.
- **Surface finish and pattern:** Match existing adjoining footpaths and driveways as appropriate or as directed by the Council. This is a WITNESS POINT.
- **Expansion joints:** 15 mm thick preformed jointing material of bituminous fibreboard or equivalent approved by the Superintendent placed where new concrete abuts existing concrete and in line with joints in existing concrete.
- **Control joints:** Form control joints strictly in line with the control joints in existing concrete.

## Asphalt footpaths

**Materials and installation:** To 1144 Asphaltic concrete (Roadways), or 1142 Bituminous cold mix, as nominated by Council Officer.

**Thickness:** Match the adjoining footpath.

**Finish:** Compact to a smooth even surface.

## Segmental paving units

**Materials and installation:** To 1145 Segmental paving and as follows:

- **Laying:** Re-lay to match the pattern and surface levels of the existing paving.
- **Damaged paving units:** Replace with new units, paving units which are unsuitable for relaying, as determined by the Superintendent, with new units of the same material, type, size and colour as the existing.
- **Tree surrounds, service boxes and poles:** Match the pattern at similar existing features in the immediate area or be as directed by Council's Officer. This is a HOLD POINT.

## Turfed verges

**Topsoil:** 50mm minimum thickness, placed on the subgrade prior to restoration of turfed verges.

**Existing grass turf:** Re-lay to conform with the original grassed surface.

**Method:** Hand butt turfs against each other in rows and topdress the seams with topsoil, rolled and watered to ensure direct and uniform contact with the topsoil.

**Additional turf:** If required complete the affected area with turf of the same species.

## Verge plants, shrubs and trees

**Topsoil:** Match the surrounding thickness, placed on the subgrade prior to restoration of turfed verges.

**Plant material:** Re-plant existing plants, shrubs and trees which are suitable for replanting as determined by the Council. Backfill the planting hole with topsoil and compact by foot up to surface level.

**Staking:** Stake the shrubs and trees as directed by the Council, and water and maintain for 2 months after the date of formal completion of the restoration works.

## Completion

**Extent:** Clean up the areas affected by the Works and associated construction activities and restore to a condition equivalent to that existing at the commencement of the Works.

**Rubbish:** Remove and legally dispose of all formwork, rubbish and residue construction materials off site, including material left at stockpiles.

**Approval:** Present the cleaned up restoration works to the Council for approval. This action is a HOLD POINT.