WAKEFIELD
REGIONAL COUNCIL

EXCAVATION AND REINSTATEMENT

SPECIFICATION

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1 Scope

The excavation and reinstatement requirements contained in this Specification apply to roads and reserves which are maintained by the Council (as defined in Clause 2.2 “Council”). All work shall conform with this specification unless otherwise approved by the Infrastructure Services Manager.

The specification shall be adhered to when excavation, along or across any pavement or shoulders on these roads is required for service installation, relocation of existing services, drainage or other reasons.

Notwithstanding any variation to certain of the requirements which any Government Authority (Federal or State) may consider it can exercise by virtue of its own or any other enabling legislation with respect to any underground installations, the technical and quality standards of the road work and materials specified herein are minimum acceptable within the meaning of words “making good” or “reinstate” used in most such legislation.

2 DEFINITIONS

2.1 General

The definitions given in AS 1348 “Road and Traffic Engineering -Glossary of Terms” shall apply to all appropriate wording in this specification.

2.2 Council

“Council” means Wakefield Regional Council.

2.3 Manager Strategic Asset Planning

“Manager Strategic Asset Planning” shall mean Manager Strategic Asset Planning of Wakefield Regional Council or their delegate.

2.4 Service Authority

“Service Authority” means the person, Statutory Authority, Government Department, Corporate body or any other organisation or individual (private, State or Federal) responsible for the excavation and reinstatement referred to in this specification. This will include but is not limited to:

Telstra	SA Power Networks
Optus	Gas Company
SA Water	Contractors
APA	Private individuals

2.5 Minor Programmed Works

Works confined to two days duration from commencement to completion.

2.6 Major Programmed Works

Works exceeding two days duration from commencement to completion

2.7 Excavation

“Excavation” is to incorporate any disturbance to any surface.

2.8 Proper Land Management

Proper Land Management can be referred to as the organisation or regulation of land use activities for a specific purpose in the manner that will support sustained use. Maintenance of improvement of the integrity of the land, water, atmosphere and its aesthetic value is the objective.

3 STAGES

3.1 Notification of Proposed Works

Notification of proposed works should be formally given to Council prior to work commencing, in writing requesting approval of the said works and to include a sketch plan of the proposal and suggested time frame.

3.2 Approval Granted

Council will notify the service authority of their approval to the said works and to include any alterations, specifications, time frames and any concerns, e.g. Native vegetation, future works and planning requirements.

3.3 Undertaking of Works

Council is to be notified 48 hours prior to the commencement of works for relevant inspections to take place to confirm location and compliance to specifications.

3.4 Completion of Works

The service authority shall notify Council as soon as possible of the completion of works so that compliance can be ascertained.
Also, the service authority shall supply Council with a plan of the finished product showing:

- the location
- the depth of service
- any reference to on site features such as boundaries, posts and buildings
- measurement of location and size of services
- any other service depicted
- reference to any known easements

4 GENERAL

4.1 Council Notification

The service authority shall notify the Council where it carries out excavation on, along or across any road pavement, shoulder or reserve which is maintained by the Council, in accordance with the procedure given below.

These procedures also apply to those Service Authorities where enabling legislation (e.g. Waterworks Act and Sewer Act) provides for, or where the Council approves otherwise, the quality, supply and placing of the surfacing by the Service Authority (as in accordance with Clause 8.1 & 8.2 “Asphalt Concrete Surfaced Roads and Spray Bituminous Surfaced Roads”).

4.1.1 Minor Programmed Works

Where the Service Authority is undertaking final surfacing, a minimum 48 hours’ notice shall be given to the Council, before any work is commenced.

4.1.2 Major Programmed Works

Works shall be in accordance with drawings, specifications and work methods submitted at least four weeks prior to the intended work and approved by the Council before any work is commenced.
Furthermore, the Service Authority shall be responsible for advising the Council at least 48 hours before commencement of excavation in order for regular inspections and arrangements for final reinstatement to be made.

4.1.3 Emergency Works

Where either the road pavement or shoulder is damaged, or excavation of same is necessary in emergency situations, then the Service Authority shall provide verbal notification to the Council, as soon as practicable after the emergency becomes known, in order that regular inspections and arrangements for final reinstatement and maintenance period commencement can be made.

4.1.4 Attachment of Service to Bridge and Culvert Structures

Drawings including fixture details, are to be submitted to the Council at least six weeks prior to the intended work and approved by the Manager Strategic Asset Planning before any work is commenced.

4.2 Identification of Completed Work within the Maintenance Period

After the completion of work, and at any time upon request with in the maintenance liability period, the Service Authority shall supply the Manager Strategic Asset Planning, with details including drawings, size, location and date constructed of their reinstatement.

4.3 Safety

The Service Authority shall be responsible for the safety of vehicle, bicycle and pedestrian traffic for the duration of the work and all due precautions shall be taken and adequate warning given to traffic to ensure safety around the work site in accordance with AS1742.3 “Manual of Uniform Traffic Control Devices, Part 3: Traffic control for works on roads” available from the Department for Infrastructure and Transport.

4.3.1 Occupational Health and Safety

The Service Authority shall supply to Council a copy of their Work Health and Safety Policies or if none available, agree to the specific conditions as per the Work Health and Safety Policies of the Wakefield Regional Council.

4.3.2 Public Liability Insurance

The Service Authority is to show Council proof of Public Liability Insurance up to a value of 20 million dollars.

4.4 Trenchless Methods

The specification does not apply to the installation of services where alternatives to open trench such as thrust boring, tunneling, etc. are used. However, plans of the proposed new service will need to be supplied to Council for prior approval.

5 EXCAVATION

5.1 Trenching Times

Trenching which is likely to reduce traffic volume should not be carried out between 7.00am and 9.00am or between 4.00pm and 6.00pm on peak flow traffic lanes unless unavoidable due to emergency circumstances, or otherwise approved by Council. Works shall be organised so as to cause minimal disruption to traffic, pedestrian and access to properties at all times.

Approximately one half of the carriageway shall remain open to traffic at all times, unless otherwise approved by the Council.

5.2 Detector Loops

All the necessary care and precaution shall be taken to prevent damage occurring to the detector loops where excavation is to be undertaken in the vicinity of traffic signals or pedestrian crossings. Where damage occurs, the Service Authority shall lodge an order with the Department for Infrastructure and Transport to cover the cost of repairing the detector loops.

5.3 Saw Cut

The trench shall be saw cut to the full depth of the existing asphalt surface. Where cement stabilised pavement exists, the pavement shall be cut to full depth (unless restricted by cutting equipment) to minimise damage to the surrounding pavement.

5.4 Excavated Material

Unless otherwise approved by the Council excavated material shall not be reused in reinstatement of trenches and shall be removed from site and responsibly disposed.

5.5 Depth of Service under Road Pavement

Unless otherwise approved by Manager Strategic Asset Planning the minimum depth of new service installation under Council road pavement shall be 1000mm.

5.6 Trench Width

Minimum trench width shall be 300mm. All cut bitumen edges to be overlapped between new and existing asphalt and crack sealed. Any damage to side of trenches is the responsibility of the contractor to repair.

6 BACKFILL

Prior to backfill operations, all loose rubbish and foreign material shall be removed from the excavation. All spaces excavated and not occupied by permanent work shall be backfilled.

Excavation shall be backfilled with sand Type C to the standard specification of Sa-C or alternatively, approved by Manager Strategic Asset Planning, clean quarry, pit or dune sand or rubble of plasticity not exceeding 8 or Controlled Low Strength Material (CLSM conforming to DIT Master Specification Part 209) and approved by the Council.

The backfilling Shall be uniform compacted in horizontal layers nominally not exceeding 150mm thickness to the dry density determined using AS1289, test methods 5.2.1 (modified compaction) for:

(a) not less than 90%, up to a level of 800mm below finished level, and/or
(b) not less than 95% at all levels above 800mm below finished level

7 PAVEMENT REINSTATEMENT

7.1 Asphaltic Concrete Surfaced Roads

After completion of the backfill, 20mm crushed rock with 2% cement shall be used to reinstate the excavation to a level not less than 50mm or more than 75mm below the existing surface adjoining the excavation. The crushed rock shall comply with standard Specification PM1/20QM and with the addition of 2% cement shall be described by a suffix system as PM1/20.

The cement treated crush rock shall be uniformly compacted in horizontal layers not exceeding 150mm thickness to not less than 98% of the dry density determined using AS1289, test method 5.2.1 (modified compaction).

To ensure maximum performance of the cement treated material, the cement treated material shall be placed and compacted within two hours.

7.2 Sprayed Bituminous Surfaced Roads

After completion of the backfill, 20mm crushed rock to standard specification PM1/20 shall be used to reinstate the excavation to a level approximately 14mm below the existing surface adjoining the excavation. The reinstatement depth may vary slightly with the Average Least dimension of the final aggregate size selected.

The crushed rock shall be uniformly compacted in horizontal layers 150mm thickness to not less than 98% of the dry density determined using AS1289.

7.3 Unsealed Shoulders

After completion of the backfill, a compacted depth of 300mm depth of 20mm PM2/20, or an equivalent material approved by Council, shall be placed and compacted in two horizontal layers not greater than 150mm to reinstate the road shoulder to the finished shoulder level and match crossfall. Compaction shall be 95% of the dry density determined using AS1289, test method 5.2.1 (modified compaction).

7.4 Temporary Pavement Surface

On completion of backfill and pavement reinstatement, it shall be the responsibility of the Service Authority, to maintain the open surface of the reinstated excavation until final asphalt or other bituminous surfacing has commenced.

A temporary pavement surface shall be provided and maintained by the Service Authority, who shall insure the surface is in a safe and trafficable condition for all traffic including bicycle, at all times pending final surfacing.

7.5 Asphalt and Sprayed Bituminous Surfacing

The Council will supply and place asphalt or other bituminous surfacing at cost to the Service Authority for all excavation reinstatement work.
Where enabling legislation of the Service Authority overrides this stipulation (ie, Waterworks Act, and Sewers Acct) or where the Council approves the quality, supply and placing of the surfacing in accordance with the requirements of the Manager Strategic Asset to ensure that the asphalt treatment matches the existing surfacing along the road section where work is to be carried out.

Where modified asphalt treatment exists, the Council will specify the appropriate surface reinstatement procedure.
Wherever standard asphalt or other bituminous surfacing exists, the following surface reinstatement requirements shall apply as appropriate:

(a) Comply with quality requirements and the finished acceptance criteria of DIT Master Specification RD-PV-C6 Reinstatement of Existing Pavements (available here).

(b) All trenches on roads surfaced with bitumen shall have asphalt applied to the wearing surface. Comprise a sprayed prime or tackcoat and asphaltic concrete AC14 wearing course in accordance with RD-PV-C6 (unless otherwise directed by the Manager Strategic Asset Planning) placed in layers not less than 30mm or greater than 50mm compacted thickness, finished off evenly and flush with the adjoining pavement surface.

(c) Comprise primerseal and sprayed bituminous surface with matching size and texture to the existing adjacent road surfacing, placed not less than forty-eight hours after the primerseal with an emulsion or hot cut-back binder. The level of workmanship shall comply with the general requirements of RD-PV-C6.

7.6 Pavement Markings

The Service Authority is responsible for the reinstatement of any painted pavement markings, raised pavement markers or safety bars, which are removed or damaged during trenching works.

7.7 Road Furniture

The Service Authority shall replace all road signs, guide posts, guard fence or road furniture which are temporarily removed or damaged during trenching work, ensuring that all road furniture is made good (including sign mounting heights) and cleaned. This work is to be completed prior to pedestrian and traffic use and/or road being re-opened to motorists.

7.8 Concrete Kerbing

The Service Authority shall reinstate (in concrete) any concrete kerb and gutter or median type kerb which is removed or damaged during trenching work, ensuring that the kerb profile, conforms with existing. Concrete used in the work shall be in accordance with AS1379 “The Specification and Manufacture of Concrete” and shall be Grade N20 concrete. Kerb reinstatement shall be completed by the Service Authority within three days of leaving the work site and be in accordance with the Wakefield Regional Council’s standard drawings.

7.9 Road Drainage Systems

The Service Authority shall report all instances of damage caused to the road drainage systems, ie, culverts, sumps, subsoil drainage, roadside drainage systems etc, incurred during trenching works, to the Council. All costs for the repairs shall be borne by the Service Authority.

Once the damage has been assessed by the Council’s Manager Strategic Asset Planning and proposed rectification works agreed to, the Service Authority is to undertake these rectification works at their own cost. Once these works are complete they are to be inspected and signed off by the Manager Strategic Asset Planning.

7.10 Medians/Traffic Islands/Verges

The Service Authority shall reinstate medians, traffic islands, and verges to conform to the existing surface treatment. The Service Authority is responsible for the replacement of any vegetation (e.g. shrubs, median grasses, etc.) which are removed or damaged during trenching works.

7.11 Native Vegetation

The Service Authority shall consider all relevant information under the Native Vegetation Act and Local Roadside Vegetation Management Plans using Proper Land Management.
The terms 'capability' and 'degradation' are often used with regard to proper land management, and the Soil Conservation and Land Care Act 1989 has defined these terms as follows:

> Capability: in relation to land, means the ability of the land to sustain a particular use without suffering permanent damage or a reduction in future productivity.
>
> Degradation: of land means a decline in the quality of the soil, vegetation, water and other natural resources of the land, resulting from overgrazing, excessive tillage, over clearing, mineral extraction, development of towns, disposal of wastes, road construction, failure to control plant and animal pests or any other human activity on the land.

7.12 Footpaths/Driveways

9.11.1 Concrete Footpath/Driveway

The Service Authority will reinstate in concrete, any path/driveway of the same which is removed or damaged during the works with concrete to a minimum N20 compressive strength (footpaths) N32 compressive strength (driveway) to a minimum 100mm thickness with SL72 mesh, doweled to existing concrete with 30mm clear cover.

9.11.2 Paved Footpath/Driveway

The Service Authority will reinstate with pavers any footpath/driveway that was previously paved. Pavers are to conform to existing patterns and must be a minimum of 50mm in footpath and 60mm in driveway.

7.13 Other Services

It is the responsibility of the Service Authority to arrange for the location of other Services, such as Telstra, Effluent drainage system, SA Water, ETSA, Gas, etc.

7.13 Sedimentation Control

The Service Authority is to ensure there is minimal dust from works as a result of trenching. If there is extensive trenching the Contractor is to provide a sediment control plan to ensure there is no sediment transport to nearby drainage structures.

8 CONFORMITY TESTING

The Service Authority shall submit to Council copies of laboratory test results to confirm compliance with materials and compaction requirements as specified herein for any reinstatement works carried out, within 14 days of testing. Testing is not required for emergency work. However, the Service Authority will be responsible for any works required during the maintenance period of 12 months.

Testing shall be undertaken by a laboratory registered by the National Association of Testing Authorities (NATA). The arrangement and cost of such testing shall be borne by the Service Authority.

It shall be the responsibility of the Service Authority to remove and replace any material used by the Service Authority, which does not comply with this specification.

8.1 Material

All pavement material shall comply with PM1/20, QM as appropriate, and conformance documentation may be required.

8.2 Compaction

The following minimum frequencies of testing shall apply:

(a) Pavement

0 – 50m^2	no testing required
50 – 200m^2	minimum 2 tests
over 200m^2	2 tests and an additional test for every 200m^2 over 200m^2

(b) Backfill

No testing required unless otherwise directed by Council.

9 MAINTENANCE PERIOD

For all work, not withstanding the reinstatement of the surface by the Department for Infrastructure and Transport, the Service Authority will be responsible for the cost of making good any settlement or other deterioration in the reinstated excavation for maintenance period 12 months after reinstatement.

The Service Authority shall indemnify, and keep indemnified Council against all claims which may arise due to excavations or settlement of excavation until the maintenance responsibility has transferred to the Council.

All costs and charges incurred by the Council for any works necessitated by the Council due to non-compliance with the requirements of this specification for all installations by the Service Authority are to be borne by the Service Authority until the end of the maintenance period. Should Council be required within the 12 month maintenance period to undertaken remedial work as a result performed by the Service Authority Council will give notice in accordance with the requirements of Section 339 of the Local Government Act, to the Service Authority of its intentions so that the deficient work may be inspected before rectification.

10 References

1 Native Vegetation Act, 1991 and Regulations 2017

2 Care, Control & Management of Roads (Highways), Commissioner of Highways

3 Telecommunications Act, 1997 –Schedule 3

4 Electricity Act, 2003

5 Gas Regulations, 2012

6 Gas Act, 1997

7 South Australian Public Health (Wastewater) Regulations, 2013

8 Water Industry Regulations, 2012

9 Water Industry Act, 2012

10 Department for Infrastructure and Transport – Roads – Master Specification – RD-PV-S1 Supply of Pavement Materials, 2020