



# Standards and Requirements for the Design, Construction and Development of Infrastructure Assets Guidelines for undertaking Land Division

## Document Information

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### DISCLAIMER

All information presented herein is accurate as of 16 March 2021. This Document is uncontrolled when printed. Please check with The Barossa Council website to ensure this is the current version.

## INTRODUCTION

A Land Division is the division of land into at least two allotments which are held independently of one another or a boundary realignment. A Community Title is also the division of land into at least two lots and includes an area of common property (typically a driveway).

There are two types of Community Titles depending on the nature of the scheme:

1. A community scheme
2. A community strata scheme

In South Australia development approval must be obtained before land may be divided. This approval is required pursuant to the *Planning, Development and Infrastructure Act 2016* and the *Real Property Act 1886* and applies whether a boundary between neighbours is shifted, one or more allotments is created, or for large-scale developments of numerous allotments.

A proposal for the division of land is assessed against the provisions of the Planning and Design Code to ensure the orderly and economic supply of land.

## PLANNING AND DESIGN CODE

The Planning and Design Code is a statutory document which sets out the planning policies for the state. The Planning and Design Code describes the way land should be developed for different parts of the area, the types of development preferred and the policies and standards against which land division proposals will be assessed.

The Planning and Design Code guides the construction of roads, public services, adequate open space, layout and dimension of allotments in suitable areas, placement of existing or required easements etc.

Policies cover a range of social, environmental and economic matters including planning, building, heritage and environmental protection. Such policies are set out in terms of word descriptions, zoning maps, diagrams and tables.

## STANDARD REQUIREMENTS

The *Development and Infrastructure Act 2016* specify several mandatory land division requirements. e.g. Regulation 81 regarding width of road and thoroughfares.

A developer/applicant shall provide for the construction, to the reasonable satisfaction of Council and all relevant authorities, of all necessary services and infrastructure including but not necessarily limited to:

- roads and pavements
- open space (12.5% and/or monetary payment)
- stormwater drainage
- waste disposal
- water, gas, electricity, public lighting and communications.

All associated costs shall be borne by the developer.

The purpose of the guideline is to establish minimum criteria that is to be satisfied by developers/applicants of land divisions within the Council area. It will assist developers to undertake preliminary planning and design work and facilitate discussion with Council prior to lodgement of a Development Application.

The statement of requirements provided in this guideline will form the conditions and requirements of Council with respect to approving a land division.

This guideline must be read in conjunction with the Planning and Design Code.

These Standards have been prepared with the aim of encouraging 'best practice' in the development of urban and rural areas within Council.

Information required for land division applications, includes a plan showing all allotments, roads and reserves, an open space contribution and/or financial contribution, water supply, sewage disposal facilities and easements. The plan of division required for planning approval must be drawn to a reasonable drafting standard and in the format prescribed by Schedule 8 of the Planning, Development and Infrastructure (General) Regulations 2017.

### **Professional Engineer**

When seeking construction approval from The Barossa Council, a Professional Engineer shall provide detailed design drawings, calculations and specification for:

- Road layouts, including sub-base course, base course and road sealing,
- Community Wastewater Management Scheme (CWMS), and
- Stormwater drainage systems etc.

The design shall generally be in accordance with relevant Australian Standards, technical codes of practice, Australian Road Rules and in line with current engineering practice.

All documentation will conform to drawing standards.

The developer/applicant is to submit an electronic PDF and DWG format of all drawings and specifications relating to the land division.

The drawings and specifications for such works shall be approved by Council, in writing before any construction work commences.

Specifications shall take precedence over construction drawings.

### **Further Advice**

Developers/applicants are encouraged to consult with Council's Works and Engineering Services and Development and Environmental Services departments and any other relevant authorities prior to or during the preparation of design.

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# STATEMENT OF REQUIREMENTS

## 1. LAND DIVISION

### 1.1. Design

A land division layout should provide a strong and positive identify, responding to:

- site characteristics
- setting
- landmarks
- views
- natural (i.e. significant vegetation) and cultural features.

Accordingly, a site analysis plan and/or masterplan should be prepared (for divisions greater than 5 allotments or where appropriate) which details:

- features and characteristics of the subject site
- drainage and open spaces
- contours and geotechnical conditions
- views and vistas to and from the site
- surrounding community facilities
- existing and proposed easments
- connection with surrounding streets, regional and local pedestrian and cycle path networks.

Lot design and layout should provide a mix of lot size and enable a variety of housing types to be developed.

Opportunity for higher densities should be provided in areas close to:

- services
- public transport
- public open space.

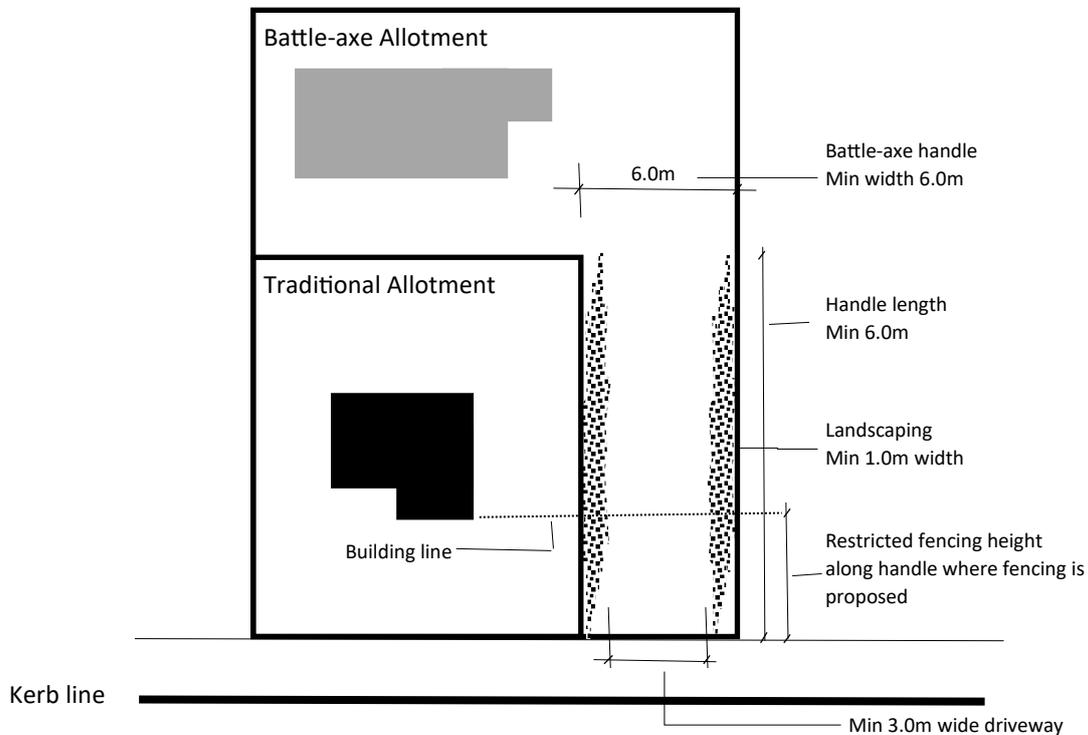
### 1.2. Battle-Axe Allotments

Battle-Axe allotment means an allotment or site that comprises:

- a driveway (and any related open space) that leads back from the road to the balance of the allotment or site; and
- a balance of the allotment or site that is the principal part of the allotment or site that does not have a boundary with the road.

The 'handle' of battle-axe/hammerhead allotments should maintain a minimum width of 6.0 metres, which consists of a driveway width of 3.0 to 4.0 metres and 1.0 metre width landscaping strips on both sides of the driveway and extend for a distance of 6.0 metres from the boundary.

An existing dwelling should be set back at least 0.9 metres from the 'handle' driveway/boundary.



## 2. ROADS AND PAVEMENTS

The provision of a road network within a land division is to be designed so as to provide:

- convenient and safe access to all allotments for pedestrians, vehicles and cyclists
- safe, logical and hierarchical transport linkages with existing street system
- appropriate access for buses, emergency and service vehicles
- a quality product that minimises maintenance costs
- a convenient way for public utilities
- street landscaping
- convenient parking for visitors.

The Barossa Council's Road Hierarchy has the following classes of road applied to sealed and unsealed roads:

- Collector Roads
- Local Roads (Urban and Rural)

A Road Hierarchy is essential to maximise road safety, residential amenity and legibility. Each class of road serves a distinct set of functions and is designed accordingly.

## 2.1. Road Reserve and Road Width

The following minimum road reserve widths shall apply

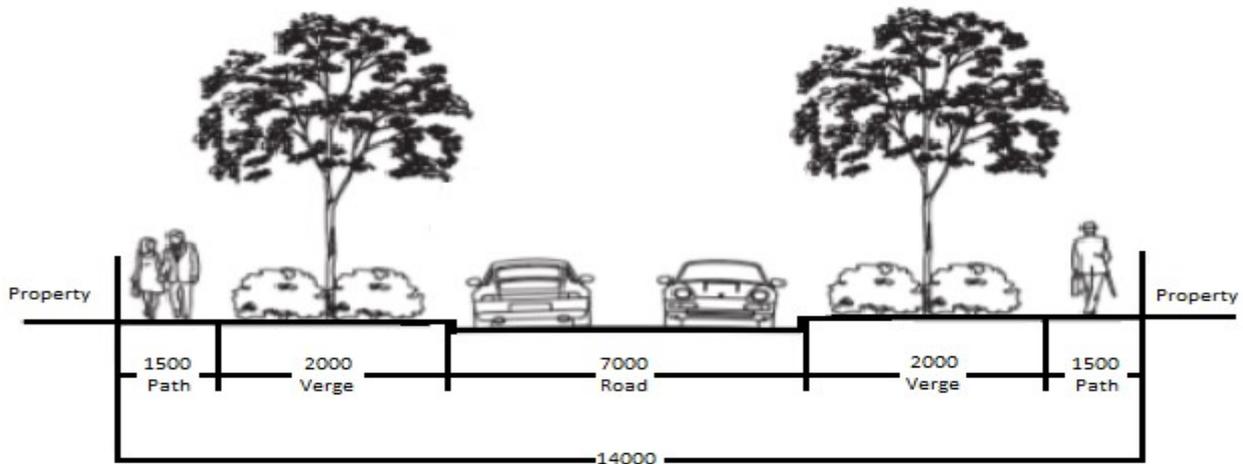
Collector Road	15 metres
Local Road	14 metres
Cul-de-sac Ends	25 metres
T Turnaround Ends	14 metres

Adequate vehicle swept path space (bulbing) shall be provided at road on bends to assist traffic movements. Bulbing shall be equally spaced about the road centreline.

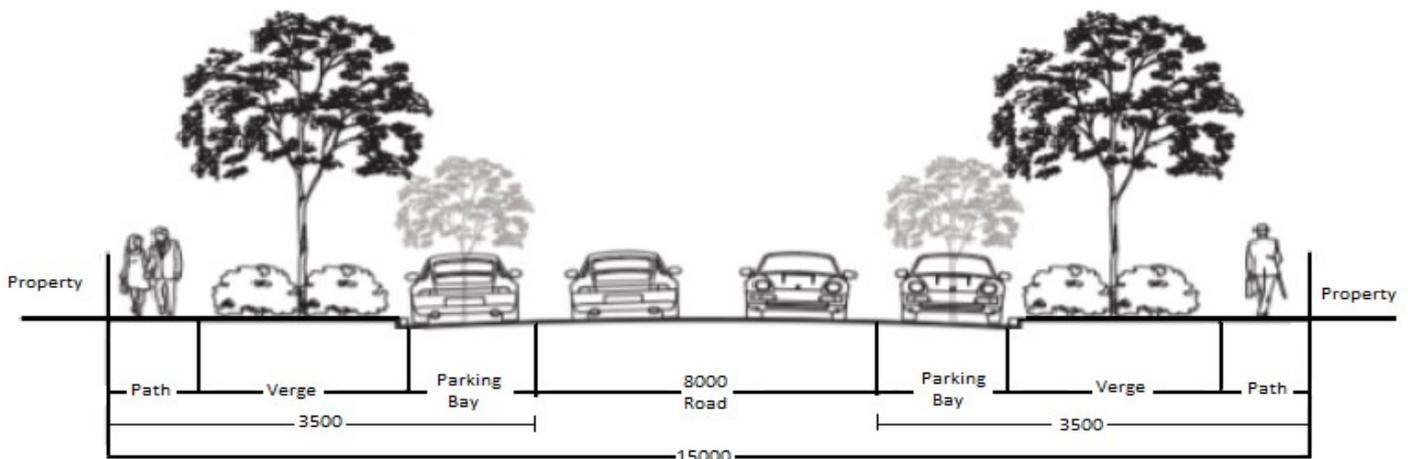
The following minimum road carriageway width shall apply

Collector Road	8 metres
Local Road	7 metres
Cul-de-sac Ends (circular)	9 metres radius (at gutter invert)
T Turnaround Ends	14 metres leg length (from the T junction)

All cul-de-sac and T Turnarounds ends are to be designed to enable a large single unit vehicle, e.g. Council waste compactor, to undertake a U turn or three point turn.



**Typical Local Road**



**Typical Collector Road**

## 2.2. Road Grades

Minimum road grades shall be 0.5% and maximum road grades shall be 15% unless approved otherwise.

## 2.3. Pavement Design

Geotechnical test results shall be provided to the Council's Works and Engineering Services department with the pavement design and calculations for engineering approval with the engineering documentation.

## 2.4. Road Sealing and Pavements

All Urban road pavements are to be sealed with an AC10, 30mm thick Bituminous Hot mix wearing course.

Consideration will be given for rural roads in some areas to be sealed with a 14mm / 7mm two coat bituminous spray seal wearing course.

All road pavements are to be designed using 95 percentile confidence limits for the ultimate traffic loading and a 20 year design life, pavements are to be designed based on:

- Austroads '*Guide to Pavement Technology Part 2: Pavement Structural Design*',
- Austroads '*Pavement Design for Light Traffic: A Supplement to Austroads Pavement Design Guide*', and
- Austroads '*Guide to Asset Management Part 5: Pavement Performance*'.

## 2.5. Road Pavement to Extend to Existing

The pavement of proposed roads shall be extended to and join the pavements of adjoining streets and roads.

## 2.6. Traffic Control Devices

All necessary signs, traffic control devices and pavement markings shall be provided in accordance with Australian Standard – AS1742 *Manual of Uniform Traffic Control Devices*.

All required statutory approvals shall be obtained from Department of Planning, Transport and Infrastructure (DPTI) for traffic control devices.

## 2.7. Road Verge

The road verge on both sides of a carriageway shall be a minimum width of 3.5 metres.

A 2.5% grade is to be provided towards the top of kerb with 100mm of clean topsoil.

Batters into allotments are to be no steeper than 1 in 6.

## 2.8. Kerbs and Gutters

All roads within designated townships shall be provided with kerb and gutter. Rural areas will instead require road side drainage swales. Semi-mountable or 150mm high upright kerb shall be provided adjacent allotments.

200mm high upright kerb shall be provided adjacent all reserves and non-residential properties.

Minimum longitudinal grade for kerb and gutter shall be 0.5% unless approved otherwise.

Kerb outlet sleeves for the disposal of stormwater shall be provided for each allotment that drains to the road.

Kerb inverts and crossing places shall be provided in upright kerbs for safe and convenient access to allotments where necessary.

If any portion of an existing entranceway is to be amended to accommodate a proposed entranceway, it shall be removed and re-instated with kerb and gutter, together with appropriate restoration of the footpath and verge.

For kerb and gutter, and barrier kerb detail refer to council standards in **Appendix 1**.

## 2.9. Vehicle Access and Crossover

A Developer/Applicant must seek authorisation from Council, pursuant to Section 221 of the Local Government Act, to alter a road to permit or facilitate access from an adjacent property. Such authorisation is not required if the alteration is approved as part of a development authorisation under the Planning, Development & Infrastructure Act 2016.

A single/double vehicle all weather verge crossover is to be provided for each allotment.

A crossover shall generally be located at the property owners preferred position, provided that due regard has been taken to ensure reasonable sight lines and sight distances are maintained at all times for safe vehicle movements (**Refer 7.2 Street Trees/Roadside Vegetation**).

Crossovers are to be paved from the edge of the water table to the property boundary. (All costs to be borne by the developer).

Where the crossover traverses a road side drainage swale an appropriately sized drain in the crossover is to be constructed to provide for free and unrestricted flow of stormwater

All driveway access shall comply with AS/NZS 2890.1:2004. *Parking facilities - Part 1: Off-street car parking*.

No vehicle access/egress to allotment is to be provided within (10) metres of the intersecting roads to ensure that there is no conflict with Council infrastructure. (This is relative to Australian Road Rules 1999, Rule 170(3)).

## 2.10. Corner Cut-Off

Properties located at intersections shall provide a 4.5m x 4.5m corner cut-off vested to The Barossa Council to allow adequate road and verge widths. Other corner cut-off dimension

requirements may apply where obtuse angle road alignments or existing road infrastructure are to be considered.

All fencing structures or other improvements shall be removed from that portion of land affected by the corner cut off, with all cost borne by the developer.

## 2.11. Earthworks

All earthworks associated with the development shall be stabilised in accordance with certified engineering design and practises against erosion and failure.

Earthworks must not encroach across neighbouring property boundaries, reserves or road verges.

When fill or cut at the property boundary exceeds 200mm, a retaining wall with existing ground and proposed wall levels shall be specified.

## 2.12. Continuous Grade

Allotments being created shall be filled to provide a continuous grade of not less than 0.5% from the back of the allotment to the road reserve boundary where necessary.

## 2.13. Buffer Reserve Strip

A 0.1m wide buffer reserve strip shall be provided along the boundary of the development, to prevent legal access from existing allotments to the proposed road reserve.

## 2.14. Easements

Any necessary easement(s) for drainage purposes are to be vested free of costs to The Barossa Council.

The easement(s) shall be a minimum width of 3 metres and be appropriately located to the satisfaction of Council.

## 2.15. Drawings and Specifications

Design drawings and specification shall be provided for separate construction approvals for the following: earthworks, base course, sub-base course, road sealing, etc., for large staged development.

## 2.16. Practical Completion

All construction test results shall be provided to Council and approved prior to the Certificate of Practical Completion being issued

An as constructed survey is to be performed on all infrastructure and services and provided to Council in DWG and PDF format to adequately inform Council's Asset Management data base of all works performed.

A bond equivalent to 10% of the total construction cost plus the cost of any defects and omissions shall be provided in the name of The Barossa Council prior to the Certificate of Practical Completion being issued, for the duration of the defects liability period.

### 3. STREET NAMES AND SIGNS

Suggested street names of a historical/Barossa nature can be supplied to Council, and will be considered in accordance with Council's *Property Identification Policy*.

Street signs shall be supplied (from an approved supplier) and erected so as to indicate the appropriate streets to the reasonable satisfaction of Council.

Street signs shall generally be located 1.85m from back of kerb (to face of pole) or as detailed in AS1742.5. All costs to be borne by the Developer.

Street signs shall comply with the Australian Standards and be provided with a 200mm pointer blade and shall be installed prior to the issue of Certificate of Practical Completion.

### 4. FOOTPATHS

#### 4.1. Footpaths

Footpaths shall be provided on one side adjacent to the roadway in all 'Local Residential' streets, and on both sides of all 'Collector' roads with all costs borne by the Developer/Applicant.

The location of footpaths shall generally be determined by the Developer/Applicant and approved by Council's Works and Engineering Services department.

Concrete block paved footpaths shall be a minimum width of 1.8m (unless noted otherwise) and grade towards the kerb and gutter with a cross-fall not exceeding 2.0%.

All footpaths shall be constructed at a point in time when most of housing development in the land division has been completed to avoid dilapidation by construction traffic.

The Developer/Applicant is to provide pedestrian pram (wheelchair) ramp accesses, including tactile ground surface indicators, in accordance with Australian Standard - AS1428 - *Design for access and mobility*.

Footpaths shall be constructed and finished in bitumen, concrete or blockwork to the approved construction standard and satisfaction of Council.

#### 4.2. Cyclist and Shared Paths

Cycle paths and shared paths shall be designed in accordance with Austroads *Guide to Road Design Part 6A: Pedestrian and Cyclist Paths* and the DPTI publication '*Guide to Bikeway Pavement Design Construction and Maintenance for South Australia*'.

Cycle paths shall be constructed and paved to the satisfaction of Council.

## 5. CAR PARKING

### 5.1. Car Parking Space or Area

Each car parking space or area abutting a walkway, footpath, landscaping area, fence or shop frontage shall be provided with a vehicle wheel stop or a 900mm high bollard, prior to the occupation or use of the development.

Parking shall be restricted within cul-de-sacs and T Turnarounds where it may affect the turning manoeuvre.

### 5.2. Car Parking Construction

All car parking, driveways and vehicle manoeuvring areas shall be constructed and finished in bitumen, brick paving or concrete in accordance with approved engineering procedures prior to the occupation or use of the development.

## 6. SERVICES AND INFRASTRUCTURE

### 6.1. Underground Services

All services, including communications and electricity, shall be placed underground to the requirements of the relevant service providers.

Where appropriate services should be provided in a common service trench located as recommended in the Local Government Association of South Australia publication '*Services in Streets – A Code for the Placement of Infrastructure Services in New and Existing Streets*'.

### 6.2. Electrical/Lighting

Street lighting is to be provide throughout a land division in urban environments. Consideration to intersection lighting treatments only may be considered in rural environments.

All street lights and poles shall be of an approved standard SA Power Networks type to Council satisfaction.

Underground electrical power shall be provided to each allotment in accordance with a design approved by SA Power Networks and Council.

The lighting system shall comply with SA Power Networks standards. All costs to be borne by the developer.

The light column shall be located a minimum 1,550mm behind back of kerb to allow for a 1,500mm wide footpath. Additional setback is required where the footpath is wider.

Pad mounted transformers and switching cabinets are not to be located in Council reserves. If a Council reserve is demonstrated as the only possible location, they are to be located to the side boundary of the reserve to the satisfaction of Council.

## 6.3. Water Supply

Water supply services, where required, shall be installed in accordance with design requirements and relevant standards of SA Water, for the provision of an adequate water supply to each created allotment.

## 6.4. Waste Water Disposal

Waste Water Disposal services, where required, shall be installed in accordance with design requirements and relevant standards (SA Health, SA Water/Water Services Association of Australia codes) for the provision of an adequate waste disposal from each created allotment.

## 6.5. Communications

Communication network services, where required, shall be installed in accordance with design requirements and relevant standards of the service provider for the provision of an adequate supply to each created allotment.

## 6.6. Damaged Infrastructure

Any portion of Council's infrastructure damaged as a result of work undertaken, on or associated with the development shall be repaired/reinstated at the developer's expense.

# 7. LANDSCAPING / RESERVES

Public open space provides opportunities for:

- Recreation - both active and passive forms
- Conservation - protection or integration of natural features and cultural sites
- Amenity - greening of the urban environment and a spatial setting for housing
- Utility - stormwater management, buffers between different land uses and repair of degraded land.

Public open space should be provided in accordance with an approved open space strategy, master plan and/or the requirements of the Development Plan.

## 7.1. Landscaping and Open Space

A range of general design principles should be considered when planning streetscapes and open space design.

Consideration should be given but not limited to:

- Future ongoing low maintenance
  - \* Drought tolerant and appropriate for Barossa climate (frosts in winter and hot/dry conditions in summer)
  - \* Good quality plant and irrigation design, materials and construction – appropriate for our region and with a good design life
  - \* Not prone to a large leaf drop.

- Configuration of open space to complement existing vegetation
- Integration of streetscapes, parks, reserves and habitat corridors to provide linear connections within and external to the development
- Wherever practicable, local indigenous plant species should be used (as recommended by Barossa Bushgardens)
- Establishment of plant material of appropriate structure and species composition
- New tree planting should reinforce the existing character of areas, and not present a fire risk
- Conservation of irrigation water by using designs appropriate to the climate and utilising water-wise plant selection
- Maximising opportunities for water reuse
- Ensure that the design and development of the site does not increase the rate of surface water run-off and that opportunities to improve water quality before leaving the site are examined
- Linkage of the pedestrian and cycle network with reserves and parks where appropriate
- Orientation of the subdivision design should consider incorporation of frontages to open space to promote natural surveillance and community ownership
- The design of all landscaped areas should ensure:
  - \* Safety of employees maintaining the area
  - \* Safety of motorists within vicinity of these areas
  - \* Clear Zones appropriate to the speed of vehicles are maintained where landscaping is adjacent to roads.

All landscaping and tree planting proposed as part of the development is to be provided to the complete satisfaction of Council.

The Developer/Applicant shall submit to Council a landscaping plan showing all landscaping proposals in detail, including the type and location of plantings and any existing trees to be retained or removed.

The potential impact of the land division upon existing trees must be clearly shown on the plan and must contain the following information:

- Identification of the species including the botanical name of the tree
- The location of the tree accurately indicated
- The height and canopy of the tree and girth of the trunk
- Tree healthy and vigour

All landscaping must be maintained for a period of 12 months from Practical Completion.

The Developer/Applicant is to remove all noxious weeds and vegetation from all reserves and ensure that all reserves are left in a condition suitable for Council to mow and maintain.

An appropriate sized water meter shall be provided in Reserves at no cost to Council in locations as determined by the applicant and approved by Council's Works and Engineering Services department.

## 7.2. Street Trees/Roadside Vegetation

Street trees are to be provided in front of all properties at the centre of the allotment (allowing for minimum distance of 1.5m from proposed access point) where the frontage is a minimum of 10 metres at a rate of one tree per allotment.

Where allotments are less than 10 metres in width or where a cul-de-sac or corner applies, tree locations are to be approved by Council.

Spacing of trees should not exceed 20 metres.

Street trees are to be planted within the council verge.

Access points or service runs should consider the impact on the health of existing and proposed street trees.

On occasions, and at the applicant's expense, Council may support the removal of a street tree to accommodate new access point(s). However, allotments will usually need to be designed to ensure the protection of the street tree.

The removal of any roadside native vegetation to accommodate vehicle access (or any other access) requires approval from Council or a relevant authority, having regard to Council's *Roadside Vegetation Management Plan*.

## 7.3. Furniture

Park furniture will be of a type and manufacture approved by Council during the concept plan design stage.

Park furniture shall be selected based on the following:

- Durability
- Life span
- Construction material
- Vandal resistance
- User comfort

## 7.4. Lighting

Public lighting shall be required in reserves over 1 hectare in size or where paths are to show access to other structures or features of the park or the park forms a linear link.

Provision for lighting where appropriate in accordance with the relevant Australian Standards, including AS 1158 *Road lighting*.

Light poles shall be a type and style approved by Council during the concept plan design stage.

Where possible solar and energy efficient lighting shall be considered.

## 7.5. Fencing

All allotment boundaries abutting reserves (excluding any 0.1m reserve strip where required) shall be adequately fenced using 1800mm high 'Good Neighbour' colourbond fencing.

Where allotments are designed to front the reserve, an open style of fencing shall be provided by the developer as approved by Council.

All fencing costs shall be borne by the Developer/Applicant.

## 8. STORMWATER DRAINAGE

The Developer/Applicant is required to install stormwater infrastructure, costs will vary depending on the scale of infrastructure required for the division proposed.

The stormwater drainage design must include a stormwater and site management plan with supporting computations compliant with the requirements listed below.

A detailed drainage design is required for all of the proposed development, and if necessary due to existing land form, include areas outside the proposed development but within the drainage catchment affecting the development.

The plan shall at least include at least existing contours, features, existing stormwater infrastructure, proposed site works details, levels and grading, proposed stormwater drainage system, details of detention facility including volumes and discharge controls, proposed building floor levels, proposed paving and connection details to and any upgrading if required of the existing external drainage systems.

The stormwater drainage system shall be designed in accordance the current edition of 'Australian Rainfall and Runoff' (IEA) and AS/NZS 3500.3:2003 - *Plumbing and drainage - Stormwater drainage* and Council's requirements set out below.

The requirements for stormwater detention are separate to the requirements for stormwater retention.

Stormwater retention systems may be required within the development to maximise on-site reuse via internal plumbing and / or reticulation to gardens and / or soakage systems and as required by current State Government regulations. Reference 'South Australian Appendix to the Building Code of Australia' (BCA) and the 'South Australian Housing Code' (SAHC).

### 8.1. Drawings and Site Inspections

The detailed design drawings must be submitted to the Works and Engineering Services department for approval prior to any works commencing on site.

All site construction work must be carried out under the inspection of a Professional Engineer in accordance with the approved plans and specifications

Council must be notified 24 hours prior to the following:

- Commencement of any work onsite

- Testing of any/all stormwater drainage pipelines and associated infrastructure
- Backfill of any/all stormwater drainage pipelines and associated infrastructure

## 8.2. Site Discharge

The controlled discharge from the site shall be connected safely to Council's stormwater drainage system.

The maximum point discharge to kerb and gutter up to a 10yr ARI event shall be 12L/s; 100yr ARI event shall be 20L/s.

## 8.3. Sub-Division Drainage System

A stormwater management plan for a development shall be based on ultimate development of the allotments. For residential allotments it shall be assumed that 75% of the area of the lots is impervious, unless it is demonstrated that alternative is appropriate.

The underground system shall provide for runoff generated by a minimum 10% AEP event with overflow paths provided for a 1% AEP event that will prevent stormwater runoff inundating properties.

## 8.4. Overland Flow Path

An unobstructed overland flow path shall be designed for the 1% AEP event.

Detention shall be provided for a 1% AEP storm where a flow path cannot be achieved

No stormwater runoff from the site shall be permitted to discharge onto any adjacent property or the footpath verge.

The discharge to council's drainage system or a watercourse shall be consistent with the capacity of the systems.

## 8.5. Minor Drainage System

Minor drainage systems shall be designed for a minimum of 10% AEP event with gutter flow widths limited to a maximum of 1.5m.

Where overflow path discontinuity occurs and property flooding may occur, a minimum 1% AEP standard is required.

## 8.6. Development Building Levels

Where a lot grades towards a roadway, driveway levels at the boundary shall be specified at a minimum of 225mm above the adjacent street watertable level and floor levels shall be a minimum 300mm above the highest adjacent street watertable level.

Where a lot grades away from a roadway, a continuous barrier shall be specified (including any driveway) along the frontage boundary at a minimum of 300mm above the adjacent watertable levels.

## 8.7. Detention

Any increase in stormwater flows from a development must be managed on site to minimise the impact on Council's stormwater infrastructure, water courses or other properties.

Stormwater detention systems shall be incorporated within the development to ensure that the peak flow rate discharging from the whole development site post development does not exceed the peak flow rate from the pre-development site. The post development analysis is required to demonstrate that critical storm duration is clearly identified. The outlet restriction system details and hydraulic design computations are required.

Any stormwater detention basin shall have:

- a flat verge with a minimum width of 3 metres around the edge of the basin to facilitate access of maintenance equipment, and
- batters with a maximum slope of 1 (vertical) in 6 (horizontal).

Detention basins shall be seeded and landscaped to Council's satisfaction.

Detention basins shall not incorporate retaining walls, or rocks within areas to be mowed.

Land used for detention basins, swale drains and overland flow paths shall be designated as 'drainage reserves'.

Post-development peak rate of runoff from the site must not exceed the pre-development peak rate of runoff from the site or the maximum acceptable discharge to Councils infrastructure, whichever is the lesser. (Refer table below for Pre-development and Post-development design storms).

PROPOSED DEVELOPMENT	ANNUAL EXCEEDANCE PROBABILITY (AEP) and MAXIMUM DISCHARGE RATES
Residential development up to 2 dwellings	Detention shall be provided to limit the 20% AEP post-development peak discharge to the 20% AEP pre-development peak discharge from the site or as required by section 8.2 (Site Discharge), whichever is the lesser.
Residential Development of more than 2 dwellings. - Undeveloped vacant Land. - Commercial and Industrial development.	Detention shall be provided to limit the 5% AEP post-development peak discharge to the 5% AEP pre-development peak discharge from the site or as required by section 8.2 (Site Discharge), whichever is the lesser.
<b>HIGH RISK ZONE and DEVELOPMENT</b>	
Residential Development of more than 2 dwellings  Undeveloped vacant Land. / Commercial and Industrial development	Detention shall be provided to limit the 1% AEP post-development discharge to the 5% AEP pre-development discharge from the site or as required by section 8.2 (Site Discharge), whichever is the lesser.

Note:

1. Refer to Council for **High Risk Zone** and **Development** assessment
2. Stormwater detention is not required for residential development less than 100m<sup>2</sup> roof area.

## 8.8. Pollution Control

Runoff shall be treated to achieve desired water quality levels consistent with current best practice and the Environmental Protection Authority's '*Stormwater Pollution Prevention code of practice for local, state and federal government*'.

Pollution control devices shall be incorporated within commercial and industrial development to provide for the removal of gross pollutants, silt, grease and oil and possible harmful chemical pollutants. This requirement shall also apply to development during the construction period to protect the downstream drainage systems.

Grease, silt, oil and solid pollutants shall be removed from car parks where the number of parking lots exceeds nine.

Council supports Water Sensitive Urban Design (WSUD) initiatives.

## 8.9. Works External to Site

A completed '*Application for Construction or Modification on Council Property*' form is to be provided to Council with all designs extending beyond the property boundary.

## 8.10. Easements and Rear Allotment Drainage

All Council owned drainage infrastructure within private property shall be covered by a 3m wide easement. Where shared with CWMS infrastructure the easement shall be 4m.

Provide for rear allotment drainage with appropriate easements where drainage to the street gutter is not achievable.

## 8.11. Discharge to Watercourse

Any direct connection of a stormwater drainage system to a water course shall incorporate scour protection measures and shall not obstruct flows in the water course.

All necessary approvals from the relevant authority must be sought for discharging into a watercourse.

## 8.12. Open Drainage Channel

Any required open drainage channel shall be designed so that it does not scour, with a minimum requirement to be grass lining.

Batters shall be no greater than 1 on 6 for safety and to facilitate maintenance, i.e. slashing.

## 8.13. Minimum Size of Pipes and Reinforced Concrete Box Culverts

Minimum pipe size for road drainage shall be 375mm and rubber ring jointed.

Minimum size of reinforced box culverts shall be 300mm (W) x225mm (H).

## 8.14. Pumped Discharges

Pumped discharges shall only be considered where a gravity drainage system cannot be achieved.

The pump station and rising main shall be designed by an appropriately qualified Engineer and include the following:

- The capacity of Council's drainage system.
- Detailed design and documentation of the pump station installation and operation, including provision for power failure and back up.
- Details of the operational and maintenance manual for the property owner.

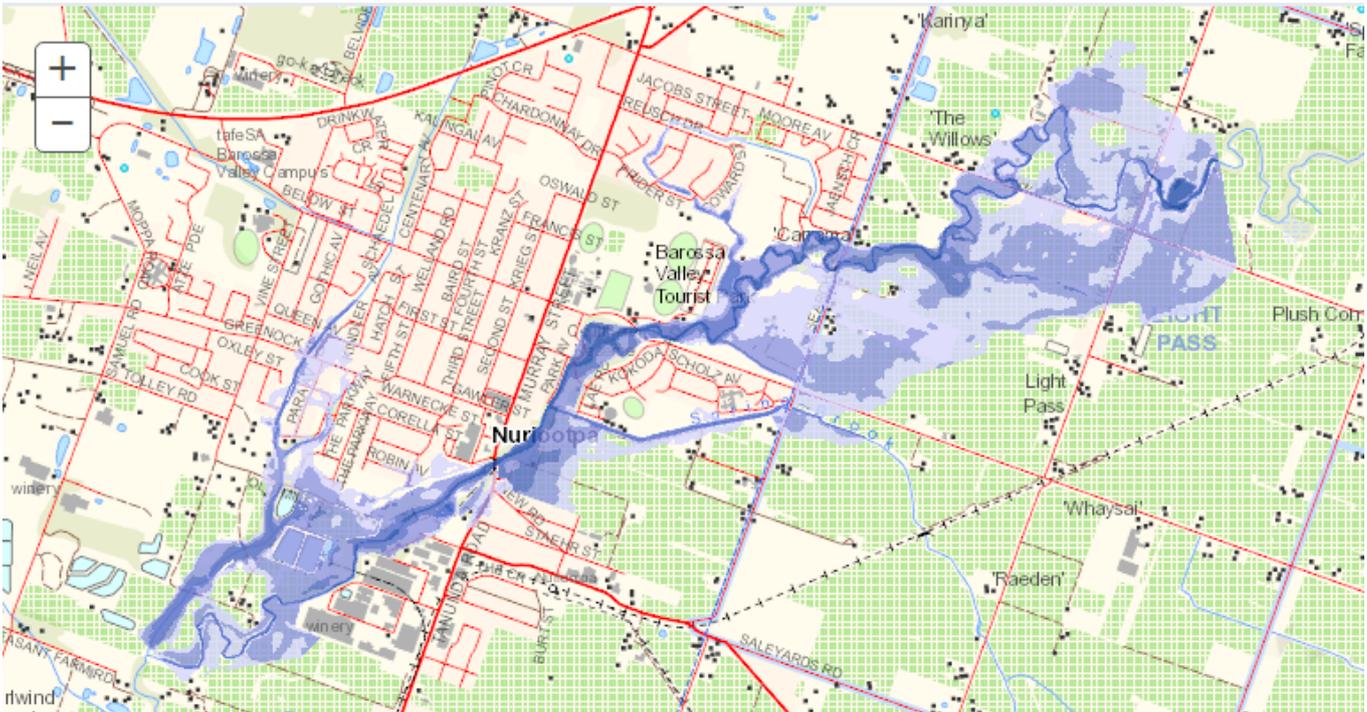
## 8.15. Flood Prone Land

Land within the maximum probable flood plain shall be considered as flood prone land.

Appropriate development of the land between the 1% AEP flood plain and the maximum probable flood plain is permitted but shall comply with current best practice flood plain management, planning and environmental principles and must be safe.

Land within the 1% AEP flood plain must be preserved. However the land between the 100yr and 5% AEP flood plains may be considered by Council for appropriate development. The issues, amongst others, that Council may consider are:

- The floodplain properties within this 1%-5% zone are demonstrated to be of a non-conveyance, storage type hydraulic function such that the development is not likely to have a significant impact on flood levels, the flood conveyance properties of the water course or flood risk to properties.
- The stormwater management system and major flood paths shall be designed to provide a minimum of 1% AEP protection against inundation of any building or flood intolerant structure.
- The development is safe and environmentally responsible
- The development complies with current best practice flood plain management principles
- The development is consistent with Council's policies and / or plans for the locality
- No flow obstructive development is permitted within the 5% AEP flood plain
- No flow obstructive fencing or structure is to be placed across the watercourse.
- Residences constructed on the allotments are to have a minimum floor level 300mm above the adjacent 1% AEP flood level.
- Upon the selection of the housing location/s within the property, further assessment shall be undertaken by an appropriately qualified Engineer to specify the appropriate floor level and check proposed site earthworks.
- A flood management plan shall incorporate safe access from any development during a 1% AEP flood.
- A flood plain management report with supporting analysis shall be prepared by an appropriately qualified Engineer. The documents shall cover any proposed development within the flood prone land.



**Flood Prone Areas – Nuriootpa (1 in 100 year Scenario)**

## 9. COMMUNITY WASTEWATER MANAGEMENT SYSTEMS

The Developer/Applicant is responsible for the installation of Community Wastewater Management System (CWMS) infrastructure required to service all allotments created by the division.

All proposed new CWMS reticulation design shall be submitted to Council prior to construction for approval and be of a suitable standard to comply with requirements of all regulatory authorities (SA Health, EPA and Office of the Technical Regulator etc.) and Council.

Guidelines for different types of connections, fee and approval processes are available on the Council web site.

A suitable easement shall be provided for CWMS infrastructure and illustrated on the final plan as required

### Site Inspections

Council's Works and Engineering Services department will inspect all drainage works carried out for the division and will only give clearance to the Development Assessment Commission once works are given practical completion.

Council should be notified 24 hours prior to the following:

- Commencement of any work on site.
- Backfill of all CWMS pipelines and associated infrastructure
- Testing of all CWMS pipelines and associated infrastructure.

## 9.1. Augmentation Fee (connection charge)

An augmentation fee will be charged by Council for the connection of additional loads to the CWMS is based on the need to construct additional treatment infrastructure to cater for the additional wastewater.

The augmentation is paid per dwelling/Allotment based on a disposals rate of 490L/day (SA Health Design Guideline flow rate).

## 9.2. Disconnection of Inspection Points

Provide for the disconnection of any redundant inspection points on the existing CWMS pipeline to the satisfaction of Council.

## 9.3. As Constructed Survey

Upon practical completion the Contractor shall arrange for a complete 'As Constructed' survey of the CWMS to be undertaken to include all features, but not limited to natural surface levels, any fill levels, all inverts and top-stone levels and structures to sufficiently verify design plans.

The completed detail survey must be issued to Council in .pdf and .dwg file formats.

This survey must be submitted to Council prior to *Certificate of Practical Completion* (CPC) being issued.

# 10. ENVIRONMENTAL PROTECTION

## 10.1. Site Management

The Developer/Applicant must submit to Council an Environmental Management Plan for approval that addresses all possible sources of pollution during construction on the site.

The Environmental Management Plan should outline the methodology to:

- minimise the impacts of noise on the amenity of the surrounding areas
- ensure the impacts of dust on adjacent areas and the community are minimised
- minimise / manage the spread of sediments generated by construction activities
- minimise soil disturbance, degradation and erosion
- minimise the potential for spills of oils and other noxious substances to as low as reasonably practicable
- reduce waste volume, maximise recycling, reuse and recovery
- prevent any construction waste/litter entering the environment
- minimise the disturbance to existing flora
- minimise the introduction and/or spread of weed species

## 10.2. Local Nuisance/Litter Control

All operations shall be conducted in the most efficient and reasonable manner as set out by the *Local Nuisance and Litter Control Act 2016 and Regulations*.

For the purposes of this Act, local nuisance, amongst other things, includes any adverse effect on an amenity value of an area that is caused by noise, odour, smoke, fumes, aerosols or dust that unreasonably interferes with or is likely to interfere unreasonably with the enjoyment of the area by persons occupying a place within, or lawfully resorting to, the area.

All Environment Protection Authority and Council requirements shall be observed.

### **Exemption of local nuisance**

A Developer/Applicant may apply to Council for an exemption from causing local nuisance in respect of a specified activity pursuant to the Local Nuisance and Litter Control Act.

An application for an exemption must be accompanied by:

- a. a site nuisance management plan; and
- b. any other information in connection with the application that the council may require; and
- c. a fee

Council may determine that a division for land (proposed to be carried out, or is being carried out), involves or may involve a significant risk of the release or escape of dust affecting adjoining land; and accordingly may request that a site nuisance management plan pursuant to the Local Nuisance and Litter Control Act be lodged with Council in order to receive an exemption notice.

A site nuisance management plan must provide:

- a. an assessment of the potential for local nuisance and the number of residential and commercial premises occupied by persons likely to be affected by the local nuisance (potentially affected persons);
- b. a map showing-
  - i. the proposed location of the activity and the likely fixed sources of local nuisance; and
  - ii. the location of premises occupied by potentially affected persons and the distance of the premises from those sources;
- c. the name and contact details of the responsible person in relation to the activity;
- d. the proposed strategy for minimising, managing and monitoring the effects of the local nuisance on potentially affected persons;
- e. the proposed communication strategy for communicating with potentially affected persons;

- f. a copy of the notice (forming part of the communication strategy) proposed to be given to those persons to notify them of the activity, which must include the following details:
  - i. the nature of the proposed activity;
  - ii. the start and finish dates for the activity;
  - iii. the daily start and finish times for the activity;
  - iv. the anticipated sources of local nuisance generated by the activity;
  - v. the proposed measures to be implemented to minimise the local nuisance;
  - vi. the name and contact details of the person who may be contacted by potentially affected persons regarding concerns or complaints in relation to the activity;
  - vii. such other details as the relevant council may require;
- g. the proposed communication strategy with the relevant council, including reporting by the exempt person on progress of the activity and the site nuisance management plan and any unforeseen incidents;
- h. the proposed process for recording details about complaints, including-
  - i. contact details for each complainant; and
  - ii. the date and time of the complaint; and
  - iii. a description of the complaint; and
  - iv. the nature of the activity giving rise to the complaint; and
  - v. any action taken to address the complaint.

### 10.3. Working Hours

Construction activities on the development site shall be carried out only between the following hours:

- Monday to Saturday – 7am to 7pm
- Sunday/Public Holidays – 9am to 5pm with approval of Council.

## 11. COMMUNITY TITLE DEVELOPMENT

### 11.1. Access

The common property intended to be used for roadways or vehicular access to community lots shall have a minimum width of 6.1m, measured from boundary to boundary (minimum 5.5m between kerbs).

The community access road shall be designed in accordance with AS/NZS 2890.1 *Parking facilities - Part 1: Off-street car parking*.

The entrance to the access road shall be a minimum width of 6m and extend for a distance of 6m from the boundary. The minimum width of the access road shall be 5.5m (measured between the kerb inverts or kerb faces) and be constructed on the common property.

The entry/exit point shall be designed so that sufficient on-site manoeuvring area is available to enable all vehicles to enter and exit the site in the forward direction.

The roadway and any associated kerb, including visitor parking shall be wholly located on common property.

All internal driveways and 'on-site' parking areas shall be designed in accordance with the AS/NZS 2890.1:2004 and other relevant Australian Standards.

## 11.2. Car Parking

It should be identified that there is sufficient onsite parking for 1 minimum visitor car per dwelling, independent of vehicle turnaround and manoeuvring areas.



### PAVEMENT DESIGN

- |   |  |
|---|--|
| <input type="checkbox"/> Design and Calculations    | <input type="checkbox"/> Geotechnical test results |
| <input type="checkbox"/> Drawings and Specification |  |
| - earthworks  |  |
| - base course                                       |  |
| - sub-base course                                   |  |
| - road sealing                                      |  |

### STREET NAMES

- Proposed street names

### LANDSCAPING/RESERVES

- |   |  |
|---|--|
| <input type="checkbox"/> Landscaping Plan | <input type="checkbox"/> Park Furniture Plan/Listing |
|---|--|

### STORMWATER DRAINAGE

- |  |   |
|--|---|
| <input type="checkbox"/> Stormwater/Site Management Plan | <input type="checkbox"/> Floodplain management report |
|--|---|

### COMMUNITY WASTEWATER MANAGEMENT SYSTEM

- |   |   |
|---|---|
| <input type="checkbox"/> Design Drawings and Specifications | <input type="checkbox"/> Detailed 'as constructed' Survey |
|---|---|

### ENVIRONMENTAL PROTECTION

- |  |  |
|--|--|
| <input type="checkbox"/> Environmental Management Plan | <input type="checkbox"/> Site Nuisance Management Plan |
|--|--|

### OTHER

- |  |   |
|--|---|
| <input type="checkbox"/> Building Envelope Plan  | <input type="checkbox"/> Site layout Plan |
| <input type="checkbox"/> 'Application for Construction or Modification on Council Property' form |   |

## Reference Material

Australian Road Rules 1999

Australian Standard - AS1158 - Road lighting.

Australian Standard - AS1428 - Design for access and mobility.

Australian Standard - AS1742 Manual of Uniform Traffic Control Devices.

Australian/New Zealand Standard - AS/NZS 2890.1:2004. Parking facilities - Part 1: Off-street car parking.

Australian/New Zealand Standard - AS/NZS 3500.3:2003. Plumbing and drainage - Stormwater drainage.

Austrroads 'Guide to Asset Management Part 5: Pavement Performance'.

Austrroads 'Guide to Pavement Technology Part 2: Pavement Structural Design'

Austrroads 'Guide to Road Design Part 6A: Pedestrian and Cyclist Paths'

Austrroads 'Pavement Design for Light Traffic: A Supplement to Austrroads Pavement Design Guide',

CSIRO:'WSUD Engineering Procedures: Stormwater' 2005

Department of Planning, Transport and Infrastructure, Safety and Service Division - Guide to Bikeway Pavement Design, Construction and Maintenance for South Australia

Environmental Protection Authority - Stormwater Pollution Prevention: code of practice for local, state and federal government

Local Government Association of SA - Services in Streets – A Code for the Placement of Infrastructure Services in New and Existing Streets'

SA Health/ Local Government Association of SA - Septic Tank Effluent Drainage Scheme Design Criteria

South Australian Appendix to the Building Code of Australia (BCA)

South Australian Housing Code (SAHC)

The Barossa Council - Property Identification Policy

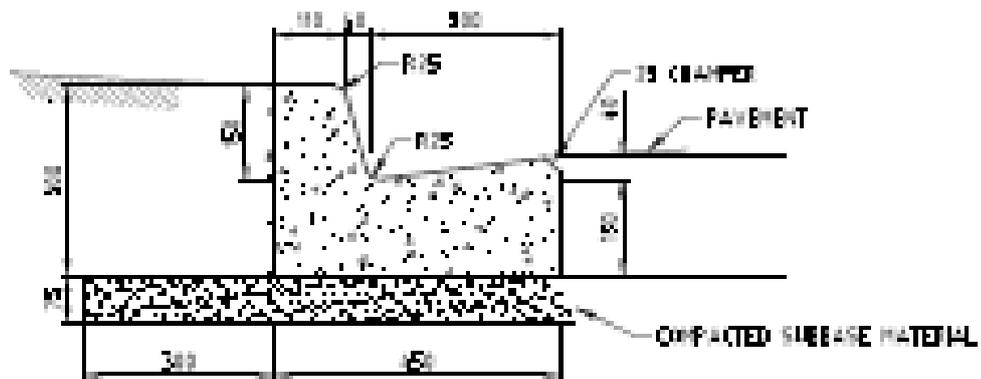
The Barossa Council - Roadside Vegetation Management Plan

The Barossa Council - Stormwater Drainage Guidelines

Transport SA Standards Specification pm32

## Checklist

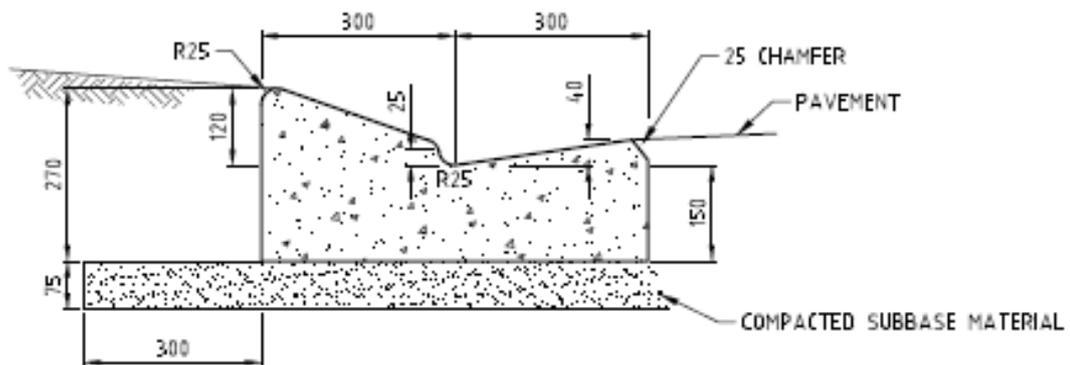
Appendix 1



150mm UPRIGHT KERB & WATERTABLE  
SCALE 1:10

<table border="1"> <tr> <td>REVISION</td> <td>FX</td> </tr> <tr> <td>REVISION</td> <td>FX</td> </tr> <tr> <td>DATE</td> <td>JUNE 2015</td> </tr> </table>	REVISION	FX	REVISION	FX	DATE	JUNE 2015		STANDARD DETAILS 150 UPRIGHT KERB & WATERTABLE	10-110
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	100								
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## MOUNTABLE KERB & WATERTABLE

SCALE 1:10

DESIGNED:	RJC	 <i>The Barossa Council</i>	STANDARD DETAILS MOUNTABLE KERB & WATERTABLE	SCALE: 1:10
DRAWN:	RJC			SHEET: 120mkwt
DATE:	JUNE 2015			

