DESIGN STANDARD 1

Engineering requirements for land divisions

STATE PLANNING COMMISSION

DRAFT FOR CONSULTATION

This design standard was adopted by the Minister for Planning under section 73(10) of the *Planning, Development and Infrastructure Act 2016* on [day] [month] [20XX]

Introduction

Section 69 of the *Planning, Development, and Infrastructure Act 2016* (the Act) allows the State Planning Commission to prepare design standards that relate to the public realm or infrastructure. Design standards form part of the Planning Rules and may supplement the Planning and Design Code by:

(a) specifying design principles; and

(b) specifying design standards for the public realm or infrastructure; and

(c) providing design guidance with respect to any relevant matter.

A design standard may:

(a) be linked to any spatial layer in the Planning and Design Code; and

(b) apply to any location specified in the Planning and Design Code, an infrastructure delivery scheme under Part 13 Division 1, or a scheme established under Part 15 Division 2.

Where relevant to the particular development, design standards must be considered in relation to any application:

(a) for planning consent under s 102(1)(a); and

(b) for land division consent under s 102(1)(c)(ii) and s 102(1)(d)(ii) and (iii); and

(c) involving encroachments under s 102(1)(d)(iii) and s 102(1)(e);

(d) involving an alteration to a public road for vehicular access as part of a development authorisation under s 221(3)(b) and s 234AA of the *Local Government Act 1999*.

In accordance with the above, this design standard specifies design principles and design requirements for infrastructure associated with land divisions within areas and circumstances identified in the scope of this standard.

Design Standard 1 – Engineering Requirements for Land Divisions

Part 1 – Preliminary

1. Citation

This design standard may be cited as *Design Standard 1 – Engineering Requirements for Land Divisions.*

2. Commencement of the Design Standard

This design standard will come into operation on dd mm yyyy

3. Object of the Design Standard

(1) The object of this design standard is to prescribe the standard requirements in relation to land division with respect to:

(a) Pavement design

(b) Stormwater design

(c) Road design

(d) Road corridor design

(e) Service infrastructure

(f) Water Sensitive Urban Design

(g) Street landscaping including trees

4. Interpretation

In this design standard, unless the contrary intention appears –

Act means the *Planning, Development and Infrastructure Act 2016.*

Activity Centre has the same meaning as in the Code.

Code means the Planning and Design Code.

Council means a council constituted under the *Local Government Act 1999*.

Design Principle provides the objectives that are sought to be achieved through the design requirements.

Design Requirement (DR) is the assessment criteria that must be met to satisfy the design standard.

Design Requirement Table (DRT) is supplementary quantitative information to a design requirement that must be met to satisfy the design standard.

Regulations means the *Planning, Development and Infrastructure (General) Regulations 2017*.

Standard Drawing (SD) means detailed specifications for construction including dimensions, materials and construction methods.

Technical Manual means the *South Australian Growth Areas Technical Manual* and associated standard drawings. Provides technical detail and context for the design and construction relating to the corresponding section of the design standard.

In addition to the above, any definition contained within Chapter 2 of the *Growth Area and Greenfield Development Technical Manual* will also be included as a definition in this design standard.

Note: Section 12 of the *Legislation Interpretation Act 2021* provides that an expression used in an instrument made under an Act has, unless the contrary intention appears, the same meaning as in the Act under which the instrument was made.

Part 2 – Compliance

5. Compliance

(1) A person is taken to have complied with this design standard if they have satisfied the relevant design requirements and standard drawings.

(2) For the avoidance of doubt, the relevant authority may determine that one or more of the design requirements are not relevant to a proposed land division.

Part 3 – Design Standard

6. Scope of this design standard

(1) Subject to this clause, this design standard applies to all applications for consent under section 102(1)(c) of the Act involving:

(a) Division of land for residential purposes, or as part of a master planned development which is primarily for residential purposes; and

(b) The construction of a public road or infrastructure which is to be vested in a council; and

(c) Where the land the subject of the application for consent is located within the following zones in the Code:

i. Master Planned Neighbourhood Zone
ii. Master Planned Renewal Zone
iii. Master Planned Township Zone

(2) Design Requirements DR7.1 to DR7.8 (inclusive) relating to Water Sensitive Urban Design only apply in relation to land division applications involving the creation of more than 5 allotments.

7. Assessment Provisions

1. STORMWATER DESIGN

Design Principle

Design of stormwater systems and stormwater management will be undertaken with consideration towards the technical detail provided within **Chapter 4 - Stormwater Design** of the **Technical Manual.**

Stormwater drainage design in new developments is to be undertaken to achieve the following objectives:

- collect, control and manage all stormwater generated from the development or project.
- collect stormwater from a catchment and convey it to its receiving waters with minimal nuisance, danger, flooding, or damage to the environment.
- prevent flooding of public and private property both within the catchment, upstream and downstream through adequate design of the development.
- provide an effective outlet for all collected stormwater to a natural watercourse or approved outfall with outlet erosion control.
- facilitate optimal water quality, as well as opportunities for stormwater harvesting and reuse; and
- achieve these objectives without detrimentally affecting the environment, surface and subsurface water quality, the adjoining landowners in the vicinity of the stormwater drainage outlet and watercourses either upstream or downstream of the development.

Design Requirements

DR 1.1- Design of Stormwater

The design of roads will be undertaken in accordance with the specifications of **Chapter 4 – Stormwater Design** of the **Technical Manual.**

DR 1.2 - Existing constraints

Stormwater drainage design and the design and management of stormwater runoff must be in accordance with any current stormwater management strategies or catchment management plans in place under a deed of agreement, infrastructure scheme or regional stormwater management plan.

DR 1.3 – Stormwater Management Plan

A Stormwater Management Plan (SMP) will be provided with the application for land division consent. The SMP will provide the following details (as applicable):

(a) catchment and sub-catchment plans
(b) conceptual stormwater drainage systems including treatment, detention, and retention
(c) detail of proposed stormwater discharge to the existing system
(d) water quality detail
(e) erosion management
(f) flood management
(g) electronic drainage model (DRAINS or approved equivalent)

The SMP will adopt the 'major / minor' approach to stormwater drainage systems as outlined in section 4.4 of **Chapter 4 - Stormwater Design** of the **Technical Manual** and will adopt the largest flow for the design of the stormwater system downstream of the connection point.

DR 1.4 – Major Stormwater drainage system

The stormwater drainage for the proposed division will be designed in accordance with the technical requirements for stormwater systems as detailed in **Chapter 4 - Stormwater Drainage** of the **Technical Manual.**

DR 1.5 – Stormwater Drainage Reserves

Where stormwater drainage reserves are proposed, the following provisions will be met:

(a) reserve widths must be able to accommodate a drain with sufficient capacity to cater for a major storm event.
(b) reserve design provides for an access or maintenance track along the top bank of the drain.
(c) stormwater drainage reserves are to be shown in the plan of division.
(d) any infrastructure such as pump stations, electrical equipment, water-quality treatment infrastructure or any other service must be sited with sufficient clearance for construction and maintenance.

DR 1.6 – Stormwater Drainage easements

Stormwater easements are not to be used, except in circumstances where discharge to the road reserve or existing drainage reserve cannot be achieved.

All easements will be shown on the plan of division and (unless otherwise required by the asset owner) such easements will be:

(a) 2 metres wide when the easement contains only a single drain or pipe less than 900mm in diameter: or
(b) 4 metres wide when the easement contains more than one drain or pipe, where they will be separated by a minimum of 1 metre.

DR 1.7 – Retention & Detention Basins

Any stormwater retention and detention basins proposed will be clearly shown on the plan of division within a stormwater reserve and will:

(a) demonstrate they are required as part of a proposed drainage system.
(b) demonstrate any required stormwater retention or detention systems can be integrated into the existing stormwater drainage system.
(c) be free draining, except where it is demonstrated that a retention basin is required as part of a stormwater treatment system, for open space purposes or to mitigate existing stormwater system constraints.
(d) retention / detention basins should not be sited in areas identified as being affected by overland flooding.
(e) incorporate stormwater treatment, sedimentation traps and litter traps into the retention / detention basin design where required as part of a proposed stormwater system.
(f) where possible, look to join or expand existing basins.
(g) provide for a spill path in major storm and blockage events which does not cross residential properties.
(h) show stormwater inlets and outlets.
(i) provide for maintenance track access around the bank of basin.

DR 1.8 – Stormwater Basin Design

Where on-site detention is required prior to discharge into an existing stormwater drainage network, evidence will be provided to demonstrate that the rate of discharge and volume of on-site detention have been designed so that the existing stormwater drainage system will not be adversely impacted by the application.

DR 1.9 – Basin Access Requirements

Basin design will provide for appropriate access for their intended use including:

(a) where public access is to be provided the maximum batter slope for basins is 1:5.
(b) provision of all-weather access to basin and any associated structures, outlets, or pumps to enable maintenance to be carried out.
(c) where a basin is not intended for public use, it will be fenced to prevent general access.

DR 1.10 – Landscaping

Landscaping for stormwater basins and drainage systems will be provided where required as part of a stormwater treatment system, to prevent erosion or disturbance to banks, and to provide stabilization to battered slopes.

2. ROAD DESIGN

Design Principle

Design of roads will be undertaken with consideration towards the technical detail provided within **Chapter 5- Road Design** of the **Technical Manual**

Aspects of road design not specifically referred to in this chapter, or the corresponding **Chapter 5 – Road Design** of the **Technical Manual** should be generally in accordance with the following documents:

- Austroads Guides
- Australian Standards
- Standard Drawings contained within Appendix A of the **Technical Manual**

Design Requirements

DR 2.1- Design of Roads

The design of roads will be undertaken in accordance with the specifications of **Chapter 5 - Road Designs** of the **Technical Manual.**

DR 2.2 – Design Vehicle

The design vehicle(s) to be adopted for roads within a land division will be selected in accordance with the current *Austroads Design Vehicles and Turning Path Templates*, except for instances in which a larger design vehicle is identified as being required to meet the specification of the refuse collection or emergency service provider for the land, in which case the larger design vehicle will be adopted as required.

DR 2.3 – Vehicle Turning Movements

Vehicle turning movements are to be examined for design vehicles and check vehicles using the current *Austroads Design Vehicle and Turning Path Templates* and roads are to be designed to meet the following requirements:

(a) the design vehicle can negotiate a left turn from the left lane without crossing opposite direction lanes or medians and without the need to reverse to complete the turning movement.
(b) the identified checking vehicle may impinge upon opposite lanes except where a median is present. Where a checking vehicle impinges on an opposite lane, adequate sight distances will be provided to allow the manoeuvre to occur.
(c) all intersection designs must be such that additional clearance from above ground structures is applied to the total swept path of the design vehicle of 600mm, unless otherwise specified.
(d) vehicle accesses and driveways are not to be used for turning movements
(e) all roadways, rights-of-way and vehicle crossings are to be designed to accommodate a standard vehicle (car).

DR 2.4 - Kerb and Channel

Kerb and channel will be provided on both sides of all residential roads.

Edge strips are to be used for application within laneways.

DR 2.5 – Kerb Ramps

Kerb ramps will be provided at every corner radius where footpaths are proposed, with the location to provide connection to existing or future footpath networks.

DR 2.6 Footpaths

A footpath and pedestrian movement plan will be submitted which provides for the following minimum footpath widths:

(a) 3 metres for shared paths, adjacent bus stop areas and in front of commercial buildings and activity centres
(b) 1.8 metres when a footpath is proposed on one side of a road, 1.5 metres if located on both sides of a road

In instances where a footpath is to connect to an existing footpath network, or a division adjoins an existing land division approval, an alternate width which aligns with the adjoining network may be approved to achieve consistency in the pedestrian network.

DR 2.7 – Access to allotments

Vehicular access to all allotments within a land subdivision application must be provided for on the proposed plan of division.

DR 2.8 – Residential Crossovers

Vehicle crossings will be provided in accordance with detail contained within the **Standard Drawings of Appendix A** of the **Technical Manual**, unless site parameters do not allow for this design. In instances where the Standard Drawings cannot be achieved, vehicle crossing design will best align with the provisions of **Chapter 5- Road Design** of the **Technical Manual**.

DR 2.9 – Vehicle Crossings

Driveway crossovers to residential properties will be shown to achieve the following:

(a) maximum number of vehicle crossings to not exceed 2 crossings
(b) where 2 crossings are proposed, neither will exceeds 4 metres in width.
(c) where 2 crossings are provided, the minimum separation will be 9 metres or more.
(d) minimum width of a single crossing to not be less than 3 metres.
(e) maximum width of a single crossing will not exceed 6 metres.
(f) crossings to adjacent properties will either be fully combined, with a maximum width of 6 metres, or have a minimum separation to allow an on-street park between driveways.
(g) vehicle crossings to corner allotments are to be located a minimum of 6 metres from the tangent point of the kerb return at intersection of roads and 1 metre clear of pedestrian kerb crossings, street trees, signs, bollards and other street furniture in accordance with AS 2890.1.

DR 2.10 – Roundabouts

Roundabouts are to be designed to comply with the following requirements:

(a) meet the requirements of the relevant Austroads publication.
(b) designed in accordance with detail provided within the **Standard Drawings of Appendix A** of the **Technical Manual**
(c) vehicular access to individual lots is not provided to or from the circulating roadway of a roundabout.
(d) landscaping of the central roundabout island will not be of such nature and height as to compromise the sight distance requirements for vehicles set out in the above standards and will not extend past a mature growth height of 200mm.

DR 2.11 – Intersection Design

Intersections are to be designed to function in a safe, convenient and appropriate manner for the type of road and will be in accordance with **Chapter 5- Road Design** of the **Technical Manual**.

Corner cut offs or truncations of suitable dimensions to allow adequate sight distance, are to be provided at all corners of new and upgraded intersections in accordance with the following:

(a) Vehicle design speeds of less than 50km/h – 3 x 3 metre truncation; or
(b) Vehicle design speeds greater than 50km/h – 5 x 5 metre truncation.

DR 2.12 – Culs-de-sac

Where a residential street proposes a cul de sac or a court, provision must be made for a standard 12.5 metre service vehicle (fire truck) to undertake a three-point turn manoeuvre on the pavement area.

Such turn around area and swept path detail must account for any potential on street parking or identify where parking restrictions would be required to facilitate the turning.

3. ROAD CORRIDOR

Design Principle

Design of road corridors will be undertaken with consideration towards the technical detail provided within **Chapter 6- Road Corridor Design** of the **Technical Manual.** The design and construction of roads and allotment accesses should meet or exceed the requirements of the Austroads, the Act and relevant Australian Standards

The application and consideration of this design standard is not intended to apply to pre-existing road hierarchies or established network management plans, except for where the volume of traffic generated from a development would be sufficient to change the classification or hierarchy of an existing road, which would require assessment by the Relevant Authority.

The road classification referred to within this Design Principle relates specifically to the design and construction of new or upgraded roads associated with a development.

Design Requirements
DR 3.1 – Design of Road Corridors The design of roads will be undertaken in accordance with the specifications of **Chapter 6 - Road Corridor Designs** of the **Technical Manual.**
DR 3.2 – Road Classification The classification of residential streets within any development should be in accordance with the 'DRT 6.1 Metropolitan Road / Street Characteristics Table' of **Chapter 6** – **Road Corridor Design** of the **Technical Manual.** Road classifications will be consistent with future traffic requirements and generation movements envisaged for the subject land or area following completion of the development or (where applicable) under a deed of agreement, infrastructure deed or Infrastructure Scheme as may apply to the land.
DR 3.3 – Road Design and Street characteristics The design of roads, road reserve widths and road carriageway widths are to be designed in accordance with the requirements of **Chapter 6 – Road Corridor Design** of the **Technical Manual.** The road function will provide the following: (a) ultimate traffic volume and the type and volume of commercial vehicles (b) where identified in a road hierarchy plan, road carriageway width should include allowance for on street parking, cycle lanes/paths, footpaths and underground services (c) road verges should include allowance for footpaths and shared paths landscaping, WSUD (where required), street trees and street lighting (d) minimum verge width (see DRT 6-1 of **Chapter 6 – Road Corridor Design** of the **Technical Manual**) to provide for the mature growth of a street tree with significant canopy (e) street trees should have a minimum 2.4 metres tree zone to allow for growth and pruning to provide vertical height clearances (f) shared paths where identified are to be 3 metres wide (g) footpaths, where provided on only one side of the street are to be a minimum of 1.8 metres and in all other circumstances 1.5 metres and to be suitable for pedestrians and cyclists; and (h) location for waste bins.

4. PAVEMENT DESIGN

Design Principle

Design of pavement will be undertaken with consideration towards the technical detail provided within Chapter 7- Pavement Design of the Technical Manual.

Pavement design will be undertaken with regard to the intended function of the proposed road or roads, nature and frequency of movement and the topography and soil characteristics of the subject site.

Design Requirements

DR 4.1- Design of Pavement

The design of pavement will be undertaken in accordance with the specifications of Chapter 7 - Pavement Design of the Technical Manual.

DR 4.2- Minimum Design Traffic

The minimum design traffic to be used for the design of a road classification will be in accordance with DRT 7.1 Design Traffic.

DR 4.3 – Flexible Sealed Road Pavements

Road pavement designs will be identified as providing for a minimum 30-year design life.

DR 4.4 – Concrete Street Pavements

Concrete Street Pavement designs will be identified as providing for a minimum 30-year design life.

DR 4.5- Interlocking Pavers

Interlocking block street pavements are not to be used unless:

(a) required for traffic calming purposes.
(b) required for stormwater design and treatment purposes; and/or
(c) required for retention of regulated or significant trees.

DR 4.6- Interlocking Pavers Design

Where approved pursuant to DR 4.5, Interlocking pavers will be designed in accordance with the following:

(a) minimum 30-year design life
(b) have a road slope not exceeding 10%
(c) provide for suitable drainage on slopes of 5% or more; and
(d) be in shape ‘type A’ in a herringbone pattern

DR 4.7 Permeable Pavers

Permeable Pavers are not to be used unless required for:

(a) stormwater design and treatment purposes; and/or
(b) retention of regulated or significant trees

5. EARTHWORKS DESIGN

Design Principle

Design of earthworks in land divisions will be undertaken with consideration towards the technical detail provided within **Chapter 8 - Earthworks Design** of the **Technical Manual**

Earthworks associated with a land division involving activities such as lot filling, constructing basins, stormwater drainage systems (including open channels), levee banks, access tracks, excavation, flood protection devices, overland flow paths or other associated activities should look to minimise unnecessary fill or excavation and have regard to the surrounding site levels to inform design.

Design Requirements

DR 5.1 Design of Earthworks

The design of earthworks will be undertaken in accordance with the specifications of **Chapter 8 – Earthworks Design** of the **Technical Manual.**

DR 5.2- Site Levels

Site levels will ensure that the finished surface of any lot filling is equal to or above the 1% annual exceedance probability (AEP) flood level and that a future dwelling or structure is able to achieve a finished floor level of buildings at a minimum of 300mm above the 1% AEP flood level.

Where this cannot be achieved, plans must demonstrate that the development is otherwise protected from a 1% AEP flood event.

DR 5.3 – Bulk Earthworks Plans

Bulk earthworks plan for a division must demonstrate:

(a) that existing stormwater runoff storage areas or flow paths are not obstructed
(b) the anticipated extent of all cut and fill which will allow the site to drain; and
(c) earthworks grading away from the location of future dwellings and structures.

DR 5.4 – Sloping Sites

All new allotments on sloping sites will be graded, cut, or filled, such that a minimum grade of 1 in 200 is achieved along the low side of the allotment towards the stormwater drainage outlet.

DR 5.5 - Flow Paths

No water is to be directed to flow into adjoining properties unless one or more of the following are met:

(a) the water flow is part of an existing watercourse and pre-existing stormwater conditions are maintained; and/or
(b) an easement for stormwater purposes is in place on the adjoining land and pre-existing stormwater conditions are maintained; and/or
(c) connection into existing infrastructure is provided and pre-existing stormwater conditions are maintained

6. SERVICE INFRASTRUCTURE

Design Principle

Design of service infrastructure will be undertaken with consideration towards the technical detail provided within **Chapter 9 - Service Infrastructure** of the **Technical Manual**

Service infrastructure will be provided to all new allotments in a manner and form as would be expected to ensure that services are provided in an appropriate and accessible manner for all new owners.

Design Requirements

DR 6.1 – Design of Service Infrastructure

The design of service infrastructure will be undertaken in accordance with the specifications of **Chapter 9 – Service Infrastructure** of the **Technical Manual.**

DR 6.2 - Undergrounding of services

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

DR 6.3 – Tree Protections

New land divisions will ensure that existing and proposed trees are protected and will provide for the following:

(a) tree root barriers are to be installed a minimum 750mm radius of newly planted trees (measured from the trunk of the tree) from new services or to the extents of the established tree canopies.
(b) new services to not be installed within a minimum 750mm radius of newly planted trees.
(c) new services to not be installed in the root protection zone of regulated and significant trees.

DR 6.4 – Street Lighting

Street lighting is to be provided throughout any land division in accordance with Australian Standard AS/NZS 1158

DR 6.5 - Location of Services

Pad-mounted transformers, switching cabinets and pump stations which are to be located within a proposed reserve should be situated:

(a) in an area with reduced visibility.
(b) away from locations near play equipment, BBQ or picnic areas or active recreation furniture and located in corners of reserves.
(c) not adjacent to collector roads or shared paths; and
(d) with landscape screening to obscure structures associated with the services and infrastructure.

DR 6.6 - Accessibility

Electrical cabinets and similar associated infrastructure will be located in accessible locations, accessible from a public road and with appropriate easements shown on the relevant plan of division.

DR 6.7 - Plan of Division

Transformers, pumping stations and electrical cabinets are to be shown on a plan of division and are to be excluded from any open space calculations as shown on the relevant plan of division.

DR 6.8 - Potable water and wastewater provision

All new allotments are to be provided with potable water and wastewater connections.

7. WATER SENSITIVE URBAN DESIGN

Design Principle

Design of urban environments will be undertaken with consideration towards the technical detail provided within **Chapter 11- Water Sensitive Urban Design** of the **Technical Manual.**

Water Sensitive Urban Design (WSUD) principles may be used within urban environments to achieve water management outcomes for pollutant load reductions and green infrastructure. WSUD outcomes will look to mitigate adverse water quality impacts such as such as sediments, nutrients, and hydrocarbons into receiving waterways, degrading water quality and aquatic ecosystems.

The use and application of WSUD in stormwater treatment for land division will be undertaken against the following considerations that systems should:

- preserve natural features and support ecological features
- preserve the natural hydrological behaviour of sites
- safeguard the quality of surface water and groundwater.
- incorporate water into the urban landscape to enrich the aesthetic, social, cultural, and ecological features.

Design Requirements
DR 7.1 – Design of Water Sensitive Urban Design The design of urban environments will be undertaken in accordance with the specifications of **Chapter 11 – Water Sensitive Urban Design** of the **Technical Manual.**
DR 7.2 – Pollutant Load Reductions Stormwater systems will achieve the following mean annual pollutant loads, when compared to the unmitigated stormwater runoff. (a) 80% for Total Suspended Solids (TSS) (b) 60% for Total Phosphorus (TP) (c) 45% for Total Nitrogen (TN) (d) 90% for Gross Pollutants (GP)
DR 7.3 – Water Treatment In designing a system to meet the water quality requirements identified in DR 7.2, the applicant must confirm if WSUD devices and management techniques are proposed for stormwater quality, or what other method may be proposed.
DR 7.4 - design of WSUD systems and devices Where WSUD devices or stormwater management systems are proposed under DR 7.3, they will be designed in accordance with the requirements of **Chapter 11- Water Sensitive Urban Design** of the **Technical Manual.**
DR 7.5 - Vegetation Vegetation species identified for use within bioretention systems will be consistent with DRT 11-1 of **Chapter 11 – Water Sensitive Urban Design** of the **Technical Manual.**
DR 7.6 - Access A dedicated access into an end-of-line bioretention basin, swale and any Gross Pollutant Trap for maintenance of inlet and outlet structures is required, either via adjacent road or driveways or by provision of a maintenance path.
DR 7.7 - WSUD and Proprietary devices Where a WSUD system or device is proposed which meets the requirements of **Chapter 11 – Water Sensitive Urban Design** of the **Technical Manual**, but is not a device or system preferred by the council, the Relevant Authority may specify an alternate device which is to be used in place of the proposed, provided that such device meets the following requirements: (a) the device has comparable performance relating to water quality; and (b) the device is of a comparable cost and is readily obtainable.

DR 7.8 - Vegetated Swales

Where vegetated swales are proposed to provide water quality treatment they are not to be used for urban development where the swale is required to cross residential driveways.

8. STREET LANDSCAPING INCLUDING TREES

Design Principle

Design of street landscaping will be undertaken with consideration towards the technical detail provided within **Chapter 10 - Street Trees** of the **Technical Manual**

The design and planting of street trees in new divisions will have regard to the following provisions:

- street trees are a legacy for the community. Maximise planting of trees in all streets and retain existing trees wherever possible.
- street trees should contribute to the overall unity of the streetscape, through their layout, scale and character. Careful selection of the tree species will provide scale and visual cohesion to the street. Beyond this generic design intent for the street trees, trees can also form landmarks, contribute to both contextual character and the general amenity of a place.
- select the most appropriate tree species to satisfy the design intent and the physical conditions of the site both natural and manmade. Respond to other functional requirements such as solar access, vehicle clearances etc.
- optimise soil conditions for trees. Locate trees to maximise available soil volume. Ensure there is a sufficient quantity and quality of soil within the anticipated root zone to support the intended mature tree and that adequate moisture is provided to that zone.
- street trees need adequate water to flourish. Street tree location and design should optimise passive watering of all street trees.
- minimise infrastructure and functional conflicts. Locate trees and utility services to minimise potential conflicts between street elements and functions, such as streetlights being blocked by the tree canopy, or car doors being opened into tree trunks.
- where appropriate integrate water sensitive urban design (WSUD) initiatives with the provision of street trees

Planting of new and protection of existing trees will occur with a view to contributing towards the Greater Adelaide Regional Plan target of achieving 30% tree canopy cover across Greater Adelaide by 2051.

Design Requirements

DR 8.1 – Design of Street Landscaping

The design of street landscaping will be undertaken in accordance with the specifications of **Chapter 10 – Street Trees** of the **Technical Manual.**

DR 8.2 - Tree Planting

Street trees will be provided within the road reserve at the following rates:

(a) 1 tree will be planted per single frontage allotment with a frontage of 10 metres or less.
(b) 1 tree will be planted every 8 metres on allotments with a frontage greater than 16 metres.
(c) 3 street trees to be provided to corner allotments.
(d) 1 tree will be planted every 8 metres where not located adjacent a dwelling.

DR 8.3 – Quality of Stock

All tree stock supplied for installation will meet the requirements of Australian Standard AS 2303.

DR 8.4 – Tree Stock Dimensions

All trees to be a minimum height at time of planting of 2 metres, have a minimum pot size of 45 litres, and a minimum calliper of 30mm.

DR 8.5 - Planting Detail

Street trees will be planted and established in accordance with the detail provided within the **Standard Drawings** in **Chapter 10 - Street Trees** of the **Technical Manual**.

DR 8.6 - Tree Species

Street trees will be selected from the endorsed species list contained within **Chapter 10 - Street Trees** of the **Technical Manual**.

Alternatively, street trees will be selected from the approved species list of the Relevant Authority in which the site is located.

Where a species is proposed, a Relevant Authority may nominate a substitute species in place of the proposed species provided that:

(a) the species is readily available; and
(b) the cost for the planting and establishment of the species is comparable.

DR 8.7 - Tree Locations

The precise location of all street trees is to be shown on the landscaping plan. Trees are to be located such that the centre of the tree is a minimum distance of

(a) 2 metres from nearest property boundary, and
(b) 1 metre from the face of kerb or edge of road
(c) centrally located in the verge where possible or as specified by the Relevant Authority.

DR 8.8 - Corner Cut Offs

No street trees are to be planted on road corners where corner cut-offs apply.

DR 8.9 - Tree Identification All street trees will be shown on a landscaping plan detailing location, species and indicative location of services and driveways.
DR 8.10 - Infrastructure Separation Street trees are to be setback from infrastructure in accordance with **Chapter 10 - Street Trees** of the **Technical Manual.**
DR 8.11 - Existing Trees All existing regulated or significant trees (including trees located outside the site boundary but with a canopy overhanging the development land) will be shown on an 'Existing Tree Survey Plan' which provides the following detail: • the Tree Protection Zone (TPZ) and Critical Root Zone (CRZ); and • the location of any roads, structures, services or infrastructure associated with the proposed division.

Versions

Version 1 xx xx xxxx