

Keywords: Land division, development

Corporate Plan:	
Classification:	<i>Public – Environmental Services Policy</i>
First Issued/Approved:	<i>August 2009</i>
Review Frequency:	<i>Annually</i>
Last Reviewed:	<i>11 September 2018 (SGAMC)</i>
Next Review Due:	<i>September 2019</i>
Responsible Officer(s):	<i>MES/MP, MIS</i>
Council File Reference:	<i>3.71.3</i>
Applicable Legislation:	<i>Development Act 1993 Local Government Act 1999</i>
Relevant Policies:	<i>Nil</i>
Related Procedures:	<i>Nil</i>
Delegations:	<i>Development Act 1993 Local Government Act 1999 Community Titles Act 1996</i>

Purpose

The development of this policy ensures the provision of adequate infrastructure in new residential developments. It provides a standard group of requirements to consider when considering land division within the Council area, primarily focussed on developments within towns and rural living zones but not excluding other circumstances.

Principles

The statement of requirements provides guidance in accordance with the Development Act 1993 and the Local Government Act 1999. It ensures that developers are required to provide a high level of infrastructure in new divisions. It also ensures that the needs of residents and Council in that area are met.

The Policy has been developed in conjunction with the District Council of Loxton Waikerie and the Renmark Paringa Council to facilitate a common direction towards development in the Riverland.

Developers undertaking new development proposals in the Council area shall be required to provide infrastructure in accordance with the following Statement of Council Requirements:

STATEMENT OF COUNCIL REQUIREMENTS FOR A PLAN OF DIVISION

Description/Location of proposed development:

Development Number: / D /

APPLICANT OR
AUTHORISED
AGENT

TO:

The following requirements are to be satisfied within thirty months of the date hereof or any extension thereof which the Council may stipulate for a Certificate of Approval to be issued in respect of your application.

Prior to works commencing on site	As per Attachment A	Item 1
Drainage Reserves and easements for drainage and electricity supply	As per Attachment A	– Item 2
Provision of Open Space or payment in lieu	As per Attachment A	– Item 3
Roads and access to land	As per Attachment A	– Item 4
Footpaths, water tables and kerbing	As per Attachment A	– Item 5 & 6
Bridges, culverts and drains	As per Attachment A	– Item 7
Road and street names, signage, street trees and landscaping	As per Attachment A	– Item 8 & 9
Services and street lighting	As per Attachment A	– Item 10 & 11
Water Reticulation	As per Attachment A	– Item 12
Sewerage and common effluent	As per Attachment A	– Item 13
Environmental Considerations	As per Attachment A	– Item 14
Contributions Infrastructure	As per Attachment A	Item 15
Essential Inspections during Construction	As per Attachment A	Item 16
Completion of Works and Construction Record	As per Attachment A	– Item 17

1 Prior to works commencing on site

- 1.1 Prior to construction a full set of draft Engineered drawings and specifications of the proposed work shall be provided to Council for written approval. These drawings and specifications are to include designs for stormwater management, entry statements, street furniture and CWMS and are to be prepared by a qualified engineer.
- 1.2 The design drawings and specifications shall be prepared and be provided to Council for separate construction approvals for:
 - i earthworks,
 - ii base course,
 - iii sub-base course,
 - iv road sealing,
 - v effluent construction and
 - vi. storm water construction
 - vii. landscaping plan for road reserves (including street tree location) and any parks
- 1.3 Council must be presented with a coordinated services plan signed by all relevant service authorities associated with the development. The plan must show offsets and depths as approved.
- 1.4 The developer must advise Council in writing of a Project coordinator appointed to oversee the works. Subsequent Council correspondence will be directed to the nominated Project coordinator.
- 1.5 A Soil Erosion and Drainage Management Plan must be prepared and approved by Council and implemented to the satisfaction of Council prior to construction commencing, which includes a range of strategies to collect, treat, store and dispose of stormwater during construction and from the final form of the development. *The objectives and requirements of a Soil Erosion and Drainage Management Plan are described in the 'Stormwater Pollution Prevention General Code of Practice for Local, State and Federal Government'.*
- 1.6 A Construction Management Plan must be prepared and implemented to the satisfaction of Council prior to construction commencing. The plan must address the mitigation or minimisation of impacts (especially from noise, dust and waste) during the construction stage and shall include:
 - a suitable sedimentation and erosion protection planning measures for all construction works and conform with the stormwater pollution prevention code of practice as published by the EPA. Applicants are referred to the Environmental Protection Authorities Stormwater Pollution Prevention Code of Practice. EPA 1800 623 4455

Summary of information required:

- Electrical Reticulation Design & Layout ☐
- Stormwater Management Plan ☐
- Wastewater Reticulation Design & Layout ☐
- Water Reticulation Design & Layout ☐
- Construction Management Plans ☐
- Landscaping Plans (road reserves & parks) ☐
- Environment Management Plan ☐
- Soil Erosion and Management Plan ☐

The following information is provided as a guide to assist applicants with design requirements normally acceptable to meet Council's required standards. Alternatives will be considered and variations to this guide may be necessary to meet specific requirements.

2 Drainage reserves, easements for drainage and electricity supply

- 2.1 The requirements of SA Power Networks and/or ElectraNet with respect to the provision of easements are to be met.
- 2.2 Drainage reserves under the control of the Council are required over any stormwater retention basin, settling pond, gross pollution trap, or like structure, not located on a road reserve.
- 2.3 3m wide easements made out in favour of the Council are required over every water main, sewer main and sewerage rising main /or portion thereof, and stormwater drains located in private property. In the case of a shared easement (e.g. stormwater/CWMS or sewer) the width will be 4m.
- 2.4 Reserves of dimensions approved by Council must be formed over any reservoir or pump station site located on private property. Such reserves shall be under the control of Council.

3 Open space

- 3.1 Provide all reserves as shown in the approved layout plan. ☐
- 3.2 Contribute open space requirement to Council as applicable. ☐
(to be paid prior to the issues of the Certificate of Approval)

The applicant may enter into a written agreement with Council to have a combination or both (open space provided and payment of an open space contribution), or to have the Public Open Space component set aside in a later stage of the development

If option 3.1 is required by Council, the applicant must:

- a. provide a detailed landscaping and irrigation plans for all the proposed reserve areas for the approval of Council prior to works commencing on site. The landscaping in these areas shall be established prior to the certificate of approval being issued. Water supply for the irrigation system shall be capable of connection to Council's reticulated CWMS water or the Irrigation Trust water supply system.
- b. fence at it own cost the boundary of the allotments abutting the area to be reserved for public open space. Such fencing is to be constructed to the standard required by the Council and must be constructed so that the fence posts and rails are not exposed on the side of the land so reserved, and must be compatible with other residential fences within the subdivision.
- c. Where lots shown on the endorsed plan(s) have a common boundary with any Reserve for Council purposes, such boundary must be fenced to the satisfaction of and at no cost to Council.
- d. entrances to reserves shall be fenced to prevent unauthorised access by vehicles. The fence style and location are to be approved by Council prior to installation
- e. open space may, at the discretion of Council, include drainage reserves (swales etc), depending upon the design and layout of the engineering/civil works.

4 Roads and access to land

4.1 Reserve Widths

The following minimum road reserve widths shall apply:-

- residential streets – 15 metres (unless approved by Council)
- Industrial streets - 20 metres
- Cul-de-sac ends (circular) 27 metres

4.2 Sealed Road Widths

Streets will have the following minimum width:-

- Minor Streets (face to face of kerb) 8 metres
- Corner cut offs 4.5 metres from intersection point
- Cul-de-sac ends (circular) 10.5 metre radius

4.3 Minimum Stopping Sight Distance

Adopt the minimum for 50 km/hr design speed.

4.4 Longitudinal Grades

The following are to be adopted:

Preferred minimum	0.5%
Absolute minimum	0.3%
Maximum	10%

4.5 Pavement Construction

The following minimum standards will apply:-

Subgrade Preparation

The street subgrades are to be formed, compacted and trimmed so that:-

- a dry density ratio of 95% (AS 1289.5.1.1) is attained
- a firm, uniform surface is achieved
- the tolerance on levels is –25mm, +0.

Sub-Base

- to comply with Transport SA Standard Specification PM21
- to be compacted to 95% dry density ratio (AS 1289.5.2.1)
- minimum soaked CBR at the above compaction to be 40
- minimum thickness of 100mm (subject to site conditions)
- level tolerance on completed course –20mm, +10mm.

Base

- to comply with Transport SA Standard Specification PM32
- to be compacted to 98% dry density ratio (AS 1289.5.2.1)
- minimum soaked CBR at above compaction to be 80
- minimum thickness of 100mm (subject to site conditions)
- level tolerance on completed course –10mm, +10mm

Total Pavement Thickness

- to be determined from current Austroads Pavement Design Manual, adopting a traffic level of 10⁴ ESA, and using a design subgrade CBR determined from testing of actual materials encountered in the exposed subgrade when compacted to 95% dry density ratio (AS 1289.5.1.1)
- to be no less than 200mm (excl. Hotmix thickness).

4.6 Seal

- | | |
|--|--------------------------|
| 40mm Hot Mix (Preferred) | <input type="checkbox"/> |
| 2 Coat Bituminous Seal with 10mm/5mm Aggregate Application | <input type="checkbox"/> |
| 2 Coat Bituminous Seal with 14mm/7mm Aggregate Application | <input type="checkbox"/> |
| Prime / Seal 14mm Aggregate with Slurry Seal | <input type="checkbox"/> |
| INTERSECTIONS – CUL-DE-SAC TURNAROUND AREA | <input type="checkbox"/> |
| 40mm thick hotmix laid in compliance with DPTI | |
| specifications with 10mm Aggregate Application for 10m from the intersection | |

4.7 Road Pavement Crossfall

To be 3% minimum in general. Flatter crossfalls may be approved by Council at cul-de-sac ends, car parks, roundabouts, etc where no practical alternative exists.

4.8 Cul-de-sac Ends

The layout of cul-de-sac ends shall be to the complete satisfaction of Council, and shall be adequate to accommodate the operation of emergency services vehicles and Council's refuse collection truck with a side mounted robotic arm, without the need for multi-step manoeuvres, or for the driver to leave the cab.

4.9 Access to Allotments

The developer is to provide adequate access, including crossover, from the carriageway to individual allotments, pursuant to the topography of the development.

5 Footpaths (one side sealed path) – Country Living, (two sided seal path) - Urban

OPTIONS:

- 5.1 Clay brick paved (minimum width 1.5m) – remainder of footpath to be compacted with crusher dust ☐
- Pavers are to be a minimum of 60mm thickness on a base of 100mm minimum of compacted quarry crusher dust material and washed river sand to the manufacturers recommendations.
- Bitumen Hotmix (width 2.0m x .03m thick, remainder of footpath compacted) ☐
- Compacted 20mm crushed rock (minimum depth 100mm) with crusher fines ☐
- ☐
- 5.2 The above footpaths will be constructed with a minimum crossfall of 2% and a maximum crossfall of 2.5%. They shall also be constructed at such levels to ensure water is not ponded over the path under any circumstances.
- 5.3 Paved/sealed footpaths shall be located a minimum of 1.0m from the kerb unless otherwise agreed by Council with consideration given to planting of street trees

- 5.4 Provisions of permeable paving adjacent street tree plantings to assist in growth and sustainability.

6 Water tables and kerbing

- 6.1 Both edges of all streets will be protected by the provision of an extruded kerb and gutter of cross-section approved by Council.
- 6.2 Generally, the kerb and gutter is to have a mountable type profile approved by Council unless the area is prone to high levels of stormwater runoff.
- 6.3 Kerb ramps including tactile indicators complying with the requirements of AS 1428 shall be constructed wherever a footpath intersects a kerb line, and at, and opposite street corners.
- 6.4 Kerb ramps including tactile indicators and vehicle access crossings shall be of reinforced concrete construction, at least 100mm thick, with F72 mesh centrally placed.
- 6.5 Spoon drains shall be constructed with a top profile approved by Council. They shall have a minimum thickness of 125mm, and shall be reinforced with F82 mesh centrally placed. A spoon drain may not be constructed across a through street and generally they are not to be used.
- 6.6 All concrete used in kerb ramps, vehicle access crossings and spoon drains will be Grade 25 MPa /20mm. Concrete in extruded kerb and gutter and median kerbing shall have a minimum 28 day strength of 25MPa.
- 6.7 A stormwater penetration point must be provided within the kerb for each proposed allotment in suitable locations within a RHS section bonded in the concrete shaped to the kerb profile to the satisfaction of Council. Penetration points must extend from the property boundary and be of a minimum 90 mm stormwater pipe. If rear of allotment drainage is provided this penetration point will not be required.
- 6.8 Rear of allotment underground drainage is not preferred but will be considered where it is necessary due to site constraints that result in driveways, paved areas and houses not draining to the street. Rear of allotment drainage shall be designed to accommodate a 100 year ARI storm from potential impervious areas of each allotment. Minimum pipe size where more than one allotment contributes shall be 300mm dia. A minimum 3 metres easement shall be created to enable access for maintenance.

7 Drainage

- 7.1 Underground drainage entry pits, traps, etc shall be designed on the following basis:-
- using Bureau of Meteorology published rainfall IFD data for the region
 - adopting an ARI = 100 years
 - using a method approved by Council for the calculation of the various sub-catchment times of concentration, e.g. ARRB Special Report No. 34 J. Argue "Stormwater Drainage Design in Small Urban Catchments"
 - a minimum pipe size of 300mm dia.
 - minimum pipe gradient of 0.4%.
 - Trafficable lids are required
- 7.2 Drainage calculations

- 7.3 shall be based on the fully developed catchment and shall include the runoff from any upstream catchment. *stormwater drainage from the subject land shall not exceed the predevelopment stormwater runoff levels from the site*
- 7.4 All drainage pipes and pits shall be located within road reserves, drainage reserves or drainage easements.
- 7.5 Only Reinforced Concrete & Fibre Reinforced Concrete pipes may be used, unless an alternative is specifically approved by Council.
- 7.6 All stormwater entry pits and junction boxes shall be constructed of reinforced concrete, complying with AS 3600 – 1994.
- 7.7 Critical entry pits, as nominated by Council, shall incorporate a silt trap of minimum depth 150mm below the invert of the outlet pipe.
- 7.8 Side entry pits should be spaced at no greater than 100metres and at closer spacing if required, depending on the conditions and detailed design.
- 7.9 All drainage outfalls shall be appropriately protected to the satisfaction of Council, against scouring resulting from the action of storm waters and the river and scouring of any downstream watercourse.
- 7.10 The whole development shall be designed so that no inundation of private land occurs as a result of a critical ARI = 100 years flood event. Surplus flows unable to be handled by the underground drainage system will be adequately catered for by one or more of the following means:-
- (i) via swale drains or overland flow (through “public” lands only)
 - (ii) via the installation of ARI = 100 years pipes in lieu of ARI = 5 years
 - (iii) temporary detention within road and drainage reserves.
- 7.11 Swale drains shall be constructed with side slopes of 3 horizontal: 1 vertical to facilitate maintenance slashing. Their longitudinal gradients shall be no steeper than that consistent with the avoidance of scouring, having regard to soil type, vegetative cover and the design flow average velocity. Where site conditions are not consistent with this requirement, the drain shall be rock lined, or shall incorporate steps or drop structures, with appropriate protection against local scouring. Details of these provisions shall be subject to the specific approval of Council.
- 7.12 For drainage outfalls serving the catchment, a settling pond /detention basin may be required in addition to the normal silt and litter traps.
- 7.13 Storage basins capable of holding the run-off of the designated rainfall storm may be required at suitable locations and provided with appropriate warning signs.
- 7.14 Rubber Ring Jointed (RRJ) reinforced concrete pipes shall be used in the following circumstances or where directed by Council:
- 1 The Hydraulic Grade Line exceeds 1.0m above the pipe,
 - 2 Where tree growth in the vicinity is likely,
 - 3 Where pipe grades exceed 20%,
 - 4 Where ground water incursion is likely,

8 Road and Street Naming / Signage / Engraving

- 8.1 Street name posts, traffic control signs, furniture, lighting, trees and any proposed entry description structures and the like must be provided at full cost of the developer in such number and location in accordance with the Councils requirements and policies.
- 8.2 An application to name the new street for the subdivision must be submitted and approved by Council prior to lodging for certification.

9 Landscaping and Street Trees

- 9.1 The landscaping specified in the approved landscaping plan must be established within two months of the issue of a Statement of Compliance at the full cost of the developer and must be maintained for a twelve month period thereafter to the satisfaction of the Council.
- 9.2 Any reserve(s) shown on endorsed plan(s) must be cleared of all rubbish, noxious weeds, debris and spoil and must be leveled, graded and landscaped to the satisfaction of Council, such landscaping must be in accordance with a plan approved by the Council prior to certification of the plan of division.
- 9.3 The developer must contribute to the cost of planting street trees within the subdivision to the satisfaction of Council. More specifically, the developer must either provide, or pay a sum equal to the cost of providing street trees in accordance with the approved Landscaping Plan (generally the provision for street trees is one tree seedlings of one metre high per fifteen meters of road within the division or *one street tree per allotment in the road reserve area*).
- 9.4 The cost per tree is as per Council's Schedule of Fees and Council will plant the trees when development has occurred to at least 75% of allotments and weather conditions are appropriate.

10 Services

- 10.1 The developer shall make arrangements with SA Power Networks for the provision of an adequate electricity supply to each lot. All reticulation shall be undergrounded.
- 10.2 Transformers and other sizable infrastructure should be positioned so as to cause minimal impact to proposed building allotments, and proposed locations must be approved by Council.
- 10.3 All allotments shall be provided with reticulated water, CWMS connection point and telecommunications.
- 10.4 No services are to traverse the boundaries of the proposed allotments unless adequate provisions are provided for via appropriate easements.
- 10.5 A water supply and fire hydrant system of adequate capacity to be used for fire and other emergencies within the proposed development area shall be provided. The fire hydrant system shall be wet pipe system incorporating SA Water Department standards, with a minimum pipe size of 100mm for the distribution main.

11 Street Lighting

- 11.1 Provide street lighting throughout the subdivision. The following minimum lighting "categories" (ASNZS 1158.3.1 – 1999) will apply:-

- 11.2 The street lights and poles shall be of a type approved by Council. They shall also be of an SA Power Networks “standard” type or approved for SA Power Network’s C.L.E.R. tariff, so that that authority will assume full responsibility for the maintenance /replacement of lamps and poles.
- 11.3 Light columns shall be located to accommodate the footpath.
- 11.4 All street lights shall be shielded to direct the light downwards.

12 Water reticulation

- 12.1 Provide a complete water reticulation scheme for the project to meet SA Water requirements (where available), including:-
- mains reticulation in each new street including stop valves, fire plugs, etc.
 - water service connections to each new lot in the subdivision, including a 20mm dia. meter and cock.
 - The design and construction of the water reticulation scheme will comply in every respect with the requirements and standard specifications of SA Water.

13 Common Effluent Drainage

- 13.1 Provide a complete common effluent scheme for the project to meet the requirements of the Environmental Health Branch of the Department of Health and Council including allotment connection points, gravity drains, pump station/s and rising main to treatment plant.
- 13.2 The design and construction of the common effluent drainage scheme will comply in every way with the requirements and standard specifications of both the Department of Health and Council.
- 13.3 Design drawings and specifications shall be prepared and submitted to Council for approval by a person or company that is experienced and competent in this field. The design shall relate to AHD and shall be to scale.
- 13.4 A connection point must be installed and provide an independent connection point for each proposed allotment. The design, construction, installation and interconnection of the connection points to Council’s existing scheme must be designed by a suitably qualified engineer and be approved by Council prior to installation.
- 13.5 The waste control system for an existing dwelling must be contained wholly within the proposed allotment and conform with the minimum boundary set back requirements as detailed in the SA Health Commissions Standard for the Construction, Installation and Operation of Septic Tank systems in South Australia.
- 13.6 Where proposed additions to Councils existing common effluent drainage scheme requires upgrades to the headworks, Council will require contributions by the developer of the land.
- 13.7 Where the Development cannot be connected by gravity mains to an existing CWMS scheme, the Developer shall provide a pump station in or adjacent to the development within an adequate easement and ceded to Council. Full detailed drawings and specifications of the pump station shall be provided to Council for assessment and written approval prior to commencement of work.
- 13.8 Any Development in the vicinity of a new or existing pump station shall provide sufficient clearance around the pump station for access by maintenance vehicles to the reasonable satisfaction of Council.

14 Environmental Considerations

- 14.1 The developer shall control dust and noise nuisance as the project proceeds. In the most adverse climatic conditions, operations shall be suspended if necessary to reduce nuisance and to avoid undesirable environmental impacts. All operations shall be conducted in the most efficient and reasonable manner.
- 14.2 All construction works must include suitable sedimentation and erosion protection planning measures and conform with the stormwater pollution prevention code of practice published by the Environment Protection Authority (Refer to Environment Management Plan).
- 14.3 If the land division involves a change of use to a residential use (i.e from horticulture or industrial use) then Council may require that a Preliminary Site Audit Report be prepared by a qualified Environmental Consultant to assess the suitability of the proposed allotments for the intended residential use.
- 14.4 If the proposed residential allotment is adjacent to a horticultural use or industrial use the Council may require a dedicated vegetation buffer to be retained/established on the proposed allotment to minimise the impacts from chemical spray drift. The buffer shall be at least 40metres wide comprising random planting of variety of trees and shrubs of different growth habits at spacing's of 4-5 metres for a minimum of 20 metres.
- 14.5 All earthworks associated with the development shall be stabilised in accordance with good engineering design and practices against erosion and failure. Earthworks must not encroach across neighbouring property or street boundaries without prior approval.

15 Contribution to Infrastructure

Where the proposed development requires upgrades of existing infrastructure, Council will require a contribution to such works.

Stormwater

A contribution will be required per allotment towards stormwater infrastructure as per Council's Fees and Charges Register. .

Common Effluent Drainage Scheme

A contribution will be required per allotment for connection to the CWMS as per Council's Schedule of Fees.

16 Essential Inspections during Construction

- 16.1 The developer/applicant is required to notify Council when the following stages of the engineering works have been achieved and will not proceed until such works have been inspected and approved (including appropriate testing if required). If the works continue without the necessary inspections Council may issue a stop work order:
 - a. Base preparation prior to placement of pavement in all roads and footpaths
 - b. Kerb preparation alignment including base compaction and alignment
 - c. Prior to backfilling trenches for underground stormwater and effluent drainage.
 - d. Prior to placing seal coat.
- 16.2 All site construction works shall be carried out under the supervision of a qualified Engineer in accordance with the approved plans and specifications. Council shall be notified 48 hours in

advance prior to the commencement of each stage outlined in A.1 above to enable Council to inspect the works. Council is to be notified in writing at the completion of each stage.

17 Completion of Works and Construction record

- 16.1 The Developer shall, within 14 days of practical completion, supply Council with a certified Engineer's Report (and as constructed drawings and specifications), containing complete construction records including:-
- compaction test reports for all bulk earthworks, service trench backfilling, subgrade, sub-base and base;
 - material quality test reports (base, sub-base, sand-backfill, bulk fill, etc);
 - water main pressure testing;
 - as constructed levels for sewers, common effluent drains, stormwater drains, water mains if applicable, subgrade, sub-base, top of kerb, etc. (both hard copy and electronic),
 - as constructed drawings of the CWMS in accordance with the *Guidelines, Design Criteria and Standards for Septic Tank Effluent Disposal Schemes*. The drawings shall be provided to Council in both hard copy and electronic format.
- 16.2 A final inspection must be completed to Council's satisfaction prior to issuing the Section 51 clearance.
- 16.3 All fees and bonds are to be paid prior to the issuing of the Section 51 clearance.
- 16.4 The applicant/developer shall lodge with Council a standard agreement to indemnify Council against any defects that occur in the engineering works within twelve (12) months of the date of practical completion. The date of practical completion will be the date that Council accepts the engineering works. The agreement will provide for the faults to be rectified by the applicant.
- 16.5 The developer/applicant shall provide Council with a security deposit equal to 5% of the project cost as determined by the project designer which will be refunded, returned or cancelled following completion of the defect liability periods and the rectification of any defects.

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