

Development – Provision of Infrastructure

Date Adopted:

5 September 2022

1. **STATEMENT**

This policy sets out the requirements of the Wattle Range Council ("Council") for the provision of infrastructure in privately funded development.

DEFINITIONS / ACRONYMNS 2.

- Act Planning, Development, and Infrastructure Act 2016 (SA)
- ARR Australian Rainfall and Runoff
- AS Australian Standards
- California Bearing Ratio CBR
- **CODE** Planning and Design Code
- **CWMS** Community Wastewater Management Scheme
- DIT Department of Infrastructure & Transport
- MDD Maximum Dry Density
- **NATA** National Association of Testing Authorities
- SPC State Planning Commission
- TGSI **Tactile Ground Surface Indicators**

PRINCIPLES 3.

3.1 Scope

This policy applies to all persons and / or organisations undertaking development for any purpose within the Wattle Range Council area.

The first part of the Policy (section 3.2) relates to development involving land division.

The second part of the Policy (section 3.3) relates to engineering requirements for common infrastructure items, such as road and pavement design, footpath design, drainage and reserves. While these items commonly arise for consideration in the context of land division, they may also arise in the context of other forms of development.

The third part of the Policy (section 3.4) relates to infrastructure agreements, which may arise in the cases of land division, other forms of development and for infrastructure upgrades outside of development.

3.2 Planning Requirements – Land division

For the purposes of planning consent, the minimum requirements for general land division applications are prescribed in Schedule 8 of the Planning, Development and Infrastructure (General) Regulations 2017 (Regulations).

In addition, under the Planning, Development and Infrastructure Act 2016 (Act), the relevant authority may request further information where reasonably required to assess the application.

For the purposes of land division consent, Part 9 of the Regulations prescribes additional matters which must be addressed by the applicant. Typically, those requirements relate to detailed design and engineering of roads, drains, water, sewerage and other service-related infrastructure.

In addition, where a development application proposes infrastructure over and above the matters specifically provided for in the Act and Regulations (e.g. street tree planting, or landscaping of a proposed open space reserve), the relevant authority may require further detail to assist with the assessment.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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A development application and supporting material should include (in addition to such information as is required or prescribed under the Act and Regulations) the following:

- a) Where new roads are to be created proposed road reserve and road pavements widths;
- b) Reference to and details of any proposed fencing, particularly fencing adjoining reserves/screening reserves;
- c) Street trees are encouraged in land divisions. They must be properly planned for and integrated as part of the overall land division proposal. A Plan of the land division showing proposed street trees should accompany the Development Application. The number, position and type of street trees shall be at the total discretion of Council and should be discussed with Council prior to submitting the proposal. The cost of purchasing any agreed to street trees shall be totally borne by the applicant/land developer; and
- d) Design site levels to be provided with the lodgement of the land division for formal approval.

3.3 Infrastructure

3.3.1 Street Names

Proposed street names associated with the overall land division (including estate name etc) must comply with the Naming of Roads Policy.

3.3.2 Land Management Agreements

Where appropriate and at the sole discretion of Council, Council may require or be prepared to accept Land Management Agreements, in accordance with the provisions of the *Planning*, *Development & Infrastructure Act 2016* (PDI Act) and Regulations.

All costs associated with the preparation of a Land Management Agreement (including any draft agreement) for any matter and its final lodgement and execution shall be totally borne by the applicant/land developer.

3.3.3 Reserves

Where a developer proposes, or is required, to vest an area of open space reserve in the Council, the Council must agree to accept the vesting of that land. In such circumstances, the applicant will be asked to provide details of the proposed reserve including its size, location, topography, constraints (if any) and what (if any) improvements are proposed to be made by the developer (e.g. plantings, landscaping, paths, playground equipment, shelter etc). There is no obligation on the Council to accept what the developer is proposing, and the Council may wish to negotiate, or to suggest alternatives before agreeing to accept.

Generally speaking, Council aims for public open space reserves to be contained in parcels of at least 1,000m² in area and on flat land. Such areas should link with other reserves where possible and practicable.

In instances when screening reserves are required, the Development Approval and / or Land Management Agreement, should include provision for the Developer to fence the screening reserve and develop the reserve in accordance with a plan approved by Council.

Council aims to plant out (with appropriate species) public open space reserves to the equivalent of approximately 10% of the reserve area, with the remainder of the area to be left grassed, to allow for low level active and passive recreation.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
Printed copies of this document are uncontrolled, refer to Council's Intranet to verify this is the current version.				

	POLICY 584	Version:	2
\approx	Development Provision of Infrastructure	Date Adopted:	5 September 2022
	Development – Provision of Infrastructure	Next Review Due:	September 2026

3.3.4 Clearance / Certificate of Approval

Where Council has agreed and has been engaged to undertake the physical construction works associated with the development (or part works), all money for the cost of the work shall be paid to Council prior to Council clearing the land division and advising the State Planning Commission (SPC) that it can issue the Certificate of Approval for the plan of division; and;

- a) Where a private contractor has been engaged to undertake the physical construction works, associated with the development (or part works), all of the work shall be completed to the satisfaction of Council, prior to Council clearing the land division and advising the SPC that it can issue the Certificate of Approval for the plan of division; or
- b) Where the work has not been fully completed, a bond equalling 150% of the higher of two highest quotations for any outstanding work/s shall be lodged with Council in the form of cash or an unconditional bank guarantee, together with an agreement (which sets out the construction stages and timing of each stage for the whole of the works) that will allow Council to draw upon deposited funds or bank guarantee to complete outstanding works. If works fall more than 30 days behind the submitted schedule, Council will have the sole discretion in the decision to complete the works, or to grant time extensions.

The form of bank guarantee is to be in the Council's sole discretion. Typically, the Council will not accept bank guarantees which are conditional or time-limited.

Upon receipt of the contract sum (or other amount as determined to be reasonable by Council) and the signed works schedule agreement, Council will clear the land and advise the SPC that it can issue the Certificate of Approval for the plan of division.

3.3.5 Depressions – Prone to Flooding

Where a land division includes land that is situated within a depression that may be prone to flooding, Council will endeavour to have the land transferred to Council for reserve purposes if appropriate.

The applicant, with the assistance of a professionally qualified and experienced Engineer, will assess any depression situated within a proposed land division, which may become flooded and develop a strategy, based on current engineering design principles, to eliminate or reduce the flooding or potential for flooding to any property. The applicant will be required to submit the strategy (which is to include engineering plans showing retention areas, drainage pits, outfall drains, contouring, building envelopes, finished floor levels, etc. if appropriate) to Council for approval and if approved, incorporate the same into the overall infrastructure plan for the land division.

Council may require a Land Management Agreement to ensure that the agreed approach to managing flood risk is enforceable.

Council will ensure, to the best of its resources and ability, that any flooding problem has been satisfactorily overcome prior to issuing any approval.

Where a flooding problem is unable to be satisfactorily overcome, the land division application may not warrant the grant of approval under the Act.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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3.3.6 Engineering Works

The applicant is required to submit for approval, design plans for all the engineering and infrastructure works associated with the land division and such plans are to include:

- a) Road Hierarchy, Design and Construction Standards;
- b) Kerb Profile;
- c) Drainage;
- d) Footpaths;
- e) Crossing Places;
- f) Retaining Walls; and
- g) Wastewater Infrastructure.

3.3.7 Road Hierarchy, Design and Construction Standards

Philosophy

The development road hierarchy is to reflect the different road functions, ranging from traffic distribution to shared traffic, pedestrian and recreation use. Road design, based on current engineering standards is to be consistent with the road hierarchy, land use and land forms.

Development should generally be undertaken in a manner consistent with general policies contained in the Planning and Design Code (the Code).

Unsealed roads will not be permitted within Township boundaries or Rural Living zones as defined in the Planning and Design Code (the Code).

Table 1 – Road Design Requirements							
Road Classification	Maximum 24- hour Traffic Volume	Number of allotments served	Design Speed (kmh)	Road Reserve Width (m)	Carriageway Width (m)	Minimum Pavement Thickness (mm)	
Access Place	100	<10	30	<12	4.5 – 7.0	300	
Access Street/road	250	<25	40	<14	4.5 - 8.0	300	
Collector Road	250 to 1000	<100	<50	14-16	6.0 - 8.0	350	
Distributor Road	>1000	>100	<50	16-18	8.0-10.0	350	
Industrial Street	-	-	50	18-20	10.0 – 13.0	450	

Table 1 is to be used in developing design criteria consistent with this philosophy.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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Technical requirements - Road Design:

- a) Centre line grades generally should be a maximum of 10%, absolute minimum of 0.4%. Steeper grades, over a short distance will be permitted subject to the prior approval of the Director Engineering Services (or nominee).
- b) Intersections in areas of steep grades should be avoided if possible. Intersection storage area for one vehicle is desirable. Intersection site distances should comply with current engineering standards, as should all the design work within the proposed development.
- c) In roads classified as collector roads or distributor roads, consideration should be given to the installation of accepted traffic management devices to control traffic flow and speed (e.g. roundabouts, slow points etc).
- d) Where a new road is to intersect with a distributor road or major arterial road or industrial road, developers are encouraged to be innovative in the design to ensure vehicles leaving the road do so at a very low speed for the safety of all road users. Such designs are to be in accordance with the Code of Practice for the Installation of Traffic Control Devices in South Australia. If the developer and the Director Engineering Services cannot agree on a suitable intersection treatment, then this may be referred to Council for a final and binding decision.
- e) Road cross fall should be in the range of 1 in 20 (5%) to 1 in 50 (2%) with the desirable being 1 in 33 (3%).
- f) One-way road cross fall may be utilised, where the land form is such that the road will tie into existing natural surface levels more readily than with the conventional and desired 2-way cross fall with centre crown.

3.3.8 Kerb Profile

Kerb and channel are required to both sides of all streets to provide a structural pavement edge, a drainage mechanism and to delineate vehicle movements. This does not apply to allotments within a Rural Living Zone or Rural Neighbourhood Zone.

Pavement edges may be provided as follows:

- a) Access place roll-over profile;
- b) All other roads roll-over profile and/or barrier profile see approved cross sections below (Diagram 1);
- c) Other kerb profiles may be used subject to the prior approval of the Director Engineering Services and the provision of kerb inverts at the location shown on the engineering drawings.

Kerb and channel is to be constructed using concrete of twenty eight (28) day strength of 25MPa (F'c=25MPa) and finished to a steel float finish.

Kerb transition between types shall be made over 3 metres.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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	POLICY 584	Version:	2
\sim	Development Provision of Infrastructure	Date Adopted:	5 September 2022
	Development – Provision of infrastructure	Next Review Due:	September 2026

Diagram 1 – Kerb Profiles



3.3.9 Road Pavement Requirements

Table 1 gives minimum pavement depths (as a general guide) but they may be increased depending on the quality and type of sub-grade material and also based on:

- a) The design of flexible pavements as per the Austroads Design Guide Part 2 Guide to Pavement Technology, Pavement Structural Design method using equivalent standard axle (ESA's) loadings based on 10 vehicles per day per allotment and a twenty (20) year design life; OR
- b) Road designs shall provide for concrete pavement based on the Concrete and Cement Associations design tables.

All flexible pavements shall be constructed of materials approved by the Director Engineering Services (or nominee).

- a) Where there is any doubt about the quality of proposed pavement materials, the Director Engineering Services (or nominee) may require laboratory testing of materials as follows:
 - Sieve Analysis (Gradings)
 - Atterberg Limits
- b) All testing to be carried out by a National Association of Testing Authorities (NATA) registered laboratory.
- c) Material, in the opinion of the Director Engineering Services (or nominee), not considered suitable for road pavement construction is not to be used.

Pavement density testing is required on all works prior to placement of seal coat, pavers, asphalt etc. Unless otherwise indicated by the Director Engineering Services (or nominee), the modified density test method shall be used.

The road pavement is to extend a minimum of 150mm behind the back of kerb and a minimum of 100mm under the base of kerb. Kerb base material is to be compacted to the same specifications as the road pavement.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
Printed copies of this document are uncontrolled, refer to Council's Intranet to verify this is the current version.				

Wattle Range COUNCIL Development – Provision of Infrastructure Date Adopted: 5 September 2022 Next Review Due: September 2026		POLICY 584	Version:	2
Wattle Range COUNCIL Development – Provision of Infrastructure Next Review Due: September 2026	\sim	Development – Provision of Infrastructure	Date Adopted:	5 September 2022
	Wattle Range		Next Review Due:	September 2026



TYPICAL KERB BEDDING

An Asphaltic concrete (hotmix) surface or two coat basalt aggregate seal is to be provided to all roadways to the satisfaction of the Director Engineering Services.

The design of the hotmix surface to be to the satisfaction of the Director Engineering Services (or nominee); and may include a requirement to use a mix design utilizing polymer modified binders.

3.3.10 Vehicle Turning Movements

All vehicle turning movements shall be deemed to comply with performance measures when compared with templates contained in the National Association of Australian State Road Authorities Design Vehicles and Turning Templates, as follows:

- a) For turning movements involving local arterial and distributor roads/industrial roads, the design 30 metre A-Double truck with radius 15.0 metres shall be used;
- b) For turning movements involving collector roads but not local arterial or distributor roads/industrial roads, the design rigid truck with radius 12.5 metres shall be used;
- c) For local arterial roads/industrial roads, the largest design vehicle likely to enter the land division shall dictate the road geometric design;
- d) For turning movements involving access streets or access places, but not involving local arterial or distributor roads/industrial roads or collector roads, the design car with radius 8.0 metres shall be used;
- e) For turning movements at the head of dead-ended streets, sufficient area shall be provided for the design car to make a complete turn and for garbage collection vehicles to undertake a 3-point turn. Pavement shapes may be one of, but not restricted to:

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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	POLICY 584	Version:	2
	Development Provision of Inforcement	Date Adopted:	5 September 2022
Wattle Range	Development – Provision of Infrastructure	Next Review Due:	September 2026

f) Access places and access streets should not exceed 150 metres in length. It is desirable streets interconnect at 90-degree junctions separated by at least fifty (50) metres. Cross roads and "Y" junctions are to be avoided, to reduce the likelihood of road-user accidents.

SQUARE

SYMMETRICAL

CENTRE

PARKING

3.3.11 Materials for Roadworks

General:

CIRCULAR

SYMMETRICAL

- a) All material shall be clean, sound, hard and durable. Foreign material shall not be present in sufficient quantity to produce adverse effect upon the usage or performance of the material.
- b) All material shall be produced from natural rock or sand deposits and shall be preapproved by the Director Engineering services (or nominee) prior to its use.
- c) The contractor shall be required to submit a reference sample of the proposed material and to undertake the following laboratory testing of the material:
 - Sieve analysis (gradings)

CIRCULAR

OFFSET

- Atterberg limits
- d) Pavement Material Specification (produced by Department of Infrastructure & Transport (DIT) and found at <u>https://www.dpti.sa.gov.au/</u>, shall be referred to and used as the general document to determine the acceptability of various classes of materials to be used in roadworks. The suitability of fill material shall be determined on a case by case basis by the Director Engineering Services (or nominee) but generally shall conform to the requirements as indicated in - Fill material.

Fill Material:

- a) Excavated material may be used as fill material provided it is considered acceptable by the Director Engineering Services (or nominee), but shall consist of the following properties:
 - particle size to not exceed 75mm;
 - be free of organic or other foreign matter;
 - under proof rolling, not show any signs of deformation, rutting, softness or yielding;
 - or be unstable;
 - be stable under various moisture contents with minimal swell or shrinkage.
- b) Proof rolling shall be used to determine the acceptability of a material placed as fill and shall be undertaken by using either a fully laden water cart or other heavy machine exceeding 10 tonne in mass.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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c) Fill material shall be placed in layers of between 150 - 200mm loose thickness.

Proof rolling is a hold point in roadwork construction and the contractor shall not proceed to the next stage until approval has been granted by the Director Engineering Services (or nominee).

Sub-grade:

The sub-grade shall be prepared to produce a tight dense surface and shall be compacted to not less than 95% of standard maximum dry density for all roadways up to and including residential class. For road classes considered above residential (i.e. industrial and or collector and distributor) the sub-grade shall be compacted to a level as determined by the Director Engineering Services (or nominee) and based on the materials sub-grade California Bearing Ratio (CBR) value and its resilient modulus. The method for determining the sub-grade materials CBR value shall be in accordance with the Austroads pavement design manual "A Guide to the Structural Design of Road Pavements."

The testing and verification of the sub-grade is a hold point in the road construction and the contractor shall not proceed to the next stage until approval has been granted by the Director Engineering Services (or nominee).

Sub-base:

- a) For roads up to and including residential class, the sub-base layer shall consist of either 40mm crushed limestone rubble as approved by the Director Engineering Services (or nominee), and in accordance with the material properties as indicated below, or PM2/40QG as specified in Appendix 1 - Pavement Material Specification. The minimum sub-base thickness shall be 150mm, and with no individual layer placed exceeding a compacted thickness of 150mm.
- b) A minimum compaction of 96% MDD is required and tested at a frequency of 1 test per 500m2 per sub-base layer.
- c) Material to be used is generally described as non-plastic cementitious coraline limestone rubble. It shall be graded and all material shall pass a 75mm screen, with the maximum dimensions being not more than 100mm. It shall be free of deleterious material. Surfaces containing oversize material may be rejected.
- d) Contractors are required to provide a NATA laboratory analysis of the material being used. The analysis is to include:
 - particle size distribution to AS1289 C.6.1 (sampled in accordance with AS1141.3);
 - consistency limits and moisture content to AS1289.

NOTE: If the above tests are superseded by revised Australian Standards, such new standards to be used and listed.

- e) During the works, any substantial variation in the material may be rejected. The Director Engineering Services (or nominee) will have sole discretion definition of substantial variation.
- f) The contractor shall supply two samples in suitable containers. Samples shall weigh at least eight (8) kilograms each and be lodged at the time of tender or at least two (2) weeks before work commences on site. The samples will be marked. One sample will be returned to the contractor and the other sample will be retained by Council.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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g) For road classes considered above residential (i.e. industrial and or arterial or distributor status) the sub-base material and layer thickness and compaction specification shall be determined by a proper road pavement design process as referred to in the Austroads pavement design manual "A Guide to the Structural Design of Road Pavements" or approved equivalent design process, and shall consider the design traffic loading for the road class.

The testing and verification of the sub-base is a hold point in the road construction and the contractor shall not proceed to the next stage until approval has been granted by the Director Engineering Services (or nominee).

Base:

- a) For roads up to and including residential class, the base layer shall consist of a 100mm thick compacted layer of PM2/20QG.
- b) A minimum compaction of 96% MDD is required for all sample points, tested at a frequency of 1 test per 250m2 per layer.
- c) For road classes considered above residential (i.e. industrial and or arterial or distributor status) the base material and layer thickness and compaction specification shall be determined by a proper road pavement design process as referred to in the Austroads pavement design manual "A Guide to the Structural Design of Road Pavements" or approved equivalent design process, and shall consider the design traffic loading for the road class.

The testing and verification of the base is a hold point in the road construction and the contractor shall not proceed to the next stage until approval has been granted by the Director Engineering Services (or nominee).

Construction Tolerances:

a) Tolerances for the construction of various pavement courses shall comply with Table 2.

Course	Design Level Tolerance	Layer Thickness Tolerance	Shape Tolerance
Sub-grade	+ 30mm	+ 30mm	30mm in 3 metres
	- 30mm	- 30mm	maximum
Sub-base	+ 20mm	+ 20mm	25mm in 3 metres
	- 20mm	- 20mm	maximum
Base	+ 10mm	+ 15mm	15mm in 3 metres
	- 10mm	- 15mm	Maximum
Overall	+ 20mm - 10mm	+ 20mm	

Table 2: Construction Tolerances

Final Trim:

Following placement and compaction of base course material, the whole of the surface of base course shall be final graded and trimmed to the specified tolerances, so as to leave a hard, dense, tightly packed surface, free of defects. Road surfacing shall not be commenced until the profile, surface compaction, quality and finish of the base course have been inspected and approved by the Director Engineering Services (or nominee).

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
Printed copies of this document are uncontrolled, refer to Council's Intranet to verify this is the current version.				

	POLICY 584	Version:	2
\sim	Nattle Range COUNCIL Development – Provision of Infrastructure	Date Adopted:	5 September 2022
Wattle Range		Next Review Due:	September 2026

This is a hold point in the road construction and the contractor shall not proceed to the next stage until approval has been granted by the Director Engineering Services (or nominee).

3.3.12 Drainage

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

Design shall be in accordance with procedures in the current edition of "Australian Rainfall and Runoff (ARR)" or other edition as approved by the Director Engineering Services (or nominee) and the Environment Protection Authority "Guidelines for stormwater management in Mount Gambier" in so far as this document is applicable to the location and the design. These documents are to be used to determine the appropriate sizing on the drainage system for both minor and major storm events.

Drainage computations must be prepared by a qualified and experienced Engineer and submitted with the detailed engineering drawings for the proposed land division.

All stormwater runoff attributable to the proposed land division is to be adequately disposed of within the development area, or as otherwise approved by the Director Engineering Services (or nominee).

As a general rule, side entry pits should be spaced no further than 100 metres apart; closer spacing if required, may be acceptable depending on conditions and detailed design.

Any drainage bores and associated settlement tanks shall be constructed to meet the requirements of Council and the Limestone Coast Landscape Board. Drainage capacity of any bore is to exceed the calculated drainage discharge for the designated stormwater system; and the bore is to be proved to the satisfaction of the Director Engineering Services (or nominee).

Storage basins capable of holding the run-off of the designated rainfall storm shall be provided at suitable locations if drainage bores prove to be unacceptable or outfall drainage has limited capacity.

Spoon drains, when required at junctions, shall be constructed to maintain the pavement width of the through street and to ensure continuity of flow of all stormwater. A spoon drain should be constructed across a through street. Generally, spoon drains are not to be used unless approved by the Director Engineering Services (or nominee).

All stormwater storage basins are to be provided with appropriate warning signs and fencing where required (in cases where side slopes exceed a slope of 1 vertical to 5 horizontal) to the satisfaction of the Director Engineering Services (or nominee).

Council may require a separate drainage reserve in land divisions of adequate area to provide stormwater treatment and retention for a one (1) in five (5) year storm event in residential areas and a one in ten (10) year storm event in other areas. Any requirements above these limits may be incorporated into the public open space calculation.

3.3.13 Footpaths

Paved footpaths are to be provided where shared use of road pavement is not appropriate; and where potential volumes of pedestrians warrant formal construction to provide safe and adequate all-weather links.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
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Footpaths shall be provided as follows:

- a) Industrial streets, local streets and access places carrying less than 400 vehicles per day shall have no separate constructed pedestrian path;
- b) Streets carrying between 400 and 2000 vehicles per day shall have, on one side of the road pavement, a separate pedestrian path of concrete or blockwork of 1.5 metres width to the approved construction standard;
- c) Collector roads, distributor roads and arterial roads and industrial roads with greater than 2,000 vehicles per day, shall have on each side of the road pavement, a separate pedestrian path of concrete or blockwork of 1.5 metres width to an approved construction standard;
- d) Concrete footpaths shall be constructed to a minimum thickness of 80mm with regular control joints at 1.2 metres to 1.5 metre centres and 10mm expansion joints at 6.0 metre centres and with sections of paths extending through crossovers to be suitably steel reinforced to take the required traffic loading;
- e) The footpaths shall be located on the relevant road reserves in accordance with the current edition of 'Code of Practice for Coordination of Work and Allocation of Space on Roads and Footpaths (South Australia)';
- f) All concrete footpaths are to have a broom finish;
- g) Kerb Ramps shall be provided at every corner radius where footpaths are proposed. The location is to be approved by the Director Engineering Services (or nominee). Kerb ramps shall comply with relevant AS1428 standards.

Warning Tactile Ground Surface Indicators (TGSI) shall be provided within kerb ramps. The ramps shall have a maximum grade of 1:8, as allowed in AS1428.4.

The full width of footpaths (nature strips with or without paved path) shall be graded to slope toward the adjoining top of kerb at a rate of 0.040 metre (fall) per metre (width).

Details of blockwork and concrete footpaths are to be included with the detailed engineering drawings as submitted as part of the land division application.

The land owner/developer should have regard for the establishment of bike lane/bike paths within the road reserve (either on-road or off-road).

3.3.14 Crossing Places (Driveway Crossovers)

It is Council's expectations that one (1) paved crossover will be provided to each new allotment created by the land division. Crossing places must avoid road/drainage infrastructure, particularly stormwater pits, service pits etc.

Crossing places shall be constructed to the following specifications and require the approval of the Director of Engineering Services or delegate:

- a) Finished grades shall be consistent with the adjoining roadway and footpaths (levels at the property boundaries shall be designated by the Director Engineering Services (or nominee);
- b) Materials shall be either reinforced concrete with a minimum thickness of 100mm for residential allotments (125mm to 150mm for industrial allotments); or

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GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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c) Blockwork of suitable strength and design for the expected vehicle movements (full design details must be submitted with engineering drawings).

Crossing place relocation due to inappropriate siting for a specific building design/development shall be the responsibility of the current owner of the allotment.

3.3.15 Retaining Walls

Where retaining walls are required to achieve design site levels, the developer must submit an application for building consent prior to the creation of allotment titles. Planning and building consent may be submitted in a single application. It will be a condition of planning approval that the retaining walls are constructed prior to release of titles.

3.3.16 Fencing Standards

Where fencing is proposed, minimum standards for fencing shall be 1.5m high zincalume sheet with treated timber (or steel) posts and rails within township area or post and wire fencing in rural areas. Subject to agreement, Council may allow for fencing up to 1.8m and, in township areas, of timber or stone construction. It should be noted Council will only contribute to the cost of fencing where obligated to do so under the *Fences Act 1975* (which is likely to be only in very rare circumstances), in which case contributions will be based on minimum standards.

3.3.17 Provision of Wastewater Services to New Allotments

All allotments in a residential zone must be provided with a connection to the relevant wastewater system (either Council-owned or SA Water), aerobic wastewater and other alternatives systems will only be approved where a scheme does not exist or in exceptional circumstances.

It is the responsibility of the developer / applicant to provide evidence of the exceptional circumstances and cost alone is not considered to be sufficient grounds.

3.3.18 SA Water Sewer Scheme

SA Water conditions must be complied with to connect newly created allotments, to its sewer scheme.

3.3.19 Council-Owned Community Wastewater Management Scheme

The developer / applicant shall engage a suitably qualified wastewater Engineer to provide Council with a full design and specifications for the CWMS and details of the connection point to the existing CWMS. All design specifications must meet the requirements of Council. A concrete inspection cover is to be installed over the connection point at the time of the CWMS construction.

Should alterations be required to the existing scheme to allow access to the new development, all associated costs shall be borne by the developer.

Where necessary, the design may include a pressurised system or additional pump stations to accommodate flows outside the capacity of the existing wastewater control system.

Any easement to be created as part of the design and construction of the CWMS shall be 3 metres in width and made out in favour of the Wattle Range Council.

Any reserves of dimensions approved by Council must be formed over any pump station site located on private property. Such reserves shall be under the control of Council.

The developer / applicant shall pay the fee prescribed in Council's Fees and Charges Schedule to the Council per each newly created allotment created by the land division that requires access to the CWMS.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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Each connection point and associated infrastructure must be installed or bonded prior to issuing clearance.

Council will accept ownership of the infrastructure only from outside the property boundary. This includes gravity mains, pump stations and rising mains, but not private pump stations within a property or sewer boundary kits, required due to a lack of fall for gravity connections.

Council will require at least 24-hour notice, for any works of connecting to the CWMS, to allow a site inspection to occur, prior to backfilling pipe work.

The Defect Liability provisions below will also apply to CWMS infrastructure.

3.3.20 Provision of Drinking Water to Newly Created Allotments

All newly created allotments in a residential area must be serviced by potable mains water where it is available in the town. Bore water will not be approved for drinking water in townships where mains water is available.

3.3.21 Street Lights and Street Signs

Street lighting is to be designed and installed in accordance with the current Australian Standard and have regard to energy efficient lighting systems, with all costs associated with this requirement being borne by the developer.

Street signs shall be supplied (from an approved supplier) and erected to indicate the appropriate street names to the reasonable satisfaction of the Director Engineering Services (or nominee).

3.3.22 Defects Liability Period

Applicants are required to lodge with Council, (unless Council is the construction contractor) a standard agreement to indemnify Council against any defects that occur in any infrastructure (including but not limited to road and drainage infrastructure, reserves, and retention basins, etc) for a period of twelve (12) months from the date of practical completion. The date of practical completion will be the date that Council accepts the engineering works.

The standard agreement will stipulate that any/all infrastructure faults are to be rectified by the applicant or to reimburse Council the full cost of all necessary works.

Council will notify the applicant in writing of practical completion in response to a written request by the applicant.

The applicant (or contract representative) is required to notify Council in accordance with Table 3 below when each stage of the engineering works have been met. Works are not to proceed until inspection is completed and works have been approved (including appropriate testing if required) by Council.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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Next Review Due: September 2026

Table 3: Hold Points	
The following are the hold points for the process	of civil construction in concluding road works
for residential class	
Stage	Testing
Roadworks	
1. Cut/Fill	Proof Rolling
2. Sub-Grade Placement	95% SSD
	1 test per 500m ²
3. Sub-Base Placement	96% MDD
	1 test per 500m ²
4. Based Placement	965% MDD
	1 test per 500m ²
5. Final Trim prior to placement of	Visual inspection plus reference to table
seal/asphalt	2 construction tolerance
6. Concrete Kerb – on completion of crush	Visual Inspection
rock base and prior to placement of kerb	
7. Stormwater and Council CWMS	Visual Inspection
8. Pipe Laying prior to backfilling of trenches	Visual Inspection

3.3.23 Provision of "As Constructed" Document / Plans

Prior to Council accepting the engineering works, the applicant is required to provide "asconstructed" documents/plans for all works. Documents must be provided in a suitable format approved by Council and the applicant should contact Council prior to preparation.

3.3.24 Provision of Power to Newly Created Allotments

Where any new allotment is created the provision of electricity shall only be permitted to be installed as an above ground service (i.e. using stobie poles), in areas where electricity is currently provided above ground.

In areas where there is currently no above ground electricity installed and any new allotment is created Council will require that the provision of electricity shall be provided via underground cables.

3.4 Infrastructure Agreement

Not all proposed development will be serviced by adequate external infrastructure. For example, it is not unusual for there to be a lack of appropriate drainage, footpaths, public lighting or even road access. In every case, there will need to be an assessment of whether existing external infrastructure is reasonably adequate to support the expected demands of the proposed development.

Where existing infrastructure is lacking, the developer may be asked to contribute towards the cost of any upgrade or augmentation that is reasonably required on account of the proposed development. Further, the applicant may be asked to agree to putting assessment of the development application on hold until the relevant issues have been resolved.

Ordinarily, where external infrastructure upgrades are triggered by a proposed development, it will be necessary to tie the relevant requirements to the development approval. This is to ensure that the relevant infrastructure requirements travel with the development approval. There are various ways in which this can occur.

In some instances, it may be possible to impose a condition of planning consent requiring that the developer makes a financial contribution. Typically, this will be where the nature of the required infrastructure is clear, and the cost is ascertainable up front.

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly
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	POLICY 584	Version:	2
\approx		Date Adopted:	5 September 2022
Wattle Range	Development – Provision of Infrastructure	Next Review Due:	September 2026

In other cases (i.e. where it is not possible to impose a condition of planning consent), there may be a need for the developer to enter into an Infrastructure Agreement with the Council prior to planning consent being granted.

An Infrastructure Agreement is a 'side' contract with the Council (or some other public authority or service utility) which does not automatically form part of the approval. As such, there is also a need to tie the Infrastructure Agreement to the development approval.

In some instances (i.e. where the only purpose of the Infrastructure Agreement is to secure payment of a financial contribution of an amount yet to be determined), it may be possible to tie the Infrastructure Agreement to the planning approval via a condition of planning consent. In other instances (i.e. where the infrastructure is to be delivered by the developer) it may be necessary to tie the Infrastructure Agreement to the land via a Land Management Agreement entered into under the Act.

Generally speaking, the total cost of the required upgrade or augmentation to external infrastructure should be borne by the developer. In some instances, this may be shared contribution between developers or other landowners who may stand to benefit from the particular infrastructure. An example of this is drainage which may service a number of allotments outside of the land division or a road that might provide access to other properties. In this instance, a joint agreement with shared cost may be agreed.

A template example for an Infrastructure Agreement is available on request and should be used as a basis of preparing the agreement.

Because of the various pathways that may be invoked, applicants are encouraged to contact the Council's planning or engineering staff as early as possible (and ideally prior to lodgement), to discuss the specific requirements of the case.

If appropriate arrangements to secure the delivery of external infrastructure cannot be agreed as between the Council and the applicant (and other parties if relevant), the development application may be refused (subject to due consideration against relevant provisions of the Code and the legislation).

File Ref:	Classification:	Department:	Position Responsible:	Review Frequency:			
GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly			
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Development – Provision of Infrastructure

4. REVIEW

This Policy must be reviewed at least every four years or updated when necessary.

5. AVAILABILITY

This Policy is available without charge on the Council Website: www.wattlerange.sa.gov.au.

A copy of the Policy may be purchased from the Principal Council Office upon payment of a prescribed fee in accordance with Council's Schedule of Fees and Charges.

6. REFERENCES & FURTHER READING

References	 Australian Standards Code of Practice for the Installation of Traffic Control Devices in South Australia Austroads Design Guide Part 2 – Guide to Pavement Technology, Pavement Structural Design National Association of Australian State Road Authorities Design Vehicles and Turning Templates
Relevant Legislation:	 Planning, Development and Infrastructure Act 2016 (PDI Act) Planning, Development and Infrastructure (General) Regulations 2017
Relevant Policies / Procedures / Guidelines	 Naming of Roads Policy Fees & Charges Schedule Community Land Management Plans

7. ADOPTION & AMENDMENT HISTORY

The table below sets out the adoption, review, and amendment history of the policy.

Version No:	Issue Date:	Authorised by:	Description of Change:	Minutes Reference:
1	10/11/2020	Council	New Policy: Land Division – Provision of Infrastructure	Item 15.4.1 Folio 9062
2	5/9/2022	Council	Renamed and revised to include expansion of scope from land division to all development, fencing standards and Infrastructure Agreement	Item 9.4.2 Folio 10345-10346

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GF/9.63.1/3	Public	Engineering Services	Director Engineering Services	4 Yearly			
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