



POLICY NO:-
CP060 – STORM WATER DISCHARGE FROM BUILDINGS

GOVERNANCE INFORMATION			
Procedure Link:	NA	Administrative Policy Link:	NA

ADMINISTRATION INFORMATION						
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1. RESPONSIBLE DIRECTORATE

Engineering & Development Services

2. PURPOSE OR OBJECTIVE

To ensure that stormwater on private property is adequately planned and controlled so it does not adversely impact on the Shire's stormwater system and public land.

3. POLICY

The requirements for stormwater drainage of private land vary depending on the nature of the development.

Residential Development

Soak wells or other means of collecting, storing and soaking of stormwater shall be provided on the property and maintained in all instances where the aggregate impervious area including roofs, carparks, driveways, carports and patios exceeds 250 square metres or where the lot size is less than 400m².

When soak wells or another means of collecting, storing and soaking of stormwater is required, it shall be provided at the rate of 1.0 cubic metre of storage for each 65 square metres of impervious area.

An additional 1m³ per 65m² of impervious area shall be provided in areas of clayey or silty soils or in high groundwater table areas. The collection points and soak wells shall be located so as to minimise the amount of run-off entering the road reserve.

On "A" Class lots and where an independent system is suitable within the property, there is no requirement to seek approval if the system is installed in accordance with the requirements of this policy.

Where an independent system is not suitable within the property and connection to the local stormwater network is required, the proponent is required to make an application to the Shire for the connection of the proposed system.

Group Dwellings, Strata Lots, Commercial and Industrial Development

Stormwater run-off from all roofs, carparks, driveways and other impervious areas shall be collected and disposed of into suitably sized and located soak wells, or other means of storing and soaking of stormwater on site. Storage shall be provided at the rate of 1.0 cubic metres of storage for each 65 square metres of impervious area.

An additional 1m³ per 65m² of impervious area shall be provided in areas of clayey or silty soils or in high groundwater table areas.

Council requires the submission of stormwater drainage plans for all developments , together with the building licence application.

The applicant shall provide a stormwater drainage plan showing the following information:

- Table showing volume calculations, including lot area, impermeable area, minimum soak well volume required and additional volume required for high ground water or non-sandy soils.
- Plan of the site showing location, size and levels of soak wells, pipes and other drainage features.
- Where additional volume is required for high groundwater or non-sandy sites, calculations showing the additional storage volume and any levels necessary to ensure this is achieved. A sample stormwater drainage plan is attached at Appendix C.
- Details of any proposed connections to Council's drainage system.
- Construction details for soak wells, other drainage structures and any proposed connections to Council's drainage system.
- Rainfall run-off from the development of private property into Council's drainage system shall generally be retained on site.

General

Soak wells shall be provided in accordance with Appendix A – Standard Requirements for Soak wells.

An overflow provision into Council's system for any further stormwater run-off may be provided at the developer's cost subject to approval of the Director Engineering Services.

Connections to the Shire's stormwater drainage system shall be in accordance with the requirements of Appendix B – Standard requirements for Connection to the Shire's Stormwater Drainage System.

If in the opinion of the Director Engineering Services, the soak wells have become inoperative, the property owner is to undertake such maintenance as directed.

Large Developments

Nothing in this policy shall prevent an applicant carrying out a detailed drainage plan that demonstrates drainage of the development by alternative means. Preparation of a drainage plan shall be in accordance with a brief approved by the Director Engineering Services and shall be carried out by a professional engineer experienced in drainage design. Recommendations of the drainage plan will be subject to acceptance by the Director Engineering Services.

CP060 - APPENDIX A – STANDARD REQUIREMENTS FOR SOAK WELLS

The following outlines minimum requirements for soak wells for new developments. The purpose of these requirements is to prevent increased stormwater run-off entering the Shire's drainage system causing overloading and flooding.

1. Soak wells shall be provided for all residential development where the aggregate impervious area including roofs, driveways, carports, patios, paved areas and carparks is in excess of 250m² or where the lot size is less than 400m² and for all commercial and industrial development where direct connection to the Shire's drainage system is not available.
2. Storage shall be provided at a rate of 1m³ of storage for every 65m² of impervious area in areas of sandy soil without high groundwater. In case of residential development soak wells shall be provided where the impervious area is in excess of 250m².
3. Storage shall be provided at a rate of 2m³ of storage for every 65m² of impervious area where there is high groundwater or soils are not free draining.
4. The first 1m³ per 65m² of storage to be provided in a soak well or approved equivalent. The second 1m³ per 65m² may be provided in soak wells or above ground in basins, swales or within car parking areas.
5. Collection points shall be located to minimise runoff entering the road reserve.
6. Drainage plans shall be submitted to the Council's Building Department including:
 - 6.1. Existing ground levels or contours.
 - 6.2. Proposed location and levels of roofs, driveways, parking and other paved or sealed areas.
 - 6.3. Details of soak wells including depth, diameter, location and construction detail.
 - 6.4. Location, size and level of pipes.
 - 6.5. Detail of any proposed connections to the Shire's drainage system including size, level and location.

(Note: For requirements for connection to the Shire's drainage system, refer "Standard Requirements for Connection to the Shire's Stormwater Drainage System")
 - 6.6. Additional information for high groundwater sites (typically sites where winter ground water table is within 0.5m below base of soak wells)
Assumed winter groundwater level, location of subsoil drainage and levels of crossovers, carparks and building floor levels for areas utilised for above ground storage for the second 1m³/65m².
(Note: Standard Drawing MISC-02-01 shows a typical drainage plan.)
7. The volumes and areas served by standard sized soak wells is summarised in the following table:

Soak well size Diameter (m) x depth (m)	Storage Volume	Area served - 2m ³ per 65m ²	Area served – sandy areas 1m ³ per 65m ²
Ø 1.8m x 1.8m	4.6m ³	150-m ²	300 m ²
Ø 1.8m x 1.2m	3.0m ³	100 m ²	200 m ²
Ø 1.5m x 1.2m	2.1 m ³	70 m ²	140 m ²
Ø 1.2m x 1.2m	1.4 m ³	45 m ²	90 m ²
Ø 1.2m x 0.9m	1.0 m ³	35 m ²	70 m ²
Ø 0.9 x 0.6m	0.4 m ³	12 m ²	25 m ²

8. Provisions for overflow into the Shire's drainage system is subject to the approval of the Director Engineering Services (refer to Standard Requirements for Connection to the Shire's Stormwater System)
9. The property owner is responsible for the maintenance of soak wells on private property. If in the opinion of the Director Engineering Services soak wells have become inoperative, the property owner shall undertake any necessary maintenance.

CP060 - APPENDIX B - STANDARD REQUIREMENTS FOR CONNECTION TO THE SHIRE'S STORMWATER DRAINAGE SYSTEM

1. Connections to the Shire's stormwater system shall be approved in writing.
2. Overflow connections from soak wells shall be made from the final soak well of the private drainage system. A trapped manhole shall be placed at the boundary of the lot prior to entering the Shire's system.
3. All connections shall have a trapped manhole placed at the boundary of the lot prior to entering the Shire's system. Connections shall be fitted with a non-return valve to prevent surcharging from the Shire's stormwater system.
4. All connections shall have a provision for an overflow. Overflows shall be located to allow stormwater to flow overland to the street without entering buildings.
5. Connections shall only be made to manholes. No direct connections to pipes shall be permitted. Where a new manhole is required, it shall be approved by the Director Engineering Services and constructed at the applicants cost.
6. Connections may be constructed by the applicant or the by the Shire at the applicant's cost. Contact for construction of connections is the Engineering Department.
7. Where the applicant makes connections, the applicant is required to have a road-opening permit prior to commencing work and to comply with requirements for works in road reserves. Include traffic management plan.
8. Connections shall be smoothly and neatly grouted.
9. Maintenance of connections is the responsibility of the applicant. Council accepts no responsibility for any maintenance costs or damages arising through lack of maintenance of the connection, backflow prevention or overflow provisions.
10. The Shire requires pollution control facilities to be installed to remove sediments, rubbish and oils prior to connecting to the Shire's stormwater system. Pollution control is required on connections from carparks and paved areas in commercial, industrial, light industry and mixed business areas. Pollution control facilities and devices shall be selected and designed to suit the site and shall be approved by the Shire Engineer.
11. All Subdivision of lot classification less than an "A" must be provided with a drainage connection point for each lot.
12. The drainage connection shall be 90mm overflow.

CP060 - APPENDIX C - SAMPLE STORMWATER DRAINAGE PLAN

