Draft Gawler & Surrounds Stormwater Management Plan

Community Consultation

The Town of Gawler, Light Regional Council and the Barossa Council and the Stormwater Management Authority have jointly prepared a draft Stormwater Management Plan which covers a 73km² catchment spread across pars of all three Council areas. This draft Stormwater Management Plan is now released for community feedback.

What is a Stormwater Management Plan?

A Stormwater Management Plan is a strategic planning document which aims to address existing stormwater problems with a catchment and identify opportunities for providing a range of benefits across various criteria. These criteria include consideration of flood risk, cost of flood damage, protection of water quality and opportunities for stormwater re-use.

A Stormwater Management Plan includes a series of strategies, actions and priorities to guide future decision making of the Councils around stormwater management and infrastructure investment. Specific actions might include:

- flood mitigation initiatives
- gross pollutant traps
- water sensitive urban design
- water re-use / retention and detention
- environmental flows
- education.

Why prepare a Stormwater Management Plan?

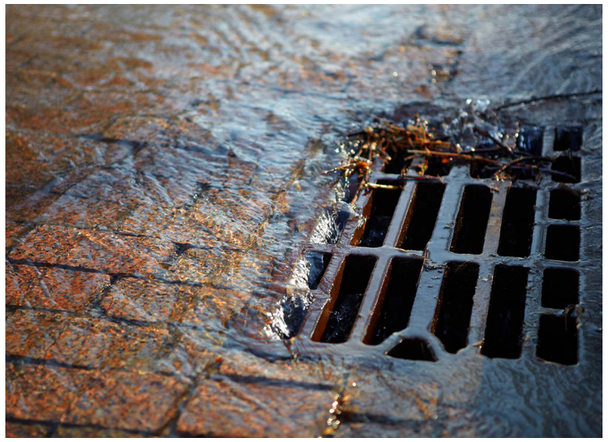
Councils are required to prepare Stormwater Management Plans by the Local Government Act, 1999 in accordance with the Stormwater Management Authority Guidelines.

A Stormwater Management Plan provides a clear understanding of the current issues and will enable the Councils to adopt a consistent, sustainable and environmentally aware and integrated approach to stormwater management. This will provide a framework to address priority drainage and flooding issues.

Preparing a Stormwater Management Plan will enable the Councils to seek State Government funding for new projects, as well as plan and prioritise their own budgets.

How was the Stormwater Management Plan prepared?

The plan was prepared with feedback and comments from a number of key stakeholders throughout the catchment, including government agencies, emergency service providers, local elected members and community representatives. The plan's priorities and focus were derived from these discussions and workshops.



In order to recommend strategies and actions, an assessment of the current catchment's characteristics is needed. This included identifying all existing stormwater infrastructure in place (drains, pits etc), as well as understanding current flows and capacities of the catchment and infrastructure.

Future changes to stormwater flows were then modeled having regard to:

- future developments that will occur within and surrounding the catchment (and their ability to increase stormwater run-off)
- impacts of climate change on catchment condition and rainfall event frequency and intensity.

A series of maps were prepared for a range of different flooding events to identify where flood risks were at their greatest, both in terms of their extent and likely costs.

A series of mitigation measures and their priorities were then recommended having regard to their performance against a series of criteria that included:

- reduction in properties affected by flooding
- reduction in costs associated from flooding
- cost of implementing the measure
- potential for improving the environment
- potential for contributing to environmental flows
- potential for broader community benefits (such as education and amenity benefits).

Other high priority Strategies

The following non-physical strategies have been recommended which will have significant benefit to the management of stormwater and flood mitigation.

- Utilisation of flood mapping for new development through Council GIS systems to inform decisions around new development. This will ensure sufficient building floor levels where appropriate, and the retention of overland flow paths.
- Update floodplain mapping to accommodate for climate change, providing greater clarity on its impacts and the implications for flood prone land extents.

Other medium priority strategies

- Subsiding large rain tanks to encourage the installation of rainwater tanks to help reduce water run-off from individual sites. This will aid in reducing downstream flooding, as well as encourage use of stormwater as a resource.
- Installation of rain gardens within road verges which provide drainage and capture of stormwater, along with its treatment before disposal into an underground stormwater pipe. Rain gardens are recommended for installation in certain locations and will also improve amenity.
- Water Sensitive Urban Design (WSUD) in backyards through promotion and education of how stormwater can be captured to be used and improved before being discharged from sites.
- Riparian habitat restoration and erosion management (ie creek lines) through weed removal and introduction of native species. This will provide habitat and reduce future erosion potential.
- CCTV inspection and database program for Council stormwater assets so better planning of infrastructure upgrades can occur and be planned (and budgeted) before their failure.

Implementation

The Plan suggests an implementation program comprising a 10 year capital works program due to the significant potential costs of the measures proposed. A total expenditure of $1 million per year is suggested, with assumed funding of 40% from the Stormwater Management Authority.

All Councils will be responsible for the implementation of the study area wide, however individual capital works projects will rest with the Council within which they located.

Want to find out more?

If you want to know more, you can:

- download a copy of the Plan at **www.gawler.sa.gov.au/your-voice/15975/gawler-and-surrounds-stormwater-management-plan**
- attend an **'Open House' drop-in information session**:

  Wednesday 4 September 2019
  7pm to 9pm
  Hewett Community Centre
  28 Kingfisher Drive, Hewett.

Come along and speak to one of the consultant team or Council staff about the Plan and what is proposed.

Can't make the open house session and still want to know more? Contact Council on 8522 9211 to speak to the project manager.

How to have your say

Community consultation is being undertaken from 28 August 2019 through to 27 September 2019.

Public comments are welcome before the closing date of consultation through submitting a completed feedback form to the Town of Gawler via any of the following methods.

- **Email** to stormwater@gawler.sa.gov.au
- **Hard copy** to the Customer Services Counter at the Gawler Administration Centre, 43 High Street, Gawler East 5118
- **Posted** to Team Leader Asset Planning, Town of Gawler, PO Box 130, Gawler SA 5118

What happens next?

Following the closure of the community consultation period on 27 September 2019, the Councils will review all community feedback and make any necessary changes as required.

As outlined in Phase 4 of the Community Enagement Plan Council will also be undertaking a Key Stakeholder Workshop and Council Member Workshop in the near future to seek further feedback on the draft Plan.

A summary report of the engagement undertaken will then be prepared and presented to all partner Councils for consideration along with an updated draft Plan.

Government of South Australia
Stormwater Management Authority

Natural Resources
Adelaide and Mt Lofty Ranges

Light Regional Council

The Barossa Council

Gawler

What did the Plan find?

The modelling identified key flood prone areas within the catchment across the different flood event intensities. Six key flood prone areas emerged being:

- Greening Drive in Evanston South - localised low spot that overflows from the creek banks running through Trinity College.
- Railway Crescent / Przibilla Drive, Evanston - trapped low spot due to a large volumes from the catchment and insufficient capacity of the Gawler Bypass drainage system underpass.
- First Street at Gawler South - trapped low spot due to high flows from the urbanised catchment and limited capacity of the culverts under the racecourse.
- Jarvis Street and Brooks Avenue in Willaston - limited capacity of existing drainage network, including existing detention basin in Brooks Avenue.
- Jane Street and Davies Street in Willaston - as a result of a lack of underground drainage in upper catchment.
- Gawler Belt - large natural depression that acts as a basin for surrounding catchments with a lack of any formal drainage. Despite large areas of flood prone land, few houses affected.

What is the Plan proposing?

The Plan considers 14 specific infrastructure improvements which are aimed at maximising flood mitigation benefits for the costs of the works. It also recommends other non-physical strategies to contribute to improving water quality, better managing risk and educating the public about stormwater management.

The implementation of all physical infrastructure recommendations would result in a 23% reduction in average annual damages as a result of flooding (equating to $374,000).

The high and medium priority improvements are identified below and their locations are shown on the map. Priorities were allocated based on their collective benefit against a range or criteria relative to their cost of implementation.

High Priority Physical Infrastructure

1 Flood Control Basin and Wetland - Gawler Racecourse
- 35,000m³ basin combined with 2.3 hectare wetland centrally located within racecourse
- Adelaide Road and Main North Road drainage systems diverted directly into basin
- results in significant flood reduction to residential areas east of the basin
- provides for improvements in water quality through wetland
- opportunity for habitat creation and improved amenity

2 Tingara Road Flood Control Basin
- 8m high embankment located at the junction of two tributaries at the top end of Tingara Road
- reduces peak flows down catchment
- potential water quality improvement
- low capital cost

4 Trinity College Upgrade
- upgrading cuvert capacity and widening section of the watercourse channel running through the ovals
- increases capacity to convey water under the Gawler Bypass Road
- low capital cost
- likely to result in loss of mature trees

12 Evanston Oval Dual/Parallel Pipe
- installation of duplicate pipe under oval between existing channel and the pipe network under the rail line
- increases capacity to convey water under the Gawler Bypass Road
- low capital cost

Medium Priority Physical Infrastructure

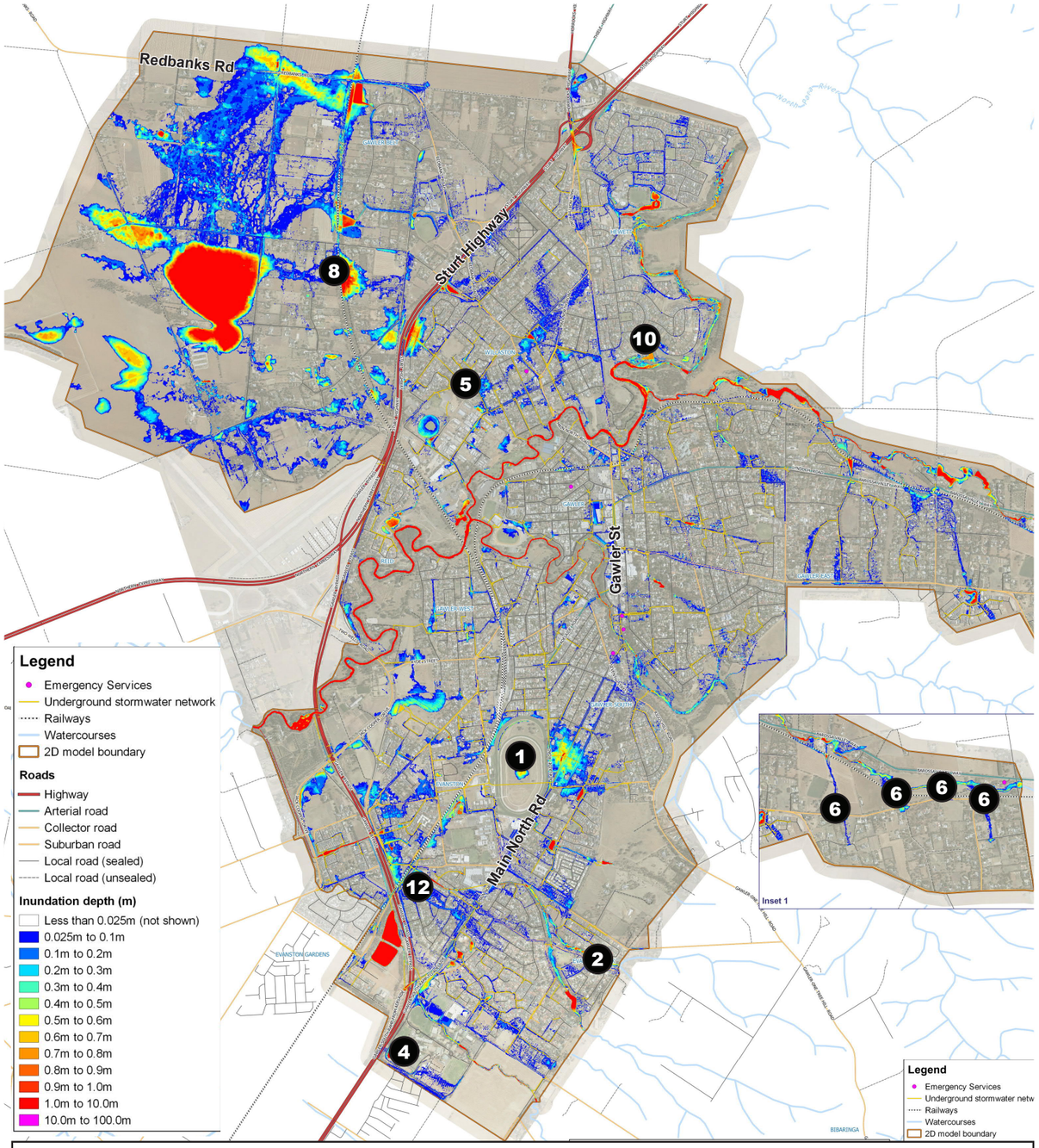
5 Jarvis Street and Willaston Drainage upgrade
- upgrade to underground drainage pipes between the Sturt Hwy and the Gawler River (along Busbridge Way, Woodall Ct, Jarvis St and Panter St)
- reduces deep flooding in vicinity of Brooks Ave
- significant capital cost due to drain length, but also significant reduced damages cost

8 Gawler Belt railway culvert
- new culvert/pipe installation under rail line, along with channel linking to existing at Clancy Road
- significant reduction in flooding east of rail line
- some potential for water quality improvements
- requires easements over private land for new channel

6 Gawler East flow path improvements
- formalising stormwater flows through establishing open channels within four locations across private properties
- prevents nuisance flooding across a number of private properties
- landscaped channels provide for water quality improvements
- will require Council easements to allow for maintenance

10 Hewett rear of allotment drainage
- Rear of allotment drainage pipe for a number of properties fronting Oaklands Circuit and Explorer Parade
- prevents nuisance flooding from runoff from higher properties
- requires easement on private land

Flood extent for a 1% Annual Exceedence Probability flood event



Disclaimer

This map has been prepared to a standard of accuracy sufficient for broad scale flood risk management and planning. The flood extents are not based on actual historical floods. The map does not increase the risk or affect the level of flooding over an area or property. The limit of flooding shown on this map is not a boundary between flood prone and flood free land. Land outside the flood extent shown on this map could be affected by:

- Floods with a different Average Recurrence Interval (ARI).
- Blockage in drainage systems, creeks and culverts caused by vegetation and other debris carried by flood flows.
- Further development, earthworks and other changes to the catchment that alter the actual flood extents.

The flood extents shown are a prediction of land subject to a specific level of flood risk and do not necessarily indicate a threat to buildings located on that land. Confidence in the prediction is reduced in areas affected by flood depths less than 0.1 m, due to the effects of fences, walls, buildings and landscaping which affect the flow of floodwaters. Such effects, which require detailed modelling, are beyond the capabilities of the modelling process. Flood assessment for particular sites will require more detailed interpretation, survey and analysis by qualified and experienced persons.

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