Notice To Readers Of This Map

This map must be read in conjunction with the following information and the main study report "Gawler River Floodplain Mapping Report, September 2015", prepared for the Gawler River Floodplain Management Authority; and "Light River Floodplain Mapping Volume 1 Study Report, June 2011", prepared for the District Council of Mallala.

Background
This map has been prepared using the best technology currently available to a standard of accuracy sufficient for broad scale flood risk management and planning. All maps in the series will help promote awareness of flooding associated with the Gawler River and the Light River. It is expected that it will be of use to persons undertaking development and by the authorities that assess land capability and development proposal. It will also assist in planning essential services and emergency response.

Flood behaviour
A flood occurs when a pipe, channel or creek cannot carry the volume of water entering from a catchment. When this occurs, floodwaters travel across the surface of the land potentially damaging property built upon the floodplain and potentially threatening the safety of people in the floodplain. Flooding is a natural event..

Annual Exceedance Probability (AEP)
The AEP is the likelihood of occurrence of a flood of given size or larger in any one year. This is expressed as a ratio, for example 1:100 or 1%. There is a 1% chance that the 1:100 AEP flood will be equalled or exceed in any one year. Similarly, there is a 5% chance that a 1:20 AEP flood will be exceeded in any one year.

Alternatively, flood risk can be considered in terms or average recurrence interval (ARI). This is the number of years on average, within which a given flood will be equalled or exceeded. A 1:100 ARI flood will be equalled or exceeded once in 100 years on average. A 1:20 ARI flood will be equalled or exceeded once in 20 years on average, and so on.

Due to the random nature of floods, however, a 1:100 year flood need not occur in every 100 years and conversely, several floods which exceed the 1:100 year flood could occur within any one period of 100 years.

Storm durations
The flooding response of a catchment is dependent on the duration of any storm event. Generally shorter, more intense storms produce the greatest flows from urban areas. Longer duration, but less intense storms, produce the greatest flows from undeveloped hills areas.

Impact on buildings
The flood extents shown are a prediction of land affected for the specific level of risk and do not necessarily indicate a threat to buildings located on that land. Flood assessment for particular sites will require more detailed interpretation, survey and analysis by qualified and experienced persons.

Changes to the catchment
The flood extent shown on the maps is based on conditions current as known at the time of the modelling. Further development, earthworks and other changes to the catchment may affect the actual flood extents.

Basis of mapping
The data contained on this map is based on survey, hydraulic and hydrological modelling as at 2015 (Light River) and 2015 (Gawler River) to an accuracy sufficient for broad scale flood risk management and planning. The modelling reflects current practice, but it must be realised that there are uncertainties and assumptions associated with the data and the processes on which the models are based, and the flood extents shown on this map cannot be regarded as exact predictions.

The flood extents are not based on actual historical floods.

Scope of the mapping
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 (for example):

- flooding from the mapped flood that extends beyond the area that has been mapped;
- larger storms;
- flooding from local drainage systems which can occur as a result of localised heavy rainfall or drain blockage;
- storms with a different Annual Exceedance Probability;
- flooding caused by other river systems, most notably Smith Creek (south of the Gawler River).

The modelling and mapping does not deal with the influence of local underground drainage systems. The effect of these systems will increasingly affect the flood extent as distance from the main creek increases and the depth of flooding reduces.

Areas of very shallow flooding
In areas shown as being affected by flood depths of less than 0.1m(100mm) fences, walls, landscaping and buildings will affect the flow of floodwaters. Resolution to this level of detail is beyond the capabilities of the modelling process and consequently the level of certainty in relation to flood depths in these areas is reduced.

Conjunctive probability of flooding in the flood overlap area
This combined mapping for these river systems highlights the fact that the floodplains of the Gawler River and Light River overlap north of the Gawler River. An allowance has been made for the conjunctive probability of flooding in these areas. The methodology applied is outlined in the report "Stormwater Management Plan for Two Wells, July 2014" prepared for the District Council of Mallala.

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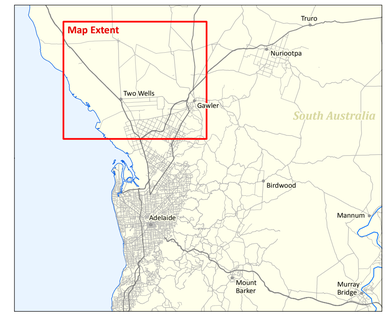


LEGEND

- Sports Ground
- CFS / MFS
- Hospital / Ambulance
- Police Station
- ETSA Substation
- Bridge
- Ford
- Weir
- Railway

Roads:
- *Major Road*
- *Intermediate Road*
- *Minor Road*
- *Local Road*
- *Track*
- Levee
- Watercourse

- Cadastral Parcels
- Local Government Boundary

Flood Depth (m):
- *0 - 0.10*
- *0.11 - 0.25*
- *0.26 - 0.50*
- *0.51 - 1.00*
- *1.01 - 1.50*
- *1.51 - 2.50*
- *2.51 - 5.00*
- *Greater than 5.00*

0 1 2 3 4 5
Kilometres (Scale 1:65,000 A1 Sheet)

WATER TECHNOLOGY
WATER, COASTAL & ENVIRONMENTAL CONSULTANTS

District Council of Mallala

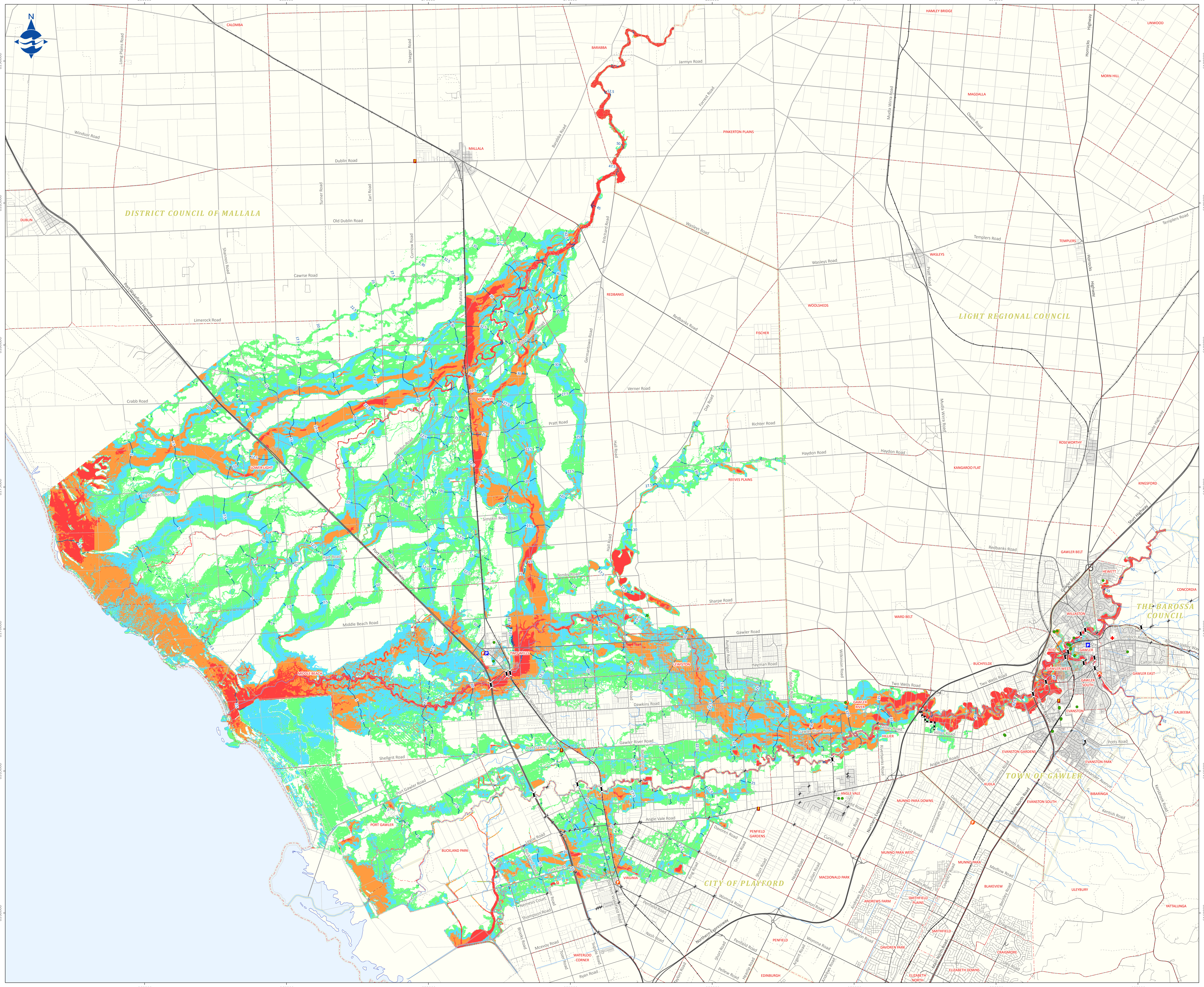
Government of South Australia

Australian WATER Environments

Gawler River and Light River
Flood Extents
Current Conditions

1 in 100 ARI Flood Inundation

12029 D500 v2 A1 Composite Flood Map Gawler Light 160630
Last Updated: 30/06/2016



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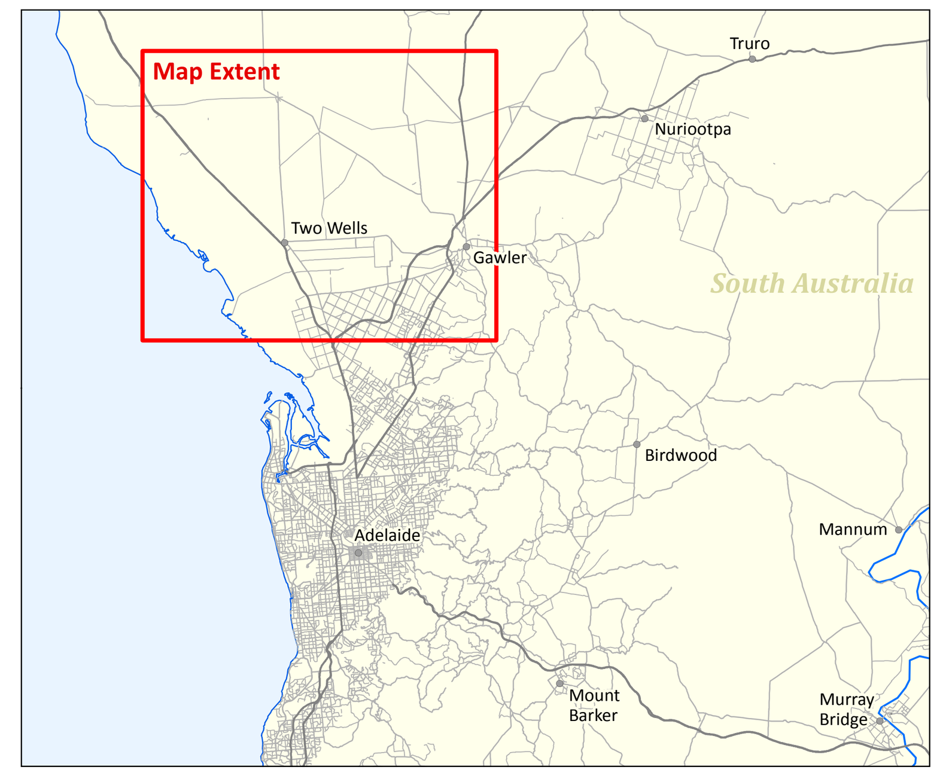

LEGEND

- Sports Ground
- CFS / MFS
- Hospital / Ambulance
- Police Station
- ETSA Substation
- Bridge
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- Weir
- Railway

Roads:
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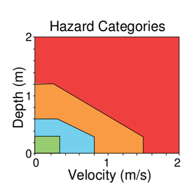
- *Minor Road*
- *Local Road*
- *Track*
- Levee
- Watercourse
- WSE Contours (2.5m intervals)

- Cadastral Parcels
- Local Government Boundary

Hazard Category:
- *Low*
- *Medium*
- *High*
- *Extreme*



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Gawler River and Light River
Flood Extents
Current Conditions

1 in 100 ARI Flood Hazard

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