

Notes to Floodplain Maps

Background

These maps have been prepared using the best technology currently available to a standard of accuracy sufficient for broad scale flood risk management and planning. The maps do not increase the risk or affect the level of flooding over an area or property; they merely seek to identify the extent of flooding under a given set of conditions. Limitations to the information shown on these maps and a brief description of some concepts upon which they are based are set out below.

Scenarios

Two flood inundation mapping scenarios were considered for this study. These two scenarios and the assumptions for each are summarised as follows:

Existing Scenario

- Catchment imperviousness based on current levels of development as at 2011.
- Stormwater drainage infrastructure as at 2011.
- Sea levels and rainfall intensity as at 2011 predictions.

Long-Term Scenario

- Catchment imperviousness increased to achieve a 0.85% annual growth rate in number of dwellings, over a 30 year period. This growth is confined to residential zones where subdivision of allotments is currently permitted.
- Rainfall intensity increased by 3%.
- Sea levels increased by 0.5 m.
- No infrastructure upgrades or additional flood mitigation measures.

More detail in relation to the scenarios can be found in the Floodplain Mapping Report associated with this study.

Annual Recurrence Interval (ARI)

Flood risk can be considered in terms of average recurrence interval (ARI). This is the number of years, on average, within which a given flood will be equalled or exceeded. A 100 year ARI flood will be equalled or exceeded once in 100 years on average. A 20 year 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 100 year ARI flood need not occur in every 100 years and conversely several floods which exceed the 100 year ARI 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 flow from undeveloped hills areas.

As a result of this interaction these maps combine the outer envelope of flood extent from the various storm events each of which produce the maximum flood extent in different parts of the catchment. Because of this, the extent of flooding shown may not occur across the entire area at the same time or during any one storm event.

Scope of the mapping

The limit of flooding shown on these maps is not a boundary between flood prone and flood free land.

Land outside the flood extent shown on these maps could be affected by:

- Storms with a different Average Recurrence Interval.
- Flooding from local drainage systems which can occur as a result of localised intense rainfall or drain blockage.
- Flooding from the Sturt River (the Sturt River channel has a greater than 100 year ARI standard).

Areas of very shallow flooding

In areas shown as being affected by flood depths of less than 0.1 m, 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.

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.

Effect of debris on flood extent

Vegetation and other debris are likely to be carried by flood flows and may cause blockages in local drainage systems, creeks and culverts. This cannot be predicted and consequently the impact of blockages is not modelled. If blockages do occur, flood extents will vary from those shown on the maps.

Disclaimer

These maps are provided on the basis that those responsible for their preparation and publication do not accept any responsibility for any loss or damaged alleged to be suffered by anyone as a result of the publication of the maps and the notations on them, or as a result of the use or misuse of the information provided herein.

The data contained on these maps is based on survey, hydraulic and hydrological modelling to an accuracy sufficient for broad scale flood risk management and planning. Further development, earthworks and other changes to the catchment may affect the actual flood extents.

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 therefore the flood extents shown on these maps cannot be regarded as exact predictions.

The flood extents are not based on actual historical floods.