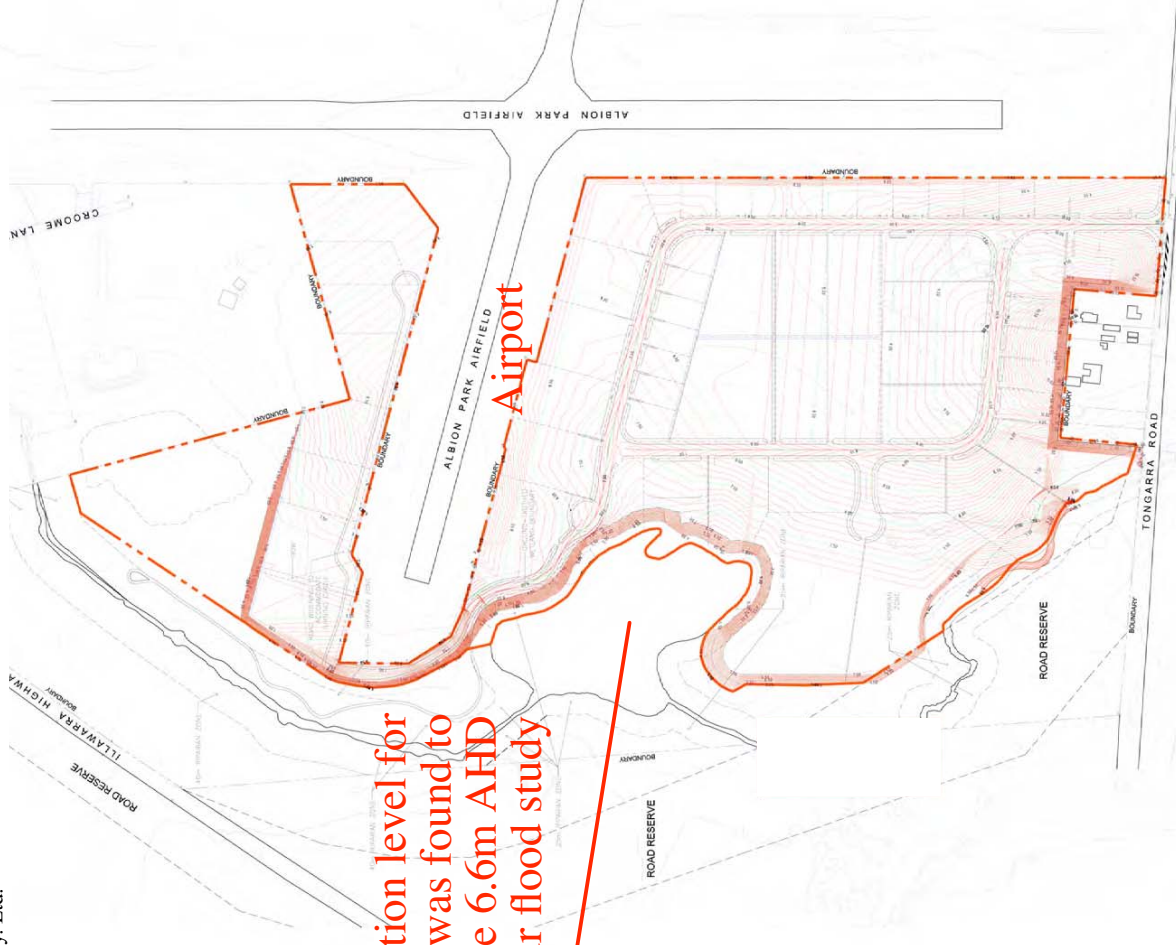
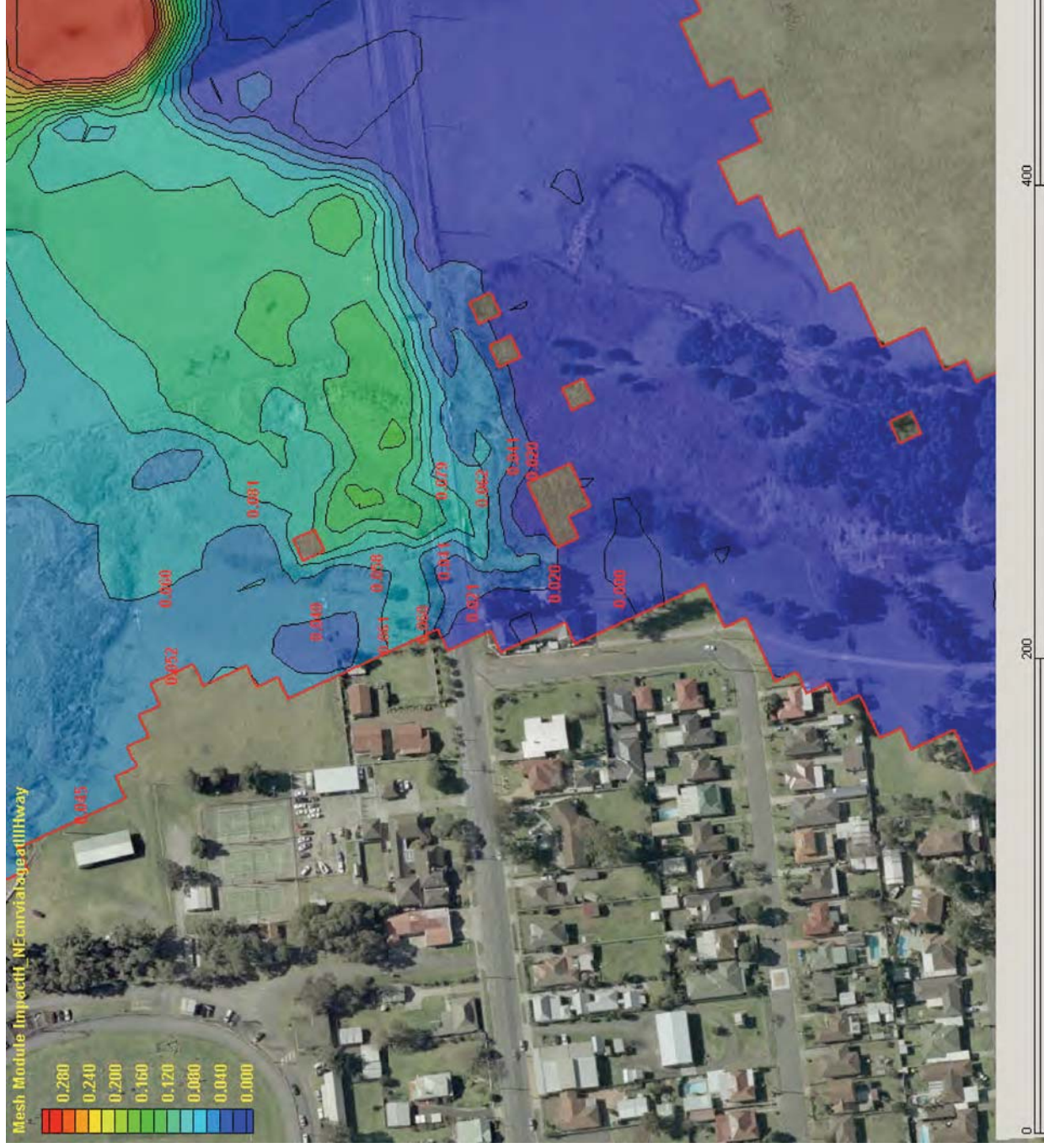


This cross section level for
the 1% flood was found to
be 6.6m AHD
in our flood study

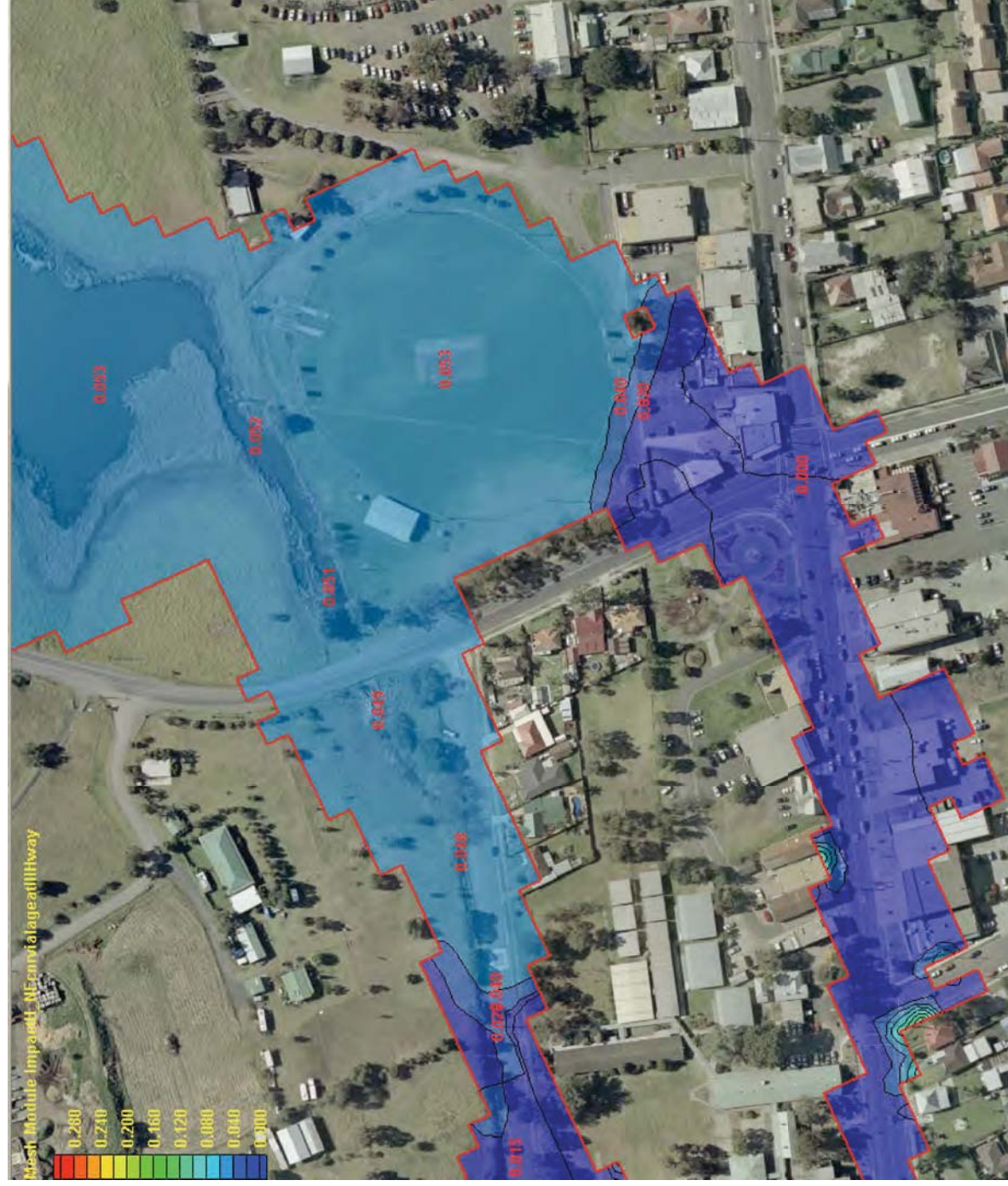


Site plan of proposed development



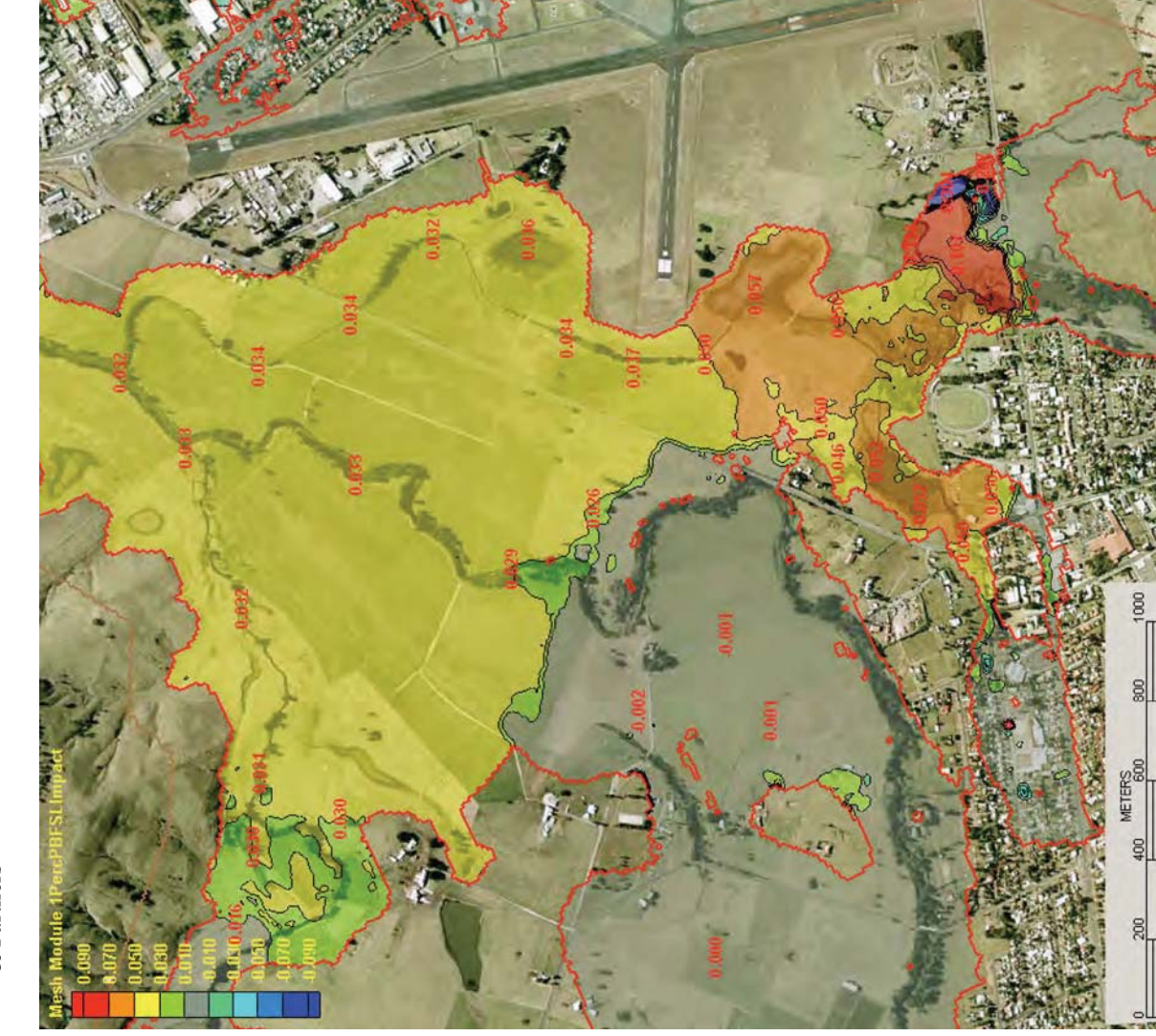
1% Impact - Tongarra Road, Change in flood levels



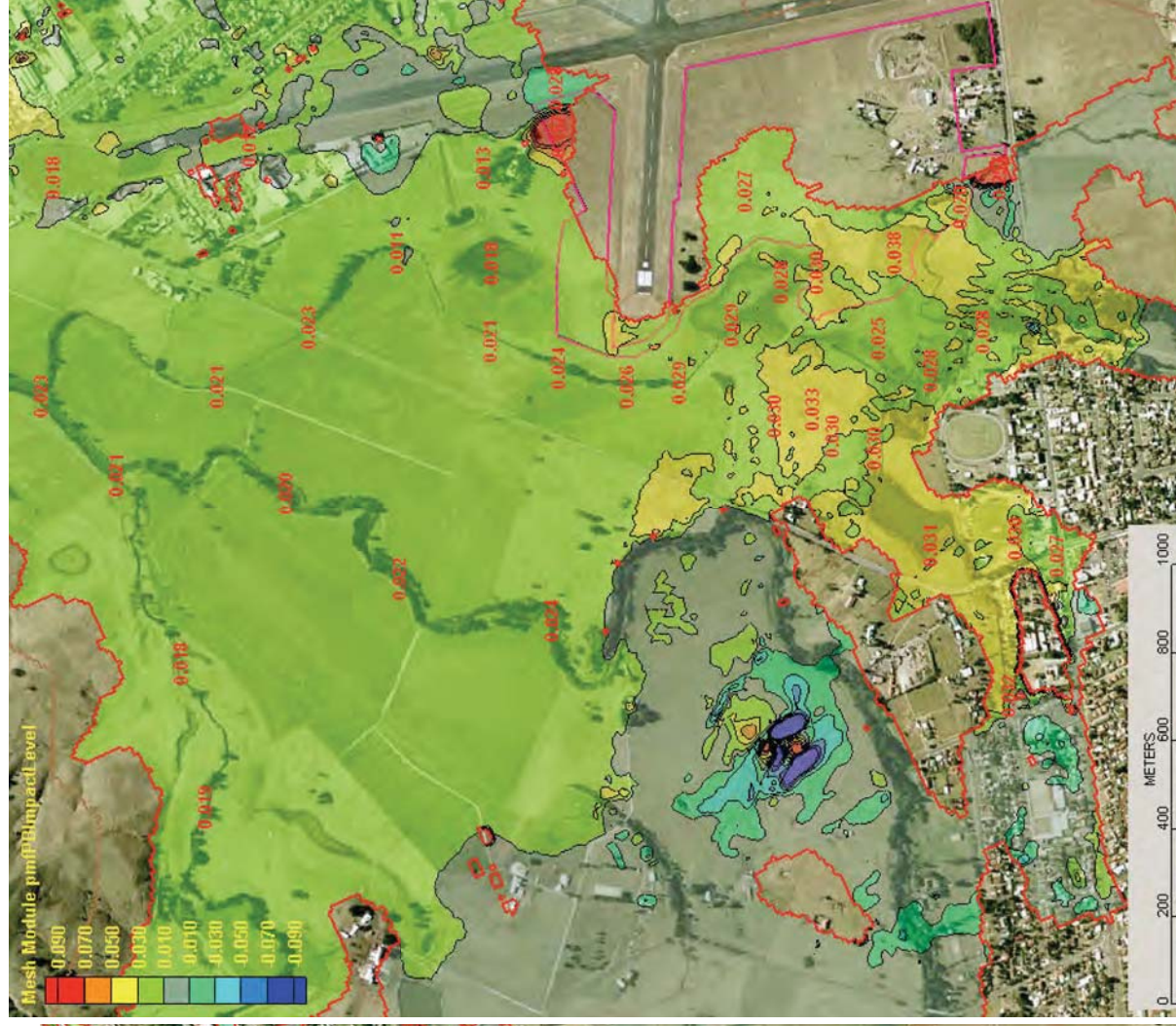




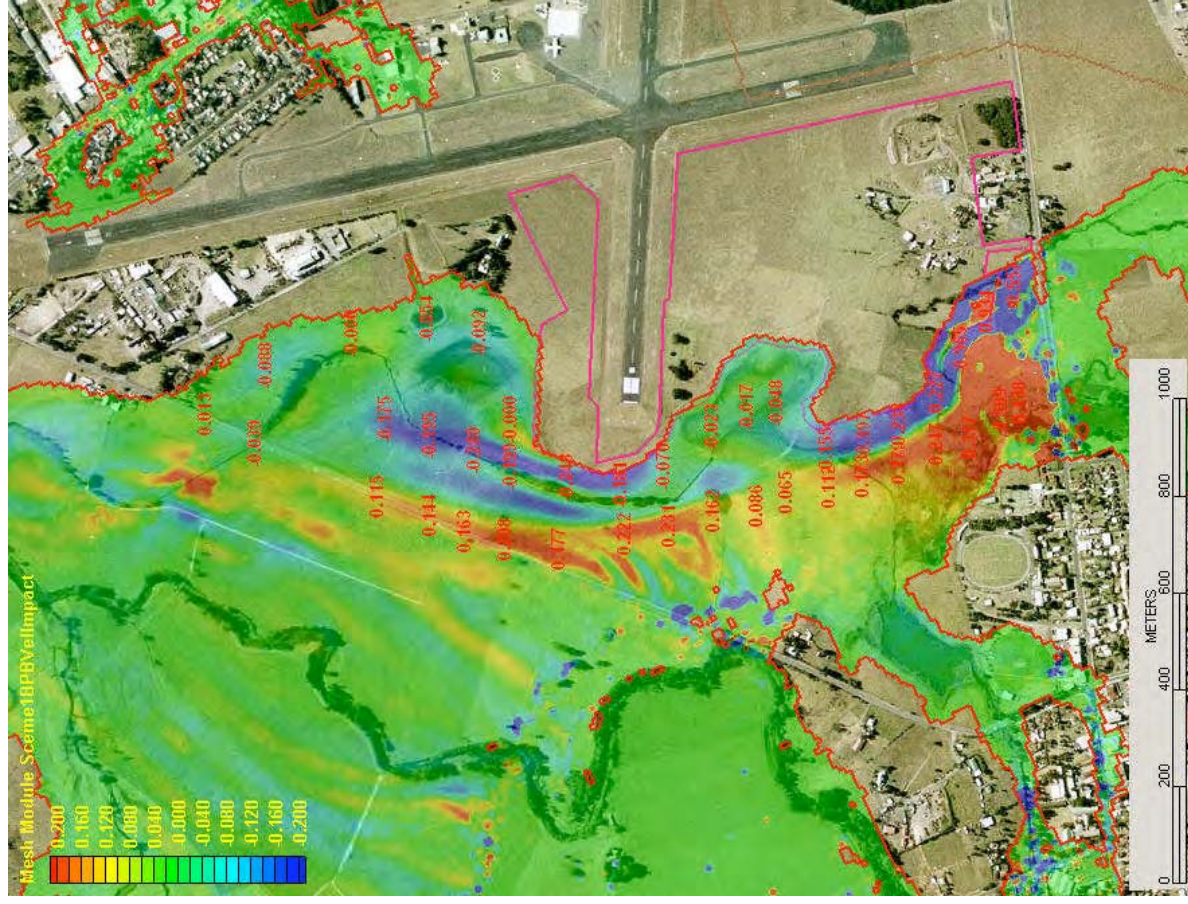
PMF Flood Levels - Tongarra Road



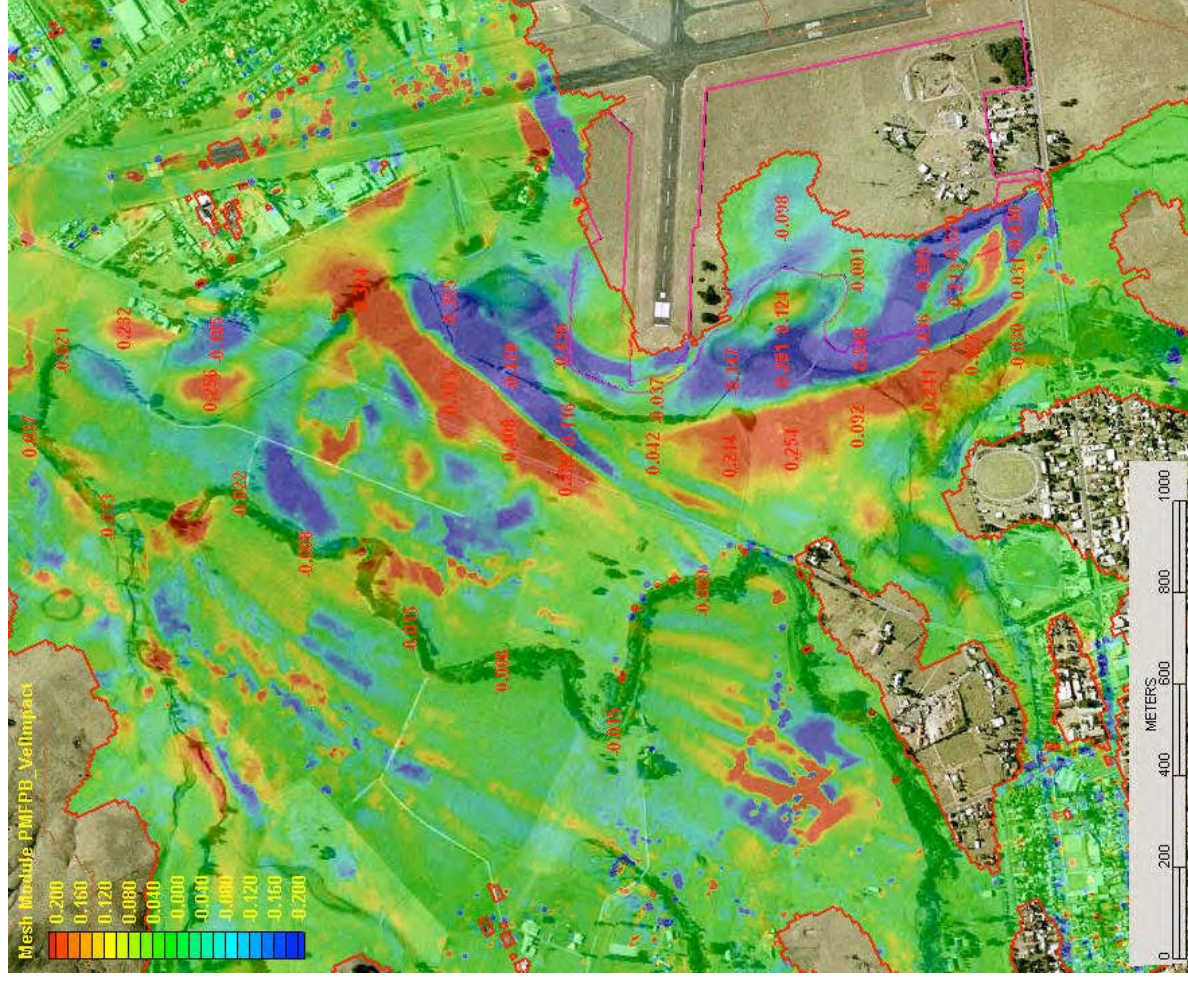
1% Impact - Full View



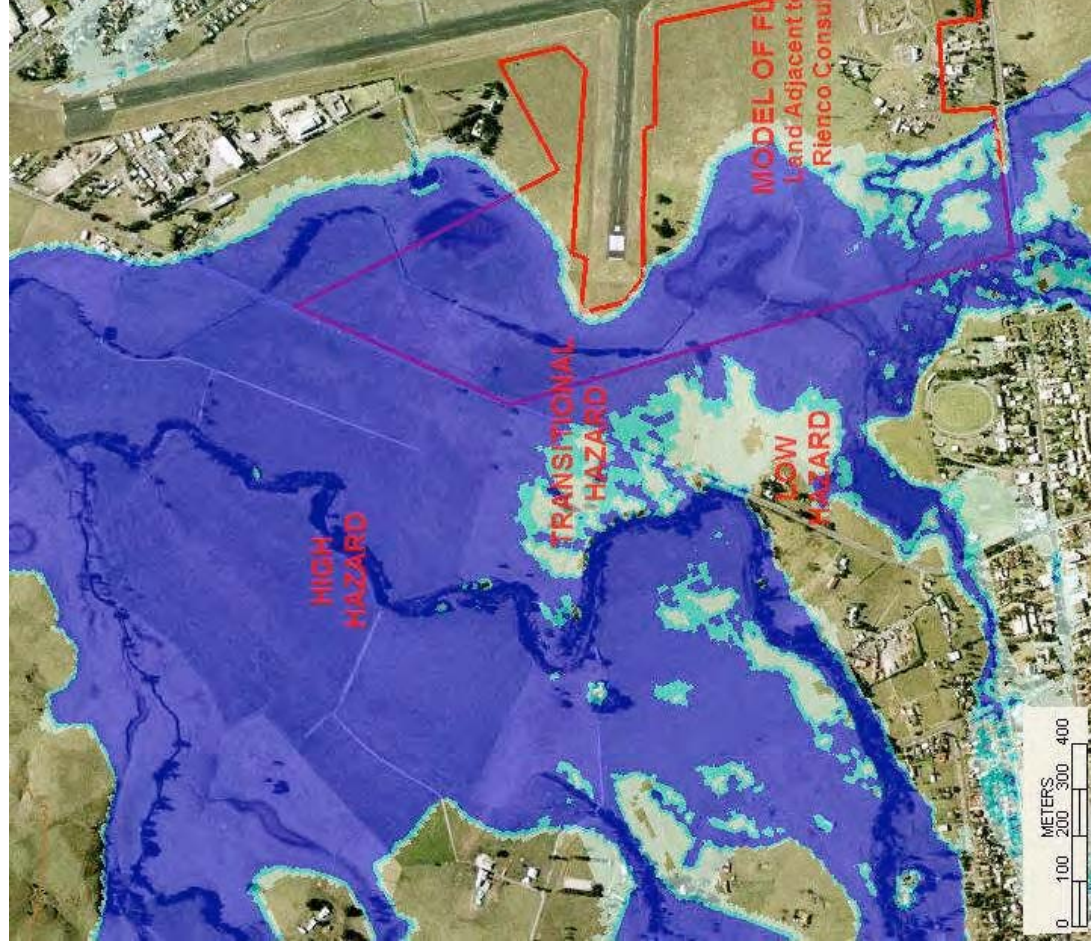
PMF Impact - Full View



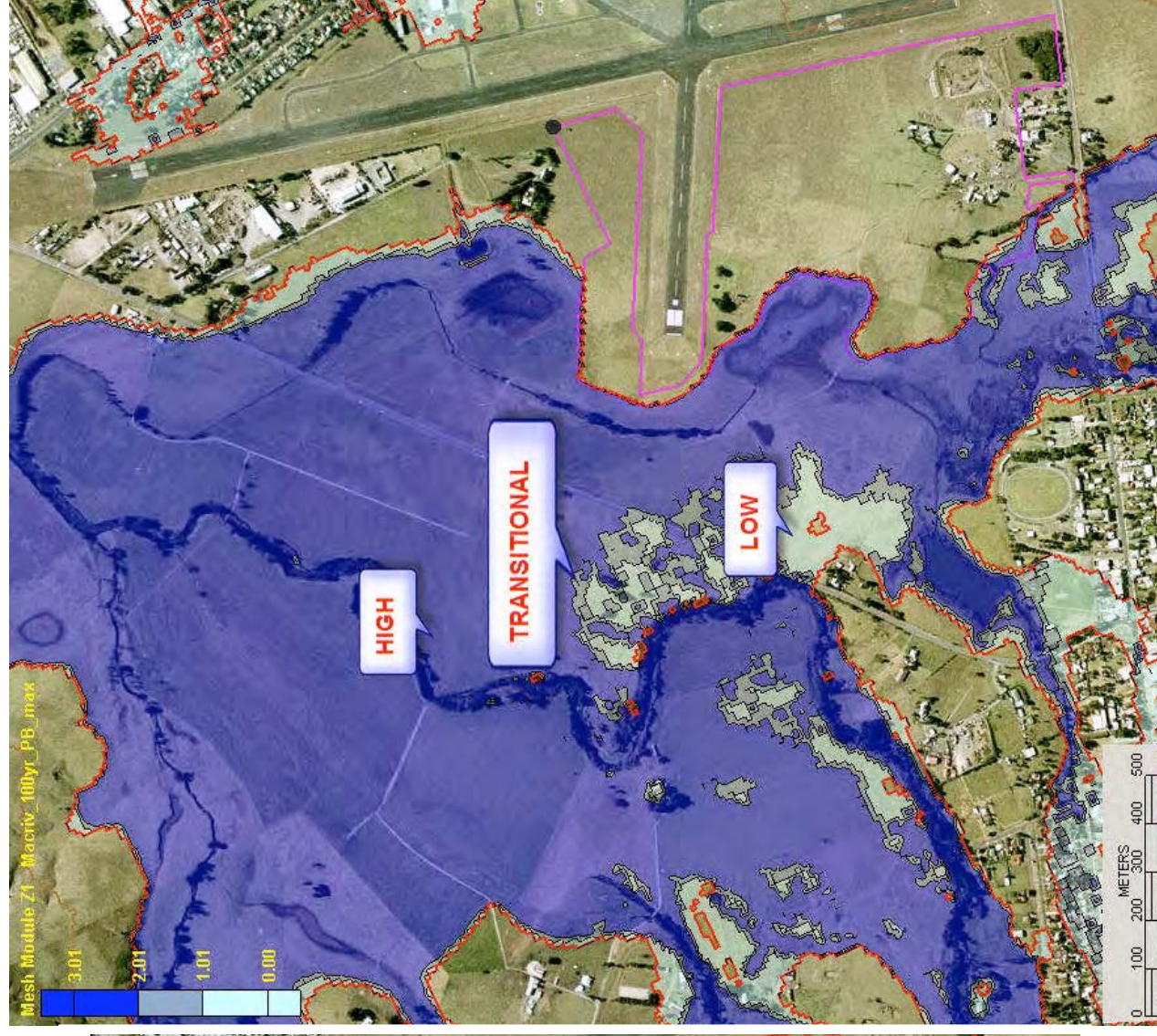
1% AEP FLOOD VELOCITY IMPACTS



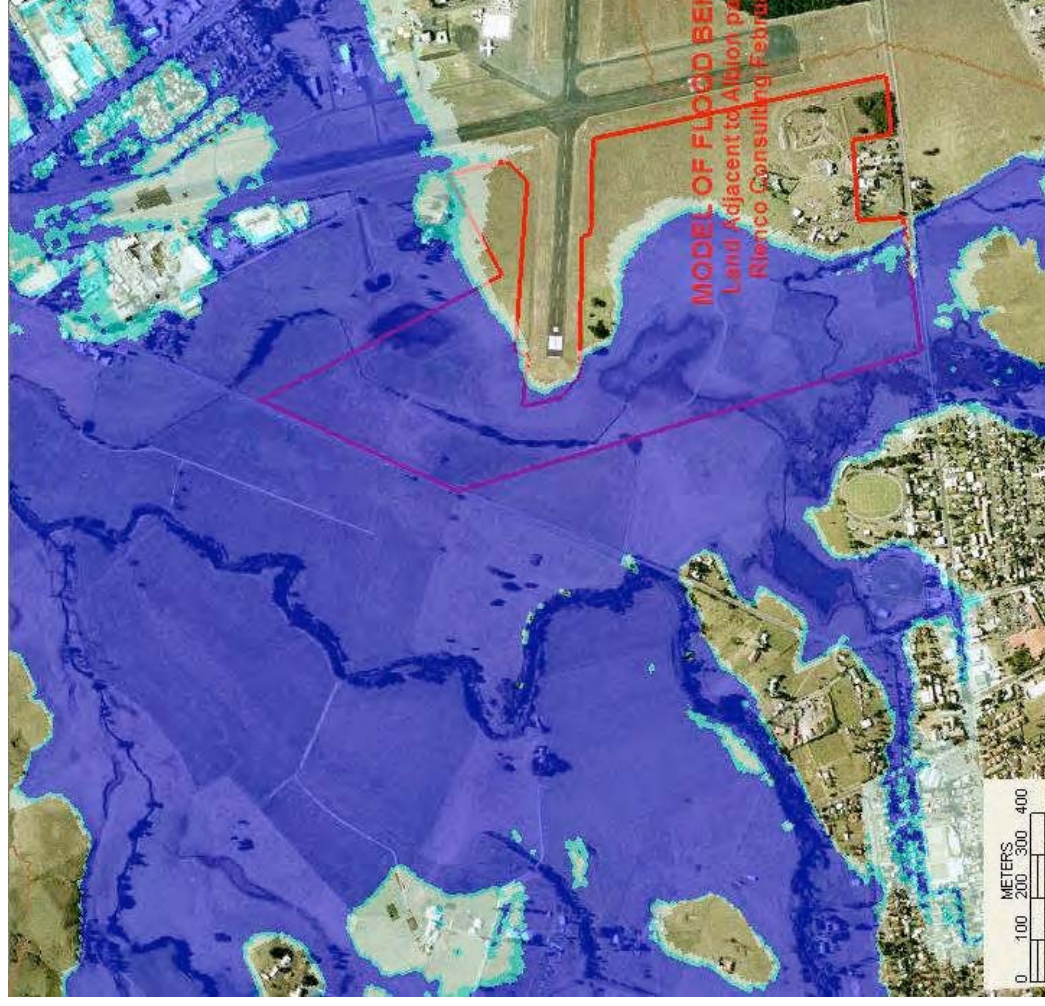
PMF FLOOD VELOCITY IMPACTS
APPENDIX A9



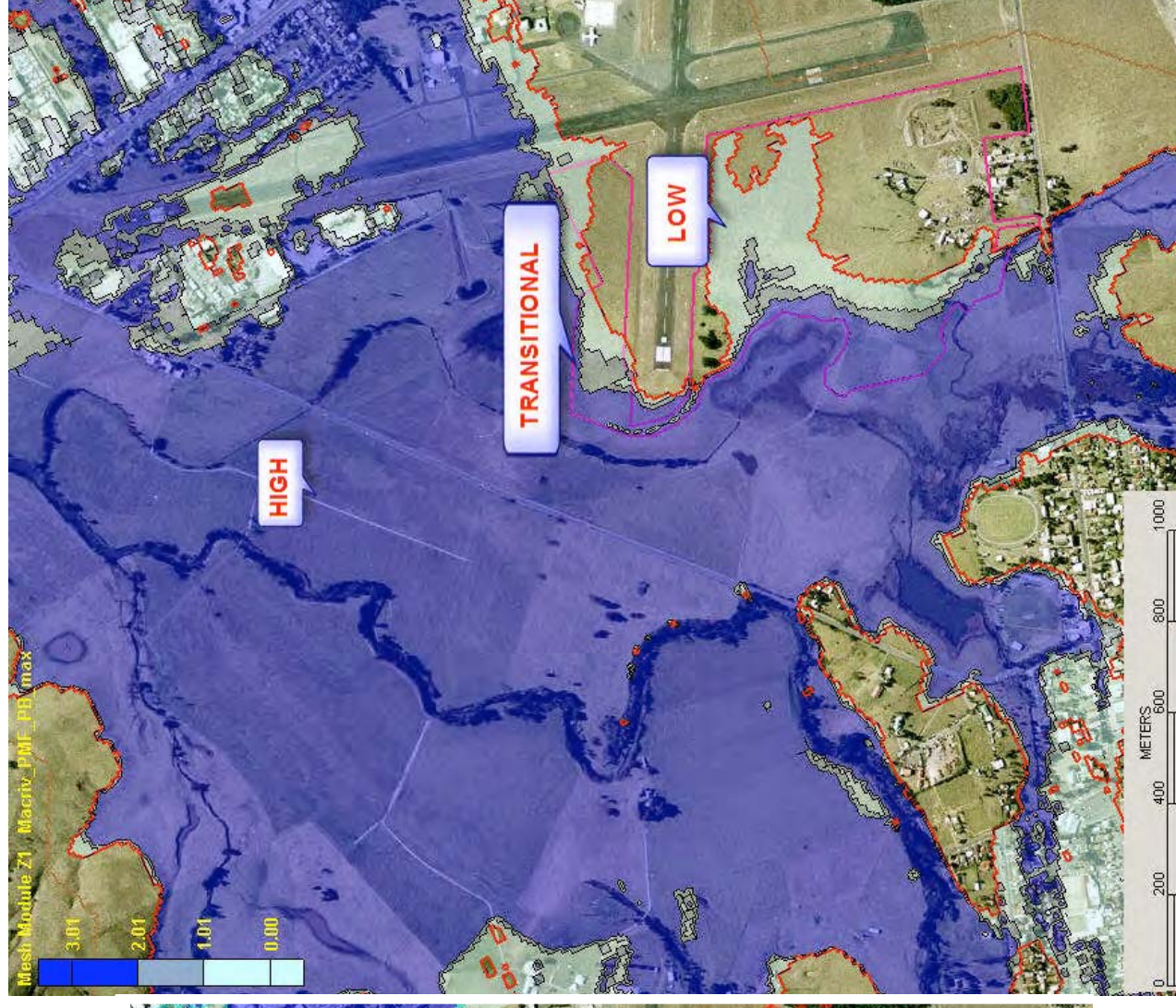
1% Peak Hazard Flood Surface
(Existing)



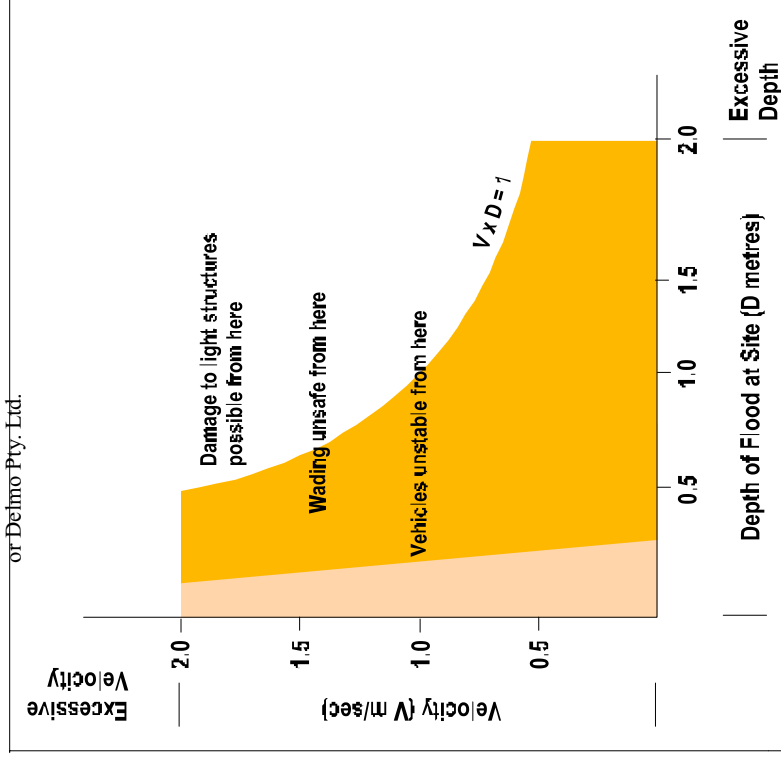
1% Peak Provisional Hydraulic
Hazard (Post Development)



PMF Peak Hazard Flood Surface
(Existing)



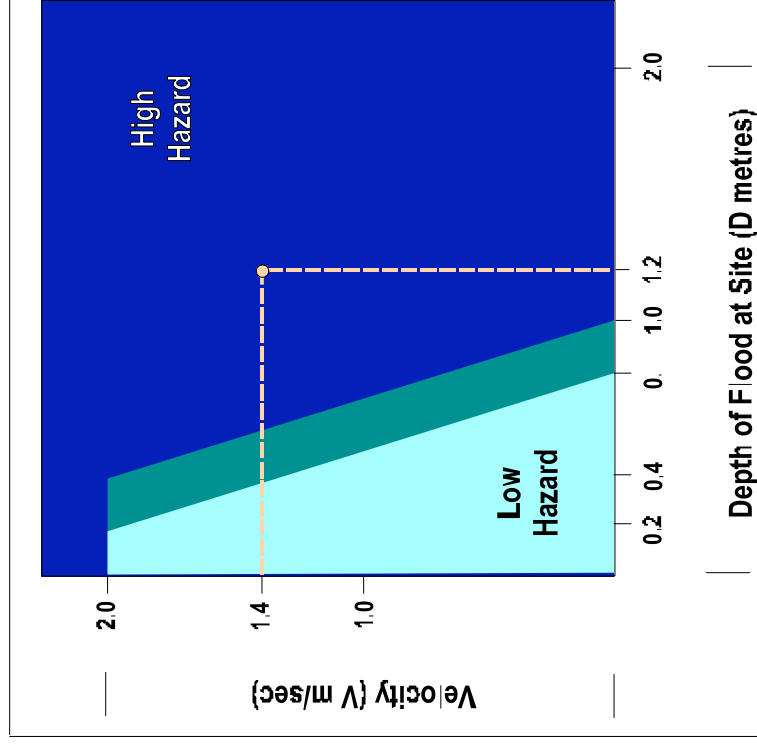
PMF Peak Provisional Hydraulic
Hazard (Post Development) APPENDIX A11



Notes

1. At velocities in excess of 2.0 m/s, the stability of foundations and poles can be affected by scour. Also, grass and earth surfaces begin to scour and can become rough and unstable
2. The velocity of floodwaters passing between buildings can produce a hazard, which may not be apparent if only the average velocity is considered. For instance, the velocity of floodwaters in a model test has risen from an average of 1 m/sec to 3 m/sec between houses.
3. Vehicle instability is initially by buoyancy.
4. At floodwater depths in excess of 2.0 meters and even at low velocities, there can be damage to light-framed buildings from water pressure, flotation and debris impact.

Derived from laboratory testing and flood conditions which caused damage.



Notes

The degree of hazard may be either -
reduced by establishment of an effective flood evacuation procedure.
increased if evacuation difficulties exist.

In the transition zone highlighted by the median colour, the degree of hazard is dependant on site conditions and the nature of the proposed development.

Example:

If the depth of flood water is 1.2 m
and the velocity of floodwater is 1.4 m/sec
then the provisional hazard is high

FIGURE L1 - Velocity & Depth Relationships

FIGURE L2 - Provisional Hydraulic Hazard Categories

Shellharbour City Council Floodplain Risk Management Development Control Plan

High Flood Risk Precinct

This has been defined as the area within the envelope of land subject to a high hydraulic hazard (as defined with the provisional criteria outlined in the Floodplain Development Manual) in a 100 year ARI flood event. The high flood risk precinct is where high flood damage, potential risk to life and evacuation problems would be anticipated or development would significantly and adversely effect flood behavior. Only in exceptional circumstances will development be permitted in this precinct. In this precinct, there would be a significant risk of flood damages without compliance with flood related building and planning controls.

Medium Flood Risk Precinct

This has been defined as land below the 100 year ARI flood level (plus 0.5m freeboard) that is not within the High Flood Risk Precinct. It is land subject to low hydraulic hazard (in accordance with the provisional criteria outlined in the Floodplain Development Manual). In this precinct there would still be a significant risk of flood damage, but these damages can be minimised by the application of appropriate development controls.

Low Flood Risk Precinct

This has been defined as all other land within the floodplain (ie. within the extent of the probable maximum flood) but not identified within either the High Flood Risk or the Medium Flood Risk Precinct where risk of damages are low for most land uses. The Low Flood Risk Precinct is that area above the 100 year ARI flood level (plus 0.5m freeboard). Most land uses would be permitted within this precinct.

These may be varied only in the case of a catchment specific floodplain risk management plan which may alter the definition of parameters within the risk precincts where critical to the catchment such as freeboard or incorporate other parameters such as riparian zones.

[illegible]

