Newsletter - June 2021

Lord Howe Island Flood Study Review and Update

A Floodplain Risk Management Study is currently being prepared examining flooding in Lord Howe Island

The Floodplain Management Process

The Lord Howe Island Board (The Board) has engaged specialist flood consultants WMAwater to provide an improved understanding of flood behaviour and impacts on the Island. A flood investigation was completed in the late 1990's. This project will update the existing study to current conditions, making use of the available modelling techniques and outputs that have been developed since then.

The project will provide detailed mapping, which will allow the Board to make transparent and consistent decisions, ensuring that flood risk is minimised. This project has been titled Lord Howe Island Flood Study Review and Update.

The project is being undertaken in:

- consistency with the NSW Floodplain Development Manual (2005),
- consistency with national best practice,
- compatibility with future climate change scenarios,
- consistency with the transparent mapping needs of the Board.

The Study Area

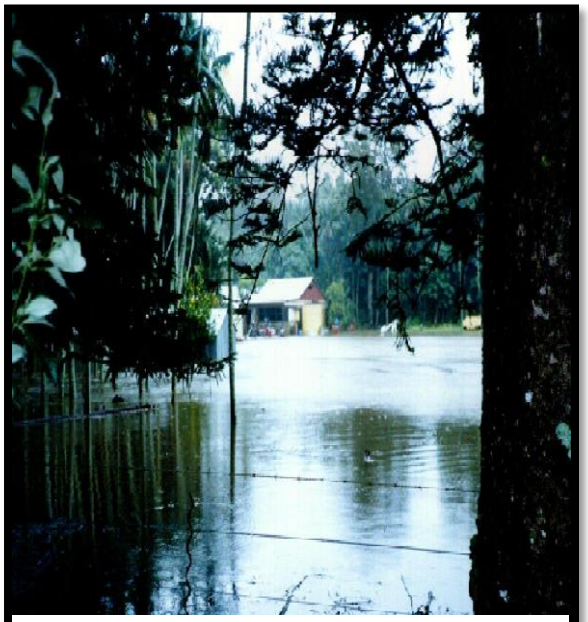
Looking down the Man Made Drain - June 1996 Storm
Source: Lord Howe Island Flood Study - June 1998. Webb Mckeown & Associates Pty Ltd

The study area includes three catchments, King's Beach, Airport and Pinetrees to Steven's Reserve.

Significant rainfall events occurred in 1996 and 1998 in the study area. WMAwater previously undertook an analysis and have a detailed understanding of the mechanisms and consequences of these events.

WMAwater will work with the Board to produce an appropriate Flood Planning Area (FPA) and Flood Planning Levels (FPL) and will investigate various options for mitigating flood risk.

Lord Howe Island Flood Study Review and Update



Paddock North of TC Douglas Drive Looking to Stevens Reserve - June 1996 Storm
Source: Lord Howe Island Flood Study - June 1998. Webb Mckeown & Associates Pty Ltd

As part of the study, computer models have been established to determine the extent and nature of potential flooding in the catchment.

These models define flood risk for a range of design floods, measured by their Annual Exceedance Probability. Annual Exceedance Probability (AEP) is the probability of an event being equalled or exceeded within a year. AEP may be expressed as either a percentage (%) or 1 in X.

Within each respective study area, two maps are generated representing 1% AEP flood events. The left hand side of the figures exhibit the extent and maximum depth (in metres) of 1% AEP flood, and the right illustrates the resulting flood planning level.

What is the Flood Planning Level

The flood planning level (FPL) is used to define land subject to flood related development controls and is generally adopted as the minimum level to which floor levels in the flood affected areas must be built. The FPL includes a freeboard above the design flood level. It is common practice to set minimum floor levels for residential buildings, garages, driveways and even commercial floors as this reduces the frequency and extent of flood damages. Freeboards provide reasonable certainty that the reduced level of risk exposure selected (by deciding upon a particular event to provide flood protection for) is actually provided.

The Flood Planning Area is defined as the 1% AEP event plus a freeboard. For Lord Howe Island the use of a 0.3 m freeboard is considered appropriate.

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