

# **GUIDELINES for Preparing a Flood Management Report**

## **Introduction**

These guidelines are intended to provide advice to applicants on preparing a Flood Management Report. The purpose of a Flood Management Report is to help applicants measure and manage the flood risk to life and property on their site.

## **When is a Flood Management Report required?**

A Flood Management Report must be submitted with any Development Application on flood prone land, for Council to consider the potential flood impacts and controls. For Residential or Commercial development, it is required for development on land identified within the Medium or High Flood Risk Precinct. For Vulnerable or Critical development, it is required if it is within any Flood Risk Precinct.

Note that the flood extents shown on the mapping are indicative only. It is recommended that flood levels are compared to registered ground survey to more accurately determine the flood extent.

There are some circumstances where a Flood Management Report undertaken by a professional engineer may not be required. However, the relevant parts of the DCP and LEP would still need to be addressed, so as to demonstrate compliance. Examples where this may apply include:

- If all proposed works are located outside the relevant Flood Risk Precinct extent
- First floor addition only, where the floor level is above the Probable Maximum Flood level
- Internal works only, where habitable floor areas below the Flood Planning Level are not being increased

Note that development on flood prone land will still be assessed for compliance with the relevant DCP and LEP, and may still be subject to flood related development controls.

## **What is in a Flood Management Report?**

The aim of a Flood Management Report is to demonstrate how a proposed development will comply with the flood related development controls outlined in the relevant LEP and DCP clauses. The report must detail the design, measures and controls needed to achieve compliance, following the steps outlined below.

A Flood Management Report should reflect the size, type and location of the development, proportionate to the scope of the works proposed, and considering its relationship to surrounding development. The report should also assess the flood risk to life and property.

## **Technical requirements of a Flood Management Report**

The technical requirements of a Flood Management Report should include (where relevant):

### **1. Description of development**

The description of development should identify:

- Outline of the proposed development, with plans if necessary for clarity
- Use of the building, hours of operation, proposed traffic usage or movement
- Type of use, ie, critical, vulnerable, subdivision, residential, business, industrial, recreational, environmental or concessional

### **2. Flood analysis**

The flood analysis should include:

- Predicted 1 in 100 year flood level
- Flood Planning Level (FPL)
- Probable Maximum Flood (PMF) level
- Flood Risk Precinct, ie High, Medium or Low
- Flood Life Hazard Category (in former Pittwater Council area only)
- Mapping of relevant extents
- Flood characteristics for the site, eg depth, velocity, hazard and hydraulic category, and the impact these have on the proposed development

Note that if the property is affected by estuarine flooding or other coastal issues, these need to be addressed separately under the relevant DCP.

### 3. Assessment of impacts

The assessment of impacts should address the various elements of the relevant LEP and DCP. A simple compliance table should be provided, similar to the table one below.

	Compliance		
	Not Applicable	Yes	No
A Flood effects caused by Development		✓	
B Drainage Infrastructure & Creek Works	✓		
C Building Components & Structural		✓	
D Storage of Goods		✓	
E Flood Emergency Response		✓	
F Floor Levels			✓
G Car Parking	✓		
H Fencing		✓	
I Pools		✓	

Further details of what is required for each of these categories can be found in the *Development Control Plan for Flood Prone Land*.

For any of these categories which are applicable, the assessment should demonstrate how the development complies, or if it doesn't, provide an explanation of why the development should still be considered.

#### Reporting requirements for a Flood Management Report

The Flood Management Report should include:

- Executive summary
- Location plan, at an appropriate scale, that includes geographical features, street names and identifies all waterways and Council stormwater pipes, pits and easements
- Plan of the proposed development site showing the extent of the predicted 100 year, any high hazard or floodway conditions and the PMF flood event
- Development recommendations and construction methodologies
- Calculation formulae (particularly for flood storage)
- Clear referencing using an accepted academic referencing system (eg. Harvard)
- Analysis of development against relevant State Environmental Planning Policies
- Analysis of development against relevant Local Environment Plan and Policies
- Conclusion detailing key points
- Standard Hydraulic Certification (Form A/A1)
- Qualifications of author
- Any flood advice provided by Council
- Any other details which may be relevant

#### NOTE: Qualifications of Author

Council requires that the Flood Management Report be prepared by a suitably qualified Engineer with experience in flood design / management who has, or is eligible for, membership to the Australian Institute of Engineers.

For further information please contact Stormwater and Floodplain Team on 1300 434 434 or via email at [floodplain@northernbeaches.nsw.gov.au](mailto:floodplain@northernbeaches.nsw.gov.au)

## Attachment A

### NORTHERN BEACHES COUNCIL STANDARD HYDRAULIC CERTIFICATION FORM

FORM A/A1 – To be submitted with Development Application

Development Application for

Address of site: 24 Darius Avenue, North Narrabeen

Declaration made by hydraulic engineer or professional consultant specialising in flooding/flood risk management as part of undertaking the Flood Management Report:

I, Rick Wray on behalf of Northern Beaches Consulting Engineers  
(Insert Name) (Trading or Business/ Company Name)

on this the 14/11/2019 certify that I am engineer or a  
(Date)

professional consultant specialising in flooding and I am authorised by the above organisation/ company to issue this document and to certify that the organisation/ company has a current professional indemnity policy of at least \$2 million.

#### ***Flood Management Report Details:***

Report Title: Flood Risk Management Report

Report Date: 12/8/2019

Author: Cameron Haack

Author's Company/Organisation: Northern Beaches Consulting Engineers

I: Rick Wray  
(Insert Name)

Please tick all that are applicable (more than one box can be ticked)

☒ have obtained and included flood information from Council (must be less than 12 months old) **(This is mandatory)**

☒ have followed Council's Guidelines for Preparing a Flood Management Report

☒ have requested a variation to one or more of the flood related development controls. Details are provided in the *Flood Management Report*.



Signature .....

Name Rick Wray