



**W A V E R L E Y**  
COUNCIL

**STRATEGIC PLANNING AND DEVELOPMENT  
COMMITTEE MEETING**

**ATTACHMENTS**

**ITEMS UNDER SEPARATE COVER**

**7.30 PM, TUESDAY 6 JUNE 2023**

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## STRATEGIC PLANNING AND DEVELOPMENT COMMITTEE MEETING

Tuesday, 6 June 2023

### ATTACHMENTS

PD/5.1/23.06 Flood Study and Waverley Development Control Plan 2022 - Peer Review and Additional Information

1	GLN Planning - Review of Waverley Flood Study and Draft DCP Amendment .....	2
2	HillPDA - Waverley Flood Controls - Impact on Property Prices .....	78
3	Insurance Implications Review - Draft Development Control Plan Amendment - Flood .....	99
4	Mills Oakley/Statewide - Advice re Flood DCP .....	120

PD/5.2/23.06 Planning Proposal - 34-36 Flood Street, Bondi - Heritage Listing

1	Planning proposal .....	123
2	Hector Abrahams Architects- Heritage assessment .....	176
3	WLPP advice .....	244



## REVIEW OF WAVERLEY FLOOD STUDY AND DRAFT DCP AMENDMENT

Waverley Council

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Date of final issue: 27 April 2023  
 File Path: <https://glnplanning.sharepoint.com/sites/GLNPlanning/Shared Documents/Projects/Active/11882 Waverley Council - Peer Review of Flood Study and Flood DCP/Reports/11882 Rpt.docx>  
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 Project Number: 11882

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Document History and Status

Version	Issue To	Qty	Date	Prepared by	Reviewed by
Draft	Patrick Hay (WC)	1-e	05.04.2023	PG	PL
Final	Patrick Hay (WC)	1-e	27.04.2023	PG	-

## Review of Waverley Flood Study and Draft DCP Amendment

Waverley Council



## Table of Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Commission	1
1.2	Background	1
1.3	Purpose of this report	2
1.4	Study Team	2
1.5	Information Reviewed or Considered	2
<b>2</b>	<b>General</b>	<b>3</b>
2.1	Statewide Planning Guidance	3
2.2	Relevant State Environmental Planning Policies	7
2.3	Waverley LEP	8
2.4	Council Flood Mapping	9
2.5	Existing DCP Provisions	10
<b>3</b>	<b>Review of Flood Study and Draft DCP</b>	<b>10</b>
3.1	Flood Study	10
3.2	Principles to be considered in Review of Draft DCP	11
3.2.1	Introduction	11
3.2.2	A Risk Based Approach for the Application of the DCP	12
3.2.3	How to Map the Floodplain for the Purposes of Applying the DCP	13
3.2.4	Flood Risk Precinct (FRP) Maps	14
3.3	Flood Mapping to Support the Draft DCP	15
3.4	Draft DCP Provisions	19
3.4.1	Process	19
3.4.2	Content	20
3.4.3	Consistency with the Manual and 2021 Guidelines	21
3.4.4	Low Medium and High Risk Categorisation	22
3.4.5	Best Practice	22
3.4.6	Submissions Report	22
3.4.7	Potential Improvements	23
<b>4</b>	<b>Conclusion</b>	<b>24</b>

## Figures

Figure 1 NSW FRM Process (adapted from the Manual 2005, pg.6)	4
Figure 2 Online Flood Planning Area Mapping	9
Figure 3: Principles for Applying the Planning Matrix Approach	13
Figure 4: Hybrid Flood Control Lot & FRP Mapping Approach	18
Figure 5: FRP Mapping Approach	18

## Appendices

A.	KBR Review
B.	Detailed Review of Draft DCP

Review of Waverley Flood Study and Draft DCP Amendment

Waverley Council



## 1 Introduction

### 1.1 Commission

GLN Planning was commissioned by Waverley Council to peer review the key documents relating to the Waverley LGA Flood Study prepared by BMT for Council dated January 2021 (**Flood Study**) and proposed amendment to the Waverley Development Control Plan 2022 (**Draft DCP**) based on Draft DCP provisions prepared by WMS dated September 2021.

### 1.2 Background

In April 2021, Council adopted the Waverley Flood Study after technical investigations and two rounds of community engagement. In July 2021, the NSW Government issued NSW Flood Prone Land Package (**the 2021 Package**). The 2021 Package included changes to the standard instrument local environmental plan, which consequently amended *Waverley Local Environmental Plan 2012 (the LEP)*, and provided guidance for other related matters including inclusions for development control plans.

The Flood Study represents the initial stage of the NSW Floodplain Risk Management (**FRM**) process as outlined in the NSW Floodplain Development Manual published in April 2005 by the NSW Government (**the Manual**). The Flood Study made recommendations in regard to the adoption of flood planning levels (**FPLs**) and Flood Planning Areas (**FPA**s) for planning purposes.

Subsequent stages in the NSW FRM process involve the preparation of a Floodplain Risk Management Study (**FRMS**) and a Floodplain Risk Management Plan (**FRMP**) that will investigate the consequences of the flood risks identified by the study, potential mitigation measures and recommendations to be implemented through the FRMP. While these mitigation measures can include planning controls, it is not unusual for planning controls to be reviewed based on the findings of a flood study as the preparation of a FRMS and FRMP typically take many years to complete and the Manual encourages Councils to always act on the best available information.

The Flood Study provided a 3 tier classification (**Types A, B and C**) for lots that should be subject to flood related development controls (**Flood Control Lots**) based on the level of confidence of the flood modelling due to the nature of the terrain. Types B and C Flood Control Lots were identified as requiring further investigation to determine the extent of the lot affected (Type B) and whether flooding would affect the identified lot or adjacent land (Type C).

As a logical adjunct to the preparation of the Flood Study, Council commissioned the preparation of draft amendments to the DCP (**Draft DCP**) to introduce appropriate flood related development controls. This provided the opportunity to address the additional lands subject to flood risks and the more detail information regarding flood extents and hazard identified by the Flood Study

Based on the Flood Study, Water Modelling Solution (**WMS**) prepared the Draft DCP provisions dated September 2021 and a Flood Risk Precinct (**FRP**) Map to be used for the purposes of applying the DCP controls. The FRP Map adapted information contained in the Flood Study to categorise lots as either part of a Low, Medium or High FRP, which cumulatively represent all proposed Flood Control Lots for the Waverley LGA.

## Review of Waverley Flood Study and Draft DCP Amendment

Waverley Council



The amendment to the DCP was exhibited in June-July 2022. During the exhibition process Council notified over 10,000 landowners and received feedback from a number of residents, many concerned with the risk classification (low, medium or high) given to their properties and the implications this may have on property values, insurance premiums and their ability to renovate or redevelop their property in the future.

Council subsequently engaged GLN Planning and KBR Consulting to undertake a peer review of the Flood Study and Draft DCP, which is the subject of this report.

### 1.3 Purpose of this report

The purpose of this report is to document the findings of a peer review of the key documents relating to the Flood Study and Draft DCP.

### 1.4 Study Team

In order to address the various components of the brief, the peer review was undertaken by the following study team:

- GLN Planning (**GLN**)
- KBR.

GLN is the lead consultant and addresses town planning related matters, specifically the approach taken to the preparation of the Draft DCP, the format and content of the Draft DCP and associated FRP mapping, and other related matters. Paul Grech (GLN Director), is the principal author of this report and has 40 years experience working as a town planner with involvement in flood risk management projects during the last 30 years for both local and state governments across Australia and private industry, most of which involved the preparation or review of FRM planning controls.

KBR addresses the assumptions and methodology adopted by the Flood Study and suitably of the information provided by the Flood Study to inform the FRP mapping relied upon by the Draft DCP and technical matters related to controls in the draft DCP. The Review by KBR was led by Joshua Eggleton (KBR National Industry Lead – Water Resources) who is an experienced water resource engineer that has completed a wide range of public and private sector projects primarily related to floodplain management across Australia.

### 1.5 Information Reviewed or Considered

The following is a list of the information sourced and considered.

- Flood prone land package changes as documented in the DPE Planning Systems Circular issued to Councils in final form on 14 July 2021 (**2021 Package**)
- *Considering flooding in land use planning – Guideline*, DPIE, 14 May 2021 (**2021 Guideline** provided with the 2021 Package)
- *Floodplain Development Manual*, Department of Infrastructure, Planning and Natural Resources, April 2005 (**the Manual**)



## Review of Waverley Flood Study and Draft DCP Amendment

Waverley Council



- *Draft Floodplain Management Manual*, Environment, Energy and Science Department of Planning and Environment (DPE), 2022, and associated complementary Guides ([Draft Flood Risk Management Manual and associated draft Guidelines](#)). **(Draft Manual)**
- [Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia](#) Australian Institute of Disaster Resilience 2017 **(Handbook 7)**
- *ISO 31000:2009 Risk management — Principles and guidelines*
- Draft Shelter in Place Guideline, Department of Planning & Environment, 2022 (exhibited 17 January until 28 February 2023). **(Draft SIP Guideline)**
- Waverley LGA Flood Study, Final Report, January 2021, prepared by BMT for Waverley Council **(Flood Study)**
- Draft DCP provisions prepared by Water Modelling Solution **(WMS)** for Council dated September 2021 **(Draft DCP)**
- Submissions received by Council in regard to the exhibition of the Draft DCP
- Review of Submissions to Draft DCP, 6.10.2022, prepared for Council by WMS **(Submissions Report)**
- Council Officer reports regarding the establishment of the Waverley Council Floodplain Management Committee, Flood Study and Draft DCP, to Council Meetings of 21.08.2018, 19.05.2020, and 13.04.2021.

## 2 General

### 2.1 Statewide Planning Guidance

#### Current Floodplain Development Manual

The Manual and NSW Flood Prone Land Policy have changed over time since first adopted in the early 1980s but have principally retained the following key principles:

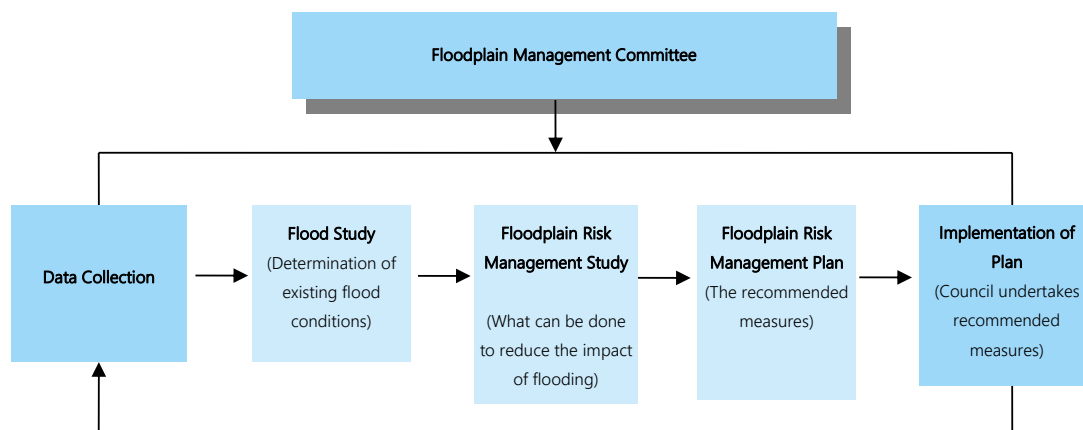
- Local Government is responsible for FRM in NSW with financial and technical support being provided by the State Government. The actions, decisions and information provided by Council and exercised in this duty are indemnified through the provisions of Section 733 of the *Local Government Act, 1993*. Indemnity is provided where Council acts in good faith, which is deemed to be in accordance with the principles of the Manual unless proven otherwise.
- A merit approach is to be adopted for the purposes of formulating a FRMP that provides a basis for decision making in the floodplain. This is in recognition that flood prone land is a valuable resource which should not be unnecessarily sterilised by the rigid application of prescriptive criteria, and to avoid the approval of inappropriate proposals. The merit approach is defined in the Manual as follows:

*The merit approach weighs socio-economic, ecological and cultural impacts of land use options*



*for different flood prone land areas together with flood damage, hazard and behaviour implications, and environmental protection and wellbeing of the State's rivers and floodplains.<sup>1</sup>*

The level of flood risk acceptable to the community is to be determined through a process typically overseen by a committee comprised of local elected representatives, community members and State and Local Government officials. This process is shown in **Figure 1**.



**Figure 1 NSW FRM Process** (adapted from the Manual 2005, pg.6)

The ultimate intent is to prepare FRMPs for individual floodplains that are adopted by Councils. FRMPs should have an integrated mix of management measures that address existing, future and continuing risk. These measures include planning and managing the approval of the location and form of new development.

The Manual and planning controls under the *Environmental Planning And Assessment Act 1979 (EP&A Act)* should not be considered as providing alternate approaches. The Flood Prone Lands Policy and Manual are separate to the principal planning legislation in NSW, being that contained within the EP&A Act and associated Regulations. Ultimately, the planning recommendations of a FRMP may be reflected in planning instruments and policies brought into force in accordance with the EP&A Act, such as the DCP.

The way that FRM should ultimately be considered in plans made under the EP&A Act is primarily determined by a combination of matters including the Manual, guidelines and circulars issued by the NSW *Department of Planning and Environment (DPE)*, national guidance documents such as Handbook 7 (AIDR, 2017), the interplay of the LEP and DCP, Council planning strategies and higher order plans and policies prepared by the DPE, and the environmental, economic and social circumstances of individual Councils. Relevant legislation, planning instruments and policies are reviewed below to provide a basis for reviewing the Flood Study and Draft DCP.

<sup>1</sup> 2005 Manual, NSW Government, 2005, page 23.



### Draft Flood Risk Management Manual and associated draft Guidelines

The Draft Manual was placed on public exhibition in the early part of 2022. The primary document consists of a more concise Manual complemented by a series of guideline documents.

The Draft Manual retains similar principles as the existing Manual. The most significant new guidance relevant to this report includes:

- The *Understanding and Managing Flood Risk Guide (Guide FB01)* This includes example considerations for DCP's (Appendix B). Three examples have been provided, each utilising a matrix approach based on dividing the floodplain into flood risk precincts, *Flood Planning Constraints Categories* or floodway and areas inside and outside of the FPA. Generic controls are provided under headings similar to those used in the Draft DCP. These example DCP's are intended to provide a guide only, requiring tailoring for individual council circumstances.
- The *Flood Impact At Risk Assessment Guide, (FIRA Guide)* which outlines matters to consider when preparing and reviewing flood impact assessments for development assessment purposes. Such a guide could replace, or inform a review of Council's current requirements for the preparation of site specific flood impact assessments.

The Draft Manual and above Guides have been taken into consideration when reviewing the Draft DCP.

### Flood Planning Guideline

On January 31, 2007 the then NSW Planning Minister announced a guideline for development control on floodplains (**2007 Guideline**). An overview of the 2007 Guideline and associated changes to the EP&A Act and Regulation was issued by the Department of Planning in a Circular dated January 31, 2007 (Reference PS 07-003). The 2007 Guideline issued by the Minister at that time was in effect related to a package of directions and changes to the EP&A Act, Regulation and Manual.

This 2007 Guideline provided an amendment to the Manual. The Guideline confirmed that unless there were "exceptional circumstances", Councils were to adopt the 100 year flood as the flood planning level (**FPL**) for residential development, with the exception of some sensitive forms of residential development such as seniors living housing. That Guideline provided that controls on residential development above the 1 in 100 year flood could only be imposed subject to an "exceptional circumstances" justification being agreed to by the Department of Planning (now DPE) and the Department of Natural Resources (now also part of DPE) prior to the exhibition of a Draft LEP or Draft DCP.

The direction regarding the selection of an FPL in the 2007 Guideline did not apply to all land uses (only standard residential) and recognised the need to consider the full range of flood sizes, up to and including the PMF and the corresponding risks associated with each flood. Where there was a reason ('exceptional circumstances') a different FPL not based on the 100 year flood (plus freeboard) could also be applied with government approval. The direction did not apply to pre-existing planning controls.

More recently, the NSW Government introduced significant changes to the FRM statutory planning framework across NSW with the Implementation of the DPE Flood Prone Lands Package. These changes were initiated on 14 May 2021 and came into effect on 14 July 2021.

Review of Waverley Flood Study and Draft DCP Amendment  
Waverley Council



The Flood Prone Land Package changes were introduced in a DPE Planning Systems Circular issued to Councils in final form on 14 July 2021 and included the *Considering flooding in land use planning – Guideline* (the **2021 Guideline**).

The principal changes relate to the harmonisation of the FRM provisions of all LEPs but with important incidental implications for DCPs and flood planning maps. Notably, the prescription in the 2007 Guideline regarding the adoption of the 100 year flood as the FPL for residential development without exceptional circumstances approval was abandoned. The current Guideline now allows Council greater autonomy in determining FPLs and FPA mapping.

The 2021 Circular provided advice to Councils on the recent changes that included:

- an amendment to clause 7A of Schedule 4 to the *Environmental Planning and Assessment Regulation 2000*
- a revised local planning direction regarding flooding (for consideration in the review of Planning Proposals) issued under section 9.1 of the EP&A Act
- two LEP clauses which introduce flood related development controls (one compulsory – clause 5.21 and one optional – clause 5.22)
- all FPA maps are now deleted from LEPs
- introduction of the 2021 Guideline
- revoking of the 2007 Guideline.

Notable direction provided by the 2021 Guideline includes:

- The guideline applies to both mainstream and overland flow flooding (pg.3).
- The full range of flooding up to and including the PMF must be considered when undertaking strategic land use planning (pg.3).
- “Councils should define their FPAs and FPLs in their development control plans (DCPs) and outline if there are multiple FPAs/FPLs and where they apply. For example, a council may have a different FPAs for different catchments based on the flood risk identified through the FRM process. Council may also have different FPLs based on the land use type (for example, residential, industrial, commercial developments) and these should be documented in their DCP. Council may have a range of development controls to suit the flood constraints and different types of development” (pg.5).
- “The manual identifies the 1% AEP flood event, or an equivalent historic flood, as an appropriate starting point for determining the DFE for development controls, including for residential development. The manual allows the selection of a rarer DFE to address broad scale flood impacts in consideration of the social, economic, environmental and cultural consequences associated with floods of different probabilities” (pg.5). DFE is an abbreviation for “defined flood event” which can be added to freeboard to determine an FPL.
- “The typical freeboard for residential development due to flooding from waterways, such as rivers or creeks, is 0.5m. A lower freeboard or an alternative approach to freeboard may be

Review of Waverley Flood Study and Draft DCP Amendment

Waverley Council



used where the consequences to people and property of low probability flood events are assessed as minor through the FRM process” (pg.5).

- “Where councils propose alternative FPL’s, they are required to demonstrate and document the merits of this approach based on a risk management approach that is consistent with the FRM process and the principles of the manual” (pg.5).
- All areas where flood-related development controls apply should be mapped where flood study information is available, with publicly accessible maps (pg.7).
- It is suggested that Councils could attach their adopted flood policies, flood studies and FRMS&Ps to their DCPs to ensure they are considered in the assessment of a DA (pg.5). However, in our view this is unnecessary. Ideally the Flood Study or future FRMP should be publicly available but all relevant planning recommendations should be translated to a DCP.

Our review takes into consideration the changes introduced with the Flood Prone Lands Package, including the new 2021 Guideline.

## 2.2 Relevant State Environmental Planning Policies

No State Environmental Planning Policy (**SEPP**) has been prepared dealing specifically with the issue of flooding, but some regulate development in response to potential flood risks.

*State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* (the **Codes SEPP**) has some relevance to this report. The Codes SEPP effectively provides approval pathways as alternatives to a full DA for certain low impact development as “exempt” or “complying” development. Exempt development requires no approval provided it complies with certain criteria. Complying development must meet certain criteria but also requires an approval in the form of a complying development certificate (**CDC**) which must be issued by Council or a private certifier subject to specified conditions.

The Codes SEPP is divided into a number of “Codes” that deal with exempt development and different types of complying development. Those Codes of relevance are the Exempt Development Code (Part 2), the General Housing Code (Part 3), and the Commercial and Industrial (New Buildings and Additions) Code (Part 5A).

Relevant clauses of the Codes SEPP apply to “flood control lots” defined as:

***flood control lot*** means a lot to which flood related development controls apply in respect of development for the purposes of industrial buildings, commercial premises, dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (other than development for the purposes of group homes or seniors housing).

**Note.** This information is a prescribed matter for the purpose of a certificate under section 149 (2) [now 10.7] of the Act.

The term “Flood control lots” exist only for the purposes of the Codes SEPP. Consequently the process of “lot tagging” to identify Flood Control Lots is a practice that had initially evolved in the preparation of flood studies to assist Councils for the purposes of issuing s10.7 planning certificates. Consequently Flood Control Lot Maps are not necessarily an appropriate format for FPA maps.











































































































































































































































































































































































































































































































































