



Hawkesbury City Council
Policy

Flood Policy 2020

Adopted by Council at the
Ordinary Meeting Held on
27 October 2020

Amended 29 June 2021

Hawkesbury City Council

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1 TITLE

Flood Policy 2020.

2 PURPOSE

The purpose of this policy is to:

- a) highlight Council's position in respect of the need for a collaborative approach across all levels of government to respond to issues associated with floodplain management across the Hawkesbury-Nepean Valley, and
- b) set the information and development controls to be used for the preparation and assessment of Development Applications for land located within the Flood Planning Area to address the requirements of Clause 5.21 *Flood planning* of Hawkesbury Local Environmental Plan 2012.

3 SCOPE

Council recognises the need for a collaborative approach to floodplain management across the Hawkesbury-Nepean Valley as outlined in the Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy 2017 prepared by Infrastructure NSW. The Resilient Valley, Resilient Communities Strategy prepared by Infrastructure NSW in particular states that:

“Resilient Valley, Resilient Communities – the Hawkesbury-Nepean Valley Flood Risk Management Strategy is a comprehensive long-term framework for the NSW Government, local councils, businesses and the community to work together to reduce and manage the flood risk in the Hawkesbury-Nepean Valley.”

Whilst supporting a collaborative approach to floodplain management for the Hawkesbury-Nepean Valley, Council also recognises the importance of applying relevant, best practice measures to manage the risks from flooding associated with development on the Hawkesbury floodplain.

In this regard, this Policy provides development controls to be applied to all Development Applications for any development in the Hawkesbury City Council Local Government Area on land located within the Flood Planning Area.

The Flood Planning Area is defined as *“the area of land below the FPL (Flood Planning Level) and thus subject to flood related development controls.”* Currently within the Hawkesbury Local Government Area, the Flood Planning Area corresponds to land having a level below the 1:100 ARI flood event.

Figures 1 and 2 show the extent of flooding within the Hawkesbury Local Government Area, including the areas subject to inundation in a 1:100 ARI flood event and Probable Maximum Flood event.

This Policy does not apply in the circumstances of local overland flooding or local drainage inundation as defined in the Floodplain Development Manual and determined by Council.



HAWKESBURY CITY COUNCIL POLICY

Flood Policy 2020

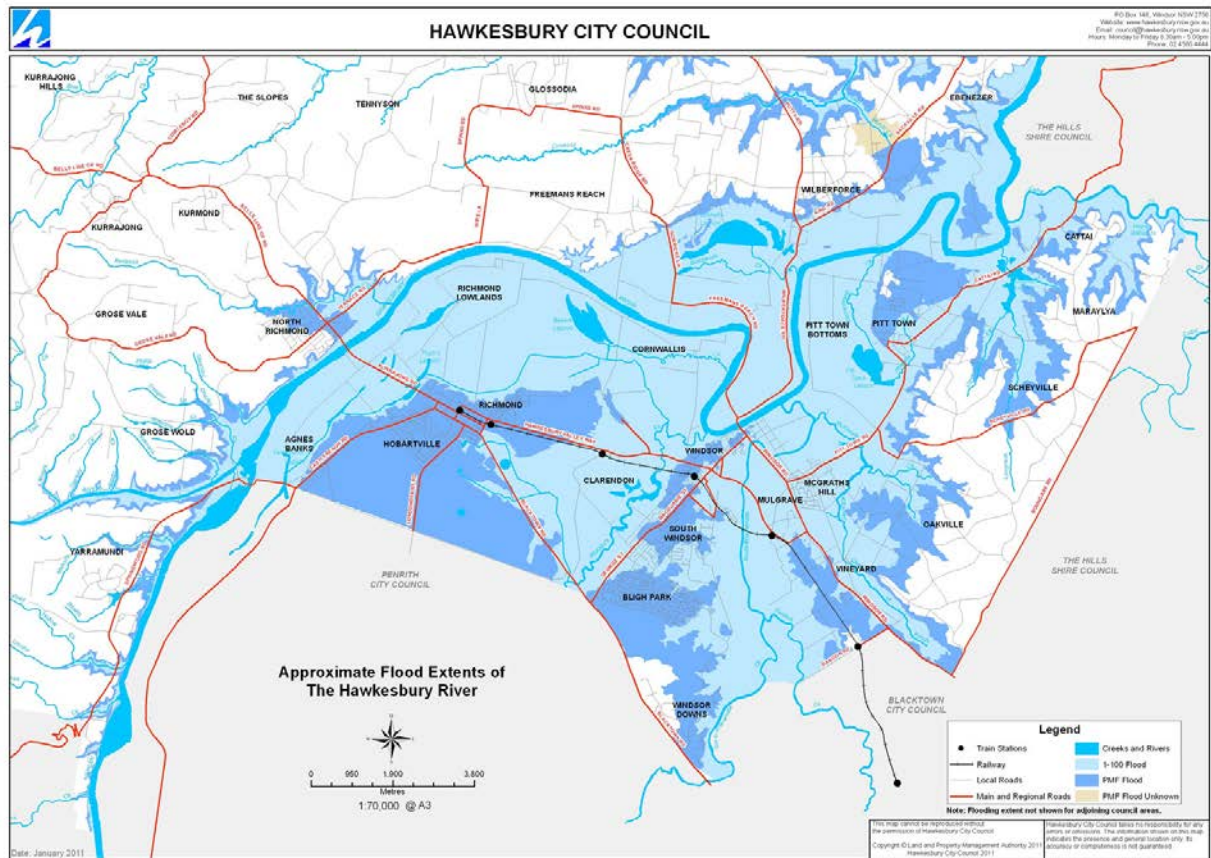


Figure 1 - Flood Extent Map – South

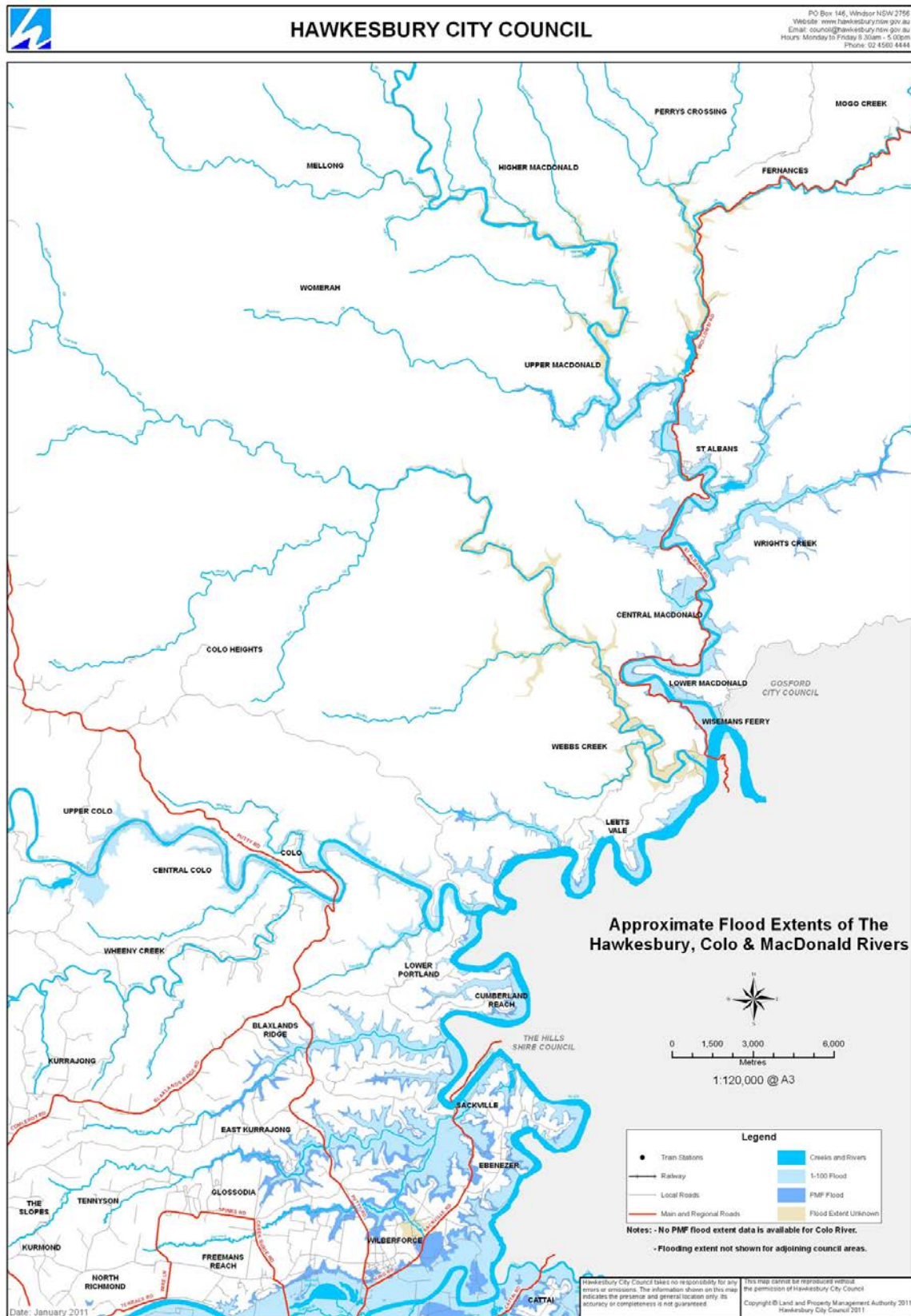


Figure 2 - Flood Extent Map - North



4 BACKGROUND

Context

The Hawkesbury-Nepean Valley has one of the most significant flood risk exposures within Australia. Infrastructure NSW's Flood Strategy *Resilient Valley, Resilient Communities* states:

"The (Hawkesbury-Nepean) Valley has a high flood hazard, with both historical and geological evidence of widespread flooding across the Valley. Climate change may further increase the severity and frequency of the flood hazard in the future.

There is also a high level of flood exposure as the floodplain is located in an area with a large and growing population, and one of Australia's most significant and diverse economies. Expanding urban development across the Valley means that flood exposure will increase in the future. Up to 134,000 people live and work on the floodplain and could require evacuation. This number is forecast to double over the next 30 years. Over 25,000 residential properties and two million square metres of commercial space are currently subject to flood risk, and this will increase significantly in the coming years.

The flood risk is heightened by a number of factors:

- *insufficient road capacity to safely evacuate the whole population in a timely fashion*
- *a fragmented approach to managing flood risk*
- *low community awareness about the flood risk.*

In addition to the above, there is a high risk of infrastructure failure of facilities and systems i.e water, wastewater, power, gas etc.

The Insurance Council of Australia considers this Valley to have the highest single flood exposure in New South Wales, if not Australia."

Within the Hawkesbury Local Government Area, the risks to life and property are significant given the depths of floodwaters and local and regional evacuation constraints. During major flood events, significant areas of land are inundated, flood islands are formed, isolating communities, and these islands have the potential to be fully inundated. Approximately 15,172 buildings are within the floodplain, 13,418 of which are residential dwellings. If evacuation does not occur, risks to life are increased through isolation. Depths of floodwaters are high within the Hawkesbury Local Government Area and therefore most existing buildings are subject to potential failure during a flood.

The last major flood in the Hawkesbury occurred in 1992, some 28 years ago with a minor flood occurring February 2020. During this period many new residents have moved into the area with no knowledge or experience of flooding in the Hawkesbury Local Government Area.

Conversely, long-time residents have not experienced flooding greater than a 1 in 30 year event for a considerable period of time.

Council recognises the need for a collaborative approach to floodplain management across the Hawkesbury-Nepean Valley as outlined in the *Resilient Valley, Resilient Communities – Hawkesbury-Nepean Valley Flood Risk Management Strategy 2017* prepared by Infrastructure NSW. The *Resilient Valley, Resilient Communities Strategy* prepared by Infrastructure NSW in particular states that:

"Resilient Valley, Resilient Communities – the Hawkesbury-Nepean Valley Flood Risk Management Strategy is a comprehensive long-term framework for the NSW Government, local councils, businesses and the community to work together to reduce and manage the flood risk in the Hawkesbury-Nepean Valley."



Council acknowledges that there are nine key outcomes of the Resilient Valley, Resilient Communities – the Hawkesbury-Nepean Valley Flood Risk Management Strategy 2017 that are being progressed or investigated, including:

- Coordinated flood risk management across the Valley
- Reduced flood risk in the Valley by raising Warragamba Dam Wall
- Strategic and integrated land use and road planning
- Accessible contemporary flood risk information
- An aware, prepared and responsive community
- Improved weather and flood predictions
- Best practice emergency response and recovery
- Adequate local roads for evacuation
- Ongoing monitoring and evaluation, reporting and improvement of the Flood Strategy.

Council also recognises the importance of providing up-to-date and relevant, best practice controls to meet the objectives and requirements of Clause 5.21 – *Flood planning of Hawkesbury Local Environmental Plan 2012*, and to clearly express how a proposed development's suitability is assessed in relation to the impacts of flooding.

Clause 5.21 of *Hawkesbury Local Environmental Plan 2012* prevents the granting of development consent unless the consent authority is satisfied that the development:

- *is compatible with the flood function and behaviour on the land, and*
- *will not adversely affect flood behaviour in a way that results in detrimental increases in the potential flood affectation of other development or properties, and*
- *will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and*
- *incorporates appropriate measures to manage risk to life in the event of a flood, and*
- *will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.*

In addition, Clause 5.21 requires the consent authority to also consider the following:

- *the impact of the development on projected changes to flood behaviour as a result of climate change,*
- *the intended design and scale of buildings resulting from the development,*
- *whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood,*
- *the potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flooding or coastal erosion.*

The development controls contained within Council's document titled 'Schedule of Flood Related Development Controls' are based on the Hazard Category in which a development will be situated, and controls are provided depending on whether the proposal is:

- new development, or
- is for the purposes of additions, alterations, intensification, rebuilding or redevelopment of an existing use, or
- if an existing use, whether or not it is within a compatible or incompatible Hazard Category.

Flood hazard is the potential for damage to property or risk to persons during a flood. It is a key tool used to determine flood severity and for assessing the suitability of future land uses.

The vulnerability of the community and its assets can be described by using thresholds related to the stability of people as they walk or drive through flood waters, or shelter in a building during a flood.



Hazard classifications provide guidance on how a flood may impact on people, vehicles and buildings.

For the purposes of the 'Schedule of Flood Related Development Controls' the hazard classifications within the Australian Disaster Resilience Handbook Collection, Guideline 7-3 Flood Hazard have been adopted and provides a general classification for flood hazard, incorporating 6 flood hazard classifications (H1 – H6). Handbook 7 and its associated guidelines are considered to be best practice in terms of flood risk management.

Whilst the development controls are based on the Hazard Category/s in which a development is situated, the controls have also been developed taking into consideration flood function (floodway or flood storage), the vulnerability of land use types, likely evacuation constraints and measures that can be implemented to minimise risk to life and flood damages.

5 POLICY DETAILS

- a) Hawkesbury City Council supports and encourages the need for regional flood mitigation measures in the Hawkesbury-Nepean Valley to be investigated and implemented by the Commonwealth and NSW State Governments and other relevant Authorities to ensure that the flood risks experienced by existing and future residents in the valley are reduced. These regional measures are too great a burden for one Council to carry and there is a need for a committed regional approach, by all relevant Authorities, to address these existing risks.

Council recognises the need for a collaborative approach across all levels of government to respond to the need for regional flood mitigation measures in the Hawkesbury-Nepean Valley.

- a) Council also recognises the importance of providing up-to-date and relevant, best practice controls to meet the objectives and requirements of Clause 5.21 – *Flood planning of Hawkesbury Local Environmental Plan 2012*.

In this regard, the requirements of Council's document titled 'Schedule of Flood Related Development Controls' are to be applied when assessing an application on flood affected land to which Clause 5.21 – *Flood Planning of Hawkesbury Local Environmental Plan 2012* applies.

6 ROLES AND RESPONSIBILITY

Authorised Officer	Roles & Responsibilities
Manager Strategic Planning	<ul style="list-style-type: none">Review and management of Policy
Manager Development Services	<ul style="list-style-type: none">Ensure Development Services Section implements Policy
Development Planners, Building Certifiers, Development Engineers	<ul style="list-style-type: none">Implementation of Policy



7 DEFINITIONS

Flood	relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam and/or local overland flooding associated with major drainage before entering a watercourse, as defined by the Floodplain Development Manual (NSW Government 2005).
Flood hazard	the potential for damage to property or risk to persons during a flood.
Flood liable land	is synonymous with flood prone land , that is land susceptible to flooding by the Probable Maximum Flood (PMF) event.
Flood planning area (FPA)	is the area of land below the Flood Planning Level and thus subject to flood related development controls.
Flood planning level (FPL)	the level of a 1:100 ARI (average recurrent interval) flood event.
Flood risk	the risk to human life and property and is the combination of the consequences of flooding and the likelihood of flooding.
Floodplain	area of land which is subject to inundation by floods up to and including the Probable Maximum Flood (PMF) event - that is, flood liable land.
Flood probability	<p>the size of a flood is described in terms of the chance or probability of that flood occurring in any 1 year, and for example can be expressed in the following ways:</p> <ul style="list-style-type: none">• 1 in 100 year flood event;• 1:100 ARI (Average Recurrence Interval);• 1% AEP (Annual Exceedance Probability). <p>Average Recurrent Interval (ARI) is measured in years:</p> <p>e.g. a 100 year ARI flood is a flood that occurs (or is exceeded) on average once every 100 years.</p> <p>Annual Exceedance Probability (AEP) is measured as a percentage:</p> <p>e.g. a 1% AEP flood is a flood that occurs (or is exceeded) on average once every 100 years. Also expressed as a 100 year event.</p>
Probable maximum flood (PMF)	Is the largest flood that could conceivably occur at a particular location. The PMF defines the extent of the floodplain.



8 RELATED DOCUMENTS

Legislation

- Hawkesbury Local Environmental Plan 2012.

Safe Work Method Statements (SWMS)

- N/A

Related policies

- N/A

Procedures

- Schedule of Flood Related Development Controls

Templates

- N/A

Guidelines

- N/A

Fact Sheet

- N/A