

Frequently Asked Questions

Camden, like other rural and urban areas, can be prone to flooding with excessive rainfall and water runoff into the rivers, creeks, and tributaries, especially when:

- River or creek banks overflow (mainstream flooding);
- Stormwater drainage is unable to cope with the inundation, causing overland flows.

Council manages land affected by flooding by:

- Identifying flood risk and flood levels through extensive studies
- Prepare floodplain risk management studies and plans that provide provisions for the management of flood prone land; and
- Assessing the compatibility of new development (and major renovations) with flood risk, thereby encouraging development that is suitable to the flood risk of the area.

The following flood documents have been updated.

- Nepean River Floodplain Risk Management Plan
- Upper South Creek Flood Study
- Flood Risk Management Policy

To assist with understanding these documents Council has assembled a list of frequently asked questions, which are discussed below.

Flooding

1. Why does Council assess flooding?

The NSW State Government has mandated that all councils conduct studies to assess what land has the potential to be flooded. This means that new developments and projects are adequately protected and do not exacerbate flooding, and that existing built areas have the ability for flood-reduction measures to be put in place.

2. Why do flood levels change over time?

Flood models are updated on a regular basis to maintain reliable forecasts, and this can result in changes in flood levels due to:

- The availability of new rainfall or ground topography information
- New floods occur, providing additional data
- Improvement in the science of flood modelling and flood modelling capabilities increase; or
- Flood mitigation works may have occurred.

3. How are flood affected properties identified?

Flood modelling by the council, which is done by specialist consultants, determines the extent of flooding in the catchment and identifies flood-affected properties. When Council obtains reliable flood information, it is included on S10.7 Planning Certificates for properties that have been marked as flood prone.

A variety of flood modelling activities are carried out by councils with the help of specialist consultants. The most sophisticated flood models are used by consultants, including:

- aerial laser surveys that accurately confirm the catchment's shape; and
- advanced two-dimensional computer models that simulate flood flows across the catchment.

Older flood studies and modelling did not have access to these more advanced models, and flood levels may change as new flood models are developed.

4. What does being flood affected mean for my property?

If your property is flood-prone, it is at risk of being affected by specific rainfall events. As a result, flood-related development controls, such as raising floor levels or using flood-resistant materials, can be imposed on a development consent.

5. How will flooding affect the value of my property?

Ultimately, the housing market decides the value of a home, which is affected by a variety of factors. Inflation, the condition and age of the house, interest rate changes, and the building of a new road or shopping centre nearby are all factors to consider.

It may be hard to determine how much a property's value would be impacted after it's been marked as flood affected. If property owners are worried that flood risk estimates will affect their property value, you may need to seek independent advice to understand the current market trends related to the impact of flooding.

Research undertaken in Australia indicates that identification of flood risk does not have a noticeable effect on property values. This is especially true in high-value markets like Sydney, where other factors are more important.

6. Can I get home and contents insurance if my house is at risk of flooding?

Yes. Flood insurance is a common inclusion in most home building and contents insurance plans. However, read your Product Disclosure Statement (PDS) to understand exactly what you're covered for.

7. What is the difference between a flood study and a floodplain risk management plan?

Flood Studies indicate flood patterns, such as historically flooded areas, water depths, hazards, and the probability of flooding in the region.

Floodplain Risk Management Studies and Plans discuss ways to reduce the effects of flooding. Drainage improvements, development controls, community awareness, and emergency response plans are all examples of this.

8. What is a 'one in 100-year flood event'?

A one-in-a-100-year occurrence is now referred to as a 1% Annual Exceedance Probability (AEP) flood, which is a flood that has a 1% chance of occurring in any one year.

9. What is the Flood Planning Level?

In flood-prone areas, the Flood Planning Level (FPL) is a height used to set floor levels for property construction. It's usually known as the 1% AEP flood level plus an acceptable freeboard (see below for a definition of "freeboard"). For vulnerable land uses such as aged care facilities, hospitals, or schools, this level could be higher. See figure 1, below.

10. What is the Freeboard?

Freeboard is a height protection margin added to a modelled flood level height to allow for unintended obstructions or other localised effects of flowing water.

Freeboard is normally 0.5 metres higher than a flood level, such as a 1% flood.

11. What is flood planning area

The flood planning area (FPA) is the area below the FPL for typical residential development. It is the area in which the majority of flood related development controls apply to most types of development.

12 What is Flood Liable Land?

Land that would most likely be flooded by the probable maximum flood (PMF). The "floodplain" for that catchment is defined by this land area.

13. What is a Probable Maximum Flood?

The Probable Maximum Flood (PMF) is the most unlikely of all floods.

The PMF has been reached by several Australian floods, and we know that extreme flood events do occur in Australia on a regular basis.

In this regard, a PMF affectation has no restrictions on how you can build or use your land, and it is most often used for emergency response and handling high-risk developments like hospitals.

14. What is a flood and/or flooding?

Flooding can be:

- High streamflow caused by an overflow from a stream, river, estuary, lake or dam; or
- A major excess of drainage water before entering a watercourse

15. What is an overland flow path?

Overland flow paths are regions that are flooded by local runoff rather than by overbank flows discharging from a watercourse. An urban street area is an example of an overland flow path.

16. What causes flooding?

There are two main types of flooding:

- **Flash flooding** - is the most common type of flooding in local areas. It is caused by heavy rainfall that exceeds the capacity of the underground drainage network resulting in flooding that happens quickly and with little warning; and
- **River flooding** - is caused by heavy rainfall in rivers that causes high water levels to spill onto nearby floodplains.

17. Have there been flooding events in the past?

Yes, over the course of recorded history, the Camden Local Government Area has been impacted by a number of major floods. This included a one-in-a-200-year event in 1873, as well as a number of minor and moderate events since 1961, including the most recent in 2022.

18. What are councils doing to manage flood risk?

Councils prepare Flood Studies and Risk Management Plans in accordance with the NSW Government's Flood Prone Land Policy and Floodplain Development Manual (2005) that include recommendations. The NSW Government and key stakeholders such as State Emergency Services provide technical and financial support for these initiatives, such as development controls, flood information, emergency management assistance, and structural engineering solutions.

19. What is climate change?

Any long-term change in average weather patterns, whether global or regional, is referred to as climate change. This includes forecasting predicted shifts in rainfall intensities in the sense of flood planning.

20. How have climate change impacts been assessed?

The Australian Rainfall and Runoff Report is a primary climate change reference document in Australia (2019). It's a long-term project that evaluates rainfall intensities across Australia and offers recommendations for dealing with climate change threats. It makes use of data from the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

For the purposes of evaluating climate change impacts, the Nepean River Floodplain Risk Management Plan employs the proposed approach of applying a 10% rise in rainfall intensities to the 1% flood.

The Upper South Creek Flood Study also similarly considered the impacts of climate change, and the impacts were noted as manageable within the freeboard allowance.

Drainage and Stormwater

21. What is stormwater?

When rainwater comes into contact with surfaces such as roofs, paved areas such as roads, gardens, and other open spaces, it becomes stormwater.

22. What is natural overland flow?

Stormwater that has flowed from neighbouring lands due to the natural slope of the land is referred to as natural overland flow. Whether on private or public land, if your property is on lower ground, you will need to consider and manage natural overland flow from higher ground.

If natural overland flow affects your property, you must not block, divert, or redirect the flow in order to cause damage or nuisance to an adjacent property.

23. What is a local drainage problem?

The pit and pipe network that drains urban areas to the nearest stream or open channel is referred to as local drainage. This network is intended to handle more common rainfall events rather than rare floods. It is common for street drainage systems to overflow from time to time.

Local drainage issues can arise anywhere and are not taken into account in the council's floodplain management plans. If the street drainage system overflows more often, there might be an issue that Council needs to address, and you can contact council.

24. What is a catchment?

A catchment is an area where water is collected by the natural landscape.

The outside edge of a catchment is always the highest point. Gravity causes all rain and run-off in the catchment to run downhill where it naturally collects in creeks, rivers, lakes or oceans

Nepean River and Upper South Creek Floodplains

25. What is flood function?

In any flood, flood-affected areas perform different flood functions. These include areas which:

- 1) allow flood waters to quickly flow through floodways
- 2) be stored of in flood storage areas or otherwise
- 3) the remainder of the flood-affected area is known as flood fringe area.

26. Floodway area

Floodways are important to convey flood waters through the floodplain. Partial blockage of these areas can cause a significant redistribution of flood flow. This can potentially result in the development of new flowpaths, increases in flood levels, extents or the length of time of inundation.

27. Flood storage area

Flood storage areas are important for storing water in the floodplain during a flood. If they are removed the loss in storage will remove their ability to temporarily store flood flows. This can result in an increase in flood flows that continue downstream exacerbating flood impacts.

28. What is a high hazard flood area?

A flood in a high-hazard flood area poses a risk to personal safety, which may include:

- Areas where the evacuation of trucks would be difficult
- Areas where able-bodied adults would have difficulty wading to safety; or
- Areas where there is a potential for significant damage to buildings.

29. What is a low hazard flood area?

The area of a flood, where should it be necessary:

- A truck could evacuate people and possessions; or
- An able-bodied adult would have little difficulty wading to safety

30. What does it mean when a flood is described as reaching a depth of 12m?

Floods in the Nepean River are measured using sensors along the river. These measure the depth of river levels above its normal resting level and information from these sensors can be found on the Bureau of Meteorology (BOM) website.

Flood depths in Camden refer to the river height above the Camden Weir level. This is located roughly halfway between the Cowpasture Bridge on Argyle Street and Macquarie Grove Bridge and is a good reference point due to its location.

Recent floods in July 2022 reached a height of 12.72m relative to the Camden Weir which is considered a Moderate flood. A Major flood would be one that exceeds 13.8m at the Camden Weir.

How to learn more?

31. Where do I go to seek additional information?

If you require any further information, please send your enquires to floodplains@camden.nsw.gov.au or contact Council on 4654 7777.

32. How can I access translation services?

If you require assistance in language translation of this FAQ, please call 131 450 or refer to the contact information on the back of the letter.

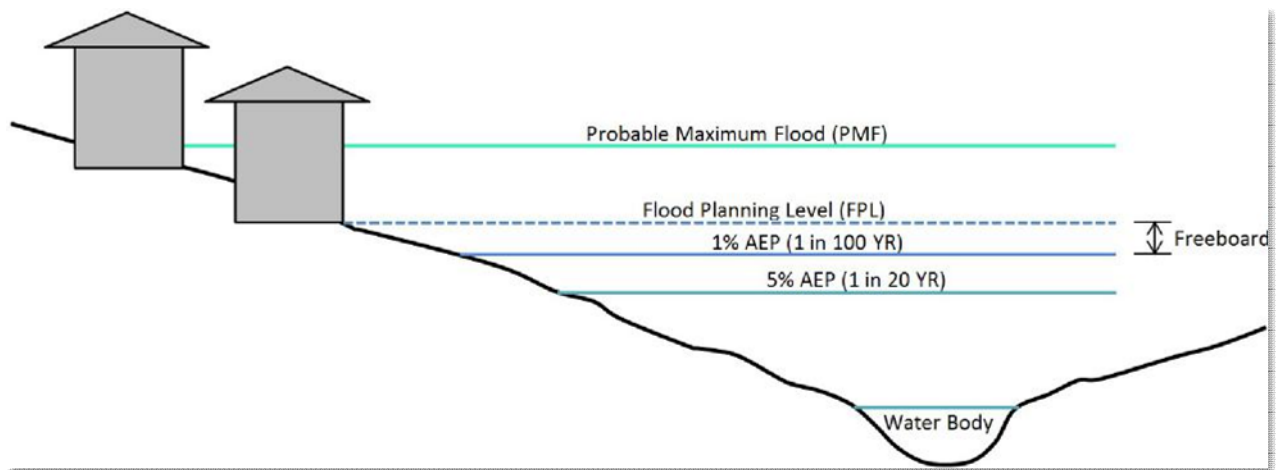


Figure 1: Flood Level Definitions