

Flooding Studies - Frequently Asked Questions

Why has Council undertaken a study to identify land subject to flooding?

Flooding causes significant damage to property and risk to life. Under NSW legislation, Councils have the primary responsibility for management of development within floodplains. To appropriately manage development, Councils need a strategic plan which considers the potential flood risks and balances these against the beneficial use of the floodplain by development. The first stage of the process is to identify what land has the potential to be affected by flooding from both intense rainfall and elevated ocean conditions and other catchment specific conditions.

A flood study will form part of an overall future Floodplain Management Plan (FMP) for the catchment. The FMP will detail how best to manage flood risks in the floodplain for the foreseeable future taking into consideration a range of environmental, social, economic, financial and engineering issues. An FMP may recommend a range of measures such as:

- improvements to flood warning and emergency management;
- engineering works (e.g. levees or detention basins) to protect existing development;
- voluntary purchase or house raising of severely flood-affected houses;
- planning and building controls to ensure future development is compatible with the flood risks and
- measures to raise the community's awareness of flooding so that they are better able to deal with the flood risks they face.

What is the 1% AEP or 100 year flood?

AEP mean Annual Exceedance Probability - the probability that the amount of rainfall over a 12 month period will exceed the long term average. Usually referred to in percentage terms, reflecting the frequency at which such a rainfall amount is likely to be encountered. 1% AEP means a rainfall event that is likely to happen, over a very long term, an average of once in 100 years. This does not mean that if a location floods one year, it will definitely not flood for the next 99 years. Nor, if it has not flooded for 99 years that it will necessarily flood the next year. Some parts of Australia have received a couple of 1 in 100 year floods within a decade of each other.

What is the Probable Maximum Flood (PMF)?

The PMF is the largest flood that could possibly occur. It is a very rare and improbable flood. Despite this, a number of historical floods in Australia have approached the magnitude of a PMF. Every property potentially inundated by a PMF will have some flood risk, even if it is very small. Under the NSW Government changes implemented during 2001, Councils must now consider all flood risks, even these potentially small ones, when managing floodplains. As part of the NSW Government changes, the definitions of the terms 'flood liable', flood prone' and 'floodplain' has been changed to refer to land inundated by the PMF.

How have the flood study maps been prepared?

As some large and rare floods have not been experienced during recorded events since European settlement, computer models are used to simulate the depths and velocities of major floods. These computer models are normally established and operated by consulting experts and are based on aerial laser surveys and photography, ground surveys and development records, ocean tide data and historical flood information. The computer models are also calibrated against actual recorded rainfall and flooding events to improve their accuracy.

My property was never classified as 'flood prone' or 'flood liable' before. Now it is. Why?

The State Government changed the meaning of the terms 'flood prone', 'flood liable' and 'floodplain' in 2001. Prior to this time, these terms generally related to land below the 1% AEP flood level. These terms now relate to all land that could possibly be inundated up to the Probable Maximum Flood (PMF).

The reason the Government changed the definition of these terms was because there was always some land above the 1% AEP flood level that was at risk of being inundated in rarer and more extreme flood events. History has shown that these rarer flood events can and do happen e.g. the 1990 flood in Nyngan, 1996 flood in Coffs Harbour and the 1998 flood in Wollongong.

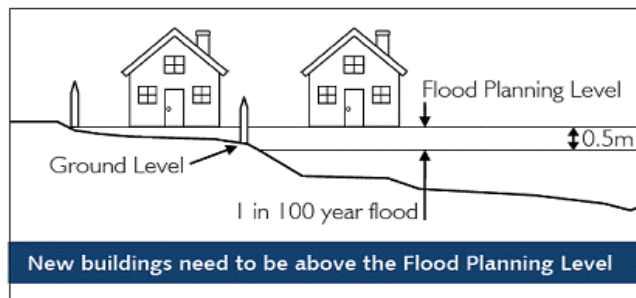
While a number of different investigations into flooding in this area have previously been undertaken, no formal flood study for the whole catchment in line with NSW State Government's Flood Policy has ever been completed. This will be the first flood study to formally identify properties at risk of flooding.

What does this mean for property owners?

For most people, there is nothing for you to do in response to this flood study, as there is no immediate change to your situation. However property owners who are planning redevelopment of their property may need to take some additional steps as part of the consent process because flood related development controls may apply. This could include the requirement to have the floor levels of new residential developments set at or above the Flood Planning Level and out of flood danger.

What is the Flood Planning Level?

The Flood Planning Level (FPL) is defined as the 1% AEP (1 in 100 year) flood level plus an appropriate freeboard or buffer to account for factors such as wind, waves or other unforeseen localised hydraulic effects. Freeboard is typically 0.5m above a flood level in accordance with the NSW Government's Floodplain Development Manual (2005). The FPL is used for planning purposes with land below the FPL considered to be flood affected and therefore subject to flood related development controls. For instance floor levels for new residential properties must be constructed at or above the FPL.



If my land is subject to flooding does this mean I cannot develop my property?

For the majority of residential properties the only effect will be that when re-development occurs the new house must be constructed with a raised floor level. For some properties flow paths across the site may need to be left open to ensure that the proposed development does not divert or dam flood waters onto adjoining properties.

Does this mean I cannot sell my property?

No

Does this affect the value of my property?

The value of any property can vary significantly depending upon a multitude of factors (desirability of an area, change in interest rates, possible construction of a nearby road or major development, increased railway noise etc). The magnitude of affectation on your property value due to it being identified as flood liable is impossible to determine. The notification may affect one potential buyer's decision to purchase a property but for another it may have no impact. Studies have shown that an actual flood event, rather than a flood planning notation, is more likely to have an affect on property values. If your property is above the Flood Planning Level, generally there will be no controls on normal residential type development and consequently impacts on land values are likely to be negligible. Ultimately the market will determine land values.

A major advantage of this process is that it should ensure that your neighbour, or even other land within the catchment is developed in such a way that it does not divert or increase flood waters onto your property that disadvantages your own property and potentially reduces its value.

Will Council compensate me for any loss of value?

Property values fluctuate for a variety of reasons over any given period of time. Council cannot predict how property values will change over time and cannot take responsibility for changes in property value. Under the NSW Government's Flood Prone Land Policy, management of flood prone land is primarily the responsibility of Councils. Under the Local Government Act, a Council is exempt from liability for flood prone land provided the information provided relating to the likelihood, nature or extent of flooding is provided in good faith.

Does this affect my property insurance?

Council is not in a position to advise you on this matter, your policy is a matter between you and your insurer. You will need to contact them directly. Flood insurance is based on the level of risk and consequent damages from flooding and this will not change as a result of Council's studies.

Flood insurance is not widely available for residential properties in Australia. Many insurance companies do not provide flood cover as part of their insurance products. Other insurance companies provide flood cover as an optional extra. Individual insurance companies typically identify flood prone land and assess risk through their own studies, analysis and flood mapping exercises, (irrespective of whether Council has undertaken a flood study) with the information then used to set policies and premiums. These calculations are outside Council's control.

Councils have responsibility for identifying and then managing the risk to life and property from flooding, and have a duty of care to disclose this information to the community. Council's catchment wide flood study represents significant advances on previous site based investigations, which all members of the community, including insurance companies, are able to access. These studies may be used by insurance companies to refine their flood profiles, potentially excluding properties that would otherwise be included through more risk-averse calculations.

Will I be able to get a home loan?

Lending standards change over time and property owners who are concerned about their ability to obtain a loan should clarify their situation with their lending authority.

I don't believe that my land is flood prone, I have lived here for many years and have never seen a flood waters on my land?

As catchment areas develop, the clearing of land, construction of buildings, roads, footpaths etc all contribute to the increase in impervious areas and subsequent rainfall runoff that would have to some extent soaked into the ground. Many long term residents may not have witnessed a large and/or infrequent flood event.

For example, prior to the 2011 Brisbane floods which caused extensive damage to the city, the last flood of the Brisbane River occurred in 1974. Thus residents who arrived after 1974 probably never considered flooding an issue until the flood of January 2011.

Can I appeal this classification?

The studies are currently drafts and are on public exhibition. Council is asking for your feedback on any aspect. The studies have been undertaken by expert hydraulic engineers with extensive experience and expertise in this field. The outcomes are based on an assessment of detailed survey, rainfall and historical flood records. If you believe that a classification has been incorrectly applied to your property, Council welcomes written submissions on the draft Policy, outlining the reasons why you believe this to be so.

The flood study maps show that only a small part of my property is affected, so why has it been classified as flood prone?

The study maps highlight which properties are expected to be affected by flooding. Even if a small portion of the property is affected, the whole property area will be classified as affected. Development controls are applied to a whole property and cannot be split, regardless of flood extent, however application of the control depends on where on the property the proposed development is located, and what type it is.

Will the Flood Mapping change over time?

Yes. All mapping undertaken by Council is subjected to ongoing review. As these reviews take place, it is conceivable that changes to the mapping will occur, particularly if new flood level information or ground topography information becomes available, however this is not expected to occur very often. From time to time the computer models are revised and predicted flood levels can change due to the following:

- new rainfall or ground topography information becomes available;
- new floods occur which provide additional data from which to fine-tune the models;
- better computer models become available as the science of flood modelling improves and computer capabilities increase; or
- flood mitigation works may have been carried out, or development within the catchment may have occurred, that was not previously simulated in the models.

Will I have to undertake a flood study when I want to develop my land?

It depends on the scale of the development. If you intend to change the use or extend the existing building or build a new building you might be required to carry out a flood study to ensure that the works do not disadvantage your neighbours. The results from Council's studies can be made available to assist in completing your study.

Has climate change been investigated in this study?

While climate change has been investigated in this flood study, it has not been included in the Flood Planning Level. The flood levels are those that could occur now, without including potential variations.

The impacts of future climate change are likely to lead to an increase in flood levels due to:

- Increases in rainfall intensity for flood producing events
- Higher initial ocean levels under sea level rise

Have tsunamis been considered?

Tsunamis have not been considered within this draft Flood Study, however, further information is available at www.ses.nsw.gov.au

What are Councils doing to manage flood risk?

The present study is the first stage in addressing catchment flooding. Management and mitigation measures will be considered in a future Floodplain Risk Management Study and Plan. However, it must be recognised that it is impossible to eliminate flooding even with the construction of large flood mitigation dams or concrete lining of channels. For this reason Land use planning through development controls is one of the most effective means of managing flood risk in a catchment.

What can I do to prepare in case of a flood?

The State Emergency Service has a useful website providing advice on how to manage flood risk. Visit www.floodsafe.com.au for more information.

Where can I find out about Council's flood policy ?

Council's flood related policy is contained in Chapter 29 of the Development Control Plan, which can be found at:

<http://www.kiama.nsw.gov.au/planning-and-development/strategic-planning/development-control-plan/kiama-development-control-plan>

What happens next?

After the public exhibition of the draft Flood Study, all comments will be reviewed and final amendments to the study made. Once adopted by Kiama Council, the study will be used in the preparation of a Catchment Floodplain Risk Management Study and Plan.

The Floodplain Risk Management Study will outline what can be done to manage flooding in this catchment, through the identification, assessment and comparison of various risk management options.

The Floodplain Risk Management Plan will contain a number of management measures and strategies. These will help guide and coordinate the responsibilities of government and the community in undertaking flood management works and initiatives. Preferred options will be publicly exhibited and subject to revision in light of community response.

Where can I get further information or make a submission on the study ?

To find out more about the draft Flood Study or to make a submission, visit Council's webpage at kiama.nsw.gov.au. Alternatively contact Kiama Council on 4232 0444 or at council@kiama.nsw.gov.au.

To make a submission, write to the General Manager at Kiama Municipal Council marked 'Submission – draft Catchment Flood Study' at:

Kiama Municipal Council - PO Box 75, KIAMA NSW 2534

Or email: council@kiama.nsw.gov.au