Your Reference: Our Reference: Related Record: Contact Person: Hours: Telephone: Fax:

F2010/00292

9.30am - 4.30pm

19 November 2010

Owner Owner's Address Owner's Address

Dear Owner

Flood Prone Land within Hornsby Shire

The NSW Government has introduced a Flood Prone Land Policy that affects all local Government areas of the State. The Policy aims to improve the protection of life and property from the threat of flood. It requires all councils to identify and map flood prone land within their local government area using guidelines set out in the Floodplain Development Manual (2005). This Policy requires that land that may be affected by flooding in certain circumstances be indentified.

As part of this process Council has now completed the Hornsby Overland Flow Study and has identified those properties that are likely to be so affected. Such properties are shown on the draft Flood Planning Maps (FPMs) as Flood Planning Areas. The Study Report and draft FPMs were considered by Council at its Ordinary Meeting held on 20 October, 2010 when it resolved to endorse for Public Exhibition for a period of 28 days, the Hornsby Overland Flow Study Report and draft Flood Planning Maps.

Council's records indicate that you own the following property in Hornsby Shire that has been identified to be designated as a Flood Planning Area in the draft FPMs:

Property No <<Formatted_House_Street_Number, Suburb, Postcode etc>>

Land identified as Flood Planning Areas in the draft FPMs are those inundated by overland flow to a depth greater than 150mm during a 100 Year Average Recurrence Interval (ARI) design storm event. The resulting flood flows may hold a significant risk to property and/or life. The areas of the Shire identified as flood planning areas are the areas between the two blue lines shown on the draft Flood Planning Maps currently on public exhibition.

Flood Planning Areas may be developed with the consent of Council provided that certain conditions that may be imposed by Council at the time of development are complied with. Any proposed development will have to be submitted under a Development Application (DA) and a hydraulic study will be required depending on what development is proposed. Letter to Property Owner re Flood Prone Land Page 2

The extent of the hydraulic study will be dependent on whether the development would be within the area affected by the overland flow.

A copy of the Hornsby Overland Flow Study Report and draft Flood Planning Maps have been placed on Public Exhibition for a period of 28 days and are available for public inspection at Council's Administration Building and libraries during business hours. The Study Report and draft FPMs are also available on Council's website www.hornsby.nsw.gov.au

A leaflet containing frequently asked questions (FAQs) about flooding, Flood Planning Areas and FPMs is attached to assist property owners in understanding the issues arising from listing of the property as a Flood Planning Area in the draft FPMs.

If you have any questions concerning Council's Overland Flow Study Report and draft Flood Planning Maps, or would like to make an appointment with a Council officer to discuss your concerns about the listing of your property, please contact Council's hotline on 9847 6940.

Written submissions will be accepted by Council regarding this matter and should be addressed to the General Manager. The closing date for submissions is Monday, 24 January 2001.

On completion of the public exhibition period and following consideration of submissions and comments a further report will be prepared for Council to consider and adopt the Study Report and Flood Planning Maps.

Yours faithfully

NICK BERMAN Mayor

Attachment: Frequently Asked Questions Leaflet (4 pages)

Public Exhibition

Draft Hornsby Overland Flowpath Study and draft Hornsby Shire Flood Planning Maps



Frequently asked questions

Why does flooding occur?

Flooding is a natural process. It happens periodically as a result of heavy rainfall in a catchment when the water level in a creek or river rises. Specifically, it occurs when the runoff generated from the storm exceeds the capacity of the drainage system.

The effects of flooding in the Hornsby Shire are magnified by the proximity of urban development to natural and modified creeks and channels. Floodwaters overflow the banks of creeks and channels inundating the floodplain which may include roads, residential, commercial and industrial properties.

What are the consequences of flooding?

Flooding causes severe economic damage and emotional distress. Flooding in urban and rural NSW is estimated to cost our economy about \$250 million each year, and the human impact is even greater.

Flooding can be dangerous to people and animals and cause damage to buildings, infrastructure and utilities. It may also cause the loss of valuable belongings and disruption of essential services. Some examples of the risks associated with flooding:

- Fast moving waters may knock down a person
- Only about 600mm of moving water can cause an average vehicle to float and wash away

 Nearly 50 percent of deaths in moving floodwaters result from people trying to escape from a flood affected area in a motor vehicle

What is flash flooding?

Flash flooding occurs following intense rainfall with resulting flood levels rising to their peak within a very short time, typically between 30 minutes and two hours. This tends to occur in steep urbanised catchments such as in the Hornsby Shire and gives residents very little warning time and little time to prepare.

What is a 1 in 100 year flood?

A 1 in 100 year flood (sometimes called a 100 year flood) is a flood that has a 1 percent (or 1 in 100) chance of occurring in any year. If an area has experienced a 1 in 100 year flood in a certain year, it does not mean that there is no chance of another 1 in 100 year flood occurring in the next 99 years. In fact, some parts of NSW have had more than one of these floods in a single decade. It is a large flood and is often used as the standard for setting flood controls on properties.

What is the Probable Maximum Flood?

The Probable Maximum Flood (PMF) is the largest flood that, based on knowledge of the characteristics of a catchment, engineers and planners consider could conceivably occur within a particular catchment. It is a very rare event, but is used for design purposes, risk assessment and disaster planning.

What is Council doing to manage the flooding problem in Hornsby Shire?

the bushland shire

Hornsby Shire Council's responsibility is to manage lands subject to flooding on two levels.

Firstly, in accordance with the NSW Government's *Flood Prone Land Policy* and the *Floodplain Development Manual 2005*, Council is responsible for formulating and implementing *Floodplain Risk Management Plans*. These plans involve catchment-wide studies that identify significant flooding issues and floodplain management studies that identify potential flood mitigation solutions and strategies. Flood mitigation options could typically involve floodplain modification, property modification and emergency response measures.

Secondly, Council has a responsibility to ensure future developments are compatible with flood hazards and do not create flooding problems in other areas. As such Council may enforce planning (development) controls such as minimum heights of floor levels above ground level and prohibiting specific land uses in areas prone to flooding.

How are floodplains managed in NSW?

In NSW, local government has the primary responsibility for controlling development on flood prone land, but the NSW Government, through the Department of Environment, Climate Change and Water (DECCW) and the State Emergency Service (SES), also has an important role to play in managing the flood risk across the State. The Environmental Planning and Assessment Act 1979 (EP&A Act) requires that a Local Environmental Plan (LEP) consider the potential for and consequence of flooding. This must be done in accordance with the Floodplain Development Manual 2005 and various Ministerial Directions under Section 117 of the EP&A Act. The flood prone land mapping has to be based on the 1 in 100 year ARI storm event plus a freeboard (usually 500mm).

The NSW Government's *Flood Prone Land Policy* and the Fl*oodplain Development Manual 2005* are directed at providing solutions to existing flooding problems in developed areas and ensuring that future developments will not create flooding problems in other areas.

The State Government subsidises flood mitigation works to alleviate existing problems and provides specialist technical advice to assist councils with their floodplain management responsibilities. The NSW Government provides technical and financial support to local councils to develop Floodplain Risk Management Plans which consist of the following stages:

- 1. Flood Study
- 2. Floodplain Risk Management Study
- 3. Floodplain Risk Management Plan
- 4. Implementation of the Plan

Read more about these stages below.

What is a Flood Study?

The first stage in the development of a *Floodplain Risk Management Plan* for a particular catchment involves a Flood Study. A Flood Study is a comprehensive technical investigation of flood behaviour for that catchment. These Flood Studies show the distribution, extent, levels and velocity of floodwaters across sections of the floodplain for different flood events including the 1 in 100 year flood and Probable Maximum Flood.

What is a Floodplain Risk Management Study?

Following a Flood Study, the next stage in the floodplain risk management process is a Floodplain Risk Management Study. The purpose of the study is to identify, assess and compare various risk management options and consider opportunities for environmental enhancements as part of mitigation works. The risk management study draws together the results of the flood study and data collection exercises. It provides information and tools to allow strategic assessment of the impacts of management options for existing, future and continuing flood risk on flood behaviour and hazard and includes the social, economic, ecological and cultural issues in addition to an assessment of costs and benefits of all options. The study also considers and informs suitable Flood Planning Levels and planning controls to guide future development.

Undertaking a Floodplain Risk Management Study is a very long and involved process.

What is a Floodplain Risk Management Plan?

A Floodplain Risk Management Plan formalises and prioritises mitigation works and other floodplain management measures that are recommended in the Floodplain Risk Management Study. The Plan is formally adopted and implemented by Council.

Scientists are warning of rising temperature and less volume and frequency of rain. Why are we going to experience flooding if there is less rainfall?

Climatologists have suggested for some time that climate change would lead to more intense rainfall globally. They suggest that while frequency of smaller rainfall events may decrease and we may experience drought conditions, more extreme events such as a 1 in 10 year event and larger may occur more often. This may result in more flooding events globally.

What is the scope of the Flood Study that has been undertaken by Council?

The Flood Study is being carried out in stages as follows:

- Stage 1 mapping the extent of flooding in urban areas, river settlements and waters edge rural areas.
- Future Stages mapping the balance of rural areas and recalibrating flood prone land mapping based on sea level rise and other climate change predictions.

This information will be used to develop planning controls as detailed below.

What is the purpose of the Overland Flowpath Study and Flood Planning Maps and the resulting planning controls?

The flooding investigation and new planning controls guide development of land in areas subject to flooding in the Hornsby Shire Local Government Area (LGA), pending the completion of Floodplain Risk Management Studies for each of the catchments comprising the overall drainage system.

The broad objectives of the new planning controls are to:

- Provide controls for the assessment of applications on land in flood prone areas.
- Alert the community to the potential hazards and extent of land affected by flooding.
- Inform the community of Council's policy in relation to the use and development of land in flood prone areas in the Hornsby Shire LGA.
- Reduce the risk to human life and damage to property caused by flooding through controlling development in flood prone areas.

What are the different types of flooding?

The flooding investigation looks at the two types of flooding which result in inundation of property in flood prone areas of the Hornsby Shire LGA – Main Stream Flooding and Local Overland Flooding (see definitions below).

What is Main Stream Flooding?

Main stream flooding is the flooding of normally dry land which occurs when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam, e.g. along the Hawkesbury River. On the Hawkesbury River Maps, the extent of Main Stream Flooding is shown by a pale blue outline.

What is Local Overland Flooding?

Local Overland Flooding results from runoff which travels as sheet flow over grassed and paved surfaces, overland flow beside natural watercourses or overland flow from underground stormwater drainage systems.

The Overland Flooding Investigation caters for two levels of Local Overland Flooding, Local Drainage and Major Drainage, which are distinguished by the depths of flooding and the potential danger to personal safety and damage to property.

At the lower end of the scale, Local Drainage problems may involve shallow depths of overland flooding, up to 150mm deep with generally little danger to personal safety. Problems could typically arise because of deficiencies in building practice where floor levels are too close to finished ground levels.

At the upper end of the scale, Local Overland Flooding may involve the flow paths of original drainage lines, whether natural or altered by urban development, and may be categorised as Major Drainage. Depths of flooding are generally in excess of 150mm and conditions may result in danger to personal safety and damage to property (premises and vehicles).

On the Overland Flow Maps, the extent of Local Overland Flooding- Major Drainage is shown by pale blue outlines.

My property is affected by the pale blue outlines on a map. What does this mean and what controls apply to it?

- If your property is affected by a pale blue outline on the Overland Flow Maps, the area within the pale blue outline is subject to Local Overland Flooding -Major Drainage.
- If your property is affected by a pale blue outline on the Hawkesbury River Maps, the area within the pale blue outline is subject to Main Stream Flooding.

For more information refer to the definitions above and maps.

Will the new planning controls affect my property?

The new planning controls apply to the areas of land which are affected by Local Overland Flooding – Major Drainage or Mainstream Flooding in their respective catchments.

Information specific to your property will be available from Council as part of a Section 149 certificate. For a property identified as a Flood Control Lot, the s149(2) or (5) Certificate would include the following clauses:

3. Complying Development

General Housing Code

Complying development under the General Housing Code <u>may not</u> be carried out on the land.

and

7A. Flood related development controls information

(1) Development on the land, or part of the land, for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls. (2) Development on the land, or part of the land, for any other purpose <u>is</u> subject to flood related development controls.

This means that if a property owner wishes to develop or undertake works on their property, A Development Application will need to be submitted and considered by Council. Provided certain requirements can be satisfied, development may be able to proceed.

What is the process for classifying land as Flood Prone Land in a LEP?

Once Council has endorsed the draft flood prone land maps for the purposes of informing Council's LEP, it will prepare a planning proposal. Council will then need to endorse and submit the planning proposal to the Department of Planning seeking a "gateway determination" to exhibit the proposal for community comment. Where a gateway determination is granted, Council will exhibit the proposal in accordance with the requirements specified in the determination, review the submissions received and report the matter to Council for final endorsement. Where endorsed, the proposal will be forwarded to the Department of Planning for the making of the plan.

What are the implications of parts of my property being identified as flood prone (i.e. a flood control lot) if I want to carry out development on my site?

If your land is identified as being a flood control lot, you will not be permitted to undertake development specified in the General Housing Code provisions of *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008* as Complying Development (i.e. by the issue of a Complying Development Certificate).

Any such development specified therein would require the submission of a Development Application (DA) to Council for approval.

What additional information will I need to provide as part of a DA?

The DA will need to address the matters for consideration in the LEP flood planning provisions and this may include the need to submit a detailed hydrological study, prepared by a suitably qualified consultant. This study will need to show the extent of any overland flowpath through the property and to set the minimum floor level for habitable and non-habitable areas of any proposed dwelling. Such studies are already required for any DA submitted to Council that is identified as being affected by an overland flowpath.

Can Council provide flood advice or a flood study for individual property owners?

Council does not currently have the resources or sufficient information to provide flood advice or to set minimum floor levels for individual properties. Council can provide calculated stormflow rates for the one in 100 year storm for use by the property owner's hydraulics consultant.

Will the value of my property be altered if it is identified as a flood control lot?

If your property is deemed to be subject to Main Stream or Local Overland Flood related planning controls the real flood risks on your property have not changed, only Council's classification has been altered. A prospective buyer of your property could have previously discovered this flood risk if they had made the appropriate enquiries.

Will I be able to get house and contents insurance if I am flood affected?

Flood cover, as part of some home and contents insurance policies, has recently been made available in NSW by some insurers. Premiums for flood cover will vary and are typically based on the assessed flood risk for individual properties which are determined by the insurer. In general, flood cover is available for properties subject to low flood risk at minimal cost. Properties with a higher flood risk may be charged a premium to reflect the likelihood and seriousness of impacts of a flood on that property.

However, it should be noted that flood cover has traditionally not been available as part of standard home and contents insurance, or has been subject to strict conditions either limiting the source of flooding or capping coverage, or both.

Contact your insurer to check if your insurance policy needs to be updated. You should confirm the availability of flood cover, and any relevant conditions and costs that might apply with your insurer.

What can I do to be flood prepared?

Visit the NSW State Emergency Service website at www.ses.nsw.gov.au for further information regarding flood preparation measures, in particular the *NSW Flood Safe Guide*.

What can I do to minimise flooding?

Flooding is a significant issue which affects the entire community, and actions by individuals may have serious consequences on others within the catchment. To play your part:

- Be aware if your property is affected by flooding or contains a potential overflow path
- Be aware of what drainage easement affects your property
- Be conscious of flow paths around your dwelling and keep them clear - be careful not to dispose of grass clippings and other garden cuttings in or near the watercourse and remove any obstructions that may cause blockages

- New fences for properties subject to flood related planning controls need to incorporate measures to allow the passage of overland flows
- Do not construct raised gardens or plant significant trees or vegetation within flow paths. Certain species such as jacaranda, poplar, willow, fig, camphor laurel, rubber trees and other types with aggressive root systems can cause pipelines to become blocked or cracked
- Do not perform any significant work (earthworks, creek bank protection, bridges, piping, etc) to the watercourse through your property without first consulting Council
- Do not lay any pipes, construct a bridge or divert a watercourse without first consulting Council. Unapproved work can increase flooding for both you and your neighbours
- Do not fill in low lying areas of your yard without seeking Council approval as this may cause water to pond and increase flooding potential on both your property and your neighbours'.

With your help, we can minimise flood risks and damages.

Who can I contact for more information?

Contact Hornsby Shire Council on 9847 6940.