Ashfield Council

Interim Development Assessment Policy 2015

Part E8

Flood Development Control Policy

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Adopted by Council 26 May 2015

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PRELIMINARY

Introduction

A flood is an overflow or accumulation of an expanse of water that submerges land. In the sense of flowing water, the word may also be applied to the inflow of the tide. Floods are a natural and inevitable event that communities must learn to live with while minimising risks to public health and safety, property and infrastructure.
This policy recognises that there are some flooding risks that require development controls and guidelines in order to reduce or eliminate their impacts.

Objectives of this Policy

The objectives of the Flood Development Control Policy are:

(a) To minimise risk to human life and damage to property.

(b) To maintain the existing flood regime and flow conveyance capacity.

(c) To enable the safe occupation of, and evacuation from, land to which flood management controls apply

(d) To avoid significant adverse impacts upon flood behaviour

(e) To avoid significant adverse effects on the environment that would cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of the river bank/watercourse.

(f) To limit uses to those compatible with flow conveyance function and flood hazard.

DEFINITIONS

Land Affected

This policy applies to land identified as being flood prone land on the Flood Control Lot Map for both the Dobroyd & Hawthorne Canal Catchment areas (see Schedule 2).

Flood prone land consists of land which:

* is in the flood planning area (mainstream flooding for both the Dobroyd & Hawthorne Canal Catchments areas); and/or
* is in the flood planning level (for local overland flooding); or

The areas identified on the Ashfield LGA Flood Control Lot Map were based on information available to Council when the map was prepared. As new information becomes available, additional land may be identified as potential flood prone land.

Flood planning Area (mainstream flooding for both the Dobroyd & Hawthorne Canal Catchments)

The flood planning area (for both the Dobroyd & Hawthorne Canal Catchments) identifies land likely to be affected by the 100-year flood (plus 500mm freeboard) for both the Dobroyd & Hawthorne Canal Catchments.

Flood planning Area (local overland flooding)

The flood planning area (local overland flooding) identifies land likely to be affected by the 100-year flood affected by local overland flooding.

NB *The 100-year flood is a flood that has a one per cent probability of occurring or being exceeded in any year. The probable maximum flood (PMF) is calculated to be the maximum flood likely to occur. Freeboard refers to a factor of safety and is expressed as a height above the flood level. Freeboard tends to compensate for factors such as wave action and localised hydraulic effects.*

Flood prone land

Land identified on the Flood Control Lot Map as flood prone land identifies land within a flood planning area, and land likely to be affected by the probable maximum flood (PMF) for both the Dobroyd & Hawthorne Canal Catchment areas.

Development Affected- Flood planning level

Flood management controls apply to land in a flood planning area; the flood development controls apply to all development that requires development consent.

All flood affected properties will require a flood certificate. Contact Council for details.

CONTROLS

1.0 General

1.1 For a proposed development, consideration must be given to such matters as the likely depth and nature of possible floodwaters, flood classification of the area (where applicable) and the risk posed to the development by floodwaters.

1.2 The applicant must demonstrate:

i. That the development will not increase the flood hazard or risk to other properties and that details have been provided of the structural adequacy of any buildings works associated with the development with regard to the effects of possible floodwaters;
ii. That the proposed building materials are suitable;
iii. That the development is sited in the optimum position to avoid floodwaters and allow evacuation; and
iv. That all electrical services associated with the development are adequately flood proofed.

1.3 All applications for development must be accompanied by a survey plan including relevant levels to AHD (Australian Height Datum), note: These surveys must use a survey datum with a minimum vertical class "D" and a vertical order of five (5) as identified on the Survey Control Information Management System on the Land and Property Information website. Consideration must be given to whether structures or filling are likely to affect flood behaviour and whether consultation with other authorities is necessary.

1.4 Compliance with flood management controls must be balanced by the need to comply with other controls in this Policy.

2.0 Controls for new residential development

2.1 Floor levels of habitable rooms must be a minimum of 0.5m above the standard flood level at that location. For areas of minor overland flow (a flood depth of 300mm or less or overland flow of 2cum/sec or less) a lower freeboard of 300mm may be considered on its merits.

2.2 Any portion of a building classified as being flood prone must be constructed from flood compatible materials (**See Schedule 1**).

2.3 Flood free access must be provided where practicable.

3.0 Controls for residential development – minor additions

3.1 Additions with a habitable floor area of up to $30m^2$ may be approved with floor levels below the standard flood level at that location if the applicant can demonstrate that no practical alternatives exist for constructing the extension above the standard flood level.

3.2 Additions greater than $30m^2$ will be considered against the requirements for new residential development (refer 2.1, 2.2, and 2.3). Note: Additions greater than $30m^2$ do not necessarily mean an increase to the existing building footprint by $30m^2$. It relates to the area which shall the demolished and rebuilt shall not exceed $30m^2$.

3.3 Any portion of a building subject to inundation must be constructed from flood compatible materials. All flood sensitive equipment must be located above the standard flood level at that location.

4.0 Controls for non-habitable additions or alterations

4.1 All flood sensitive equipment must be located above the standard flood level at that location.

4.2 Any portion of buildings subject to inundation must be built from flood compatible materials.

5.0 Controls for new non-residential development

5.1 Floor levels (except for access-ways) must be at least 0.5m above the standard flood level, or the buildings must be flood-proofed to at least 0.5m above the standard flood level. For areas of minor overland flow (a flood depth of 300mm or less or overland flow of 2cum/sec or less) a lower freeboard of 300mm may be considered on its merits.

5.2 Flood-free access must be provided where practicable.

6.0 Controls for non-residential development – additions

6.1 Where the proposed development is for an addition to an existing building on flood prone land, the development may be approved with floor levels below the standard flood level if the applicant can demonstrate that all practical measures will be taken to prevent or minimise the impact of flooding. In determining the required floor level, matters which will be considered include:

i. The nature of the proposed land use;
ii. The frequency and depth of possible flooding;
iii. The potential for life and property loss;
iv. The suitability of the building for its proposed use; and
v. Whether the filling of the site or raising of the floor levels would render the development of the site impractical or uneconomical.

6.2 Any portion of the proposed addition below the flood standard level must be built from flood compatible materials.

7.0 Controls for change of use of existing buildings

7.1 Development consent for change of use of an existing building with floor levels below the standard flood level will only be given where there is no foreseeable risk of pollution associated with the proposed use of the building in the event that the standard flood occurs.

7.2 In determining whether to grant development consent for change of use of an existing building with floor levels below the standard flood level, consideration will be given to whether the proposed development would result in increased flood risk for the property on which the building is located, or other land. In this regard, the following matters will be considered:

i. The nature of the proposed use and the manner in which it is proposed to be carried out within the building or on the land; and
ii. The foreseeable risk of pollution associated with the proposed use of the building/land in the event that the standard flood occurs.

8.0 Controls for subdivision

8.1 Development consent for the subdivision of flood prone land may depend on whether the land to which the proposed development relates is unsuitable for any development made likely by the subdivision, by reason of the land likely to be subject to flooding.

8.2 Development consent for the subdivision of flood prone land may depend on whether the carrying out of the subdivision and any associated site works would:

i. Adversely impede the flow of flood water on the land or land in its vicinity;
ii. Imperil the safety of persons on that land or land in its vicinity in the event of the land being inundated with flood water; and
iii. Aggravate the consequences of flood water flowing on that land or land in its immediate vicinity with regard to erosion or siltation.

9.0 Controls for filling of flood prone land

9.1 Development consent will not be granted to filling of flood ways or high flood hazard areas. Consideration will only be given to granting development consent to the filling of other flood prone land where:

i. Flood levels are not increased by more than 0.01m by the proposed filling.

ii. Downstream velocities are not increased by more than 10% by the proposed filling.

iii. Proposed filling does not redistribute flows by more than 15%.

iv. The potential for cumulative effects of possible filling proposals in that area is minimal.

v. The development potential of surrounding properties is not adversely affected by the filling proposal.

vi. The flood liability of buildings on surrounding properties is not increased.

vii. The filling creates no local drainage flow/runoff problems.

NB *The above criteria can only be addressed by the submission of a detailed flood study prepared by an appropriately qualified professional. Such a flood study should involve hydrologic (relating to rainfall and runoff) and hydraulic (relating to water flow in water courses) analysis of the floodplain and the effects of the proposed filling on flood levels. The report should address the seven matters listed in 9.1. Data to be collected for the flood study should include survey cross-sections of the river system (where applicable) to provide representative topographic information. The flood study should be calibrated against recorded flood data, inconsistent data should be identified, and discrepancies should be explained.*

10.0 Controls for land uses on flood prone land indentified on the Flood Control Lot Map

10.1 A site emergency response flood plan must be prepared in case of a PMF flood.

10.2 Adequate flood warning systems, signage and exits must be available to allow safe and orderly evacuation without increased reliance upon the State Emergency Service (SES) or other authorised emergency services personnel.

10.3 Reliable access for pedestrians or vehicles must be provided from the building, commencing at a minimum level equal to the lowest habitable floor level to an area of refuge above the PMF.

11.0 Controls for underground garages

11.1 Freeboard protection of 500mm must be provided within the internal driveway prior to descending into the underground garage.

11.2 Suitable pumps must be provided within the garage to allow for the drainage of stormwater should the underground garage become inundated during flooding.

11.3 Adequate flood warning systems, signage and exits must be available to allow safe and orderly evacuation without increased reliance upon the SES or other authorised emergency services personnel.

11.4 Reliable access for pedestrians or vehicles must be provided from the building, commencing at a minimum level equal to the lowest habitable floor level to an area of refuge above the PMF.

SCHEDULE 1 – FLOOD COMPATIBLE MATERIALS

Building component	
Flooring and sub-floor	• Concrete slab-on-ground monolith
	• suspended reinforced concrete slab
Floor covering	• clay tiles
	• concrete, precast or in situ
	• concrete tiles
	• epoxy, formed-in-place
	• mastic flooring, formed-in-place
	• rubber sheets or tiles with chemicals-set-adhesive
	• silicone floors formed-in-place
	• vinyl sheets or tiles with chemical-set adhesive
	• ceramic tiles, fixed with mortar or chemical-set adhesive
	• asphalt tiles, fixed with water resistant adhesive
Wall structure	• Solid brickwork, block work, reinforced, concrete or mass concrete
Roofing structure (for situations where the relevant flood level is above the ceiling)	• reinforced concrete construction • galvanised metal construction
Doors	• solid panel with water proof adhesives
	• flush door with marine ply filed with cell foam
	• painted metal construction
	• aluminium or galvanised steel frame
Wall and ceiling linings	• fibro-cement board
	• brick face or glazed
	• clay tile glazed in waterproof mortar
	• concrete
	• concrete block
	• steel with waterproof applications
	• stone, natural solid or veneer, waterproof grout
	• glass blocks
	• glass
	• plastic sheeting or wall with waterproof adhesive
Insulation windows	• foam (closed cell types)
	• aluminium frame with stainless steel rollers or similar corrosion and water resistant material
Nails, bolts, hinges and fittings	• brass, nylon or stainless steel • removable pin hinges • hot dipped galvanised steel wire nails or similar

SCHEDULE 1 – FLOOD COMPATIBLE MATERIALS (cont.)

Electrical and mechanical equipment
For dwellings constructed on land to which this DCP applies, the electrical and mechanical materials, equipment and installation must conform to the following requirements:

Main power supply
Subject to the approval of the relevant authority the incoming main commercial power service equipment, including all metering equipment, must be located above the relevant flood level. Means must be available to easily disconnect the dwelling from the main power supply.

Wiring
All wiring, power outlets, switches, must be to the maximum extent possible, located above the maximum flood level. All electrical wiring installed below this level must be suitable for continuous underwater immersion and must contain no fibrous components. Earth leakage circuit-breaker (core balance relays) or a Residual Current Device must be installed. Only submersible type splices must be used below maximum flood level. All conduits located below the relevant designated flood level must be so installed that they will be self-draining if subjected to flooding.

Equipment
All equipment installed below or partially below the relevant flood level must be capable of disconnection by a single plug and socket assembly.

Reconnection
Should any electrical device and/or part of the wiring be flooded it must be thoroughly cleaned or replaced and checked by an approved electrical contractor before reconnection.

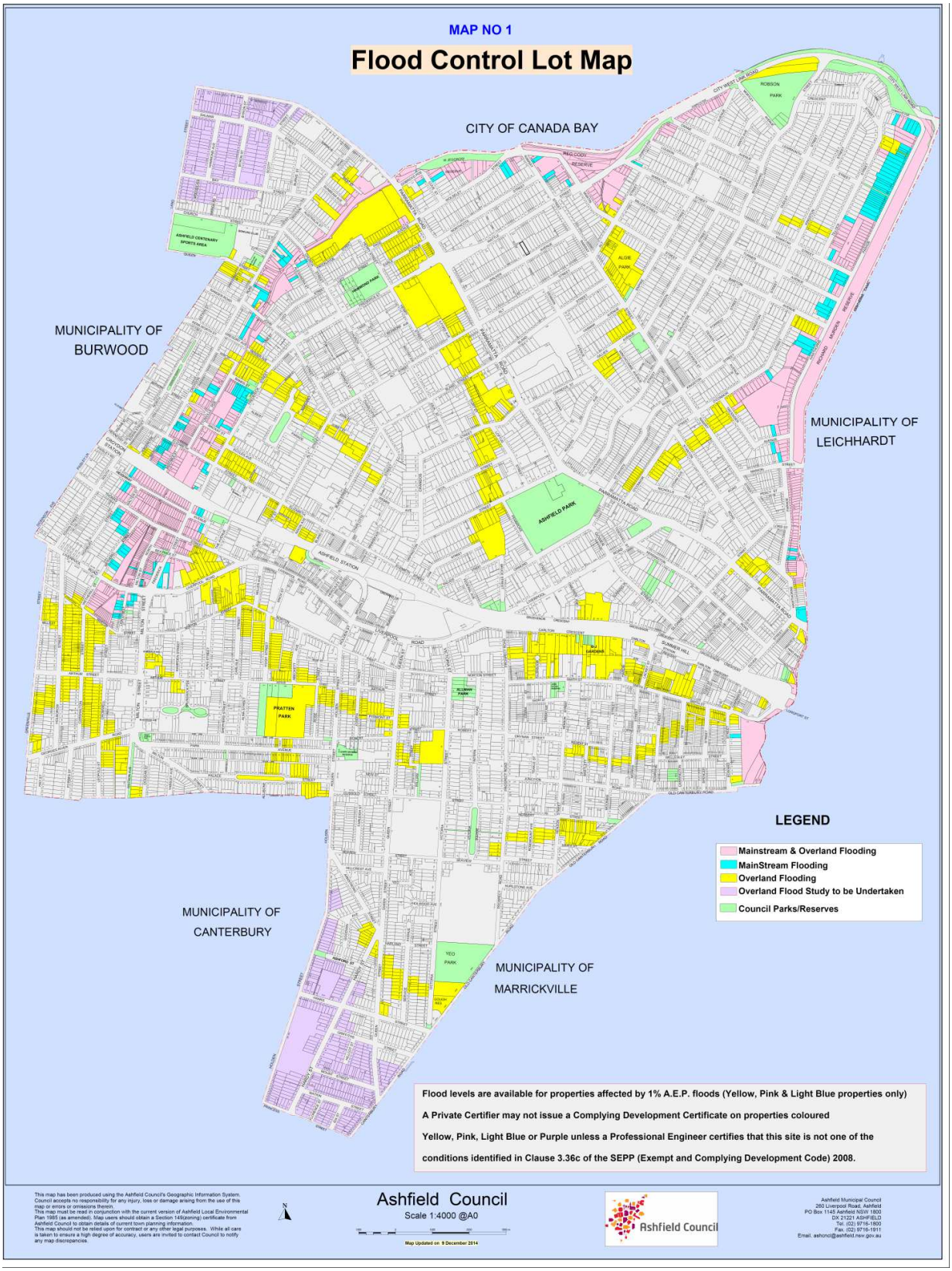
Heating and air conditioning systems
Where viable, heating and air conditioning systems should be installed in areas and spaces of the house above maximum flood level. When this is not feasible, every precaution must be taken to minimise the damage caused by submersion according to the following guidelines:

Fuel
Heating systems using gas or oil as fuel must have a manually operated valve located in the fuel supply line to enable fuel cut-off.

Installation
Heating equipment and fuel storage tanks must be mounted on and securely anchored to a foundation pad of sufficient mass to overcome buoyancy and prevent movement that could damage the fuel supply line. All storage tanks must be vented to an elevation of 600 millimetres above the relevant flood level.

Ducting
All ductwork located below the relevant flood level must be provided with openings for drainage and cleaning. Self-draining may be achieved by constructing the ductwork on a suitable grade. Where ductwork must pass through a water-tight wall or floor below the relevant flood level, a closure assemble operated from above relevant flood level must protect the ductwork.

SCHEDULE 2 – FLOOD CONTROL LOT MAP



Go to Council website to view pdf and to enlarge map.