

# **MANSFIELD SHIRE LOCAL FLOODPLAIN DEVELOPMENT PLAN**

**JUNE 2015**

## **INCORPORATED DOCUMENT**

**Incorporated within Clause 81 of the Mansfield Planning Scheme Pursuant to  
Section 6(2)(j) of the *Planning and Environment Act 1987***

### **1.0 RATIONALE FOR A LOCAL FLOODPLAIN DEVELOPMENT PLAN**

This local floodplain development plan has been prepared under the Mansfield Planning Scheme.

The plan establishes development criteria for buildings and works, and subdivision within areas as shown under the Urban Floodway Zone (UFZ), Floodway Overlay (FO), and Land Subject to Inundation Overlay (LSIO) that are part of the Mansfield Planning Scheme.

This plan provides a performance-based approach to the assessment and determination of planning permit applications. An application for a planning permit to use or develop land affected by the UFZ (Clause 37.03) and to develop land affected by the FO (Clause 44.03) or LSIO (Clause 44.04) of the Mansfield Planning Scheme must be consistent with the performance-based criteria established by this local floodplain development plan.

### **2.0 BASIS OF THE PLANNING CONTROLS**

#### **2.1 Flood History**

The Ford Creek floodplain has had a history of flooding, with recent significant flooding events recorded in 1975 and 1993. Those two floods led to flooding of existing development in low lying areas including the inundation of four houses that were occupied. The 1975 flood event is considered to be the highest flood experienced since records commenced in 1970.

The 1975 flood peaked at 12.20am on 18 September with a peak flow of 232m<sup>3</sup>/s and had receded to 77m<sup>3</sup>/s by 6am on the same day. The flood was over within a period of about 12 hours during the night.

In comparison, the flood in 1993 peaked at 12.30am on 4 October with a peak flow of 167m<sup>3</sup>/s. Peak flow had receded to 67m<sup>3</sup>/s by 6.30am on the same day.

The 1993 flood was similar to the 1975 flood in that it rose and fell during the night.

#### **2.2 Flood Impacts**

Impacts of major floods usually result in substantial rural and infrastructure flood damages. Flood impacts for FO areas are greater than LSIO areas, as the velocities, depths and frequency of flooding are generally greater.

Only four occupied houses have been confirmed as being subject to above floor flooding.

### **2.3 Flood Information**

The extent and likely impacts of flooding in the Mansfield Township were initially determined by the Mansfield Flood Study (November 2005) and its Extension Study (April 2006). These studies were replaced by the Mansfield 1% AEP Flood Mapping Project (June, 2014) which covers additional floodplain areas.

The duration of flooding can vary significantly with each flood. The rate at which floodwaters rise and fall depends on several factors, namely the shape of the floodplain and associated catchment, and the magnitude and duration of the flood. Duration of major floods is typically one to two days and longer in low-lying areas.

### **2.4 Application requirements**

Unless the floodplain management authority has advised otherwise in writing, every application for primary or secondary consent to construct a building, to construct or carry out works, or to subdivide land under Clauses 37.03 (UFZ), 44.03 (FO), or 44.04 (LSIO) of the Mansfield Planning Scheme must be consistent with this local floodplain development plan.

Applicants may attach a valid formal advice letter from the floodplain management authority in support of their application.

All applications must be accompanied by plans and supporting documents, including photographs, that contain, to the extent that in the opinion of the responsible authority is relevant, the following information:

- Whether the proposed development could be located on flood-free land or land with a lesser flood hazard.
- Whether the proposal is likely to adversely impact on floodplain and waterway environs including surface and ground water quality.
- The boundaries, dimensions, orientation, slope and elevations (drawn to scale) of the site.
- Location, layout, size, elevations (drawn to scale) and use of existing and proposed buildings and works, including subdivision, on the site and on surrounding properties.
- Relevant existing and proposed ground levels of the site, to AHD, and the difference in levels between the site and surrounding properties.
- Floor levels of all existing and proposed buildings to Australian Height Datum (AHD).

- Details of existing and proposed internal driveways and pathways and their height in relation to the nominated flood level for the site.
- Construction details of all buildings and works, including fences, and driveways.
- Adjoining roads, internal driveways, and access tracks.
- Location of significant environmental values including flora, fauna, waterways and wetlands on the site and surrounding properties.
- Details of the measures to be used to reduce the susceptibility of the development to flood damage.
- Compensatory earthworks, associated with cut-and-fill earthworks within greenfield sites, must be created with an additional 30% of flood storage (i.e., factor of cut to fill to be at least 1.3) that must be self-draining. The statement of compliance will only be considered from as constructed plans showing ground levels to AHD of all fill and borrow areas, depths of cut and height of fill, and calculations showing the net amount for of cut and fill volume is balanced by a factor of 1.3. Fill must not be placed within the identified 100-year ARI floodplain or determined by the floodplain management authority and must be sited with the development area. Furthermore, hydraulic assessment may be required in sensitive areas to ensure equivalent hydraulic capacity is achieved.

### **3.0 PERFORMANCE CRITERIA**

#### **3.1 Floodway Overlay and Land Subject to Inundation Overlay**

##### **Buildings**

Applications for new or replacement buildings must satisfy the following criteria:

- New buildings must be on the highest available natural ground.
- New or replacement buildings must be constructed to minimise potential for disrupting floodwater flow.
- New dwellings (excluding replacement dwellings) must be sited on land where the 100-year Average Recurrence Interval (ARI) flood depth is less than 300mm above the natural surface level, and have an access way from the dwelling to outside the floodplain that has a 100-year ARI flood depth no more than 300mm.
- A single dwelling on a single lot if the site is determined as an infill area, which is generally defined as a single lot surrounded by existing buildings on at least two sides, to the satisfaction of the floodplain management authority.

- The floor level in a new dwelling must be finished at least 300mm above the 100 year ARI flood level as determined by the floodplain management authority. This level is known as the Nominal Flood Protection Level (NFPL).
- New or replacement buildings must be aligned with their longest axis parallel to the direction of floodwater flow unless it can be demonstrated that this cannot be practically achieved and/ or the floodplain management authority has advised in writing that an alternative alignment is acceptable.
- Dwellings must use water resistant materials up to NFPL.
- Dwelling(s) and associated infrastructure must be consistent with the Guidelines for the Protection of Water Quality (NEPRC, 2001).

### **Retail, Office and Industrial Building(s)**

- The floor level of a new industrial, retail or office building (including a replacement building), must be set at least 300 mm above the 100-year ARI flood level (nominal flood protection level) unless the applicant can demonstrate to the responsible authority and the floodplain management authority that this requirement cannot be practically achieved. A written design response statement must accompany the application to justify a proposed floor level below the nominal flood protection level. Where relevant, the design response statement must include:
  - Relationship of the proposed building floor level to the floor levels of adjoining buildings, access-ways (vehicle and pedestrian) and street footpaths levels, which demonstrate transport and pedestrian access into the proposed building as impractical. Submitted survey levels must be to Australian Height Datum, by a licensed surveyor.
  - Plans and elevation drawings of the building and surrounding areas showing maximum allowable ramping grades to meet relevant Australian Standards and Building Regulation and Codes, which achieve the highest possible floor level.
  - Plans showing and specifying flood proofing arrangements up to the nominal flood protection level for retail or office buildings.
  - Plans showing and specifying electrical fitting located at least to the nominal flood protection level.
  - Plans showing adequate storage areas and shelving above the nominal flood protection level for the storage of valuable goods and hazardous materials.
  - Plans showing placement of flood markers inside and outside of the building showing the 100-year ARI flood and other historical flood levels.
  - A flood response action plan which sets out procedures and actions to minimise flood damage, risk to occupants, and demands on emergency services.

- Outbuildings, including sheds and garages, should be:
  - Aligned with their longest axis parallel to the direction of flood water flow;
  - Designed to minimise damage caused by flooding to the structure and its contents, such as by raising floor levels, using water resistant materials and raising electrical fittings above floor level.
- The size of building fill pads must be limited to as near as practicable to the building exterior and no more than two metres beyond the building footprint.

### Extensions to existing dwellings

- Where practicable, dwelling extensions should be aligned with their longest axis parallel to the direction of floodwater flow, and/or in the shadow of the existing dwelling where floodwater is already restricted. Extensions can be singular or multiple but collectively must not exceed the sizes outlined in the Table below. Any extension/s not in accordance with the Table below requires the **entire** extension to be set at least to the NFPL as determined by the floodplain management authority.

### Dwelling extensions at the commencement of the planning scheme on 1 May 2003

Abbreviations: EFL: Existing floor level. 1% FL: 1% Annual Exceedance Probability (AEP) flood level (or 100-year flood level).				
Size of Dwelling Extension	<b>Calculate level difference by using (EFL – 1%FL). Where the calculated level difference is:</b>			
	<b>300 mm and lower</b>	<b>Less than zero up to -300 mm</b>	<b>Between zero and +300 mm</b>	<b>Greater than +300 mm</b>
	<b>Allowable Extension (Yes/No)</b>			
<b>Up to 20 m<sup>2</sup> #</b>	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes <sup>^</sup>
<b>20 – 40 m<sup>2</sup> *</b>	No	Yes <sup>^</sup>	Yes <sup>^</sup>	Yes <sup>^</sup>
<b>40 – 80 m<sup>2</sup> *</b>	No	No	Yes <sup>^</sup>	Yes <sup>^</sup>
<b>Greater than 80 m<sup>2</sup></b>	No	No	No	Yes <sup>^</sup>

# No floor level survey required.

\* A dwelling extension between 20 and 80 m<sup>2</sup> requires a survey of the existing floor level to metres AHD, to be submitted to the floodplain management authority (Goulburn Broken CMA) for assessment.

<sup>^</sup> The entire floor extension must be set no lower than the existing ground floor level.

### **Subdivision**

Subdivision applications for land that are either partly or wholly within the LSIO, must not create new lots, unless it can be demonstrated that:

- There is an adequate building envelope on each lot (which must be formally defined on the plan of subdivision) where the inundation depth is determined to be less than 300mm.
- There is an adequate building envelope on each lot that is consistent with the Guidelines for the Protection of Water Quality (NEPRC, 2001).
- Access to the building envelope does not traverse land where the inundation depth is determined to be more than 300mm.

### **Works**

Application for works:

- Earthen land fill at the site of a new building or a building extension should be no more than two (2) metres from the building footprint.
- Designed to protect the immediate surrounds of existing habitable dwellings (such as an earthen levee), where the floor level is below the 100-year ARI flood level, must not enclose an area of more than 1,000m<sup>2</sup> including the footprint area of works.

## **4.0 APPLICATION REQUIREMENTS**

### **4.1 Flood Risk Report**

Unless the floodplain management authority has advised otherwise in writing, in addition to the minimum application requirements stated above, any application that is not consistent with this local floodplain development plan must be accompanied by a flood risk report consistent with the requirements set out under Clauses 37.03-4 and 44.03-3 of the Mansfield Planning Scheme.

## **5.0 REFERENCES**

Mansfield Flood Study (EarthTech, November 2005)

Mansfield 1% AEP Flood Mapping Project (GBCMA, 2014)

Guidelines for the Protection of Water Quality (NEPRC, 2001)

Planning Permit Applications in open potable water supply catchments (DSE, 2012)

Planning Practice Note 37: Rural Residential Development (DTPLI, 2013)

Urban Stormwater: Best Practice Environmental Management Guidelines (CSIRO, 1999)

Planning Practice Note 11: Applying for a Planning Permit under the flood provisions – a guide for councils, referral authorities and applicants (DOI, 2000)

Planning Practice Note 12: Applying the Flood Provisions in Planning Schemes – a guide for councils (DPCD, 2012)