

# CAMPASPE LOCAL FLOODPLAIN DEVELOPMENT PLAN

## PRECINCT OF ECHUCA, OCTOBER 2010

### 1.0 Application

This local floodplain development plan applies to the floodplains of Echuca as shown on the attached plan, and which is within either the Urban Floodway Zone, Floodway Overlay or Land Subject to Inundation Overlay of the Campaspe Planning Scheme (or any other area known to be subject to inundation by flooding). This local floodplain development plan has been prepared to provide a performance-based approach for decision making that reflects local issues and best practice, including flood risk assessment, in floodplain management.

### 2.0 Flood History

Echuca has a long history of flooding. The largest flood since European settlement occurred in 1870 and this was larger than a 100-year ARI event. In the twentieth century major floods occurred in 1916, 1917, 1956, 1974, 1975 and 1993. The 1975 event caused substantial flood damages.

### 3.0 Flood Information

Echuca experiences flooding from two rivers, namely; on the western side from the Campaspe River and on the eastern side from the Murray River. The extent of flooding has been determined from flood mapping completed in 2000 by NRE. The project made use of a flood study for Echuca, historic flood levels documented in past floods, aerial flood photography and surface level information. FO, LSIO and UFZ areas are based on the relative flood risk assessed for different parts of the floodplain, considering factors such as flood depth, velocity, natural storage, flood frequency and flood duration. Levees along the Murray River now protect Echuca from floods up to a repeat of the 1975 (33-year ARI). Levees are also located along the east side of the Campaspe River offering protection up to 100-year ARI flood to adjacent areas.

At Echuca West, which is located on the Campaspe River floodplain, properties rely on private levee protection that is inadequate for major floods. In 1975, floodwaters up to 1 m deep occurred for a significant period of time and in a 100-year event, the depth and duration of flooding will be much greater.

Depending on the source of flooding, the low-lying areas within Echuca are at risk of prolonged flooding when floods overtop the levees. This will generally occur during floods that exceed the design levee flood protection level. The eastern parts of Echuca are also liable to backwater flooding from the Southern Cross Depression.

### 4.0 Flood Impacts

Flood impacts in the area are significant, resulting in road closures, loss of access for residents, disruption to schools, property isolation, risks to emergency personnel during sand bagging and evacuation operations and damage to buildings constructed below flood level. During major floods, there are also likely to be substantial rural and infrastructure flood damages. There is reasonable flood warning time for this area. However the timing of levee breaches is unpredictable. Flood impacts for UFZ and FO areas are generally greater than LSIO areas, as the velocities, depths and frequency of flooding are generally greater.

## 5.0 Development Requirements

An application to construct a building, construct or carry out works or subdivide land, must be accompanied by four sets of plans and supporting documents that demonstrate the following relevant development requirements have been met.

Where relevant, the supporting documents and plans (drawn to scale) must show the following:

- The boundaries and dimensions of the property.
- A regional locality plan showing the property whereabouts within the region, including roads, streams and other prominent land marks.
- The layout plan of the existing and proposed building, works or subdivision boundaries.
- Floor level of any existing and proposed buildings to Australian Height Datum.
- Natural ground levels of the proposed dwelling site to Australian Height Datum, taken by a licensed surveyor.
- Natural ground levels along access routes to flood free land (as indicated by the planning scheme flood overlays and zone) to Australian Height Datum, taken by a licensed surveyor. The access route includes access along any relevant government road to the property and then to the proposed dwelling location.

## 6.0 General Development requirements for the LSIO and FO

### 6.1 Dwelling

- a new dwelling must not obstruct natural flow paths or drainage lines.
- the construction of a dwelling (single or multi-dwellings), including a replacement dwelling, must not be located closer than 50 metres to an existing river levee, unless the purpose of the levee is to protect a dwelling, or the levee is less than 1 metre in height.
- the floor level of any new single dwelling, must be set at least 300 mm above the 100-year ARI flood level or a higher level set by the responsible authority.

### 6.2 Dwelling Extensions

- where a dwelling extension (or multiple extensions) is greater than 20 m<sup>2</sup> and below the nominal flood protection level the owner must:
  - use water resistant materials up to the nominal flood protection level.
  - within the **FO** areas obtain approval from the responsible authority and the floodplain management authority.
- the construction of the ground floor area of any dwelling extension (single or multiple), which is more than 300 millimetres below the 100-year ARI flood level and greater than 20 m<sup>2</sup> to the existing dwelling at 1<sup>st</sup> October 1998, must be set at least to the nominal flood protection level as determined by the floodplain management authority or a higher level as determined by the responsible authority.
- the construction of the ground floor area of any dwelling extension (single or multiple) between the 100-year ARI flood level and 300 millimetres below the 100-year ARI flood level, must not be more than 40 m<sup>2</sup> greater than the existing dwelling at 1<sup>st</sup> October 1998. Where a dwelling extension (or multiple extensions) is greater than 20 m<sup>2</sup> and below the nominal flood protection level the owner must:

- enter into an agreement with Council under Section 173 of the *Planning and Environment Act 1987*, stating that combined ground floor area of the constructed extension together with any future extensions, must not be lower than the highest existing ground floor level, and must not exceed 40 m<sup>2</sup>. Extensions beyond 40 m<sup>2</sup> must be set at least to the nominal flood protection level.
- the construction of the ground floor area of any dwelling extension (single or multiple) between the 100-year ARI flood level and the nominal flood protection level, must not be more than 80 m<sup>2</sup> to the existing dwelling at 1<sup>st</sup> October 1998. Where a dwelling extension (or multiple extensions) is greater than 20 m<sup>2</sup> and below the nominal flood protection level the owner must:
  - enter into an agreement with Council under Section 173 of the *Planning and Environment Act 1987*, stating that combined ground floor area of the constructed extension together with any future extensions, must not be lower than the highest existing ground floor level, and must not exceed 80 m<sup>2</sup>. Extensions beyond 80 m<sup>2</sup> must be set at least to the nominal flood protection level.

## **7.0 Development Requirements for the UFZ**

### **7.1 Buildings**

- where no more than 50% of the existing building has been damaged or destroyed, the construction of the replacement ground floor area must not be more than 20 m<sup>2</sup> greater than the destroyed ground floor area of the pre-existing dwelling on 1<sup>st</sup> October 1998 and must be set at least 300 mm above the 100-year ARI flood level or a higher level set by the responsible authority.
- the construction of the floor area of any building extension (single or multiple) must not be more than 20 m<sup>2</sup> greater than the ground floor area of the pre-existing building on 1<sup>st</sup> October 1998, except with the consent of the floodplain management authority.
- new buildings must not obstruct natural flow paths or drainage lines on land located within the zone.

### **7.2 Works**

- New earthworks must not obstruct the natural flow paths or drainage lines.

## **8.0 Particular Development Requirements for Residential, Industrial, Township and Business Zone areas**

### **8.1 A Single Dwelling within LSIO and FO**

- the construction of a new single dwelling on a lot must be sited on land where the 100-year ARI flood depth is less than 0.5 metres above the natural surface level, and is less than 0.5 metres above the natural surface level along the defined access route to the dwelling site unless a lot is an infill site defined as a lot which is surrounded by existing dwelling, industry, commercial type buildings within 50 metres on at least 3 sides.

## **8.2 Industrial, Retail or Office Buildings within LSIO**

- 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 can not 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.

## **8.3 Subdivision within FO and LSIO**

- land is subdivided to realign the boundaries of existing lots except if the 100-year ARI flood depth is less than 0.5 metres above the natural surface level, and is less than 0.5 metres above the natural surface level along the defined access route to all lots.

## **9.0 Particular Development Requirements for FO or LSIO within rural areas**

### **9.1 Dwelling**

- the construction of a new single dwelling on a lot must be sited on land where the 100-year ARI flood depth is less than 0.5 metres above the natural surface level, and is less than 0.8 metres above the natural surface level along the defined access route to the dwelling site, unless a lot is greater than 80 hectares.
- the construction of a new single dwelling on a lot, including a replacement dwelling must be sited on the highest available ground unless the applicant can demonstrate to the satisfaction of the responsible authority and floodplain management authority that an alternative site is more suitable.

## **9.2 Buildings (other than dwelling, Industrial, Shop, and Retail Buildings)**

- the construction of any new non habitable building must be sited on the highest available ground unless the applicant can demonstrate to the satisfaction of the responsible authority and floodplain management authority that an alternative site is more suitable.
- any non habitable building must be aligned so that their longitudinal axis is parallel to the predicted direction of flood flow.

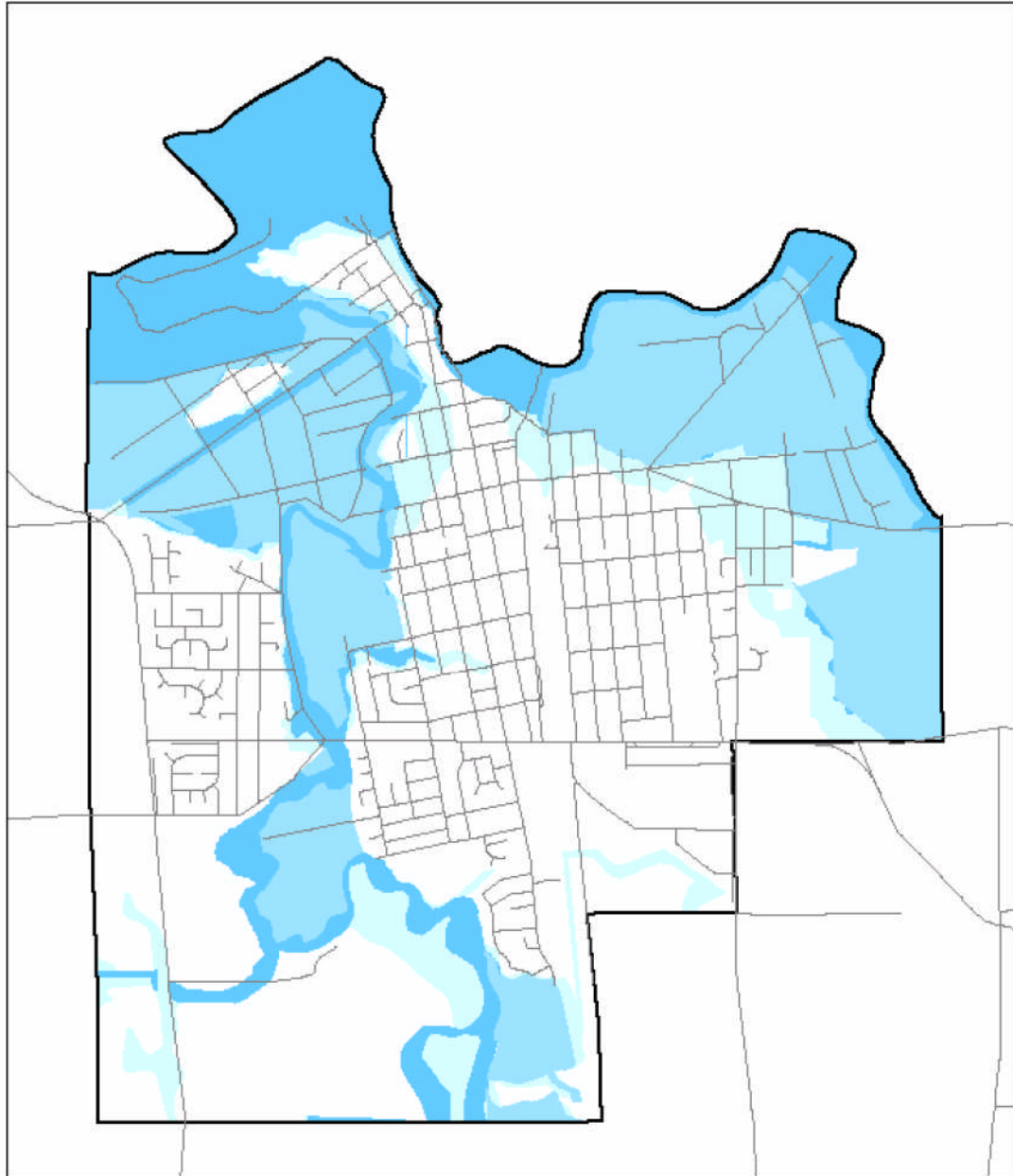
## **9.3 Works**

- any earthworks do not obstruct natural flow paths or drainage lines on land located within the overlay.
- any earthen land fill at the site of a new building or a building extension should be no more than 2 metres from the building footprint.
- any works that are designed to protect the immediate surrounds of existing habitable dwellings, where the floor level is below the 100-year ARI flood level, and do not enclose an area of more than 1,000 m<sup>2</sup> including the footprint area of works.

## **9.4 Subdivision**

- any subdivision does not increase the number of lots, except for the purposes of a lot excision agreed to by the responsible authority and the floodplain management authority, or any subdivision located partly within FO or LSIO is structured so that:
  - new lot boundaries (other than existing and/or realignment of lot boundaries) are sited on land where the 100-year ARI flood depths are less than 0.5 metres; and
  - each lot is accessible via a defined access route where the 100-year ARI flood depths are less than 0.8 metres.

## Campaspe Local Floodplain Development Plans Precinct of Echuca



### LEGEND

-  Roads
-  Echuca Precinct
-  LSIO region
-  UFZ region
-  FO region



These maps showing FO, LSIO & UFZ areas are Indicative only and not to be used as a substitute over the planning scheme maps.



PREPARED BY: PLANNING DATA AND MAPPING TEAM  
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