Appendix D

Example Local Floodplain Development Plan

YELLOW RIVER PRECINT, SHIRE OF GUMNUT (2012)

Application

This local floodplain development plan has been prepared and is an incorporated document under the Gumnut Planning Scheme.

The plan provides requirements for buildings and works and subdivision in the Yellow River Precinct in Gumnut Shire shown on Figure 1. An application for a planning permit under the Floodway Overlay (FO), Land Subject to Inundation Overlay (LSIO) and Urban Floodway Zone (UFZ) must be consistent with this local floodplain development plan.

Flood history

Rural flooding in the Shire is frequent, with relatively high flood depths and velocities in the active floodway areas. The Yellow River has a long history of flooding, with major floods in this century occurring in 1916, 1934, 1952, 1974 and 1993. During the 1993 flood, there were substantial losses to stock, fencing and crops in rural floodplain areas, and 600 urban properties were inundated in Johnsville.

Floodwater overflows from the Yellow River during events greater than the 10 per cent AEP flood. In a 1 per cent AEP (1 in 100 year) flood, floodwater up to 2 km in width may spread across the floodplain.

Urban development in Johnsville began in the 1920s without proper planning strategies for flood management. Over time, urban growth in the township has progressively obstructed floodplain land, diminishing its ability to convey, store and drain floodwater. This inappropriate development has increased both flood levels and flood risk leading to severe consequences like the 1993 flood, which submerged parts of the town in up to 2 m of water.

Flood information

Figure 1 completed by the Catchment Management Authority in 2012 shows the extent of flooding of the Yellow River. The project made use of historic flood levels documented in past floods, aerial photography, and ground level information. UFZ, FO and LSIO areas are based on the relative flood risk assessed for different parts of the floodplain, considering factors such as flood depth, velocity, natural storage and warning time.

Flood impacts

Flood impacts in the FO areas of Gumnut Shire are significant, resulting in road closures, loss of access for rural communities, stranding of livestock and soil erosion.

Flood impacts in the UFZ of Johnsville are also significant, resulting in road closures, loss of access for urban residents, risks to emergency personnel during sand-bagging and evacuation operations, and damage to buildings constructed below the flood level.

Flood impacts in both the rural and urban LSIO areas are less than in the floodway areas covered by the FO and UFZ. However, urban flood damage in the urban LSIO area of Johnsville can still be considerable because of the high density of development.

Development requirements for the Floodway Overlay in rural areas

Dwellings

- No more than one dwelling is permitted per lot, provided the average dwelling density is not less than one dwelling per 5 hectares.
- A new dwelling should not be permitted on a lot if the 1 per cent AEP (1 in 100 year) flood depth at the proposed house site, or along the accessway to the house site from a main road, is more than 0.5 m above the natural surface level.
- The minimum floor level of all new dwellings, or of extensions greater than 20 m2 to existing dwellings, is 300 mm above the 1 per cent AEP (1 in 100 year) flood level.

Commercial and industrial buildings

- New commercial and industrial buildings should not be permitted.

All buildings

- Buildings should be aligned with their longitudinal axis parallel to the direction of flood.
- The design of a building should minimise the 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 flood level.
- Building pads should be restricted as near as practicable to the building envelope.

Earthworks

- A permit is not required for earthworks which would raise the natural surface levels by less than 100 mm.
- Significant earthworks, including levees and raised roads are not permitted.
- If requested by the floodplain management authority, a hydraulic impact assessment by an appropriate specialist consultant must be undertaken for proposed earthworks which would raise natural surface levels by more than 100 mm (other than building pads and works to protect the immediate surrounds of existing dwellings).

Development requirements for the Land Subject to Inundation Overlay in rural areas

Subdivision

- Any new lot must be at least 5 hectares.

Dwellings

- No more than one dwelling should be permitted per lot, provided the average dwelling density is not less than one dwelling per X hectares.
- A new dwelling should not be permitted on a lot if the 1 per cent AEP (1 in 100 year) flood depth at the proposed house site is more than 0.5 m above the natural surface level, or if the flood depth along the accessway to the house site from a main road is more than 0.8 m above the natural surface level.
- The minimum floor level of all new dwellings is 300 mm above the 1 per cent AEP (1 in 100 year) flood level.
- The minimum floor level of extensions to existing dwellings is 300 mm above the 1 per cent AEP (1 in 100 year) flood level, unless the extension is less than 40 m2 and is less than 50 per cent of the existing floor area.

All buildings

- Buildings should be aligned with their longitudinal axis parallel to the direction of flood flow.
- The design of buildings should minimise the 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 flood level.
- Building pads should be restricted, as near as practicable, to the building envelope.

Earthworks

- A permit is not required for earthworks which would raise natural surface levels by less than 200 mm.
- If requested by the floodplain management authority, a hydraulic impact assessment by an appropriate specialist consultant must be undertaken for proposed earthworks which would raise natural surface levels by more than 200 mm (other than building pads or works to protect the immediate surrounds of existing dwellings).

Development requirements for the Floodway Overlay in Johnsville

Dwellings

- There should be no increase in the number of dwellings in the township.
- A new dwelling should not be permitted on a lot if the 1 per cent (1 in 100-year) flood depth at the proposed house site, or along the accessway to the house site from a main road, is more than 0.5 m above the natural surface level.
- The minimum floor level of all new dwellings, or of extensions greater than 20 m2 to existing dwellings, is 300 mm above the 1 per cent AEP (1 in 100 year) flood level.
- In the case of a replacement dwelling or extension to an existing dwelling, the maximum increase in the building envelope area is 40m2.

Figure 1: Local floodplain development plan – Yellow River Precinct



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