

5 FLOODPLAIN MANAGEMENT PLAN

The floodplain management areas are presented in Figures 5.1, 5.2, 5.3, 5.4, and 5.5. These maps supersede Figures 1.3, 6.4, 6.5, 6.6 and 6.7 in the Floodplain Management Study report (Kinhill, June 1994), respectively.

The above plans provide an overall framework for future controls and development within the floodplain. This ensures that potential land use is compatible with the flooding characteristics and hazards of the River Murray.

The plan of management of the Murray River floodplain within the study area comprises of a number of non-structural measures. Key features of this plan are described below.

5.1 FLOODWAYS

The Floodplain Development Manual describes a floodway as "those areas where a significant volume of water flows during floods. They are often aligned with obvious naturally defined channels. Floodways are areas which, even if partially blocked would cause a significant redistribution of flood flow, which in turn adversely affect other areas. They are often, but not necessarily the areas of deeper flow or the areas where higher velocities occur."

It is vital that the floodway areas defined in Figures 5.2, 5.3, 5.4 and 5.5 be kept clear of any form of development. Floodway areas should not be developed because of the significant risk to human life. Prohibition of development in floodway areas is also good economics as industrial or residential developments often subjected to the greatest losses and social disruption and those located in areas which should in fact be classified as floodway areas.

The provision of floodways facilitates retention of the existing river system and minimises any disturbance to the natural environment. They also provide access and room for any river improvement works which may be required at a later stage. A visible floodline further enhances the flood awareness of the local community.

In general the floodway areas within the study area have not been encroached upon. The exceptions are the following:

- existing residential development (backyard) in lower half of the area south of Carramar Drive (Figure 5.5). This area is located in a floodway. It is also zoned for urban development 2(v) under Wentworth Shire Local Environmental Plan 1993.

- eastern side of area just north-east of the Chaffey Bridge in East Buronga (Figure 5.5). This area is zoned for urban development in LEP 1993.
- water access and egress from the flood bridges on the Chaffey Bridge.

It is recommended that LEP 1993 be amended to recognise the above areas as floodways. The recommended plan of management for the floodways is as follows:

- floodways should be maintained in perpetuity and should never be compromised. Land-use should be carefully controlled to ensure that floodway capacity is not reduced.
- dwellings or buildings of any nature and any obstruction or operation which may impede the floodwaters should not be permitted. This includes fences (which may collect debris and impede the passage of floodwaters) and any form of filling of the floodway.
- only land use which is flood compatible or likely to improve the floodway capacity should be permitted.
- major services which may need to cross the floodways should be permitted, provided that any such impacts are thoroughly assessed and minimised. Such services may include highways, bridges, railways, sewer, power, water and gas lines.

5.2 HIGH HAZARD AREAS

High hazard areas are described in the Floodplain Development Manual as areas where "floodwaters could cause structural damage to buildings and in extreme cases light framed houses could be washed away. Evacuation by heavy trucks would be difficult and other methods would be difficult and potentially dangerous. There could be danger to life and limb and social disruption and financial losses could be high".

The bulk of high hazard land areas within the study area (Figures 5.2 to 5.5) is currently under rural or open space uses. There is therefore the opportunity at this stage to control future land use within these areas to ensure that only flood-compatible uses are permitted. Such uses are rural, recreation or open space/ conservation.

However 125 houses have been identified in the Floodplain Management Study Report as being in or close proximity to a high hazard area. High hazard areas zoned for development in LEP 1993 are the following:

- segment south of Coomealla CSIRO field station area (Figure 5.3). This area is zoned 1(d) as a future urban area. A river setback distance of 30 metres is specified for this area in LEP 1993

- southern portion of Rocky Point area (Figure 5.4). This area is zoned 1(c) for rural small holdings. One of the objectives of zone 1(c) is to promote development of land in locations which do not pose a threat to life and property. A river setback distance of 30 metres is specified for this area in LEP 1993
- areas immediately north-east of Chaffey Bridge, south of Sturt Highway, and north of Ferret Levee in East Buronga (Figure 5.5). These areas are zoned 2(v) for residential village or urban development.

It is considered that the river setback distances recommended in LEP 1993 for the first two areas above (near the CSIRO station and Rocky Point) are adequate. It is however recommended that the third area (north of Chaffey Bridge) be amended to ensure that no further development takes place in the high hazard areas. Dwellings or buildings should not be permitted because of the high risk to life and structural damage. It is further recommended that the lowest point at the bend in Carramar Drive (Figure 5.5) be protected to ensure that the areas north of Carramar Drive can be effectively drained.

5.3 LOW HAZARD AREAS

The remaining flood liable land within the 1% AEP flood extent classified as low hazard areas are shown in Figures 5.2, 5.3, 5.4 and 5.5. Limited development of these areas is considered appropriate to ensure that maximum use of the available land space within the Shire is achieved.

LEP 1993 zonings in low hazard areas include the following:

- south of River Road near Coomealla CSIRO field station area, Figure 5.3. These areas are zoned 1(c) for rural small holdings and 1(d) for future urban development
- North Boeill Creek area, Figure 5.4. These areas are zoned 1(c) for rural small holdings and 1(d) for future urban development
- parts of east Buronga south of Sturt Highway and south-west of the intersection with Silver City Highway, Figure 5.5. These areas are zoned 2(v) for residential village or urban development
- Carramar Drive, Figure 5.5. This area is zoned 2(v) for residential village or urban development
- land adjoining Gol Gol creek and the Murray River in Gol Gol, Figure 5.5. This area is zoned 1(c) for rural small holdings.

It is proposed that development in these areas be permitted subject to the following conditions:

- that only one dwelling per lot be permitted on fill

- that existing flood levels at the proposed development site and upstream areas are not increased as a result of the development. A target of zero afflux should be set in order to avoid any cumulative impacts from these developments
- that adequate flood free access is available.

5.4 FLOOD FREE ACCESS

Provision of flood-free access is an essential element for development of flood-labile land. Clearly defined access routes assist in reducing the material loss and social distress caused by flooding. Such access acts as exits during emergencies, removal routes for flood threatened persons and goods and provides access for emergency services.

In New South Wales flood-free access is generally provided up to the 1% AEP event. In Wentworth Shire Council there is concern that this cannot be achieved without significant filling of the floodplain.

It has been suggested that access or evacuation by boat for floods up to the 1% AEP event be considered as an alternative, considering that the residents of Wentworth are accustomed to floods and boat use. Sufficiently long flood warning times of up to 2 months or so for the study area would further facilitate early evacuation of the residents in these flood fringe areas.

For this alternative to be feasible and accepted generally it would be necessary to ensure that there is a high level of flood awareness and cooperation within the community. Contingencies and other safeguards would also be necessary to ensure that the young and disabled are not put at risk. It should also be noted that while the two months warning provides an adequate lead time for people to evacuate in an orderly manner it is not a reason to justify rescue by water.

It would be necessary for Council to seek a compromise if it is to allow development of flood-labile land without provision of flood access up to the 1% AEP event. If necessary the following plan of management may be considered:

- that as a general rule flood access be provided up to the 1% AEP event.
- where Council is satisfied that flood-free access cannot be provided for the 1% AEP event, that it be provided for at least the 5% AEP (or 20 year ARI) event.
- that Council prepares a register of all developments located in flood liable land without flood-free access for the 1% AEP event and assumes responsibility for the safe evacuation of all residents in these areas
- that community understanding and cooperation be fostered, particularly in relation to evacuation procedures.