



Edward
River
COUNCIL

Planning Proposal No 9

This planning proposal has been prepared to insert flood planning controls into the Deniliquin Local Environmental Plan 2013 and Deniliquin Local Environmental Plan 1997.

INTRODUCTION

Council adopted the Edward River at Deniliquin Floodplain Risk Management Study and Plan (WMAwater 2017) (FRM Study and Plan) at its meeting on 17 May 2017 (Council Minute 81/17). One of the recommendations of the FRM Study and Plan is that Council's planning policies be reviewed to incorporate the findings of the FRM Study and Plan.

FRM STUDY AND PLAN

Council commenced the floodplain risk management process in 2011 in accordance with the Floodplain Development Manual (2005) and has been managed by Council's Floodplain Risk Management Committee which has included the Office of Environment and Heritage, SES, Council and community representatives. The Edward River at Deniliquin Flood Study (Flood Study) was adopted by Council in 2014 and was followed by the FRM Study and Plan. Both studies apply to the former Deniliquin local government area.

The FRM Study and Plan makes 17 recommendations to assist Council in the management of flood risk. This planning proposal seeks to implement two of these recommendations through amendments to the Deniliquin Local Environmental Plan 2013 and Deniliquin Local Environmental Plan 1997. The amendments will include the identification of a flood planning area (FPA) and introduction of flood planning levels (FPL).

CURRENT FLOOD PLANNING CONTROLS

LEP 2013 and LEP 1997 currently have flood planning clauses and LEP 2013 has a small part of Deniliquin shown within the FPA. These (including an extract from the mapping) are detailed in Appendix 1. The former Deniliquin Council revised Council Policy 5.9 Flood Planning Levels (Appendix 2) to reflect outcomes of the Flood Study. It provided flood planning controls in those area identified within the flood planning area within the North Deniliquin flood levee. This policy is still current but needs to be repealed and flood planning controls need to be inserted into LEP 2013 and LEP 1997 in accordance with the recommendations of the FRM Study and Plan.

It should be noted that the flood planning clause in DLEP 2013 was recently amended for the rezoning of the land known as Kyalite Stables (being 21701-21703 Riverina Highway, Deniliquin). This amended updated that the clause and inserted a flood planning map into DLEP 2013 where only Kyalite Stables was identified as being within the FPA (see extract from the LEP mapping in Appendix 1).

PART 1 OBJECTIVES OR INTENDED OUTCOMES

The objective of the planning proposal is to insert a flood planning controls and mapping into the Deniliquin Local Environmental Plan 2013 (LEP 2013) and Deniliquin Local Environmental Plan 1997 (LEP 1997).

PART 2 EXPLANATION OF PROVISIONS

The intended outcome will be achieved by:

DLEP 2013

- a Delete sub clause 6.2(2)(b) referring to 'any other flood liable land'.
- b Amend Flood Planning Map Sheet FLD_005 to identify all the FPA to which this map applies.
- c Prepare additional flood planning map sheets to identify the FPA under the DLEP 2013.

DLEP 1997

- d Delete clause 21 of LEP 1997 and replacing it with the model flood planning clause.
- e Identify the FPL as being 1%AEP + 500mm within the mapped floodway extent and 1%AEP + 300mm outside the mapped floodway extent and within the FPA.
- f Prepare flood planning maps to identify the FPA under DLEP 1997.

Appendix 3 shows the extent of the proposed FPA.

PART 3 JUSTIFICATION

Is the planning proposal a result of any strategic study or report?

The planning proposal is the result of the FRM Study and Plan and will partly implement recommendations PM01 and PM02. It should be noted that within each of these recommendations there are several actions and some of these will occur once the amendments to the two LEPs are made.

PM01 Revision of Flood Planning Level and Flood Planning Area		
	Action	Comment
a	Mapping should be utilised to information the FPA and FPLs set for all residential development on land that exists within the FPA.	Will occur with the preparation of the flood planning maps for the LEPs.
b	Include floor level controls for sensitive uses.	Provisions for sensitive uses are not proposed. Refer to appendix 8.
c	Allow flood proofing to the FPL for non residential developments.	To be included in the amendment to DCP 2016.
d	Update the FPA (and related documentation) to reflect the extent of the 1%AEP event + 0.3m freeboard.	Will occur with the preparation of the flood planning maps for the LEPs.
e	Update the FPL (and related documentation) for non-floodway areas to be 1% AEP + 0.3m freeboard.	To be included in the flood planning clause.
f	Update the FPL (and related documentation) for replacement of existing dwellings and new dwellings in floodway areas to be 1% AEP event + 0.5m freeboard.	To be included in the flood planning clause.

g	Apply a FPL of 1% AEP event + 0.3m freeboard in the areas protected by the North Deniliquin levee until it is upgraded.	To be included in the flood planning clause.
h	Changes to be implemented via a planning proposal and additional notations included in section 149 certificates for properties with the FPA (note that changes to section 149 certificates will be implemented once the LEP amendments are made).	These amendments will occur once the LEP amendments are made.
PM02 Property Modification – Planning Policy Review		
i	The current flood planning clause 6.2 of LEP 2013 and clause 21 of LEP 1997 apply to flood liable land. This should be revised to the FPA and mapped in line with the standard instrument.	This planning proposal proposes these changes.
j	Apply an appropriate zone to the Davidson Street (deferred matter) area.	This will be implemented with the consolidation of the 3 LEPs applying to the Edward River Council area.
k	When reconsidering existing zones (for Davidson Street) do so in line with current flood data and mapping to ensure compatibility with the existing flood risk.	This will be implemented with the consolidation of the 3 LEPs applying to the Edward River Council area.
l	Submit a planning proposal to the Department to amend LEP 2013 and LEP 1997.	This planning proposal seeks to amend the two LEPs.
m	Introduce flood controls via an updated DCP and flood planning levels policy (refer to recommendation PM01 above).	Refer to the Council report regarding this planning proposal which addresses the DCP. It is proposed that once the LEP amendments are made that the Council policy would be repealed.

Appendix 4 is an extract from the FRM Study and Plan detailing the recommendations.

Is the planning proposal the best means of achieving the objectives or intended outcomes, or is there a better way?

The planning proposal is the most appropriate means of achieving the objectives and intended outcomes as it will amend the LEP 2013 and LEP 1997.

Is the planning proposal consistent with the objectives and actions of the applicable regional or sub-regional strategy?

The planning proposal is consistent with the Riverina Murray Regional Plan 2036. The Regional Plan is considered in Appendix 5 (using the s117 direction checklist).

Is the planning proposal consistent with a council local strategy or other local strategic plan?

Edward River Council does not have a local strategy or other local strategic plan that applies to the former Deniliquin Local Government Area. However, the planning proposal is consistent with the FRM Study and Plan.

Is the planning proposal consistent with the applicable State Environmental Planning Policies (SEPPs)?

The planning proposal will not impact on the operation of any SEPPs that apply to these LEPs. The SEPPs are considered in Appendix 6.

Is the planning proposal consistent with applicable Ministerial Directions (s117 directions)?

The planning proposal is consistent with the applicable directions and where there is an inconsistency, it is of minor significance or is supported by the FRM Study and Plan. The directions have been considered in Appendices 7 and 8.

Is there any likelihood that critical habitat or threatened species, populations or ecological communities, or their habitats, will be adversely affected as a result of the proposal?

No.

Are there any other likely environmental effects as a result of the planning proposal and how are they proposed to be managed?

It is considered that no adverse environmental impacts are likely to arise from the planning proposal. The planning proposal is seeking to manage flood risk with the identification of a FPA and introduction of FPLs.

Has the planning proposal adequately addressed any social and economic effects?

The planning proposal will provide social and economic benefits to the community through the consideration of flood risk for development. The assessment of development will require Council to minimise the flood risk to life and property associated with the use of land, allow development on land that is compatible with the land's flood hazard and avoid significant adverse impacts on flood behaviour and the environment. In addition to this, Council cannot grant development consent to development that is likely to result in unsustainable social and economic costs to the community because of flooding.

Is there adequate public infrastructure for the planning proposal?

Public infrastructure is not required for this development. However, flood planning controls are proposed for some areas within the North Deniliquin flood levee due to overtopping of the levee. Council currently has recently received funding under the Floodplain Grants Scheme for the North Deniliquin levee upgrade (investigation and design).

What are the views of state and Commonwealth public authorities consulted in accordance with the Gateway determination?

Council has not consulted any state or Commonwealth public authorities in relation to this planning proposal. However, the Office of Environment and Heritage funded and participated in the preparation of the FRM Study and Plan.

PART 4 MAPPING

DLEP 2013

The Flood Planning Maps – Sheet LZN_005 is to be amended to show the extent of the FPA area beyond the site currently identified in this mapping. Additional flood planning maps are to be prepared showing the extent of the flood planning area under DLEP 2013.

DLEP 1997

Mapping will be required to be prepared to show the extent of the FPA within the deferred area.

PART 5 COMMUNITY CONSULTATION

In accordance with schedule 1 clause 4 of the Environmental Planning and Assessment Act, it is proposed to exhibit the planning proposal for 28 days in the local media and on Council's website. Individual land owner notifications will not occur due to the number of properties affected by this planning proposal.

PART 6 PROJECT TIMELINE

Given the nature of the amendment, Council proposes to complete the amendment in 9 months.

APPENDIX 1

CURRENT FLOOD CLAUSES

Deniliquin Local Environmental Plan 1997

Clause 21 Flood liable land states:

- (1) A person must not erect a building or carry out a work for any purpose on flood liable land except with the consent of the Council.
- (2) The Council must not consent to the erection of a building or the carrying out of a work on flood liable land if the Council is satisfied that the development is likely:
 - (a) to impede the flow of floodwater on that land or on adjoining land, or
 - (b) to imperil the safety of persons on that land or on adjoining land in the event of those lands being inundated with floodwater, or
 - (c) to aggravate the consequences of floodwater flowing on that land or on adjoining land with regard to erosion, siltation and the destruction of vegetation, or
 - (d) to have an adverse effect on the watertable of that land or adjoining land.
- (3) The Council must not grant a consent required by this clause unless it has taken into consideration:
 - (a) the cumulative effect of the proposed development and other development on flood behaviour, and
 - (b) the risk of pollution to the waterways caused by the proposed development, and
 - (c) the availability of flood free access to the proposed development.

Deniliquin Local Environmental Plan 2013

Clause 6.2 Flood planning states:

- (1) The objectives of this clause are as follows:
 - (a) to minimise the flood risk to life and property associated with the use of land,
 - (b) to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change,
 - (c) to avoid significant adverse impacts on flood behaviour and the environment.
- (2) This clause applies to:
 - (a) land that is identified as "Flood planning area" on the Flood Planning Map and that is at or below the flood planning level, and
 - (b) any other flood liable land.

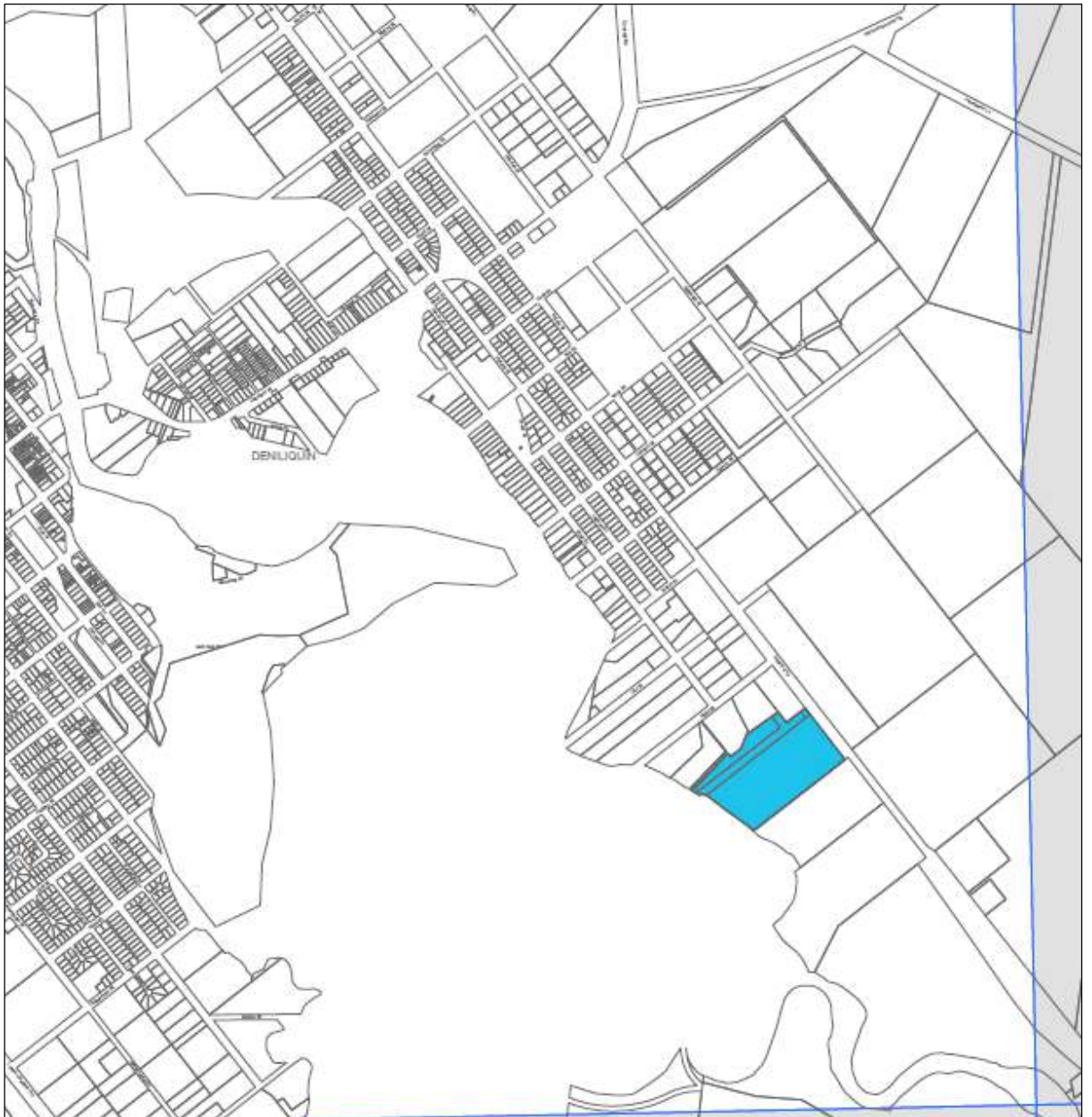
- (3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development:
- (a) is compatible with the flood hazard of the land, and
 - (b) will not significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties, and
 - (c) incorporates appropriate measures to manage risk to life from flood, and
 - (d) will not significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses, and
 - (e) is not likely to result in unsustainable social and economic costs to the community as a consequence of flooding.
- (4) A word or expression used in this clause has the same meaning as it has in the Floodplain Development Manual (ISBN 0 7347 5476 0) published by the NSW Government in April 2005, unless it is otherwise defined in this clause.
- (5) In this clause:

land at or below the flood planning level means land at or below the level of:

- (a) a 1:100 ARI (average recurrent interval) flood event plus 0.5 metre freeboard, or
- (b) a 1:100 ARI (average recurrent interval) flood event plus 0.3 metre freeboard,

based on the Edward River at Deniliquin Flood Study 2014 and the Edward River at Deniliquin Floodplain Risk Management Study and Plan 2017, available from the office of the Council.

EXTRACT FROM FLOOD PLANNING MAP SHEET FLD_005



APPENDIX 2

FLOOD PLANNING LEVELS

POLICY NO: Town Planning 5.9

DEPARTMENT: ENVIRONMENTAL SERVICES

OBJECTIVE

To set flood planning levels in the flood planning area and for other land that is at or below the flood planning level.

SCOPE

This policy applies to all land identified in the flood planning area or other land at or below the flood planning level. This policy does not apply to land protected by the South Deniliquin Flood Levee.

POLICY:

Flood Planning Areas except Davidson Street area/Inside North Deniliquin Flood Levee

All finished floor levels of residential accommodation on land affected by this policy shall be above the flood planning level.

Additions to existing residential accommodation of less than 30% of the existing habitable floor area may be permitted at a matching finished floor level to the existing building. All additions which are 30% or greater of the existing floor area shall be above the flood planning level.

Davidson Street Area

All finished floor levels shall be above the flood planning level (Davidson Street area).

Additions to existing buildings of less than 30% of the existing floor area may be permitted at a matching finished floor level to the existing building. All additions which are 30% or greater of the existing floor area shall be above the flood planning level. The floor area for residential accommodation will be calculated based on the habitable areas of the building.

Inside North Deniliquin Flood Levee

All finished floor levels of residential accommodation shall be 300mm above ground level (existing).

Additions to existing residential accommodation of less than 30% of the existing habitable floor area may be permitted at a matching finished floor level to the existing building. All additions which are 30% or greater of the existing habitable floor area shall be 300mm above the ground level (existing).

In this policy:

Flood planning area – The flood planning area is identified in figure 32 of the ‘Edward River at Deniliquin Flood Study’ (WMAwater 2014) or is other land at or below the flood planning level.

Flood planning level – the level of a 1%AEP flood event plus 100mm freeboard.

Flood planning level (Davidson Street area) – the level of a 1%AEP flood event plus 500mm freeboard.

Residential accommodation – as defined by the Deniliquin Local Environmental Plan 2013.

1% Annual Exceedance Probability (AEP) – the chance of a flood of this size or larger size occurring in any one year as determined by figure 17 of the ‘Edward River at Deniliquin Flood Study’ (WMAwater 2014).

Ground Level (existing) – as defined by the Deniliquin Local Environmental Plan 2013.

Davidson Street area – all land identified as being ‘deferred’ or zoned E3 Environmental Management under the Deniliquin Local Environmental Plan 2013.

RELATED POLICIES/DOCUMENTS:

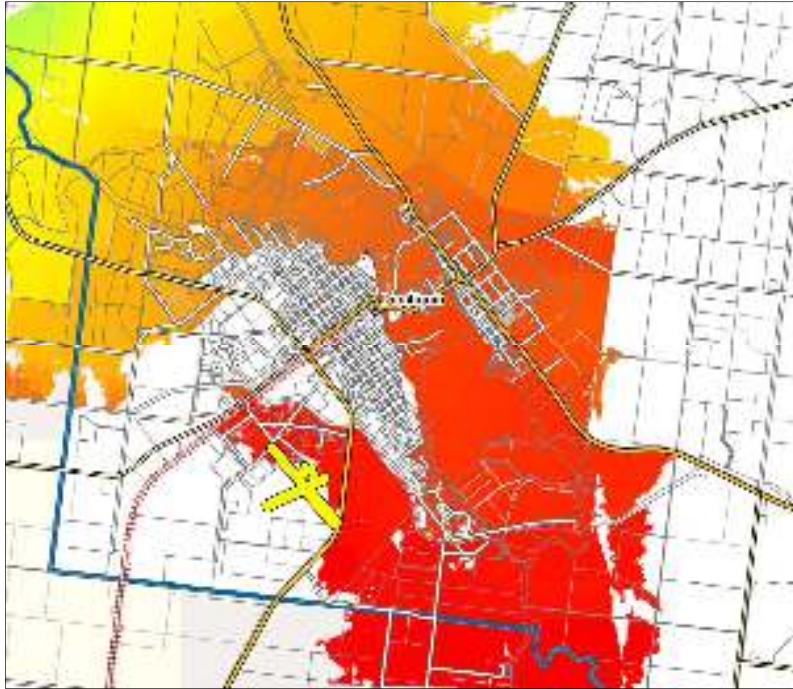
Edward River at Deniliquin Flood Study (WMAwater 2014)

Deniliquin Local Environmental Plan 2013

Date Approved	Revision No.	Minute No
13 October 2010	-	332/10
25 February 2015	1	20/15

APPENDIX 3

Flood Planning Area



Extent of the proposed flood planning area (WMAwater 2017)

APPENDIX 4

9.3.1. Property Modification – Revision of Flood Planning Level and Flood Planning Area (PM01)

Flood Planning Levels (FPLs) are an important tool in floodplain risk management. Appendix K of the Floodplain Development Manual (Reference 1) provides a comprehensive guide to the purpose and determination of FPLs. The FPL provides a development control measure for managing future flood risk and is derived from a combination of a design flood event and a freeboard.

The FPL for planning purposes is generally the height at which new building floor levels should be built to minimise frequency of inundation and associated damage. It may also refer to the height to which flood proofing should be applied to reduce damages to commercial properties. It applies to properties in the Flood Planning Area (FPA), which is typically the land at or below the flood planning level. The Flood Planning Area (FPA) is an area within Council's LGA to which flood planning controls are applied. It is important to define the boundaries of the FPA to ensure flood related planning controls are applied where necessary and not to those lots unaffected by flood risk. It is also important to define the FPA on criteria as per the NSW Floodplain Development Manual (Reference 1).

Due to the mixture of residential and commercial development in the Study Area, a variety of FPLs may be applicable depending on where in the catchment development is being considered and also based on the type of development being proposed.

A variety of factors need to be considered when calculating the FPL for an area. A key consideration is the flood behaviour and resultant risk to life and property. The Floodplain Development Manual identifies the following issues to be considered:

- Risk to life;
- Long term strategic plan for land use near and on the floodplain;
- Existing and potential land use;
- Current flood level used for planning purposes;
- Land availability and its needs;
- FPL for flood modification measures (levee banks etc.);
- Changes in potential flood damages caused by selecting a particular flood planning level;
- Consequences of floods larger than that selected for the FPL;
- Environmental issues along the flood corridor;
- Flood warning, emergency response and evacuation issues;
- Flood readiness of the community (both present and future);
- Possibility of creating a false sense of security within the community;
- Land values and social equity;
- Potential impact of future development on flooding; and
- Duty of care.

As a guide, Table 20 has been reproduced from the NSW Floodplain Development Manual 2005 to indicate the likelihood of the occurrence of an event in an average lifetime to indicate the potential risk to life.

Analysis of the data presented in Table 20 gives a perspective on the frequency of floods being exceeded over an average lifetime. The data indicates that there is a 50% chance of a 100 Year ARI (1% AEP) event occurring at least once in a 70 year period. Given this potential, it is reasonable from a risk management perspective to give further consideration to the adoption of the 1% AEP flood event as the basis for the FPL. Given the social issues associated with a flood event, and the non-tangible effects such as stress and trauma, it is appropriate to limit the exposure of people to floods.

Note that there still remains a 30% chance of exposure to at least one flood of a 200 Year ARI (0.5% AEP) magnitude over a 70 year period. This gives rise to the consideration of the adoption of a rarer flood event (such as the PMF) as the flood planning level for some types of more vulnerable development.

Table 20: Likelihood of given design events occurring in a period of 70 years

Likelihood of Occurrence in Any Year (ARI)	Probability of Experiencing At Least One Event in 70 Years (%)	Probability of Experiencing At Least Two Events in 70 Years (%)
10	99.9	99.3
20	97	86
50	75	41
100	50	16
200	30	5

The Floodplain Development Manual states that the FPL for standard residential development is the 1% AEP flood event plus a freeboard which is typically 0.5 m. Depending on the nature of the development and the level of flood risk, individual FPLs can be adopted for a local area within a greater floodplain area.

The FPL can be varied depending on the use, and the vulnerability of the building/development to flooding. For example, residential development could be considered more vulnerable due to people being present or its location, whilst commercial development could be considered less vulnerable, or it could be accepted that commercial property owners are willing to take a higher risk. For developments more vulnerable to flooding (hospitals, schools, electricity sub-stations, seniors housing and the like) consideration should be given to events rarer than the 1% AEP when determining their FPL and either consider the PMF or situating those developments outside the floodplain where possible.

For the less vulnerable commercial and industrial developments, flood proofing a building to the FPL can be considered where raising floor levels is not an option or not feasible, but should not be allowed for residential developments or more vulnerable uses. For example, it could be a requirement that residential dwellings are to have floor levels above the FPL, whilst commercial properties could have lower floor levels but be subject to other controls such as flood proofing to the level of the FPL.

More sensitive land uses such as nursing homes, hospitals and childcare centres and the like should ideally be located outside of the FPA and above the PMF.

Weighing up the range of factors discussed above in addition to those described in the freeboard assessment presented in Section 8, an appropriate FPL for Deniliquin would be the 1% AEP flood level plus 0.3 m freeboard for residential development in those areas outside the floodway (Refer to Figure 6). It is also appropriate that a higher freeboard (0.5 m) is applied to the replacement of existing dwellings and the construction of new dwellings where an entitlement exists in the floodway including Davidson Street.

The Flood Planning Area (FPA) is an area to which flood planning controls are applied. The FPA

should be the extent of the 1% AEP + 0.3m. The level of protection provided by the existing levees affect the extent of the FPA, for example it can be said that the South Deniliquin levee generally provides a 1% AEP level of protection (refer to Section 4.5.1.3 and Section 8) and therefore these areas are not included within the FPA and therefore a FPL will not apply to residential development. At present the North Deniliquin levee does not provide protection in the 1% AEP event and therefore will be included in the FPA. Should the North Deniliquin levee be upgraded to a 1% AEP level of protection (including the recommended freeboard) then it would be excluded from the FPA.

Council's Flood Planning Levels Policy 5.9 provides guidance on flood level controls and is enforced by controls included in the DCP. This policy requires updating in accordance with the recommendations included in this section.

PM01 Recommendation



- Mapping should be utilised to inform the FPA and FPLs set for all residential development on land that exists within the FPA.
- Include floor level controls for sensitive uses.
- Allow flood proofing to the FPL for non-residential developments.
- Update the FPA (and related documentation) to reflect the extent of the 1% AEP event + 0.3 m freeboard.
- Update the FPL (and related documentation) for non-floodway areas to be 1% AEP event + 0.3 m freeboard.
- Update the FPL (and related documentation) for replacement of existing dwellings and new dwellings in floodway areas to be 1% AEP event + 0.5 m freeboard.
- Apply a FPL of 1% AEP event + 0.3 m freeboard in the areas protected by the North Deniliquin levee until upgraded.
- These changes will require a Planning Proposal and additional notations included in s149 certificates for properties within the FPA (Refer Section 9.3.3).

9.3.2. Property Modification – Planning Policy Review (PM02)

Appropriate land use planning can reduce future flood risk and associated flood damages by ensuring that development is compatible with flood risk. Planning instruments can be used as tools to:

- Guide new development away from high flood risk locations;
- Prevent inappropriate development from occurring;
- Ensure that new development does not increase flood risk elsewhere; and
- Develop appropriate evacuation and disaster management plans to better reduce flood risks to the existing population.

Deniliquin Local Environmental Plan 2013 and 1997

Land use zones are generally governed by a Local Environmental Plan (LEP). The NSW Standard Instrument LEP does not include a specific land use zone classification for flood prone land, rather it permits a Flood Planning Area (FPA) map to be included as a layer imposed across all land use zones. The FPA map is referred to via a number of standard clauses, specifically Clause 6.2.

Clause 6.2 of the Deniliquin LEP 2013 (DLEP2013) and Clause 21 of Deniliquin LEP 1997 (DLEP1997) as discussed in Section 7.8 do not include a reference to a FPA map or Flood Planning Level (FPL) as prescribed in the Standard Instrument LEP clauses, rather stating that they are applied to *flood liable land*. This is inconsistent with the purpose of this clause and should be updated to use one of the Standard Instrument clauses that refer to the FPA map or land below the FPL. The FPL and FPA recommendations are included in Section 9.3.1.

As discussed in Section 4.7.3 and 7.8, the zoning of the Davidson Street area was deferred as part of the DLEP 2013 pending recommendations from this study. The Davidson Street area is located in a floodway and subject to high flood risk. The deferred area is managed under Deniliquin LEP 1997, while the rest of Deniliquin falls under the 2013 LEP.

Ideally the zoning should be compatible with this flood risk to ensure the permissible uses are appropriate. Under current planning legislation existing use rights would remain. Therefore, complete removal of flood risk would require an extensive program of rezoning and voluntary purchase (discussed in Section 9.3.4). This would be an extensive and costly project for Council. The implementation of appropriate zoning that prevents intensification of development or development of facilities that are more sensitive to flood risk; supported by development controls (discussed later in this section), is required. This would aim to reduce risk and property damage over time whilst ensuring that the current risk situation will become no worse.

There is limited development pressure in Deniliquin that would require rezoning of land to higher density uses. When considering possible future rezoning, the outputs from Reference 2 and this study should be considered to ensure the zoning is appropriate to the flood risk and appropriate flood controls are applied.

To make any significant changes to the provisions of an LEP, a planning proposal must be prepared.

Flood Policy/DCP

A potential impact on flooding can arise through the intensification of development on the floodplain, which may either remove flood storage or impact on the conveyance of flows. The Deniliquin LEP 2013 includes a control ('6.2 Flood Planning') that consent must not be granted to any development which adversely impacts the flood behaviour such that affectation on another property or development is worsened. The Deniliquin LEP 1997 also includes a control (Clause 21: Flood Liable Land) that consent should not be granted to development that a) impedes the flow of flood water, imperils the safety of persons, aggravates the consequences of floodwater flowing on that land or on adjoining land with regard to erosion, siltation and the destruction of vegetation, or has an adverse impact on the water table of that land or adjoining land on that land

or on adjoining land. It is recommended that all references to flooding in the Deniliquin LEP (2013 and 1997) are brought in line with current flood information, especially regarding land use zoning and terminology used, as discussed below. Flood related controls in the LEPs should be supported through the Development Control Plan (DCP).

A Development Control Plan is a document which supports the requirements of the Local Environmental Plan (LEP) and provides a guide for development. Chapter 10 of the Deniliquin DCP 2016 provides guidance in relation to development on flood liable land.

The application of flood controls is essential in areas where a building entitlement exists which cannot be removed by voluntary purchase or rezoning, this will ensure that the risk to life and damage can be minimised over time.

Other recommendations for amendment include the following:

- Mapping from this study should be included to define areas related to the Flood Planning Area and floodway;
- Terminology should be consistent with the Floodplain Development Manual (Reference 1) particularly in relation to the use of the terms 'floodplain' and 'flood liable land';
- Controls applying to "Floodplain" should be applicable to areas within the Flood Planning Area outside the Floodway;
- The objectives should include "to avoid significant adverse impacts on flood behaviour and the environment";
- Existing and replacement dwellings cannot exist simultaneously;
- Add "maintained" to clauses related to safe path of travel;
- Clauses Floodway – Residential and Rural Zones 1 and 4 could be combined to avoid repetition;
- Include restrictions for development with sensitive use (for example seniors living facilities, hospitals and child care centres etc); and
- Include requirement for impacts of development to be documented.

PM02 Recommendation



- The current flood planning Clause 6.2 DLEP2013 and Clause 21 DLEP1997 applies to flood liable land, this should be revised to the FPA and a map included (Refer to Figure 17) in line with the standard instrument.
- Apply an appropriate zone to the Davidson Street (Deferred Matter) area.
- When reconsidering existing zones do so in line with current flood data and mapping to ensure compatibility with the existing flood risk.
- Submit a planning proposal to the Department of Planning and Environment to amend the DLEP 2013 and DLEP 1997.
- Introduce flood controls via an updated DCP and Flood Planning Levels Policy (Refer to Recommendations in Section 9.3.1 and Section 9.3.1).

APPENDIX 5

Section 117 Direction 5.10 Implementation of Regional Plans Checklist

Directions that do not apply to this planning proposal have been deleted.

Direction 16: Increase resilience to natural hazards and climate change

No	Action	Consistent			Comments
		Yes	No	N/A	
16.1	Locate developments, including new urban release areas, away from areas of known high biodiversity value, high bushfire and flooding hazards, contaminated land, and designated waterways, to reduce the community's exposure to natural hazards.	Yes			The planning proposal will identify the flood planning area and flood planning levels for development.
16.2	Incorporate the findings of the Riverina Murray Enabling Regional Adaptation Project to inform future land use planning decisions.			N/A	
16.3	Adopt a whole-of-government approach to information exchange on climate change adaptation and preparedness.			N/A	
16.4	Respond to climate-related risks by applying and communicating fine-scale climate information to support decision-making.			N/A	
16.5	Implement the requirements of the NSW Floodplain Development Manual by updating flood studies and floodplain risk management plans.	Yes			The planning proposal is implementing the manual through the recommendations of the FRM Study and Plan.
16.6	Incorporate the best available hazard information in local plans, consistent with, current flood studies, flood planning levels, modelling and floodplain risk management plans.	Yes			The planning proposal is implementing flood planning controls.
16.7	Update and share current information on environmental assets and natural hazards with councils to inform planning decisions.	Yes			Council has a suite of flood hazard information that is used to inform planning decisions
16.8	Manage the risks of disturbance in areas affected by natural occurring asbestos.			N/A	

Additional Supporting Notes

Relevant planning proposals are encouraged to detail:

- where a proposal relates to Flood Prone Land, consistency with a current flood study endorsed by the Office of Environment and Heritage;

Notes:

- *Referral to NSW RFS may be required to comply with Section 117 Direction 4.4 Planning for Bushfire Protection*
- *Refer to the EPA website for more information on identification, management and regulation of contaminated land:
<http://www.epa.nsw.gov.au/clm/>*
- *A planning proposal must address SEPP 55 – Remediation of Land, Part 6 Contamination and remediation to be considered in zoning or rezoning proposal.*

Local Government Narratives – Edward River

No	Action	Consistent			Comments
		Yes	No	N/A	
1	Develop Deniliquin into a thriving local centre through industry development and job creation to promote population growth.			N/A	
2	Ensure that irrigated land is appropriately zoned and protected from inappropriate development.			N/A	
3	Double the size of the visitor economy through new product development and promotion.			N/A	
4	Improve the council area's liveability and lifestyle opportunities.			N/A	

APPENDIX 6
STATE ENVIRONMENTAL PLANNING POLICIES

SEPPs	Consistent	Comments
SEPP 1 Development Standards (LEP 1997 only)	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 21 Caravan Parks	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 30 Intensive Agriculture	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 33 Hazardous and Offensive Development	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 36 Manufactured Home Estates	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 50 Canal Estate Development	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 52 Farm Dams and Other Works in Land and Water Management Plan Areas	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 55 Remediation of Land	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 62 Sustainable Aquaculture	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 64 Advertising and Signage	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP 65 Design Quality of Residential Flat Development	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Affordable Rental Housing) 2009	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Building Sustainability Index: BASIX) 2004	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Educational Establishments and Child Care Facilities)	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Exempt and Complying Development Codes) 2008	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Housing for Seniors or People with a Disability) 2004	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Infrastructure) 2007	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Integration and Repeals) 2016	N/A	The planning proposal will not impact on the operation of this SEPP.

SEPP (Mining, Petroleum Production and Extractive Industries) 2007	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Miscellaneous Consent Provisions) 2007	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (Rural Lands) 2008	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP (State and Regional Development) 2011	N/A	The planning proposal will not impact on the operation of this SEPP.
SEPP Vegetation in Non-Rural Areas	N/A	The planning proposal will not impact on the operation of this SEPP.
Deemed SEPP Murray Regional Environmental Plan	Yes	Council is required to consider the planning principles of the Murray Regional Environmental Plan when it is preparing a planning proposal.

Murray Regional Environmental Plan Planning Principles

1 Aim of the REP

The aims of the REP are to conserve and enhance the riverine environment of the River Murray for the benefit of all users.

The introduction of flood planning controls will ensure that any development within the flood planning area has the appropriate controls to manage flood risk. This will ensure that flood risk within the riverine environment is managed.

2 Objectives of the REP

The objectives of the REP are:

- To ensure that appropriate consideration is given to development with the potential to adversely affect the riverine environment of the River Murray.
- To establish a consistent and co-ordinate approach to environmental planning and assessment along the River Murray.
- To conserve and promote the better management of the natural and cultural heritage values of the riverine environment of the River Murray.

The flood planning controls will be consistent with the FRM Study and Plan which has been prepared in accordance with the Floodplain Development Manual ensuring that the controls provide a consistent and co-ordinated approach to flood planning across the River Murray. The introduction of flood planning controls will ensure that appropriate consideration is given to flood risk for development and its impact on the River Murray.

3 Relevant River Management Plans

Consideration to be given to any relevant river management plan.

Council is not aware of any river management plans for this local government area.

4 Downstream Local Government Areas

Any likely effect of the proposed plan or development on adjacent and downstream local government areas.

The introduction of flood planning controls will assist in minimising flood impacts on downstream areas as Council will be required to consider whether development will significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties (which could be other properties outside the Edward River local government area).

5 Cumulative impact of the proposed development on the River Murray.

Cumulative impact of proposed plan or development on River Murray.

The introduction of flood planning controls will require Council to consider the impacts of development on flood behaviour and the impacts on the environment.

6 Specific Principles – Access

Principles to be considered include alienation/obstruction of foreshore/waterway as a public resource, development along the River Murray should be for public purposes and human and stock access should be managed to minimise impacts on uncontrolled river access on stability of the bank and vegetation growth.

The planning proposal does not relate to access to the River Murray.

7 Specific Principles – Bank Disturbance

Disturbance to the shape of the bank and riparian vegetation should be kept to a minimum in any development of riverfront land.

The planning proposal does not relate to bank disturbance resulting from the development of riverfront land.

8 Specific Principles – Flooding

Specific principles for flooding are:

- The benefits to riverine ecosystems of periodic flooding – *the introduction of flood planning controls will not prevent the periodic flooding of the riverine ecosystem.*
- The hazard risk involved in developing land that is subject to flood inundation – *the introduction of flood planning controls will require Council to consider the compatibility of the development with the flood hazard of the land.*
- The redistributive effect of the proposed development on floodwater – *The introduction of flood planning controls will require Council to consider the impact of the development on flood behaviour and ensuring that it does not increase the flood affectation of other development and/or properties.*
- The availability of other suitable land in the locality not liable to flooding – *The flood study and FRM study and plan have identified areas of flood risk which informs decisions about land suitable for development.*
- The availability of flood free access for essential facilities and services – *Council is required to consider availability of access for essential facilities and services as part of the assessment of any development application. The introduction of flood planning controls will require*

Council to consider measures to manage risk to life from flood and ensuring that any development does not result in unsustainable social and economic costs to the community because of flooding.

- The pollution threat represented by any development in the event of flood – *The introduction of flood planning controls requires Council to consider whether a development is compatible with the flood hazard of the land.*
- Cumulative effect of development on behaviour of flood water – *The introduction of flood planning controls requires Council to consider whether a development will adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties.*
- The cost of providing emergency services and replacing infrastructure in the event of a flood – *The introduction of flood planning controls will require Council to consider the social and economic costs to the community as a consequence of flooding.*
- Flood mitigation works constructed to protect new urban development should be designed and maintained to meet technical specifications of the Department of Water Resources – *Not applicable to this planning proposal.*

9 Specific Principles – Land Degradation

- Development should seek to avoid land degradation processes such as erosion, native vegetation decline, pollution of ground or surface water, groundwater accession, salination and soil acidity and adverse effects on the quality of terrestrial and aquatic habitats – *Not applicable to this planning proposal.*

10 Specific Principles – Landscape

- Measures should be taken to protect and enhance the riverine landscape by maintaining native vegetation along the riverbank and adjacent land, rehabilitating degraded sites and stabilising and revegetating riverbanks with appropriate species – *Not applicable to this planning proposal.*

11 Specific Principles - River Related Uses

- Only development which has a demonstrated, essential relationship with the River Murray should be located in or on land adjacent to the River Murray. Other development should be set well back from the bank of the River Murray – *Not applicable to this planning proposal.*

- Development which would intensify the use of riverside land should provide public access to the foreshore – *Not applicable to this planning proposal.*

12 Specific Principles – Settlement

- New or expanding settlements (including rural residential subdivision, tourism and recreational development) should be located on flood free land, close to existing services and facilities and on land that does not compromise the potential of prime crop and pasture land to produce food or fibre – *The flood planning controls will assist in determining the best location for future residential development.*

13 Specific Principles – Water Quality

- All decisions affecting the use or management of riverine land should seek to reduce pollution caused by salts and nutrients enter River Murray and otherwise improve the quality of water in the River Murray – *Not applicable to this planning proposal.*

14 Specific Principles - Wetlands

- Wetlands are a natural resource which have ecological, recreational, economic, flood storage and nutrient and pollutant filtering values – *Not applicable to this planning proposal.*
- Land use and management decisions affecting wetlands should provide for a hydrological regime appropriate for the maintenance or restoration of the productive capacity of the wetland, consider the potential impact of surrounding land uses and incorporate measures such as a vegetation buffer which mitigate against any adverse effects, control human and animal access and conserve native plants and animals – *Not applicable to this planning proposal.*

APPENDIX 7
SECTION 117 DIRECTIONS

Section 117 Direction	Consistent	Comments
1.1 Business and Industrial Zones	No	<p>This direction applies to this planning proposal as it will affect land within the Davidson Street which is zoned 2(Urban) and within an industrial precinct and land within the North Deniliquin flood levee that is zoned B6 Enterprise Corridor.</p> <p>The planning proposal will impose flood planning controls on this land that will be applied when the land is developed. The flood planning controls will not decrease or increase the amount of land zoned for industrial or business purposes but may impact of future floor space available in business and industrial zones due to flood planning controls which may impact on the layout and size of buildings. The inconsistency with this direction is of minor significance as the planning proposal relates to constraints over land and applies to all land with the flood planning area regardless of zone.</p>
1.2 Rural Zones	N/A	<p>This direction applies to this planning proposal as it will apply to land that is zoned rural. The planning proposal does not propose to rezone land or contain provisions that will increase the permissible density of land within a rural zone.</p>
1.3 Mining, Petroleum Production and Extractive Industries	N/A	<p>This direction does not apply to this planning proposal as it will not prohibit the mining of coal or other minerals, production of petroleum or winning or obtaining of extractive materials or restrict the potential development of resources of coal, other minerals, petroleum or extractive materials which are of State or regional significance by permitting a land use that is likely to be incompatible with such development.</p>
1.4 Oyster Aquaculture	N/A	
1.5 Rural Lands	Yes	<p>This direction applies to this planning proposal as it will affect land within an existing rural and environmental protection zone and therefore must consider the rural planning principles in State Environmental Planning Policy (Rural Lands) 2008.</p> <p>In response to the rural planning principles, the introduction of flood planning controls for land within the flood planning area will not impact on the agricultural capacity of</p>

		the land in these zones. These controls will only introduce controls to manage flood risk where development is proposed.
2.1 Environment Protection Zones	Yes	This planning proposal applies to land zoned for environmental management purposes (due to the nature of flooding on this land). The planning proposal will not reduce the environmental protection standards that apply to the land rather it will introduce specific flood planning controls for all land within the flood planning area.
2.2 Coastal Protection	n/a	-
2.3 Heritage Conservation	n/a	-
2.4 Recreation Vehicle Areas	n/a	-
2.5 Application of E2 and E3 Zones and Environmental Overlays in Far North Coast LEPs	n/a	-
3.1 Residential Zones	Yes	This planning proposal applies to land zoned residential (specifically land zoned R1 and R5). The planning proposal only introduces flood planning controls within the flood planning area and will not affect the provision of housing in terms of housing choice, use of infrastructure, development on the urban fringe, design, does not relate to the permissible residential density of land and/or relates to the servicing of land for residential development.
3.2 Caravan Parks and Manufactured Home Estates	n/a	This planning proposal does not apply as Council is proposing to retain provision that permit a caravan park to be carried out on land and retain the zonings of existing caravan parks. The planning proposal does not propose any changes to the zones, locations and provisions for manufactured home estates.
3.3 Home Occupations	n/a	This planning proposal does not apply as it does not propose to make any changes to the permissibility of home occupations.
3.4 Integrating Land Use and Transport	Yes	This planning proposal will alter a provision relating to urban land but the introduction of flood planning controls will not impact on the integration of land use and transport.
3.5 Development Near Licensed Aerodromes	Yes	This planning proposal applies to land that is within the vicinity of a licensed aerodrome but the introduction of flood planning controls will not impact on the operation of the aerodrome.
4.1 Acid Sulfate Soils	n/a	-

4.2 Mine Subsidence and Unstable Land	n/a	-
4.3 Flood Prone Land	No	This direction applies to this planning proposal as it relates to flood prone land. Refer to Appendix 8 for consideration of this direction.
4.4 Planning for Bushfire Protection	n/a	-
5.1 Implementation of Regional Strategies	n/a	-
5.2 Sydney Drinking Water Catchment	n/a	-
5.3 Farmland of State and Regional Significance on the NSW Far North Coast	n/a	-
5.4 Commercial and Retail Development along the Pacific Highway, North Coast	n/a	-
5.8 Second Sydney Airport: Badgerys Creek	n/a	-
5.9 North West Rail Link Corridor Strategy	n/a	-
5.10 Implementation of Regional Plans	Yes	Refer to appendix 4.
6.1 Approval and Referral Requirements	n/a	This planning proposal does not propose to introduce any approval or referral requirements into either LEPs.
6.2 Reserving Land for Public Purposes	n/a	This planning proposal does not propose to reserve land for a public purpose.
6.3 Site Specific Provisions	n/a	This planning proposal does not propose to introduce any site specific planning provisions for a development.
7.1 Metropolitan Planning	n/a	-
7.2 Implementation of Greater Macarthur Land Release Investigation	n/a	-
7.3 Parramatta Road Corridor Urban Transformation Strategy	n/a	-

7.4 Implementation of North West Priority Growth Area Land Use and Infrastructure Implementation Plan	n/a	-
7.5 Implementation of Greater Parramatta Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	n/a	-
7.6 Implementation of Wilton Priority Growth Area Interim Land Use and Infrastructure Implementation Plan	n/a	-
7.7 Implementation of Glenfield to Macarthur Urban Renewal Corridor	n/a	-

APPENDIX 8

CONSIDERATION OF S117 DIRECTION 4.3 FLOOD PRONE LAND

- 1 A planning proposal must include provisions that give effect to and are consistent with the NSW Flood Prone Land Policy and the principle of the Floodplain Development Manual 2005 (including the Guideline on Development Controls on Low Flood Risk Areas).**

The planning proposal is consistent with the provisions of the NSW Flood Prone Land Policy and the principles of the Floodplain Development Manual 2005 (including the Guideline on Development controls on Low Flood Risk Areas) except for the proposal to adopt a flood planning area based on a level of 1%AEP + 300mm and a subsequent FPL at the same level for land that is within the FPA but outside the floodway and not introducing flood planning controls for sensitive uses. This variation has been recommended by the FRM Study and Plan.

In terms of controls for sensitive uses (being caravan parks, centre based child care facilities, correctional centres, emergency services facilities, group homes, hospitals, residential care facilities, respite day care centres and tourist and visitor accommodation) Council does not propose any additional flood planning controls for these uses. If Council was to introduce flood planning controls for specifically for sensitive uses, Council would not be able to grant development consent unless it is satisfied that the development is consistent with any relevant floodplain risk management plan adopted by the Council and will not, in flood events exceeding the flood planning level, affect the safe occupation of, and evacuation from, the land. When referring to a flood event that exceeds the flood planning level, it means the probable maximum flood (PMF). The PMF is defined as the largest flood that could conceivably occur at a location, usually estimated from probable maximum precipitation.

Figure A below shows the extent of the modelled PMF for the former Deniliquin local government area. The PMF extent shown on this map is essentially all the coloured areas superimposed over the aerial photograph.

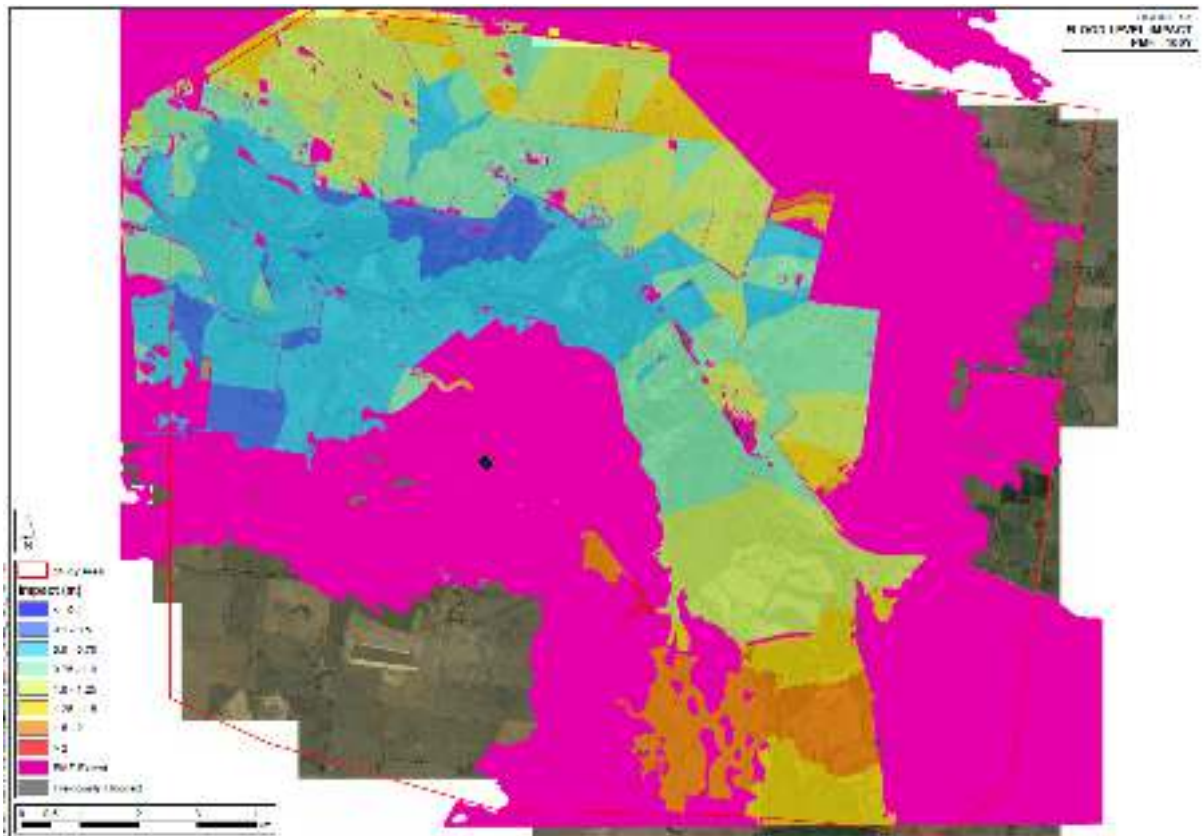


Figure A Probable Maximum Flood (Source: WMAwater)

You will note that the PMF would inundate all land within the South Deniliquin flood levee (parts of the North Deniliquin flood levee would currently be inundated in a 1%AEP) and a significantly greater area than the proposed FPA (illustrated in Appendix 3).

Council does not propose to insert flood planning controls for sensitive uses for the following reasons:

- The flat topography of Deniliquin means that the PMF extent is quite large, flood events arrive with ample warning time (weeks rather than minutes or hours) and they are slow to subside.
- Given the extent of inundation from the PMF event including all land within the North and South Deniliquin flood levees, Deniliquin would have been evacuated prior to this event occurring;
- Evacuation would affect the sensitive uses because whilst they may be built above the PMF, they would not be able to use these buildings during the flood event as there would be no services available to these building/uses eg roads, sewer, water and any on site sewage management would fail; and
- Any evacuation out of Deniliquin could extend for a number days or weeks given the length of time it takes for flood waters to subside.

2 A planning proposal must not rezone land within the flood planning areas from Special Use, Special Purpose, Recreation, Rural or Environmental Protection Zones to a Residential, Business, Industrial or Special Use or Special Purpose Zone.

The planning proposal does not propose any zoning changes.

3 A planning proposal must not contain provisions that apply to the flood planning areas which:

a permit development in floodway areas,

The planning proposal does not propose any changes to development that is permitted in the floodway.

b permit development that will result in significant flood impacts to other properties,

The planning proposal will not permit development that will result in significant flood impacts to other properties.

c permit a significant increase in the development of that land,

The planning proposal will not permit development that will result in significant flood impacts to other properties.

d are likely to result in a substantially increased requirement for government spending on flood mitigation measures, infrastructure or services, or

The planning proposal will not result any substantial increased requirement for government spending on flood mitigation measures, infrastructure or services. However, recommendations within the FRM Study and Plan will result in additional spending to assist in the managing flood risk.

e permit development to be carried out without development consent except for the purposes of agriculture (not including dams, drainage canals, levees, buildings or structures in floodways or high hazard areas), roads or exempt development.

The planning proposal does not propose any changes to the land use tables in either LEP.

4 A planning proposal must not impose flood related development controls above the residential FPL for residential development on land, unless a relevant planning authority provides adequate justification for those controls to the satisfaction of the Director-General (or an officer of the Department nominated by the Director-General).
The planning proposal does not impose any flood related development controls above the residential FPL for residential development on land. The proposed FPLs are as follows:

a 1%AEP + 300mm outside the mapped floodway extent and within the flood planning area; and

b 1%AEP + 500mm within the mapped floodway extent.

It is not proposed to impose flood related development controls above the residential FPL.

- 5 For the purposes of a planning proposal, a relevant planning authority must not determine a flood planning level that is inconsistent with the Floodplain Development Manual 2005 (including the Guideline on Development Controls on Low Flood Risk Areas) unless a relevant planning authority provides adequate justification for the proposed departure from that Manual to the satisfaction of the Director-General (or an officer of the Department nominated by the Director-General).**

Typically, the FPL (and as stated in the Floodplain Development Manual) will be 1%AEP + 500mm. However, this planning proposal proposes two FPLs for the FPA (which have been recommended by Council's FRM Study and Plan) one of which will be 1%AEP + 300mm which is less than the typical 1%AEP + 500mm. The extent of the flood planning area will also be based on 1%AEP + 300mm.

Section 8.2 of the FRM Study and Plan provides an assessment of the appropriate FPL for the FPA. In summary this justification for the 1%AEP + 300mm FPL is as follows:

- The flat topography of the study area has a significant impact on the flood behaviour in Deniliquin. The floodplain does not exhibit the more conventional river valley shape and flow that breaks out of the riparian zone spreads out over wide area at a shallow depth. This results in only slight variations in height and extent between events of different magnitude and a significantly larger event is required to substantially change the flood event.
- Traditionally, the selected freeboard is added to the 1%AEP extent to slightly stretch the extent to the FPA. Considering the flood behaviour at Deniliquin, applying this method with a 500mm freeboard would include a large proportion of the floodplain, an additional 50% area and some areas beyond the extent of the probable maximum flood or flood liable land. It is unlikely that the freeboard components (as discussed in section 8.1 of the FRM Study and Plan) would combine to generate such a broad extent of inundation without the event being much rarer. The extent generated by the 1%AEP + 500mm freeboard therefore does not capture and exaggerates the intended purpose of the freeboard in the flood planning area. An excessively large flood planning area would exaggerate the flood risk and potentially restrict development on the edges of the floodplain.
- The extent of the FPA should be representative of a real flood extent that could occur considering the freeboard components and the location of specific flood behaviour. The 0.2% AEP extent is a reasonable representation of this extent. The 0.2% AEP event is typically 200mm-300mm higher than the 1%AEP event and additionally the extent is approximated well by the 1%AEP + 300mm freeboard.

- 6 A planning proposal may be inconsistent with this direction only if the relevant planning authority can satisfy the Director-General (or an officer of the Department nominated by the Director-General) that:**
- a the planning proposal is in accordance with a floodplain risk management plan prepared in accordance with the principles and guidelines of the Floodplain Development Manual 2005, or**

- b the provisions of the planning proposal that are inconsistent are of minor significance.**

The planning proposal is inconsistent with this direction as it is not placing controls on sensitive uses into the LEPs and the FPA is based on a 1%AEP + 300mm. However, the inconsistency is justified based on the comments provided above.