



## Floodplain Management Australia

Supporting Wise Planning and Development

[www.floods.asn.au](http://www.floods.asn.au) ABN 67 007 279 179

President: Ian Dinham 0435 946 525

13 February 2023

NSW Department of Planning and Environment  
4 Parramatta Square  
12 Darcy Street  
PARRAMATTA NSW 2150

**(Submitted on line)**

### **Submission – Special Flood Considerations planning provisions**

Thank you for the opportunity to provide input to your Department's Proposal to introduce the 'special flood considerations' (**SFC**) clause into selected local environmental plans (**LEPs**) or a state environmental planning policy (**SEPP**).

#### **About Floodplain Management Australia**

Floodplain Management Australia (**FMA**) was established to promote sound and responsible floodplain management, and to help reduce the risks of flooding to life and property.

FMA has continued to carry out these important roles for more than 50 years and is now the national voice for flood management, with a membership of over 170 Local Government Councils, catchment authorities, government agencies, businesses, insurers and professionals involved in all aspects of urban and rural flood risk management. Our members are at the front-line of flood risk assessment, flood management planning, decision making, emergency management and community engagement - see [floods.asn.au](http://floods.asn.au)

FMA has strong partnerships with key State/Territory and Commonwealth Government agencies including NSW State Emergency Service, NSW Department of Planning, Industry and Environment, ACT State Emergency Service, Victorian Department of Environment, Land, Water and Planning, Queensland Reconstruction Authority and the Bureau of Meteorology. In addition, we have links to equivalent organisations in the United States, the United Kingdom and New Zealand. Our international network is invaluable in sharing flood management experience and expertise from other nations with our members for the benefit of their communities.

#### **Our Overall Comments**

FMA commends the Departments' ongoing review and refinement of how the NSW planning system manages development on floodplains.

Our aim for the way the planning system in NSW deals with flood risk is for it to:

1. Provide an uncomplicated and internally consistent system that is efficient to implement
2. Allow for best practice risk based planning outcomes
3. Communicate flood risks clearly to the public.

We support the provision of planning controls that ensure that land uses that are particularly vulnerable to flood hazards are afforded specific consideration to ensure that risks are

appropriately managed. Accordingly we support the introduction of the SFC clause for those Councils that have elected to include it within their LEPs.

However, ideally we believe that ultimately LEPs can be better structured to provide a single flood risk management clause that comprehensively addresses flood risk. Such a clause could replace both the mandatory and options clauses 5.21 and 5.22 to provide a single clause that efficiently addresses all flood risk management considerations in a manner that clearly communicates flood risk to the general community. We understand that the two clause approach initially arose due to restrictions imposed by the 2007 NSW Flood Planning Guideline which was rescinded in July 2021, and should no longer be an impediment to rationalising flood risk management planning controls.

The rationalising of the two LEP clauses would be consistent with the submission FMA made to NSW Flood Prone Land Package in 2020 and the FMA Land Use Planning Position Policy (copies attached).

Notwithstanding our view about the need for more fundamental change, the following sections of this submission outline specific comments on the matters raised in the “Explanation of Intended Effect: Special Flood Considerations Clause” document (**EIE**).

## **Specific Comments on Components of the EIE**

### Content of Clause 5.22

We understand that the clause is now an optional clause incorporated into the Standard LEP Instrument and the current Proposal does not seek to amend it.

However, we note that rationalisation of clauses 5.21 and 5.22 in the future could assist in providing a more simple, comprehensive and communicatively complete approach. For example, while clause 5.22 is intended to apply to only defined sensitive uses, subclause 5.22(2)(b) would allow the consent authority to effectively apply the clause to any use considered to be at risk and require evacuation in the event of any flood.

While FMA supports such considerations, the same outcome could be achieved with the application of clause 5.21 where a Council has adopted the PMF as the flood planning area. This would unambiguously apply to all land uses including general residential uses which have been a major area of concern during recent severe floods. We note, the defined sensitive uses in clause 5.22 do not include general residential development.

### Proposal for state-wide application of the clause

We are not opposed to the use of the use of the Resilience and Hazards SEPP to provide comprehensive floodplain risk management provisions for the NSW planning system, consistent with the aims we stated above. However we consider it would be piecemeal to include the provision of clause 5.22 in the SEPP without the introduction of broader provisions that address all flood risk planning considerations, that provide a single comprehensive list of considerations, rather than have them spread across both the SEPP and LEPs.

Further, while not clear in the EIE, we assume that inclusion of clause 5.22 provisions in the SEPP would not be limited to those Councils that have opted into the clause. On that basis we are concerned that the use of the SEPP would not provide the remainder of Councils in NSW adequate time to prepare for the additional considerations. The provisions of clause 5.22 provide high level considerations that should ideally be supplemented with more detailed controls in a DCP and appropriate mapping.

We have similar reservations in regard to the adoption of clause 5.22 in the LEPs of all Councils at this point.

As discussed above, we consider the preferred approach would be to continue with the introduction of clause 5.22 for those Councils that have opted into its application as an interim measure, followed by a more substantive review of the flood risk management planning provisions. The more substantive review could provide a single set of provisions in either the SEPP or individual LEPs, that achieves the aims sought by FMA as discussed above.

## **Conclusion**

FMA brings together expertise and experience from all aspects of flood protection, preparedness, response and recovery, with involvement in the planning process from a range of perspectives. Consequently, we consider that the above comments provide a balanced response.

In summary, FMA supports the Department's Proposal to insert clause 5.22 into the LEPs of those Councils that have requested this, on the understanding that the flood risk management approach in the NSW planning system will continue to be rationalised and improved to better achieve the fundamental aims of a more simple, comprehensive and communicatively complete system that we discuss above.

We thank you again for the opportunity to be involved.

Yours faithfully



Paul Grech  
**Director, Land Use Planning**  
**Floodplain Management Australia**

Enclosures:

1. FMA Submission to the 2020 NSW Flood Prone Land Package
2. FMA Land Use Planning Position Policy

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## Floodplain Management Australia

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[www.floods.org.au](http://www.floods.org.au) ABN 67 007 279 179

President: Ian Dinham 0435 946 525

19 June 2020

Ms Santina Camroux  
Director Resilient Places  
NSW Department of Planning Industry and Environment  
4 Parramatta Square  
12 Darcy Street  
PARRAMATTA NSW 2150

Attention: Ms Melanie Schwecke

**(Submitted on line)**

Dear Santina and Melanie

### **Submission – Flood Prone Land Package**

Thank you for the opportunity to provide input to your Department's draft updated Flood Prone Land Package (**the Package**) which is to provide advice to councils on considering flooding in land use planning. We are also grateful for the workshop and webinar you facilitated during the review of the Package, for the benefit of our members.

#### **About Floodplain Management Australia**

Floodplain Management Australia (**FMA**) was established to promote sound and responsible floodplain management, and to help reduce the risks of flooding to life and property.

FMA has continued to carry out these important roles for more than 50 years and is now the national voice for flood management, with a membership of around 160 Local Government Councils, catchment authorities, government agencies, businesses, insurers and professionals involved in all aspects of urban and rural flood risk management. Our members are at the front-line of flood risk assessment, flood management planning, decision making, emergency management and community engagement - see [floods.org.au](http://floods.org.au)

FMA has strong partnerships with key State/Territory and Commonwealth Government agencies including NSW State Emergency Service, NSW Department of Planning, Industry and Environment, ACT State Emergency Service, Victorian Department of Environment, Land, Water and Planning, Queensland Reconstruction Authority and the Bureau of Meteorology. In addition, we have links to equivalent organisations in the United States, the United Kingdom and New Zealand. Our international network is invaluable in sharing flood management experience and expertise from other nations with our members for the benefit of their communities.

Natural disasters are costing Australia over \$560 million a year on average, and flooding from rivers and local catchments is the costliest, yet most manageable, of natural disasters. The most recent major flood event, the 2019 North Queensland Monsoon Trough, resulted in \$1,243 million in insurance losses, while Deloitte Access Economics estimated that the social and economic cost was \$5,681 million (*The social and economic cost of the North and Far North Queensland Monsoon Trough (2019) for the Queensland Reconstruction Authority.*)

## Our Overall Comments

FMA commends the Departments' review of the key flood risk management (**FRM**) policies that influence planning in NSW.

FMA has advocated for a review of these policies since first introduced in 2007. The policies and practice associated with how flood risk is considered in planning in NSW has evolved since the mid-20<sup>th</sup> Century and retains elements that continue to constrain the achievement of optimum outcomes. Despite this, over the last 13 years there has been a growing awareness amongst planners and the general community of the importance of effective risk based planning and clarity in the communication of flood risks.

Our vision is for simple but fundamental changes to the manner in which the planning system in NSW deals with flood risk that:

1. Provide an uncomplicated and internally consistent system that is efficient to implement
2. Allow for best practice risk based planning outcomes
3. Communicate flood risks clearly to the public.

The Package is being reviewed at the same time that the Floodplain Development Manual (**the Manual**) is being reviewed. The Manual was published 15 years ago and remains elementarily similar to the first version of the Manual introduced in 1986. While the Manual should be recognised as having provided important revolutionary guidance for undertaking FRM, those components of the Manual dealing with Planning in particular, need review. While we recognise that the Manual and the Package are undergoing separate reviews, we understand the timing for these reviews are not so disjointed that the benefits of a combined comprehensive exercise should be ignored.

There is currently an opportunity for generational change that should not be overlooked.

Fundamental changes that we consider should be considered are:

- Dispensing with the reliance on a singular flood planning level (**FPL**) in local environmental plans (**LEPs**).
- Reviewing the way flood planning areas (**FPAs**) are delineated in LEPs so that they are consistent with the definition of flood prone land (ie floodplain) in the Manual to provide a practical framework for more detailed controls in development control plans (**DCPs**) for a range of land uses subject to different flood hazards.
- Providing better ways of mapping areas of the floodplain for the planning purposes that reflect a risk based approach to FRM and avoid miscommunicating flood risk to the community.
- Uncomplicating the way the planning system addresses FRM and bringing greater consistency with the FRM process specified by the Manual.

These changes are consistent with the FMA Land Use Planning Position Policy\*, which is available at the FMA website: [floods.org.au/site/technical-information](https://floods.org.au/site/technical-information)

Notwithstanding our view about the need for more fundamental change, the following sections of this submission outline detailed comments on the different components of the Package, which in many cases highlight the need for more the fundamental changes outlined above.

## Specific Comments on Components of the Package

### Draft Planning Circular

- a) The Circular commonly refers to “managing flooding”. We suggest that this be changed to “managing flood risks” as the message should be about how planning can manage the risks associated with flooding and not what could be inadvertently interpreted as physically managing flooding through structural measures. While structural measures can play an important part in FRM they are only one mechanism that should not be the first approach used in planning. Consequently, the Manual inclusions outlined on page 1 should also reference the broader flood modification and response modification measures that it contains.
- b) The following statement (pg.2) is key to the guidance required and we support it whole heartedly, noting that this should be consistently reflected throughout the Package:  
*Effective consideration of flood risk in land use planning involves developing an understanding of the full range of flood behaviour up to the Probable Maximum Flood (PMF) and considering this in management of flood risk.*
- c) For clarity it would be desirable to define “flood-related development controls” (pg.2) but in the absence of a definition it is taken to include controls in a DCP. Note FRM controls in a DCP often apply to an area that differs from the FPA applying in a LEP which typically relies on the default single FPL of the 100 year flood. Conversely a DCP often includes variable FPLs applying across the floodplain for different land uses, consistent with a risk based approach. This is an example of an unnecessary complication and inconsistency that should be resolved.
- d) We suggest that in the unlikely situation that a Council does not have information required to answer the proposed question at clause 7A(3) of the Regulation (pg.2) the advice on a Planning Certificate be “unknown” as opposed to “no”.
- e) We support the proposal (pg.3) to amend Local Planning Direction 4.3 to remove the need to obtain exceptional circumstances to apply flood-related residential development controls above the 100 year flood.
- f) The reference (pg.3) to the Manual’s recommendation that a “defined flood event” or historic flood plus freeboard should generally be used to set residential “FPLs” could be confusing and may not lead to optimum outcomes. While a defined flood event is referenced in AIDR Handbook 7 it is not referenced in the current Manual and is a new term that may not be familiar to NSW planners, and adds complexity and need not be introduced. While our members have expressed a preference that the 100 year flood (plus freeboard) should be maintained as a minimum FPL for most aspects of residential development, Councils should be encouraged to undertake a risk based approach to FRM. This could identify multiple FPLs for non-residential uses, vulnerable and critical uses and, in some cases, aspects of residential development such as non-habitable floors.
- g) Reliance on the FRM process (assumably the process set out in the Manual) to justify variations from using the 100 year flood (plus freeboard) in preparing flood related development controls for residential development can be onerous, confusing, and counter to achieving optimum outcomes. The FRM process is commonly out of sync with the process of preparing an LEP or DCP and may not relate to all floodplains within an LGA, and can discourage taking a broader risk management approach. We suggest that the requirement is amended to reflect that choosing an alternate FPL requires justification based on a risk management approach that is consistent with the principles of the Floodplain Development Manual.
- h) While this was explained at the Webinar, it would may be of assistance to outline where the proposed “Regional Evacuation Consideration Area” clause will apply in the short and long

term, and whether any government agency such as the SES could have a role in providing advice to Councils when assessing compliance with the clause. We understand that at present the clause would only be relevant to those parts of LGAs within the lower Hawkesbury-Nepean Floodplain. It would be helpful if the Department (and the SES) could provide a full briefing for Hawkesbury-Nepean Catchment Councils, and develop some form of practice note or guideline as to how these matters are to be considered and managed.

The inference that the choice of a single FPL for general residential development is required to establish an FPA is inconsistent with a risk management approach and is a legacy of an outdated historical approach that is in need of fundamental review.

### Revised LEP Clauses

- a) Currently there are no compulsory FRM provisions within the *Standard Instrument—Principal Local Environmental Plan* and one model “Flood Planning” clause. The use of the model clause varies considerably across the state, including some LEPs where there is no clause and some LEPs contain an additional “Floodplain Management Risk” clause. The wording of adopted clauses sometimes also varies from the Model clause. The manner by which land is mapped for the purposes of triggering the application of such clauses varies from wholly relying on a descriptive definition, to maps that identify land affected by the PMF, 100 year flood, 100 year flood plus freeboard and flood control lots (as defined by *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 - the Codes SEPP*).
- b) While flexibility on how individual Councils could address FRM in their LEPs is supported, the significant variation currently in LEPs is a reflection of a lack of direction. This is compounded by different definitions provided in the Manual. Such variability in LEP provisions, without a consistent and easily understood base, can confuse the general public leading to a misunderstanding of risk exposure and lack of preparedness.
- c) The principal purpose of LEP provisions is to identify where FRM related provisions trigger approval different pathways and to specify considerations when assessing applications. However, this needs to be presented in a way that does not miscommunicate flood risk to the community.
- d) Three Model clauses are now proposed to deal with FRM. This introduces additional complexities and the potential to confuse the public. With the single most stated issue with the planning system in NSW being its unnecessary complexity, we respectfully suggest that the Department should be moving towards uncomplicating FRM LEP provisions. A single Model Clause would suffice with optional subclauses if required.
- e) Our specific comments in regard to the “Flood Planning Area” clause are:
  - i. Objective 1(c) requirement to “maintain the existing flood behaviour” does not always provide the best outcome. In some cases, mitigation measures such as levees or filling that change flood behaviour without any unacceptable external impacts can provide the best planning and FRM outcome.
  - ii. The requirement of objective 1(d) to avoid “...cumulative impacts on flood behavior” is not a matter that ideally should be left to the DA stage (see FMA Land Use Planning Position Policy\*). It would be impractical to consider the cumulative impacts associated with individual small scale development such as single dwelling houses. However, it is recognised that some Councils require an assessment of cumulative impact in specific situations such as large scale subdivisions or in areas with legacy issues. While the intent of the objective is appreciated, we suggest rewording.
  - iii. It is not clear how individual developments could “enable safe evacuation from the land” as required by objective 1(f). Enabling safe evacuation would typically be

reliant on a range of factors such as the capacity evacuation routes and the availability of flood warning systems. Also, many Councils have adopted policies that allow development to rely on shelter in place in certain circumstances which would be inconsistent with this objective. While the intent of the objective is appreciated, we suggest rewording.

- iv. There is a concern that the definition of “hazardous materials” is broad and could inadvertently capture unintended land uses, making it difficult for otherwise appropriate uses to comply with subclause 3(h). Possible examples of such land uses include turf farms and sewage treatment plants.
  - v. Subclause (4) mandates that Council must be satisfied that the design of a development has taken into consideration climate change flood risk. This could be unnecessarily onerous or impractical for some Councils or for some types of DAs. Again, again while the intent of the objective is appreciated, we suggest rewording.
  - vi. The definition of FPA is unnecessarily complicated. As FPL is not defined in the clause it would be defined as per the Manual, in which case the Manual defines “flood planning levels (FPLs)” – that is more than one FPL could apply. The use of the word “may” introduces vagueness. As noted above, “flood related development controls” is not defined but would be interpreted as including FRM DCP controls. Consequently, an FPA could be a wide range of areas including parts of a floodplain, the whole floodplain or in some circumstances more than the floodplain. A substantial number of Councils in NSW have DCP FRM controls that apply to the whole of the floodplain as defined by the Manual, even if only for sensitive, vulnerable and critical uses.
  - vii. While it is appreciated that the Department is seeking to avoid unnecessarily constraining development in the floodplain the proposed definition will not achieve that objective in our view, and will only create further burdensome complexities for Councils and developers.
  - viii. In our view, the definition of FPA should simply adopt the Manual definition of the floodplain. This provides consistency across FRM polices in NSW, clarity as to what should be mapped, appropriate high level FRM LEP provisions for DCPs to follow with more detailed controls, less confusion and potential to miscommunicate risk to the public, and a significantly less complicated assessment process.
- f) Our specific comments in regard to the “Special Flood Considerations” clause are:
- i. Consider rewording objective 1(a) for the above reasons.
  - ii. The application of the clause to “the flood planning area and up to the level of the probable maximum flood” is problematic. The extent of what could be the FPA is wide ranging as outlined above, and could already be the PMF based on the proposed definition in the Flood Planning Area clause, meaning the clause would apply nowhere.
  - iii. The clause infers that emergency management issues are not relevant to other land uses, such as residential, in some parts of the floodplain even though emergency management plans of Council and the SES would cover all situations.
  - iv. Subclause (3)(b) is problematic because it does not recognise shelter in place, as discussed above. Also, this clause does not appear to actually require ensuring evacuation is possible, rather it relates to the impact the development would have on evacuation from “the land” [the subject of the DA].



- g) Our specific comments in regard to the “Regional Evacuation Consideration Area” clause are:
- i. We strongly support the protection of the capacity of regional evacuation routes (clauses (1)(a) and (3)(a)). However, this a matter that should be addressed through regional and local strategic planning that precedes the plan making process (see FMA Land Use Planning Position Policy\*). Reliance on individual DAs to achieve this is unlikely to achieve this aim and the imposition of such a requirement on individual DAs could be impractical.
  - ii. We anticipate there will be uncertainty about how to define “rising road access” and its necessity for all conceivable types of development in all circumstances and suggest this be reviewed. The interpretation is critical because the wording of clause (3) is such that a Council must be satisfied that it will be available before approving any development within the area subject of the clause.
- h) For the reasons outline above, we recommend considering one LEP FRM clause and a definition of FPA that is the same as that in the Manual.
- i) While we recognise that the Manual definition of floodplain applies up to the PMF we do not advocate imposition of planning restrictions on all development in the lower risk parts of the floodplain. Subclauses should be worded to write-down the applicability of some considerations to certain development in lower risk parts of the floodplain The LEP considerations should be sufficiently high level to avoid inadvertently preventing acceptable development and creating unintended inconsistencies with DCPs.
- j) Perceived concerns of the development industry that adoption of a clause that applies to all a development in a floodplain (ie up to the PMF) is unwarranted. A substantial number of Councils have DCP controls that apply in this way, If flood risk is seen to be a relevant issue for a development based on a DCP control or expert advice, it is typically taken into consideration by a Council or the Court, regardless of the applicability of a such an LEP clause. The interests of the development industry would best be served by providing greater certainty about the applicable rules and reducing complexity.
- k) As most LEPs now contain an FRM clause, Council would benefit from an outline of how the DPIE envisages transitioning to the new provisions. We understand that the DPIE has not yet determined whether the clause would become a mandatory clause within the Standard LEP or remain a model clause. Discussions so far with FMA members indicate mixed views on this point at present. The preference of our members would most likely be dependent on the final form of the clause and we would request that the DPIE engage in further consultation with us before pursuing a Standard LEP mandatory clause approach.

#### Amendment to Section 9.1 Local Planning Directive

- a) The reference to the Flood Planning Area in clause (5) suffers from the same definitional issue discussed above.
- b) The restrictions on development in a floodway can in some cases be problematic. There is no one single way of determining the extent of a floodway, and the restrictions could be excessive for minor flooding such as typical overland flow flooding situations. This could lead to disputes as to when clauses (6)(a) and (f) should be applied.
- c) The requirement that all sensitive uses should in all cases be required to self-evacuate can be excessive. For example, in urban renewal situations subject to minor overland flow flooding, shelter in place could be an acceptable alternative.
- d) The flexibility afforded by clause (8) could unnecessarily lead to disputes as to whether a proposal is consistent with the Manual. The Manual is written as a flexible document providing different ways of achieving desirable FRM outcomes. We suggest that the

requirement be changed to being “consistent with the principles of the Manual”, being the approach adopted in S733 of the *Local Government Act 1993*.

While not a criticism, we observe that clause (8) references “Flood Planning Level(s)” (ie recognising the ability to have multiple FPLs consistent with the Manual) while the proposed Model LEP clauses refer only to a singular FPL. We also note that this creates potential inconsistencies with the definition of “flood planning area” provided at Note (f) which refers to a singular FPL, and the definition of “flood prone land” at Note (a) which is the same as that in the Manual (ie up to the PMF). This exemplifies the unnecessary complexity and confusion created by the existing system and the need for fundamental change.

### New Flood Planning Guideline

The draft Guideline covers concepts in the above proposed policy documents. Consequently, our comments in regard to the draft Guideline in the main are reflected in our comments above.

- a) We commend in particular the recognition that FRM needs to consider the “...full range of flooding up to the Probable Maximum Flood (PMF)” and the specification of sensitive, vulnerable, or critical uses.
- b) We also commend the recognition that variable freeboards can be appropriate when addressing difference between major riverine and minor flooding but note that this can add to the complexities of assigning a single FPL in an LEP.
- c) The necessity for the introduction of a further term “Defined flood event” not currently used in the Manual arises only because of the continued historical approach of defining an FPA based on a single FPL. Rethinking this approach could dispense with such additional terms which do not assist in uncomplicating the system.

For the reasons outlined above we recommend that the approach of adopting a single FPL for defining an FPA be reviewed. As emphasised above this requires a fundamental change in approach. The Manual, and national guidance provided by AIDR Handbook 7, recognise that multiple FPLs would be appropriate when applying a risk based approach to FRM.

### **Conclusion**

FMA brings together expertise and experience from all aspects of flood protection, preparedness, response and recovery, with involvement in the planning process from a range of perspectives. Consequently, we consider that the above comments provide a balanced response, that in summation supports our overriding proposition that the policy documents should be reconsidered to bring about some simple but fundamental changes.

We would be pleased to contribute further as the Department progresses with the important work of reviewing the Package. We would be happy to convene a meeting with key members of the FMA Executive or to facilitate a further workshop at a forthcoming FMA Quarterly Meeting.

We thank you again for the opportunity to be involved and look forward to hearing back from you.

Yours faithfully



Paul Grech

**LAND USE PLANNING DIRECTOR**

\*FMA Land Use Planning Position Policy is available at [floods.org.au/site/technical-information](https://floods.org.au/site/technical-information)

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## Position Policy

# Floodplain Risk Management in Land Use Planning

### Summary

FMA members are committed to ensuring that the planning system optimises floodplain risk management (FRM) outcomes. Flooding causes the most damage of all natural disasters but is also the most predictable. Planning can therefore be pivotal in managing flood risks associated with the development and redevelopment of urban and rural areas.

This Policy sets out recommendations for the preparation of planning strategies and development controls, and in the dissemination of flood related information through the planning system. This Policy was originally prepared for NSW, based on generic principles, and has been updated to be nationally applicable.

### Introduction

The planning system should have regard to best FRM practice. Planning can have significant benefits in minimising and reducing flood risks to property and persons as part of the planning of new areas and the redevelopment of established areas.

Flooding is Australia's costliest natural hazard-related cause of disasters when both tangible and intangible losses are taken into account<sup>1</sup>. Australia's total economic exposure to flooding is estimated to be around \$100 billion. Approximately 7% of households have flood risk, with 2.8% being located in high risk areas; that is, up to 170,000 buildings are in locations exposed to floods with a 1 in 20 chance of occurring annually<sup>2</sup>.

There is often uncertainty in the planning process about what FRM issues and outcomes are expected to be addressed, at what stage in the hierarchy of plan making to do this, and who should do it. While overall guidance on FRM is provided at a national level through the Australian Emergency Management Handbook 7: *Managing the Floodplain Best Practice in FRM in Australia* (**AEM Handbook**) better integration of FRM and planning processes is required.

### Purpose of this Policy

To present a concise FMA endorsed position that can be used in advocating best practice about how land use planning should address FRM issues.

### Scope of this Policy

This Policy:

- applies to all planning documents including studies, non-statutory planning strategies, and local, regional and state land use planning controls (**planning policies**)

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<sup>1</sup> Deloitte Access Economics, Building resilience to natural disasters in our States and Territories, 2017.

<sup>2</sup> AXCO, Insurance Market Report. Australia: Non-Life (P&C) 2018, as cited in Flood Risk Management in Australia, 2020, Neil Duffy, Andrew Dyer and Maryam Golnaraghi, Geneva Association, pg.24.

- provides a position on what FRM issues should be addressed when undertaking planning studies and preparing planning strategies, the content of planning policies and the format of flood risk maps prepared for planning purposes
- recognises that planning studies and policies inadvertently convey information to the public in regard to the nature and location of flood risks
- has been prepared to apply nationally.

As planning systems vary from state to state, generic terms are used where possible to describe planning studies, strategies and policies to reflect those relevant to the current and possible future planning systems. FRM planning terms as defined in the AEM Handbook are relied upon when needed.

### **Position Statement**

FMA considers that the overall approach to addressing FRM in the planning system should be based on a risk based approach tailored to meet the social, economic and environmental context of individual floodplains and the communities within them. This must include recognition that climate change is changing the nature and frequency of flooding.

This application of FRM within the planning system should be undertaken as a partnership between all levels of government. State and local governments have a primary role in land use planning while the federal government should contribute by directing financial resources to maximise mitigation, aiding in recovery, and providing nationally consistent policy direction.

The attached table outlines the FMA policy position.

### **FMA Action**

FMA will:

- liaise with all levels of government to achieve the above policy outcomes
- encourage its Members to promote and make decisions consistent with the above policy outcomes
- work with governments and industry to refine the above policy position
- continue to develop training opportunities to assist in improving the FRM knowledge and skills of those professionals who are involved in town planning.

### **Policy Review**

This Policy Statement is to be reviewed every 2 years or where required to reflect changes in planning policies.

### **Policy Status**

This Policy Statement was initially prepared by a working group of FMA members comprised of engineers and town planners from local Councils and consultants based in NSW. The decision to prepare the Policy was originally initiated by a resolution adopted at the 2014 Annual General Meeting (AGM) of FMA and endorsed at the following Annual General Meeting in 2015.

FMA members were invited to provide comments after 12 months from when the Policy was adopted. The Policy was subsequently reviewed in 2016 and updated on 25 January 2017.

The Policy was more substantially reviewed for the FMA Quarterly Meeting at the National Conference in May 2021, to provide a nationally applicable approach.

Planning Documents	Comment on Existing and Possible Future Planning Studies, Strategies and Policies	FMA Policy Position
<b>State Level</b>		
<p><b>Planning Information</b></p>	<p>Planning policies inadvertently provide a source of information on flood risks. Some jurisdictions also provide written certification of planning controls and constraints that affect the development potential of a property. However, this information is commonly limited to the flood related development controls that apply to the property and not necessarily to flood risk that a property may be exposed to. The public can wrongly rely on this information as reflective of all known flood risks.</p> <p>All legislation, directions, guidelines and practices associated with how the planning system allows for the presentation of flood related development controls, is important to how the community is informed about flood risks. The community should be fully informed about flood risks to allow an opportunity for individuals to decide what are acceptable risks (particularly where planning policies retain some residual risks) and to provide awareness that aids emergency management and recovery.</p>	<ol style="list-style-type: none"> <li>1. The form and content of planning policies and certification should be reviewed to: <ul style="list-style-type: none"> <li>• avoid misleading the public who may believe there are no flood risks when only advising if flood related planning controls apply</li> <li>• ensure that the same and more complete information is communicated to all enquirers</li> <li>• ensure the public is fully informed of known flood risks or if there is insufficient information to know whether a flood risk exists.</li> </ul> </li> </ol>
<p><b>Directions for deciding on land use zones and planning controls</b></p>	<p>Government policies may explicitly or implicitly direct the form and content of statutory planning schemes (local environmental plans in NSW) and supplementary planning controls (such as development control plans and codes).</p>	<ol style="list-style-type: none"> <li>2. These should be either superseded by, or amended to be consistent with the direction provided by the AEM Handbook.</li> <li>3. Directions for deciding on land use zones and planning controls should be based on a risk based approach as opposed to relying on a singular defined flood event.</li> </ol>

<p><b>State level planning policies -</b></p>	<p>State level planning policies in some states provide high level direction as to how to manage the development of land affected by natural hazards, including flooding.</p> <p>In some cases state level policies embody detailed planning controls for development in the floodplain such as specifying development that may be permitted without development consent or through a private certification system.</p>	<ol style="list-style-type: none"> <li>4. Each state should have a state policy to provide direction for the management of natural hazards, including flooding, that: <ul style="list-style-type: none"> <li>• incorporates direction consistent with that advocated by this FMA policy;</li> <li>• references the AEM Handbook, and relevant state level FRM guidelines<sup>3</sup> as relevant to plan making;</li> <li>• requires other state policies and subordinate planning policies to adopt FRM terms defined in the AEM Handbook;</li> <li>• specifies that matters identified in this policy statement be addressed prior to the preparation of a plan that significantly changes development potential in floodplains;</li> <li>• ensures that planning addresses flood risks to private and public property, infrastructure and to life;</li> <li>• requires FRM planning to be based on a holistic risk based approach and not reliance on a single defined flood.</li> <li>• requires consideration of measures to maximise the resilience of the community post flooding; and</li> <li>• considers climate change related flood risks.</li> </ul> </li> <li>5. That the relevant state planning authority be responsible for preparing the policy in consultation with other relevant government agencies in particular those involved with the management of the natural environment, emergency services, local government, utility authorities, FMA and the Bureau of Meteorology.</li> <li>6. In states where no state level FRM planning policy currently exists, this should be prepared as a priority.</li> <li>7. Related state policies, should also be revised to provide consistency<sup>4</sup>.</li> </ol>
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<sup>3</sup> Such as the Floodplain Development Manual and NSW Flood Prone Land Policy in NSW.

<sup>4</sup> For example in NSW, State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 contains provisions that rely on the definition of areas of high flood risk to determine where development can be approved through private certification or is permitted without development approval.

## Regional Level

### Regional Plans & Strategies applicable across all NSW regions

Typically each state produces a hierarchy of plans that seek to satisfy government goals and policies. At the top of this hierarchy are regional and metropolitan plans that set out key policies, targets and the structure of future development patterns to guide the making of lower order plans.

#### 8. These documents should:

- Identify the floodplains within the planning region and the key FRM considerations for development (eg evacuation and private and public damages due to significant flood depths).
- Include a Regional Flood Planning Map that shows the extent of the floodplain(s) defined by the AEM Handbook, and associated elements relevant to FRM.
- Identify regional stakeholders (eg. local Councils, state planning agencies, emergency services, insurance companies, transport infrastructure owners, dam/irrigation authorities, etc).
- Consider regional evacuation including the location and capacity of evacuation routes and centres.
- Where flood modelling at the regional level is appropriate, determine suitable development areas having regard to cumulative flood impacts. The cumulative impact of land filling and development should not increase flood levels in existing urban areas.
- Identify regional FRM mitigation measures that are required to ameliorate the impact of future development (eg augmented capacity to evacuation routes).

Subregional		
<b>Subregional Plans &amp; Strategies (Subregional Delivery Plan or District Plans within the Sydney Metropolitan Region)</b>	Subregional planning links growth in population and housing to the infrastructure that supports communities, such as schools, health services, transport, and electricity and water projects. It also delivers planning outcomes across local Council boundaries and sets specific plan making actions such as for the making of local planning schemes to achieve a regional planning outcome.	<p>9. These documents should:</p> <ul style="list-style-type: none"> <li>• Address the FRM items required for a regional growth plan where not undertaken as part of that plan.</li> <li>• Consider FRM principles in the process of determining land use patterns<sup>5</sup>.</li> <li>• Identify responsible authorities and funding sources for the delivery of regional FRM mitigation measures.</li> </ul>
Local		
<b>Local Plans (such as Local Planning Schemes or Local Environmental Plans)</b>	<p>Local plans are typically statutory planning instruments that should have a line of sight back to higher order plans and reflect local strategic planning objectives. Local plans provide the basis upon which the majority of development is approved.</p> <p>A local plan might contain the following provisions that contribute to the way flood risks are considered in the assessment of a development proposal:</p> <ul style="list-style-type: none"> <li>• The zoning of land, and key associated planning controls such as minimum lot size, can reflect the acceptability and appropriate density of development in locations subject to unmanageable flood risk.</li> <li>• Definitions of terms, such as floodplain, or identification of the extent of flood affected land on a flood overlay map land guide the way that flood</li> </ul>	<p>10. The provisions of a local plan should:</p> <ul style="list-style-type: none"> <li>• provide for the management of flood risks to life, property and public infrastructure</li> <li>• apply a risk based approach that reflects a graded level of control dependent on the vulnerability of different land uses and the degree of hazard identified for different floodplains and different parts of a floodplain</li> <li>• adoption definitions consistent with the AEM Handbook, in particular the definition of a floodplain</li> <li>• apply to the whole of the floodplain</li> <li>• include climate change considerations.</li> </ul> <p>11. The permissibility of development should be determined by the land use zoning applied to property having regard to all planning considerations including FRM.</p> <p>12. Where resources allow, a flood planning map should be incorporated into an LEP, with the following attributes:</p>

<sup>5</sup> See principles outlined in the AEM Handbook and other publications such as 'Managing Flood Risk Through Planning Opportunities' prepared for the Hawkesbury-Nepean Floodplain Management Steering Committee, NSW Government, April 2007.



risk management considerations apply. Local plans identify either the whole (ie up the extent of the probable maximum flood) or part of floodplain (ie a flood planning level based on defined flood event lower than the probable maximum flood) as subject to flood related development controls.

- Flood overlay maps can identify areas subject to flood risk and trigger matters to be considered in the assessment of a development proposal.
- Clauses that outline matters that need to be taken into consideration when assessing the acceptability of development identified as within the area requiring consideration of flood risks.

- An overlay to land zoning maps.
- Divide the floodplain into precincts of flood risk for planning purposes (preferably 3) that trigger appropriate planning controls. These maps may show, for example, areas:
  - where most development is undesirable because of the existing hazard which is unlikely to be able to be mitigated due to cost or environmental impact. These areas should coincide with those where exemptions from development consent or private certification of development is not allowed.
  - where most development would be acceptable subject to flood mitigation measures.
  - where controls apply to only especially vulnerable development except emergency management considerations that apply to all development.

13. Include both riverine and major overland flooding and tailor planning controls to the hazards associated with each.
14. The above maps should be used to inform the preparation and review of the LEP land zoning maps.
15. The zoning and development potential of land should be checked to ensure that it would not facilitate development that would be incompatible with the flood hazard or require environmentally unacceptable mitigation measures.
16. The local FRM provisions should be applied even if a flood planning map is not included in the LEP for the whole or part of the area to which it applies. In this situation guidance should be provided as to what criteria Council will apply to determine whether to apply the LEP clause, preferably as a part of more detailed development codes or control plans.
17. Include electronic links between flood related planning controls and mapping to more comprehensive FRM information sources where available.

<b>Development Codes, Guidelines or Control Plans</b>	These provide detailed controls that supplement higher order planning instruments (normally planning schemes or local environmental planning schemes).	<ol style="list-style-type: none"><li>18. Model controls should be prepared by state agencies to assist Councils in preparing FRM provisions for development codes/plans.</li><li>19. These controls should be expressed as performance criteria and acceptable solutions, and cover:<ul style="list-style-type: none"><li>• Floor Levels</li><li>• Building material &amp; methods</li><li>• Structural soundness</li><li>• Impact on others</li><li>• Parking and access</li><li>• Evacuation &amp; refuge in place</li><li>• Environmental management.</li></ul></li><li>20. The development codes/plans should specify situations where further flood investigations should be undertaken, or not, at the development application stage and the specification for those investigations.</li></ol>
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