

AUSTRALIAN DISASTER RESILIENCE HANDBOOK COLLECTION

Considering Flooding in Land-use Planning Activities

Practice Note 7-7

This practice note is for use with Australian Disaster Resilience Guideline 7-5 Flood Information to Support Land-use Planning.

Supporting document for the implementation of *Australian Disaster Resilience Handbook 7 Managing the Floodplain: A Guide to Best Practice in Flood Risk Management in Australia* (AIDR 2017)

For copyright and acknowledgments see ADR Guideline 7-5

Why was this practice note developed?

Governments across Australia have spent hundreds of millions of dollars on mitigation works to reduce flood risks to existing communities. In some cases, they have had to relocate development from particularly hazardous areas. In many situations, these costly mitigation works could have been avoided or reduced if land-use planning decisions were better informed by flood risk.

This practice note outlines how better flood risk information can be developed to inform land-use planning activities. It provides some answers to the following questions:

- Why should we consider flooding in land-use planning activities?
- How can flood information be improved for land-use planning activities?
- How can you access better flood information?
- How can land-use planning practitioners be more involved in floodplain management?

Why consider flood risk in land-use planning activities?

Australian Disaster Resilience Handbook 7 Managing the Floodplain: A Best Practice Guide to Flood Risk Management in Australia (ADR Handbook 7) (AIDR 2017) outlines the importance of land-use planning activities in managing the growth in flood risk because of new development.

When flooding occurs, it results in hazardous conditions, and when people interact with flooding, it creates a flood risk. Therefore, introducing or intensifying land use or development in the floodplain creates a flood risk to the new development and its users.

New development can also change the flood risk to an existing community by altering flood behaviour or affecting the emergency management arrangements of the existing community. The scale of these effects will vary depending on how the floodplain is developed.

Decisions on where and how to develop a floodplain are important. Once a decision has been made to develop an area of a floodplain, applying standard development

conditions has only a limited ability to manage the growth in flood risk. By considering flood risk early in the decision-making process, intensification of land use can be directed away from areas that have flood constraints that are difficult, costly or impractical to manage to areas where flooding is easier to manage.

Considering flood-related constraints can encourage development on land that is less exposed to flooding and where flood risk is more easily managed. This approach can result in a growing community that is more resilient to flooding.

How can flood information be improved for land-use planning?

Timely access to better flood information can enable community growth strategies to be better informed on how flood-related constraints affect land within a floodplain.

The National Flood Risk Advisory Group developed *ADR Guideline 7-5 Flood Information to Support Land-use Planning* (ADR Guideline 7-5) (AIDR 2017) to improve the availability and timeliness of information so that it is more readily available for land-use planning activities. ADR Guideline 7-5 is designed to be used in consideration of, not to circumvent, jurisdictional directions or policies. It outlines how the often-complex flood-related constraint information can be developed into a single map or map set that breaks the floodplain down into four flood planning constraint categories (FPCCs). This makes information on the flood constraints and relative suitability of the land for development easier to interpret.

FPCC1 and FPCC2 represent land that is relatively highly constrained and may, in some cases, be unsuitable for intensification of development because of the:

- effect that development of these areas would have on flood behaviour, and the flood risk and flood emergency response of the existing community
- degree of flood constraints that new development would need to address to manage the flood hazard and associated risks to the development and its users.

FPCC3 identifies areas of the floodplain where most types of land uses are suitable when flood-related development conditions are met.

FPCC4 represents the least-constrained land, and identifies areas where only some types of land uses, such as those with occupants vulnerable in emergency response or community facilities which may play an important role in responding to a flood emergency (e.g.

public hospitals with emergency departments) may have flood-related development conditions.

How can you access better flood information?

ADR Guideline 7-5 uses information that can be developed in a flood study and, therefore, early in the floodplain-specific management process (refer to ADR Handbook 7). The key to having better flood information is to require it in studies – for example, by requiring technical briefs for flood studies to comply with, or consider, Guideline 7-5 (e.g. through *ADR Template 7-4 Technical Project Brief Template* (AIDR 2017) or jurisdictional equivalents).

ADR Handbook 7 and all supporting guidelines are available for free download at www.knowledge.aidr.org.au

How can land-use planning practitioners be more involved in floodplain management?

Land-use planning practitioners have a vital role in supporting decision makers to set and implement directions for community growth. They can therefore influence decisions on where changes in land use and development will occur, and with what objectives. To ensure that this can be done in an informed manner that considers flood risk, land-use planning practitioners should be actively engaged in floodplain management, such as through:

- developing the scope of work for studies, which can ensure that the flood information provided from studies suits the specific needs of land-use planning activities. It also provides the opportunity to assess the cumulative impacts of future development on flooding, test the viability of future development scenarios, and identify development controls and other treatment measures required to support development
- reviewing study outputs to ensure the required information is provided
- using the best available information to manage the growth in flood risk. Having consistent outputs and information from flood studies should make flood constraints easier to understand, interpret and use in land-use planning activities. The advice of flood risk managers can help to interpret this information, and examine development controls and treatment options.



Australian Government

Attorney-General's Department