

# Frequently Asked Questions



PlanSA



## Understanding the Flood Hazard Overlays in the Planning and Design Code

### Introduction

Land use planning plays an important role in ensuring that new developments avoid or mitigate impacts from flood hazard. The planning system does this by setting parameters around buildings in areas of known high risk and requiring that developments meet certain standards so that they are exposed to acceptable levels of risk. It is also important that the impact from new development on downstream users and watercourses is considered.

A \$3 million COVID Stimulus Grant was received to undertake a project to update flood hazard mapping for the State and enhance the Planning and Design Code's policies.

The Flood Hazard Mapping and Assessment Project will look at extending flood hazard mapping coverage, developing consistent flood hazard mapping, applying current national best practice and enhancing overlay policies.

There are three stages to this project:

- **Stage 1 – Flood Hazards Mapping Update Code Amendment:** the Chief Executive of the Department for Trade and Investment has initiated this Code Amendment. This Code Amendment seeks to reduce the spatial extent of the existing Hazards (Flooding - Evidence Required) Overlay, in 12 local government areas and several Outback Area townships where more recent flood hazard mapping has demonstrated that there is minimal risk of flooding

The Code Amendment will also seek to apply the Hazards (Flooding - Evidence Required) Overlay to a portion of the Port Adelaide Enfield Council area as a precautionary measure until the flood hazard mapping, being prepared in Stage 2 of the Project, can be implemented into the Code.

- **Stage 2 – Preparation of Mapping Products:** the Department is commissioning updated and new flood hazard mapping across the State to better identify flood risk using improved data and more consistent modelling.
- **Stage 3 – State-wide Flooding Hazards Code Amendment:** the State Planning Commission (Commission) will initiate a State-wide amendment to the Code to include the new mapping and updated policy.

## About this FAQ

This FAQ addresses how the Planning and Design Code (the Code) manages new development in areas exposed to flood hazard via three overlays:

- Hazards (Flooding) Overlay
- Hazards (Flooding - General) Overlay
- Hazards (Flooding - Evidence Required) Overlay

The policies applying to each overlay are designed to respond to flood risk and to provide the degree to which new development must consider the flood hazard.

The FAQ also assists with understanding each flood hazard overlay and how they provide policies for development subject to flooding within a 1% Annual Exceedance Probability (AEP)<sup>1</sup> event.

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<sup>1</sup> **Annual Exceedance Probability (AEP)** is a term used to express the percentage of likelihood of a flood of a given size or larger occurring in a given year. If a flood has an AEP of 1%, it has a one in 100 likelihood of occurring in any given year.

## Frequently asked questions

### **Q – What kinds of flooding are covered by the Flood Hazard Overlays?**

**A** – The overlays cover riverine (flooding of water courses and spilling onto adjoining areas) and surface water flooding (rainfall events that exceed stormwater infrastructure capacity and flood areas) at a 1% AEP event.

An annual exceedance probability (AEP) is the probability of an event occurring in any given year. For example, a 1% AEP indicates that there is a 1% change in any given year if the event occurring, which means that on average one event of this size or larger will occur every 100 years.

It is important to note however, that the occurrence of a 1% AEP event in a year does not reduce the chance that another event will occur the next year.

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### **Q – What about flood hazard along the coast and River Murray?**

**A** – Flooding along the coast and River Murray is addressed via overlays that apply to specific locations. The Coastal Areas Overlay and Coastal Flooding Overlay deal with coastal hazard risk. Flooding along the River Murray is addressed in the River Murray Flood Plain Protection Area Overlay.

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### **Q – The Code says that I am in the ‘Hazard (Flooding) Overlay’, what does this mean if I want to undertake development?**

**A** – The Hazard (Flooding) Overlay covers areas of highest flood hazard or where flood depth has been modelled at 300mm or greater above ground level for a 1% AEP flood. It seeks to minimise impact on people, property, infrastructure and the environment by avoiding development in high risk areas.

#### **What does this mean for development?**

- Development is not suitable in high-risk areas and developed areas, where intensification should be minimised.
- To ensure that flood ways are not obstructed, minor development such as fencing and small outbuildings require approval where located in this overlay.
- Development in this overlay is expected to be performance assessed and it is likely that an engineer’s report will be required to determine the extent of hazard risk for that property.
- Development should only occur where it can be sited and designed to minimise exposure of people and property to unacceptable flood risk (including adjoining properties); also, where evacuation is possible and emergency services can gain access during a 1% AEP flood event.
- After detailed consideration of the above listed factors, building above the flood plain plus a free board of 300mm may be considered appropriate by the relevant authority.
- Buildings that house vulnerable people, community services, key infrastructure and emergency services should be sited away from areas within this overlay.

- Buildings that house hazardous materials must be suitably designed to ensure there is no leakage into flood waters.
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**Q – The Code says that I am in the ‘Hazard (Flooding - General) Overlay’, what does this mean if I want to undertake development?**

**A –** The Hazard (Flooding-General) Overlay covers areas of lower flood hazard or where flood depth has been modelled at less than 300mm above ground level for a 1% AEP flood. The overlay seeks to minimise impact on people, property, infrastructure and the environment through the appropriate siting and design of development.

**What does this mean for development?**

- Habitable buildings, commercial and industrial buildings, and buildings used for animal keeping should be sited and designed to prevent the entry of floodwaters (where the entry of floodwaters is likely to result in undue damage to or compromise ongoing activities within the building).
  - A Deemed-To-Satisfy (DTS) criteria of 300mm free board above 1% AEP flood event applies for development assessment.
  - If a flood depth cannot be provided, the development authority may require an engineer’s report on the flood depth.
  - Buildings that house vulnerable people, community services, key infrastructure and emergency services should be sited away from areas within this overlay.
  - Buildings that house hazardous materials must be suitably designed to ensure there is no leakage into floodwaters.
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**Q – The Code says that I am in the ‘Hazard (Flooding - Evidence Required) Overlay’, what does this mean if I want to undertake development?**

**A –** The Hazard (Flooding-Evidence Required) Overlay applies to areas where there is no flood hazard data, making the flood risk unknown.

The overlay seeks to adopt a precautionary approach to mitigate potential impact on people, property, infrastructure and the environment through the appropriate siting and design of development.

This Overlay is applied as an interim measure until flood studies can be undertaken to determine the extent of the flood hazard. Therefore, the overlay is proposed to be removed from the Code once studies are completed via the Code Amendment process.

**What does this mean for development?**

The Deemed-to-Satisfy (DTS) criteria requires habitable buildings, commercial and industrial buildings, and buildings used for animal keeping to incorporate at least 300mm free board above:

- (a) the highest point of the top of kerb of the primary street; or
  - (b) the highest point of natural ground level at the primary street boundary where there is no kerb.
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**Q – My house is not included in a Flood Overlay. Does this mean I am not at risk of flooding?**

**A –** Flooding is dependent on many different aspects, there are limitations in predictability, and this is increasing with the occurrence of climate change. The modelling and associated mapping provides an indication of flooding from river, creek or stormwater flows during a 1% AEP event.

It is possible that your land may be affected by a larger event than the 1% AEP. It is also possible that your land may flood in a more frequent event due to infrastructure failures, such as pipes being blocked or levee failures. In addition, changes to the catchment may have occurred after the flood study data was collected, which could increase your flood risk.

Roadways are designed to accommodate excess stormwater. It is also possible that gardens, driveways and sheds in properties which are not included in the overlay may experience shallow flooding. This scenario is called 'nuisance flooding' as the impact and costs associated with the flooding is relatively low.

It is also common for local roads in metropolitan Adelaide to flood in more frequent events as most council underground stormwater systems cater for a 20% to 10% AEP.

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**Q – I have never experienced flooding before, so why has my property been identified?**

**A –** Although your property has never been flooded before, it cannot be assumed that land is free from flood risk. Climate change and increased stormwater run-off from increasing hard surfaces from urban development—will increase chances of flooding in the future. Flood studies use rainfall patterns and topography amongst other factors to determine flood hazard areas.

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**Q – Only a small proportion of my allotment is covered by the flooding overlay, does that mean that the whole allotment is assessed against the overlay policy?**

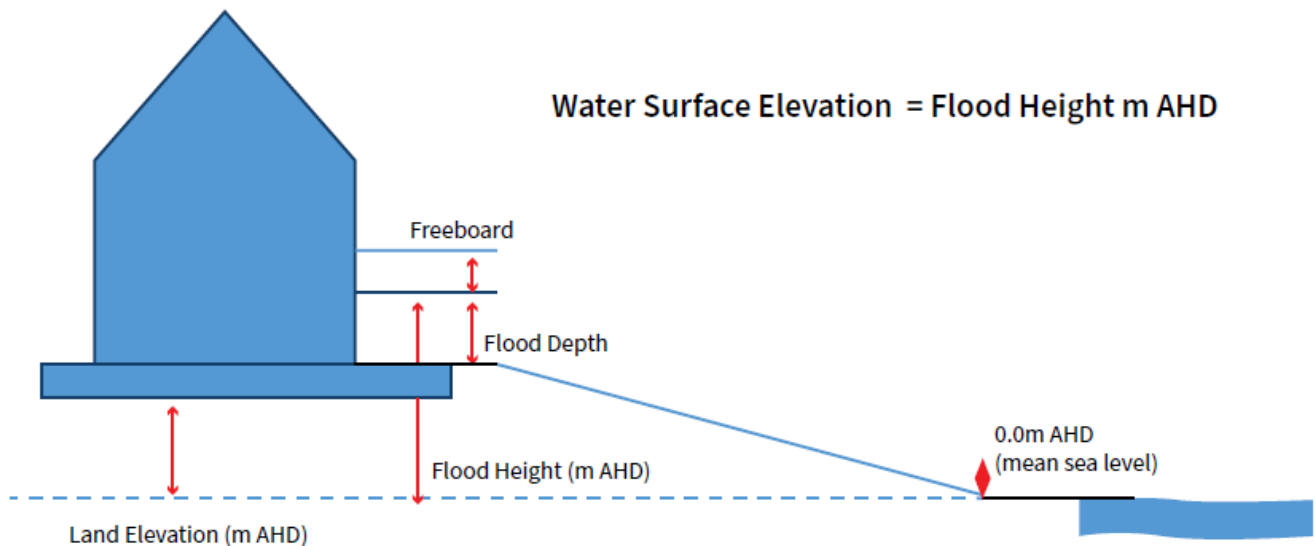
**A –** No, only that part of the development within the specific overlay needs to be assessed against the overlay policy.

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**Q – Why am I required to build 300mm above the 1% AEP flood event?**

**A –** The 300mm above the 1% AEP flood event is called the freeboard. A freeboard is added to flood height as the minimum flood level to provide reasonable certainty of achieving the desired level of protection of property. The freeboard takes into account:

- Uncertainties in the estimates of flood level from flood modelling including local factors, impact of infill and climate change.
- Wave action models assume flat surfaces and do not consider waves from either wind, or boats and vehicles in the flood areas.



**Q – What should be done when two flood hazard overlays apply?**

**A –** When more than one of the flood overlays apply to a parcel of land, the overlay that addresses the higher flood hazard risk will apply. However, the planning authority may take into consideration how the different flood overlays affect the land when undertaking a performance assessment of a proposed development (e.g. if a new building is not located where the flood overlay applies, the overlay may not be considered relevant to assessment of that development).

**Q – Where can I get information on...**

- **1% flood depth at my property?**
- **5% flood depth at my property?**
- **Whether my allotment is subject to high flood hazard?**

**A –** Contact your local council and request the information; alternatively, visit the Water Connect Website and look up [Flood Awareness Maps](#).

An engineer’s report on the flood risk and/or flood depth can be requested from the relevant decision-making authority for performance assessed developments.

**Q – Where can I find more information about this Project?**

**A –** Visit the [Flood Hazard Mapping and Assessment Project](#) page on the PlanSA portal and/or refer to the Project Information Series (below).

**Flood Hazard Mapping and Assessment Project Information Series**

- [Flood Hazard – Project Overview](#)
- [Flood Hazard – Understanding the Flood Hazard Overlays in the Planning and Design Code](#)
- [Flood Hazard – Understanding and Using Flood Maps](#)