

**PROPOSAL TO INITIATE AN
AMENDMENT TO THE PLANNING &
DESIGN CODE**

**Flooding Hazards Mapping Update
Code Amendment**

By the Chief Executive



(Signature Required)

CHIEF EXECUTIVE, ATTORNEY-GENERAL'S DEPARTMENT

Date: 19/10/2021

This Proposal to Initiate document together with conditions specified by the Minister forms the basis for the preparation of a proposed amendment to the Planning and Design Code for the purpose of section 73(2)(b) of the *Planning, Development and Infrastructure Act 2016*.



(Signature Required)

MINISTER FOR PLANNING AND LOCAL GOVERNMENT

Date: 28 October

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1. INTRODUCTION

The Chief Executive of the Attorney Generals Department (the Department) seeks to amend the Planning and Design Code (the Code) pursuant to section 73(2)(b) of the *Planning, Development and Infrastructure Act 2016* (the Act). This 'Proposal to Initiate' details the scope, relevant strategic and policy considerations, nature of investigations to be carried out and information to be collected for the Code Amendment. It also details the timeframes to be followed in undertaking the Code Amendment.

1.1. Background

Flooding has the potential to impact our safety and natural and built environments in South Australia, but with investigations and planning, the hazards arising from flood risk can be minimised.

On 19 March 2021, the Code came into effect for the whole of South Australia (SA). As part of this process, flood mapping that was in existing development plans (25 councils) and other flood mapping not in development plans but used to support assessment of development (19 councils) were incorporated into the Hazards (Flooding) overlays in the Code. The Hazards (Flooding - Evidence Required) Overlay was applied to areas of councils that did not have flood mapping.

Flood mapping is a product of a flood study (for riverine flooding or for surface water flooding) most commonly produced by councils or a group of councils. These plans and studies are developed through a detailed process that involves the collection of physical characteristics and rainfall data that is processed through hydraulic models that simulates the behaviour of floodwaters in a number of scenarios. Studies cover catchment areas so they are not defined by council boundaries. Some councils may have multiple studies covering their jurisdiction and there may be areas where there is no study or plan at all.

This is the first stage of a three stage project to improve Flood Hazard Mapping across the State. In 2020, the Department received a \$3 million COVID Stimulus Grant for the Flood Hazard Mapping and Assessment Project to deliver more consistent and contemporary mapping of flood hazard across the State. The project's mapping will be incorporated in the Code, and will be used to assess flooding hazard in new development proposals.

Data from the project will not only provide greater certainty in the assessment of new development, but can also inform rezoning, regional planning and emergency management.

The project will provide state-wide standardised modelling parameters of flood hazard to ensure that future flooding and stormwater management studies consider land use planning requirements.

This first stage (the Flooding Hazards Mapping Update Code Amendment) proposes:

- Updated flood hazard mapping that is now available from 15 councils that was not made available in time for the implementation of the Code.
- The removal of the evidence required overlay from areas where a detailed flood study is not required due to local knowledge and coarse regional mapping confirms there is minimal risk of flooding. The focus will be on elevated and sloping areas at the top of catchments in metropolitan Adelaide, Mt Gambier and outback SA.

The second stage of the project is the preparation of detailed and enhanced flooding studies which will be used in a State-wide Flooding Hazards Code Amendment.

2. Designated Entity for Undertaking the Stage 1 Code Amendment

In accordance with section 73(2)(b) of the Act, the Chief Executive will be the Designated Entity responsible for undertaking the Flooding Hazards Mapping Update Code Amendment process. As a result, the Chief Executive acknowledges that they will be responsible for undertaking the Code Amendment in accordance with the requirements Act including undertaking consultation in accordance with the Community Engagement Charter and making final recommendations to the Minister for Planning and Local Government (the Minister) prior to consideration whether to approve, amend or refuse the Code Amendment.

The Chief Executive intends to undertake the Code Amendment by:

- a) Engaging with relevant State Government agencies and councils,
- b) Utilising professional expertise of employees of the Department including:
 - I. Professional planning staff
 - II. Flood Specialists (employed through Flood Mapping Project)
 - III. Communications staff
 - IV. Mapping and spatial data expert staff
 - V. ePlanning staff responsible for the management and operation of the Code, and

- c) Utilising professional expertise of employees and consultants of councils in the application of local flood studies and community engagement.

3. SCOPE OF THE CODE AMENDMENT

3.1. Affected Area

The proposal seeks to consider updating the spatial extent of the Hazards (Flooding) overlays for the following Local Government Areas (LGAs) (subject to receipt of mapping from the LGAs and appropriate intellectual property agreements) as follows:

Update with new flood maps

- Burnside (1st to 3rd Creek Flood Study)
- Charles Sturt (Barker Inlet Study & Port Road Stormwater Study)
- Clare and Gilbert Valleys (Auburn Township)
- Gawler (Smith Creek)
- Mitcham (Sturt River Urban Catchment, McLaren Street Catchment, Brown Hill Keswick Creek Urban Catchment)
- Naracoorte
- Playford (Smith Creek)
- Port Adelaide Enfield (Barker Inlet Study & Dry Creek Study)
- Port Lincoln (Stormwater Study)
- Prospect (Barker Inlet Study)
- Salisbury (Dry Creek Study)
- Unley (Stormwater Study)

Review of the Evidence Required Overlay

- Burnside
- Marion
- Mitcham
- Mount Gambier
- Onkaparinga
- Playford
- Outback Areas
- Port Adelaide Enfield (correcting an error in application)
- Port Lincoln

The amendment will not have State-wide implications as there will be no review of the policy.

The above councils have supported the intent of the amendment.

3.2 Scope of Proposed Code Amendment

The Code Amendment seeks to review and update the spatial application of the following overlays

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

The application of mapping into the three overlays will be made in accordance with the rules established for these overlays as outlined in **Attachment A**.

Amendments to the policy wording is not in scope of this amendment.

Examples of amendments being investigated is in **Attachment B**.

4. STRATEGIC PLANNING OUTCOMES

Proposed Code Amendments occur within a state, regional and local strategic setting, which includes:

- State Planning Policies (SPPs)
- Regional Plans
- Other relevant strategic documents.

This Code Amendment will enable development assessment to be consistent with the most up to date information available, to achieve two key strategic outcomes:

- Keeping people and property safe from floods
- Consistent planning policies to improve certainty in decision making.

Refer to **Attachment C** for information regarding the proposal's alignment with relevant State Planning Policies and Regional Plans.

4 INVESTIGATIONS AND ENGAGEMENT

4.1 Investigations Already Undertaken

A number of preliminary investigations have been undertaken as part of the overall Flood Hazard Mapping and Assessment Project that inform the scope of this first stage Code Amendment, as follows:

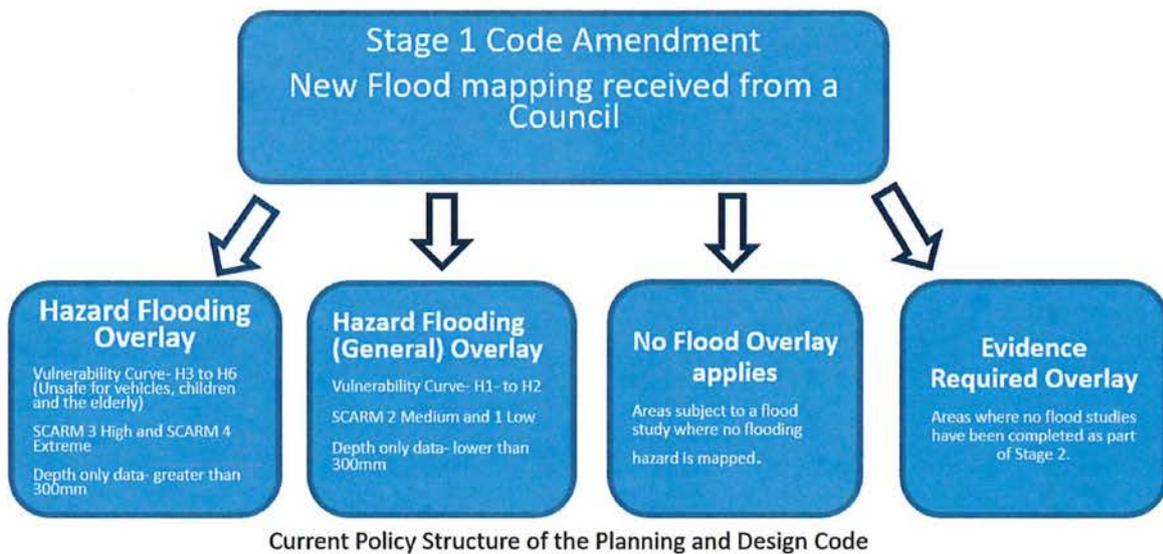
- A flood and stormwater study audit in growth areas of the State

- An audit of available flood & stormwater studies that have not previously been included in development plans & not incorporated in the Code
- Analysis of the growth projections for the State, land supply including greenfield, strategic infill and infill (analysis of capital value and site value ratios and demolition rates)
- Review of formal & informal feedback from councils on flooding policy and mapping
- Investigation of use 'off the shelf' coarse flood mapping for identifying areas of flood risk and determining whether this product can be utilised to identify areas where flood risk does not occur in order to remove the Hazards (Flooding - Evidence Required) Overlay
- Identify areas where more recent flood data could replace the Hazards (Flooding - Evidence Required) Overlay.

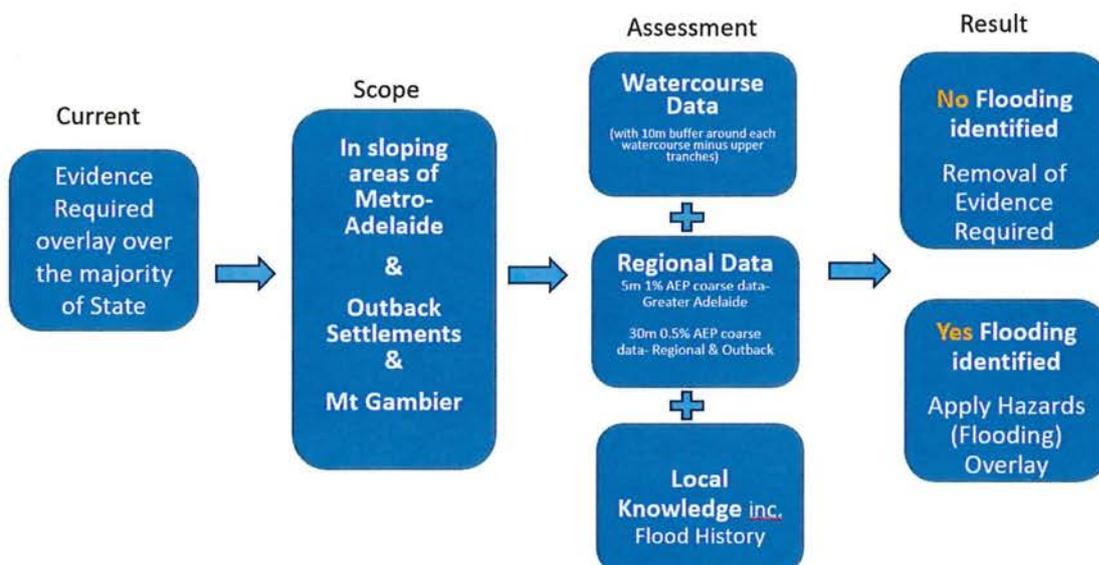
4.2 Further Investigations Proposed

In addition to the investigations already undertaken and identified above, the changes to the overlay will be undertaken in accordance with the following two diagrams.

Process for including further flood mapping to the Flood Hazard Overlays



Process for reviewing Evidence Required Overlay Using New “Coarse” Flood Mapping Data



4.3 Engagement Already Undertaken

A range of communication and engagement has already been undertaken in relation to this Code Amendment a part of the broader Flood Hazard Mapping and Assessment Project as follows:

- Flood Mapping and Assessment Project Reference Group

Meets monthly, represented by the DEW, SMA, State Emergency Services (SES) and Local Government Association

- Working with other agencies

There has been ongoing contact with staff from the Department of Infrastructure and Transport and the agencies named above.

- Engagement with councils subject to this proposal to:
 - Inform the councils of the proposal
 - Gain their support to be included in the Code amendment and provide the required mapping data
 - Support to provide assistance with the engagement

Through:

- Letters to Chief Executives
- Minuted meetings with council staff (16 meetings)
- Phone conversations and emails.

Note: The project team has also met with West Torrens, Campbelltown, Adelaide, Alexandrina, Tea Tree Gully and Adelaide Plains councils and it was considered that there were no amendments warranted in these council areas within the scope of this Amendment. All issues raised during meetings with councils have been recorded for consideration for the State-wide Flooding Hazards Code Amendment.

4.4 Further Engagement Proposed

In addition to the engagement already undertaken and identified above, the following additional engagement will be undertaken to support the Code Amendment:

- Collaboration with the relevant councils will continue to:
 - Ensure the receipt of the relevant data in the right form and in a timely manner

- Review the draft maps to seek their support on the outcomes and resolve any outstanding issues with regard to the data, especially where studies overlap
- Review the engagement plan and consultation materials
- Community consultation
 - Broader community consultation to provide an opportunity for any interested community members to comment on the proposed outcomes of the Code Amendment.
- Consultation with any person or body specified by the Commission under section 73(6)(e) of the Act.
 - The Engagement Plan will outline the specific method and nature of consultation.

5 CODE AMENDMENT PROCESS

5.1 Engagement Plan

The Code Amendment process will occur in accordance with the Community Engagement Charter and *Practice Direction 2 – Consultation on the Preparation or Amendment of a Designated Instrument*.

Consultation is intended to occur in December 2021 – January 2022 for a period of 6 weeks (excluding the week before and after Christmas)). The key audience includes councils, agencies and communities affected by the new mapping.

Consultation methods will include publication on the SA planning portal, Council websites, Council and Department Social media, Planning Ahead and Council newsletters.

An Engagement Plan will be prepared by the Chief Executive, which will include the following mandatory consultation requirements (in addition to the engagement outlined in this Proposal to Initiate):

- Given the proposal is specifically relevant to particular councils (where council did not initiate the proposal), those councils must be directly notified of the proposal and consulted;
- Consultation must also occur with any person or body specified by the State Planning Commission under section 73(6)(e) of the Act.

5.2 Engagement Report

Once engagement on the Code Amendment is complete, the Designated Entity will prepare an Engagement Report under section 73(7) of the Act.

The Designated Entity must ensure that a copy of the Engagement Report is furnished on the Minister and also published on the SA Planning Portal. This will occur in accordance with Practice Direction 2.

The Engagement Plan and the Engagement Report will also be considered by the State Planning Commission during the final stages of the Code Amendment process. The Commission will provide a report to the Environment, Resources and Development Committee of Parliament under section 74(3) of the Act. The Commission's report will provide information about the reason for the Code Amendment, the consultation undertaken on the Code Amendment and any other information considered relevant by the Commission.

5.3 Code Amendment Timetable

The Code Amendment is intended to be undertaken in line with the timeframe outlined **Attachment D**.

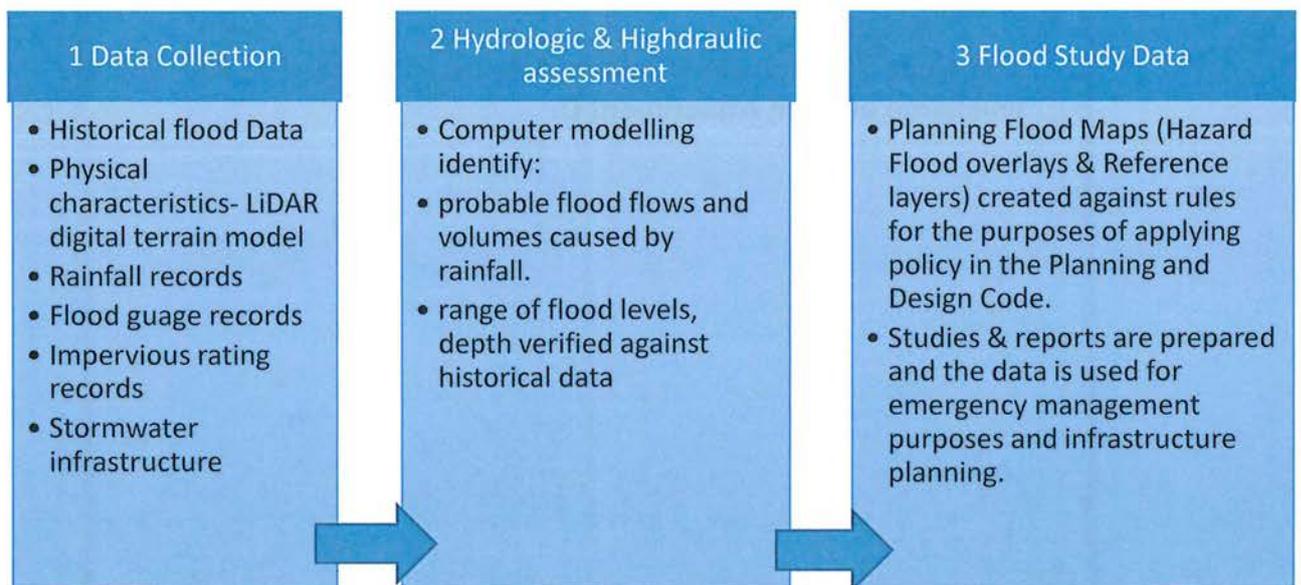
ATTACHMENT A: Understanding the Existing Flood Hazard Overlays

Flood Hazard Overlays originate from flood studies or stormwater management plans primarily prepared by councils. Most of the current overlays were transitioned from council development plan maps into the Code. These maps would have been inserted in to the development plan through a previous Development Plan Amendment (DPA).

Some additional hazard mapping was incorporated in the Code that was not previously in the Development Plan. In these instances the council had completed updated or new mapping but had yet to insert this mapping into the Development Plan through the DPA process. In many instances these councils were referring to this mapping for the purposes of Development Assessment.

In areas of the State where no flood study had been provided to the Department areas were allocated to the Hazard Flooding evidence required overlay.

The preparation of flood maps involves a complex process that is often undertaken for the purposes of infrastructure planning for stormwater and flooding events as outlined below:

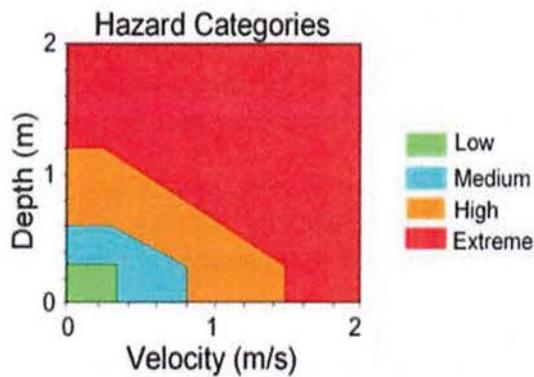


The Code applies the 1% Annual Exceedance Probability (AEP) as the standard event to apply planning policy. The application of flooding policy is then divided into three flood hazard overlays in addition to areas that are not in a flood hazard overlay, creating four classifications from flood data:

- Hazard (flooding) overlay
- Hazard (flooding general) overlay
- Hazard (flooding evidence required) overlay
- No Flood Hazard overlays apply

As flood hazard mapping has been prepared by councils, there have been various methods used for calculating flood hazard.

Hazard is the most effective way of quantifying flood risk as it includes consideration of both depth and velocity as very fast-moving water can be more dangerous than still water of a greater depth. There are two methods for categorising hazards. All but the most recent flood studies in SA use the SCARM 2000 Hazard rating scheme shown below.



6-1: FLOOD HAZARD RATINGS (ADAPTED FROM SCARM 2000)

This rating scheme has been reviewed and now the best practice Flood Hazard rating scheme is the Flood Hazard Classification Vulnerability Curve 2017 as it more accurately reflects the vulnerabilities of buildings, people and vehicles to different degrees of hazard (depth and flooding). Only a few of the most recent State studies incorporate this classification system.

Some flood maps used for Development Plan only had depth outputs as velocities were not sought as an output of study.

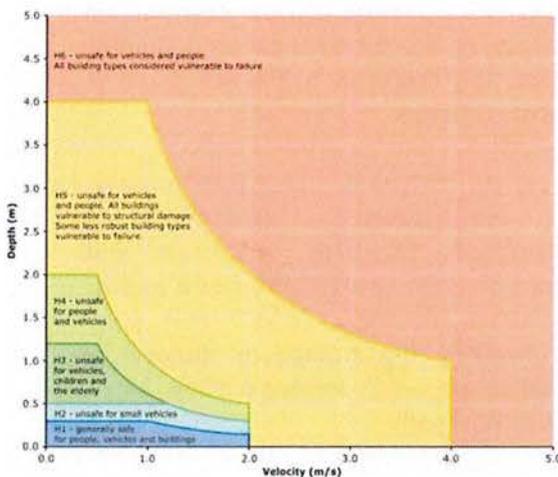


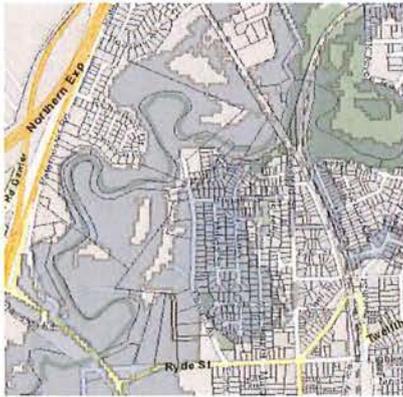
Figure 5-5 Flood Hazard Classification and Curves⁴

Hazard Vulnerability Classification	Description
H1	Generally safe for vehicles, people and buildings.
H2	Unsafe for small vehicles.
H3	Unsafe for vehicles, children and the elderly.
H4	Unsafe for vehicles and people.
H5	Unsafe for vehicles and people. All building types vulnerable to structural damage. Some less robust building types vulnerable to failure.
H6	Unsafe for vehicles and people. All building types considered vulnerable to failure.

Figure 3: National Best Practice – Vulnerability Curve 2017

The description and parameters for each Overlay is described below:

HAZARDS (FLOODING) Overlay



Overlay Intent

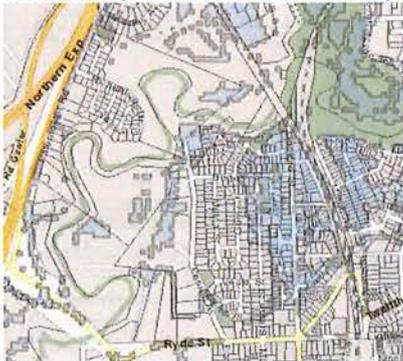
This Overlay applies to areas identified as being of high flood risk. It seeks to minimise impacts on people, property, infrastructure and the environment from high flood risk by retaining areas free from development, and minimising intensification where development has occurred. It also seeks to minimise impacts on the flood plain and flow paths by not obstructing flow paths.

Additional forms of development are defined in this overlay such as fencing, small outbuildings and level of fill to ensure that flow paths are not obstructed.

Rules

- Vulnerability Curve- H3 to H6 (Unsafe for vehicles, children and the elderly)
- SCARM 3 High and SCARM 4 Extreme
- Depth only data- greater than 300mm
- Where an outline to a flood hazard area was in the development plan but no other information was provided.

HAZARDS (FLOODING-GENERAL) Overlay



Overlay Intent

This overlay applies to areas identified as being of medium flood risk. It seeks to minimise the impacts on people, property, infrastructure and the environment by siting and designing development generally 300mm Freeboard above the height of a 1% AEP flood (A Deemed-to-Satisfy Criteria).

Pre-schools, educational establishments, retirement and supported accommodation, emergency services facilities, hospitals and prisons located outside the 1% AEP flood event.

Development involving the storage or disposal of hazardous materials are wholly located outside the 1% AEP flood Plain or flow path.

Rules

- Vulnerability Curve- H1- to H2
- SCARM 2 Medium and 1 Low
- Depth only data- lower than 300mm

HAZARDS (FLOODING-EVIDENCE REQUIRED) Overlay



Overlay Intent

This overlay was applied as a precautionary attempt to mitigate potential impacts on people, property, and infrastructure from potential flood risk by siting and designing development 300mm freeboard above the highest point of top of kerb of the primary street or the highest point of natural ground level at the primary boundary where there is no kerb. These are Deemed to Satisfy Requirements.

Rules

- No flood study data was provided at the time of preparing the Code.

ABSENCE OF A FLOOD STUDY Overlay



Intent

No flood policy applies, as this area has been identified has not been subject to 1% AEP flood hazard risk. This does not mean that the area is free from flooding it means that a flood study has determined that the area is unlikely to flood in a 1% AEP. The area may flood in a larger event or if there is infrastructure failure.

Rules:

- This area has been subject to a flood study which has determined that this area is unlikely to flood in a 1% AEP event.

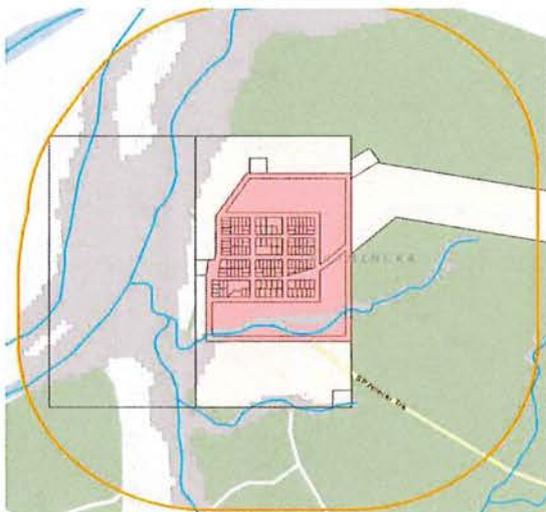
ATTACHMENT B: EXAMPLES OF MAPPING CHANGES AND EXAMPLES

Outback – Land not within a Council Area

Currently the Evidence Required Overlay- covers the whole outback area

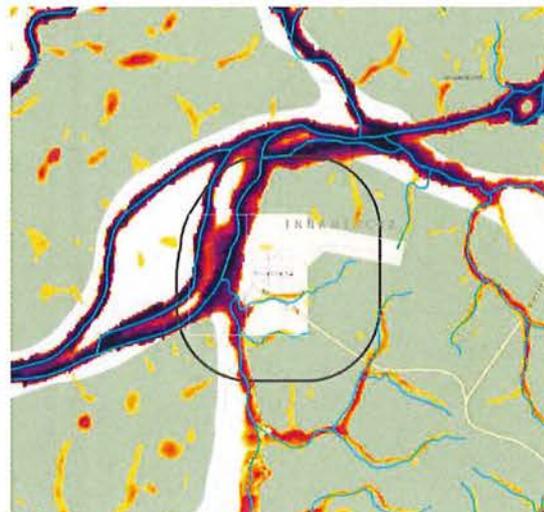


Current Evidence Required



Proposed Overlay

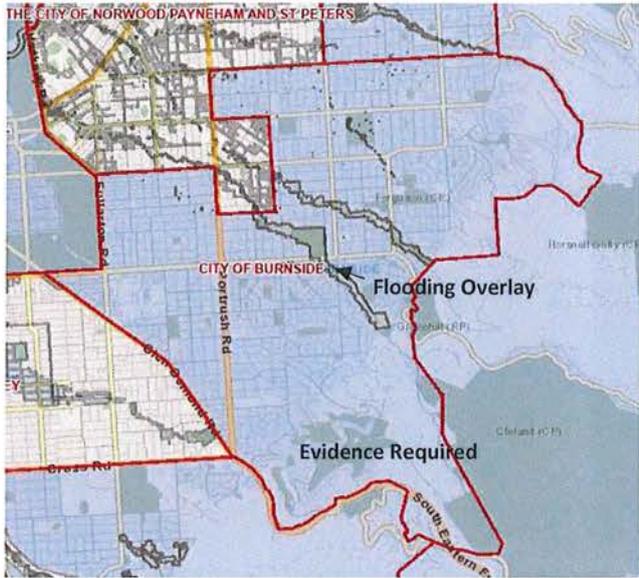
Hazard (flooding) Overlay applies within 1km of township where coarse data shows flooding. Evidence required overlay removed.



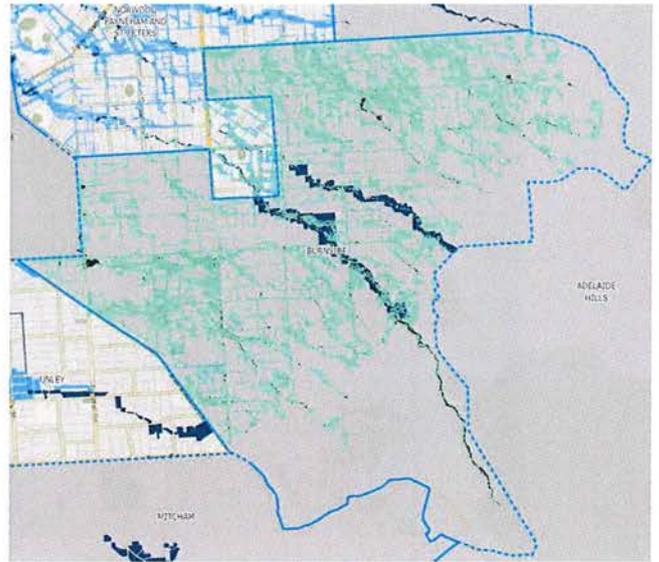
Proposed Reference Layers

Will show depths of flooding

Burnside Council Area



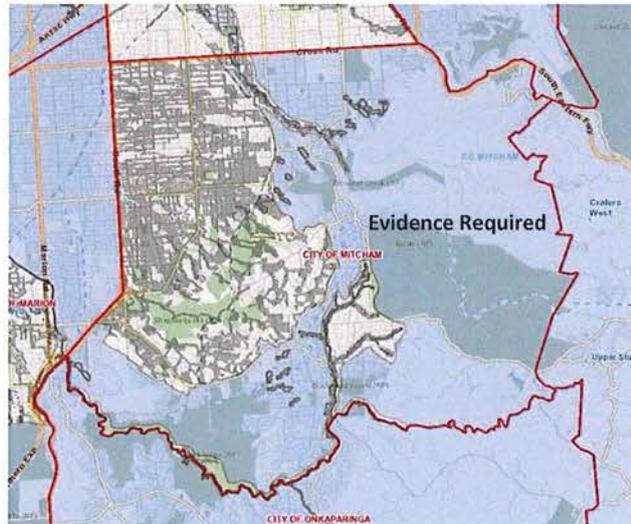
Existing Flood Hazard Overlay Mapping



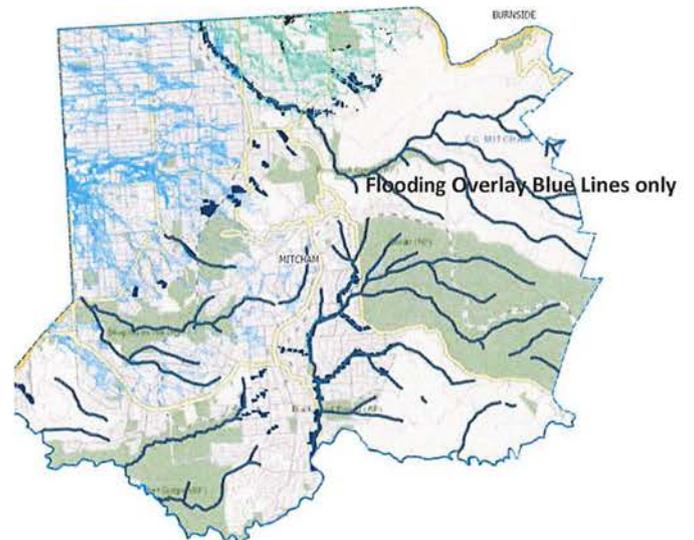
Proposed Flood Hazard Overlay Mapping

New flood mapping included and assessment of the Evidence Required Overlay against the coarse flood hazard data - Proposed Result: No Evidence Required Overlay applied

Mitcham Council Area



Existing Flood Hazard Overlay Mapping



Proposed Flood Hazard Overlay Mapping

New flood mapping to include the western part of Council and assessment of the Evidence Required Overlay against the coarse flood hazard data - Proposed Result: Updated Flood Hazard Overlays and Evidence Required Overlay removed.

Mount Gambier Council Area



Existing Flood Hazard Overlay Mapping

Overlay Covers whole Council area



Proposed Flood Hazard Overlay Mapping

Coarse flood hazard data and advice of Council is that there is no flood risk in the city. Evidence Required Overlay removed from whole council area.

ATTACHMENT C:

Alignment with State Planning Policies

The State Planning Policies (SPPs) set out the State's overarching goals and requirements for the planning system. Under section 66(3)(f) of the Act, the Code must comply with any principle prescribed by a SPP.

The Code Amendment should be initiated because the strategic planning outcomes sought to be achieved through the Code Amendment align with and seek to implement the following SPPs:

SPP 15 – Natural Hazards

To build the resilience of communities, development and infrastructure from the adverse impacts of natural hazards.

15.1 Identify and minimise the risk to people, property and the environment from exposure to natural hazards including extreme heat events; bushfire; terrestrial and coastal flooding; soil erosion; drought; dune drift; acid sulfate soils; including taking into account the impacts of climate change

15.2 Locate and design development in accordance with a risk hierarchy of 'avoid', 'accommodate' and 'adapt'.

The Amendment seeks to update the flooding hazard overlays with new contemporary maps to ensure that they more accurately reflect the 1% Annual Exceedance Probability (AEP) flood hazard, thereby ensuring greater consistency with these policies.

Alignment with Regional Plans

As with the SPPs, the directions set out in Regional Plans provide the long term vision as well as setting the spatial patterns for future development in a region. This includes consideration of land use integration, transport infrastructure and the public realm.

The following volumes of the Planning Strategy and Priorities (which has transitioned to a Regional Plan under the Act) are relevant for this Code Amendment.

30-Year Plan for Greater Adelaide (2017 Update)

Policy Theme: Emergency Management and Hazard Avoidance

Policy 118- Minimise risk to people, property and the environment from exposure to hazards (including bushfire, terrestrial and coastal flooding, erosion, dune drift and acid sulphate soils) by designing and planning for development in accordance with a risk hierarchy of avoidance, adaptation and protection.

Policy 119- *Improve the integration of disaster risk reduction and hazard avoidance policies and land use planning.*

Limestone Coast Regional Plan (LRP)- Principle 2

Eyre and Western Region Plan (EWRP)- Principle 2

Mid North Region Plan (MNRP)- Principle 2

Far North Region Plan (FNRP)- Principle 3

Protect people, property and the environment from exposure to hazards

Policies

- *Protect people, property and the environment from exposure to hazards by designing and planning for development in accordance with the following risk hierarchy:
avoidance – avoid permanent development in and adjacent to areas at unacceptable risk from hazards
adaptation – design buildings and infrastructure to minimise long-term risk
(EWRP 2.1; MNRP 2.6; FNRP 3.6)*
- *Design and plan development to prevent the creation of hazards and to minimise the impacts of naturally occurring hazards.
(LCRP 2.1; MNRP 2.1; FNRP 3.1)*
- *Develop partnerships and agreements between state and local government (particularly with emergency services agencies) to address identified risks and hazards and protect the health and wellbeing of the community.
(LCRP 2.3; EWRP 2.2; MNRP 2.4; FNRP 3.4)*

The Amendment seeks to update the flooding hazard overlays with new contemporary maps to ensure that they more accurately reflect the 1% AEP flood hazard, thereby ensuring greater consistency with these policies.

This Code Amendment is being prepared with agreement and in partnership with the relevant local governments.

ATTACHMENT D

Timetable for Code Amendment

Timetable for Code Amendment by the Chief Executive

Step	Responsibility	Timeframe
Approval of the Proposal to Initiate		
Consideration of Proposal to Initiate and advice to the Minister	Commission	October 2021
Proposal to Initiate agreed to by the Minister	Minister	November 2021
Preparation of the Code Amendment		
Investigations conducted; Code Amendment Report prepared Drafting instructions and draft mapping prepared Note: The timely receipt of data from councils and their consultants is a risk for this timeframe. Preparation of the GIS layers in preparation for consultation is dependent on GIS specialist resourcing.	Chief Executive (as Designated Entity)	November 2021
Preparation of Materials for Consultation (Informed by the Engagement Plan)	Chief Executive (as Designated Entity)	December 2021
Engagement on the Code Amendment		
Draft Code Amendment released for public consultation in accordance with the Community Engagement Charter and the prepared Engagement Plan	Chief Executive (as Designated Entity)	December 2021 to January 2022
Consideration of Engagement and Finalisation of Amendments		
Submissions summarised; Amended drafting instructions provided, Engagement Report prepared	Chief Executive (as Designated Entity)	March 2022
Prepare report to the Commission	AGD	April 2022
Consideration of Advice	Commission	May 2022
Decision Process		
Minister considers the Code Amendment Report and the Engagement Report and makes decision	Minister	June 2022
Implementing the Amendment (operation of the Code Amendment)		

Step	Responsibility	Timeframe
Go-Live - Publish on the PlanSA Portal	AGD	June 2022
Parliamentary Scrutiny		
Referral of approved Code Amendment to ERDC	AGD	8 weeks