

WEBB BEACH COMMUNITY EMERGENCY MANAGEMENT PLAN



2022

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This 2021 Plan is an adaptation of the Webb Beach Community Emergency Management Plan prepared in 2018.

The adaptation is consequent on the construction completed in early 2021 on the northern end of Webb Beach of a clay levee with a rock armoured levee at the western end, and increasing the height of the causeway. The adaptation also clarifies height measurement in AHD.

Coastal advice specific to Webb Beach in 2021 was prepared by Mutual Projects Pty Ltd trading as Integrated Coasts and reviewed by the Coast and Marine Branch Department of Environment and Water.

The 2018 work of Urban and Regional Planning Solutions with support by the SA Government and Disaster Resilient Australia is acknowledged.

Front cover images 24 June 2021.

Council acknowledges that we are on the traditional country of the Kaurna people of the Adelaide Plains and pays respect to elders past, present and emerging. We recognise and respect their cultural heritage, beliefs and relationship with the land. We acknowledge that they are of continuing importance to the Kaurna people living today.

1.0 Introduction

1.1 What is a Community Emergency Management Plan (CEMP)?

A resilient community is one that can work together to anticipate, reduce the impact of, cope with and recover from emergencies, disasters, trauma and stress.

The aim of this Community Emergency Management Plan (CEMP) is to build the resilience of the Webb Beach community by providing information on:

- Flood hazards that may lead to emergencies that affect you, and
- Actions you can take to **prevent, prepare, respond and recover** from flood events.

Having knowledge and the ability to access information to make informed decisions will contribute to building your resilience but a Community Emergency Management Plan is only part of what makes a community resilient.

Having strong social connections, supporting neighbours, family and friends, a sustainable natural environment, physical and mental health and wellbeing and supporting infrastructure are all needed as well.

1.2 Why do we need a Community Emergency Management Plan for Webb Beach?

Webb Beach's coastal location and low elevation mean it is more inclined to be at risk of being flooded if a very high tide is combined with a severe storm event. Historically, some flooding has occurred over the causeway (George Street) and at the corner of Jarmyn and Jury Street. However, this risk has been alleviated with the raising of the causeway, the raising of the frontal carpark, and the installation of a levee along the northern end of Webb Beach in response to the Coastal Settlements Adaptation Study State of Play Report¹.

In October 2021, sea flood risks were assessed taking into account the protection works and flood maps produced. It was found that if a rare sea-flood occurred at the height assigned by SA Coast Protection Board, then Webb Beach township would experience minor flooding along the only access road to Webb Beach and inundation around dwellings on the corner of Jarmyn and Jury Street (p.13). Even though flooding risks have been much reduced, in the context of projected rising sea levels, it was deemed prudent to maintain the Community Emergency Management Plan².

This Community Emergency Management Plan focuses on risks associated with sea-flooding at Webb Beach. People who take action to get prepared for a flood before it happens are more likely to keep themselves, their families, their pets, and their properties safe during a flood.

This plan does not directly address risks associated with other emergencies. However, by preparing for flood-related emergencies, you and your community will be more resilient and better prepared to cope with and recover from other emergencies that may occur.

Throughout this report, the term **flooding** is used to refer to any event where an area is covered, inundated, or submerged by water (including seawater but excluding rain).

¹ Western, M. and Kellett, J. (2014) *Coastal Settlements Adaptation Study – Webb Beach Framework Report*, prepared for the District Council of Mallala by the University of South Australia, School of Natural and Built Environments, August 2014.

² Review and flood mapping produced by M. Western and J. Downes, Integrated Coasts, October 2021.

This Community Emergency Management Plan is an adaptation of the plan developed for Webb Beach in 2018. It was prepared by Adelaide Plains Council involving a review of the Coastal Settlements Adaptation Study – Webb Beach³ and input by Mark Western, Integrated Coasts.

1.3 Emergency management planning

South Australia's emergency management arrangements, consistent with the National Strategy for Disaster Resilience, identify action to prevent, prepare for, respond to and recover (PPRR) from hazards. This CEMP has been prepared following the PPRR model, with action focused on what you and other Webb Beach residents can do.

Prevent - whilst a flood event at Webb Beach cannot be prevented, you can take action to prevent your property and contents from being damaged or destroyed and to prepare for the arrival of floodwaters in order to reduce flood impacts.

Prepare – you can make arrangements, prepare plans and undertake action before a flood event occurs to reduce the impact of flooding on your property and contents.

Respond – if or when a storm tide or flood warning is issued, you will need to activate your preparedness arrangements and plans to minimise the impact of flooding.

Recover – after a flood you may need to take action to repair or rebuild, restore wellbeing or help your friends and neighbours.

At a community scale there is overlap between actions to prevent and prepare for flooding. In this plan, prevention and preparation have been considered together.



Photo credit: C Billing

³ Western, M. and Kellett, J. (2014) *Coastal Settlements Adaptation Study – Webb Beach Framework Report*, prepared for the District Council of Mallala by the University of South Australia, School of Natural and Built Environments, August 2014.

1.4 Roles and responsibilities for flood management

The State Emergency Management Plan states that all levels of government, households, businesses and volunteer organisations have a role to play in emergency management.

The **South Australian Government** and government agencies have primary responsibility for the protection of life, property and the environment in South Australia.

Local governments (councils) support state emergency management arrangements and have responsibilities to protect their areas from hazards (under section 7 of the *Local Government Act 1999*), educate their communities about the risks they face and support response and recovery efforts.

Individuals and communities need to understand the risks they face and their own role in preparing for, responding to and recovering from emergencies. Being prepared is a personal responsibility. The better prepared individuals are, the better they are able to cope with and recover from an emergency.

The State Emergency Management Plan identifies specific government agencies to manage key hazards. The **Department for Environment and Water (DEW)** is the flood hazard leader. As hazard leader, DEW undertakes a leadership role for the planning of emergency management activities relating to flooding and ensures that all aspects of the State's approach to the flood hazard are coordinated. In addition, DEW provides hydrology and mapping support to the South Australian State Emergency Service during flood incidents.

The State Emergency Management Plan also identifies control agencies, nominated to take charge during an emergency. The **South Australian State Emergency Service (SES)** is the control agency for flood and extreme weather (including storms and extreme heat). The SES is responsible for responding to extreme weather and flooding events in order to minimise the loss of life, injuries and damage.

The **Bureau of Meteorology** works in partnership with Emergency Services to assist in the delivery of services that help to ensure public safety. The Bureau issues Severe Weather Warnings whenever severe weather including gale force winds, very heavy rainfall, abnormally high tides (or storm tides) or large surf waves are occurring or expected to occur.

If a severe weather event is deemed likely to have a significant impact on life or property, the SES may then provide additional advice or warnings. More information on these warnings is provided in section 5.0.

2.0 How is Webb Beach vulnerable to flooding?

2.1 Storm characteristics in the Webb Beach region

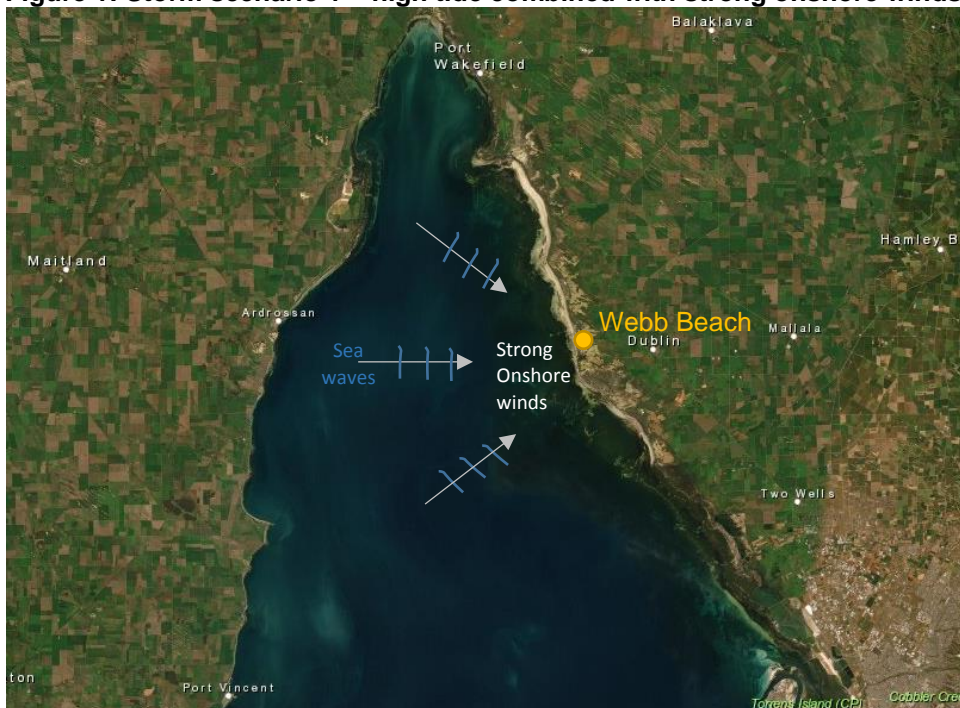
Historic sea-flood events at Webb Beach have been caused by a combination of high tides and storm events, with floodwaters rising and falling with the tides and lasting for between 1 to 3 hours. The characteristics of the sea-flood including its speed of flood flow (velocity), direction of flow, duration, and the potential for warning about an impending flood are summarised in the table below.

Table 1: Sea Flood characteristics for coastal townships of Adelaide Plains ⁴

Flood characteristic	Mallala region
Velocity of water	Low, due to tidal action and ocean terrain
Direction of flow	From the west
Duration of flood	Short 1-2 hours
Warning	Predictable as flood normally relates to tide.

There are two main ways in which meteorological conditions can combine with a high tide which may impact the Webb Beach coastline. The first way is for a high tide to combine with strong onshore winds that push water up against the coastline and increase the height of waves. However, due to the shallow water and the small distances that the wind can travel over water in the Webb Beach region (30-50kms), this storm scenario is not likely to produce waters high enough to flood Webb Beach, although erosion of the foreshore may occur.

Figure 1: Storm scenario 1 – high tide combined with strong onshore winds



Source: South Australian Property and Planning Atlas, Adapted by M. Western, 2021

⁴ Western, M. and Kellett, J. (2014) *Coastal Settlements Adaptation Study – Webb Beach Framework Report*, prepared for the District Council of Mallala by the University of South Australia, August 2014.

The second way that meteorological and tidal conditions combine to produce the largest storm surges in the Gulf St Vincent occur in association with a deep depression (low) in the Southern Ocean. With a falling barometer and the onset of northerly winds, the tides are below prediction, but due to the north-west winds, waters in the Gulf are backed up against Kangaroo Island. If the strong north-westerly wind switches to a west-south-westerly wind at about the time of low water, then a storm surge of maximum amplitude will occur with heights expected from 1m to 1.5m above the predicted tide. The narrowing of the upper Gulf causes the large volume of water to be pushed up against the coast and therefore water levels are higher in a location such as Webb Beach than at Outer Harbor⁵.

In the context of coastal flooding of Webb Beach, the risk is normally related to the peak of the tide height and as the tide falls, the risk reduces.

The time of the year in which these events are most likely to occur is between April and September.

Figure 2: Storm scenario 2 – high tide combined with a LOW in the Southern Ocean



Source: South Australian Property and Planning Atlas, Adapted by M. Western, 2021

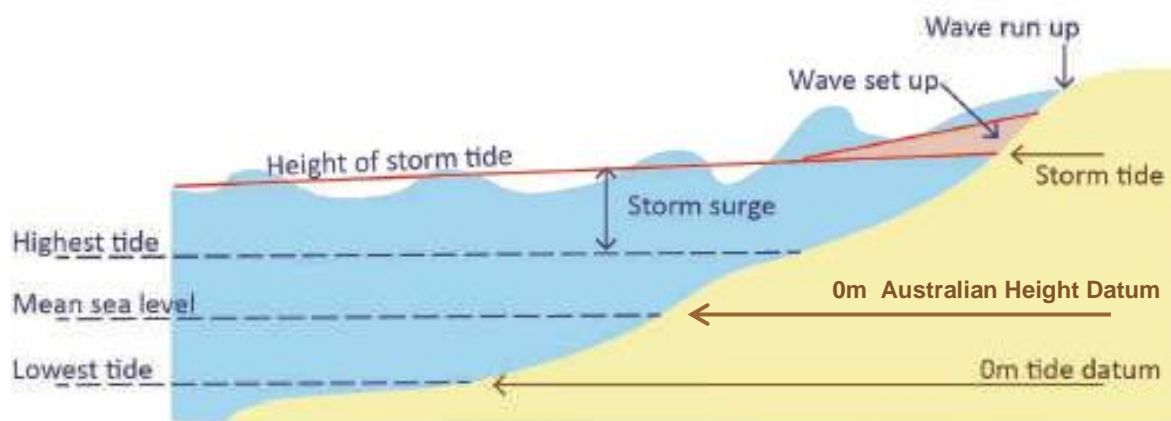
⁵ Flinders Ports (ND) Port User Guide – General Information, and Lord 2012, p 22.

Sea storms are usually evaluated within the following contexts as illustrated in figure 3:

- The height of the **storm surge**
- The height of **wave setup**
- The impact of **wave runup**

Storm surge is a high tide level caused by strong wind and/or reduced atmospheric pressure (a low-pressure system). **Wave run** is the distance a breaking wave can wash up the beach and **wave setup** is caused by the momentum of the waves as they near the shore causing the level of the ocean to slope up.

Figure 3: The characteristics of a storm surge as it impacts the land



Understanding tide datum and Australian Height Datum (AHD).

The Bureau of Meteorology provides tide predictions for ports and coastal towns around Australia, including Port Adelaide (Outer Harbour) and Ardrossan⁶. In times past, the most important information a mariner required was the depth of water around each port and therefore depths of tides were always measured from the lowest possible tide. These tide charts are known as **chart datum** or **tide datum**.

On the other hand, the height of land is measured by the Australian Height Datum (AHD) which is approximately equal to mean sea level or the mid-point between the highest and lowest tide at any particular tide gauge. If you plan to build a house, a surveyor will measure the height of your land in Australian Height Datum (AHD) and give you a height at which your floor level should be constructed.

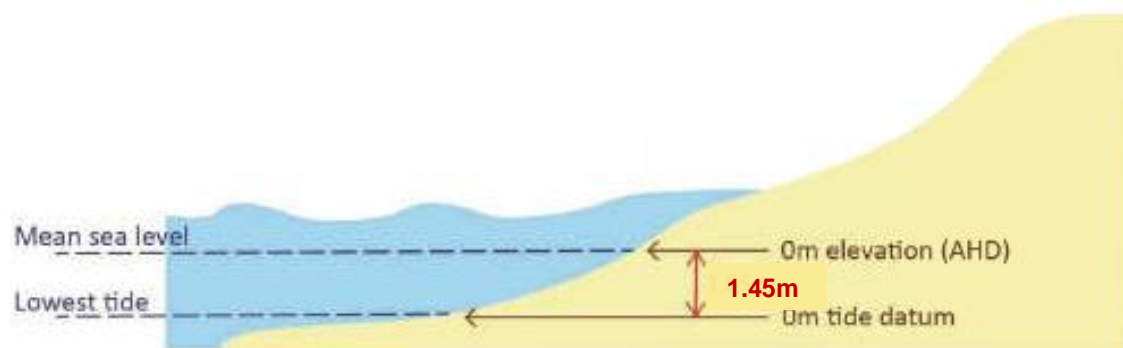
There are two tide charts that may be referenced for Webb Beach. The most likely source for tidal information for the local people of Webb Beach is the tide projections for Outer Harbor as these are also the same as the projections found at the online source of Willy Weather. Extreme weather warnings associated with storm tides for South Australia, issued by the Bureau of Meteorology always reference Port Adelaide (Outer Harbour) levels.

As Webb Beach is located at a similar latitude to Ardrossan, the tide levels are likely to be similar so some people may access the tide predictions for Webb Beach from the Ardrossan tide chart.

⁶ <http://www.bom.gov.au/australia/tides/>

In this Community Emergency Management Plan, land elevations and projected storm surge heights will be given in Australian Height Datum in accordance with the practice of the South Australian Coast Protection Board. See also sea-flood warnings in Section 5, Forecasts and Warnings (p.22) for the range of predictions at Outer Harbor tide gauge that are likely to cause the greatest impact at Webb Beach.

Figure 4: A comparison of Tide Datum (Outer Harbor) with Australian Height Datum (land-based height measurements).



Understanding how sea-flood risk heights are assigned by the South Australian Coast Protection Board.

To understand the chance of a major flood, storm or tide event occurring, analysis of long-term records is undertaken to identify the Average Recurrence Interval (ARI). This is the long-term average number of years between events as large as or larger than a given event. The '1 in 100-year event' is designated as having an 'acceptable risk' for planning in most of South Australia.

A storm surge tide as high as, or higher than the 1 in 100 ARI event will occur on average once every 100 years. It is important to note that this does not mean that an event will only occur every 100 years or at any regular frequency. It means that there is a 1% chance of this event happening in any given year. Seawater levels associated with the 1 in 100 ARI storm surge events for Webb beach are assigned by the South Australian Coast Protection Board and are shown in Table 2.

Table 2: Sea-flood risk for 1 in 100-year ARI event (AHD).

<i>AHD</i>	<i>Webb Beach</i>
<i>Storm surge (1 in 100 ARI)</i>	2.75m
<i>Wave setup</i>	0.10m
<i>Wave run-up</i>	0.00m
<i>Total risk height</i>	2.85m

Note: due to the narrowing of the Gulf St Vincent the 1 in 100-year ARI sea-flood risk is approximately 0.35 to 0.40m higher than the risk level assigned to Outer Harbor.

2.2 Routine tides

At Webb Beach, two high tides and two low tides usually occur each day. Typically, the time between each successive high (or low) tide is about 12½ hours.

The Highest Astronomical Tide (HAT) is the highest tide level that can be expected in a particular location in the context of the routine movement of the moon and earth in its orbit around the sun but with minimal meteorological effects (in other words, normal weather conditions with no storm influence). The Highest Astronomical Tide (HAT) is similar to the highest tide height predicted in any one year on the tide charts and is used as a reference level for flood risk.

The highest astronomical tide predicted for Outer Harbor is 1.46m AHD (2.91m tide datum)⁷.

However, due to the narrowing of Gulf St Vincent, the height of the highest astronomical tide is higher at Webb Beach and is estimated at 1.54m AHD, or approximately 0.10m higher than Outer Harbor⁸.

With meteorological effects (stormier weather) the height of the monthly high tide has been calculated at 1.75m AHD.

Sometimes people refer to a 'King Tide'. This is a non-scientific term often used to describe the highest tides that occur each year but also used just to describe a high tide that may also be accompanied by storm conditions.

2.3 Sea level rise

Global sea levels have varied greatly over long time periods but have been largely stable over the last 2-3000 years. One of the outcomes of global warming is sea-level rise, caused by thermal expansion and melting of ice caps and glaciers. Over the period 1901 to 2000, global mean sea level rose by around 150mm, or an average 1.5mm per year⁹. Tide gauge and satellite measurements since 2000 indicate a global sea-level rise of 3.5mm on average per year (plus or minus 0.4mm).

⁷ Department of Planning Transport and Infrastructure, SA, 2020 Tide Tables for South Australian Ports.

⁸ The tide tables for 2020 for South Australian ports assigns a ratio of rises from Outer Harbor to Ardrossan (which is on a similar latitude to Webb Beach) as 1.22. Therefore (2.91m x 1.22) – 2.01 (conversion from tide datum to AHD in Ardrossan) is 1.54 (p. 132).

⁹ <https://www.csiro.au/en/research/environmental-impacts/climate-change/State-of-the-Climate/Oceans>

In the Australian context, sea level varies from year to year and from place to place, partly due to the natural variability of the climate system from the effect of climate drivers such as El Niño and La Niña. Based on satellite altimetry observations since 1993, the rates of sea-level rise to the north and southeast of Australia have been significantly higher than the global average, whereas rates of sea-level rise along the other coasts of the continent have been closer to the global average.

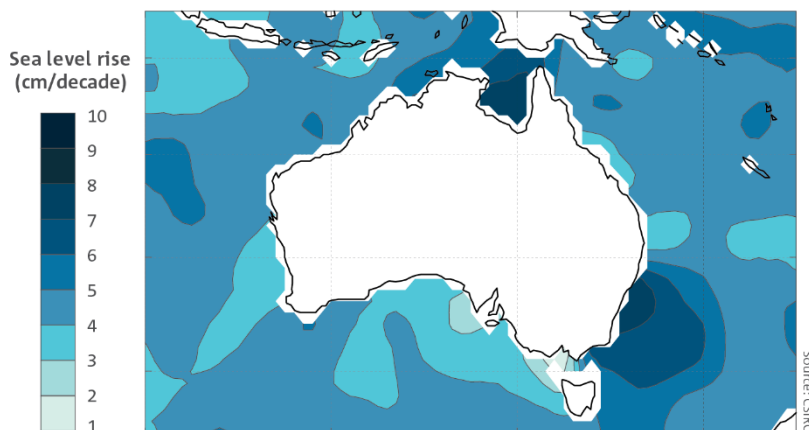


Figure 5: Australian sea-level rise.

In the South Australian region, the rate of rise is approximately 3 to 4 mm per year (or 3 to 4 cm per decade).

Since 1993, South Australian Coast Protection Board policy requires consideration of +0.3m sea level rise by 2050 and +1.0m rise by 2100 for planning decision in the coastal zone. These figures have been adopted for the consideration of future flood conditions at Webb Beach.

A summary of the 1 in 100-year ARI sea-flood risk and for Highest Astronomical Tide is provided for Webb Beach for current (2021), 2050 projections, and 2100 projections.

Table 3: Highest astronomical tide and 1 in 100-year ARI storm magnitudes for years 2021, 2050 and 2100 (AHD).

<i>Webb Beach</i>	<i>Current (2021)</i>	<i>2050</i>	<i>2100</i>
<i>Highest Astronomical Tide¹⁰</i>	1.55m	1.85m	2.55m
<i>Routine Monthly High Tide</i>	1.75m	2.05m	2.75m
<i>1 in 100-year ARI storm</i>	2.85m	3.15m	3.85m

2.4 9 May 2016 flood event

In the late afternoon of 9 May 2016, a significant storm surge event occurred in St Vincents Gulf. Between 5.20 and 5.40pm the tidal gauge at Outer Harbour registered a height of 2.35m AHD (3.80m tide datum), eclipsing the old record of 2.31m AHD (3.76m tide datum) that previously had been the highest level in eighty-five years of records.

A study in the Webb Beach region found that the flood height at Webb Beach on 9th May 2016 was likely to be 2.65m AHD with wave effects. A comparison with the chart above shows that this event approached the assigned 1 in 100-year ARI risk set by South Australian Coast Protection Board.

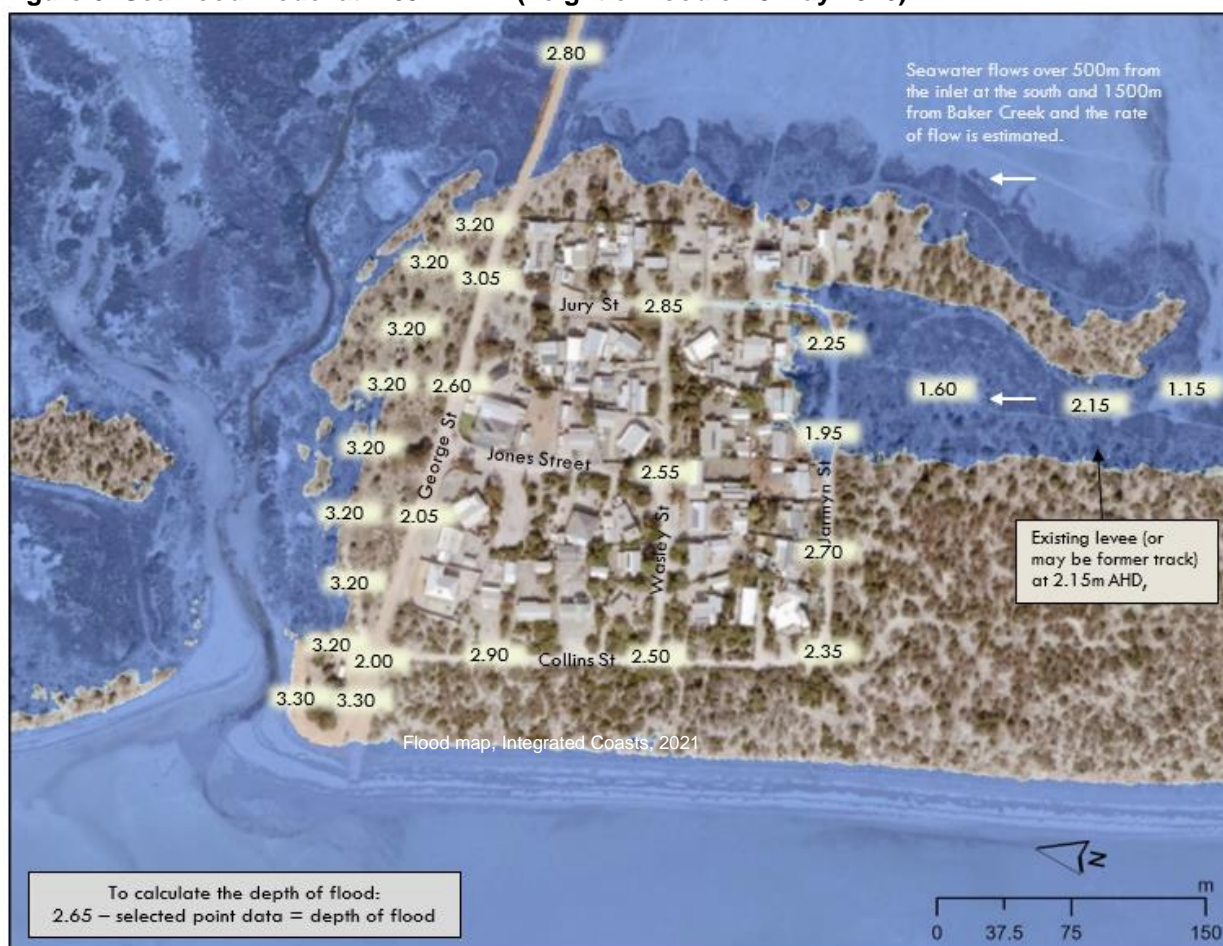
¹⁰ Adjusted up from Outer Harbor from 1.46m AHD to account for higher tide levels at Webb Beach.

The flood event modelled below is an estimation of a 2.65m AHD storm surge, however, the model is not a recreation of the 2016 event but an example of how a flood of the same magnitude would impact the township today. The flood map below includes recent upgrades to coastal defences and infrastructure completed in 2021, such as:

- Raising the causeway that crosses the salt marsh to 2.80m AHD¹¹. The road over the culverts was not raised and is at 2.50m AHD.
- Upgrading and extending the levee on the northern side of the settlement to a height of 3.20m AHD. Rock revetment installed to north-west corner.
- Raising the level of the carpark at the onramp to the beach to 3.20m AHD (high enough to manage events projected to 2050).

Figure 6 demonstrates the capacity of recent works to defend against floodwaters on the northern and southern borders; however, in this event minor flooding does occur at the corner of Jarmyn and Jury Street.

Figure 6: Sea-flood model at 2.65m AHD (height of flood on 9 May 2016).

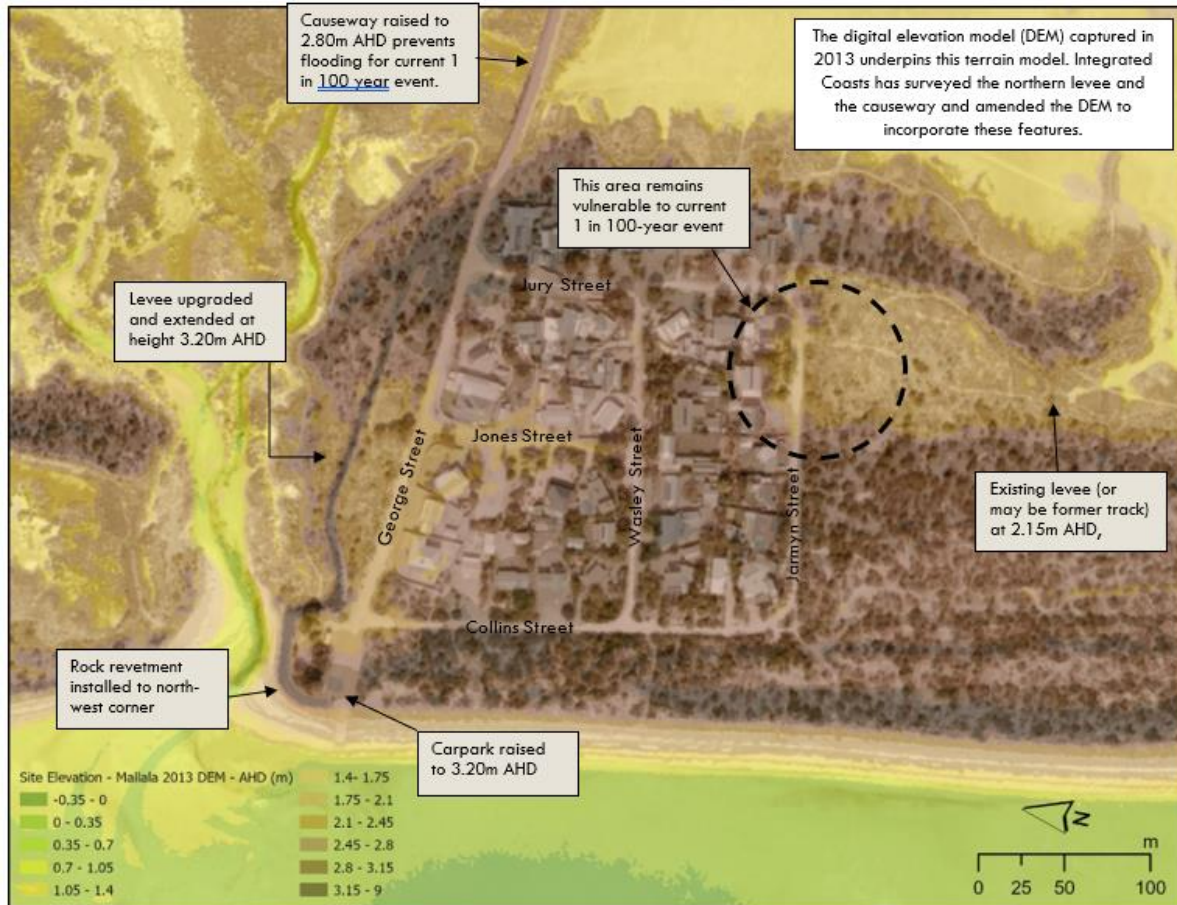


¹¹ This is high enough to manage the current 1 in 100-year event. Other secondary items were not implemented. The height of the road over the culverts was not raised which is at 2.50m AHD.

2.5 Elevation of Webb Beach township

Evaluating the elevation (or height) of the land upon which Webb Beach is situated (see Figure 7) is a key ingredient to understanding how vulnerable it may be to flooding, both in this current time, but also in the future in the context of rising sea levels.

Figure 7: Site elevation at Webb Beach AHD.



Figures 8 and 9 demonstrate the flooding risk for the current 1 in 100 ARI event (i.e., the rare storm event).

Two flood maps detailing the same event are provided; Figure 8 which depicts the surroundings of Webb Beach, including, the only access road to Webb Beach and Figure 9 a narrower extent which shows potential flooding within the township.

Figure 8: 1 in 100-year ARI event – 2.85m AHD (wide view)



Map interpretation

To calculate the depth of flood, use 2.85 minus the spot height on the map. For example, the height of the bridge over the inlet is 2.50m AHD. The depth of the flood is $2.85\text{m} - 2.50\text{m} = 0.30\text{m}$ depth of water.

Interpretation of map and key flood risks:

If the 1 in 100-year (rare event) occurred as projected by SA Coast Protection Board then:

- Some sections of Webb Beach Road on the section from Port Parham Road to the inlet bridge would be flooded up to depths of 0.3m.
- Seawater would flow over the bridge on the corner of Webb Beach Road and George Street at depth 0.3m.

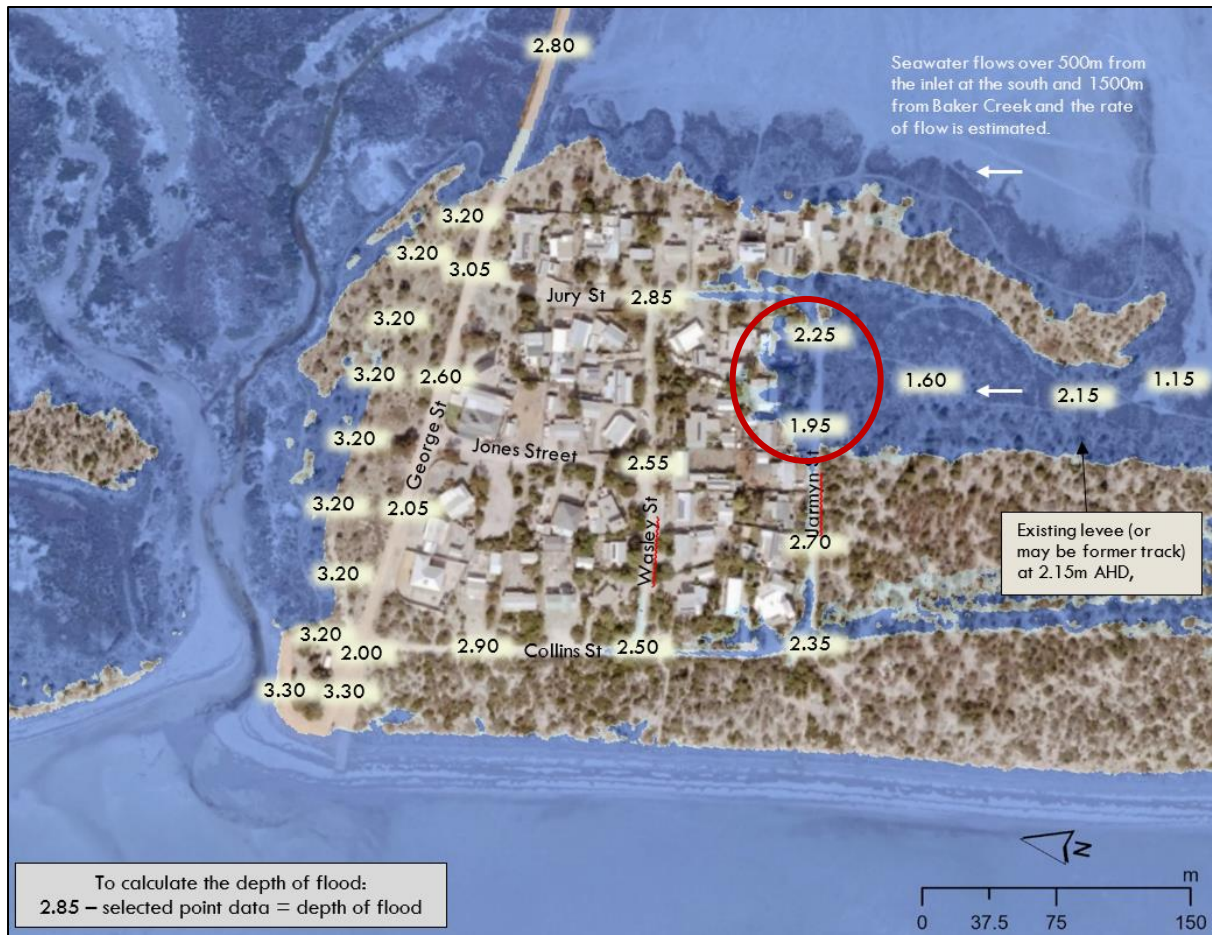


Figure 9: 1 in 100-year ARI event – 2.85m AHD (narrow view)

Map interpretation

To calculate the depth of flood, use 2.85 – the spot height on the map. For example, one of the road heights depicted within the red circle on the map above is 2.25m AHD. The depth of the flood is 2.85m – 2.25m = 0.60m depth of water.

Interpretation of map and key flood risks:

If the 1 in 100-year (rare event) occurred as projected by SA Coast Protection Board then:

- Seawater would flow through the inlet south of Webb Beach and if the duration of the event was long enough, flow into Jarmyn Street. This event may inundate areas in the Jarmyn Street vicinity by 0.50m to 0.80m of seawater on the road, and impact some of the base of homes pictured within the red circle.
- The flood pattern shown coming from the south to the corner of Jarmyn and Collins Street is unlikely to penetrate into this area within one flood cycle.

In summary, the greatest flood risk is to the only access road (Webb Beach Road) leading into the township, restricting emergency vehicle access, such as, ambulances. The township could also be directly impacted by floodwaters; particularly, the corner of Jarmyn and Jury Street which would result in the flood waters around a number of homes (see flood mapping above).

3.0 What are the risks associated with flooding?

Flooding at Webb Beach can have consequences for the community, built environment and natural environment. The vulnerability of Webb Beach to flood risks is increased by a number of factors including the low elevation of the settlement, low floor levels of many houses, low elevation of the single access road to the settlement, light-weight construction of many houses, high proportion of dwellings not permanently occupied, high proportion of older residents and rising sea levels.

Risks to the **Webb Beach community**:

- Injuries or fatalities resulting from people entering floodwaters (either on foot or in a vehicle).
- Injuries or fatalities resulting from restricted emergency vehicle access.
- Injuries or fatalities resulting from people trying to protect their property.
- Injuries or fatalities associated with clean-up or recovery efforts, including risks associated with electrocution, contaminated water or mould.
- Flood-induced stress, during and after a flood event.
- Isolation or inability to get to or leave Webb Beach, particularly for people with vulnerabilities including the aged and people living with physical disabilities or medical conditions. However, this risk has been significantly reduced by the raising of the causeway road into Webb Beach.
- Community disruption, if homes are flooded and uninhabitable or services are disrupted including telephones, electricity or water supply.
- Financial impacts associated with property, building or contents damage.

Risks to **the Webb Beach built environment**:

- Damage to the contents, building structure and condition of houses.
- Damage to household wastewater management systems (on-site septic).
- Inundation and damage to roads and culverts, restricting access and egress and increasing the risk of accidents.
- Damage to the beach access ramp.
- Damage to infrastructure including SA Water mains supply and Telstra cables.
- Damage to flood mitigation infrastructure including levees and warning signs.

Risks to the **Webb Beach natural environment**:

- Damage to dunes, reducing their ability to protect Webb Beach from wind and wave impacts.
- Damage to coastal wetlands and vegetation, with adverse impacts on associated cultural, amenity, recreation and biodiversity values including habitat for critically endangered bird species.

4.0 What can you do to manage flood risks?

Everyone at Webb Beach will be impacted when a flood occurs. Everyone has a role to play in managing flood risks.

Managing flood risk means thinking about what you would do to:

Prevent and prepare before a flood happens

Respond when a storm tide or flood warning is issued

Recover after floodwaters recede

Everyone has different abilities to prevent, prepare for, respond to, and recover from emergencies. In an emergency, the pressure and stress of responding can make it difficult to solve problems and make good decisions about what you need to do.

By preparing a Household Emergency Management Plan that identifies your unique capabilities and requirements and decisions about staying or evacuating, your response to a flood can follow a pre-planned process that was developed without pressure or stress. This means you will be more likely to look after the things that are most important to you.

The following sections provide general information on what to do to prepare, respond and recover in the event of a flood. A Household Emergency Management Plan template is provided at the end of this document for you to fill out.

4.1 Prevent and prepare – what to do before a flood happens

People who understand their risk and have prepared for flood events are more likely to keep themselves, their properties and their pets safe if it does flood. Thinking about what might happen to you if it does flood and developing a Household Emergency Management Plan is the best way for you to prepare.

The Webb Beach Household Emergency Management Plan template provides forms and checklists to help you consider the points described below.

Know your risk

- Find out about the flood history and flood risks at Webb Beach from this CEMP. Adelaide Plains Council and SES can provide more information if required.
- SES – phone 8115 3800 or email SES.feedback@sa.gov.au
- Adelaide Plains Council – phone 8527 0200 or email www.apc.sa.gov.au
- When has it flooded, where exactly, how quickly and for how long?
- Is your home likely to become inundated or isolated?

Think about how you might feel or think if it does flood

- Consider how you might feel if your property or home gets flooded. People react differently to stressful situations and how you react might be different to other people in your household.
- How do you manage other stressful situations in your life? Do you have any techniques that might help you in the event of a flood?

- Remember that in a flood there are people around to help you. Identify which of your neighbours, friends and family will be most useful to help you.

Learn about the flood warning system

- Learn how the flood warning system by the Bureau of Meteorology and SES works (see section 5.0).

Keep an eye and ear on the weather

- Stay alert to the weather outdoors.
- Check tide predictions for the coming weeks and months. The Bureau of Meteorology provides predictions for Outer Harbor, these are also provided by Willy Weather. Predictions are also provided for Ardrossan which approximate Webb Beach tides.
- Be aware on days of predicted 'higher' tides, particularly between April and September.
- Listen to local radio and check the Bureau of Meteorology website or the BOM weather app for warnings.
- Check seawater levels and if they are rising higher before the predicted high tide time, this could indicate the development of a storm surge tide.

Check your house and property are 'flood ready'

- Do you know the elevation of your house's floor level?
- How will you protect your house and contents in the event of a flood?
- How will you prevent water entering your house?
- Will you need sandbags and sand?
- Could you install flood shields or gates to prevent floodwater from entering doors, windows or front and backyards?
- Will you need to sandbag toilets or tank covers to prevent floodwater entering your septic system?
- Do you need to move valuables, furniture, floor coverings or other contents?
- Is there anything in your shed you need to move?
- Is the building structurally sound?
- Could electrical systems (power points or switchboards), septic systems or bottled gas be inundated by floodwaters?
- Do you keep any hazardous substances including fuel, garden chemicals or poisons in your house or shed? Are hazardous substances stored out of the way of possible flood waters?
- If your property is left vacant for long periods, ensure it is 'flood ready' each time you leave

Keep your important records safe

- Keep important records such as passports, marriage and birth certificates, wills, financial records, photos and computer back-ups together in a safe place ready to pack into a waterproof bag in case you need to leave your house.

Check your insurance

- Does it cover your property and contents for flood damage specifically from storm surge (coastal) floods?
- Have you got enough insurance to repair or rebuild your home if it is damaged?

Keep a store of food and drinking water

- Keep a store of drinking water and non-perishable food items to sustain your household (including pets) for up to 72 hours in the event you become isolated if the causeway becomes unpassable.

Consider getting a mobile phone

- Phone lines may go down in a flood. Consider having a mobile phone, keep it charged and have ways to keep it charged if there is a loss of power or if you need to leave your home (e.g. car charger, mobile charging devices).

Plan for what you will do before and during a flood – prepare a flood action plan

- How will you protect your house in the event of flood?
 - How will you prevent water from entering your house?
 - Will you need to turn off water, electricity, solar or gas?
 - What will you do if it floods at night?
 - Will you need sandbags and sand?
- Are you going to stay at home and wait for the floodwaters to recede or will you go somewhere else?
 - If you do stay, is there a higher place where your family and pets could stay dry?
 - If the electricity is cut, how long will you be able to stay without lights, hot water or cooking?
 - If you are going to leave - when will you evacuate and where will you go?
 - How will you care for or evacuate your pets if needed?
- What will you do if you are not home?
 - Where will you go if you cannot get back to Webb Beach?
 - Is there someone who can help protect your house if you are away?

Keep a list of emergency numbers

- Keep local emergency numbers handy (near your phone, in your mobile and on your fridge).

Create an emergency kit

- Including a first aid kit, torch, battery operated portable radio, spare batteries, emergency numbers etc. Keep it in a handy place known by all household members. See the checklist in the Household Emergency Management Plan for what to include.

Plan for what you would take if you need to evacuate

- Identify important items you will take (along with your emergency kit) when you evacuate, for example, important documents, medicines, photos, money, credit cards, mobile phone, dry clothes and blankets, non-perishable food for people and pets, jewellery or other valuables that would cause distress if they were lost.

Share and practice your plan

- Share your plan with all those in your household (as well as carers and your neighbours). Make sure everyone understands the plan and what you will do if a flood warning is issued.

4.2 Respond – what to do when a warning is issued

Once a storm tide or flood warning is issued, flooding is likely and it is time to implement your flood action plan. Emergency assistance may not be immediately available, so it is important you are prepared to look after yourself.

The Webb Beach Household Emergency Management Plan template provides forms and checklists to help you consider the points described below.

Know who to call

- In a life-threatening emergency, call 000 (triple zero).
- For emergency help in floods and storms, call the SES on 132 500.
- For current information on floods and storms, call the SES on 1800 362 361.
- Keep local emergency numbers handy (near your phone, in your mobile and on your fridge).

Secure your property and valuables

- Secure your property to prevent water entering your house.
- Turn off water, electricity, solar or gas.
- Sandbag toilets, drains and tank covers to prevent floodwater entering your septic system.
- Move valuables, furniture, floor coverings or other contents to high places like tables, benches or beds.
- Electrical appliances and equipment should be unplugged and, where possible, moved to a high place.
- Think about what is in your fridge or freezer and what you will do with it.
 - As a general rule, food will remain safe in your refrigerator for 2 hours without power. If the power is out for between 2 and 4 hours, the food will be safe to eat however do not put it back in the fridge. If it has been more than 4 hours, throw the food out.
 - Food in the freezer will last longer. A full freezer can retain its temperature for up to 2 days. A half-full freezer can retain its temperature for about 1 day.
- Lighter household items could be stored in ceiling space.
- Move hazardous substances including fuel, garden chemicals or poisons in your house or shed to higher places.
- Pack important records such as passports, marriage and birth certificates, wills, financial records, photos and computer back-ups together in a safe place ready to pack into a waterproof bag in case you need to leave your house.

Decide to stay or go

- Follow your flood plan which should identify if you will stay at home and wait for the floodwaters to recede or go somewhere else.
- Find out if floodwaters are predicted to peak at night and review your decision to stay or go.
- If you are staying, go to a high place where you and your pets can stay dry.
- If you are leaving, follow your evacuation plan, take your emergency kit and other important items and go to your identified evacuation location.

Take care moving around

- Avoid driving and walking through floodwaters. People and vehicles can be swept away in fast moving floodwater. It's often deeper and faster than it looks. Submerged hazards such as debris or washed-out sections of the road may not be visible. Floodwater may be contaminated by sewage, toxic chemicals, or other hazardous substances.
- The unsealed roads at Webb Beach are particularly vulnerable to damage when wet so avoid driving on them when they are inundated.
- If you must walk through floodwater, wear solid shoes and take a stick to check depth and surface stability.
- Stay away from fallen powerlines.

Check on your neighbours

- Inform them as soon as you can of the flood advice or warning.
- Inform them of your decision to stay or evacuate.
- Offer them assistance if you are able to do so, once your property is secure.

Stay tuned to local media

- Check local media including the radio, websites and apps for information, updates and advice.

Follow the advice of emergency services

- Always follow the advice of emergency services.
- If roads are closed, do not attempt to use them. They may be damaged and/or dangerous.

4.3 Recover – what to do after a flood

If you stayed during the flood, or if you are returning home after leaving, there may be damage to your home, essential services may not be working and there may be damage to local roads. If your house gets flooded it is important to start cleaning up and drying out as soon as possible to avoid the growth of potentially harmful mould.

The Webb Beach Household Emergency Management Plan template provides forms and checklists to help you consider the points described below.

Take precautions

- If roads have been closed or access restricted, wait for the roads to be reopened before going back to Webb Beach. Check traffic.sa.gov.au for the status of road closures.
- Assume all floodwater is contaminated and prevent contact with skin and eyes.
- Do not drink mains tap water until it has been declared safe by SA Water. Drink bottled water if this is unavailable boil mains tap water before drinking.
- bottled water.
- Check electricity and services.
- Look out for vermin including snakes, spiders and rats.
- Mosquito populations can increase after flood events. Make sure there are no small pools of water, including in old tyres, pot plant saucers and puddles. Cover up and use insect repellent on exposed skin.

Returning home

- Continue to listen to the radio, check local media for information and updates and follow the advice of emergency services. Access may be restricted to some or all of Webb Beach if flood damage has made roads or areas unsafe.
- Don't be embarrassed to ask for help. There will be people in emergency services, the council, friends, family and neighbours who will be happy to help you.

Check electricity and services

- Make sure gas and electricity are turned off before you enter the house.
- Don't use gas or electrical appliances until they have been checked for safety. Residue water and moisture can remain in electrical systems after floods.
- Phone lines may not function effectively if water has entered underground connection boxes. Contact Telstra by mobile if your phones are not working.

Inspect your home and property

- Use a torch to inspect inside and outside your house and any sheds or outbuildings. Do not use matches, cigarette lighters or naked flames due to the potential of flammable gas.
- Check for damage to windows, walls, floors and the roof.
- Look out for vermin. Snakes, rats and spiders in floodwaters often end up in houses.
- If your home or property has suffered damage, call your insurance company as soon as possible to request an assessment and advice.
- Take photos or videos and make a list of all damaged items to assist with insurance claims.
- Check your septic system. Flooded septic systems may not operate effectively and may need to be pumped out before use. Call the Environmental Health section at Adelaide Plains Council for more information.

Check on your neighbours

- Check in with your neighbours to make sure they're safe.
- If you are able, ask them if they need help cleaning up or getting help from others.

Cleaning up inside your home

- Take everything that is wet and transportable outside to avoid trapping moisture in the house and increasing the risk of mould.
- In dry weather, leave doors and windows open to dry out your home. Moisture may be trapped between walls and in porous materials such as timber and plasterboard.
- Turn on heaters (one per room) and leave on with the window open to assist drying.
- Wear rubber gloves and goggles during all clean up to protect your skin and eyes and protective shoes and clothing.
- Clean every part of your home that has been inundated by floodwater with a commercial grade cleaner, then use disinfectant on all surfaces.
- Throw away food or medications that might be contaminated with flood water or that has been in a fridge without electricity for more than 2 hours.
- If mattresses or upholstered furniture have been soaked with floodwater, they should be disposed of.
- Where possible, remove the backs of furniture to allow air to circulate.
- Remove any carpet or floor coverings that have been soaked. Ensure floors are left to dry completely before laying any new floor covers.
- Wash all clothes and materials that get wet or muddy with hot water and, where possible, bleach, disinfectant or sanitiser.

Cleaning up outside your home

- Remove any rubbish, decaying vegetation, driftwood and stacked damaged or loose materials away from your house, water meters, telephone and power lines.
- Make sure there are no pools or puddles of water for mosquitos to breed.
- Wash off mud or dirt from walls, verandas and decks.
- Ensure vents are clear of mud and debris.
- Make sure buildings are completely dry before starting repair work or painting. This may take several months.
- Oil locks and hinges to prevent rust developing.
- Make sure door and window frames are completely dry before replanning or adjusting. This may take several weeks.

5.0 Forecasts and warnings

Warnings are issued when there is a need to provide the community with information on heightened risk situations to enable them to make informed decisions about their own preparedness and safety.

Being prepared for flooding means understanding what the Bureau of Meteorology and SES's forecasts, advice and warnings mean. These are explained in the table below.

The warnings issued by the Bureau of Meteorology and SES follow the National Emergency Warning Framework. The three-stage warning system aligns with an increasing level of threat, however, it is important to note that warnings may not be issued sequentially if flood conditions change rapidly.

5.1 Bureau of Meteorology advice and warnings

<p>Forecasts</p>	<p>Daily tide and weather forecasts are issued by the Bureau of Meteorology. The Bureau of Meteorology does not specifically predict tides for Webb Beach.</p> <p>Tide predictions for Ardrossan and Port Adelaide (Outer Harbour) are released more than one year in advance and can be found on the Bureau's website www.bom.gov.au/australia/tides/</p> <p>When accessing Willy Weather for Webb Beach, these tide heights are for Outer Harbor.</p>
<p>Storm Tide Advice</p>	<p>Storm tide advice may be issued by the Bureau of Meteorology if sea levels are predicted to rise more than 1m above Highest Astronomical Tide at Port Adelaide (Outer Harbour). Storm tide advice will generally be issued 6-8 hours before high tide when it is predicted that tide heights will exceed 3.50m tide datum (2.05m AHD) at Outer Harbor.</p> <p>Storm Tide Advice will include the following information:</p> <ul style="list-style-type: none"> • The time the warning is issued • The area for which the warning is issued, for example, the coastal areas of Gulf St Vincent • The expected high tide time and sea levels forecast for Port Adelaide (Outer Harbour) • The time the next update will be issued <p>Storm tide advice will not specifically mention Webb Beach, however, any warnings issued for coastal areas of Gulf St Vincent are likely to be relevant to Webb Beach.</p> <p>The peak tide time and height for Webb Beach will differ from those forecast for Outer Harbour. The high tides for Webb Beach will generally occur slightly before the Outer Harbour high tide and the low tide for Webb Beach will occur slightly after.</p> <p>Updates will generally be issued every 6 hours; however, more frequent updates may be provided if conditions change more rapidly than anticipated.</p>

Severe Weather Warning

Severe Weather Warnings are issued by the Bureau of Meteorology if potentially hazardous or dangerous weather such as gale force winds, very heavy rainfall, abnormally high tides (or storm tides) or large surf waves are occurring or expected to occur.

A storm tide warning will be given when it is predicted that tide heights will exceed 3.75m Tide Datum (2.30m AHD) at Outer Harbor.

A Severe Weather Warning will include the following information:

- The time the warning is issued
- The area for which the warning is issued, for example, coastal areas of Gulf St Vincent
- The nature of the severe weather expected (wind speed, heavy rain, high tides)
- A description of the threat (for example likely damage to homes or infrastructure)
- Action statements (for example seek shelter, stay indoors, secure items that could blow around)
- The time the next update will be issued

Severe weather warnings will not specifically mention Webb Beach, however, any warnings issued for coastal areas of Gulf St Vincent are likely to be relevant to Webb Beach.

A severe weather warning will usually be updated every 6 hours, however, more frequent updates may be provided if conditions change more rapidly than anticipated.

In summary, at the time of writing of this document, the warnings issued by the Bureau of Meteorology for Outer Harbor that may indicate an increased risk of flooding at Webb Beach include:

- **Storm Tide Advice - Predictions of 3.50m Tide Datum (2.05m AHD) at Outer Harbor.**
- **Storm Tide Warning – predictions of 3.75m Tide Datum (2.30m AHD) at Outer Harbor.**

5.2 SES advice and warnings

If an extreme weather event is likely to lead to flooding that may have a significant impact on life or property, including cutting evacuation routes or inundating property, the SES may issue a flood advice or warning.

Advice or warnings issued for areas described as the Mallala coastal communities, Adelaide Plains coastal communities or Gulf St Vincent coastal communities will be relevant to Webb Beach. It is unlikely that public warnings will specifically mention Webb Beach.

Flood Advice	Flood advice may be issued to keep you informed about developing flood risks. There is no immediate danger to the community, however, you should continue to follow the Bureau of Meteorology and SES warnings.
Flood Watch and Act	A watch and act message means you need to act now to protect you, your family, neighbours and property.
Flood Emergency Warning	A flood emergency warning means you are in danger and need to take immediate action. This warning is calibrated to the highest level of risk to life and aligned with the principal message that the safest option is to not be near floodwaters.
Flood Advice Reduced Threat	Once the threat has passed or reduced, a reduced threat flood advice message may be issued to down-grade or close off the warnings cycle.

Each of these warnings will include the following information:

- The area for which the warning is issued, for example, Adelaide Plains coastal communities.
- The nature of the flood risk, for example, damaging waves and coastal flooding.
- Action statements, for example, what you should do to prepare your family and home from flooding.
- Likely impacts in your area.
- Ways to stay informed and monitor local conditions, for example, through the radio, websites and phone numbers.

6.0 Household Emergency Management Plan Template

HOUSEHOLD EMERGENCY MANAGEMENT PLAN

NAME

ADDRESS

Emergency Phone Numbers

For life threatening emergency
Triple zero (000)

Emergency TTY for speech or hearing impaired
106

For SES emergency assistance (flood or storm)
132 500

For police assistance (non-urgent)
131 444

Emergency Warnings

Bureau of Meteorology – Storm tide advice and severe weather warnings
1300 659 215
<http://www.bom.gov.au/sa/warnings/>

SES Warnings
1800 362 361
<http://www.ses.sa.gov.au>

Emergency broadcast
ABC Radio Adelaide (891 AM)
Cruise 1323 (1323 AM)
FIVEaa (1395 AM)
Nova 919 (91.9FM)
Mix 102.3 (102.3 FM)
TripleM (104.7 FM)
hit107 (107.1 FM)

PREPARING YOUR HOUSEHOLD EMERGENCY MANAGEMENT PLAN

Follow the steps below to help you get prepared for a flood at Webb Beach:

1. Your property

Review your property and location map.

2. Assess your knowledge and capacity

Assess your knowledge of flooding and your capacity to cope with and recover from a flood.

3. Write down important contacts and details

Write down the important contacts and details you might need if there is a flood.

4. Get your home 'flood ready'

Go through the flood preparation checklist.

5. Emergency kit

Prepare an emergency kit following the checklist.

If flood advice or a warning is issued...

6. Flood action checklist

Follow your flood emergency management plan that identifies what you will do if there is a flood.

7. Recovery checklist

Follow the checklist to make sure you stay safe after the flood and as you clean up.


1 - YOUR PROPERTY

Contact Adelaide Plains Council to get a map of your property.

2 – ASSESS YOUR KNOWLEDGE AND CAPACITY

Complete the checklists over the next two pages to assess your knowledge of flood risk and capacity to respond and recover.

Your flood risk knowledge

	This checklist can help you understand how much you know about floods and how vulnerable you might be to flooding.
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	Do you know what causes flooding at Webb Beach?
	Do you know the elevation of the land around your house?
	Do you know what the approximate floor level of your house is?
	Is your home likely to be isolated or inundated?
	Do you understand the levels of warnings that may be issued for flooding at Webb Beach?
	Do you know where to get information about an emergency?

If you don't know the answer to these questions, the Webb Beach Community Emergency Management Plan provides most of the information you need.


Further information can be obtained from:

SES - phone 8115 3800 or email SES.feedback@sa.gov.au

Adelaide Plains Council - phone 8527 0200 or www.apc.sa.gov.au


About you

Recognising your own abilities and limitations to cope with an emergency situation is important so you can identify when you might need help, and plan for how you might get this help.

	This checklist can help you think about your ability to cope with and recover from a flood.
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	Are you able to cope with stressful situations? How do you manage other stressful situations in your life?
	Have you thought about how you might feel if your home or property is flooded?
	Are you in good health? Do you have any physical or mental health conditions that might impact how you respond to a flood?
	Do you require any assistance to manage your daily routine?
	Are you reliant on any medical equipment or medicines?
	Do you have someone you can get support from at any time?
	Do you know the names of your neighbours?
	Do you have a mobile phone?
	Do you have any pets?

Your insurance

	This checklist can help you think about your insurance.
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	Does your home insurance cover your property and contents for flood damage specifically from storm surge (coastal) flooding?
	Is your insurance adequate to repair or rebuild your home if it is damaged?

It is important that you understand the types of flooding and water-related events that may occur to your home and property at Webb Beach. Not all insurance companies cover actions of the sea (coastal flooding). Insurers do not cover future impacts of sea level-rise.

If you are not sure, call your insurance company and ask them directly if you are covered for actions of the sea.

More information about the different types of insurance can be found on the Insurance Council of Australia's website <http://understandinsurance.com.au>.

3 – IMPORTANT CONTACTS AND PERSONAL DETAILS

Noting all your important contacts and details in one place will make it easier during and after a flood.

Household Details

Name	Medicare number	Centrelink Number	Passport number	Tax File Number	Drivers License Number

Important contacts

	Name	Contact Details
Doctor		
Hospital		
Dentist		
Other Health Specialist		
Vet		
Neighbour		
Neighbour		
Neighbour		

Utilities and Services

Electricity – SA Power – network faults and emergencies, including loss of supply	13 13 66
Water – SA Water – burst water mains	1300 650 950
Telstra – report a fault	13 22 00
Adelaide Plains Council	8527 0200

Your utilities and services account numbers

	Account name	Account number	Other details
Electricity			
Water			
Phone			
Internet			
Other			

Insurance details

	Insurer	Policy number	Contact details
Building/Home			
Contents			
Health			
Car			
Life			
Income Protection			
Business			
Other			

4 – GET YOUR HOME FLOOD READY

This checklist will make sure you and your home are as prepared as possible.

What is the approximate level of your house's floor level?	
How will you prevent water from entering your home if it is going to flood?	
What would you do if it floods at night?	
Could you install flood shields or gates to prevent floodwater entering doors, windows and front and back yards?	
Might you need sandbags and sand? Are you able to fill and move these yourself?	
Are important records such as passports, marriage and birth certificates, wills, financial records, photos and computer back-ups stored together in a safe high place ready to pack if you need to leave?	
Do you have any valuables, furniture, floor coverings or other contents which may need to be moved if it floods? Where will you put these?	
Do you have any electrical systems close to the floor of your house? For example power points less than 0.5m above flood level? Could you get these moved higher if there is a risk they could get flooded?	
Do you have bottled gas?	

Is your home structurally sound?	
Have you got drinking water and non-perishable food items to sustain your household (including pets) for up to 72 hours in the event you become isolated if the causeway becomes unpassable?	
Do you keep any hazardous substances including fuel, garden chemicals or poisons in your house or shed? Are hazardous substances stored out of the way of possible flood waters?	
Is there anything in your shed you need to move?	

Decide if you will stay at your home during a flood or go somewhere else

I am planning on staying at home

I am planning on going somewhere else

If you are going to stay:

Where is the highest part of the building to shelter?	
Do you have water storage containers to fill in case the mains water is affected?	

If you are going somewhere else:

Where are you going to go?	
When are you going to go?	
How will you get there? Do you need someone to drive you?	
Who do you need to tell you are going?	
What will you need to take? Refer to the emergency kit checklist on the next page.	

5 – EMERGENCY KIT CHECKLIST

Use this checklist to tick off the items as you put your emergency kit together

Equipment connected over the nbn™ access network will not work during a power blackout. Make sure you have a battery powered radio and your mobile phone is fully charged.

Having an emergency kit ready to go can help you save precious time if you must leave in a hurry. Keep it on the fridge once completed and use it to remind yourself to check/restock your kit.

My emergency kit has

	battery powered radio with
	spare batteries
	torch with spare batteries
	first aid kit
	candles and waterproof matches
	important papers including passports, marriage and birth certificates, wills, financial records, photos and computer back-ups.
	emergency contact numbers

Other items to pack

We will add these items when we are ready to leave

	mobile phone and charger
	prescriptions and medications
	toiletries
	clothing and strong shoes
	non-perishable food and
	drinking water
	anything special you need for other family members

If you have pets don't forget leads, food and bowls too.

Useful tips

- keep your emergency kit in a waterproof storage container
- check and restock items regularly (eg. use-by dates on batteries)
- keep a list of emergency numbers near your phone or on your fridge.

6 – FLOOD ACTION CHECKLIST

When flood advice or a warning is issued:

	Check on your neighbours to make sure they are aware of the warnings.
	Secure your property to prevent water entering your house.
	Switch off electricity, solar, water and gas, taking note of the time the electricity is switched off so you can keep food safe.
	Sandbag toilets, drains and tank covers to prevent floodwater entering your septic system.
	Get your emergency kit ready and add the extra items you have identified you will take.
	Move valuables, furniture, floor coverings or other contents to high places like tables, benches, or beds.
	Unplug electrical appliances and equipment and, where possible, move to a high place.
	Fill your water storages before floodwaters rise.
	Keep your fridge and freezer closed as long as possible.

If you are going to stay at home and wait for the floodwaters to recede:

	Go to the highest place you can.
	Stay tuned to local media for information and updates.
	If it is safe and you are able to, check if your neighbours need assistance.

If you are going to leave and go somewhere else:

	Pack your emergency kit and other important items.
	Leave.

Avoid driving or walking through floodwaters.

People and vehicles can be swept away in fast moving floodwater. It's often deeper and faster than it looks. Submerged hazards such as debris or washed-out sections of the road may not be visible. Floodwater may be contaminated by sewage, toxic chemicals, or other hazardous substances.

7 – RECOVERY CHECKLIST

Take precautions

	If roads have been closed or access restricted, wait for the roads to be reopened before going back to Webb Beach.
	Assume all floodwater is contaminated and prevent contact with skin and eyes.
	Do not drink mains tap water until it has been declared safe. Boil water or drink bottled water.
	Check electricity and services.
	Look out for vermin including snakes, spiders and rats.
	Mosquito populations can increase after flood events. Make sure there are no small pools of water, including in old tyres, pot plant saucers and puddles. Cover up and use repellent on exposed skin.

Returning home

	Continue to listen to the radio, check local media for information and updates and follow the advice of emergency services. Access may be restricted to some or all of Webb Beach if flood damage has made roads or areas unsafe.
	Don't be embarrassed to ask for help. There will be people in emergency services, the Council, friends, family and neighbours who will be happy to help you.

Check electricity and services

	Make sure gas and electricity are turned off before you enter the house.
	Don't use gas or electrical appliances until they have been checked for safety. Residual water and moisture can remain in electrical systems after floods.
	Phone lines may not function effectively if water has entered underground connection boxes. Contact Telstra by mobile if your phones are not working.

Inspect your home and property

	Use a torch to inspect inside and outside your house and any sheds or outbuildings. Do not use matches, cigarette lighters or naked flames due to the potential of flammable gas.
	Check for damage to windows, walls, floors and the roof.
	Look out for vermin. Snakes, rats and spiders in floodwaters often end up in houses.
	If your home or property has suffered damage, call your insurance company as soon as possible to request an assessment and advice.
	Take photos or videos and make a list of all damaged items to assist with insurance claims.
	Monitor your septic system. Flooded septic systems may not operate effectively and may need to be pumped out before use. Call the Environmental Health officer at Adelaide Plains Council for more information.

Check on your neighbours

	Check in with your neighbours to make sure they're safe.
	If you are able, ask them if they need help cleaning up or getting help from others.

Cleaning up inside your home

	Take everything that is wet and transportable outside to avoid trapping moisture in the house and increasing the risk of mould.
	In dry weather, leave doors and windows open to dry out your home. Moisture may be trapped between walls and in porous materials such as timber and plasterboard.
	Turn on heaters (one per room) and leave on with the window open to assist drying. Wear rubber gloves and goggles during all clean up to protect your skin and eyes and protective shoes and clothing.
	Clean every part of your home that has been inundated by floodwater with a commercial grade cleaner, then use disinfectant on all surfaces.
	Throw away food or medications that might be contaminated with flood water or that has been in a fridge without electricity for more than 2 hours.

	If mattresses or upholstered furniture have been soaked with floodwater, they should be disposed of.
	Where possible, remove the backs of furniture to allow air to circulate.
	Remove any carpet or floor coverings that have been soaked. Ensure floors are left to dry completely before laying any new floor covers.
	Wash all clothes and materials that get wet or muddy with hot water and, where possible, use bleach, disinfectant, or sanitiser.

Cleaning up outside your home

	Remove any rubbish, decaying vegetation, driftwood and stacked, damaged or loose materials away from your house, water meters, telephone and power lines.
	Make sure there are no pools or puddles of water for mosquitos to breed.
	Wash off mud or dirt from walls, verandas and decks.
	Ensure vents are clear of mud and debris.
	Make sure buildings are completely dry before starting repair work or painting. This may take several months.
	Oil locks and hinges to prevent rust developing.
	Make sure door and window frames are completely dry before replanning or adjusting. This may take several weeks.