



Local Flood Guide

Tambo Upper to Swan Reach & Johnsonville

Understand, prepare, and respond effectively to your flood risk.



FLOOD STORM
EMERGENCY **132 500**



If life threatening
call triple zero 000

Contents

■ Local flood information	<u>Page 3</u>
Why does the area flood?	<u>Page 3</u>
How do floods impact communities?	<u>Page 3</u>
Check your home, work, and travel routes for floodwater	<u>Page 4</u>
What might happen in a flood in your area?	<u>Page 5</u>
Previous flood impacts	<u>Page 6</u>
View the interactive flood map	<u>Page 7</u>
Your local services	<u>Page 7</u>
East Gippsland Emergency Dashboard	<u>Page 7</u>
■ Plan and prepare for floods	<u>Page 8</u>
■ What to do in a flood emergency	<u>Page 9</u>
■ Sandbag Guide	<u>Page 10</u>



Victorian State Emergency Service acknowledges Aboriginal Traditional Owners of Country throughout Victoria and pays respect to their cultures and Elders past and present.

Disclaimer: Victoria State Emergency Service assumes no responsibility or liability for any errors or omissions for any of the content in this document.

Cover: Tambo Upper and Old Orbost Road Intersection. July 2016. *Tina Bills*.

Content reviewed: November 2025


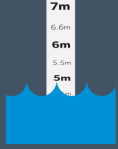



For more information visit: ses.vic.gov.au/plan-and-stay-safe

Local flood information

Towns within the area that are most likely to be impacted during a flood event are:

- Tambo Upper
- Bumberrah
- Swan Reach
- Johnsonville

 <p>There have been 4 significant flood events in the area between 1998 and 2016.</p>	 <p>The largest flood on record was in 1998 when the floodwater reached 12.0 metres at the Tambo River gauge.</p>	 <p>Flooding can happen within hours, giving people little to no time to prepare and take action.</p>
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Why does the area from Tambo Upper to Swan Reach flood?

Tambo Upper to Swan Reach and Johnsonville is at risk of both **riverine flooding** and **flash flooding**, which can happen separately or at the same time. Both are usually caused by heavy rainfall.

Riverine flooding

This happens when the Tambo River rises and overflows its banks, and spills water onto land.

- Tambo Upper, Bumberrah and Swan Reach are built along the Tambo River and parts of the towns are on the floodplain, the naturally low-lying areas more likely to be impacted in a flood.
- Rainfall from as far away as Mount Elizabeth and The Great Dividing Range can end up flowing into the Tambo River, potentially causing, or adding to flooding.







Flash flooding

This type of flooding can happen quickly and you may not receive an official warning. Although these floods only last short time, they can cause severe damage.

- The ground may be unable to absorb the amount of rainfall naturally causing the water to pool. More buildings and less green spaces can impact this.

How do floods impact communities?

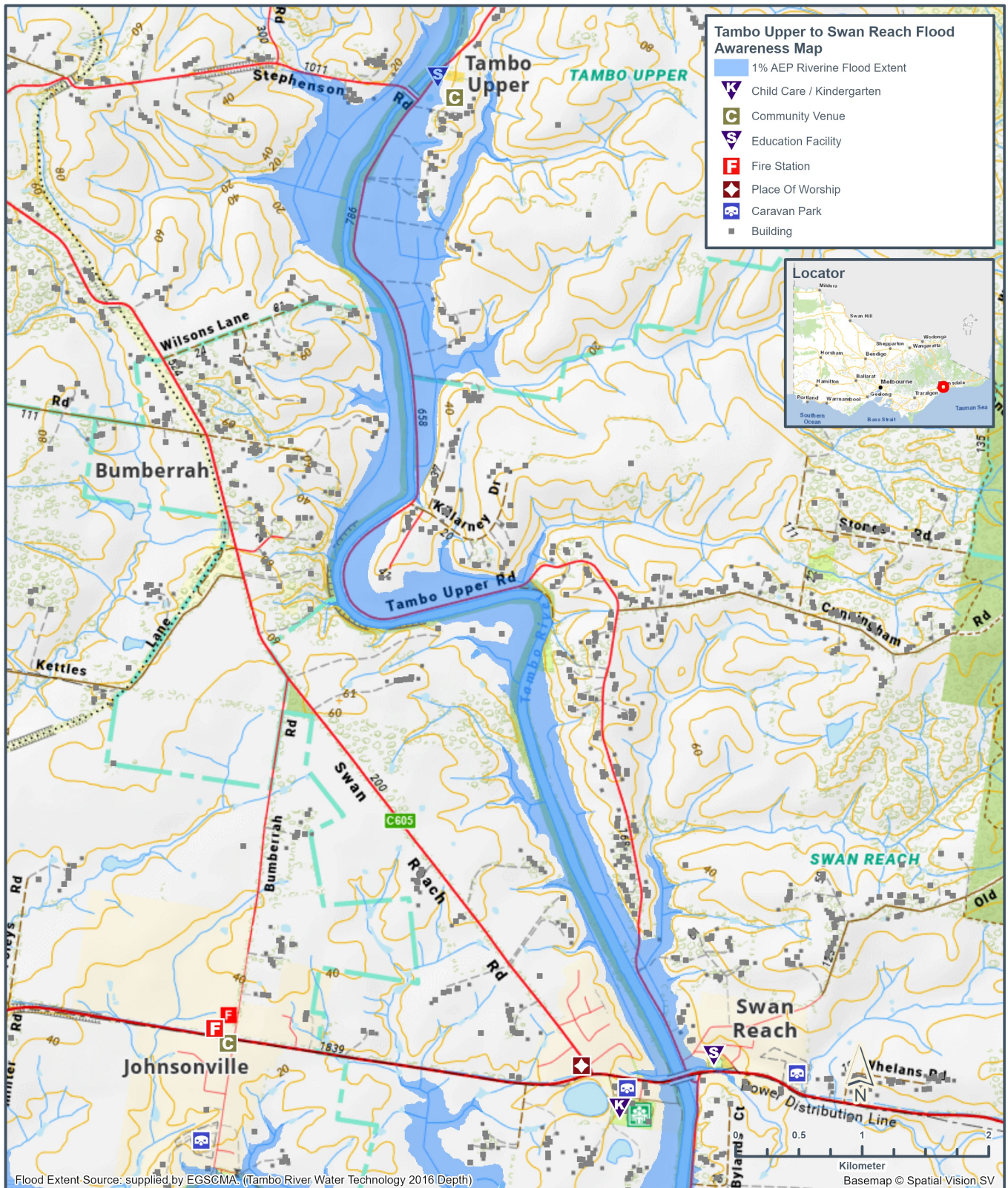
Even if your home or workplace stays dry, floods can impact you in many ways.

 <p>Buildings flooded</p>	 <p>Road closures</p>	 <p>Drinking water supply and quality affected</p>	 <p>Power outages</p>	 <p>Mobile and internet network outage</p>	 <p>Sewage overflows inside building</p>
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Check your home, work, and travel routes for floodwater

If this map shows potential flood risk for you, ensure you take action to **plan and prepare for floods**. See page 9 for more information.

- This map shows the area likely to flood in a significant flood event that would measure at least 11.9 metres high on the Tambo River at downstream Ramrod Creek gauge.
- This is referred to as a 1% Annual Exceedance Probability (AEP) which means there is a 1% chance of this size flood (or greater) happening in any year.



What might happen in a flood in your area?

Although no two floods are the same and the environment is constantly changing, the below table provides an idea of what to expect at different flood heights.

- **Before a flood:** Use the floodwater heights in the table to help you decide when you will need to act to protect yourself and your property in a flood event.
- **During a flood:** When a warning is issued by [VicEmergency](#), use the predicted floodwater height and warning information to understand what the potential impacts may be for you and your community.

Floodwater Height (metres)*	Potential impacts and previous flood events [^]
4.1m	<p>Minor flood level</p> <p>Low-lying areas near the Tambo River may be inundated. Minor roads may be closed and low level bridges submerged. Removal of stock and equipment may be required.</p> <ul style="list-style-type: none"> • Properties along Tambo Upper Road between McMeekins and Stephenson's Road may be isolated as low points in the roads and driveways are affected by water. • The water level at Johnsonville Boat Ramp will rise and affect moored boats.
6.9m	<p>Moderate flood level</p> <p>In addition to the minor level, the area of inundation is more substantial. Main traffic routes may be affected. Some buildings may be affected above the floor level. Evacuation of flood affected areas may be required. In rural areas removal of stock is required.</p> <ul style="list-style-type: none"> • Access to Tambo Upper Primary School may be lost with floodwaters possibly cutting the Tambo Upper Road. • Several low lying properties on Tambo Upper Road may be isolated due to flooding on Tambo Upper Road between Metung Road to McMeekins Road. • Swan Reach Road at Mossiface north of Baines Road is blocked from water over the road.
8.2m	<ul style="list-style-type: none"> • Tambo Upper Road at Stephenson's Road intersection and Fred Albert Bridge is blocked by water, with dangerous flows over the road. • Tambo Upper Road between Metung Road and Cunningham Road is blocked by water over the road. • The Johnsonville Boat Ramp carpark area is flooded and water is affecting the Punt Road and Clues Road area.
9.5m	<ul style="list-style-type: none"> • Tambo Upper Road between Bruthen–Nowa Nowa Road and Jennings Road is blocked from water over the road. • Low lying properties near the intersection of Tambo Upper Road and Old Orbost Road at Swan Reach can start to flood. • Swan Reach Primary School oval has water across the area.
9.7m	2012 flood event, see page 6.
10.0m	Major flood level
11.9m	1% Annual Exceedance Probability
12.0m	1998 flood event, see page 6.

*The height measurement is at the [Tambo River at downstream Ramrod Creek](#) gauge.

[^]This table includes information from previous flood events and flood studies, which are scientific models used to predict impacts at different flood heights and flows.

Previous Flood Events

June 1998 Flood Event

The largest flood event on record occurred after the areas of the catchment and throughout East Gippsland received more than 100mm of rain a day, for several days during a storm event that also had gale force winds.

Extensive flooding throughout Gippsland left many households and businesses without power and communications for several days.

The Great Alpine Road at Bruthen, the Princes Highway at Swan Reach and Lakes Entrance and many local roads were blocked by flood water, isolating residents for days.

The estimated damage was \$45 million.



**11.96
Metres**



**188mm
48 hours[^]**

[^] Ensay rain gauge



Image: Swan Reach Hotel, bank erosion. 1998. *DELWP*.

June 2012 Flood Event

On 4th of June 2012 areas of the East Gippsland received more than 150mm in 24 hours, breaking many of the areas previous daily rainfall records and causing major flooding at most of the catchments.

Power and telecommunication outages affected the area between Bruthen and the New South Wales border, with some communities affected for more than 3 days.

Fred Albert Bridge at Stephenson's Road was destroyed during this event, and rebuilt higher.

Bridges, roads and recreational areas throughout Gippsland were damaged with council asset damages estimated at \$10 million.



**9.7
Metres**



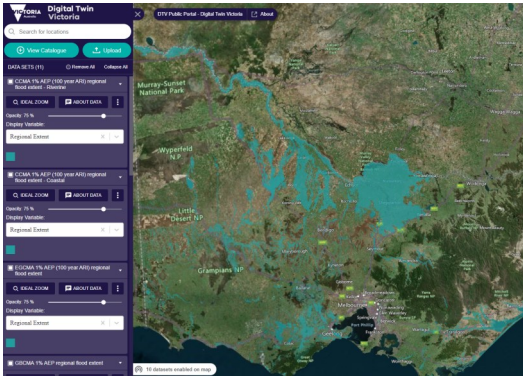
**177mm
24 hours[^]**

[^] Mount Elizabeth rain gauge



Image: Stephenson's Road, Tambo Upper. 2012

View the interactive flood map on Digital Twin Victoria (DTV)



The [Digital Twin Victoria Public Portal](#) brings together 2D, 3D and live data in a single online place for everyone to use. The portal hosts some flood mapping data.

- Use the map to zoom in on where you live, work and travel to see if it's likely to be affected in a flood event.

Go to digitaltwin.vic.gov.au



In a flood emergency, stay informed through [VicEmergency](#), see [page 8](#) for more information.

Your local services

Catchment Management Authority

For flood advice and information on flood levels or depths when developing your property.

- **East Gippsland Catchment Management Authority**
egcma.com.au | 03 5152 1184

Local Council

For relief and recovery support after a flood event.

- **East Gippsland Shire Council**
eastgippsland.vic.gov.au
03 5153 9500

East Gippsland Emergency Dashboard

East Gippsland Shire Council's Emergency Dashboard provides community with centralised real-time access to emergency information including weather, emergency warnings, road closures, river heights and power outages.

To support community preparedness the East Gippsland Emergency Dashboard provides access to:

- Local Flood Guides, via the Victoria State Emergency Service website, and
- Community Emergency Management Plans and Local Incident Management Plans on the 'Your Community' page.

Go to emergencydashboard.eastgippsland.vic.gov.au



Stay safe by never driving through floodwater. It can take just 15cm of flowing water to float a car, that's the height of an average pen.

Plan and prepare for floods

1 How to stay informed

VicEmergency is Victoria's source of emergency information and warnings.

- Set-up a watch zone for your area for alerts when warnings are issued.
- Learn about the three different warning levels.

 VicEmergency app
emergency.vic.gov.au
1800 226 226

 vicemergency

 @vicemergency



2 Make an Emergency Plan

Use information from your Local Flood Guide and your Catchment Management Authority, to help you decide;

- What you will do in a flood emergency
- When you will do it
- Who you will inform



Red Cross RediPlan is a free tool that helps you create a simple emergency plan that supports the flood actions you have chosen.

- Visit redcross.org.au/prepare
- Download the [Get Prepared](#) app

3 Prepare an emergency kit

 Power bank	 Radio	 Drinking water
 Spare batteries	 Documents & records	 First aid kit
 Long life food	 Torch	 Gloves

Emergency kit



You may need to stay safe for 72 hours in a disaster before help arrives. Make sure you have safe drinking water, food, and any special needs or medications for all family.



There will be extra items to be added to your emergency kit in an emergency like clothes, a phone and charger.



Watch a video on how to get your Emergency kit ready.
youtu.be/XgyLnKDMkNo

4 Reduce impacts to your property

- Keep gutters and drains clear of debris including leaves and any other items.
- Check your building and contents insurance, what kind of flooding does it cover?
- Move your valuable possessions up high.
- Back up important files and documents to a cloud storage or USB kept elsewhere.
- Identify higher ground on or around your property, away from the danger area.
- Consider buying sand and sandbags ahead of time, refer to our Sandbag Guide for more information.

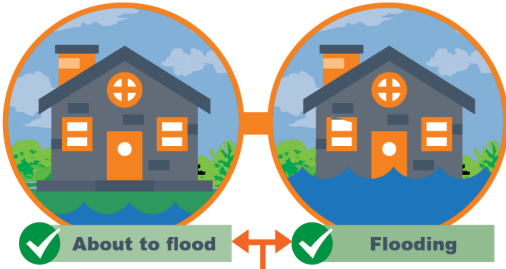



For more details and other tips, visit:
ses.vic.gov.au/flood



What to do in a flood emergency

When to call VICSES



 **Flood emergency assistance call VICSES 132 500**

 **If life threatening call triple zero 000**

Stay Informed

VicEmergency

Emergency warnings will provide information on what is happening and advice of what you should do.

You may not receive an official warning before a flood.



VicEmergency app
emergency.vic.gov.au

1800 226 226



vicemergency @vicemergency



■ Set-up a watch zone for alerts for your area.

Bureau of Meteorology



Monitor rainfall, river levels, weather forecasts/warnings.

bom.gov.au/vic/flood/east_gippsland.shtml

Emergency broadcasters



Radio | ABC 100.7 FM or 828 AM, REGFM 105.5

TV | Sky News

If you expect floodwater at your property

1



Bag it

Sandbag doorways and low-lying windows to slow floodwater entering your home.

2



Block it

Block toilets, bath and drains using a sandbag ideally placed inside a plastic rubbish bag.

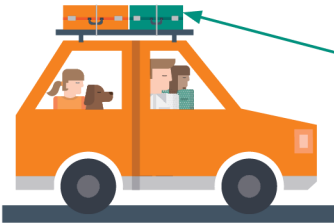
3



Lift it

Put your valuables and electrical items as high as possible. Turn off power, gas, and water at the mains.

4



Leave

- Leave **before** the flood arrives.
- Check warnings from VicEmergency for information like evacuation or relief centres, and road closures.
- Travel to the home of family or friends who are in a safe location, away from the flooded area.

Take your emergency kit and add the items below:



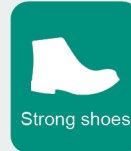
Phone & charger



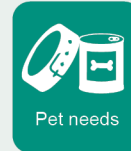
Prescriptions & medication



Clothes for your family



Strong shoes



Pet needs

Never drive through floodwater

Large



A Large 4WD can be moved by water only 45cm deep.

Small



A small car can be moved by water only 15cm deep.



For more details and other tips, visit:

ses.vic.gov.au/flood

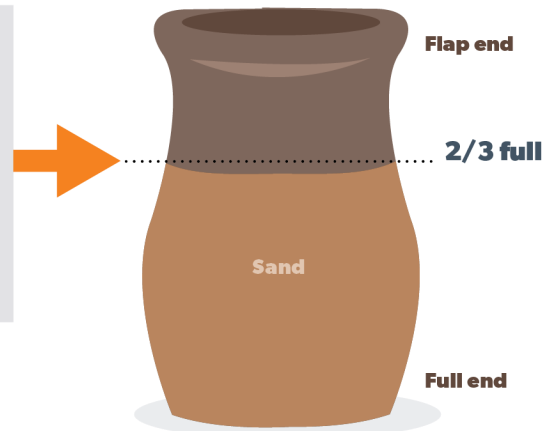


Sandbagging

Sandbags won't stop the water completely, but can reduce the amount of water entering your home.

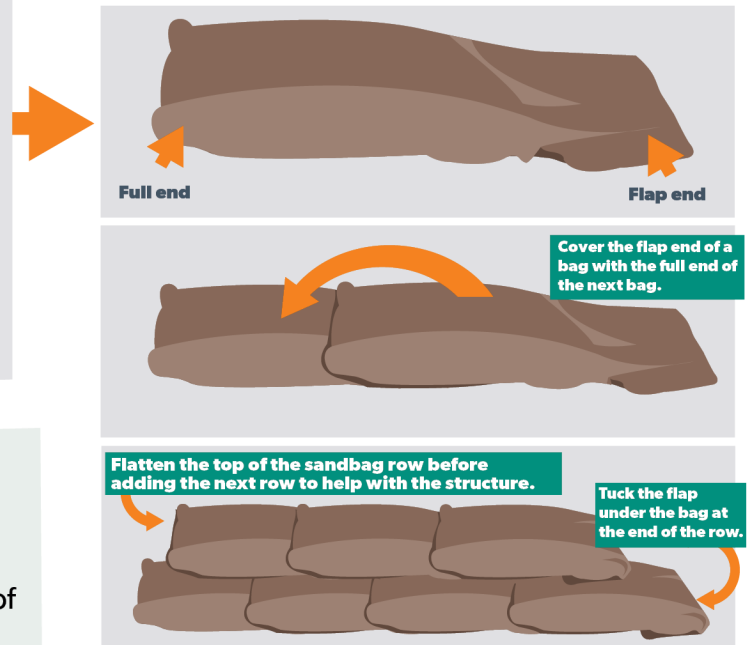
How do I fill a sandbag?

- Only use sand to fill hessian bags. Do not use dirt.
- Only fill sandbag two-thirds full.
- Do not over fill the sandbag as it will be too heavy to carry.
- Do not tie the top of the sandbag.
- Take care when filling and lifting the sandbag, to avoid injury.



How do I lay sandbags?

- Lay sandbags like brickwork. Stagger rows so that the joins do not line up.
- Start at one end and work to the other end.
- Ensure the unfilled part of the bag is covered by the next bag.
- Tuck flap under the bag at the end of the row.
- If the sandbag wall is going to be more than five (5) bags high, you will need to lay two (2) rows wide.

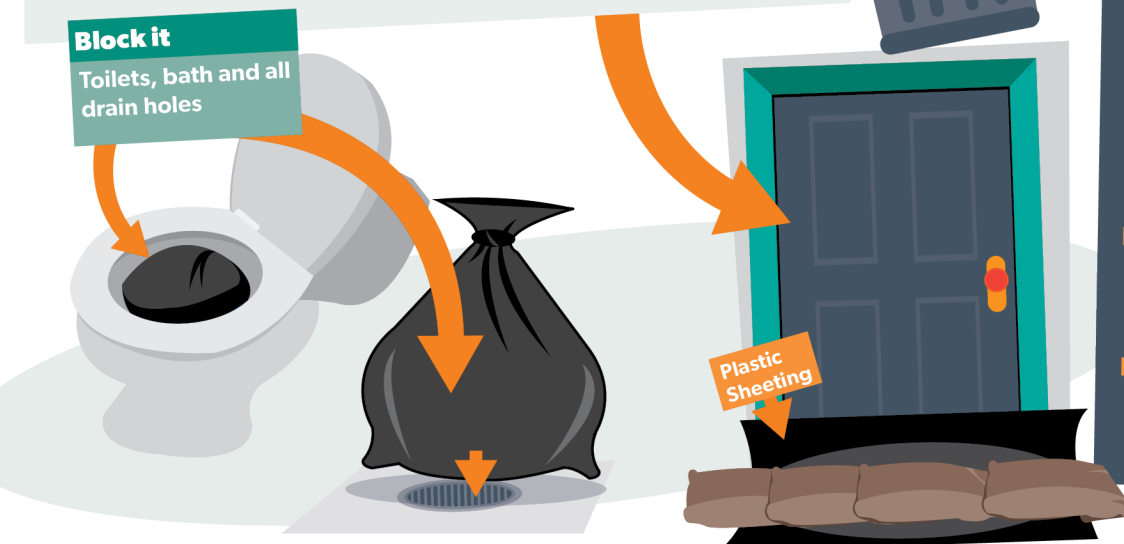


Where do I place the sandbags?

- Place sandbags in plastic bags to cover drainage holes in home (e.g. showers, toilets, sinks) to stop back flow of water.
- Place a small wall across doorways, at least the height of the expected water level. Be careful not to trap yourself inside.
- If available, plastic sheeting may be used under sandbags to reduce the seepage.

Block it

Toilets, bath and all drain holes



What do I do once I have finished with the sandbags?

- Sturdy gloves should be worn when handling wet sandbags as they can contain chemicals, waste and diseases.
- Sandbags that have been in contact with floodwater need to be thrown away.
- Contact your local council to find out how to dispose of your sandbags safely.



Sandbags and sand

Preparing your home

Having sandbag supplies ready can assist you before a flooding emergency occurs.

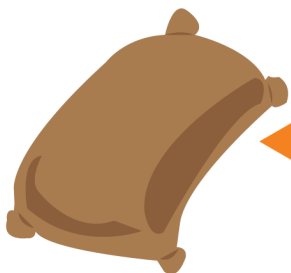


What supplies do I need to sandbag my home?

- Sandbags
- Sand
- Plastic sheeting
- Gloves and safety goggles
- Shovel and hand scoop

Where can I purchase these supplies?

- Many sandbag supplies can be purchased from hardware stores or garden centres.
- VICSES do not routinely supply sandbags to households.
- During floods, sandbag distribution points may be established in flood-affected areas.

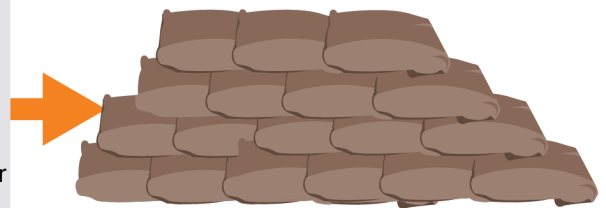


How many sandbags will I need and how much sand?

- Most homes can be protected by less than 25 sandbags.
- The number of sandbags will depend on your local flood risk and availability.
- Sandbags are filled 2/3 full which requires around 15-20kgs of sand per bag.

How do I store my sand and sandbags?

- Filled sandbags only have a short shelf life.
- It is recommended to store sandbags empty.
- Sandbags should be stored in a cool dry area away from UV light.
- Sand should be kept dry and can be stored in water resistant containers or under a tarp.
- Sand is heavy - ensure it is stored so it can be moved safely.



When should I sandbag my home?

- **You** are best placed to decide if there is a need to sandbag your home, based on local knowledge and past flood events.
- Monitor your local conditions. Stay up-to-date with weather forecasts and warnings by downloading the **BOM Weather** and **VicEmergency** apps, or call the VicEmergency Hotline on 1800 226 226.
- If you think you are at risk, do not wait for an official warning to act.