# Flooding in Brisbane

A GUIDE FOR BUSINESSES



Dedicated to a better Brisbane

Brisbane is built on a floodplain and is known for its river, waterways and beautiful subtropical climate, but this can mean our city is prone to summer storms and flooding.

Every flood is different and while we will never be able to prevent these types of weather events, we can always be better prepared.

Brisbane City Council has implemented risk-based flood management tools to reduce the likelihood and impact of flooding.

This includes significant historical and on-going investment in flood mitigation measures by Brisbane City Council and others. However, it is important to note that the tools have limitations and cannot eliminate the risk of flooding.

Examples include:

- 6,500 km of stormwater drainage pipes, which help manage smaller storm events.
- Waterways that were straightened, widened and/or dredged to improve flow capacity and reduce flooding of nearby areas.

- Dams and detention basins which can reduce but not eliminate the impacts of some floods.
- Land use planning and development controls to improve flood resilience of new buildings.
- Voluntary acquisition of severely flood affected homes and improvements to building flood resilience.
- Continued pro-active floodplain management planning, including identification of further feasible flood mitigation measures.

While Council continues to review and improve our flood management practices, it is everyone's responsibility to understand their flood risk and prepare for the potential of flooding in their buisness.



#### Be prepared for flooding

Don't wait until it's too late. Brisbane City Council has a range of free tools and information that can help businesses understand their potential flood likelihood and how to be prepared. These include the following:

#### Interactive Flood Awareness Map

Check your flood risk to identify the likelihood and sources of flooding that may affect your business. Learn about the extent of Brisbane's major historic river floods.

#### FloodWise Property Report

Download a FloodWise Property Report for flood information related to building, renovating or fit-outs for your business.

#### **Council's Business Hotline**

Phone **133 BNE (133 263)** 24 hours a day, seven days a week to discuss how to prepare your business for an emergency.

#### How to prepare for flooding

All businesses should have a business continuity plan and emergency and evacuation plans in place to ensure their business can operate if something unforseen like a severe weather event, fire or natural disaster should happen.

Below are some guidelines to help your business, employees and customers to be safe and ready for potential flood impacts.

#### Insurance

• Talk to your insurer and review your business and contents insurance regularly, to ensure your insurance is adequate to cover flood and storm events, as well as the full replacement value of your building and contents.

#### **Business continuity**

- Have a plan for stock or other equipment that needs special protection from floodwaters. Consider storing these items in an area that will not be affected by floodwaters to minimise potential damage.
- Develop a business continuity plan (Visit **brisbane.qld.gov.au** and search **'Prepare your business'**) to use if you are unable to return to your business for a period of time. Consider if there is somewhere else you and your employees can continue to work from.
- Regularly backup computer files off-site to ensure accessibility in case your workplace computers are damaged or inaccessible.

- Have a process in place for accounting - payroll, banking, accounts payable and receivable.
- Make a list of the essential items you need to run your business if you can't access your workplace. Can you keep backups or spares?
- Think about what help you will need after a flood. If you have warning, make arrangements in advance to line up help and support. This may save you time and money after a flood.
- Consider after-hours and emergency phone numbers that can be used if you can't access your workplace - how easily can these be communicated via a voicemail message, website or social media?

#### Employees, suppliers and customers

- Create a contact list for your workforce, including mobile numbers, email addresses, and emergency contacts.
- Display important emergency numbers for employees and suppliers in a visible location.
- Make a contact list of key suppliers and customers who may be affected by your business being flooded. For example, would you need to cancel any regular deliveries?
- Consider the needs of employees who may require special assistance during an emergency evacuation, such as those who are visually or hearing impaired, have disabilities, or are elderly.
- Establish a clear process for informing all employees about emergency evacuations. Consider an evacuation warning system and designate a meeting point.
- Arrange employee training and regular evacuation drills.

#### Emergency and evacuation plans

- Keep a record of your security procedures - what needs to be done before exiting the premises? Do windows/doors need to be locked? Is there an alarm that needs to be set? Make sure you have employees who know what to do.
- Develop an evacuation plan and display the maps.
- Prepare an emergency kit. Find out more about the emergency kit content checklist by visiting **brisbane.qld.gov.au** and search '**Be Prepared**'
- Conduct regular practice evacuation drills with employees.

#### Utilities

- Create a list of essential contacts (telephone, email), including building supervisors and owners, electricity, water, gas, waste collection contractors, and internet/telephone providers for easy reference.
- Know what you need to do to make your workplace safe - where do you turn off power, water and gas? These should be marked on a map with any necessary instructions, and kept with your emergency plan.

#### Hazardous materials

- If you have hazardous chemicals, oil or other substances, make sure they are stored safely away from possible flood-affected areas.
- Secure general waste and recycling bins to prevent waste items washing away into waterways.
- If you have a food business, ensure perishable and non-perishable food items are not stored in areas that could be affected by flooding.

#### Understand your local area

- When it rains heavily, watch where the water comes from and where it goes.
- Consider your location. Is your business close to a river, creek, gully or tidal waterway that may cause flooding? If you are close to a creek, water may move quickly through your business during a flood. Consider how this may affect your preparation plans.
- Assess how local roads or flood-prone areas might affect access to your business for you, your employees, and your customers during heavy rainfall.
- Collect sandbags in advance if you know your business is in a flood risk area.

#### Use local knowledge

• Ask local traders and businesses what their flood experience is in your area and share your knowledge with other local businesses. This will also help build a local network so you can pool resources and help each other if a flood occurs.

#### Understand Brisbane's climate and weather patterns

- Listen to weather reports to check if storms or heavy rain are forecast.
- Visit **bom.gov.au** to check weather radars and forecasts for the Brisbane area.
- Sign up for Council's free Brisbane Severe Weather Alert. Visit brisbane.qld.gov.au and search 'Be Prepared'

#### How to use the Flood Awareness Map

Brisbane City Council's Flood Awareness Map is for general awareness about the possibility of flooding on a property. It also provides information on different types of flooding and historic flooding. The Flood Awareness Map was built from the latest flood studies and models endorsed by Council.

High flood likelihood (5%)	Medium flood likelihood (1%)
This is considered regular. There is a 1 in 20 chance (5% likelihood) of this type of flooding happening in any year. <b>Action</b> : Businesses are strongly advised to prepare for flooding to minimise the impact on their business and property.	This is considered to be irregular. There is a 1 in 100 chance (1% likelihood) of flooding occurring in any year. Action: Businesses are advised to prepare for flooding to minimise the impact on their business and property.
Low flood likelihood (2%)	Very low flood likelihood (0.05%)
This is considered rare. There is a 1 in 500 chance (0.2% likelihood) of flooding occurring in any year. <b>Action</b> : Businesses should consider how flooding may affect their local area to minimise the impact on their business and property.	This is considered a very rare or an extreme event. There is a 1 in 2000 chance (0.05% likelihood) of flooding occurring in any year. Action: Businesses should consider how flooding may affect their local area to minimise the impact on their business and property.

Theological College

Milton Statio

The Flood Awareness Map now includes a February 2022 historic flood extent (based on river and creek information only). Regularly updating the Flood Awareness Map ensures that residents and businesses have access to the best available flood information to be prepared for potential flood risks.

Overland flow	High impact
Overland flow can occur in this area. Action: Businesses are strongly advised to learn about overland flow paths surrounding their property to be prepared and help minimise the impact on their business and property.	There is a 1 in 20 chance (5% likelihood) of flood occurring in any year. The overland flow is generally unsafe for people, vehicles and buildings. <b>Action</b> : Businesses are strongly advised to prepare to minimise the impact on their business and property.
Medium impact	Low impact

Brisbane

**Brisbane** City

Queen Street Station

#### **Medium impact**

Kurilpa Point

There is a 1 in 50 chance (2% chance) of flood occurring in any year. The overland flow is generally unsafe for people, vehicles and buildings, however these hazards are experienced less frequently than in high impact areas.

Action: Businesses are strongly advised to prepare to minimise the impact on their business and property.

There is a 1 in 100 chance (1% chance) of flood occurring in any year. The overland flow is generally safe for people, vehicles and buildings, however these hazards are experienced less frequently than in high impact areas.

**Action**: The overland flow is generally safe for people, vehicles and buildings, however, certain areas can experience greater hazards.

Thomas St

Payne St

Agnes St





Free sandbags are available for collection 24 hours a day, seven days a week from September to March, and also when there is severe weather predicted.

Sandbag collection locations:

- Darra South Depot, 38 Shamrock Road
- Lota Depot, 58 Herbert Street
- Morningside Balmoral Depot, 9 Redfern Street
- Newmarket SES Depot, 66 Wilston Road
- Zillmere North Depot, 33 Jennings Street

Never drive through or enter floodwaters.

### Know your flood risk: understand the four flood types

The Flood Awareness Map includes flooding from all sources: creek, river, overland flow and storm tide. All floods are different and may occur from one or a combination of these four sources.

#### **Creek flooding**

Happens when intense rain falls over a creek catchment. Run-off from houses and streets also contributes to creek flooding. The combination of heavy rainfall, run-off and the existing water in the creek causes levels to rise.

#### **Overland flow**

Run-off that travels over the land during heavy rainfall events. Overland flow can be unpredictable because

it is affected by localised rainfall and urban features such as stormwater pipes, roads, fences, walls and other structures. The actual depth and impact of overland flow varies depending on local conditions but it generally occurs quickly.

#### **River flooding**

Happens when widespread, prolonged rain falls over the catchment of a river. As the river reaches



capacity, excess water flows over its banks causing flooding. River flooding downstream can occur hours after the rain has finished.

#### Storm tide flooding

Happens when a storm surge creates higher than normal sea levels. A storm surge is caused when a low pressure



system or strong onshore winds force sea levels to rise above normal levels. The impact from storm tide or storm surge is increased during high tides and king tides and can affect low-lying areas close to tidal waterways and foreshores.

Floodwater may rise very slowly and be slow moving. This is normally associated with Brisbane River flooding, which occurs after prolonged periods of heavy rain across the whole catchment. Floodwater can also rise very quickly, be very fast moving and then recede quickly. This is normally associated with creek flooding.

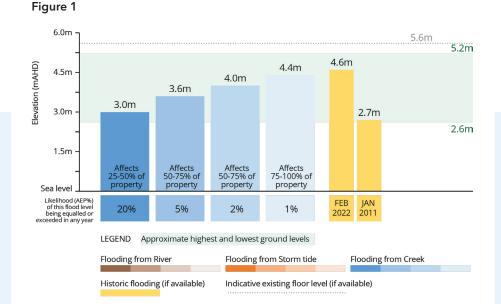
Many properties unaffected by previous major Brisbane River flood events may still be at risk from other sources of flooding including creek, storm tide and overland flow.

Even if you live on top of a hill, heavy rain can cause localised flooding.

#### How to read the FloodWise Property Report

FloodWise Property Reports show the likelihood and type of flooding at a specific property. The reports use the best available flood planning information to guide how land in Brisbane is used and developed for the future, in accordance with Brisbane City Plan 2014. Information in the FloodWise Property Report enables you to plan and build new habitable floor levels in accordance with Council's City Plan requirements.

The FloodWise Property Report includes a summary graph of flood information relevant to the property. The graph shows the highest source/ type of flooding for the highest source/type of flooding for 1%, 2%, 5% and 20% annual chance of flooding. This is also known as the Annual Exceedance Probability or AEP and is the probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance. The graph also shows historic flood levels. Other flood types and levels may be present and will be listed in the Flood Planning Information table also included in the FloodWise Property Report. The graph does not include overland flow flooding.





Levels (flood, ground, habitable floor) are shown relative to sea level - 0m. The flood levels above sea level are represented by vertical bars. The values shown on the bars DO NOT indicate the depth of floodwater. In Figure 1, the 1% AEP flood would be 0.8m below the maximum ground level and affect 75-100% of the property or land. The type of flooding would be from a creek. This property was also affected by the February 2022 and January 2011 flood events as these flood levels are above the minimum ground level.

The range between minimum and maximum ground levels is represented by a solid, light green, horizontal bar with the minimum and maximum ground levels labelled in Figure 1. The minimum and the maximum ground levels of this property are 2.6m and 5.2m respectively as shown in Figure 1.

The indicative existing floor level, if available, is included as a dashed line and has value in metres included. In some cases, the indicative existing floor level may not be shown. In Figure 1, the indicative existing floor level is 5.6m.



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## Find out more information on how to be prepared, visit brisbane.qld.gov.au and search 'Be Prepared'.

During a flood you may need to contact a range of people and services for help. Keep these numbers in your list of important contacts:

- Medical providers (doctors or hospital, health fund)
- Service providers (phone, electricity and internet providers)
- Financial providers (bank, insurance provider, real estate agent).

Council will also update its **Emergency Dashboard** frequently during a flood or other emergency events, visit **brisbane.qld.gov.au** for more information.

#### **Emergency contact details**

- Life threatening emergencies 000
- Police/fire/ambulance (mobiles 000 and 112)
- State Emergency Service (SES) 123 500
- Energex 13 19 62
- Brisbane City Council 3403 8888

Brisbane City Council GPO Box 1434 Brisbane Qld 4001

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