

Flood Impacts and Types of Flooding

Following the recent severe weather that impacted south-east Queensland, including Redlands Coast, Redland City Council is working across the city to develop a deeper understanding of changing flood patterns.

Redlands Coast experienced unprecedented rainfall and localised flooding, and Council is aware that some properties, roads and open spaces were impacted more than others. Some of these areas have not previously experienced flooding.

Natural and human factors can change flood behaviour. Rainfall intensity also determines how much water run-off will flow over the land surface instead of soaking into the ground. Heavy rainfall in one hour has a much greater run-off ratio than if the same amount falls over a week.

Underground stormwater systems such as pipes and catch pits can only cater for minor rainfall events. During heavy rainfall, roads often become flooded due to stormwater run-off and creek flooding, but road infrastructure is designed to act as 'gutters' to direct the water away from areas. Residents may notice some roads closed during severe storms and flooding, however roads will redirect overland water back into the creek system or the bay.

While we can't control what nature delivers to us, we can work together as Council and community to further increase our resilience.



Investigating and responding to flood-impacted areas

Following a severe rainfall event, the vast clean-up and repairs to Council infrastructure across the mainland and islands can sometimes take a few weeks or longer. Council often receives many reports from the community regarding flood-affected infrastructure during this period.

We appreciate the community helping to keep Council informed of the affected areas. When the rain has eased, and as soon as it is safe to do so, Council officers begin the process of inspecting any damage caused to city infrastructure. This includes roads, bridges and pathways, as well as our parks and recreational facilities.

Our investigations involve recording the areas impacted by floodwater and taking stock of the damage. However, the safety of Council officers is paramount, so if a stormwater pipe is blocked or flooded, Council will wait to ensure the affected site is safe before maintenance work begins.

Council needs to prioritise flood-impacted areas to ensure we can investigate and address each issue as effectively as possible. We ask that the community please be patient as we work through the incidents using a risk-based approach.

Types of flooding

Storms and flooding are synonymous with living in south-east Queensland, including Redlands Coast, especially during the summer season.

Due to our climate, flooding from stormwater run-off, creeks and storm tide must be expected. By understanding what types of flooding could affect your property, you can however be better prepared.

Stormwater run-off (natural overland water flow)

Flooding caused by stormwater run-off is a common event during severe rainfall events. Stormwater run-off flooding occurs when there is a slope on the land that directs water from neighbouring land, causing water to flow to the lowest point. This type of flooding impacts localised areas rather than the whole city.

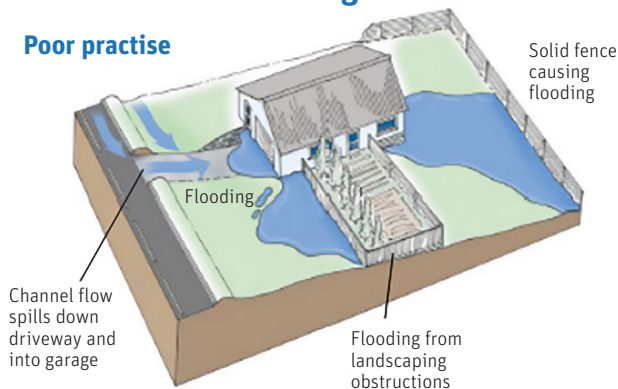
Property owners are responsible for managing stormwater run-off and ensuring adequate drainage systems are installed on their property to avoid concentrated water from flowing onto adjacent or downstream properties. This can be managed by ensuring water run-off is drained to a lawful point of discharge via a kerb adapter or into the kerb and channel in front of the property. Some guidelines that you can follow include:

- avoid altering the ground level around an overland flow path
- ensure your vehicle crossing has sufficient 'rollover' to prevent water from the road, or channelling, from flowing down your driveway
- ensure your driveway and other paved surfaces have an appropriate shape and levels to direct surface flow away from your garage and house
- avoid blocking the path of overland flow at both the upstream and downstream boundaries of your property
- protect your home by ensuring ground levels around it direct surface flow away from the house.

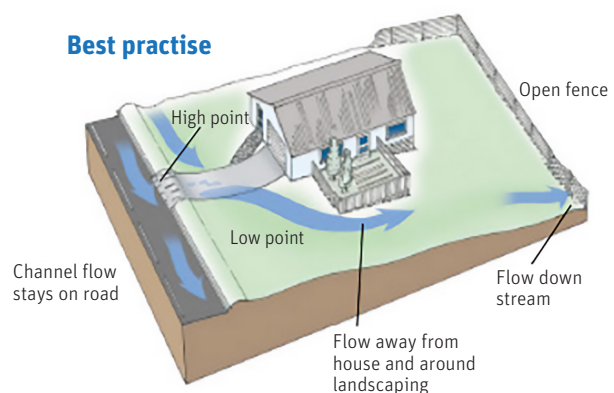
More information on how to manage stormwater run-off is available on Council's website at redland.qld.gov.au

Stormwater run-off management

Poor practise



Best practise



Creek flooding

Creek flooding is caused when, during heavy rainfall, water from roofs, driveways, parks, footpaths, roads and other surfaces flows into the underground stormwater pipe network, exiting into our creeks and waterways.

Creek levels rise due to the combination of rainfall, stormwater run-off and the existing water in the creek, but heavy rainfall can lead to the creek water level surpassing its capacity. When this occurs, we can expect to see water flowing over creek banks and into properties, roads and parks.

It's important to stay alert and prepared as creek flooding is hard to forecast and can rise and fall quickly.

Known areas to Council that are prone to creek flooding include Hilliards Creek at Ormiston and Tingalpa Creek at Capalaba. Creek flooding in these locations tend to impact Council parks and pathways.

Storm tide flooding

Redlands Coast's foreshore and low-lying suburbs can be prone to storm tide flooding. Storm tide flooding occurs when there is an abnormal increase in seawater level during a storm event, typically caused by strong winds pushing water onto land. Flooding at foreshore or low-lying properties can be attributed to the combination of storm tide and stormwater run-off.

King tides can also be linked to storm tide flooding as they bring unusually high water levels, and can cause local tidal flooding. Sea level rise, as a result of climate change, is raising the height of tidal systems, causing high tides to extend further inland than previously recorded. Fortunately, king tide information is predictable and available on the Queensland Government's website at www.msq.qld.gov.au