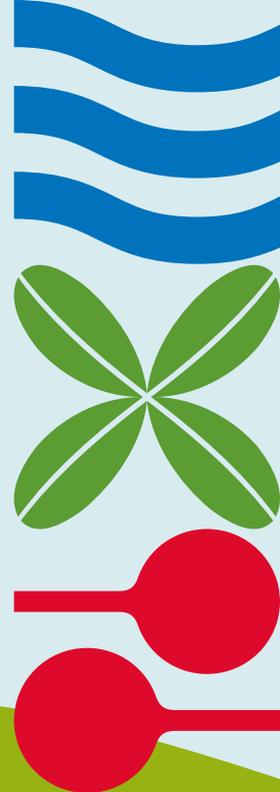


Preparing your property for flooding



What is stormwater?

Stormwater is the water that runs off surfaces when it rains.

During wet weather, stormwater naturally flows overland to the lowest point. In regular, small rain events, this usually has minimal impact on people or property. However, when there is heavy rain and the stormwater network reaches capacity or there is a blockage, greater volumes of water flow overland and may cause flooding. Climate change is increasing the number and intensity of extreme rain events, so we all need to be prepared and become more resilient to flooding.



About stormwater

Stormwater flows across public and private land through open drains, culverts, pipes, along roads and via parks, wetlands and streams on its way to the sea.

Everyone has a role to play in maintaining the stormwater network to reduce the impact of flooding. By allowing water to flow freely and safely through our neighbourhoods, we will help keep our whānau, property and the community safe during storms.

Who is responsible for maintaining the stormwater network?

The public stormwater network serves whole communities and is managed by Auckland Council (or Auckland Transport in rural areas). In some cases, the public stormwater network may run across or under private properties.

Private stormwater systems are the pipes and drains on private property that connect to the public network. Streams that run through or next to a privately owned property are part of the private stormwater system. It is the property owner's responsibility to maintain the private stormwater system, (including streams and overland flow paths), up to and including connections to the public network.

To report stormwater flooding risks like blocked drains, culverts, catchpits or grates, or to request an investigation following a flood or stormwater event, call Auckland Council on **09 301 0101**.

For drain or pipe blockages on private property, please call a plumber or drainlayer.



What is an overland flow path?

An overland flow path is the natural course water takes across the land.

During heavy rain an overland flow path can become a temporary, fast-flowing stream.

What is a flood plain?

Flood plains are areas predicted to be covered by flood water during heavy rain. They occur in low-lying areas and next to streams and rivers, including where streams were historically piped.



What is a flood-prone area?

Flood prone areas are low-lying areas where water can become trapped and collect during heavy rain, especially if the stormwater outlet reaches capacity. They can occur naturally or be created by changes to the land.



Know your flood risk

Your property might be at risk of flooding for several reasons including:

- it is at the bottom of a steep hill/road or driveway
- it is next to (or near) a stream or river
- there is a flood plain or flood prone risk on or near the property
- it has an overland flow path within (or near) the property
- it is in an urban area with a lot of hard surfaces (e.g. concrete, asphalt) that can't absorb water
- if changes have been made to the land or buildings that obstruct the flow of stormwater
- it is in a low-lying coastal area.

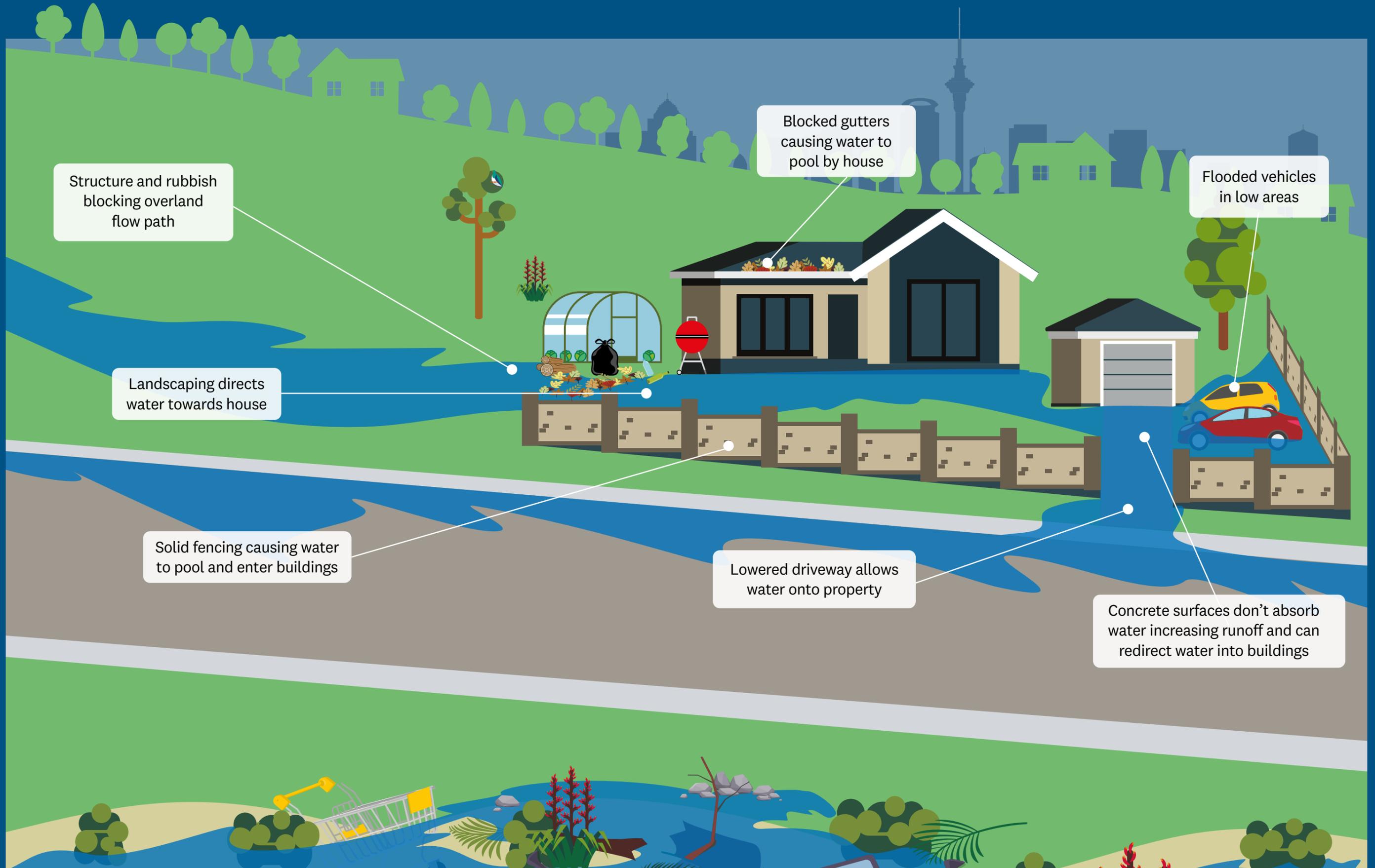
Find out if your property is at risk from flooding
on Auckland Council's flood viewer:
aucklandcouncil.govt.nz/floodviewer
(read the back of this leaflet for more info on the flood viewer).

Simple ways to reduce flood damage when a storm is expected

While we can't control the weather, and it's not always possible to prevent flooding, there are things you can do to prepare your whānau for storms and minimise flood damage to your property. Consider doing the following:

- move vehicles, valuable items and livestock away from low areas that could flood
- check gutters and drains are clear of debris so water can drain away easily
- clear rubbish and debris that could be picked up by flood water and create a blockage
- in the house, store valuables and important documents in high places
- ensure that places that might flood including garages and basements are not used for sleeping
- have a grab bag and emergency plan that includes your pets ready, in case you need to evacuate. Visit **getready.govt.nz** for more information
- report any visible blockages in the public network (roadside drains) to council on **09 301 0101**.

Property related stormwater issues



Do you rent your home?

While the property owner or landlord is typically responsible for building works and larger property maintenance (check your lease or rental agreement for specifics), you should be careful where you place your belongings and look after the property to reduce the risk of flooding and damage.

Long-term improvements to reduce the impact of future floods

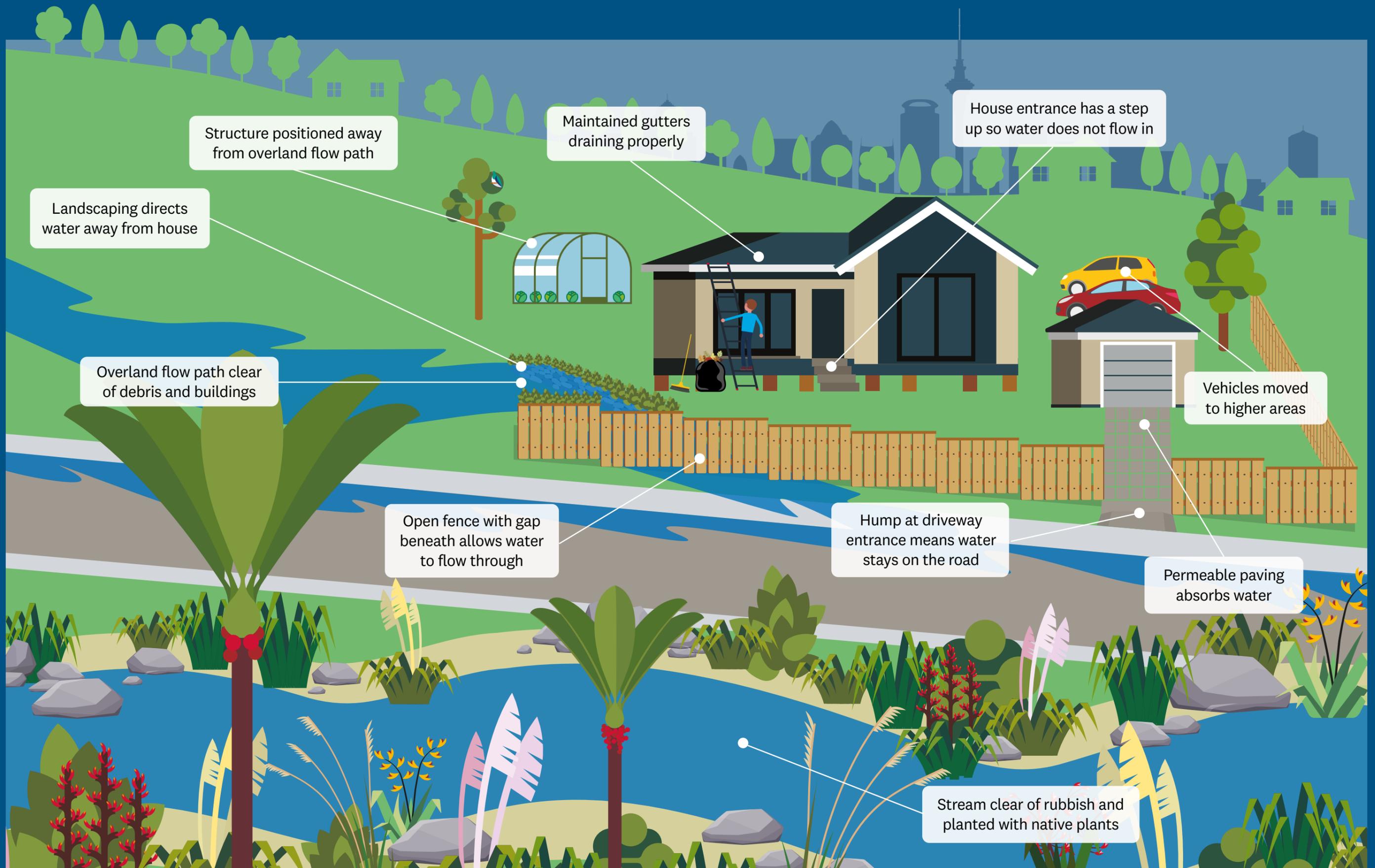
If your property is in a flood risk/hazard area or changes are made to the natural flow of water e.g. the overland flow path is blocked by debris or a structure is built over it, more water can find its way onto your property and into your home. If there is an overland flow path through your property, water must be able to enter and exit freely at its natural point, however there are some improvements you can make to minimise the impacts of flooding.

Does your home insurance cover flood damage?

Consider increasing the amount of flood related cover you have in your policy if you're able to.

- When your driveway is lower than the road and is not in an overland flow path, ensure it is high enough or has a hump so water stays on the road instead of running down your drive.
- When landscaping, ensure the ground is shaped to direct water away from your home.
- Ideally your house's floor height should be higher than the surrounding land, and you should have to step up (or ramp) to enter your home.
- Fix or replace broken gutters and downpipes to prevent water pooling by your house.
- Place fences and buildings away from overland flow paths and ensure fences have a gap at the bottom to allow water to travel underneath.
- Where practical, replace hard surfaces like concrete with permeable materials like grass or spaced pavers to absorb water and reduce run off.

Property related stormwater improvements



I have a stream on or near my property

Most streams running through or next to privately owned property are private streams. Maintenance of the channel and stream banks to ensure water can flow freely is the responsibility of the property owner.

During heavy rain, high water volumes can cause streams to overtop. To reduce potential damage to your home, streamside residents should:

- keep the stream clear of debris, fallen trees, rubbish and invasive pest plants so water can flow freely
- plant stream banks with native plants with narrow trunks and leaves that will lie flat in a flood, to prevent stream bank erosion and create habitat for wildlife.

Streams often flow through multiple properties so it's a great idea to work with your neighbours on maintaining the stream so everyone is better protected from flooding. Talk to your neighbours or your local community / environmental group about working with other local residents to make improvements to your stream.

Do I need a consent to carry out works on my property?

Any building activity, such as raising the ground level, increasing the impervious area or changing an overland flow path may require a resource consent from the council.

Common works that require a building or resource consent:

- constructing buildings and structures (including fences) on a flood plain
- diverting, changing, or blocking overland flow path
- earthworks in (or next to) a stream
- vegetation removal within 10m of a stream, where the plant species are native or non-natives not listed in the Regional Pest Management Plan
- new or replacement structures (including fences), in (or next to) a stream.

Information about consents, including when you need them and how to apply, can be found at aucklandcouncil.govt.nz. Always check with council or a building professional first, for specific advice about consent requirements for your property.

Consider your neighbours

When making changes to your property, consider your neighbours and avoid increasing the flood risk elsewhere.

It is illegal to intentionally re-direct stormwater that naturally flows through your property, onto a neighbouring property. Water must be allowed to flow down its natural path, and any impacts must be managed by each property owner.



Find out if your property is at risk from flooding



Use the interactive map on the **Auckland Flood Viewer** to see if there are flood hazards present on your property.

Anyone can use this free, easy app on a smartphone, tablet or computer. The Flood Viewer shows flood plains, overland flow paths, flood prone areas and areas at risk of coastal inundation, as well as information, advice and videos to keep you, your whānau and property safe.

The information shown on the Flood Viewer is publicly held data and is also available upon request on a LIM report. Flood modelling is updated periodically so we recommend checking back regularly to see if the information about your property has changed.



Visit aucklandcouncil.govt.nz/floodviewer

