



St Marys Flood Risk Management Plan

2018 – 2023



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Background

This Break O'Day Council plan follows the St Marys Flood Risk Management project, a flood studies project undertaken by Council during 2017 and 2018. The project actively involved the community and government and emergency management partners to identify priorities for flood risk management. The project was funded with support from the Natural Disaster Resilience Grants Program and flood modelling and management expertise was provided by project consultants Water Technology.

Through the project, computer flood models were developed to simulate floods in St Marys, quantify and map flood risks and test flood mitigation options developed with the community and stakeholders. It recommended a series of flood management priorities and work on some flood mitigation options started in 2018.

With this plan Break O'Day Council will continue this work and identify the next priorities for managing the risk of flooding.

While Council is leading the way, this plan can only succeed in managing flood risks and building a flood resilient community when the community, government and emergency management agencies and other partners work together to achieve the outcomes identified in the plan. Some flood management activities also require substantial investment and will depend on the availability of resources and funding.

Purpose

The St Marys Flood Risk Management Plan identifies strategies and actions Council will pursue to reduce the risk of flooding in St Marys and build a flood resilient community.

Flooding in St Marys

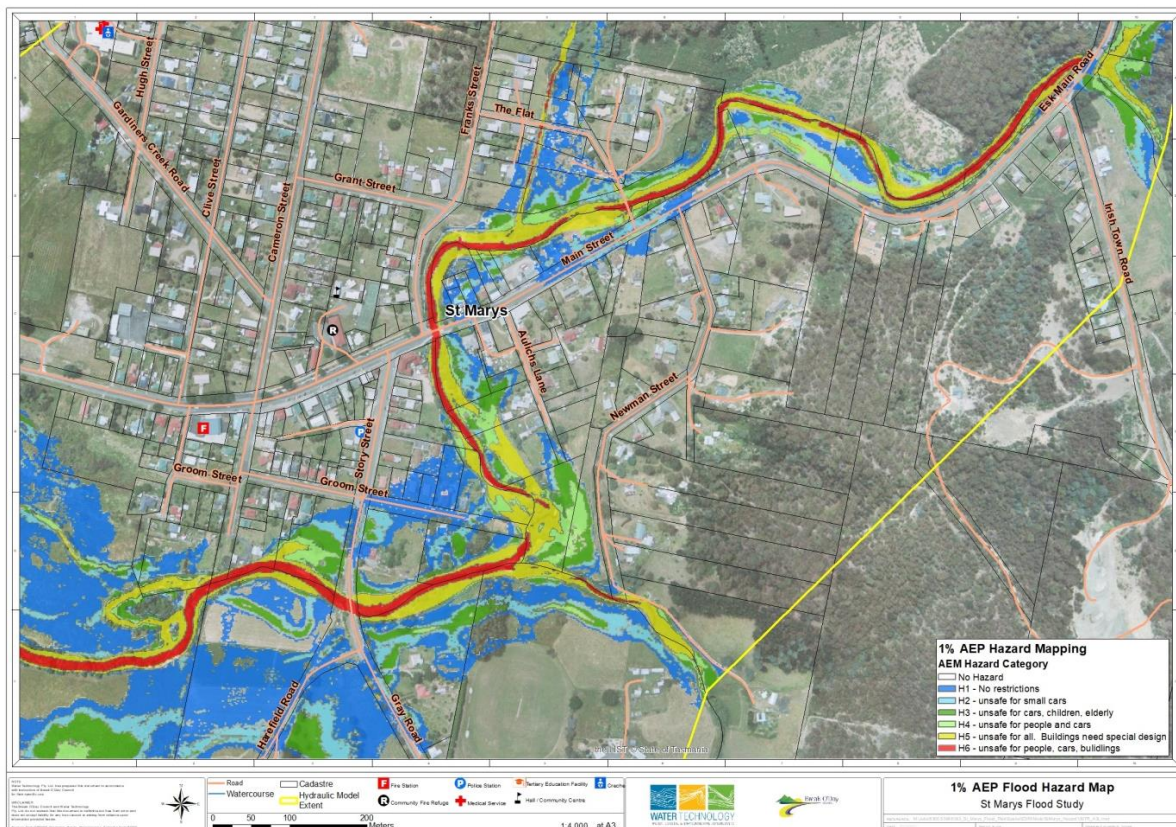
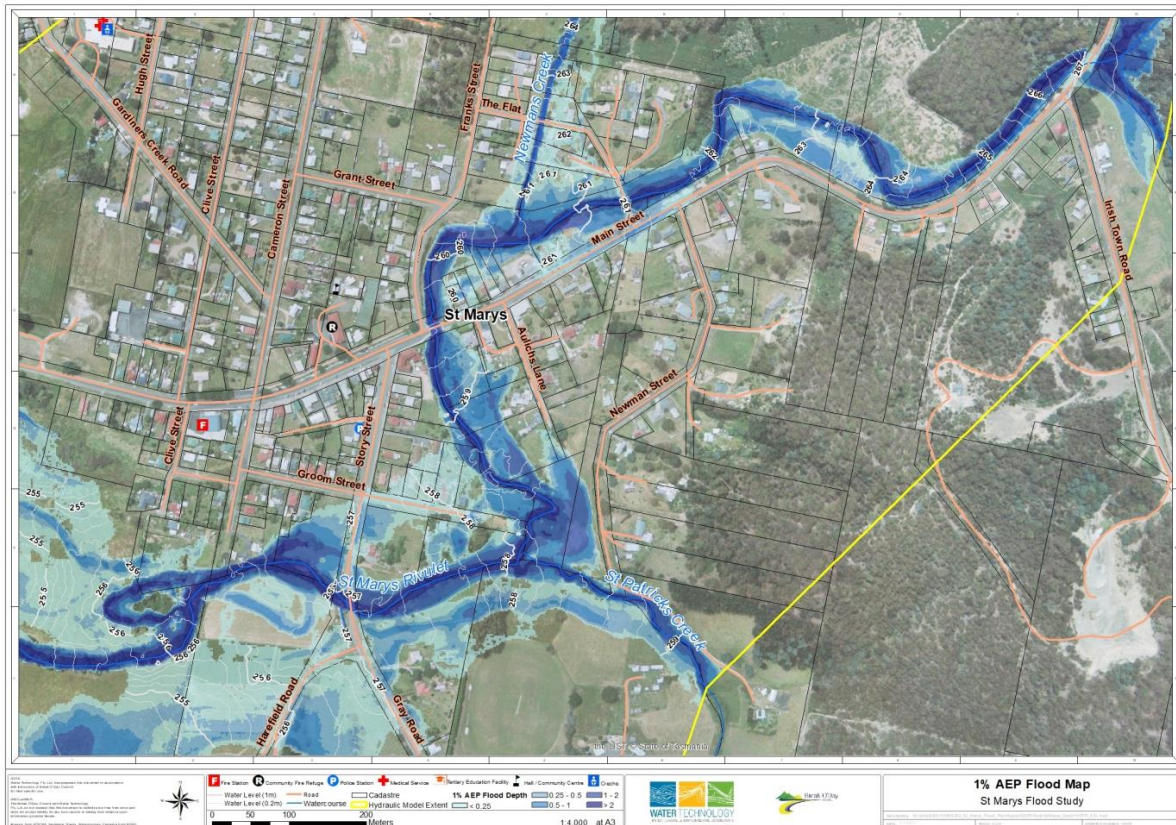
St Marys is located at the confluence of several creeks from steep mountain catchments which surround the township. Flooding occurs during heavy rain events, particularly occasional, very heavy rainfall on the surrounding ridges during storms coming from the Tasman Sea to the east. During 2016 St Marys township experienced three flood events, an extreme flood in January, the June flood event that impacted Tasmania widely, and a smaller flood in November.

Flood Risks and Management Priorities

The St Marys Flood Risk Management project used the 2016 flood events to build a model of how floods occur along St Marys Rivulet through the middle of St Marys township. This was used to simulate, over a range of flood events (probabilities): flood extent and depth, hazard (depth X velocity), 'flood function' areas and sensitivity to land development and climate change projections.

This plan references this information and the project reports: *Flood Study Report – St Marys Flood Risk Investigation* (flood modelling) and *Flood Risk Management Report – St Marys Flood Risk Study* (evaluation of management options). Maps of these (two reproduced here) and project reports are available on Council's [website](#).

The St Marys Flood Risk Management project has identified priorities for flood management at St Marys (*Flood Risk Management Report – St Marys Flood Risk Study*). These include improved flood warning and flood response advice and, after testing several options with the flood model, some on-ground flood mitigation works to reduce flood risks. These priorities are the starting point for developing future strategies and actions to manage flood risks in St Marys.



Strategies

Flood Warning

The location of St Marys means flooding can occur quickly and with limited time to react and respond.

Existing food warning systems and local communication networks can benefit from national expertise with flood warning systems and technology to ensure the best early warning of floods to trigger pre-flood actions and response protocols.

Flood Response and Preparedness

Emergency management plans and protocols as well as coordinated agency and volunteer efforts already help the community through floods when they occur.

The St Marys Flood Risk Management project has quantified flood hazard, and related rainfall amounts to flood probabilities and the consequences in the town. This new and detailed information can be used to ensure the whole community and individual households and businesses are well prepared for and respond to floods to minimise impacts and loss.

Flood Avoidance/Planning

Existing land use planning and building regulations aim to reduce flood risks to people and property based on knowledge of flood probabilities, depths and Flood Hazard (depth X velocity).

The St Marys Flood Risk Management project has generated new and better knowledge of the risks of flooding and can help ensure new developments and buildings avoid putting people and property in harm's way.

Flood Mitigation Works

A range of potential flood mitigation works were identified during the St Marys Flood Risk Management project with the community and tested to prove their effectiveness. These are documented in the *Flood Risk Management Report – St Marys Flood Risk Study* as the following 'Options'. (The report is available on Council's [website](#)).

As part of the project, work has started on three preferred options recommended by the project. Non-preferred options suffered from limited benefits and in places, negative side effects.

Targeted Vegetation Removal

Ease flood levels near Groom Street with vegetation reduction to reduce friction (Option A). Some vegetation cover is needed to avoid erosion and sedimentation (increasing flood risks) and impacting the amenity value of St Marys Rivulet to the community.

Groom Street levee

A low levee bank protecting housing and properties east of Story Street (Option B). This levee bank would have to be built on private land.

The Flat Bridge Ford Replacement

Modification of the The Flat bridge to reduce inundation of Main Street and properties along it (Option D).

Review Flood Management - Risk Assessment

With initial flood management measures and mitigation works undertaken to reduce flood risks there will be a need to re-evaluate flood behaviour, reassess flood risks and update this plan and flood emergency management.

A review can also consider future flood mitigation works with potential for investigating and development. Some examples include floodplain vegetation management to assist flood flows (while protecting stream stability and health), the Main Street bridge (future replacement), catchment management and retreat/accommodation measures.

Action Plan

Implementation of the following priority actions will depend on sufficient financial resources being available and the participation and contributions of partners and the community.

Works in particular may be expensive and be planned and developed in readiness for opportunities for funding to support investment by Council and others. Just as when floods do happen, management of the floodplain need government agencies, the community, landholders and volunteer groups to work together. In this plan Break O'Day Council includes actions that anticipate this cooperation.

Strategy	Actions	Implementation
FLOOD WARNING		
Better early information to trigger pre-flood actions and response protocols.	• Investigate and plan improved flood warning system	Council, 2018/19
	• Secure funding and implement flood warning system.	Conditional on available resources/partners.
FLOOD RESPONSE & PREPAREDNESS		
Ready for floods and impacts are minimised when they happen.	• 'Community Flood Plan' and update of emergency management flood plans and protocols for St Marys	Council & SES 2018/19
	• Household, business and farm Flood Plans – facilitated with landholders.	Council, SES, community, 2019/20.
FLOOD AVOIDANCE/PLANNING		
People and property not put in harm's way.	• Flood studies knowledge and new 'flood prone' area adopted by Council	Council, 2018/19
	• Application to current planning and building proposals and decisions	Landholders, Council, 2018/19
	• Apply to new Planning Scheme (Tasmanian Planning Scheme provisions).	Council.
FLOOD MITIGATION WORKS		
Option A - Targeted Vegetation Removal		
Ease flood levels at Groom St.	• St Patricks Ck. junction.	<i>Undertaken</i> , care and maintenance – Landholders, Council.

Strategy	Actions	Implementation
Option B - Groom Street levee		
Protect housing and properties east of Story Street from flooding.	• Plan levee with landowners on whose land it would be built	Landowners and Council 2018/19
	• Design levee, test effectiveness and specify works, cost	Council 2018-20
	• Secure land access, funding, approvals and construct.	Conditional on available resources.
Option D - The Flat Bridge Modification		
Reduce inundation of Main Street and properties above Main St. bridge.	• Design bridge lift, test flood mitigation effectiveness and specify works, cost	Council, 2017/18
	• Secure funding and implement Flat bridge lift project	Conditional on available resources.
REVIEW FLOOD MANAGEMENT		
Update plan and emergency management for reduced flood risks.	• Reassess flood behaviour after mitigation works, and flood risks and review Plan.	Council 2023
INVESTIGATE POTENTIAL FUTURE FLOOD MITIGATION		
A flood resilient community and reduced flood risks.	• Liaise with state government on Main Street bridge	Council, 2017-20
	• Investigate managing floodplain roughness and stream stability and health (vegetation) with landowners to reduce flood risks	Council 2019-20
	• Monitor catchment land use and management issues	Council, 2020-
	• Review future flood risks and need for retreat/accommodation strategies with Plan review.	Council 2023