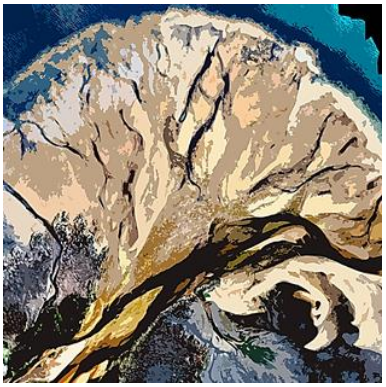
Lower George Riverworks Trust

Established October 2007, under Section 206 of the Tasmanian Water Management Act 1999.

With support from Break O'Day Council



Lower George River Flood and River Management

ACTION PLAN

2019-2022

1. Background

The lower reaches of the George River and its floodplain near St Helens have inherent river management issues and flood risks affecting residents, farmers, public infrastructure and the whole community. Besides east coast rain storm and catchment factors, large volumes of sand sediment from past mining and other sources continue to impact the river system.

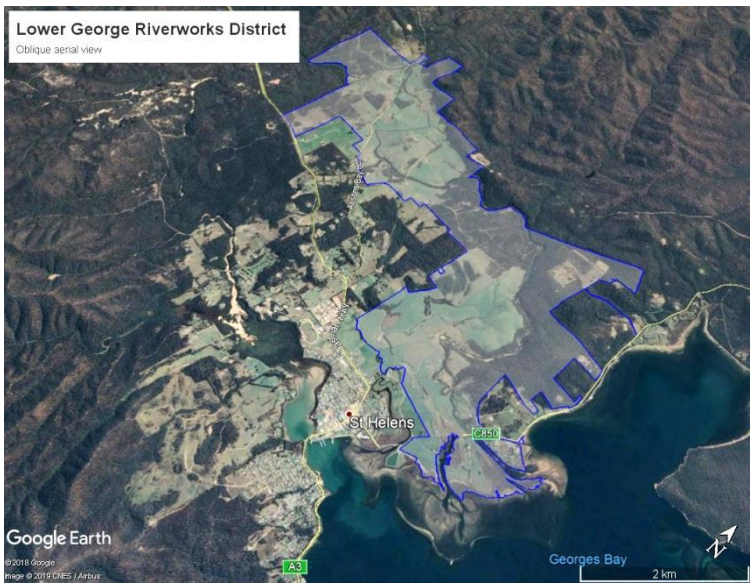
Following the 2016 floods in Tasmania the Lower George Riverworks Trust obtained funding support and technical expertise through the Tasmanian Agricultural Landscape Rehabilitation Scheme for some landholder riverworks and a review of river management priorities during 2017 and 2018.

The review of river and flood management issues included an investigation and report (Lower George River Investigation, June 2018) and a field day to visit key sites on the River to discuss its recommendations and explore priorities for action.

Two key findings are

- the current channel bed through the floodplain is rising and a profound change in the course of the river channel ('avulsion') is increasingly likely and needs carefully planned responses
- sediment loads transported to and already in the floodplain channel are increasing this risk – works can be undertaken to mitigate avulsion and flood risks and 'buy time' to plan management responses.

Priority actions have been developed from these by the Riverworks Trust.



2. Aims

2.1 Stability of the lower George River system

Minimise erosion and sedimentation transport to the floodplain and manage sediment bedload in the floodplain channel – making the system more stable and resilient and reducing flood risks on the floodplain, including of channel break-outs (avulsion).

2.2 Strategies for the serious risks on the floodplain

Identify the best strategies for managing flood risks and likely scenarios of channel change over the floodplain to protect the community, landholders and businesses and a healthy river and bay.

2.3 Human and financial resources

Those with a role to play in management of the river and flood risks are involved and acquire the financial resources that will be required to make and implement sound decisions to protect the floodplain and the community – people, businesses, infrastructure and the economy.

3. Implementation resources

The human and financial resources required for the work ahead is a critical constraint for the Trust and landholders, stakeholders and wider community.

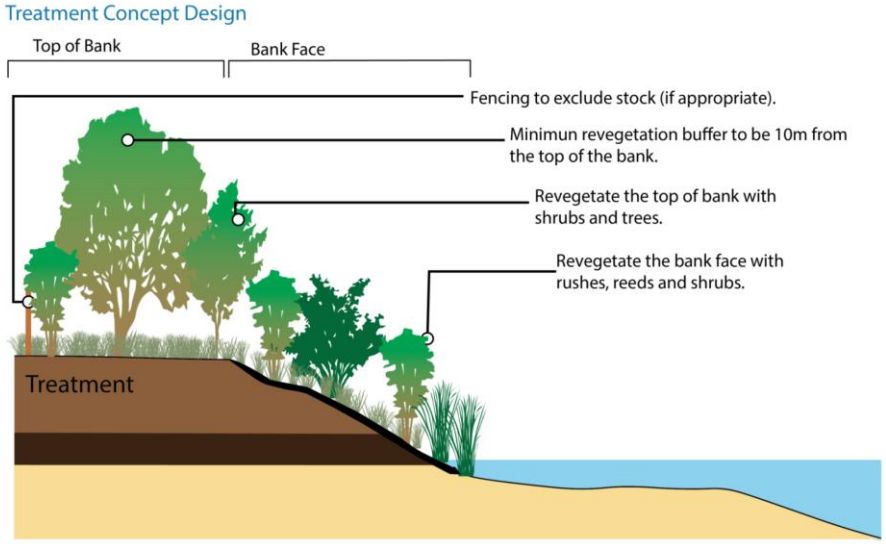
The Riverworks Trust is a landholder based statutory body established by the Water Management Act 1999 to manage the Lower George River and floodplain (declared Riverworks District). However the uncertainty and the significant consequences of risks are shared by government, industry and other stakeholders and the wider community.

Understanding the risks, management options and responding with sound decisions and then action on the ground will require significant expertise, funding and collaboration, which the Trust and Riverworks District landholders do not have.

Government, industry and other stakeholders and the wider community have shared roles and responsibilities to support and work with the Riverworks Trust to manage river and flood risks on the floodplain and implement this Action Plan.

4. Action Plan

4.1 Works to stabilise vulnerable sediment and erosion sites above the floodplain. Objective: Minimise erosion and sediment transport to the floodplain. Reduces likelihood of channel break-outs (avulsion) and other risks on the floodplain. Increases river system stability and resilience.	• Identify significant sites at Priory of erosion, vulnerable sediment stores and floodway channels with participating landholders • Plan sediment protection works such as fencing out livestock, revegetation and soil stabilisation works. Use existing riparian protection best practice (fencing/revegetation). If required, erosion control structures will need technical design advice • Monitor works success, and for reduction in sediment transport and the rivers response (2018 drone photography will be useful) • Design and cost works with landholder commitment, shovel ready and seek funding for works • Implement works. • Develop stabilisation plans for further erosion sites in upper catchment.	2019 2020, funding dependant 2021	Landholders with Council support Landholders with Trust ($)



4.2 Impact assessment of river channel break-out scenarios. Objective: Appraise implications for community and economic sectors of possible new routes the river could take over the floodplain.	• Impact assessment brief for avulsion scenarios – possible new river channels from Lower George River Investigation report • To investigate with sector stakeholders: impacts for public infrastructure (Binalong Bay Road, Taswater), emergency management, aquaculture industry, the floodplain residents, businesses and farm production, tourism, Break O'Day economy and communities and the ecological health of river, bay and floodplain, and • To estimate costs of impacts for sectors and of management responses each scenario is likely to require. And estimate the benefits gained from early action. • Obtain funding and commission independent expertise to undertake report impact assessment.	2019, depends on funding. 2020	Trust, with Council and other stakeholders support.
4.3 Engage responsible stakeholders in river and flood management with Riverworks Trust. Objective: Responsibility for flood risk management is shared by government agencies, Council and Riverworks Trust working collaboratively with the community.	• Engage DPIPWE, as authority for the Water Management Act 1999, to actively support the Trust and contribute to shared river and flood management responsibilities as a key member of a Lower George River Flood and River Management group pursuing implementation of this Action Plan • Invite other government agencies and organisations to participate: PWS/CLS, SES, Dept. State Growth, TasWater, TasNetworks, MAST, ECRTO • Trustees and Riverworks District property owners collaborate with government agencies and other stakeholders as a Lower George River Flood and River Management group. • Lower George River Flood and River Management group to identify financial resources to undertake flood risk management works.	2019 2020	Trust, and stakeholders.

4.4 Floodplain sediment management strategies to reduce river channel break-out and flood risks. Objective: Pilot strategies to reduce sediment bedload with willow reduction and sediment extraction works along the floodplain channel.	• Design and trial willow reduction works to alleviate rising channel bed levels – island and banks below Binalong Bay Road bridge, banks above. • Design and trail sediment extraction to establish rates of sediment bedload transport in channel and monitor for effects up and down stream. Develop willow management program to improve channel hydraulics while maintaining river stability. • Monitor impact of giant willow aphid on willows and investigate implications for sediment management. • Design and cost programs for willow management and sediment extraction options that can reduce rising bed levels, improving river channel flows, while maintaining river and floodplain stability. Seek funding for continued works.	2019-2020 2019-2020 2020-2022 2022	Trust with landholders and support from other stakeholders.
 			

4.5 Inform community of the risks and consequences it faces and strategies for managing them. Objective: Community and economic support for planned management of future river channel break-outs and other flood risks.	• Use impact assessment and experience with sediment management to gain support and resources for further strategies to manage flood risks and the river to protect the community, landholders and businesses and a healthy river and bay.	2020	Trust, with stakeholders.
4.6 Resolve floodplain levee height issues. Objective: Agreement of authorities and floodplain landholders on the common flood levee height to be maintained.	• Convene negotiation by landholders, DPIPWE (dams-levee permits) and Council (riverworks planning approval) to set the level to be maintained for the existing levee along the south bank of the river's floodplain channel. • Determined flood levee level adopted by Riverworks Trust.	2019	Trust, with stakeholders
4.7 Future Actions. Potential and anticipated future actions.	• Flood (modelling) Studies, supported by Tasmanian Flood Mapping Project • Engineering design of works and testing with flood models to quantify options for planned river channel coarse scenarios and other flood risk management strategies • Works for planned river channel changes and sediment management • Large scale floodplain revegetation • Treatment of more erosion sites and sediment sources in the catchment • Review priorities from existing flood risk assessments – farms, residents, industries, health & safety, infrastructure, emergency management, environment	2021+	Trust, with stakeholders and community.

5. References

Lower George River Investigation. Report to Lower George Riverworks Trust by Water Technology, June 2018.

Discussion Notes, George River Flood and River Management Field Day, 30 June 2018.

Rivercare Plan Lower George River (D. Sprod 2003)

Lower George River Floodplain Risk Management Plan. Report to Break O'Day Council by Pitt & Sherry, 2013 (and associated studies).