

Project: Prosser Plains Raw Water Scheme (PPRWS)

Summary & Status Report – At Stage 1 Construction Phase Initiation February 2019

Stage 1 Pumpstation and Pipeline with Hobbs Lagoons and Stage 2 Twamley Dam

- Contents:**
1. Executive Summary
 2. Concept Development Phase
 3. Preliminary Design & Approvals Phase
 4. Stage 1 Pump Station & Pipelines
 5. Stage 2 Twamley Dam
 6. Commercialisation Strategy

David A. Burt

Principal

Version Control

Draft 2 - For GSBC

17 February 2019

1. Executive Summary

The PPRWS project's approvals phase has completed the primary approvals necessary for Stage 1 Pump Station and Pipeline and utilisation of various water supplies other than via the Twamley Dam.

The Twamley Dam is scheduled to become Stage 2 of the project if, and when, it is approved by the relevant authorities, including the Federal Government's EPBC process.

Construction of Stage 1 will commence in March 2019 and be completed by August 2019.

Key Approvals Achieved –

Water Sources - DPIPWE water licence for Tea Tree Rivulet at 1,795ML pa and a matching Watercourse Authority to transfer same through the Prosser River. Water rights to the Hobbs Lagoons (nominal 3,000ML existing storage) and another matching Watercourse Authority to transfer this water through the Bluff and Prosser Rivers. The supporting Water Conveyance Agreement with TasWater includes provision for a 200ML drought allocation from the PPRWS to alleviate any future town water restrictions.

Stage 1 Pump Station & Pipelines (PS & P) - GSBC DAs (Permits x 2) covering works from the Paradise Gorge pump station, piped through the Prosser River, to Solis & the Eastcoaster, across Spring Bay to Paddy's Point.

Funding – A Federal grant of \$2.34M and State Treasury borrowing authority of up to \$6M have been obtained by the GSBC. A Water Supply Agreement has been agreed with Tassal, which financially underwrites the project, whilst enabling other water users to join the scheme without risk to the GSBC ratepayers as per resolutions of the Glamorgan Spring Bay Council.

2. Water Supply Concept Development: 2009-2016

- Orford/Triabunna area water supply options investigation was initiated post the 2008/9 drought, after TasWater had to take contingency actions to maintain treated water supply to the area. TasWater holds long term Surety 1 (highest priority winter and summer) and Surety 2 water allocations on the Prosser River for extraction at their Lower Prosser Dam.
- The justification for the increased supply of raw water to the area was enhanced by the commercial interests of the Solis residential and golf course development proposal for the Louisville area; and support of aquaculture activities.

This water can only be allocated at lower Surety (priority) than TasWater's rights.

- In 2015 Macquarie Franklin undertook a potential water source investigation (engaged by other parties), which included use of the Water Management Divisions' (within DPIPWE) Water Assessment Tool. This assesses local catchments, which could potentially satisfy

potential users' volume and reliability requirements. This showed that there were only a few streams (Sand River, Tea Tree Rivulet and Prosser River) where sufficiently reliable yields may exist. The highest volumes of unallocated Surety 5 & 6 water was on the Tea Tree Rivulet and this catchment, extending to the Wielangta Forest Reserve, also received the first benefit of the south easterly storm events, which are critical to re-filling local storages.

- Macquarie Franklin then undertook desktop searches for economically viable dam sites in these catchments. The topography change 1km upstream of the Twamley Farm residences provided the most favourable dam site on the Tea Tree Rivulet.
- A preliminary approach to the Twamley Farm owners indicated agreement in-principle to the use of the target valley site as a water storage.
- Later in 2015 engineering consultant JMG was commissioned by the GSBC to develop a concept plan for water supply based on the Tea Tree Rivulet source using the target dam site on the Twamley property and run-of-river transmission to an extraction point at the Lower Prosser Reservoir. A pump station located here was to supply raw water through a pipeline to Louisville Point. JMG also developed indicative capital costs to assist with feasibility assessments.

3. Approvals & Preliminary Design: 2017-2019

- An underwriting agreement was formed with Tassal Group Ltd to support a project feasibility study seeking approvals for a raw water supply which mitigates any risk to the GSBC ratepayers.
- In 2017 GSBC engaged a part-time Project Manager and experienced engineer David Burt (Burt Family Enterprises T/A Burt's Engineered Solutions & Testing (BEST)) to progress the nominated Prosser Plains Raw Water Scheme (PPRWS) project concept for approvals to potentially lead to a recommendation for construction.
- A PPRWS Steering Committee was formed with a senior Tassal representative (Justin O'Connor), David Metcalfe (GSBC GM), Shane Wells (GSBC Manager Planning & Special Projects) and David Burt.
- A Twamley Dam site survey was undertaken, producing a plan and preliminary dimensional statistics for a nominal 3,000ML storage which would cover some 50ha of Twamley farmland and forest. This was accepted as the base case for the project to be developed by the Steering Committee and the Twamley Farm owners.
- The hydrology, water transmission loss, flora and fauna, heritage, aboriginal heritage, aquatic and other sub-marine surveys were assigned generally by competitive Request for Quotation (RFQ) to available, local consultants.

- TasWater is granted a drought triggered allocation of 200ML from the PPRWS as part of the Water Conveyance Agreement required to obtain the DPIWWE Watercourse Authority. This raises the water reserves available to TasWater by 50% and would guarantee sufficient storage to supply one full summer under drought conditions, something TasWater cannot guarantee at present.
- Variations to the design concept were necessary to overcome some planning hurdles for pump station and pipeline locations and the dam. The discovery of an EPBC listed species impacted by the Twamley Dam inundation area required referral to seek approval via the Federal Department of Environment and Energy (DoEE) ahead of DPIWWE approval processes. This referral has generated the need for considerably more investigation, including significant mitigations to protect habitat. Meeting these mitigatory measures prolongs the overall approvals phase for the Twamley Dam, making it more appropriate to become Stage 2 in this project.
- Given the above circumstance, an existing alternative summer water source (Hobbs Lagoon) was identified and assessed to enable Stage 1 Pump Station and Pipelines to proceed. In the longer term, this storage can provide even more water for other Scheme users.
- Application for a Federal grant via the Regional Jobs & Investment Packages – Local Infrastructure from the Department of Industry Innovation & Science using the initial capital costing was successful with \$2,337,500 being awarded to the GSBC for the PPRWS project;
- Due to operational issues, the pipeline alignment was varied in part and a second planning permit for this issued.
- In April 2018, engineering consultant IPD was awarded (by competitive Request for Quotation (RFQ)) the work to produce a Detailed Design and Specification sufficient for tender documentation.
- The open Request for Tender (RFT) was internally managed via Tenderlink to meet the Local Government procurement regulations. This RFT closed on 25 September 2018 followed by an evaluation, nominating two shortlisted tenderers, required to submit clarifications.
- The extended Stage 1 scope, the buoyant construction market and perceived construction risks resulted in higher than anticipated capital costs for Stage 1. A risk investigation and minimalisation of the scope, prolonged the clarification period into early 2019.
- A review of the potential water sources utilising the current licences and rights indicated some remnant summer supply risk in the medium term, which was accepted by the parties. A formal Water Supply Agreement was negotiated between GSBC & Tassal to enable the PPRWS to enter the Construction Phase. The agreement allows for additional Scheme customers and the TasWater drought allocation of 200ML. The agreement is consistent with previous Council resolutions and the business case of no risk exposure to Council ratepayers.

- Stage 1 will secure water storage and delivery for Tassal Group Ltd, the Solis project and TasWater drought allocation.

4. Stage 1 Pump Station & Pipeline Construction: 2019

Approvals Status Tables Updated from the September 2018 RFT-

Table 1 Status of Approvals for PPRWS Stage 1 sourced by the Principal

Authority	Permit or Licence	Status
DPIPWE	Water Licence – Tea Tree Rvt	Complete
DPIPWE	Watercourse Authority	Complete
Hobbs Enterprises P/L	Water Right	Complete
TasWater	Water Conveyance Agreement	Complete but for final Annex. B
GSBC	DA2017/00132	Permit Issued Secondary approvals progressing
GSBC	DA2018/00177 (Pipeline Extension across Spring Bay)	Permit Issued Secondary approvals achieved
DIER/DSG	Tasman Hwy redundant reserve works	Agreed in Principle
DPIPWE	Tasman Hwy redundant reserve works	Completed
DIER/DSG/CLS	Tasman Hwy reserve works	Agreed in principle
CLS	Prosser River Crossing & bed, Foreshore	Agreed in principle
CLS	Prosser River Crossing & bed, Foreshore	Agreed in principle
MAST	Prosser River Moorings	Agreed in principle
TasNetworks	PS Power Supply	Complete

Burt Family Enterprises Pty. Ltd.,
ABN: 61 104 717 633

BEST

Trading as **BURT'S ENGINEERED SOLUTIONS & TESTING**

M: +61 (0) 407 568 862
E: david.burt2013@gmail.com
P/F: +61 (03) 6248 8584

Home Office:
10 Bayside Drive, Lauderdale TAS, 7021 AUSTRALIA

Bayport P/L (Solis)	Boundary realignments with Pipeline in Easement	Agreed 5m easement along A3 & 2m along Louisville Rd
Bayport P/L (Solis) & grazier	Access & laydown areas	Agreed
Land owner (D)	Extn of easement & access	Agreed
Land owner (S)	Extn of easement & access	Agreed
Convict Connection, Paradise Gorge Leasee	Balance of TasWater Prosser Water Treatment Plant (WTP) site -use rights holder	Leasee is fully supportive of Works
Landowner & Police	Radio Mast	Agreed
Eastcoaster Resort	Pipeline extension corridor 4m easement provider	Agreed
End Table 1		

The Table 2 below contains examples of permits, authorities or approvals likely to be required by the Contractor to undertake the Works.

Table 2 – Examples of Permits/Approvals to be sourced by the Contractor

Authority	Permit / approval or action	Dependent on
GSBC	Building permit – Pump Station	Final design and supplier's structural details
CLS	Orford F/shore Laydown areas	Agreed in Principle
CLS	Raspins Beach parking areas	Timing & public interference
DIER/DSG	Road Crossing - Freestone Point Road	Completed
TasWater	Works <2m from TasWater infrastructure	DA Permit and WCA Annexure B
TasWater	TasWater Induction	Access for work requirement
MAST	Prosser River Navigation temporary changes	Interruptions timings
MAST	Spring Bay Navigation temp. changes	Interruptions timings
Other	Road, lane, access closures	Methodology
DIER/DSG/CLS (Transfer ex T1 above)	Tasman Hwy reserve works	Agreed in principle
End of Table 2		

Stage 1 Status Summary

- Preferred construction contractor has been advised of their success.
- Balance of procurement action plan agreed and ready for GSBC PO issue W/B 18 February, 2019;
- Surveys for land tenure (procurement and easements) changes in progress;

5. **Stage 2 Twamley Dam: 2019**

- Response to EPBC Request for Information #2 dated 7/11/18 is currently under preparation.
- Dam reservoir size variation increment from 3,000ML to 4,000ML request submitted to EPBC 14/2/19 for flexibility to add additional Stakeholders and future Scheme customers. Agreement being sought with TasWater to become a key stakeholder in Stage 2 of the project based on approval of this variation.
- GSBC is in early stages of discussion with TasWater regarding the potential to develop Twamley. The opportunity has always existed for Twamley to be increased in size with minimal cost and no additional impact to threatened habitat. This may be a far less expensive proposition relative to the options under consideration in the 2015-2050 TasWater strategy, which also entails options with adverse impacts to the Swift Parrot.

6. **Commercialisation Strategy**

There are a number of potential additional users and significant interest received for water, including one individual request for 2,000ML pa. Once Twamley is approved a commercial expression of interest process will be undertaken.