

5.3. CONTRACT WO5781-001 PDWWTP – SEQUENCING BATCH REACTOR DIFFUSER UPGRADE

REPORT AUTHOR	Wayne Kristalyn, Project Manager
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DEPARTMENT	Project Office

RECOMMENDATION

That Council:

- 1. Resolves to award the design portion of Contract WO5781-001 PDWWTP – Sequencing Batch Reactor Diffuser Upgrade to Xylem Water Solutions Australia Ltd (ABN 28000832922) for \$15,000.00 (GST exclusive) and if ordered, award the construction portion of Contract WO5781-001 to Xylem Water Solutions Australia Ltd for \$683,840.00 (GST exclusive); and**
- 2. Delegates authority under section 257 of the *Local Government Act 2009* to the Chief Executive Officer to negotiate, finalise and execute any and all matters in relation to this contract.**

EXECUTIVE SUMMARY

Queensland Government is offering funding for construction and planning projects under “Building Our Regions Round 6”. The Port Douglas Wastewater Treatment Plant (PDWWTP) Sequencing Batch Reactor (SBR) upgrade design and construct project satisfies the requirements to submit an Expression of Interest (EOI) for funding up to \$2,000,000. The EOI has been submitted.

If the EOI is accepted by the funding body, then Council will be invited to submit a detailed application by 19 April 2022. To have sufficient supporting documentation in the timeframes allowed for the detailed application, a certified engineering design is required.

Due to the propriety nature of the materials required for the upgrade it was necessary to issue a design and construct tender. The intent is to issue a contract for the design only at this time for the PDWWTP SBR upgrade, with the company who supplied the design later being awarded with the construction part of the contract if funding is approved.

A Request for Tender was issued through Vendor Panel and of four responses evaluated, Xylem Water Solutions Australia Ltd provided the most attractive technical solution.

BACKGROUND

The PDWWTP SBR system infrastructure is aging and has been identified as requiring upgrade in the next few years in a report commissioned in 2019. Required upgrades identified in the report included diffusers, blowers and the SBR infrastructure. To date, the diffusers and blowers have been replaced, with the remaining work required being upgrades to the SBRs.

The SBR system is a vital stage of the wastewater treatment process and is the main contributor of power consumption for the plant.

Upgrading the SBR basin diffuser system would improve oxygen transfer, which would reduce load on the plant, reduce power usage by up to 25% and improve maintainability.

The current system is not removable for maintenance; the upgraded infrastructure would be.

COMMENTS

A Request for Tender was issued through Vendor Panel with five responses. One response provided an unrealistic price and had no detail, so was not evaluated with the other four offers. The remaining four offers were considered by three Council Officers in terms of price, technical capacity, experience and business profile. A process engineer was engaged to provide detailed technical examination of the offers.

Although not the lowest price, Xylem Water Solutions Australia Ltd provided the best technical solution and have installed diffusers of the same model in PDWWTP recently. The offer met all the required technical criteria, and the design portion came in below Council's initial budget, noting that the initial engagement is for detailed design to support a request for funding from Queensland State Government.

Advantages of selecting Xylem Water Solutions Australia Ltd included a known product, reduction of different spares and proven professional and reliable service.

The following is a summary of the evaluations.

Table 1 - Evaluation of Offers

Evaluation Criteria		Company			
Criteria	Weighting	1	2	3	Xylem Water Solutions Australia LTD
Price (\$)		\$1,039,000.00	\$463,591.87	705,009.00	\$698,840.00
Price (Score)	40%	71.4	87.2	80.6	80.8
Technical Capacity	30%	73.3	79.3	78.0	86.7
Business Profile	10%	45.0	83.3	79.3	88.0
Experience	20%	45.0	82.7	76.7	86.0
Total Score		234.7	332.5	314.6	341.5
Weighted Score		64.1	83.5	78.9	84.3
Weighted score without pricing		35.5	48.7	46.7	52.0

PROPOSAL

That Council:

1. Resolves to award the design portion of Contract WO5781-001 PDWWTP – Sequencing Batch Reactor Diffuser Upgrade to Xylem Water Solutions Australia Ltd (ABN 28000832922) for \$15,000.00 (GST exclusive) and if ordered, award the construction portion of Contract WO5781-001 to Xylem Water Solutions Australia Ltd for \$683,840.00 (GST exclusive); and
2. Delegates authority under section 257 of the *Local Government Act 2009* to the Chief Executive Officer to negotiate, finalise and execute any and all matters in relation to this contract.

FINANCIAL/RESOURCE IMPLICATIONS

The initial budget for provision of a detailed design for the SBR basin upgrades is \$30,000. The design will be used to support an application for funding, which will cover the remaining cost of the project. Financial implications are per Table 2 below:

Table 2 - Financial Implications

Financial Year Budget 21/22	Amount (excl. GST)
Project Budget	\$30,000.00
Spent/Committed to Date (as at 20 December 2021)	\$2,044.40
Budget Available	\$27,955.60
Recommended Tender Price	\$15,000.00
Project Management/ Council Officers	\$2,000.00
Contingency (10%)	\$1,700.00
Total Project Costs Estimated	\$18,700.00
Net Position (Surplus)	\$9,255.60

RISK MANAGEMENT IMPLICATIONS

The SBR basin requires upgrading in the next few years. Currently the system is operating well below desired performance and is continuing to degrade.

The initial outlay for the design of the SBR basin upgrade will support an application for funding from the Queensland State Government under Building Our Regions Round 6.

Should the application for application not be awarded, the project will be shovel ready when future funding come available.

SUSTAINABILITY IMPLICATIONS

- Economic:** Once the SBR has been upgraded it is anticipated that there will be a significant reduction in operating and maintenance costs. The SBR uses much of the electrical power in the plant and a more efficient transfer of oxygen translates to reduced operation time of the blowers and hence energy consumption and thus costs.
- Environmental:** Improved SBR performance will reduce the nutrient load on the remainder of the plant as well as reduce nutrient load to the receiving waters. Reduced energy usage will reduce the carbon footprint at the wastewater treatment plant.
- Social:** Nil

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2019-2024 Initiatives:

Theme 2 - Fostering Sustainable Economic Growth

A robust economy is at the heart of a thriving community and enables investment in environmental protection. While our remoteness is a key attribute, it also presents challenges for attracting new business and investment. We must also meet the challenges of fierce competition in the tourism sector. Council will partner with industry to build, diversify and promote the Douglas economy. Council will design and deliver infrastructure, strategies and services that support the local economy and businesses.

Goal 1 - We will build appropriate infrastructure and deliver services that connect and support businesses.

COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

- Advocate** Council makes representation on behalf of the community on important issues, funding opportunities, projects and programs. Council will use its influence to seek the best outcomes for the community.
- Service Provider** Council provides many services to the community from roads and waste services to libraries and recreational facilities. Services evolve over time and it is the Council's mission to ensure that these services are appropriate, delivered efficiently, and designed with the customer at the centre.

CONSULTATION

Internal: Water and Wastewater Department

External: Yabbie Pond Pty Ltd

COMMUNITY ENGAGEMENT

Nil

ATTACHMENTS

Nil