

5.13. TENDER FOR MOSSMAN WATER TREATMENT PLANT ULTRAFILTRATION SYSTEM UPGRADE

REPORT AUTHOR	Wayne Kristalyn, Project Manager
MANAGER	Scott Hahne, Manager Project Office
DEPARTMENT	Project Office

RECOMMENDATION

That Council:

- 1. Awards Contract WO5658-001 – Mossman Water Treatment Ultrafiltration System Replacement to AquaManage Environmental Pty Ltd (ABN 18 151 268 156) for \$1,834,988.00 (GST exclusive) in separable portions over three financial years.**
- 2. Delegates authority under s 257 of the *Local Government Act 2009* to the Chief Executive Officer.**

EXECUTIVE SUMMARY

The Mossman Water Treatment Plant (MWTP) requires the ultrafiltration (UF) system to remain operational to supply drinking water to most of the Shire's community. With short notice, Council has been advised that the current UF equipment supplier, Koch Membrane Systems, has ceased to manufacture the existing Koch 8" UF membrane cartridges. Hence a request for tender (RFT) was issued through Vendor Panel for a Contractor to provide a suitable replacement. The RFT closed on 23 June 2022.

Internal stakeholders and an external consultant evaluated six conforming offers and recommends that AquaManage Environmental Pty Ltd (AquaManage) is issued the contract to upgrade the MWTP UF system. The contract is divided into three separable portions that will be delivered over consecutive financial years.

Table 1. shows the evaluation summary of the received submissions, which was based on price, technical capacity, business profile and experience.

Three appealing responses were close in weighted score, so the evaluation panel selected the contractor that was most aligned with Council's requirements, provided best value for money and promises an upgrade that will be reliable and long lasting.

AquaManage also provided the lowest price with cost savings through reuse of some of the existing infrastructure.

The RFT process, evaluation findings and recommendations were discussed at a Council Workshop on 19 July 2022.

Table 1 - Evaluation Summary

Evaluation Criteria		Company						
Criteria	Weighting	AquaManage	2	3	4	5	6	7
Price		**\$1,834,988	\$2,964,900	\$2,859,834	\$2,511,682	\$4,467,501	\$1,000,000	\$2,385,639
Price Score	40%	85.6	66.0	67.8	73.8	40.0	100.0	76.0
Technical Capacity	30%	75.0	63.3	61.7	80.0	81.7	13.7	80.0
Business Profile	10%	70.0	50.0	63.3	78.3	80.0	13.7	76.7
Experience	20%	76.7	65.0	63.3	85.0	83.3	13.7	80.0
Score		308.8	244.3	256.2	317.2	285.0	141.0	312.7
Weighted Score		79.1	63.4	64.6	78.4	65.2	48.2	78.1
Weighted score no pricing		44.8	37.0	37.5	48.8	49.2	8.2	47.7

**AquaManage price revised during post tender negotiations

COMMENTS

MWTP supplies Mossman/Port Douglas at 30 ML/day and the plant has been in operation for 20 years. There are five racks consisting of 58 UF membranes in total, which have traditionally been replaced in an annual cycle. Each rack contains UF membranes of varying age and hence remaining useful life. As the existing UF system is around 20 years old and the original supplier of UF membranes no longer produces them, like for like replacement of the membranes is not available or recommended, and advancements in filtering technology means the treatment process can be improved with less chemical usage, power and water losses.

For the plant to remain operational, Council have elected to transition from the old system over three financial years as follows:

- Year 1: Design the system. Construct, install and commission the first rack;
- Year 2: Construct, install and commission the second and third racks; and
- Year 3: Construct, install and commission the fourth and fifth racks.

An RFT was issued to the market through Vendor Panel on 4 May 2022 and closed on 23 June 2022. There were eight responses, although one response was not an actual submission leaving seven submissions to review, and one of these responses did not supply any of the required supporting data, so scored low in the evaluation process. Each submission was evaluated against price, technical capacity, business profile and experience with a focus on meeting Council needs. An external consultant was utilised for a deeper technical review. Results of the evaluation are shown in Table 1 above.

Contractors provided a price for the separable portions in today's costs for fair comparison, and the contract has a provision for price escalation based on consumer price and/or materials index. Prior to entering separable portions two and three, price will be agreed between Council and successful Contractor.

The current pricing is broken into three phases in Table 2 as follows:

Table 2 - Price Breakdown

Description	**AquaManage	2	3	4	5	6
Phase 1	\$525,293	\$636,900	\$641,531	\$680,916	\$2,120,661	\$773,033
Phase 2	\$628,164	\$1,164,000	\$1,109,152	\$866,707	\$1,173,420	\$806,303
Phase 3	\$681,531	\$1,164,000	\$1,109,152	\$866,707	\$1,173,420	\$806,303
SUB-TOTAL	\$1,834,988	\$2,964,900	\$2,859,835	\$2,414,330	\$4,467,501	\$2,385,639
GST	\$183,498	\$296,490	\$285,984	\$241,433	\$446,750	\$238,564
TOTAL	\$2,018,486	\$3,261,390	\$3,145,819	\$2,655,763	\$4,914,251	\$2,624,203

**AquaManage price revised during post tender negotiations

PROPOSAL

That Council:

1. Resolves to award Contract WO5658-001 – Mossman Water Treatment Ultrafiltration System Replacement to AquaManage Environmental Pty Ltd (ABN 18 151 268 156) for \$1,834,988.00 (GST exclusive) in separable portions over three financial years.
2. Delegates authority under s 257 of the *Local Government Act 2009* to the Chief Executive Officer.

FINANCIAL/RESOURCE IMPLICATIONS

This project is not currently funded by an external source although Council intends to seek funding for phase two and three in the following financial years.

Since the remaining budget from 2021-22 budget will rollover and the price is well within expectations, the net position of this project will remain in surplus this financial year. It is expected that approx. \$100,000 will be utilised from the 2021-22 budget. Council has already approved a budget of \$620,000 as part of the 2022-23 budget.

RISK MANAGEMENT IMPLICATIONS

The previously supplied Koch filter membranes are no longer available. The membranes in the first rack of five is due for replacement and others are deteriorating with no spares for unscheduled maintenance. This project is a timely risk reduction process that will ensure long term operation and spares availability.

Risks associated with changing over to new membranes and process is reduced by transitioning the change in three phases. The plant will continue to operate the existing racks with the current process, while slowly introducing the new equipment.

A hazard and operability analysis will be conducted with Council officers and the Contractor during design phase to capture any possible risks during the transition of the new filter membranes and controls will be developed prior to implementation.

The Contractor selected has a strong reputation and excellent experience in UF filtration. The upgrade does not require innovation but will rely on tested and proven equipment.

SUSTAINABILITY IMPLICATIONS

Economic: Due to advances in technology and processes, the new equipment to be installed will help to reduce power and chemical usage and reduce water losses that are currently encountered in the water treatment process.

Environmental: Potential reduction in water demand at Rex Creek Intake.

Social: Nil

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2019-2024 Initiatives:

Theme 3 - Leading Environmental Stewardship

Our visitors and residents deeply value the unparalleled environment in which we live. We recognise our responsibility in protecting and preserving our natural world for generations to come. We understand the strong link between the environment and the economy: they are interdependent. Douglas Shire will be at the forefront of environmental protection by developing strategies, setting policies, and working with all stakeholders to become the envy of and to inspire locations across Australia and the World.

Goal 3 - We will continue to build water infrastructure so that the Douglas Shire may enjoy water security and water quality.

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:

Builder/Owner Council makes a significant investment every year in the infrastructure that underpins the Shire through its capital works program. Council will manage its assets with appropriate frameworks and deliver its projects through robust project management.

CONSULTATION

Internal: Water Quality Team

External: Yabby Pond Pty Ltd

COMMUNITY ENGAGEMENT

Nil

ATTACHMENTS

Nil