

6.8. PORT DOUGLAS WASTEWATER TREATMENT PLAN INLET WORKS DETAILED DESIGN

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

RECOMMENDATION

That Council:

1. Resolves to award Contract WO6103-001 – Port Douglas Wastewater Treatment Plant Inlet Works Upgrade Design to Arup Australia Pty Ltd (ABN 76 625 912 665) for \$208,656.00 (GST exclusive).
2. Delegates authority under s 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

The Port Douglas Wastewater Treatment Plant (PDWWTP) inlet works requires upgrading due to deterioration and capacity limitations. A request for quote was issued for design of an upgrade through Vendor Panel with five suitable responses received. The table below summarises the submissions received including pricing.

Table 1 - Received submissions.

Company	Status
AECOM Australia Pty Ltd	Conforming
Reinmac (Brisbane)	Conforming
Ganden Pty Ltd	Conforming
GHD	Conforming
Arup Australia Pty Ltd	Conforming

Submissions were evaluated by a panel of Council Officers with input from an external consultant. The evaluation identified Arup Australia Pty Ltd as the preferred supplier, which was the cheapest but also satisfied the requirements detailed in the scope documentation.

BACKGROUND

PDWWTP inlet works was last upgraded in 1999 and is now identified as being beyond the end of its useful life being over 20 years old. The existing step screen is old technology and has a very low screenings capture rate of less than 25%, resulting in a greater volume of screenings accumulating in the downstream process units including the low-lift pump station and the SBR aeration tanks.

This low screening rate leads to pump blockages and higher maintenance costs to regularly clean the downstream process units. The high sand content of the inflow also causes the screen to jam more frequently. Modern screen technology has much better capture rates of 50-65%.

Components in the next stage of the screening process also fail regularly, with bearings and belts replaced twice in the last 5 years. A further consequence of the grit system being offline is that a greater amount of grit ends up in the downstream processes resulting in increased blockages and maintenance issues for the entire sewerage plant.

The inlet works is the limiting process component of the plant and is approaching its design capacity.

Upgrading the inlet works will have the following benefits:

- Increased grit capture meaning reduced maintenance on downstream process components,
- Protection of the upgraded downstream process components – SBR aerators and diffusers, and sludge processing system, and
- Reduced operational costs including a significant reduction in power costs due to reduced fouling of bio reactor diffusers.

Douglas Shire Council therefore requires a design consultant to generate a design that will then enable open tender invitations for construction of new PDWWTP inlet works once funding becomes available.

A request for quote was issued through Vendor Panel to 65 suitable design consultants from the Local Buy LB312 register of pre-qualified suppliers and five detailed responses were received.

COMMENTS

The evaluation was completed by Council Officers with input provided by an expert external consultant. Submissions were assessed against the following weighted criteria with a focus on price and the solution provided:

Table 2 - Evaluation Criteria and Weightings.

Criteria	Weighting
Price	30%
Solution	30%
Business Profile	20%
Technical capacity	20%

Price, evaluation scores (out of 100) and weighted totals from the evaluation are summarised in the table below:

Table 3 - Evaluation Summary.

Company	Price	Evaluation Scores				Weighted Total
		Price	Solution	Business Profile	Technical Capacity	
		30%	30%	20%	20%	
Arup Australia Pty Ltd	\$208,656	93.8	82.5	80.0	82.5	85.4
2	\$214,660	91.8	77.5	72.5	77.5	80.8
3	\$249,360	80.2	77.5	77.5	80.0	78.8
4	\$264,300	75.2	82.5	77.5	77.5	78.3
5	\$364,418	41.9	77.5	77.5	77.5	66.8

Based on the above evaluation, Arup Australia Pty Ltd was selected as the most attractive offer satisfying the scope requirements, while remaining price competitive.

PROPOSAL

That Council:

1. Resolves to award Contract WO6103-001 – Port Douglas Wastewater Treatment Plant Inlet Works Upgrade Design to Arup Australia Pty Ltd (ABN 76 625 912 665) for \$208,656.00 (GST exclusive).
2. Delegates authority under s 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 expected cost of the project will exceed the current budget by \$37,500. However, due to an underspend on another wastewater project, the overrun will be offset, during this year's budget review.

RISK MANAGEMENT IMPLICATIONS

Eventual upgrade of the PDWWTP inlet works will reduce risk of breakdowns and blockages as well reduce wear and tear on downstream process components.

SUSTAINABILITY IMPLICATIONS

- Economic:** Reduced operational and maintenance costs due to operating efficiency and cleaner waste.
- Environmental:** Reduced solids entering the plant process will translate to cleaner plant discharge.
- Social:** Nil.

CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

Corporate Plan 2019-2024 Initiatives:

Theme 4 - Inclusive Engagement, Planning and Partnerships

In delivering for our communities, economy and environment, Douglas Shire will ensure open and transparent engagement and communication. We will develop robust strategic plans and we will partner with our community and key stakeholders.

Goal 2 - We will develop forward looking strategies for the future of our communities and we will ensure balanced and appropriate planning decisions.

Operational Plan 2023-2024 Actions:

New project arisen during the financial year.

Infrastructure Improvements - Determine options for an enhanced service and commence design if necessary.

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 and Wastewater Department. Discussed with Councillors at workshop held 19 September 2023.
External:	Stantec Australia Pty Ltd. Yabbie Pond Pty Ltd.

COMMUNITY ENGAGEMENT

Nil.

ATTACHMENTS

Nil.