CM13.6. Albury Leachate Treatment Plant Upgrade Contract No. 18/02396

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CONFIDENTIAL	No		
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Purpose of Report

To consider a preferred tenderer for the Design and Construction of the Leachate Treatment Plant Upgrade at the Albury Waste Management Centre.

Background

The Albury Waste Management Centre (AWMC) is located in Mudge Street, Hamilton Valley, on an area of approximately 102 hectares. The site is divided into two waste areas, the Northern Valley Cell for non-putrescible waste, and the Southern Valley Cell for putrescible, commercial and industrial waste.

Leachate from the Southern Valley is currently totally contained on site in three ponds, two clay lined and one concrete lined, but the management of this liquid is becoming more problematic because of the confined area of the containment site and the increasing footprint of the putrescible disposal area, and a resulting increased leachate volume. Further, the NSW EPA has amended Council's Licence No. 6017 (which regulates the activities of resource recovery and waste disposal) to now require "*By December 2019 the licensee: Design, build and operate a wastewater treatment system to treat leachate generated from the Albury Waste Management Centre for trade waste disposal to sewer*".

In seeking to explore the feasibility of treating the leachate to meet allowable trade waste parameters and then discharging it to sewer, an initial leachate characterisation and treatment investigation was undertaken in 2014 which undertook to:

- define the leachate characteristics and variability;
- quantify the leachate volume generated and its variability;
- assess the treatment options available; and
- conduct bench scale trials on the most viable identified treatment option and prepare a concept design for the process along with the likely capital and operating cost for the future facility.

Over the ensuing period, the original sub-surface leachate drainage system has been required to be supplemented with a new secondary system which allows for a quicker and more controlled mode of delivery of leachate to the existing ponds. Subsequent, further regular testing and flow monitoring has been required to validate the initial investigation with more representative leachate quality data.

In November 2017 Wastewater Consultants Kellogg Brown & Root (KBR) were appointed by Council to confirm the feasibility or otherwise of the original concept design based on the revised data and then to proceed to develop a specification for a fully operational leachate treatment facility. In this process the need for a Trade Waste Licence to allow for a discharge of 50kl/day was highlighted and this was subsequently conceded to by the NSW Office of Water.

KBR were quick to identify that the existing leachate ponds at the AWMC (subject to lining the earthen ones) could still be used as part of the proposed new treatment facility and the specification for these works would be used to provide the concept scope for the Design and Construction tender of the Leachate Treatment Plant Upgrade which is the subject of this report.

Upon the appointment of the successful contractor for this Design and Construction tender, KBR will still be involved in overviewing the technical aspects of the project up to commissioning and then overseeing the rectification of defects after the actual completion date.

The 2018/19 budget allocated for the Leachate Treatment Plant Upgrade is $1.1M (including GST). The estimate received in September from the Wastewater Consultant and based on the agreed concept was $1.43M (including GST) for the construction of a Leachate Treatment Plant. Accordingly, a further $330K has been tentatively allocated to the 2019/20 draft budget.

The tender was uploaded onto TenderLink on Wednesday 3 October. It was advertised in the Border Mail on 6 October and in the Sydney Morning Herald on 9 October. There was a compulsory site inspection for prospective tenderers on 17 October and tenders closed at noon on 6 November.

The scope of works includes; the design, supply, installation, testing and commissioning of all equipment, instrumentation and other works as required, to construct a new leachate treatment plant. The new leachate treatment plant will utilise the existing leachate ponds, and will include the following equipment:

- a new leachate collection pump well, with duty/standby pumps;
- two new aerators/mixers in the existing Leachate Dam 3 (LD3);
- chemical dosing station at LD3;
- transfer pump station from LD3 to either Leachate Dam 1 or 2 (LD1 and LD2); and
- discharge pump well from LD1 and LD2 to sewer.

Tender Evaluation

At the close of the RFT a total of two submissions were received from the following consultancies:

- DeKort Systems Pty Ltd t/a DeKort Pumps; and
- Water Treatment Australia Pty Ltd.

All tenders were evaluated in accordance with Council's Procurement Policy and Guidelines. The assessment panel comprised the Senior Project Engineer – Ross Tuckwell, Team Leader Waste Management – Andrea Baldwin and Procurement and Contract Management Coordinator – Gerard

Coyle. Consultants KBR also provided input into the technical adequacy of the tenders and recommendation for the panel.

Conformity Check

A conformity assessment was undertaken to ensure the submission was in accordance with the tender documentation.

Tenderer	Pricing Details	Supporting Information	WHS Compliance	Compulsory Site Inspection	Comments
DeKort Systems Pty Ltd t/a DeKort Pumps	✓	✓	✓	✓	Fully complies
Water Treatment Australia Pty Ltd	✓	✓	✓	✓	Fully complies

As indicated above, both submissions were deemed conforming tenders.

Water Treatment Australia Pty Ltd are WHS registered with Council. DeKort Systems Pty Ltd have demonstrated the appropriate systems and have, since the tender, gained WHS registration with Council.

Qualitative Assessment

The qualitative assessment involved the evaluation of the following criteria:

- experience and expertise in performing the same or similar contracts;
- methodologies or systems of work, and proposed program;
- demonstrated capacity and capability to carry out the project; and
- benefit to the local region.

The respective weighting for each criteria, ratings and final score are shown on the following table;

Tenderer	Experience & Expertise (max 35)	Methodology, System of Work and proposed program (max 25)	Capacity and Capability (max 30)	Local Benefit (max 10)	Total Qualitative Score (max 100)
Water Treatment Australia Pty Ltd	32	20	27	3	**82**
DeKort Systems Pty Ltd t/a DeKort Pumps	24	15	15	7	**61**

Water Treatment Australia Pty Ltd is based in Melbourne, but has previously completed the Water Treatment plant DAFF upgrade for Council. Water Treatment Australia Pty Ltd has been operating for over 50 years and has a vast experience in water and wastewater treatment plant installations and commissioning.

Water Treatment Australia Pty Ltd included a 42-week construction program, with an 8-month on site construction period (DeKort Systems Pty Ltd is five months). Water Treatment Australia Pty Ltd have made allowances in their program for early procurement of long lead time items, and their project methodology has considered the ongoing leachate treatment during the construction phase, with only one leachate pond being remediated at a time.

Water Treatment Australia Pty Ltd has listed three projects currently in hand, including: a 300kL per day leachate treatment plant at Woodlawn Landfill, and the Albury Hospital filter refurbishment. All projects are scheduled for completion by December 2018. Water Treatment Australia Pty Ltd have nominated personnel for each project supervision role, and each supervisor has 10-years' minimum experience in the water and wastewater treatment industry.

Referee feedback obtained for Water Treatment Australia Pty Ltd rated them very high for the quality of the finished projects, and their knowledge of water and wastewater treatment processes and facilities. Two referees for Water Treatment Australia Pty Ltd did advise that they have previously had issues with the resource levels allocated to projects by Water Treatment Australia Pty Ltd for the design or the completion stage of projects, this issue would be addressed with Water Treatment Australia Pty Ltd if they were awarded the contract.

The Wastewater Consultant KBR reviewed the technical submission from Water Treatment Australia Pty Ltd and advised; *'The lead personnel for WTA have extensive experience in all aspects of water and wastewater treatment, and there would be little that would surprise them in a project of this nature. As such, KBR has a high level of confidence that WTA would be a 'safe pair of hands' and ACC could be confident that the treatment plant that was delivered would meet their needs and be well designed.'*

Benefit to local region was rated moderately lower with Water Treatment Australia Pty Ltd having locally based employees and having nominated local subcontractors for the project. Water Treatment Australia Pty Ltd is also able to provide specialist expertise to Council, as they have previously undertaken the Water Treatment plant DAFF upgrade for Council.

With consideration of the tender submission from Water Treatment Australia Pty Ltd, as summarised above, it is considered that Water Treatment Australia Pty Ltd have vast experience in managing projects which are very similar to that required by Council. As such, Water Treatment Australia Pty Ltd would have the capacity to successfully undertake this project.

DeKort Systems Pty Ltd is based locally in Wodonga, and has recently constructed sewer pump stations for Council at North Street and Eastern Circuit, and at Thurgoona Park North for AP Delaney. DeKort Systems Pty Ltd has over 30 years' experience in providing pumps and servicing throughout Australia from their Wodonga base.

DeKort Systems Pty Ltd has provided a 22-week construction program that included the key phases of the works. The program provides great detail for the pump station construction, however there is a distinct lack of detail for most other tasks associated with the project. This potentially shows a lack of understanding of the overall project requirements and that there is a risk that the duration of these tasks (and therefore the overall program duration) will extend. KBR also raised concerns with the

project methodology provide by DeKort Systems Pty Ltd, who proposed to direct all leachate into Leachate Dam 1 (LD1) during the construction activities, and the ability of LD1 to adequately treat the leachate.

DeKort Systems Pty Ltd has listed five projects currently in hand, with all scheduled for completion by January 2019. Their submitted Schedule of Company Experience and Financial Reports indicate the value of this project is twice the value of any project previously undertaken by DeKort Systems Pty Ltd, and is similar to their turnover for 2018 and could extend their capacity to undertake this project.

DeKort Systems Pty Ltd has not listed a Construction Manager or Site Supervisor for this project, however referees have advised that their Director has spent a considerable amount of time on site during other projects. This raises a concern that DeKort Systems Pty Ltd don't have sufficient resources to undertake this project. Other referee feedback, rated them very good for the quality of the finished projects, although all their reference projects only involved pump stations with minor electrical and instrumentation work, and involved no leachate treatment experience. Referees also advised DeKort Systems Pty Ltd are an excellent company to work with and they will aim to meet their clients' requirements.

The Wastewater Consultant KBR reviewed the technical submission from DeKort Systems Pty Ltd and advised; '*We have concerns that DKP has not undertaken a project of this magnitude before, and that it has not demonstrated a fundamental understanding of the actual treatment processes that will underpin the operation of the treatment plant. Therefore, we have concerns that DKP will not be able to manage the project, and will have significant difficulty in preparing an appropriate design for the plant so that it will be able to operate to the level required*.'

Benefit to local region was rated well as a local long-established company employing and resourcing locally. DeKort Systems Pty Ltd provides sponsorship to a wide variety of local clubs and charities.

With consideration of the tender submission from DeKort Systems Pty Ltd, as summarised above, it is considered that DeKort Systems Pty Ltd have the capabilities to construct each section of the Leachate Treatment Plant, but risks exist with regard to their experience and knowledge to manage a project of this value and to ensure that the leachate treatment plant process meets the requirements of Council.

Quantitative Assessment

The lump sum tender prices and ratings relative to the lowest price are tabulated below.

Tenderer	Tendered Price (including GST)	Rating (max 100)
DeKort Systems Pty Ltd t/a DeKort Pumps	$1,347,802.32	100
Water Treatment Australia Pty Ltd	$1,505,946.22	89

As detailed above, the submission from DeKort Systems Pty Ltd was the least expensive, being $158K or 11% more favourable than Water Treatment Australia Pty Ltd.

Both tender submissions were greater than the allocated budget for this project. As detailed above, the Wastewater Consultant estimated this project would cost in the order of $1.43M. DeKort System Pty Ltd was within this revised estimate, while Water Treatment Australia Pty Ltd are slightly ($76K) higher. As this project will be concluded in the 2019/20 period, a further allocation ($406K) can be included in the draft 2019/20 Operational Plan.

Summary

Tenderer	Quantitative ($) Assessment Score	Qualitative Assessment Score
Water Treatment Australia Pty Ltd	89	82
DeKort Systems Pty Ltd t/a DeKort Pumps	100	61

The qualitative assessment indicated that Water Treatment Australia Pty Ltd are the best placed tenderer to deliver a project that achieves Council's requirements, due to their superior knowledge of the leachate treatment process and their previous experiences of constructing this type of plant.

From the quantitative assessment, DeKort Systems Pty Ltd provided the most competitive price. However, due to the critical importance of the new leachate treatment plant to the operation of the AWMC and its EPA Licence, it is crucial that the preferred contractor be selected not based on price alone.

When considering both the qualitative and quantitative assessments, Water Treatment Australia Pty Ltd provided the best overall tender submission and therefore is considered the preferred contractor for the execution of this project.

Risk

- Business Risk - if the EPA requirement to 'treat leachate generated from the Albury Waste Management Centre for trade waste disposal to sewer' is not achieved by the required date of December 2019, then it is possible that EPA would enact enforcement measures. Additionally, the current leachate treatment process doesn't have the capacity to handle the increased volumes of leachate being produced by the expanding growth of the landfill.
- Corporate Risk - the incorporation of treated trade waste discharge of the leachate to sewer is a beneficial outcome in terms of recognised modern practice for managing this waste and will be publicly perceived as such. The treatment process will involve the use of aerators in the ponds with the inherent generation of some low-level broadband noise. Given that this type of noise is without tonality its impact is considered to be minimal but nonetheless can be mitigated against by minimising their use overnight and incorporating shrouds over them. The upgraded leachate treatment plant will have the added benefit of reducing the odour impact on neighbours.
- WHS and Public Risk - currently, excess leachate is pumped from the storage dams into a tanker and then sprayed out on site within the leachate catchment area. This operation involves staff getting close to the leachate with the risk of coming into contact with it and its vapours. The proposed leachate treatment plant will eliminate these hazards and will be largely automated in neutralising the volatile compounds before discharging into the sewer system for

further treatment downstream. The new plant operation will also provide better environmental outcomes in managing the leachate.

- Delivery Program Risk - the primary identifiable risk is the NSW EPA amendment to Council's Licence No. 6017 that requires "*By December 2019 the Licensee: Design, build and operate a wastewater treatment system to treat leachate generated from the Albury Waste Management Centre for trade waste disposal to sewer"*. Awarding this contract will ensure this requirement is met.

Community Engagement

As part of Council's ongoing communication with the local community, a bulletin detailing the upcoming projects at the Albury Waste Management Centre, including the Leachate Treatment Plant Upgrade, was mailed to neighbouring residents during October 2018, no feedback has been received regarding the Leachate Treatment Plant.

Albury 2030

This project identifies with the objectives of the Community's Strategic Plan, Albury 2030 in seeking to be a leader in natural resource management and promoting effective waste management practices. The construction of this Leachate Treatment Plant will significantly improve the way leachate waste from the landfill is managed and considered best practice.

Conclusion

This tender for the provision of Design and Construction services to complete the Albury Leachate Treatment Plant Upgrade is required to be able to effectively manage the long term disposal of leachate from the site. The need to have a wastewater treatment system to treat leachate from the AWMC for trade waste disposal to sewer is also a requirement included in Council's EPA licence to operate the landfill, and must be operational by December 2019.

Council appointed Wastewater Consultants Kellogg Brown & Root (KBR) in November 2017, to confirm the feasibility and/or otherwise of the original concept design based on the revised data and then to proceed to develop a specification for a fully operational leachate treatment facility.

Council invited tenders for the Design and Construction of a Leachate Treatment Plant at the Albury Waste Management Centre. Two submissions were received, with both tenders being in excess of the $1.1M budget.

The outcome of the tender evaluation process, which included a review of the technical submissions by the Wastewater Consultant KBR, supported that the submission from Water Treatment Australia Pty Ltd provides the most advantageous proposal for Council. Water Treatment Australia Pty Ltd's submission was not the lowest price, however Water Treatment Australia Pty Ltd have the expertise in all aspects of water and wastewater treatment, and significant experience in managing similar projects, to ensure that the plant constructed is able to operate to the level required. Therefore, the acceptance of this tender is duly recommended.

Recommendation

That Council:

a. Accepts the tender from Water Treatment Australia Pty Ltd for Contract No. 18/02396 – Leachate Treatment Facility – Design, Construct and Commission in the lump sum of $1,505,946.22 (including GST); and
b. Allocate a further $406K (including GST) as part of the 2019/20 Operational Plan to complete this project.

Attachments

1. Potential layout of new Leachate Treatment Plant facilities, prepared by Kellogg Brown & Root - Document No. MEG767-TD-WE-SPC-0001 (DOC18/177084).