

<b>TO:</b>	<b>CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 17, 2018</b>
<b>FROM:</b>	<b>KELLY SCHERR, P. Eng., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL AND ENGINEERING SERVICES &amp; CITY ENGINEER</b>
<b>SUBJECT:</b>	<b>GREENWAY ROTARY DRUM THICKENER PRE-PURCHASE</b>

**RECOMMENDATION**

That, on the recommendation of the Managing Director, Environmental and Engineering Services & City Engineer, the following actions **BE TAKEN** with respect to the Greenway Wastewater Treatment Plant (WWTP) Rotary Drum Thickener Purchase:

- (a) The bid submitted by JWC Environmental Canada ULC in the amount of \$191,307.00 (excluding HST) **BE APPROVED** in accordance with Section 12.2(b) of the City of London's Procurement of Goods and Services Policy;
- (b) The financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix 'A';
- (c) The Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project; and
- (d) The Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

**PREVIOUS REPORTS PERTINENT TO THIS MATTER**

CWC report of 2016-02-02 – Electricity Generation from Waste Heat at the Greenway Wastewater Treatment Plant - Update

CWC report of 2016-10-04, Infrastructure Canada Phase 1-Project Requests- Clean Water and Wastewater Fund

CWC report of 2017-06-07, Clean Water and Wastewater Fund, Purchase of Major Organic Rankine Cycle System Components for Power Generation at the Greenway Wastewater Treatment Plant

**2015-2019 STRATEGIC PLAN**

This project supports the Strategic Plan with respect to building a sustainable city and robust infrastructure through optimization of existing resources for wastewater treatment plant performance enhancement.

**BACKGROUND**

**Purpose**

The purpose of this report is to recommend the award of a purchase order for supply and delivery of a new rotary drum thickener to the Greenway Wastewater Treatment Plant to JWC Environmental Canada ULC (JWC).

## **Context**

Biosolids removed from wastewater during treatment at City wastewater treatment plants (WWTPs) are incinerated at Greenway. The thickening process reduces the volume of biosolids requiring storage by removing water. This process also reduces the size of equipment required to handle the biosolids. This rotary drum thickener will replace inefficient and end of life equipment removed to free up space for the Organic Rankine Cycle (ORC) System which will generate electricity from the Greenway incineration process.

## **DISCUSSION**

Biosolids thickening at the City's wastewater treatment plants takes sludge from the treatment process and thickens it by removing a portion of the water. This water is returned to the wastewater process stream for treatment while the thickened sludge is further dewatered by centrifuges prior to incineration.

In June 2017, Council approved the purchase of the major equipment associated with the proposed ORC system as part of one of many Canadian Water and Waster Fund (CWWF) projects proposed. The new ORC system is expected to enable Wastewater Treatment Operations to generate an estimated 460 – 800 kW of electricity from waste heat captured from the incinerator exhaust.

The creation of a suitable location for this new ORC equipment package requires the removal of two existing dissolved air flotation tanks. These tanks were used to thicken waste biosolids prior to the installation of two rotary drum thickeners in 2015. After the rotary drum thickeners were installed, the tanks were retained as standby in the event that either of the new drum thickeners were undergoing maintenance or repair. With the imminent removal of the dissolved air flotation units to accommodate the ORC scheduled for Q2-2019, a third rotary drum thickener is needed to offset the loss of standby capacity for biosolids thickening. It is this third RDT that Wastewater Treatment Operations is seeking Council approval to purchase.

### **Procurement Process**

Because of variability across different manufacturers with respect to capacity, dimensions, layout materials of construction, etc. it was determined that a Request for Proposals was the appropriate means by which to select a preferred supplier for the new RDT. RFP 18-13 was subsequently issued.

Six (6) Proponents submitted proposals in response to the rotary drum thickener. A review panel, made up of representatives from the Wastewater Treatment Operations and Purchasing Divisions, reviewed all proposals and the proposal from JWC received the highest score. It should be noted that the JWC proposal was the second lowest price, but was better suited dimensionally to the available space, and therefore scored higher than the lowest bidder.

The price of \$191,307.00 (excluding HST) compares favourably with preliminary estimates and previously completed rotary drum thickener projects. The equipment proposed is seen to be of a suitable quality, and the City has experience with RDTs from this manufacturer at the Adelaide WWTP (the original manufacturer, IPEC, has since been acquired by JWC). Delivery times proposed are compatible with the overall ORC project schedule. There are sufficient funds in the Capital Budget for this work.

## CONCLUSIONS

Civic Administration have reviewed the submitted proposals and recommend that JWC Environmental Canada ULC be awarded the contract to supply and deliver the requested rotary drum thickener package, as per their proposal in response to RFP18-13.

### Acknowledgements

This report was prepared with the assistance of Kirby Oudekerk, P.Eng., Environmental Services Engineer in the Wastewater Treatment Operations Division.

<b>PREPARED BY:</b>	<b>REVIEWED &amp; CONCURRED BY:</b>
<b>GEORDIE GAULD DIVISION MANAGER WASTEWATER &amp; TREATMENT OPERATIONS</b>	<b>SCOTT MATHERS, MPA, P.ENG. DIRECTOR, WATER AND WASTEWATER</b>
<b>RECOMMENDED BY:</b>	
<b>KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR, ENVIRONMENTAL &amp; ENGINEERING SERVICES &amp; CITY ENGINEER</b>	

Attach: Appendix 'A' – Sources of Financing  
Cc: John Freeman – City of London  
Alan Dunbar – City of London  
Jason Davies – City of London  
Michele Shears – City of London  
Chris Ginty – City of London