

## Report to Civic Works Committee

**To:** Chair and Members  
Civic Works Committee

**From:** Kelly Scherr, P.Eng., MBA, FEC  
Deputy City Manager, Environment and Infrastructure

**Subject:** Vauxhall Wastewater Treatment Plant Rotating Drum  
Thickener Equipment Single Source

**Date:** August 23, 2022

## Recommendation

That, on the recommendation of the Deputy City Manager, Environment and Infrastructure, the following actions **BE TAKEN** with respect to the purchase of a rotating drum thickener at Vauxhall Wastewater Treatment Plant:

- a) the contract for purchase of a rotating drum thickener **BE AWARDED** to JWC Environmental Canada as a single source procurement for a total value of \$171,295.00 plus HST in accordance with Sections 14.4 (d) of the City of London's Procurement of Goods and Services Policy;
- b) the financing for the project **BE APPROVED** in accordance with 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;
- d) the approvals given herein **BE CONDITIONAL** upon the Corporation entering into a formal contract; and
- e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.

## Executive Summary

### Purpose

This report recommends approving the purchase of new rotating drum thickener (RDT) for Vauxhall Wastewater Treatment Plant (WWTP) from JWC Environmental Canada.

### Context

Sludge thickening, the removal of a portion of the water from waste sludge, is an important process at the City's wastewater treatment plants. By removing a portion of that water through thickening, storage, energy consumption, and transportation requirements are reduced. Gravity belt thickening is the current technology used at Vauxhall WWTP for sludge thickening, where the existing thickener is nearing its end of life.

The City has recently purchased a similar model through a previous competitive process and successfully operates this equipment at both the Greenway and Adelaide treatment plants. RDTs have proven to be a cost-effective sludge thickening strategy, and the procurement of equipment from the same manufacturer provides further maintenance and operation benefits for the City. The approval for single source procurement to align with current installations is requested and recommended.

## Linkage to the Corporate Strategic Plan

This project supports the 2019-2023 Strategic Plan through:

- Building a Sustainable City: build infrastructure to support future development and protect the environment; and manage the infrastructure gap for all assets.

## Analysis

### 1.0 Background Information

#### 1.1 Previous Reports Related to this Matter

Civic Works Committee, June 1, 2021, Purchase of Rotary Drum Thickener for Greenway Wastewater Treatment Plant.

Civic Works Committee, April 17, 2018, Greenway Rotary Drum Thickener Pre-Purchase

#### 1.2 Context

The Vauxhall Wastewater Treatment Plant is the City's fourth largest plant, treating 7% of the City's wastewater. In 2021 it reliably treated an average of over 13 million litres per day of wastewater. An important part of the treatment process is the disposal of waste streams, such as the waste sludge, that are generated during the treatment process prior to discharging to the Thames River.

Vauxhall utilizes sludge thickening technology to remove water and thicken Waste Activated Sludge (WAS) from 0.5% to 5% solids, effectively reducing the volume of product required to be trucked, stored and further processed at Greenway Wastewater Treatment Plant prior to final disposal. This reduces operational cost and greenhouse gas emissions related to solids disposal. By installing common sludge thickening technology at multiple City plants, maintenance and training requirements are simplified and spare part inventories are reduced, lowering operational cost and risk.

### 2.0 Discussion and Considerations

#### 2.1 Vauxhall WWTP Sludge Thickening

The current Vauxhall sludge thickening process employs a gravity belt thickener (GBT) that is approaching its end of life. Major repairs would be required to extend its operating life, after which the prospects for reliable operation are still expected to be poor. Rotary drum thickeners generally require much smaller areas for installation, and investigations by City staff have confirmed that the installation of a new RDT in the location of the current GBT will be relatively simple and inexpensive.

#### 2.2 Selection of JWC Environmental Canada as a Single Source Supplier

The procurement policy includes a provision to allow a project to be single sourced to a specific supplier under a predefined set of criteria. JWC Environmental Canada has been recommended as a single source supplier for the reasons noted in section 14.4 d) of the Procurement of Goods and Services Policy:

- 14.4 d. There is a need for compatibility with goods and/or services previously acquired or the required goods and/or services will be additional to similar goods and/or services being supplied under an existing contract (i.e. contract extension or renewal);

Utilizing a common provider of sludge thickening products at multiple facilities ensures consistent product support, a shared inventory of spare parts, coordination of service, and consistency of staff training requirements as similar units are installed at other City treatment facilities. The rotating drum thickening system proposed for Vauxhall, the

IPEC Monster Drum Thickener, represents continued use of a technology which the City has previously evaluated and selected through a competitive bidding process (most recently, Request for Proposal 21-15), and has proven to be an effective and reliable technology. Maintaining JWC Environmental Canada as London's rotating drum thickening equipment supplier will help maintain this system wide consistency and efficiency.

### **3.0 Financial Impact/Considerations**

#### **3.1 Activity Planned and Budget Available**

Supply and delivery of the rotating drum thickener at Vauxhall was anticipated and accounted for under the current approved multi-year capital budget. Although current well-documented global supply chain issues have increased prices, the proposed prices for the supply and delivery of the new unit still aligns generally with previous estimates used to develop that budget.

### **Conclusion**

Sludge thickening at Vauxhall WWTP is an essential component of the City's wastewater treatment operations. The current thickening equipment has reached its end of life and must be replaced. By purchasing a rotating drum thickener from JWC Environmental Canada, the City will maintain reliable thickening operations at the plant while ensuring consistency of operations across all five of the City's treatment plants for reduced cost and improved maintenance. For these reasons, a single source procurement is recommended.

**Prepared by:** Kirby Oudekerk, MPA, P.Eng.  
Division Manager, Wastewater Treatment Operations

**Submitted by:** Ashley Rammeloo, MMSc., P.Eng.  
Director, Water, Wastewater, and Stormwater

**Recommended by:** Kelly Scherr, P.Eng., MBA, FEC  
Deputy City Manager, Environment and Infrastructure

cc: John Freeman, Manager III, Purchasing and Supply  
Steve Mollon, Manager I, Purchasing Operations  
Zeina Nsair, Financial Business Administrator, Finance and Corporate Services

## Appendix "A"

#22122

August 23, 2022  
(Award Contract)

Chair and Members  
Civic Works Committee

RE: Vauxhall Wastewater Treatment Plant Rotating Drum Thickener Equipment Single Source  
(Subledger FS22VX01)

Capital Project ES508422 - WWTP Optimization & Renewal  
JWC Environmental Canada - \$171,295.00 (excluding HST)

### Finance Supports Report on the Sources of Financing:

Finance Supports confirms that the cost of this project can be accommodated within the financing available for it in the Capital Budget and that, subject to the approval of the recommendation of the Deputy City Manager, Environment and Infrastructure, the detailed source of financing is:

<b>Estimated Expenditures</b>	<b>Approved Budget</b>	<b>Committed To Date</b>	<b>This Submission</b>	<b>Balance for Future Work</b>
Engineering	66,443	66,443	0	0
Construction	489,211	15,188	0	474,023
City Related Expenses	7,086	7,086	0	0
Vehicles & Equipment	1,010,124	835,814	174,310	0
<b>Total Expenditures</b>	<b>\$1,572,864</b>	<b>\$924,531</b>	<b>\$174,310</b>	<b>\$474,023</b>
<b>Sources of Financing</b>				
Drawdown from Sewage Works Renewal Reserve Fund	1,572,864	924,531	174,310	474,023
<b>Total Financing</b>	<b>\$1,572,864</b>	<b>\$924,531</b>	<b>\$174,310</b>	<b>\$474,023</b>

### Financial Note:

Contract Price	171,295
Add: HST @13%	22,268
Total Contract Price Including Taxes	193,563
Less: HST Rebate	-19,253
Net Contract Price	\$174,310

Jason Davies  
Manager of Financial Planning & Policy

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