

Report to Civic Works Committee

To: Chair and Members
Civic Works Committee

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

Subject: Planned Rebuild of Incinerator Systems at Greenway
Wastewater Treatment Plant – Procurement Approvals

Date: October 24, 2023

Recommendation

That, on the recommendation of the Deputy City Manager, Environment & Infrastructure, the following actions **BE TAKEN** with respect to the upcoming renewal and emergency repairs of the incinerator at the Greenway Wastewater Treatment Plant:

- a) Replacement fluidizing blower and repair of the existing blower **BE AWARDED** to Gardner Denver Nash LLC for the total price of \$273,587.00 USD (estimated at \$375,000.00 CDN) excluding HST, in accordance with Section 12.2 (b) of the City of London's Procurement of Goods and Services Policy;
- b) the supply of expansion joints **BE AWARDED** to Senior Flexonics Canada for the total price of \$615,000.00 excluding HST, in accordance with Section 12.2 (b) of the City of London's Procurement of Goods and Services Policy;
- c) the purchase orders issued for emergency repairs to the incinerator and related systems at Greenway Wastewater Treatment Plant under Section 14.2 of the City of London's Procurement of Goods and Services Policy at a projected total price of \$99,086.00 excluding HST, **BE CONFIRMED**; and
- d) the financing for this project **BE APPROVED** as set out in the Sources of Financing Report attached hereto as Appendix 'A'; and
- e) the Mayor and City Clerk **BE AUTHORIZED** to execute any contract or other documents, if required, to give effect to these recommendations.
- f) the Civic Administration **BE AUTHORIZED** to undertake all the administrative acts that are necessary in connection with this project.

Executive Summary

This report seeks Council approval for the procurement of goods and services to facilitate the upcoming renewal of the sludge incineration process at Greenway Wastewater Treatment Plant.

Incineration is the final process in the disposal of waste solids generated at London's five wastewater treatment plants. Administration is developing plans for its replacement within fifteen years, but the functionality of the existing incinerator must be maintained until the new system is ready for operation. Continued functionality requires a complete rebuild, which is expected to bridge the gap until the new solids disposal strategy is in place. The unique nature of the project and long lead times associated with some components warrants non-standard procurement in some instances.

Linkage to the Corporate Strategic Plan

This report supports the 2023-2027 Corporate Strategic Plan by contributing to the following outcome:

- Climate Action and Sustainable Growth
 - London's infrastructure and systems are built, maintained, and operated to meet the long-term needs of the community.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

Civic Works Committee, March 21, 2023 – Planned Rebuild of Incinerator Systems at Greenway Wastewater Treatment Plant – Single Source

Civic Works Committee, October 4, 2022 – Emergency Repair of Incinerator Systems at Greenway Wastewater Treatment Plant.

Civic Works Committee, June 18, 2019 – Single Source Procurement – Greenway Reheater

Civic Works Committee, May 26, 2014 – Single Source Purchase of Pre-Heater Heat Exchanger and Re-Heater Heat Exchanger at Greenway Wastewater Treatment Centre

2.0 Discussion and Considerations

2.1 Sludge Incineration at Greenway WWTP

The Greenway Wastewater Treatment Plant is the City's largest treatment plant. It is also the location of a centralized solids handling facility that processes the waste sludge removed from wastewater at all five City wastewater treatment plants in preparation for disposal. This final stage of the treatment process is essential for the safe and effective operation of the treatment facilities to ensure the protection of public health and the environment.

There is no standby or spare incinerator at Greenway. If the incinerator is out of service, it requires Greenway Operations to utilize alternative methods for disposal at costs of \$60,000 per week or more. These alternate methods may not always be able to keep up with process demands which can lead to plant upsets.

Given the essential nature of the incinerator, a full asset renewal was planned. Design for this renewal is underway, with construction planned for summer 2024.

2.3 Procurement Process

Through the design process, certain items were identified for pre-purchase because of either long lead times or a need for compatibility with existing systems. These items are listed below, along with the method of procurement and the requested approval:

- i. Fluidizing Blower Single Source – The blower is responsible for providing combustion air to the incinerator and is a critical component of the system. The current blower is original to the incinerator and is at its expected end of life. Staff have sourced a replacement blower identical to the existing. The intent is to purchase and install the new blower and then have the same vendor re-build the existing blower to retain as a spare. Staff will also utilize an existing stock of motors installed in other areas as spares rather than purchasing a new motor. These measures substantially reduce the capital cost required. Because of a need to match the existing blower, approval from Council is sought to undertake the sole source purchase of a new blower and repair of the existing blower from Gardner Denver Nash LLC for a total cost of \$273,587.00 USD (estimated at \$375,000 CDN), excluding HST, in accordance with article 14.4.d of the Procurement of Goods and Services policy: "There is a need for compatibility with goods previously acquired." The estimated cost for this purchase was previously reported to Council as \$600,000.

- ii. Expansion Joints Irregular Result – Expansion joints are installed throughout the incinerator duct system to accommodate the significant expansion and contraction that results when increasing or lowering the operating temperature to over 800C. Previous experience with routine failures of fabric style expansion joints prompted staff to pursue the purchase of metal-bellows expansion joints, offering much better reliability but with higher purchase costs up front. A Request for Tenders was issued, but only one supplier submitted a bid resulting in an irregular result per article 8.10.b of the Procurement of Goods and Services policy. The bid was opened, and staff are requesting approval to award to Senior Flexonics Canada for the total tendered price of \$615,000.00, excluding HST. The estimated cost for this purchase was previously reported to Council as \$500,000, but was based on preliminary dimensional information that changed for some of the joints, increasing the cost.

2.5 Ongoing Emergency Replacement

Notwithstanding the preceding discussion regarding the planned refurbishment of the incinerator system, the deterioration of expansion joints in the current incinerator duct system necessitated replacement in the short term. The purchases of the replacement expansion joints and installation were initiated under the emergency procurement provisions (article 14.2) of the Procurement of Goods and Services policy, as indicated to Council in March. The full impact of the measures taken to repair the duct are as follows:

- Purchase of replacement expansion joints: \$64,165.00 plus HST from Sudbury International Engineered Products Ltd.
- Supply of services to repair duct and install new expansion joints: \$34,921.00 plus HST by Lordon Limited.

3.0 Financial Impact/Considerations

Sources of funding have been identified for the procurements identified in this report, and funding for the overall renewal will be monitored and re-evaluated as part of the 2024-2027 Multi-Year Budget development process, including a full review of potential funding sources to mitigate any budgetary shortfall, if any.

Conclusion

Sludge incineration is an essential part of the City's wastewater solids disposal strategy. Unplanned shut-downs are costly and increase the level of operational risk to wastewater treatment processes. A renewal of the incinerator and all associated systems is required in order to maintain operations. Civic administration is recommending the award of a single-source purchase of a replacement fluidizing blower and repair of the existing blower to Gardner Denver Nash LLC for a total cost of \$273,587.00 USD (estimated at \$375,000 CDN), and the award of an irregular tender result for the purchase of expansion joints to Senior Flexonics Canada for the total of \$615,000.00, all prices excluding HST.

Further, a previously initiated emergency procurement for supply and installation of replacement fabric-style expansion joints was concluded for a total cost of \$99,086.00 plus HST.

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 & Infrastructure

Appendix 'A'

Source of Financing

cc: Steve Mollon, Senior Manager, Procurement and Supply
Jason Davies, Manager III, Financial Planning and Policy
Zeina Nsair, Financial Business Administrator, Finance and Corporate Services

Appendix "A"

#23204

October 24, 2023
(Award Contract)

Chair and Members
Civic Works Committee

RE: Planned Rebuild of Incinerator Systems at Greenway Wastewater Treatment Plant - Procurement Approvals
(Subledger FS23GW01)

Capital Project ES3080 - Greenway Incinerator Refurbishment
Gardner Denver Nash LLC - \$375,000.00 (\$273,587.00 USD) (excluding HST)
Senior Flexonics Canada - \$615,000.00 (excluding HST)
Sudbury International Engineered Products Ltd. - \$64,165.00 (excluding HST)
Lordon Limited - \$34,921.00 (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:

Estimated Expenditures	Approved Budget	Committed To This Date	This Submission	Balance for Future Work
Engineering	2,190,684	2,190,684	0	0
Construction	6,149,374	6,113,838	35,536	0
City Related Expenses	607,501	607,501	0	0
Vehicles and Equipment	5,113,907	3,376,914	1,072,718	664,275
Total Expenditures	\$14,061,466	\$12,288,937	\$1,108,254	\$664,275

Sources of Financing

Capital Sewer Rates	3,445,422	3,445,422	0	0
Debenture By-law No. W.-5590-307	1,812,530	40,001	1,108,254	664,275
Drawdown from Sewage Works Renewal Reserve Fund	8,803,514	8,803,514	0	0
Total Financing	\$14,061,466	\$12,288,937	\$1,108,254	\$664,275

Financial Note:	Gardner Denver Nash	Senior Flexonics	Sudbury International	Lordon
Contract Price	375,000	615,000	64,165	34,921
Add: HST @13%	48,750	79,950	8,341	4,540
Total Contract Price Including Taxes	423,750	694,950	72,506	39,461
Less: HST Rebate	-42,150	-69,126	-7,212	-3,925
Net Contract Price	\$381,600	\$625,824	\$65,294	\$35,536

Financial Note Continued:	Total
Contract Price	1,089,086
Add: HST @13%	141,581
Total Contract Price Including Taxes	1,230,667
Less: HST Rebate	-122,413
Net Contract Price	\$1,108,254

Jason Davies
Manager of Financial Planning & Policy