

# ADDITIONAL ITEM - IE18.9



## REPORT FOR ACTION

### Green Lane Landfill Operations, Maintenance and Construction Contract Extension

**Date:** December 1, 2020

**To:** Infrastructure and Environment Committee

**From:** General Manager, Solid Waste Management Services

**Wards:** All

#### SUMMARY

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This report provides an overview of the current Operations, Maintenance and Construction contract at the City's Green Lane Landfill and provides details of benefits to the City and cost savings to support the extension of the contract with CRA Landfill Operations Limited.

#### RECOMMENDATIONS

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The General Manager, Solid Waste Management Services recommends that:

1. The Infrastructure and Environment Committee receive this report for information.

#### FINANCIAL IMPACT

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The Operation, Maintenance and Construction contract extension with CRA Landfill Operations Limited has the potential value of \$187,113,906.97, net of Harmonized Sales Tax (HST) which includes nine (9) years of potential Operations and Maintenance costs in the amount of \$90,043,679.98 including contingency, net of HST and nine (9) years of potential Construction capital costs in the amount of \$97,070,226.99 including contingency, net of HST. Sufficient funding for the first year's Operations & Maintenance costs has been included in the Solid Waste Management Services 2021 Operating Budget submission; additional funding related to the remaining eight (8) years will be requested through the 2022-2029 Operating Budget submissions. The Solid Waste Management Services 2021 Capital Budget and 2021-2030 Capital Plan submission includes consideration for the total potential cash flows over this 9-year period. Actual cash flow requirements will be reviewed annually, as part each subsequent year's

budget submission, to ensure alignment of funding commitments with site development plans and schedules.

The estimated operational savings based on the nine (9) year contract extension are \$15,689,239.49 (15% savings including contingencies).

The estimated savings related to new construction work, when compared to the similar base scope of work in the original contract, is \$3,644,480.09 (5% savings including contingencies).

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

## **DECISION HISTORY**

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At its meeting on December 17, 2019, City Council adopted item EX11.3 entitled "2020 Rate Supported Budgets - Solid Waste Management Services and Recommended 2020 Solid Waste Rates and Fees" which authorizes the General Manager, Solid Waste Management Services to negotiate and enter into a contract extension agreement with CRA Landfill Operations Limited to provide landfill operations, management, and construction services for a term not to exceed 10 years, with the specific requirements that landfill compaction ratio be increased, a lower annual guaranteed minimum tonnage be implemented and efficiencies be developed to reduce site costs on terms and conditions satisfactory to the General Manager, Solid Waste Management Services and in a form satisfactory to the City Solicitor.

The City Council Decision document can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2019.EX11.3>

At its meeting on July 23, 2018, City Council adopted item AU13.13 entitled " Review of the Green Lane Landfill Operations – Management of Contract Needs Improvement". Amongst other directions, City Council requested the General Manager, Solid Waste Management Services to establish a defined process to conduct and document the basis for developing contract contingency amounts or percentages, review opportunities to reduce costs through optimizing the tonnage of waste landfilled at Green Lane, and consider including annual, rather than monthly, reconciliation of the guaranteed tonnage in the next contract for landfill operations.

The City Council Decision document can be viewed at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2018.AU13.13>

## **COMMENTS**

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The City of Toronto secured long-term waste disposal capacity by purchasing the Green Lane Landfill (GLL) on April 2, 2007 and started shipping all of Toronto's municipal waste requiring final disposal there on January 2, 2011.

There are currently two (2) contracts associated with the operation and development of the landfill. The first is the Engineering/Monitoring/Reporting contract which includes the detailed engineering design and oversight needed to develop the landfill, the undertaking of a comprehensive environmental monitoring program for groundwater, surface water, leachate and landfill gas, and the annual reporting of results to the Ministry of Environment. The contract for these services is in effect until March 31, 2023.

The second contract is the current Operations, Maintenance and Construction (OMC) contract which provides for the day-to-day operations and maintenance of the site which includes landfilling, landfill gas flare operations, leachate treatment, etc. The contract was developed to include construction activities which includes cell excavation and base preparation, expansion of the landfill gas, leachate and storm water control systems, interim and final cover placement, and the provision of site services. This contract commenced on April 1, 2014 and expires on March 31, 2021, with the potential for two (2) option years.

With the authority delegated to the General Manager, Solid Waste Management Services, the extension for the Operation, Maintenance and Construction contract with CRA Landfill Operations Limited can meet or exceed the parameters set by City Council, including a term not exceeding 10 years, specific requirements that landfill compaction ratio be increased, a lower annual guaranteed minimum tonnage be implemented, and efficiencies to reduce site costs.

#### *Term Not Exceeding 10 Years*

- The negotiated extension is for nine (9) years effective on or about January 1, 2021. This will achieve significant savings to the City earlier than waiting for the current contract to expire on March 31, 2021, or through the exercising of the City's two (2) discretionary option years.

#### *Landfill Compaction Increase*

- The guaranteed compaction rates have increased from 0.825 tonnes/m<sup>3</sup> to 0.875 tonnes/m<sup>3</sup>. This increase is intended to improve the City's ability to maximize the use of the landfill airspace by consuming proportionately less overall volume for given tonnages.

#### *Lower Guaranteed Annual Minimum Tonnage*

- The guaranteed annual tonnages have been reduced from 400,000 to 350,000 tonnes per year. This is intended to allow the City greater flexibility with respect to reducing volumes to the landfill as it ramps up waste diversion policies and programs, resulting in savings in disposal costs.

#### *Efficiencies to Reduce Site Costs*

- The contractor has assumed the risk associated with Canadian and American currency fluctuations, which primarily impacts their capital and maintenance costs for operational equipment. In 2013, the average exchange rate was 1.03, while the average year-to-date exchange rate in 2020 is 1.35.
- Unconsumed line item quantities from the current contract will be carried forward under the contract extension at existing unit prices, providing further opportunity for savings.

The terms of the extended contract address all outstanding recommendations made by the Auditor General's Office in the report titled "Review of the Green Lane Landfill Operations – Management of Contract Needs Improvement". The outstanding recommendations addressed by the contract extension include the following:

- Recommendation 3: Establish a defined process to conduct and document the basis for developing contract contingency amounts or percentages.
  - Staff at Green Lane Landfill have successfully managed the contract, the site, and contingencies have been managed within available funds. As such, the proposed contingencies on the extension have been reduced from 26.7% to 20% on Operations, and from 28% to 25% for Construction.
- Recommendation 6: Review, and report back to Council, on opportunities to reduce costs through optimizing the tonnage of waste landfilled at Green Lane Landfill. The review should concurrently assess the immediate and long term financial and other impacts of modifying the volume of waste being redirected to contingency landfill sites.
  - The new fixed cost per tonne pricing structure over the reduced minimum put-or-pay volume eliminates the tiered pricing that incentivized sending more waste to the landfill in order to reduce operational cost / tonne at the expense of consuming valuable landfill space.
- Recommendation 7: Consider including annual, rather than monthly, reconciliation of the guaranteed tonnage in the next contract for landfill operations.
  - The contractor will reconcile monthly tonnages on an annual basis with respect to the reduced put-or-pay volume of 350,000 tonnes per year. This overall formulation is intended to allow the City to rationalize any month-to-month variances in incoming tonnage, thereby eliminating potential additional costs on a monthly basis.
- Recommendation 14 (c): Enhance the change order log to include key information related to each change order. This log should be analyzed and used to inform the scope of work for future contracts.
  - Both the City and the contractor recognized there were ways to improve pricing visibility and streamline administration of the contract. Eight (8) new unit price items were created for costs that were incurred during the initial term of the contract and paid through contingency.

Retaining the same contractor for an additional nine (9) years assists with maintaining improvements already implemented through the following recommendations made by the Auditor General's Office in the report titled " Review of the Green Lane Landfill Operations – Management of Contract Needs Improvement":

- Recommendation 11: (a) Require contractors to include sufficient documents in the invoice package for staff to conduct adequate review and validation of monthly invoices; and (b) Use the City's external engineering consultant for work oversight and verification if needed.
- Recommendation 14: (a) Ensure all change order requests are supported by appropriate documentation and approved at the staff level and timeframe required by the Division's procedures; and (b) Implement additional review and approval by Solid Waste Management Services senior management for change order requests submitted after the work is completed.
- Recommendation 17: Obtain from contractors adequate supporting documents for verification of change order payment requests (including progress payment requests).

In addition to meeting or exceeding the parameters set by City Council and responding to outstanding recommendations made by the Auditor General's Office, the contract extension has additional benefits.

Solid Waste Management Services is significantly increasing investment in landfill gas infrastructure over what was originally planned for the site. Capturing more landfill gas effectively builds support for two (2) critical initiatives into the contract extension:

1. The expansion of the landfill gas collection infrastructure will not only result in an optimized use of landfill gas to produce a renewable form of energy, but it will also contribute to the City's TransformTO target of net-zero emissions by 2050.
2. Improved landfill gas collection will result in a reduction of odour complaints from the host community, including the three (3) First Nations communities. Operational and construction initiatives undertaken since a 2019 consultant report have reduced year-over-year odour complaints by 52%.

There are benefits for Solid Waste Management Services to maintain a single Operations, Maintenance and Construction service provider over the long-term including risk mitigation and overall site management:

- There are key areas of risk beyond traditional health and safety risks that the maintenance of a single, long term OMC contractor is better positioned to manage. These include actions or events that may result in the inability to receive the full volume of waste at the site or noncompliance with the various aspects of the existing Certificate of Approvals at the site such as exceeding discharge objectives at the Leachate Treatment Plant, failure to control stormwater on site within the stormwater management system, failure to control landfill gas emissions, failure to manage

leachate within the active landfill area, acceptance of unauthorized waste streams, excessive off-site litter, and excessive off-site odours, among others.

- Operations and construction activities are highly integrated. Prior to the current contract, the site had different operations and construction contractors. Challenges with cooperation and coordination between the two activities resulted in significant delays in the progression of required landfilling space and infrastructure. A single Operations, Maintenance and Construction contractor allows for more efficient coordination between operations and construction.

Extending the current contract with CRA Landfill Operations Limited has additional benefits including that:

- CRA Landfill Operations Limited has extensive knowledge of construction methodologies, the capabilities of equipment, and most importantly, the site-specific conditions. This allows CRA Landfill Operations Limited to provide their best pricing which helps Solid Waste Management Services avoid excess risk mitigation pricing that would be expected from another contractor through a bid process. An example of where their experience and expertise has benefitted Solid Waste Management Services is their 21.4% reduction in annual Leachate Treatment Plant Operations and Maintenance costs moving forward.
- CRA Landfill Operations Limited has demonstrated their ability to deliver \$12.7M of cell development and infrastructure work on a yearly basis. This is enough to exceed our current 10-year capital construction plan of approximately \$11.5M per year and allows us to keep up with constructing adequate contingency landfilling space, thereby assisting with minimizing odour complaints.
- CRA Landfill Operations Limited has effectively implemented and maintained numerous controls to ensure compliance with the Certificate of Approvals and minimized off-site impacts from the landfill operations. There has only been one Certificate of Approval infraction at this site since it was purchased by the City, and there have been none since the start of this contract.
- The Green Lane Landfill requires high standards of operations from its Operations, Maintenance and Construction contractor. CRA Landfill Operations Limited has demonstrated this throughout the existing contract, and extending this contract mitigates the risk of getting a less competent contractor through a bid process.

## **CONTACT**

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**SIGNATURE**

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