

**The Corporation of the City of Kawartha Lakes**  
**Council Report**

**Report Number WM 2017-007**

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**Date:** September 12, 2017  
**Time:** 2:00 p.m.  
**Place:** Council Chambers

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**Ward Community Identifier:** All

**Subject:** Construction and Demolition Waste Recycling Program

**Author Name and Title:** Angela Porteous, BESc., Regulatory Compliance Officer

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**Recommendation(s):**

**RESOLVED THAT** Report WM 2017-007, **Construction and Demolition Waste Recycling Program**, be received;

**THAT** Council approve the implementation of a construction and demolition waste recycling program as a 22 month pilot to start March 1, 2018 and end on December 31, 2019 as outlined in this report WM 2017-007 at a cost of \$133,500 for 2018 and \$155,000 for 2019; and

**THAT** staff report back to Council on the success of the construction and demolition waste recycling pilot program by June 30, 2019 with future program recommendations and 2020 budget expectations.

**Department Head:** \_\_\_\_\_

**Financial/Legal/HR/Other:** \_\_\_\_\_

**Chief Administrative Officer:** \_\_\_\_\_

## **Background:**

At the Council Meeting of October 27, 2015, Council adopted the following resolution:

**RESOLVED THAT** Report WM 2015-011, **Integrated Waste Management Strategy**, be received;

**THAT** Council approves the Integrated Waste Management Strategy as appended to Report WM 2015-011, as the guiding strategy to inform the City's Waste Management Program and waste master planning consideration;

**THAT** staff be directed to plan and phase-in the recommended initiatives, in consultation with Council and the Waste Management Strategy Task Force, as generally outlined in the appended Strategy; and

**THAT** the Waste Management Strategy Task Force's Terms of Reference be updated and approved to include the implementation of the Integrated Waste Management Strategy, as appended to this Report to November 30, 2018.

### **CR2015-1119**

The Integrated Waste Management Strategy, as approved by Council, recommends a construction and demolition (C&D) waste recycling program as one of the short term initiatives to be launched in 2018.

In keeping with this recommendation, the City retained Reclay StewardEdge (Reclay) to assess the feasibility of a C&D waste recycling program at one or more of our five operating landfill sites.

As part of the background research Reclay noted that in most municipalities including Kawartha Lakes, the quantity of C&D waste generated far exceeded the amount of municipal solid waste generated. As well, C&D materials are bulky and are challenging to compact in a landfill. Many materials generated through C&D activities can be recycled or provide a fuel source. For all of these reasons, C&D waste is a resource, if managed properly, and an important material type to divert from City landfills.

Through the Reclay C&D Feasibility Study (attached as Appendix A), the primary recommendation is for the City to implement a pilot recycling program at both the Fenelon and Lindsay Ops landfill sites. This report supports Reclay's recommendation and proposes a start date of March 1, 2018 to December 31, 2019. Prior to implementation staff will need to ensure that appropriate staff training occurs and a competitive tender process is undertaken to secure a third-party contractor to process material. This schedule will ensure there is sufficient timing for the procurement process and startup (further details are provided in the rationale section). It should be noted, that through Reclay's research there is

insufficient volumes of C&D waste received at the other landfills ( i.e. Somerville, Eldon and Laxton landfills) to justify a business case for those sites.

The staff report and Feasibility Study was presented in draft to the Waste Management Strategy Task Force as well as the Lindsay Ops and Fenelon landfill public review committees for comments prior to finalization.

For information the resolutions from the Task force and public review committees are as follows;

At the Waste Management Strategy Task Force Meeting of August 16, 2017, the committee adopted the following resolution:

**Moved By** Councillor Rob Macklem  
**Seconded By** Councillor Stephen Strangway

**THAT** the Waste Management Strategy Task Force endorse the implementation of a 22 month pilot C&D waste recycling program for the City of Kawartha Lakes to start March 1, 2018 to December 31, 2019; and

**THAT** staff provide recommendations to the Waste Management Strategy Task Force after one year of the pilot program in April/ May 2019.

**CARRIED**

At the Lindsay Ops landfill public review committee Meeting of August 23, 2017, the committee adopted the following resolution:

**Moved By** Larry Scrivens,  
**Seconded By** Barry Hodgson

**THAT** the Lindsay Ops PRC endorse the implementation of a pilot C&D waste recycling program for the City of Kawartha Lakes to start March 1, 2018 to December 31, 2019; and

**THAT** staff circulate the one year pilot recommendations to the committee for feedback and input in April/ May 2019.

**CARRIED**

At the Fenelon landfill public review committee Meeting of June 22, 2017, the committee adopted the following resolution:

**Moved By** Julia Taylor,  
**Seconded By** Marlene Edwards

**THAT** the Fenelon landfill PRC receive the final Reclay C&D Feasibility Report and support the implementation of a pilot C&D waste recycling program for the City of Kawartha Lakes; and

**THAT** staff report back to the committee on the program success when information is available.

**CARRIED**

### **Rationale:**

Staff is recommending that a 22 month pilot C&D waste recycling program be launched March 1, 2018 to December 31, 2019. A mid-program review with one year of pilot results will provide sufficient data to make future recommendations and 2020 budget considerations to present to the Waste Management Strategy Task Force and landfill public review committees in April or May of 2019. As well, a staff report will be presented to Council by June 30, 2019 with Waste Management Strategy Task Force and public review committee resolutions and future program recommendations ahead of the 2020 budget preparation schedule. The implementation of a 22 month pilot C&D waste recycling program is proposed at the Fenelon and Lindsay Ops landfills.

Based on the recent Reclay study, it is anticipated that at least 10% of C&D waste being landfilled at these two sites will be diverted through this pilot program. The 10% reduction is conservative and could be as high as 20% or more based on experience from other municipalities. The estimated 10% reduction is also consistent with the UEM's projected diversion rate. UEM is the original firm retained by the City to assist in preparing the City's Integrated Waste Management Strategy. According to the Reclay C&D Feasibility Study, the 10% equates to approximately 1,339 tonnes of mixed C&D waste diverted per year from both landfills (i.e. 277 tonnes from Fenelon and 1,062 tonnes for Lindsay Ops). In addition to diversion, the benefits include:

1. A potential reduction in required cover material as there is less waste being landfilled;
2. Potential savings on fuel as there is less waste to compact; and
3. Increase in landfill site life.

The driving factor for moving this recycling program forward is the conservation of landfill space, which valued at the industry standard of \$150/tonne (Reclay) equates to savings of landfill space valued at an estimated \$200,000/year from both landfills. This is the estimated savings per year if the City had to build a new landfill site. Therefore, this is the savings per year to defer closing the landfills. In terms of landfill space saved, 1,339 tonnes of C&D waste is approximately 9,000 m<sup>3</sup> of airspace saved per year. This airspace saved will result in an increase in

landfill life of 0.21 years (i.e. 0.04 years for Fenelon and 0.17 years for Lindsay Ops) for each year a C&D waste recycling program operates. Therefore, over the anticipated 19 years of landfill life remaining at the Lindsay Ops landfill the City could gain an additional 3.2 years of landfilling capacity at existing fill rates. As well, over the anticipated 7.6 years of landfill life remaining at the Fenelon landfill the City could gain an additional 0.5 of a year of landfilling capacity at existing fill rates. Should the C&D waste diverted from this pilot be greater than 10%, additional landfill life saved will increase.

As the 22 month pilot program progresses staff will be evaluating if the program is also able to reduce cover material used and fuel consumed.

To implement a C&D waste recycling pilot, Reclay is recommending the City issue a request for proposals (RFP) to seek a contractor to collect, transport and recycle the C&D waste. Staff is in support of this recommendation and after discussion with Reclay it was agreed that the initial term of this RFP be a 22 month contract with optional one year renewals should the two year pilot program be successful. As well, the work will be monitored closely and the recommendations from the pilot program will include whether or not there is a business case justification to run future portions of the program internally and what implications that would have for staffing. Through the RFP process pricing will be secured for select C&D waste where known recycling markets exist including drywall only or wood waste only or mixed C&D (including wood, drywall, aggregates, glass, metals and shingles). The pricing secured to process each material type through the RFP will determine the material(s) that will be accepted in the C&D waste recycling program. The RFP will be structured to request pricing for three separate material types as per Reclay's recommendations. This will allow the City some flexibility in terms of managing processing costs vs. budget while allowing a high volume of material to be diverted from the landfill to realize landfill space savings. There is space at each landfill site to setup a staging area for C&D materials and operations staff will manage the selected third party contractor. Processing costs and savings to divert C&D waste is further discussed in the finance section below.

For the implementation of a 22 month pilot program staff has also considered requirements for landfill approvals, landfill site staging, health and safety and tipping fees discussed below.

### Landfill Approvals

The most current Waste Management By-Law 2016-144, section 4.06 b) allows for the Director of Public Works and/or his or her designate to establish procedures to accept other materials for recycling including C&D waste.

In terms of regulatory approvals required, the project was discussed with the MOECC Peterborough District Office and they have indicated in writing that they are very supportive of the pilot project since it is providing diversion of materials

otherwise destined to be landfilled. Should the recommendation after one-year of the pilot be for this program to become permanent, MOECC will require that the Environmental Compliance Approval (ECA) for each landfill site be amended to reflect C&D recycling.

### Landfill Site Staging

The staging of a C&D waste recycling program will be dependent on the responses received from an RFP process. However, there are two setup options that Reclay recommended that could occur including collecting diverted C&D waste in roll off bins or construction of open bunkers. If open bunkers was the preferred option, staff may be required to load material from bunkers into trailers.

### Health and Safety

Standard Operating Procedures (SOPs) would be established in consultation with internal departments, to ensure that each site meets and exceeds occupational health and safety standards. Also, training to all landfill staff will be provided prior to the launch of the two-year pilot program.

### Tipping Fees

When the pilot is launched in March 2018, the City will charge \$105 per tonne at all landfill sites for C&D waste in CKL in accordance with the Consolidated Fees By-Law. When a program review is completed after one year, recommendations can be made if the tipping fee should be lowered as an incentive and the loss in revenue can be reported.

Should RFP pricing be higher than the proposed tipping fee, a tipping fee adjustment would be required to ensure the City costs of this program remain within the financial impacts as outlined in this report. If a tipping fee needs to be adjusted as the price to manage the C&D waste is higher than the current tipping fee then staff would report back to Council with further recommendations as to whether or not it is worthwhile to run the pilot program prior to commencing the program. Any staff recommendations will be based on consultation with the Waste Management Strategy Task force and landfill public review committees. Any changes to tipping fees will be included in an amendment to the consolidated fee by-law.

As part of the 22 month pilot, tonnages of C&D waste that are recycled will be recorded to gauge the success of the program. This information will be included in the update that will be provided to Council by June 2019.

### **Other Alternatives Considered:**

Option 1: Council could choose to not implement a C&D pilot. This would go against the Integrated Waste Management Strategy and valuable landfill space would continue to be taken up by recyclable materials.

Other recycling alternatives have been identified and considered throughout the Integrated Waste Management Strategy process. These alternatives are well documented in the strategy and many did not meet the criteria that were set by the City in consultation with the public. The main criteria are listed below.

- Proven method by other municipalities
- Ease of regulatory implementation
- Low cost to the municipality
- Extending landfill space
- Reducing municipal liability

For instance staff reviewed potential implementation of a carpet recycling program, disposal bans or establishing recycling incentives. After the review of all alternatives the implementation of a construction and demolition waste recycling program was selected as one of the highest ranked strategies. A construction and demolition waste recycling program was deemed to be one of the most effective proven ways to divert large volumes of material from landfill, saving valuable landfill space.

### Financial/Operation Impacts:

The following table summarizes the anticipated expenses and revenue associated with the implementation of a 22 month pilot C&D recycling program that will divert 10% or approximately 1,116 tonnes diverted in 2018 and 1,339 tonnes diverted in 2019. There will be a cost to operate a C&D waste recycling program. The benefits to the City from this program will be in the landfill space saved (i.e. deferred cost to build additional landfill cells).

<b>Expenses</b>				
<b>Itemized Costs</b>	<b>Unit Rate</b>	<b>2018 Costs (10 months)</b>	<b>2019 Costs (12 months)</b>	<b>22 Month Pilot Total</b>
1) Processing (estimated contractor cost)	10% Diverted plus contingency	\$123,000	\$148,000	\$271,000
2) Incremental Staff Cost	Monthly Loading from bunkers	\$6,500	\$7,000	\$13,500
3) Education Materials	Industry Flyer, soft-launch	\$4,000	-	\$4,000
<b>Expenses Sub-Total (A)</b>		<b>\$133,500</b>	<b>\$155,000</b>	<b>\$288,500</b>
<b>Savings</b>				
<b>Savings</b>	<b>Unit Rate</b>	<b>2018 Savings (10 months)</b>	<b>2019 Savings (12 months)</b>	<b>22 Month Pilot Total</b>
1) Landfill Space	\$150 per	\$167,500	\$201,000	\$368,500

Saved	tonne			
<b>Savings Sub-Total (B)</b>		<b>\$167,500</b>	<b>\$201,000</b>	<b>\$368,500</b>
<b>TOTAL Pilot Savings (B-A)</b>		<b>\$34,000</b>	<b>\$46,000</b>	<b>\$80,000</b>

It should be noted that as indicated there is an increase in operation costs to run this program of an estimated \$133,500 in year one (2018) and \$155,000 in year two (2019) but this cost is offset by deferral of capital due to landfill space savings. The net value to the City is estimated to be at least \$34,000 in year one (2018) and \$46,000 in year two (2019) in landfill space savings.

Therefore, it is recommended that \$133,500 be incorporated into the 2018 operating budget and that \$155,000 be incorporated into the 2019 operating budget for a 22 month pilot starting March 1, 2018 to December 31, 2019.

**Relationship of Recommendation(s) to the 2016-2019 Strategic Plan:**

This report contributes to the Council Adopted Strategic Plan, namely Strategic Action 3.1.2 which is “Executing the Waste Management Strategy”. This report aligns with the City’s Integrated Waste Management Strategy to divert materials from landfill and find further recycling opportunities to save landfill space.

Also, the proposed C&D recycling program aligns with Goal #3 of a “Healthy Environment”. The act of construction and demolition waste diversion aligns with the City’s vision of a naturally beautiful community that protects our local environment, enhances water quality and creates an improved quality of life.

**Review of Accessibility Implications of Any Development or Policy:**

None

**Servicing Implications:**

None

**Consultations:**

- Reclay StewardEdge
- Waste Management Strategy Task Force
- Fenelon Public Review Committee
- Lindsay Ops Public Review Committee
- Environmental Services
- Finance
- Asset Management

**Attachments:**

Appendix A – Reclay C&D Feasibility Study



FINAL CD Report.pdf

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