



## Committee of the Whole Report

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**Report Number:** WM2021-009

**Meeting Date:** June 1, 2021

**Title:** **Construction and Demolition Recycling Pilot Results and Recommendations**

**Description:** An update on the Construction and Demolition recycling pilot program and recommendation to establish it as a permanent program.

**Author and Title:** David Kerr, Manager of Environmental Services

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### Recommendation(s):

**That** Report WM2021-009, **Construction and Demolition Recycling Pilot Results and Recommendations**, be received;

**That** Council approves a permanent Construction and Demolition recycling program at the Lindsay Ops landfill, with an operating budget of \$155,000 in 2022; and

**That** this recommendation be brought forward to Council for consideration at the next Regular Council Meeting.

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

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

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

## **Background:**

At the Council Meeting of September 12, 2017 Council adopted the following resolution:

### **CR2017-756**

Resolved That Report WM 2017-007, Construction and Demolition Waste Recycling Program, be received;

That 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 \$133,500.00 for 2018 and \$155,000.00 for 2019, be approved; 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.

At the Council meeting of June 18, 2019 Council adopted the following resolution:

### **CR2019-405**

Resolved That Report WM2019-008, Construction and Demolition Recycling Pilot Results and Recommendations, be received;

That Council approve an extension of the pilot to December 31, 2020 with an operating budget of \$155,000 in 2020; and

That Staff report back to Council on the success of the construction and demolition waste recycling pilot program by June 30, 2020 with future program recommendations and associated budget.

At the Council meeting of July 28, 2020 Council adopted the following resolution:

### **CR2020-193**

That Report WM2020-009, Construction and Demolition Recycling Pilot Program, be received;

That Council approve an extension of the pilot to December 31, 2021 with consideration of an operating budget of \$155,000 in 2021; and

That Staff report back to Council on the success of the construction and demolition waste recycling pilot program by June 30, 2021 with future program recommendations and associated budget.

This report addresses that direction.

Prior to implementing the construction and demolition (C&D) recycling pilot program, we retained Reclay Steward Edge (Reclay) to assess the feasibility of such a program. As part of the background research, Reclay noted that the quantity of C&D waste generated far exceeded the amount of municipal solid waste generated. For our municipality, approximately 40% of the waste going to landfills is C&D waste. Therefore, diversion of this material could almost double our landfill's life expectancy. As well, C&D materials are bulky and challenging to compact, taking up needless volume of landfill space. Furthermore, many materials generated through C&D activities have value and can be recycled into other products, used as fuel or even be used as an aggregate substitute.

The primary recommendation of the Reclay study was for the City to implement a pilot C&D recycling program at both the Fenelon and Lindsay Ops landfill sites. It should be noted that through Reclay's research there was insufficient volume of C&D waste received at the other landfills (i.e. Somerville, Eldon and Laxton landfills) to justify a business case for C&D recycling at those sites.

The driving factor for this recycling program was the savings related to increasing landfill space, which was valued at the industry standard of \$150/tonne (Reclay). Reclay estimated a C&D program could divert 10% of C&D waste from landfill. In other words, the projected space saved by having a C&D recycling program would result in an increase in landfill life of 0.04 years for each year Fenelon operates and 0.17 years for each year Lindsay Ops operates.

In January of 2018 a competitive request for proposal (RFP) process was undertaken to secure a third-party contractor to transport and process the C&D material from Lindsay Ops and Fenelon landfills. Unfortunately, the City received no submissions for the RFP. The likely reason was that at the time, quantities and commodity pricing for the C&D materials was not high enough to justify transportation costs for end use processing.

Staff then researched what other municipalities were currently doing to reduce their C&D materials going to landfill. Based on this research we implemented actions to reduce C&D waste as follows:

- In 2018, staff started separating and chipping wood waste at the Lindsay Ops Landfill for cover material and road base at the landfill. This did not divert material from landfill but reduced the volume materials consumed in the landfill.
- In 2019, Durham Disposal was contracted to transport and process offsite clean wood waste from the Lindsay Ops landfill. This program ran successfully for 6 months, diverting 46 tonnes of material from landfill.
- In 2019, we implemented a drywall recycling program with New West Gypsum. This program ran successfully at both the Lindsay Ops and Fenelon landfills, diverting approximately 3 tonnes from Fenelon and 31 tonnes from Lindsay Ops.

In December of 2019, a competitive request for quotation (RFQ) process for a clean wood recycling program (to be implemented in 2020) was initiated. Unfortunately, no bids were received for this work. Staff then reached out to Durham Disposal (the previous contractor) to inquire on why they did not submit a bid. As a result of those discussions, an alternative arrangement was negotiated and Durham Disposal agreed to transport and process mixed construction and demolition material (including clean wood waste, drywall, shingles, rubble, etc.) from the Lindsay Ops landfill for \$150 per tonne.

This new agreement with Durham Disposal was set to commence in early 2020, but due to the pandemic state and landfills being closed to the public, this program was delayed in the first half of 2020. Fortunately, it was able to start up in the late spring and successfully ran from June 1, 2020 to December 31, 2020. During this time, a total of 267 tonnes of material were diverted from landfill.

As per Council approval, the agreement with Durham Disposal was extended to December 31, 2021. With a budget of \$155,000, there is potential to divert 1000 tonnes of C&D material from the Lindsay Ops landfill by the end of 2021.

## **Rationale:**

Landfill staff have been working with local contractors to divert as much material as possible. From the beginning of the year to the end of May 2021, approximately 400 tonnes of material have been diverted from the Lindsay Ops landfill. We anticipate that

this program will be even more successful in the summer months. We are on track to meet our goal of 1000 tonnes of C&D diversion by December 31, 2021.

This program holds great opportunities for us to extend the life of our landfills. Although this program has been most successful at the Lindsay Ops landfill, we will continue to review and implement ways to divert additional C&D from our four other active landfills.

Therefore, we strongly recommend establishing a C&D recycling as a permanent program as part of our ongoing waste management operation.

As a summary, the following table indicates the amount of materials that have been diverted from landfill since the pilot program started:

Year	Material	Tonnages Diverted from Landfill
2018	Clean Wood Waste	0 Note: volume of the material was decreased through chipping and was utilized as landfill cover
2019	Clean Wood Waste	46
	Drywall	34
2020	Mixed Construction/Demolition Materials	267
2021	Mixed Construction/Demolition Materials	390 (end of April 2021)

At the Waste Management Advisory Committee meeting on April 19, 2021 the following resolution was made:

Resolved That the Waste Management Advisory Committee supports a permanent Construction and Demolition recycling program at the Lindsay Ops landfill, with consideration of an annual operating budget of \$155,000 for 2022.

**Moved By** Councillor Yeo

**Seconded By** Councillor Ashmore

At the Lindsay Ops Landfill Public Review Committee meeting on April 21, 2021 the following resolution was made:

Resolved That the Lindsay Ops Landfill PRC receive the report, and

That the PRC supports a permanent Construction and Demolition recycling program at the Lindsay Ops landfill, with consideration of an annual operating budget of \$155,000 for 2022.

**Moved By** Councillor Dunn

**Seconded By** L. Scrivens

At the Fenelon Landfill Public Review Committee meeting on May 25, 2021 the following resolution was made:

Resolved That the Fenelon Landfill Public Review Committee supports a permanent Construction and Demolition recycling program at the Lindsay Ops landfill, with consideration of an annual operating budget of \$155,000 for 2022.

**Moved By** Julia Taylor

**Seconded By** Robert Coleman

### **Other Alternatives Considered:**

Council could choose not to proceed with a permanent construction and demolition recycling program. However, without a C&D recycling program it would be difficult to meet the diversion targets set out in our long term Waste Management Strategy. Therefore we recommend that the City continue to lead by example in diverting waste from landfill and continue to explore further C&D diversion options over future years

### **Alignment to Strategic Priorities**

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.

In addition, 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.

## **Financial/Operation Impacts:**

Staff are requesting Council to consider operating budget approval of \$155,000 for the Lindsay Ops landfill in 2022. If an annual goal of 1000 tonnes of diverted C&D material is met, this would save approximately 3000 cubic metres in landfill space in one year. This can be compared to 3000 cubic metres of residential waste, which we estimate when compacted in a landfill is approximately 2100 tonnes. When the estimated savings in landfill space of \$150 per tonne is considered there is a savings of \$315,000 (2100 tonnes x \$150) in deferred landfill space every year. Therefore, the \$155,000 annual expense for transportation and processing of C&D waste justifies a savings to the City of \$160,000 (revenue-expense) per year.

**Department Head email:** [brobinson@kawarthalakes.ca](mailto:brobinson@kawarthalakes.ca)

**Department Head:** Bryan Robinson, Director of Public Works