



TO: Angela Porteous, City of Kawartha Lakes
FROM: Dave Faris Yousif, Reclay StewardEdge
DATE: January 17, 2017
RE: **Options for a Construction & Demolition Waste Recycling Program at the City of Kawartha Lakes: Consultation & Assessment Plan**

1. Objective

The City of Kawartha Lakes (City) has selected Reclay StewardEdge Inc. (RSE) to investigate the feasibility of implementing a construction and demolition (C&D) waste landfill drop-off program and identify strategies for resource recovery of C&D materials.

2. Consultations

Consultations will be carried out with a minimum of ten Ontario municipalities and eight industries and non-municipal organizations.

Municipalities

Information collected from the municipal consultations will include the C&D material types and amounts that are accepted and collected, financial aspects of the municipal program (public cost, operating and capital cost, any positive returns), the amount of landfill space saved and impact to diversion rate, end markets and processors and municipal contact information, with notes.

The proposed list of municipalities to be consulted:

Municipality	Rationale
County of Simcoe	Existing C&D recycling program and in close proximity
City of Orillia	Existing C&D recycling program and in close proximity
County of Peterborough	Some diversion of C&D materials. Identified increased C&D diversion as a priority in master plan
City of Peterborough	High diversion rate municipality with existing C&D material diversion
Region of Durham	Existing C&D recycling program
Region of York	Existing C&D recycling program
City of Guelph	Existing C&D recycling program
Muskoka District	Some C&D recycling, seasonal municipality
County of Northumberland	High diversion rate municipality and in close proximity
City of Ottawa	Identified C&D recycling as a priority in master plan

Industry

The intent of consultations with industry will be to primarily identify the opportunities (outlets, markets) that exist for C&D recycling. We also hope to identify industries standards and specifications for receiving material (for example, are mixed loads acceptable or must C&D waste be sorted by material type). The consultations will also seek to identify the range of industry fees and costs associated with C&D recycling. Lastly, in our consultations we hope to identify reuse options. All contact information and notes from the consultations will be provided to the City.

The proposed list of industries and contacts to be consulted:

Rebecca Mustard ¹ , Manager of Economic Development	Kelly Maloney ¹ , Agricultural Development Officer
Index Environmental	M&M Disposal
New West Gypsum Recycling	Habitat for Humanity
Try Recycling	Countrywide Recycling
Ken Redmond	Cement manufacturers

3. Waste Assessment Methodology

The proposed waste assessment methodology:

- Combination of weight and visual audit of sample materials from all landfills
- When auditors not on-site, all C&D material loads during sample period need to be set aside as dedicated piles until auditors are able to assess the load
- Weight of each load will need to be tracked separately, and if possible, generator and vehicle type (input as a note on scale ticket). C&D loads from the general public should not be combined in one bin until auditors have had a chance to audit load
- A list of material categories (below) will be utilized to track composition
- When on-site, auditors will inspect each load. Photographs and a visual volumetric measurement will be taken. Auditors will also record the length, width, and height of each load to aid in an estimation of volume
- Recorded volumes will later be converted into weights based on standard material bulk density conversion factors, and the net weight of each individual truck load
- Weight of miscellaneous materials in homogenous loads will be captured

¹ As a first point of contact.

4. Material Assessment Categories

The material assessments will be based on the following audit categories:

Major Category	Sub Categories
Brick and Concrete	Cut offs, broken bricks, spilled concrete, cut or broken blocks, concrete with metal, asphalt
Cardboard	Boxes, sleeves on side of pallet loads
Carpet	Cuttings/remnants, underpadding
Drywall	Cutoffs, broken or damaged pieces, cut outs for windows/doors, compound, plaster
Fines	Fill, aggregate
Fixtures	Vanities, countertops, toilets, sinks
Insulation	Cuttings, damaged pieces, blown, blocks
Metal	Electrical, beams, light tracks, hangers, pipe, conduit
Plastic	Cuttings from plastic pipe, plastic film/wrap
Roofing Shingles	Cutoffs, damaged shingles, tar paper
Tile	Floor tiles, floor cutoffs, ceiling tiles, ceramics
Wood	Lumber cut-offs, damaged studs, skids, clean wood, particle board, wood flooring, treated vs. untreated wood
Other	Electrical wire, glass, construction paper
Non C&D Materials	Blue box recyclables, HHW, organics, general waste, furniture, bulky plastics

5. Waste Assessment Schedule

Based on a 10 to 11 day sample schedule, the waste assessment schedule is proposed below:

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	<u>February 27</u> Fenelon Somerville	<u>February 28</u> Lindsay	<u>March 1</u> Fenelon Eldon	<u>March 2</u> Lindsay Laxton	<u>March 3</u> Lindsay Somerville	<u>March 4</u> Fenelon Eldon	<u>March 5</u>
Week 2	<u>March 6</u> Laxton Fenelon Somerville	<u>March 7</u> Lindsay	<u>March 8</u> Fenelon Eldon	<u>March 9</u> Lindsay Laxton	Back-Up Dates – March 10-12		



6. Preliminary Notes of Consideration and Requests

The following is a list of notes of consideration and requests we would like to identify prior to carrying out the assessment and, eventually, analysis:

- Need to be able to ensure that C&D loads tipped not in the presence of auditors are not altered (e.g. scrap metal removed by landfill staff)
- Keys to rural landfill sites. Auditors may need to assess C&D loads after landfill closure. RSE will ensure keys are returned to the City
- Site plans of the five landfill sites and possible C&D program locations

7. Project Timeline

