



**Trent University - Peterborough Campus**  
**1600 West Bank Drive**  
**Peterborough, Ontario**

## **2023 Waste Audit**

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# Table of Contents

## [Executive Summary](#)

### [1. Introduction](#)

#### [1.1 Purpose and Objectives](#)

### [2. Scope of Work](#)

### [3. Sampling Methodology](#)

### [4. Waste Audit Findings](#)

#### [4.1 Site Tour](#)

#### [4.2 Sample Mass Analysis](#)

#### [4.3 Sample Mass Composition by Material and Waste Stream](#)

#### [4.4 Types of Recycling Material in the Garbage and Organics Stream](#)

### [5.0 Waste Diversion Programs and Disposal Systems](#)

### [6.0 Performance Metrics](#)

#### [6.1 Waste Diversion Rate](#)

#### [6.2 Capture Rate](#)

### [7.0 Year-Over-Year Analysis](#)

### [8.0 Waste Audit Summary and Waste Reduction Work Plan](#)

### [9.0 Findings and Conclusions](#)

### [10 Recommendations](#)

#### [10.1 Improve Existing Waste Diversion Programs](#)

#### [10.2 New Waste Diversion Opportunities](#)

#### [10.3 Promoting Culture](#)

#### [10.4 Continuous Monitoring and Process Improvement](#)

## [Appendices](#)

### [Appendix A: List of Categories](#)

### [Appendix B: Annual Request Form](#)

### [Appendix C: Scale Calibration Certificate](#)

### [Appendix D: Sample Composition by Building, Functional Area and Waste Stream](#)

### [Appendix E: Sample Composition \(by Functional Area and Material\)](#)

### [Appendix E: Sample Composition \(by Building and Material\)](#)

### [Appendix F: Estimated Annual Quantities Generated from Garbage/ Recycling/ Organics Streams](#)

### [Appendix G: Site Photographs](#)

### [Appendix H: Waste Reduction Work Plan](#)

## Executive Summary

Waste Reduction Group (“WRG”) was retained by Trent University - Peterborough Campus (“Trent”) to conduct a solid non-hazardous waste audit (in compliance with the Environmental Protection Act, O.Reg. 102/94: Waste Audits and Waste Reduction Work Plans and O.Reg. 103/94: Industrial, Commercial and Institutional Source Separation Program) for the educational institution located at 1600 West Bank Drive in Peterborough, Ontario (the Site).

The objectives of the audit were to determine the composition of the garbage, recycling, and organics streams by point of origin, quantify Trent's estimated 2023 annual waste generation, determine the waste diversion and capture rates, identify additional opportunities for waste reduction and diversion, and address any specific concerns identified during the study.

The scope of the waste audit included collecting 49 representative samples of garbage, recycling, and organics from multiple floors of the site-building.

### Findings and Conclusions

#### *Sample Composition*

- The garbage stream generated the highest sample mass (61% of the total sample mass), which consisted primarily of paper towels.
- Approximately 57% of the sample mass originated from the ESB/CSB, Student Centre, LEC and DNA Building.
- Approximately 49% of the sample mass originated from public areas and offices.
- Garbage Stream Sample
  - Paper towels had the highest material sample mass (15.95%), followed by organics (10.39%). Some fine paper was identified in the Enweying College offices, and aluminum was identified in the Lady Eaton Centre public garbage stream.
- Recycling Stream Sample
  - Fine paper had the highest material sample mass (3.23%). The sample also identified small amounts of non-recyclable contamination, including LDPE (#4) plastic film. The ESC/CSB public area sample also identified some non-recyclable contamination.
- The organics sample had the highest material sample mass (9.35%).
- In general, contamination in the waste collection streams was minimal.

#### *Recyclables in Waste Streams*

- Mandatory Recyclables were identified in the garbage stream (15.11%).
  - Enweying College generated the highest ratio of mandatory recyclables (49.96%), followed by Blackburn (26.24%) and ESC/CSB (23.88%).
  - The Office Areas generated the highest ratio of mandatory recyclables (35.34% and 26.70%), followed by the Complex Lab (27.96%) and Classrooms (20.88%)

- The mandatory recyclable materials identified consisted primarily of fine paper and copier paper.
- The total annual quantity of mandatory recyclables estimated to exist in the garbage stream is 39.2 MT, of which 25.77 MT consists of fine paper.
- Other Recyclables were identified in the garbage stream (74.94%) and primarily consisted of:
  - **Paper towels - estimated to produce 77.98 MT annually**
  - **Organics - estimated to produce 43.49 MT annually**
- **Waste Diversion Rate**—It was calculated to be **82.26%** based on 1,250.88 MT of diverted waste and 1,520.72 MT of total waste produced annually. Waste diversion has decreased slightly from 2018 (82.46%) but has remained consistently high since 2016.
- **Capture Rate**—The overall capture rate was 84.32% based on 1,483.45 MT of total divertible waste generated and 1,250.88 MT of divertible waste generated through diversion programs. Capture rates have remained high since 2018 but have decreased from 94.06% (2018). The decrease in capture rate is due to a lower organic capture rate due to paper towels and organic take-out containers in the garbage stream.

## Recommendations

Improving the following existing diversion programs could improve waste diversion and capture rates.

### *Existing Waste Diversion Programs (Mandatory Recyclables):*

- **Fine Paper** - 25.77 MT of material is estimated to be generated annually through the garbage stream. Diverting this material through the existing mixed paper diversion program could **increase the waste diversion rate by up to 1.7%**. It could **increase the Mixed Papers Recycling Stream capture rate by up to 8%** based on current waste quantities at the Site.
- **Aluminum** - 9.37 MT of material is estimated to be generated annually through the waste stream. Diverting this quantity through the existing mixed recycling diversion program could **increase the waste diversion rate to 0.61%** based on current waste quantities at the Site.
- **Glass**—3.14 MT of material is estimated to be generated annually through the waste stream. Based on current waste quantities at the site, diverting this quantity through the existing mixed recycling diversion program could increase the waste diversion rate to 0.2%.

*Existing Waste Diversion Programs (Other Recyclables):*

- **Organics** - 43.49 MT of organics are estimated to be generated through garbage streams. Diverting this material through the existing organics stream could **increase the waste diversion rate to 2.85% and increase the organics capture rate to 27.14%** based on current waste quantities at the Site.
- **Craft Paper**— 15.38 MT of craft paper is estimated to be generated through garbage streams. Based on current waste quantities at the site, diverting this material through the existing mixed-paper stream could increase the waste diversion rate to 1%.
- **PP #5** - 11.74 MT of PP #5 are estimated to be generated through garbage streams. Based on current waste quantities at the site, diverting this material through the existing co-mingled recycling stream could increase the waste diversion rate up to 0.77%.

*New Waste Diversion Opportunities:*

- **Paper Towels**— **77.98 MT of paper towels are estimated to be generated through garbage streams. The City of Peterborough accepts paper towels in the organic streams. Diverting paper towels through the existing organics stream could increase the waste diversion rate up to 5.12%, and the organics capture rate up to 48.67%** based on current waste quantities at the Site.

*Promoting Culture:*

- Establish a committee that oversees waste reduction and sustainability and promotes a culture of waste diversion.
- Educate students and staff on the importance of waste diversion and communicate the corporate goals for waste diversion and sustainability.
- Create a positive message around the benefits of waste diversion and the individual's role.
  - Support and encourage purchasing and using “environmentally friendly,” reusable or recyclable materials, packaging, and/or recycled content.

*Continuous Monitoring and Improvement:*

- Continuing to track year-over-year changes in waste diversion, capture rates and communicate progress to staff to encourage further participation/engagement from staff.

## 1. Introduction

Waste Reduction Group (“WRG”) was retained by Trent University—Peterborough Campus (“Trent”) to conduct a solid, non-hazardous waste audit for the facility located at 1600 West Bank Drive in Peterborough, Ontario (the Site). The audit complied with the Environmental Protection Act, O.Reg. 102/94: Waste Audits and Waste Reduction Work Plans, and O.Reg. 103/94: Industrial, Commercial, and Institutional Source Separation Program.

### 1.1 Purpose and Objectives

The purpose of the waste audit was to comply with Ontario Regulation 102/94 – Waste Audits and Waste Reduction Work Plans Part XI, which requires educational institutions to conduct a waste audit covering the waste generated by the establishment operating at the site and prepare and implement a waste reduction work plan on an annual basis to confirm compliance with Ontario Regulation 103/94 – IC&I Source Separation Programs.

The objectives are as follows:

- Determine the composition of the Garbage, Recycling and Organics waste streams by point of origin,
- Quantify the estimated 2023 annual waste generation for all waste streams using the 2022 annual data provided by Trent,
- Determine the waste diversion and capture rates,
- Identify additional opportunities for waste reduction and diversion; and
- Address any specific concerns identified during the study.

The Site is considered to apply to O.Reg. 103./94 – Educational Institutions.

## 2. Scope of Work

The scope of work focused on the following buildings and functional areas of the Site:

- DNA Buildings and Life & Health Sciences Complex (DNA Building):
  - DNA Labs
  - Offices
  - Public Areas
  - Washroom
- Environmental Science Centre and Chemical Science Building (ESC/CSB):
  - Classroom
  - Complex Lab
  - Office Area
  - Public Areas
  - Washroom
- Enweying College:
  - Offices
  - Public Areas

- Enweying Dining Hall
- Julian Blackburn Hall (Blackburn):
  - Offices
  - Public Areas
- Lady Eaton College (LEC)
  - Classroom
  - Offices
  - Public Areas
- Otonabee College - Academics (Otonabee Academics):
  - Public Areas
- Otonabee College - Dining Hall (Otonabee Dining Hall):
  - Dining Hall
  - Kitchen Services
  - Public Areas
- Otonabee College - Residence (Otonabee Residences):
  - Offices
  - Public Areas
- Student Centre
  - Public Areas
  - Starbucks

To meet the objectives outlined above, the following activities were undertaken by WRG:

- Collected a total of 49 samples of the garbage, organics, and recycling streams from the following buildings:
  - Five (5) samples from the LEC
  - Five (5) samples from the Student Centre
  - Four (4) samples from the Enweying Dining Hall
  - Five (5) samples from the Enweying College
  - Five (5) samples from Blackburn
  - Three (3) samples from the Otonabee Residences
  - Five (5) samples from the Otonabee Dining Hall
  - Two (2) samples from the Otonabee Academics
  - Seven (7) samples from the DNA Buildings
  - Eight (8) samples from the ESC/CSB
- Samples were collected from the site between October 2<sup>nd</sup> and October 5<sup>th</sup>, 2023.
- Sorted samples into predetermined categories as set out by WRG (detailed in Appendix A: List of Categories)
- Determined the total quantity of waste diverted from landfill through current reduction, reuse, and recycling programs implemented at the facility (provided by Trent, Appendix B: Annual Data Request Form);
- Completed a waste audit report summarizing the audit findings and provided recommendations for increased waste diversion efficiency.
- Conducted a tour of the Site accompanied by Trent personnel and interviewed staff to obtain information on existing waste diversion practices.



### 3. Sampling Methodology

WRG collected 49 representative samples between October 2<sup>nd</sup> and 5<sup>th</sup>, 2023, from various buildings and associated functional areas of the Site. Below is a summary of the samples collected by location.

Figure 1: Sample Collection Summary

Building -> Functional Area	Garbage	Co-Mingled	Mixed Papers	Organics	Total
<b>DNA Buildings and Life &amp; Health Sciences Complex</b>	<b>4</b>	<b>3</b>			<b>7</b>
DNA Labs	1	1			2
Offices	1	1			2
Public Areas	1	1			2
Washroom	1				1
<b>Environmental Science Centre and Chemical Science Building</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>8</b>
Classroom	1				1
Complex Lab	1				1
Office Area	1				1
Public Areas	1	1	1	1	4
Washroom	1				1
<b>Enweying College</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>5</b>
Offices	1	1			2
Public Area				1	1
Public Areas		1	1		2
<b>Enweying Dining Hall</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>
Dining Hall	1	1	1	1	4
<b>Julian Blackburn Hall</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>5</b>
Offices	1	1			2
Public Area				1	1
Public Areas		1	1		2
<b>Lady Eaton College</b>	<b>2</b>	<b>2</b>		<b>1</b>	<b>5</b>
Classroom	1				1
Offices		1			1
Public Areas	1	1			2
Unlabeled				1	1
<b>Otonabee College - Academics</b>	<b>1</b>			<b>1</b>	<b>2</b>
Public Areas	1				1
Unlabeled				1	1
<b>Otonabee College - Dining Hall</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>
Dining Hall	1			1	2
Kitchen Services	1				1
Public Areas		1	1		2
<b>Otonabee College - Residence</b>	<b>1</b>	<b>1</b>	<b>1</b>		<b>3</b>
Offices	1				1
Public Areas		1	1		2
<b>Student Centre</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>5</b>
Public Area				1	1
Public Areas		1	1		2
Starbucks	1				1
Unlabeled	1				1
<b>Total</b>	<b>20</b>	<b>14</b>	<b>7</b>	<b>8</b>	<b>49</b>

Qualified WRG staff sorted the materials using containers to keep them separate. Waste was sorted into individual material categories and weighed using a calibrated scale (Appendix C:



Scale Calibration Certificate). It was then re-bagged and disposed of in an appropriate waste container.

## **4. Waste Audit Findings**

In total, 308.87 kg of waste materials were collected for the waste audit. Analysis of the waste stream sample is provided in the following sections.

### **4.1 Site Tour**

During the tour of the Site, the following observations were made by WRG representatives:

- Three-stream containers were observed throughout the building and included:
  - Landfill waste
  - Mixed paper
  - Mixed containers, and
  - Organics
- Adequate and clear signage was observed throughout the Site to encourage proper disposal at the source and signage to promote the culture of environmental sustainability.
- Cell phone/printer cartridge/battery disposal receptacles were observed in areas of the Site.
- Milk/cream jugs for coffee/tea were observed to reduce waste generated from small disposable packaging.
- Reusable cutlery was available for public use to reduce disposable take-out waste.
- Eco-tray receptacles were observed and were labelled with clear signage to discourage contamination.
- Donation bins were observed in various locations throughout the Site.
- Water bottle refill stations were observed throughout the buildings to encourage students and staff to reduce waste from single-use containers.

## 4.2 Sample Mass Analysis

Based on the audit findings, the site areas that produced the highest mass (kg) from the waste stream are shown below.

Figure 2: Sample Mass by Building and Sample Stream  
 (in kg and % of sample by mass)

Sample Stream Building	Garbage		Co-Mingled		Mixed Papers		Organics		Total	
	kg	%	kg	%	kg	%	kg	%	kg	%
DNA Buildings and Life & Health Sciences Complex	20.61	6.67%	6.21	5.25%					36.82	11.92%
Environmental Science Centre and Chemical Science Building	43.97	14.24%	5.83	1.89%	4.76	1.54%	1.61	0.52%	56.17	18.19%
Erweyng College	13.85	4.48%	7.66	2.48%	1.54	0.50%	4.56	1.48%	27.61	8.94%
Erweyng Dining Hall	1.31	0.42%	3.59	1.16%	4.57	1.46%	16.48	5.34%	25.95	8.40%
Julian Blackburn Hall	7.05	2.28%	8.15	2.64%	3.60	1.17%	2.76	0.89%	21.56	6.98%
Lady Eaton College	20.28	6.89%	3.89	1.26%			2.20	0.71%	37.37	12.10%
Otonabee College - Academics	9.20	2.98%					1.14	0.37%	10.34	3.35%
Otonabee College - Dining Hall	20.99	7.12%	3.48	1.13%	2.39	0.77%	5.85	1.89%	33.71	10.91%
Otonabee College - Residence	10.86	3.52%	1.59	0.51%	1.22	0.39%			13.67	4.43%
Student Centre	18.40	12.43%	5.96	1.93%	0.79	0.26%	0.52	0.17%	45.67	14.79%
<b>Total</b>	<b>188.52</b>	<b>61.04%</b>	<b>66.36</b>	<b>21.48%</b>	<b>18.87</b>	<b>6.11%</b>	<b>35.12</b>	<b>11.37%</b>	<b>308.87</b>	<b>100.00%</b>

Figure 3: Sample Mass by Functional Area and Sample Stream  
 (in kg and % of sample by mass)

Sample Stream Functional Area	Garbage		Co-Mingled		Mixed Papers		Organics		Total	
	kg	%	kg	%	kg	%	kg	%	kg	%
Classroom	11.54	3.74%							11.54	3.74%
Complex Lab	4.84	4.80%							14.84	4.80%
Dining Hall	3.46	4.36%	3.59	1.16%	4.57	1.48%	22.33	7.23%	43.95	14.23%
DNA Labs	8.35	2.70%	1.43	0.46%					9.78	3.17%
Kitchen Services	9.84	3.19%							9.84	3.19%
Office Area	6.14	1.99%							6.14	1.99%
Offices	37.11	12.01%	28.36	9.51%					66.47	21.52%
Public Area							7.84	2.54%	7.84	2.54%
Public Areas	38.43	12.44%	31.98	10.35%	4.30	4.63%	1.61	0.52%	86.32	27.95%
Starbucks	24.23	7.84%							24.23	7.84%
Unlabeled	4.17	4.59%					3.34	1.08%	17.51	5.67%
Washroom	10.41	3.37%							10.41	3.37%
<b>Total</b>	<b>188.52</b>	<b>61.04%</b>	<b>66.36</b>	<b>21.48%</b>	<b>18.87</b>	<b>6.11%</b>	<b>35.12</b>	<b>11.37%</b>	<b>308.87</b>	<b>100.00%</b>

Notable observations are described below:

- The garbage stream generated the highest sample mass (188.52 kg, approximately 61% of the total sample mass).
- Approximately 57% of the sample mass originated from the ESB/CSB, Student Centre, LEC and DNA Building.
- Approximately 49% of the sample mass originated from public areas and offices.

A detailed breakdown of sample mass by building, functional area and waste stream is provided in Appendix D.

### 4.3 Sample Mass Composition by Material and Waste Stream

Based on the audit findings, the materials with the highest mass (kg) from the waste streams are shown in the visual below.

Figure 4: Waste Sample Composition by Material and Waste Stream  
 (in kg and % of total sample by mass)

Note: higher intensity of blue highlighting indicates higher sample mass/percent

Sample Stream Material	Garbage		Co-Mingled		Mixed Papers		Organics		Total	
	kg	%	kg	%	kg	%	kg	%	kg	%
Aluminum	6.67	2.16%	4.81	1.56%	0.31	0.10%	0.00	0.00%	11.79	3.82%
Ancillary Elements	0.14	0.05%	0.01	0.00%	0.00	0.00%	0.01	0.00%	0.16	0.05%
Aseptic Containers	3.39	1.10%	0.42	0.14%	0.20	0.06%	0.05	0.02%	4.06	1.31%
Batteries	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Boxboard	6.30	2.04%	3.17	1.03%	3.66	1.18%	0.20	0.06%	13.33	4.32%
Cardboard	0.46	0.15%	4.17	1.35%	1.48	0.48%	0.00	0.00%	6.11	1.98%
Coffee Cups	3.24	1.05%	1.66	0.54%	0.35	0.11%	0.09	0.03%	5.34	1.73%
Coffee Pods	0.11	0.04%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.11	0.04%
Cold Beverage Wax-Lined Paper Cups	0.78	0.25%	0.83	0.27%	0.00	0.00%	0.02	0.01%	1.63	0.53%
Craft Paper	10.98	3.55%	1.65	0.53%	1.77	0.57%	0.72	0.23%	15.12	4.90%
Electronic Waste	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Gable Top Containers	6.54	2.12%	0.86	0.28%	0.56	0.18%	0.00	0.00%	7.96	2.58%
Glass	2.34	0.76%	8.30	2.69%	0.00	0.00%	0.00	0.00%	10.64	3.44%
HDPE Plastic Containers #2	2.09	0.68%	1.84	0.60%	0.00	0.00%	0.00	0.00%	3.93	1.27%
LDPE (#4) Plastic Films	7.68	2.49%	2.89	0.94%	0.76	0.25%	0.48	0.16%	11.81	3.82%
Newspaper	0.22	0.07%	0.68	0.22%	0.00	0.00%	0.00	0.00%	0.90	0.29%
Non-Recyclable	14.89	4.82%	2.86	0.93%	1.04	0.34%	0.03	0.01%	18.82	6.09%
organic take-out container	4.89	1.58%	1.10	0.36%	1.39	0.45%	1.35	0.44%	8.73	2.83%
Organics	32.09	10.39%	0.10	0.03%	0.20	0.06%	28.88	9.35%	61.27	19.84%
Other fine paper	9.22	2.99%	9.99	3.23%	2.91	0.94%	0.00	0.00%	22.12	7.16%
Other packaging	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Paper Towels	49.27	15.95%	0.54	0.17%	0.74	0.24%	2.85	0.92%	53.40	17.29%
paper/copier paper	7.83	2.54%	3.57	1.16%	2.18	0.71%	0.00	0.00%	13.58	4.40%
PET #1	6.08	1.97%	7.70	2.49%	0.14	0.05%	0.03	0.01%	13.95	4.52%
Plastic Strapping	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Polystyrene #6	0.39	0.13%	0.13	0.04%	0.02	0.01%	0.00	0.00%	0.54	0.17%
PP #5	8.23	2.66%	7.76	2.51%	0.42	0.14%	0.08	0.03%	16.49	5.34%
PPE	2.51	0.81%	0.00	0.00%	0.00	0.00%	0.00	0.00%	2.51	0.81%
Scrap Metal	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Scrap Wood	0.10	0.03%	0.17	0.06%	0.00	0.00%	0.06	0.02%	0.33	0.11%
Service accessories	0.29	0.09%	0.47	0.15%	0.09	0.03%	0.27	0.09%	1.12	0.36%
Steel Cans	0.00	0.00%	0.10	0.03%	0.00	0.00%	0.00	0.00%	0.10	0.03%
Styrofoam	0.05	0.02%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.05	0.02%
Textiles	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Trent-branded items	0.00	0.00%	0.00	0.00%	0.21	0.07%	0.00	0.00%	0.21	0.07%
Trent-branded paper	1.74	0.56%	0.58	0.19%	0.44	0.14%	0.00	0.00%	2.76	0.89%
<b>Total</b>	<b>188.52</b>	<b>61.04%</b>	<b>66.36</b>	<b>21.48%</b>	<b>18.87</b>	<b>6.11%</b>	<b>35.12</b>	<b>11.37%</b>	<b>308.87</b>	<b>100.00%</b>

Notable observations are described below:

- Garbage sample - paper towels had the highest material sample mass (15.95%), followed by organics (10.39%);
- Recycling sample - other fine paper had the highest material sample mass (3.23%), and
- The Organics sample had the highest material sample mass (9.35%).

The sample mass (%) ranked by building, functional area and material and organized by the waste stream is provided in the charts below.

Figure 5a. Garbage Sample Mass (kg) Ranked by Building, Functional Area and Material (including Material Type)

**Green** = Mandatory Recyclables    **Blue** = Other Recyclables    **Brown** = Non-Recyclables

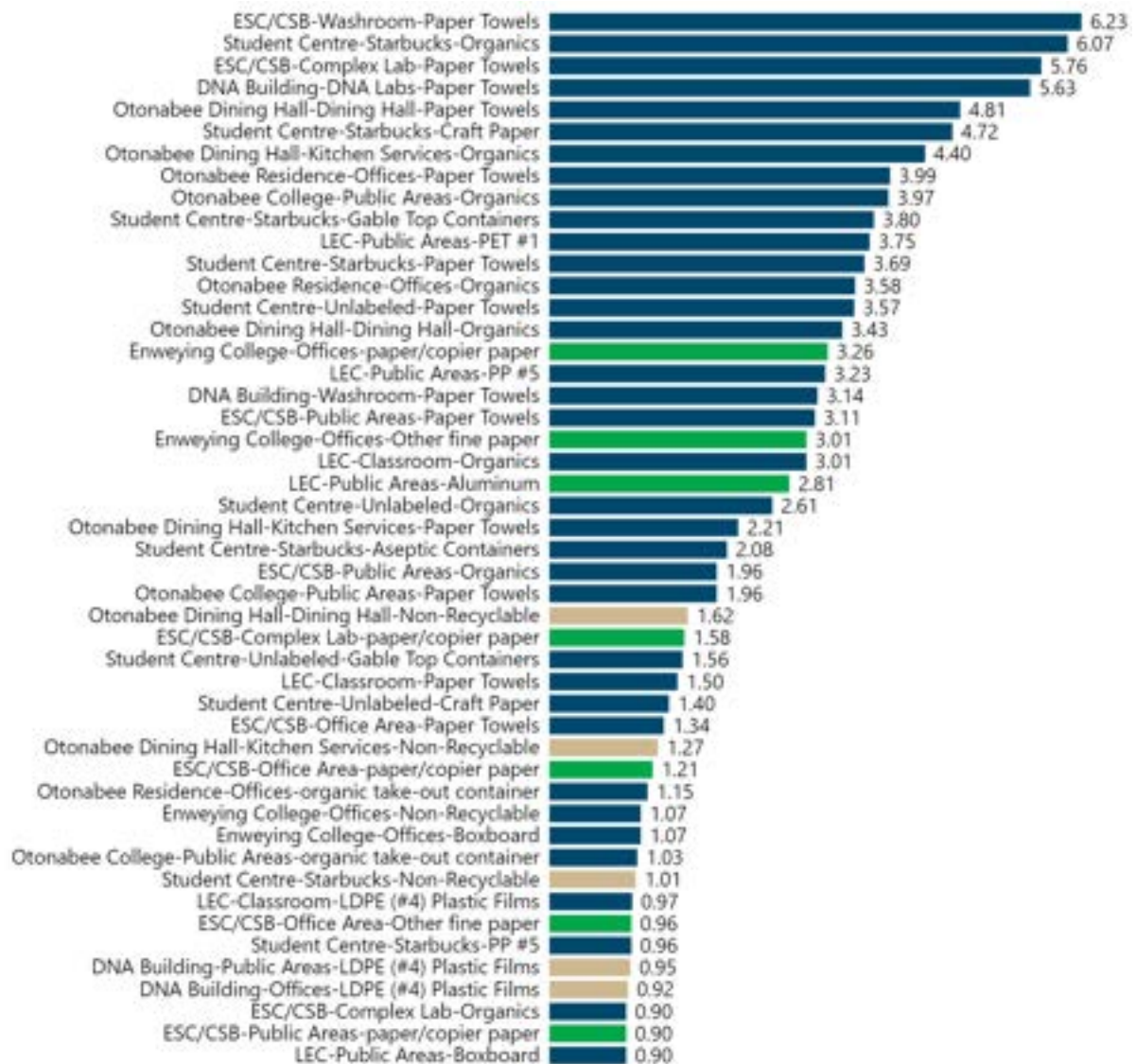




Figure 5b. Co-Mingled Recycling Sample Mass (kg) Ranked by Building, Functional Area and Material (including Material Type)

**Green** = Mandatory Recyclables    **Blue** = Other Recyclables    **Brown** = Non-Recyclables

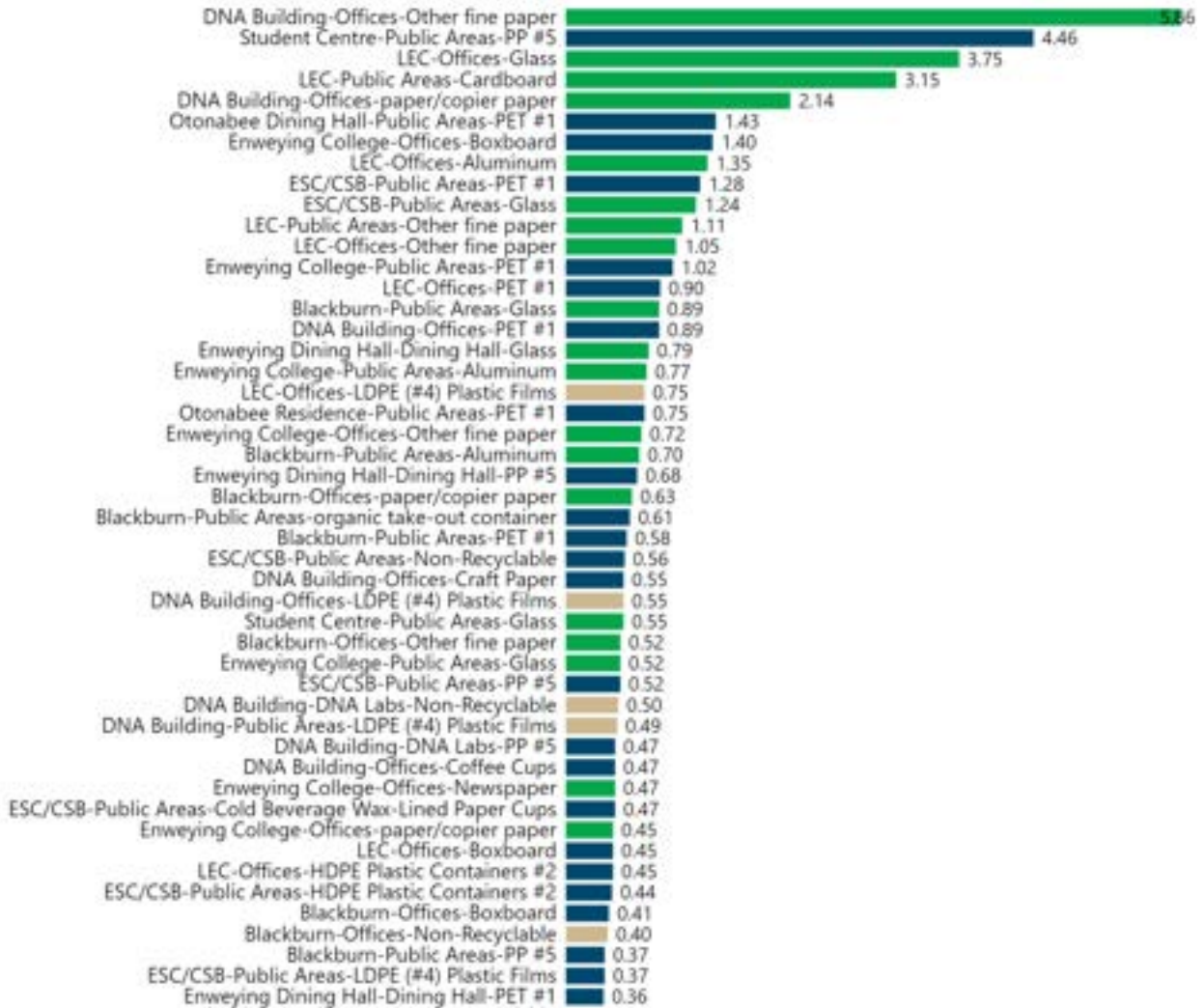


Figure 5c. Mixed Paper Recycling Sample Mass (kg) Ranked by Building, Functional Area and Material (including Material Type)

**Green** = Mandatory Recyclables    **Blue** = Other Recyclables    **Brown** = Non-Recyclables

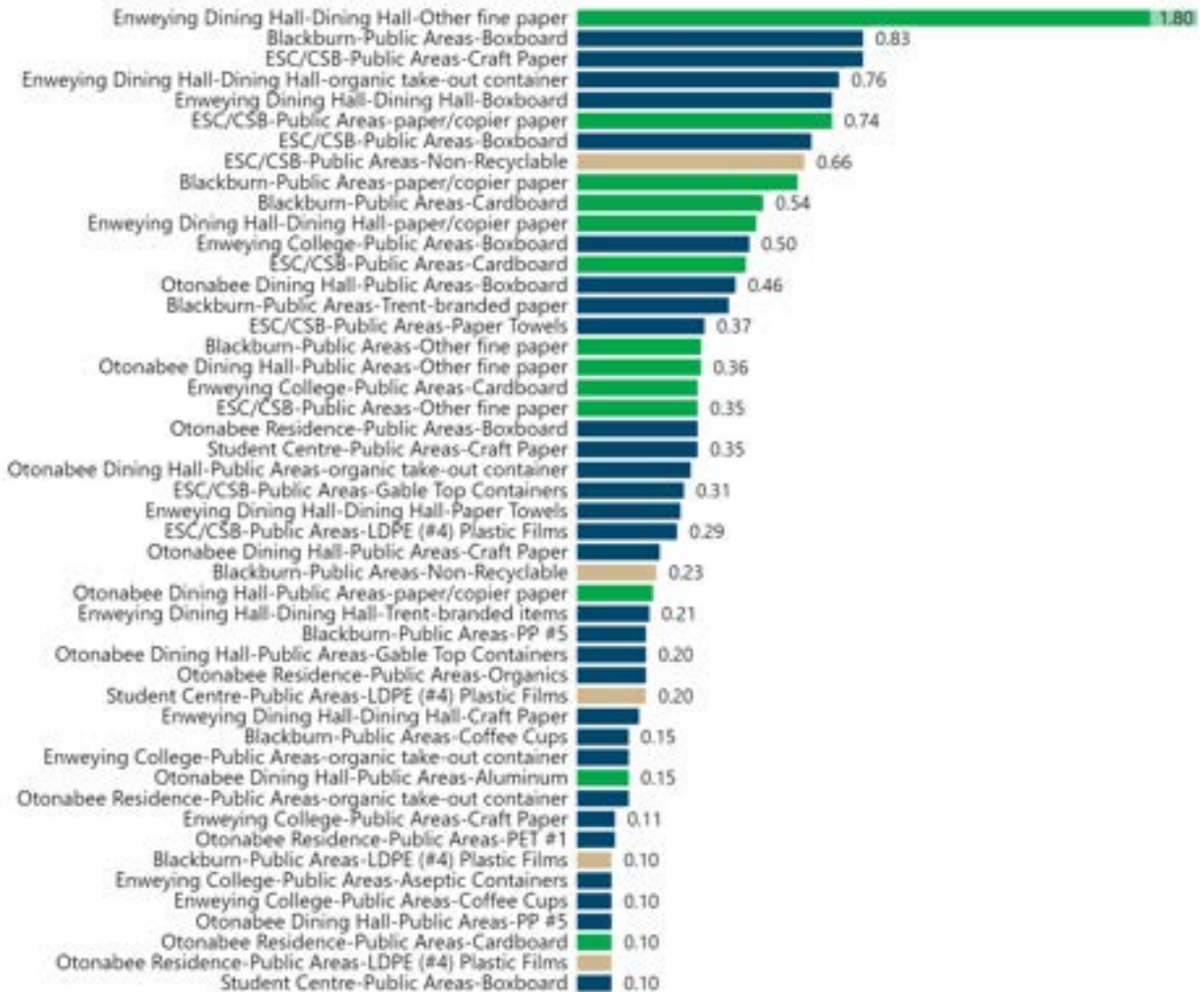


Figure 5d. Organics Sample Mass (kg) Ranked by Building, Functional Area and Material and (including Material Type)

**Green** = Mandatory Recyclables    **Blue** = Other Recyclables    **Brown** = Non-Recyclables



Notable observations are described below:

- Garbage Stream Sample—The sample consisted primarily of paper towels and organics. Some fine paper was identified in the Enweying College offices, and aluminum was identified in the Lady Eaton Centre public area garbage stream.
- Co-Mingled Recycling Stream Sample—The sample consisted primarily of fine paper, PP #5, glass, and cardboard. Small amounts of non-recyclable contamination, including LDPE (#4) plastic film, were identified in the sample.
- Mixed Paper Recycling Stream Sample—The sample consisted primarily of fine paper, boxboard, cardboard, and organic take-out containers. Some non-recyclable contamination was identified in the sample, originating from the ESC/CSB public area.
- Organics Stream Sample - Consisted primarily of organics and some paper towels. Minimal contamination was identified in the sample, which included LDPE (#4) plastic film.

A detailed breakdown of the sample composition is provided in Appendix E.

#### 4.4 Types of Recycling Material in the Garbage and Organics Stream

Based on analysis of the waste sample composition for the garbage stream, Mandatory Recyclables and Other Recyclables were identified. The garbage sample consisted of 15.11% Mandatory Recyclables, 74.94% Other Recyclables, and 9.96% Other (Non-Recyclable) material. Mandatory recyclables were not identified in the organics sample and, therefore, are not included in the analysis. A description of the categories is provided below.



## Mandatory Recyclables

O.Reg.193/04 requires that educational institutions source separate the following materials (at a minimum):

- Cardboard
- Fine Paper
- Newsprint
- Glass
- Aluminum
- Steel cans

## Other Recyclables

Includes the following materials:

- Aseptic containers
- Batteries
- Boxboard
- Craft paper
- Electronic waste
- Organics
- Gable top containers
- Paper towels
- PP #5
- Scrap metal
- Scrap wood

## Other (Non-Recyclables)

Includes all other non-recyclable materials, including organics.

Analysis of the Mandatory Recyclables, Other Recyclables and Non-Recyclables is provided below.

Figure 6a: Composition of Mandatory Recyclables, Other Recyclables and Non-Recyclables in the Garbage Stream by Building

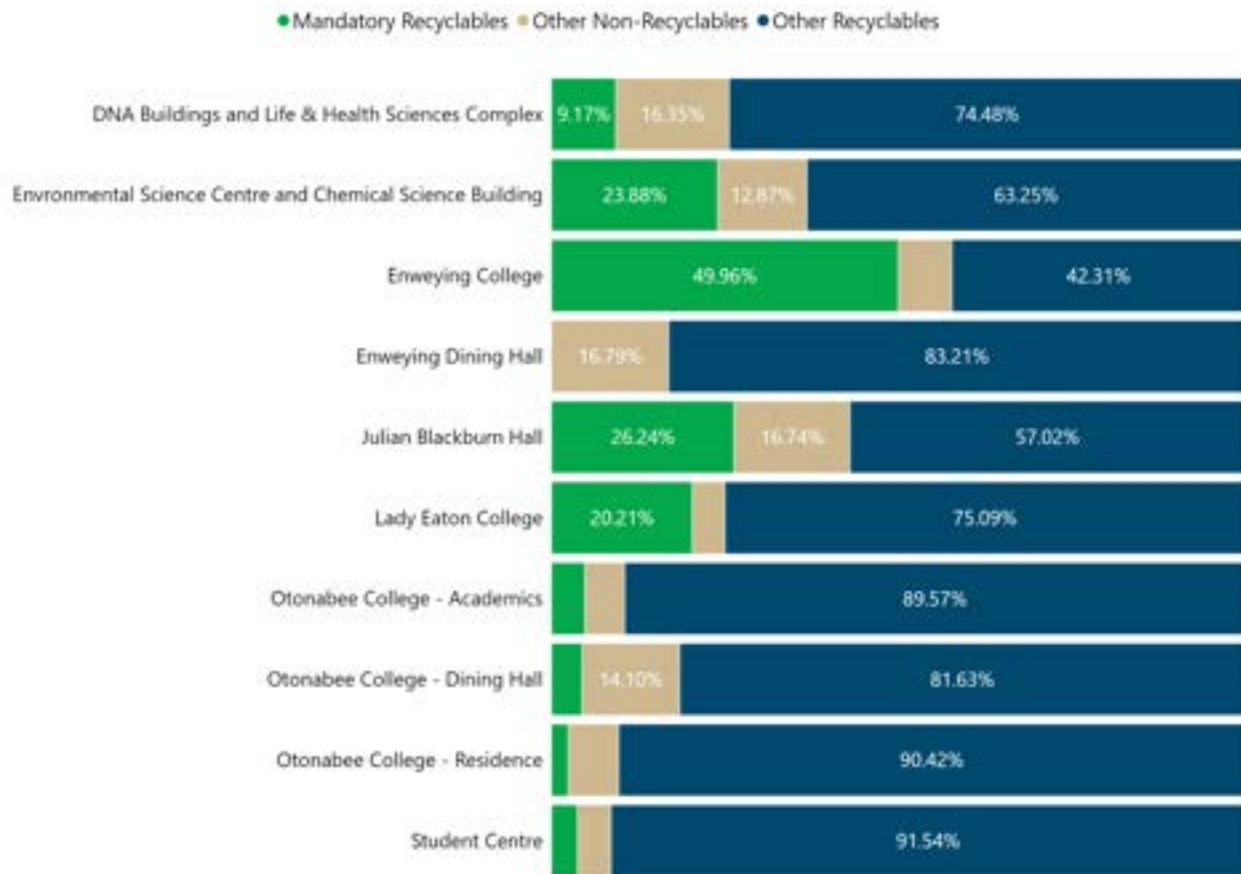
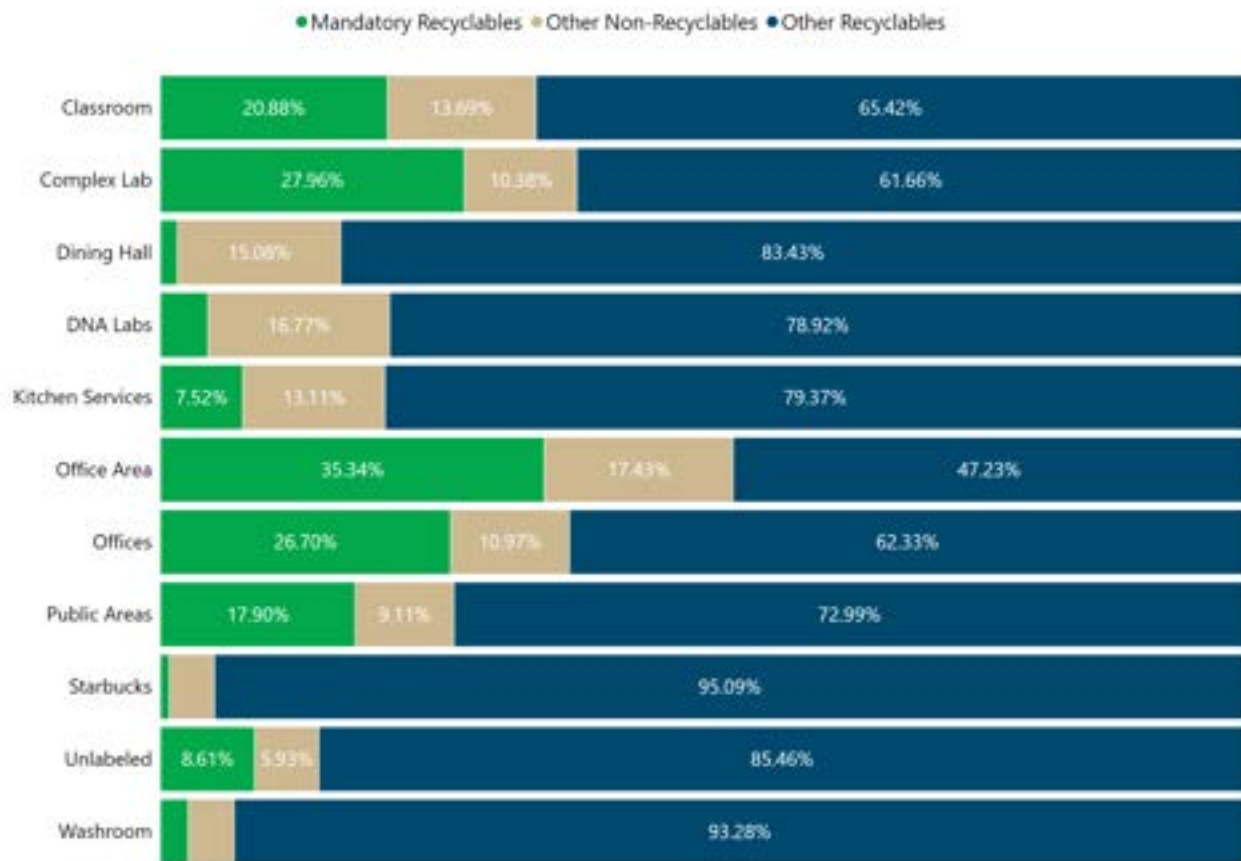


Figure 6b: Composition of Mandatory Recyclables, Other Recyclables and Non-Recyclables in the Garbage Stream by Functional Area



Notable observations pertaining to the garbage stream are described below:

- Enweying College generated the highest ratio of mandatory recyclables (49.96%), followed by Blackburn (26.24%) and ESC/CSB (23.88%).
- The Office Areas generated the highest ratio of mandatory recyclables (35.34% and 26.70%), followed by the Complex Lab (27.96%) and Classrooms (20.88%)
- The mandatory recyclable materials identified consisted primarily of fine paper and copier paper.

The table below provides a detailed breakdown of the mandatory recyclables by building, functional area, and material.

Figure 7: Detailed Breakdown of Mandatory Recyclables in the Garbage Stream by Building, Functional Area and Material (intensity of **Green** indicates higher sample mass)

Material	Aluminum		Cardboard		Glass		Newspaper		Other fine paper/copier paper		Steel Cans		Trent-branded paper		Total			
	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%		
<b>Blackburn</b>	<b>0.65</b>	<b>2.28%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.45</b>	<b>1.58%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.32</b>	<b>1.12%</b>	<b>0.43</b>	<b>1.51%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>1.85</b>	<b>6.50%</b>
Offices	0.65	2.28%	0.00	0.00%	0.45	1.58%	0.00	0.00%	0.32	1.12%	0.43	1.51%	0.00	0.00%	0.00	0.00%	1.85	6.50%
<b>DNA Building</b>	<b>0.35</b>	<b>1.23%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.22</b>	<b>0.77%</b>	<b>0.87</b>	<b>3.05%</b>	<b>0.45</b>	<b>1.58%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>1.89</b>	<b>6.64%</b>
DNA Labs	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.36	1.26%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.36	1.26%
Offices	0.30	1.05%	0.00	0.00%	0.00	0.00%	0.22	0.77%	0.37	1.30%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.89	3.12%
Public Areas	0.05	0.18%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.45	1.58%	0.00	0.00%	0.00	0.00%	0.50	1.76%
Washroom	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.14	0.49%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.14	0.49%
<b>Enweyng College</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.40</b>	<b>1.40%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>3.01</b>	<b>10.57%</b>	<b>3.26</b>	<b>11.45%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.25</b>	<b>0.88%</b>	<b>6.92</b>	<b>24.30%</b>
Offices	0.00	0.00%	0.40	1.40%	0.00	0.00%	0.00	0.00%	3.01	10.57%	3.26	11.45%	0.00	0.00%	0.25	0.88%	6.92	24.30%
<b>Enweyng Dining Hall</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>
Dining Hall	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
<b>ESC/CSB</b>	<b>1.63</b>	<b>5.72%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.52</b>	<b>1.83%</b>	<b>0.00</b>	<b>0.00%</b>	<b>3.27</b>	<b>11.48%</b>	<b>3.69</b>	<b>12.96%</b>	<b>0.00</b>	<b>0.00%</b>	<b>1.39</b>	<b>4.88%</b>	<b>10.50</b>	<b>36.87%</b>
Classroom	0.43	1.51%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.53	1.86%	0.00	0.00%	0.00	0.00%	0.79	2.77%	1.75	6.14%
Complex Lab	0.60	2.11%	0.00	0.00%	0.52	1.83%	0.00	0.00%	0.85	2.98%	1.58	5.55%	0.00	0.00%	0.60	2.11%	4.15	14.57%
Office Area	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.96	3.37%	1.21	4.25%	0.00	0.00%	0.00	0.00%	2.17	7.62%
Public Areas	0.60	2.11%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.81	2.84%	0.90	3.16%	0.00	0.00%	0.00	0.00%	2.31	8.11%
Washroom	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.12	0.42%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.12	0.42%
<b>LEC</b>	<b>3.23</b>	<b>11.34%</b>	<b>0.06</b>	<b>0.21%</b>	<b>0.66</b>	<b>2.32%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.35</b>	<b>1.23%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>4.30</b>	<b>15.10%</b>
Classroom	0.42	1.47%	0.06	0.21%	0.00	0.00%	0.00	0.00%	0.18	0.63%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.66	2.32%
Public Areas	2.81	9.87%	0.00	0.00%	0.66	2.32%	0.00	0.00%	0.17	0.60%	0.00	0.00%	0.00	0.00%	0.00	0.00%	3.64	12.78%
<b>Otonabee College</b>	<b>0.36</b>	<b>1.26%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.07</b>	<b>0.25%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.43</b>	<b>1.51%</b>
Public Areas	0.36	1.26%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.07	0.25%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.43	1.51%
<b>Otonabee Dining Hall</b>	<b>0.02</b>	<b>0.07%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.51</b>	<b>1.79%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.31</b>	<b>1.09%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.10</b>	<b>0.35%</b>	<b>0.94</b>	<b>3.30%</b>
Dining Hall	0.02	0.07%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.08	0.28%	0.00	0.00%	0.00	0.00%	0.10	0.35%	0.20	0.70%
Kitchen Services	0.00	0.00%	0.00	0.00%	0.51	1.79%	0.00	0.00%	0.23	0.81%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.74	2.60%
<b>Otonabee Residence</b>	<b>0.14</b>	<b>0.49%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.11</b>	<b>0.39%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.25</b>	<b>0.88%</b>
Offices	0.14	0.49%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.11	0.39%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.25	0.88%
<b>Student Centre</b>	<b>0.29</b>	<b>1.02%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.20</b>	<b>0.70%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.91</b>	<b>3.20%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>0.00</b>	<b>0.00%</b>	<b>1.40</b>	<b>4.92%</b>
Starbucks	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.18	0.63%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.18	0.63%
Unlabeled	0.29	1.02%	0.00	0.00%	0.20	0.70%	0.00	0.00%	0.73	2.56%	0.00	0.00%	0.00	0.00%	0.00	0.00%	1.22	4.28%
<b>Total</b>	<b>6.67</b>	<b>23.42%</b>	<b>0.46</b>	<b>1.62%</b>	<b>2.34</b>	<b>8.22%</b>	<b>0.22</b>	<b>0.77%</b>	<b>9.22</b>	<b>32.37%</b>	<b>7.83</b>	<b>27.49%</b>	<b>0.00</b>	<b>0.00%</b>	<b>1.74</b>	<b>6.11%</b>	<b>28.48</b>	<b>100.00%</b>

Based on a total sample weight of 308.87kg, an annual generated garbage amount of 269.84MT and the composition of mandatory recyclables in the waste stream, the estimated yearly quantities of mandatory recyclables generated were calculated and are provided in the chart below.

Figure 8: Estimated Annual Quantity of Mandatory Recyclables in the Garbage Stream (MT)

Material Type	Garbage Stream (MT)
<input checked="" type="checkbox"/> <b>Mandatory Recyclables</b>	<b>39.20</b>
Fine Paper	25.77
Aluminum	9.37
Glass	3.14
Cardboard	0.62
Newspaper	0.30
Steel Cans	0.00
<b>Total</b>	<b>39.20</b>

The total annual quantity of Mandatory Recyclables estimated to exist in the garbage stream is 39.2 MT, of which 25.77 MT consists of fine paper.

Other Recyclables were also identified in the Garbage Stream and primarily consisted of paper towels and organics. A detailed breakdown of the estimated annual quantities of Other Recyclables generated at the Site is provided below.

Figure 9. Estimated Annual Quantity of Other Recyclables in the Garbage Stream (MT)

Material Type	Garbage Stream (MT)
<input checked="" type="checkbox"/> <b>Other Recyclables</b>	<b>204.08</b>
Paper Towels	77.98
Organics	43.49
Craft Paper	15.38
PP #5	11.74
LDPE (#4) Plastic Films	10.72
Gable Top Containers	8.78
PET #1	8.49
Boxboard	8.46
organic take-out container	6.57
Aseptic Containers	4.55
Coffee Cups	4.35
HDPE Plastic Containers #2	2.81
Polystyrene #6	0.63
Scrap Wood	0.13
Batteries	0.00
Electronic Waste	0.00
Scrap Metal	0.00
<b>Total</b>	<b>204.08</b>



Notable observations are described below:

- A total of 204.08 MT of Other Recyclables are estimated to be generated through the garbage stream annually.
- Paper towels generated through the garbage stream are estimated to produce 77.98MT annually.
- Organics generated through the recycling stream are estimated to produce 43.49MT annually.

The estimated annual quantities generated by each material and waste stream are provided in Appendix F.

## 5.0 Waste Diversion Programs and Disposal Systems

As part of the waste audit, WRG staff conducted a tour of the Site (accompanied by Trent personnel) to document existing waste disposal systems. Interviews with Trent personnel were also conducted to understand the existing waste diversion programs and practices.

The following diversion programs exist at the Site:

- **Co-Mingled/Mixed Containers Recycling** for containers, including glass, plastics and cans, is collected in dedicated receptacles and consolidated in bins for recycling.
- **Mixed Paper Recycling** is collected in dedicated receptacles and is then consolidated by staff into bins for recycling.
- **Organics** are collected in dedicated receptacles and consolidated in green bins for diversion from landfills.
- **Confidential Papers/Fine Paper:** Dedicated receptacles are placed in high-usage areas and collected to divert them from landfills.
- **Scrap wood** is consolidated to be picked up for diversion from the landfill.
- **Scrap metal** is consolidated to be picked up for diversion from landfill.
- **Wood Skids** are reused onsite.
- **Swap Shop** donation bins are placed around the Site to encourage clothing or furniture donations.
- **Electronic Waste and Batteries** are collected in dedicated receptacles in high-usage areas and diverted from landfills.
- **Oil and Grease** are collected from food services areas across campus and stored in dedicated containers.
- **Fluorescent Bulbs** are collected in dedicated areas for diversion from landfills.
- **Printer Cartridges** are collected and diverted from landfills.

**Reduction Programs** include:

- Implementation of Eco-Trays in the cafeteria.
- Provision of non-disposable cutlery for reuse
- Milk and cream for coffee/tea are provided in jugs instead of individual packets.

- Provision of water bottle filling stations to reduce single-use plastics.
- Encouraging double-sided printed paper.
- Reusable mug incentive program.

The waste diversion programs and associated annual generated quantities (in metric tonnes) are provided below.

Figure 10: Waste Diversion Programs and Annual Waste Quantities (MT)

Waste Stream	3R	2022-2023 Annual Quantity (MT)	%
Cardboard	Recycle	499.35	32.84%
Co-Mingled	Recycle	373.07	24.53%
Mixed Papers	Recycle	279.82	18.40%
Garbage	Garbage	269.84	17.74%
Organics	Recycle	32.19	2.12%
Scrap Wood	Recycle	26.95	1.77%
Confidential Papers/Shredding	Recycle	9.75	0.64%
Cooking Oil	Reuse	7.75	0.51%
Scrap Metal	Recycle	6.72	0.44%
Swap Shop	Reuse	5.90	0.39%
E-Waste	Recycle	5.29	0.35%
Shipping Pallets	Reuse	2.35	0.15%
Batteries	Recycle	0.50	0.03%
Academic Calendars	Reduce	0.46	0.03%
Plates	Reduce	0.22	0.01%
Lcbo (Kegs)	Reuse	0.19	0.01%
Move-In Poly	Recycle	0.14	0.01%
Lcbo (Bottles And Cans)	Recycle	0.08	0.00%
Ecotray	Reduce	0.07	0.00%
Move-In Ldpe	Recycle	0.05	0.00%
Travel Mug	Reduce	0.04	0.00%
<b>Total</b>		<b>1,520.72</b>	<b>100.00%</b>

A total of 1520.72 MT of waste material was generated in 2023. Photos of the receptacles and bins are provided in Appendix G.

## 6.0 Performance Metrics

### 6.1 Waste Diversion Rate



Waste diversion is the percentage of waste materials that a facility diverts from landfills due to reduce, reuse and recycling (3Rs) programs versus the total amount of waste generated (3Rs plus landfill waste). The Ministry of the Environment, Conservation and Parks defines the Waste Diversion rate calculation as follows:

$$\text{Waste Diversion Rate} = \frac{\text{Total Waste Diverted (3Rs)}}{\text{Total Waste Generated}} \times 100$$

Where,

$$\begin{aligned} \text{Total Waste Diverted (3Rs)} &= \\ &1,233.9 \text{ MT (Recycled)} \\ &+ 0.78 \text{ MT (Reduce)} \\ &+ 16.20 \text{ MT (Reuse)} \\ &= 1,250.88 \text{ MT (Diverted)} \\ \text{Total Material Generated} &= 1,520.72 \text{ MT} \end{aligned}$$

$$\text{Waste Diversion Rate} = 82.26\%$$

The 2022-23 waste diversion rate of 82.26% is above the provincial objective of 60%.

## 6.2 Capture Rate

The capture rate is the proportion of divertible waste materials successfully diverted from disposal compared to the total amount of divertible waste materials generated. It measures the effectiveness of existing recycling programs.

The Recycling Council of Ontario defines the Capture Rate calculation as follows:

$$\text{Capture Rate} = \frac{\text{Total Divertible Material Captured (3Rs)}}{\text{Total Divertible Material Generated}} \times 100$$

Below are the capture rates for all divertible materials included in existing waste diversion programs at the Site.

Figure 11: Capture Rates for Divertible Materials

Waste Stream	Divertible Materials Generated Through Garbage Stream (MT)	Divertible Materials Generated Through Diversion Programs (MT)	Total Generated (MT)	Capture Rate
Cardboard	0.62	499.35	499.97	99.88%
Co-Mingled	62.33	373.07	435.40	85.68%
Mixed Papers	41.45	279.82	321.27	87.10%
Organics	128.04	32.19	160.23	20.09%
Scrap Woods	0.13	26.95	27.08	99.50%
Confidential Papers/Shredding	0.00	9.75	9.75	100.00%
Cooking Oil	0.00	7.75	7.75	100.00%
Scrap Metals	0.00	6.72	6.72	100.00%
Swap Shop	0.00	5.90	5.90	100.00%
E-Waste	0.00	5.29	5.29	100.00%
Shipping Pallets	0.00	2.35	2.35	100.00%
Batteries	0.00	0.50	0.50	100.00%
Academic Calendars	0.00	0.46	0.46	100.00%
Plates	0.00	0.22	0.22	100.00%
Lcbo (Kegs)	0.00	0.19	0.19	100.00%
Move-In Poly	0.00	0.14	0.14	100.00%
Lcbo (Bottles And Cans)	0.00	0.08	0.08	100.00%
Ecotray	0.00	0.07	0.07	100.00%
Move-In Ldpe	0.00	0.05	0.05	100.00%
Travel Mug	0.00	0.04	0.04	100.00%
<b>Total</b>	<b>232.57</b>	<b>1,250.88</b>	<b>1,483.45</b>	<b>84.32%</b>

The overall **Capture Rate is 84.32%** based on a total divertible material quantity generated of 1,483.45 MT and a divertible material quantity generated (through diversion programs) of 1,250.88 MT. It should be noted that Organics in the table above include paper towels, organics, and organic take-out containers.

## 7.0 Year-Over-Year Analysis

Based on previous annual data from Trent, the waste diversion rate has remained consistent since 2016, and the capture rate has decreased slightly since 2018. The historical waste diversion and capture rates are provided in the charts below.

Figure 12a. Year-Over-Year Waste Diversion Rate

Year	Diverted (MT)	Total Generated (MT)	Waste Diversion Rate
2023	1,250.88	1,520.72	82.26%
2018	1,683.42	1,946.94	86.46%
2016	1,253.50	1,562.37	80.23%

Figure 12b. Year-Over-Year Capture Rate

Year	2018			2023		
	Waste Diversion Program	Diverted (MT)	Total Generated (MT)	Capture Rate	Diverted (MT)	Total Generated (MT)
Cardboard	506.78	509.83	99.79%	499.35	499.97	99.88%
Co-Mingled & Mixed Containers	365.37	403.43	90.57%	373.07	435.40	85.68%
Mixed Papers/Fine Paper	309.63	323.67	95.66%	279.82	321.27	87.10%
Construc. & Demo	320.00	320.00	100.00%			
Organics	88.47	140.85	62.81%	32.19	160.23	20.09%
Scrap Wood/Pallets	24.09	24.09	100.00%	26.95	27.08	99.50%
Confidential Papers/Shredding	19.16	19.16	100.00%	9.75	9.75	100.00%
Scrap Metals	12.53	12.87	97.36%	6.72	6.72	100.00%
Swap Shop	9.86	9.86	100.00%	5.90	5.90	100.00%
Bulbs & Ballasts	12.81	12.81	100.00%			
Cooking Oil & Grease	4.15	4.15	100.00%	7.75	7.75	100.00%
E-Waste				5.29	5.29	100.00%
Shipping Pallets				2.35	2.35	100.00%
Batteries	0.48	0.48	100.00%	0.50	0.50	100.00%
Printer Toners	0.58	0.58	100.00%			
Academic Calendars				0.46	0.46	100.00%
Plates				0.22	0.22	100.00%
Lcbo (Kegs)				0.19	0.19	100.00%
Move-In Poly				0.14	0.14	100.00%
Reduction Initiatives/Disposable Take-out Containers	0.10	0.10	100.00%			
Lcbo (Bottles And Cans)				0.08	0.08	100.00%
Ecotray				0.07	0.07	100.00%
Move-In Ldpe				0.05	0.05	100.00%
Travel Mug				0.04	0.04	100.00%
<b>Total</b>	<b>1,676.01</b>	<b>1,781.88</b>	<b>94.06%</b>	<b>1,250.88</b>	<b>1,483.45</b>	<b>84.32%</b>

Overall, waste diversion and capture rates have remained high and are consistent with historical rates. The capture rate for the organic stream decreased from 2018 (62.81%) to 2023 (20.09%) due to paper towels and organic take-out containers in the garbage stream.

## 8.0 Waste Audit Summary and Waste Reduction Work Plan

Refer to Appendix H for the Waste Audit Summary and the Waste Reduction Work Plan.

**According to O.Reg.102/94, the Waste Reduction Work Plan or a plan summary must be posted at the facility where employees can review it. If a summary is posted, the entire Work Plan should also be made available for review by any employee upon request.**

## 9.0 Findings and Conclusions

It should be noted that the conclusions and recommendations provided in this report are based on the waste audit sample results, which are considered representative of the annual quantities for this report. The estimates in this report have not accounted for fluctuations in waste quantities generated daily.

Based on the findings of the waste audit, the following conclusions can be made:

### Sample Composition

- The garbage stream generated the highest sample mass (61% of the total sample mass), primarily from paper towels.
- Approximately 57% of the sample mass originated from the ESB/CSB, Student Centre, LEC and DNA Building.
- Approximately 49% of the sample mass originated from public areas and offices.
- Garbage Stream Sample
  - Paper towels had the highest material sample mass (15.95%), followed by organics (10.39%). Some fine paper was identified in the Enweying College offices and aluminum in the Lady Eaton Centre public area garbage stream.
- Recycling Stream Sample
  - Fine paper had the highest material sample mass (3.23%). Small amounts of non-recyclable contamination, including LDPE (#4) plastic film, were identified in the sample. The ESC/CSB public area sample also identified some non-recyclable contamination.
- The Organics sample had the highest material sample mass (9.35%).
- Contamination in the waste collection streams was minimal (see Figures 5a to 5d).

### Recyclables in Waste Streams

- Mandatory Recyclables were identified in the garbage stream (15.11%).
  - Enweying College generated the highest ratio of mandatory recyclables (49.96%), followed by Blackburn (26.24%) and ESC/CSB (23.88%).
  - The Office Areas generated the highest ratio of mandatory recyclables (35.34% and 26.70%), followed by the Complex Lab (27.96%) and Classrooms (20.88%)
  - The mandatory recyclable materials identified consisted primarily of fine paper and copier paper.
  - The total annual quantity of mandatory recyclables estimated to exist in the garbage stream is 39.2 MT, of which 25.77 MT consists of fine paper.
- Other Recyclables were identified in the garbage stream (74.94%) and primarily consisted of:
  - **Paper towels - estimated to produce 77.98 MT annually**
  - **Organics - estimated to produce 43.49 MT annually**
- **Waste Diversion Rate** - was calculated to be **82.26%** based on 1,250.88 MT of diverted waste and 1,520.72 MT of total waste produced annually. Waste diversion has decreased slightly from 2018 (82.46%) but has remained consistently high since 2016.

- **Capture Rate**—The overall capture rate was 84.32% based on 1,483.45 MT of total divertible waste generated and 1,250.88 MT of divertible waste generated through diversion programs. Capture rates have remained high since 2018 but have decreased from 94.06% (2018). The decrease is due to a lower organic capture rate due to paper towels and organic take-out containers in the garbage stream.

## 10 Recommendations

Based on the conclusions, the following recommendations are tied to the findings discussed in the previous section.

The Site diverts 82.26% of generated waste through existing programs, above the provincial objective of 60%. The capture rate is 84.32%. There are opportunities to improve the waste diversion rate and capture rate further.

### 10.1 Improve Existing Waste Diversion Programs

Improving the following existing diversion programs could improve waste diversion and capture rates.

#### Mandatory Recyclables

- **Fine Paper**—25.77 MT of material is estimated to be generated annually through the garbage stream. Diverting this material through the existing mixed paper diversion program could **increase the waste diversion rate to 1.7%** and the Mixed Paper Recycling Stream capture rate to 8% based on current waste quantities at the Site.
- **Aluminum** - 9.37 MT of material is estimated to be generated annually through the waste stream. Diverting this quantity through the existing mixed recycling diversion program could **increase the waste diversion rate to 0.61%** based on current waste quantities at the Site.
- **Glass**—3.14 MT of material is estimated to be generated annually through the waste stream. Based on current waste quantities at the site, diverting this quantity through the existing mixed recycling diversion program could **increase the waste diversion rate to 0.2%**.

#### Other Recyclables

- **Organics**—43.49 MT of organics are estimated to be generated through garbage streams. Based on current waste quantities at the site, diverting this material through the existing organics stream could increase the waste diversion rate to 2.85% and the organics capture rate to 27.14%.
- **Craft Paper**—15.38 MT of craft paper is estimated to be generated through garbage streams. Based on current waste quantities at the site, diverting this material through the existing mixed-paper stream could increase the waste diversion rate to 1%.



- **PP #5** - 11.74 MT of PP #5 are estimated to be generated through garbage streams. Based on current waste quantities at the site, diverting this material through the existing co-mingled recycling stream could increase the waste diversion rate to 0.77%.

## 10.2 New Waste Diversion Opportunities

Conduct a full review of other possible reduction/reuse/recycling programs that may be implemented on-site that are not documented in this report. Such programs may include #2 HDPE Plastics (i.e. large pails), household/office reuse, paper towels, etc. While ensuring that these programs have the same signage and promotional materials to promote them among the staff, students and faculty.

Adding new diversion programs will improve overall waste diversion and capture rates.

- **Paper Towels**—77.98 MT of paper towels are estimated to be generated through garbage streams. The City of Peterborough accepts paper towels in the organic streams. Diverting paper towels through the existing organics stream could **increase the waste diversion rate to 5.12%, and the organics capture rate up to 48.67%** based on current waste quantities at the Site.

## 10.3 Promoting Culture

A committee is recommended to be established that oversees waste reduction and sustainability and promotes a culture of waste diversion. Educate staff on the importance of waste diversion and communicate the corporate goals for waste diversion and sustainability. Create a positive message around the benefits of waste diversion and the individual's role.

- Support and encourage purchasing and using “environmentally friendly,” reusable or recyclable materials and packaging, and/or recycled content.
- Ensure an Environmental Policy is clearly visible in common areas throughout the building and continue to emphasize the facility’s commitment to environmental stewardship through its training program, and green or environmental initiatives.
- Continue to encourage staff, students and faculty to use the Ecotrays or bring reusable items on the site as much as possible.
- Continue to promote and highlight Trent’s current environmental programs and efforts.

## 10.4 Continuous Monitoring and Process Improvement

Continuing to track year-over-year changes in waste diversion and capture rates and communicate progress to staff to encourage further participation/engagement from staff.

Continuous monitoring and reporting for this site annually and comparison with year-over-year changes would provide insight into trends, which can be used as a basis for policy decisions regarding solid waste management for future projects. Further programs/processes can be refined, and adherence to provincial requirements can be achieved.

## Appendices



## Appendix A: List of Categories

Material Category	Description
<b>1. Paper and Paper Products</b>	
Fine Paper	Includes mixed fine papers, writing paper, office paper, copy paper, bills and statements, ad mail, lottery tickets, receipts, envelopes, promotional cards, promotional calendars, printed information found within packaged products, etc. It also includes soft-cover books, booklets, magazines, catalogues, calendars, flyers, and inserts.
Newsprint	Major daily and weekly newspapers and community newspapers. Does not include flyers and inserts.
Shredded Confidential Papers	Any paper that has been shredded.
Boxboard	Single layered paperboard and fibre board with no corrugation. Includes cereal boxes, shoe boxes, cores from toilet paper/paper towels/gift wrap, etc.
Craft Paper	Craft paper bags and wrap, grocery or retail bags, potato bags, some pet food bags, etc. Includes brown, white, and coloured kraft paper and bags. No bags with bonded plastic or foil lining.
Corrugated Cardboard	Waxed or unwaxed corrugated cardboard containers. Includes molded pulp materials such as egg cartons, drink trays, other trays, etc.
Gable Top Containers	Polycoat containers with a gable-shaped top are used for milk, juice, some foods, etc.
Aseptic Containers	Tetra-pak type polycoat packaging containers used for juice, milk, some soups & broths, alternative milk beverages, alcoholic beverages, etc.
Composite Cans	Spiral wound cans with paper walls and plastic or metal tops or bottoms. Includes frozen juice, Pringles chips, dough, some

	raisins, etc.
<b>2. Plastic</b>	
#1 Polyethylene Terephthalate (PET)	All PET #1 plastics. This includes clear or coloured thermoform packaging, beverage bottles, non-beverage bottles used for food items, and non-food items such as dish soap, shampoo, mouthwash, window cleaner, floor cleaner, etc. <ul style="list-style-type: none"> <li>• Does not include Black Plastics.</li> </ul>
#2 High-Density Polyethylene (HDPE)	All HDPE #2 plastics. Includes natural and coloured bottles, jugs, and containers for beverages, food items, and non-food items such as laundry soap, shampoo, bleach, vinegar, pill bottles, etc. <ul style="list-style-type: none"> <li>• Does not include Black Plastics.</li> </ul>
#4 Low-Density Polyethylene (LDPE) Films	All #4 LDPE plastic films. Includes soft "stretchy" PE plastic used for items such as produce bags, overwrap for water bottles, garbage bags, kitchen liners, blue or clear recycling bags, sandwich and freezer bags, etc. <ul style="list-style-type: none"> <li>• Does not include Black Plastics.</li> </ul>
#5 Polypropylene (PP)	All #5 PP plastics. Includes clear and coloured food containers, jugs, jars, take-out beverage cups, bottles, and jars for food items, etc. <ul style="list-style-type: none"> <li>• Does not include Black Plastics.</li> </ul>
#6 Non-Expanded Polystyrene (PS)	All Non-Expanded (rigid) #6 PS plastics. Includes clear or coloured rigid food trays, clamshells, cup lids, yogurt cups, CD and DVD cases only (no disk), etc. <ul style="list-style-type: none"> <li>• Does not include Black Plastics.</li> </ul>
Other Recyclable Plastics (#3, 4, 7)	All other recyclable plastics (#3, 4, 7). Includes clear and coloured bottles, jugs, jars, and containers.
<b>3. Glass/Metal</b>	

Glass	<p>All clear and coloured glass. Includes bottles and containers for food, beverage, cosmetics, toiletries, household pharmaceutical products, candle jars, etc.</p> <ul style="list-style-type: none"> <li>Does not include non-recyclable glass such as windowpane glass, plates, drinking glasses, figures, and incandescent light bulbs.</li> </ul>
Aluminum	<p>All aluminum containers and foils. Includes food and beverage containers, rigid aluminum trays (pie plates, baking trays, etc.), empty aerosol containers, and containers for hair products, tubes, etc.</p> <ul style="list-style-type: none"> <li>Does not include full or partially full pressurized cans.</li> </ul>
Steel	<p>All steel containers. Includes food and beverage containers, empty spray cans (for cooking oil, whipped cream, etc.), empty paint cans.</p> <ul style="list-style-type: none"> <li>Does not include full or partially full pressurized cans.</li> </ul>
<b>4. Organics</b>	
Organic Food Waste	<p>All edible and non-edible organic wastes that result from food items. Includes untouched and leftover bakery, meat &amp; fish, dried food, fruits &amp; vegetables, dairy, and other foods.</p>
Other Organics	<p>All other organic materials that do not result from food items. Includes yard waste, grass clippings, small wood waste, pet waste, diapers and sanitary products, certified compostable plastic bin liners, and other compostable papers.</p>
Compostable Fibres	<p>Paper towels, paper napkins, toilet paper, facial tissues, etc.</p>
<b>5. Operational Waste</b>	
Other Metals	<p>Scrap metals, copper pipes, hardware, etc. Includes multi-material items that are mainly metal.</p>
Non-Treated Wood	<p>Non-treated wood materials. Includes skids/pallets, wooden furniture, etc.</p> <ul style="list-style-type: none"> <li>Does not include branches, brush, or wood chips.</li> </ul>
Batteries	<p>All single-use and rechargeable batteries. Includes Alkaline-Manganese, Lithium, Silver Oxide, Zinc Air,</p>

	Zinc-Carbon, etc.
Printer Toners	All ink cartridges and printer toners.
E-Waste	All Waste from Electrical and Electronic Equipment (WEEE). Anything that is battery-operated and/or can be plugged into an electrical outlet. Includes computer / IT equipment, telecom equipment, TV & audio equipment, small kitchen appliances, wires/chargers/adapters, cocks, gadgets, etc.
Plastic Strapping	All Plastic Strapping material. This material is used to bundle products together for retail sales and can come in a variety of colours and plastic materials.
<b>6. Non-Recyclable Waste</b>	
Non-Recyclable/Garbage	All other non-recyclable waste materials are not classified elsewhere. Includes hazardous waste, coffee cups, black plastics, and expanded polystyrene, all described below. Includes chip bags, furnace filters, laminated papers, rigid or durable plastics, non-recyclable glass, dust, single-use cleaning wipes, single-use coffee pods, plastic straws and cutlery, materials too small to process, etc.
Hazardous Wastes	All hazardous wastes are not classified elsewhere. Includes full or partially full pressurized cans, paints, and oil containers. Includes fluorescent light bulbs and tubes, medical sharps and syringes, mercury-containing devices, pharmaceuticals, antifreeze, fertilizers, solvents, pesticides, etc. Also includes all other liquid or non-liquid items with signal words such as "Poison," "Danger," "Warning," "Caution," and "Precautionary Statements".
Coffee Cups	All cups and containers used for hot/cold beverages and food should have a plastic or wax lining. Multiple layered, primarily fibre, hot/cold food and beverage containers common in the fast food industry. Includes paper based cups with a plastic lining, water cooler cups, freezer boxes, etc.
Black Plastics	Includes all Black Plastics #1-7 and unmarked. Also includes rigid, durable, and expanded Black Plastics, as well as black plastic bags.

Expanded Polystyrene	<p>Includes white, coloured, and black polystyrene foam packaging.</p> <p>Includes food trays, clamshells, etc. Also includes foam packaging "peanuts" and foam blocks used to protect boxed products.</p>
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## Appendix B: Annual Request Form

WASTE SUMMARY		Bin Size	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Building		Yd3	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg
Blackburn Hall	Blackburn	4	540	600	820	240	380	450	410	170	470	280	790	n/a	5150
Trent Day Care Centre	Other	4	540	540	1040	530	360	810	750	590	n/a	510	420	n/a	6090
Athletics Complex	Other	4	960	930	1210	700	1110	380	1030	910	2740	910	1280	1010	13170
Lady Eaton Residence	LEC	6	1100	1290	3240	3140	1070	1040	840	800	3230	1580	2600	2950	22880
Lady Eaton Kitchen	LEC	--													0
Champlain College Depot	Other	2x8	2990	3250	4890	5050	1940	720	1040	3390	4800	4370	5470	4700	42610
Gzowski Building Depot	Enwayaang	2x8	2510	2400	2480	2880	690	1970	940	1380	3030	1960	2370	2400	24990
Gzowski Kitchen	Enwayaang Dining Hall	6	1690	1560	1980	440	850	300	1970	420	570	600	360	n/a	10740
Otonabee College Residence - South End	Otonabee Residence	8	1840	1740	1840	2050	1020	790	1920	n/a	1590	1210	2330	2160	18490
Otonabee College Residence - North End	Otonabee Residence	8	2250	1580	1680	1710	660	810	n/a	n/a	1560	1640	1440	1730	15060
DNA Lab	DNA Building	6	1000	1060	1240	680	1820	1520	1430	n/a	1320	1810	1170	1290	14340
Animal Care Facility	Other	2	250	250	350	280	220	220	110	n/a	290	240	320	210	2740
Otonabee College Kitchen	Otonabee Dining Hall	8	1150	2570	2190	1070	470	330	n/a	n/a	2280	2040	2020	1720	15840
Otonabee College Admin Depot	Otonabee College	6	1000	1730	330	550	780	330	1490	n/a	1440	720	890	1540	10800
Otonabee College Admin Depot	Otonabee College	4	1870	920	1260	400	780	680	570	n/a	1940	1020	n/a	460	9880
Catherine Parr Trail College	Other	4	1840	840	760	710	560	950	580	390	n/a	n/a	n/a	n/a	6630
Grounds Crew	Other	--						1720	1060						2780
Student Centre	Student Centre	4	2340	2350	2620	1670	1110	1110	590	n/a	3380	2420	2770	2370	22730
Science Complex	ESBCSB	6	1020	2320	1170	900	1310	810	1430	n/a	1080	1260	1130	740	13170
Blackburn Hall (@ Carpentry)	Blackburn	Temp 20					2370								2370
Champlain College Depot - Move Out	Other	Temp 20				860					500		2190		3550
Lady Eaton Residence - Move Out	LEC	Temp 20				390									390
Gzowski Building Depot - Move Out	Enwayaang	Temp 20				1380					460				1840
Otonabee College Res. - S End - Move Out	Otonabee Residence	Temp 20				870					280				1150
Otonabee College Res. - N End - Move Out	Otonabee Residence	Temp 20				410					290				700
Catherine Parr Trail College - move out temp	Other	Temp 4yd				90									90
Science Complex	ESBCSB	Temp 20					1630								830
DNA Lab	DNA Building	Temp 20					830								830
780 Argyle St	Otonabee College	Temp 20													0
<b>TOTAL</b>		<b>kg</b>	<b>24890</b>	<b>25930</b>	<b>29080</b>	<b>27000</b>	<b>19940</b>	<b>14940</b>	<b>16160</b>	<b>8050</b>	<b>31250</b>	<b>22570</b>	<b>27550</b>	<b>23280</b>	<b>269840</b>
		<b>MT</b>	<b>24.89</b>	<b>25.93</b>	<b>29.08</b>	<b>27.00</b>	<b>19.94</b>	<b>0.00</b>	<b>16.16</b>	<b>8.05</b>	<b>31.25</b>	<b>22.57</b>	<b>27.55</b>	<b>23.28</b>	<b>269.84</b>

CORDBOARD SUMMARY																	
Building	Bin Size	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Yr03	kg	
	Yr03	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts
Blackburn Hall	Blackburn	2	5	4	4	4	5	3	5	4	5	4	4	51	102	4641	
Trent Day Care Centre	Other	0.4T	4	4	5	4	4	5	5	4	4	5	4	51	24	1090.6	
Athletics Complex	Other	2	8	8	10	7	8	9	7	9	9	8	9	101	202	8191	
Lady Eaton Residence	LEC	4	7	8	10	8	9	9	7	8	8	8	9	100	400	18200	
Champlain College Depot	Other	2xk	26	16	18	13	20	15	18	17	22	20	21	235	3600	163800	
Gzowski Building Depot	Enwayasang	8	11	12	14	12	14	12	12	13	13	13	13	151	1208	54964	
Gzowski Kitchen	Enwayasang Dining Hall	6	12	12	14	12	14	12	12	13	13	13	12	152	912	41496	
Otonabee College Residence - South End	Otonabee College	4	8	8	10	8	9	9	7	9	9	8	9	102	408	18564	
Otonabee College Residence - North End	Otonabee College	4	8	8	10	8	9	9	7	9	9	8	9	102	408	18564	
DNA Lab	DNA Building	8	8	8	10	8	9	9	7	9	8	8	9	102	612	27846	
Otonabee College Kitchen	Otonabee Dining Hall	8	13	12	14	12	13	12	13	11	13	13	13	152	1218	55328	
Otonabee College Admin Depot	Otonabee College	4	12	12	14	12	14	12	12	13	13	13	13	152	608	27864	
Catherine Parr Trail - hand pick	Other	0.4T	9	8	9	8	10	8	9	8	9	9	8	104	48	2224	
Student Centre	Student Centre	4	13	12	14	12	14	12	12	13	13	13	12	153	612	27846	
Science Complex	ESBCSB	4	12	12	14	12	14	12	12	13	13	13	12	152	608	27864	
Champlain College Depot - Move In (kg)	Other	Temp 20												0		0.00	
Otonabee College Res - S End Move In (kg)	Otonabee Residence	Temp 20												0		0.00	
Otonabee College Res - N End Move In (kg)	Otonabee Residence	Temp 20												0		0.00	
Lady Eaton Residence Move In (kg)	Other	Temp 20								270				270		270	
<b>TOTAL</b>	<b>kg</b>															<b>499353</b>	
	<b>MT</b>															<b>499.35</b>	

Mixed Papers																	
Building	Totes	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	kg		
	95 Gal	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts
Blackburn Hall	Blackburn	3	9	8	9	8	9	8	9	8	8	9	8	102	26010		
Trent Day Care Centre	Other	1	--	--	--	--	--	--	--	--	--	--	--	0	0		
Athletics Complex	Other	1	9	8	9	8	9	8	9	8	8	10	8	103	8755		
Lady Eaton Residence	LEC	4	9	8	9	8	9	8	9	8	8	10	8	103	35020		
Lady Eaton Kitchen	LEC	1	9	8	9	8	9	8	9	8	8	10	8	103	8755		
Champlain College Depot	Other	4	9	8	9	8	9	8	9	8	8	10	8	103	35020		
Gzowski Building Depot	Enwayasang	1	9	8	9	8	9	8	9	8	8	10	8	103	8755		
Gzowski Kitchen	Enwayasang Dining Hall	1	9	8	9	8	9	8	9	8	8	10	8	103	8755		
Otonabee College Residence - South End	Otonabee Residence	2	9	8	9	8	9	8	9	8	8	10	8	103	17510		
Otonabee College Residence - North End	Otonabee Residence	2	9	8	9	8	9	8	9	8	8	10	8	103	17510		
DNA Lab	DNA Building	2	9	8	9	8	9	8	9	8	8	10	8	103	17510		
Animal Care Facility	Other	--												0			
Otonabee College Kitchen	Otonabee Dining Hall	2	9	8	9	8	9	8	9	8	8	10	8	103	17510		
Otonabee College Admin Depot	Otonabee College	2	9	8	9	8	9	8	9	8	8	10	8	103	17510		
Grounds Crew	Other	1	2	2	3	2	2	2	2	2	2	2	2	25	2125		
Science Complex	ESBCSB	2	9	8	9	8	9	8	9	8	8	10	8	103	17510		
Catherine Parr Trail College	Other	3	9	8	4	4	5	4	5	4	4	5	4	60	15300		
Student Centre	Student Centre	3	9	8	9	8	9	8	9	8	8	10	8	103	26265		
<b>TOTAL</b>	<b>kg</b>															<b>279820</b>	
	<b>MT</b>															<b>279.82</b>	

Comingled Containers		Totes	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Building		95 Gal	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts	Lifts
Blackburn Hall	Blackburn	5	9	8	9	8	6	9	8	9	8	8	9	8	99
Trent Day Care Centre	Other	2	4	4	5	4	4	5	3	5	4	4	5	4	51
Athletics Complex	Other	4	9	8	9	8	9	9	8	9	8	8	10	8	103
Lady Eaton Residence	LEC	5	9	8	9	8	9	9	8	9	8	8	10	8	103
Lady Eaton Kitchen	LEC	4	9	8	9	8	9	9	8	9	8	8	10	8	103
Champlain College Depot	Other	8	9	8	9	8	9	9	8	9	8	8	10	8	103
Gazowski Building Depot	Erwayyang	5	9	8	9	8	9	9	8	9	8	8	10	8	103
Gazowski Kitchen	Erwayyang Dining Hall	8	9	8	9	8	9	9	8	9	8	8	10	8	103
Otonabee College Residence - South End	Otonabee Residence	5	9	8	9	8	9	9	8	9	8	8	10	8	103
Otonabee College Residence - North End	Otonabee Residence	6	9	8	9	8	9	9	8	9	8	8	10	8	103
DNA Lab	DNA Building	7	9	8	9	8	9	9	8	9	8	8	10	8	103
Otonabee College Kitchen	Otonabee Dining Hall	12	9	8	9	8	9	9	8	9	8	8	10	8	103
Otonabee College Admin Depot	Otonabee College	4	9	8	9	8	9	9	8	9	8	8	10	8	103
Science Complex	ESBCCB	4	4	4	5	4	9	5	8	9	4	4	5	4	85
Catherine Parr Trail College	Other	5	9	8	4	4	5	4	5	4	4	5	4	4	60
Student Centre	Student Centre	5	9	8	9	8	9	9	8	9	8	8	10	8	103
<b>TOTAL</b>			<b>kg</b>												<b>373068</b>
			<b>MT</b>												<b>373.07</b>

SCRAP METALS SUMMARY		Bin Size	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Building		Yd3	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg
Athletics Complex	Other	Temp 20													0
Grounds Crew	Other	Temp 20					3280					1,920.00			5200
DNA Lab	DNA Building	Temp 20					1520								1520
<b>TOTAL</b>		<b>kg</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,800</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,920</b>	<b>0</b>	<b>0</b>	<b>6,720</b>
		<b>MT</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4.8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.92</b>	<b>0</b>	<b>0</b>	<b>6.72</b>

SCRAP WOODS SUMMARY		Bin Size	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Building		Yd3	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg	kg
Blackburn Hall (@ Carpentry)	Blackburn	Temp 20	2,670.00		2,610	2,340				2,800	3,570	4,070			18,060
Grounds Crew	Other	30yd	0.00						5,350.00			1,810		1,730	8,890
<b>TOTAL</b>		<b>kg</b>	<b>2,670</b>	<b>0</b>	<b>2,610</b>	<b>2,340</b>	<b>0</b>	<b>0</b>	<b>5,350</b>	<b>2,800</b>	<b>3,570</b>	<b>5,880</b>	<b>0</b>	<b>1,730</b>	<b>26,950</b>
		<b>MT</b>	<b>2.67</b>	<b>0</b>	<b>2.61</b>	<b>2.34</b>	<b>0</b>	<b>0</b>	<b>5.35</b>	<b>2.8</b>	<b>3.57</b>	<b>5.88</b>	<b>0</b>	<b>1.73</b>	<b>26.95</b>



3R	Stream	Weight in Kg	2022-2023 Annual Qua	Notes
Reduce	ecotrayer	68	0.07	10,953 meals served on ecoTray, multiplied by 6.2g for each paper clamshell that was avoided.
Reduce	plates	225	0.22	36,290 meals served on plates - same method as above. Remainder of meals served in single-use containers that would be captured in other streams.
Reduce	Academic calendars	455	0.46	Previously Trent printed ~350-400 academic calendars annually, now promote digital version more - estimated reduction of 300 calendars/year.
Reduce	Campus paper		0.00	did not calculate in time, next year
Reduce	Travel mug	35	0.04	3,918 coffees served in Travel Mugs, multiplied by 9g for each paper cup that was avoided.
Reuse	cooking oil	7750	7.75	amounts from Sanimax report
Reuse	shipping pallets	2352	2.35	Grounds crew has a pallet return program with ice melt provider last year ~115 pallets returned for reuse at ~45lbs each
Reuse	SWAP Shop	5903	5.90	used 2021 data as an estimate (last assessment)
Reuse	LCBO (kegs)	191	0.19	14 kegs x 30lb each (Used 2022 as an estimate)
Recycle	e-waste	5292	5.29	Used estimate of a pick-up truck full every 5-6wks, assumed 128sf of waste per trip, and 180kg/square yard of mixed e-waste
Recycle	batteries	500	0.50	two barrels, BoL states 250kg each
Recycle	coffee pods		0.00	No 2023 data
Recycle	Confidential Papers/Shreddin	9750	9.75	Report provided from Iron Mountain
Recycle	LCBO (bottles and cans)	75	0.08	cans estimated at 70 cans/kg and bottles at an average of 600g each (611 cans and 110 bottles - wine and liquor) (Used 2022 as a proxy)
Recycle	lab Glass	n/a	0.00	
Recycle	Lab Plastic	n/a	0.00	
Recycle	move-in LDPE	49	0.05	used 2022 move-in as estimate
Recycle	move-in poly	136.4	0.14	used 2022 move-in as estimate
Recycle	scrap metal	6720	6.72	weighed
Recycle	wood	26950	26.95	weighed

## Appendix C: Scale Calibration Certificate



### CALIBRATION CERTIFICATE

DATE: Aug 17 2023

SR # 51702

**CUSTOMER:**

Waste Reduction Group  
214 Merton St. Unit 101  
Toronto ON

**REMARKS**

This is to certify that the following scale has been tested and verified in relation to the Standards maintained by **CANADIAN SCALE COMPANY LIMITED**, with test weights traceable to the Legal Metrology Laboratories of, Industry Canada and National Research Council, Canada.

Western model EWA-150  
Capacity - 150 kg  
S/N - 202304031

CANADIAN SCALE COMPANY LIMITED is accredited with Measurement Canada

\_\_\_\_\_  
Technician's signature



**CANADIAN SCALE COMPANY LIMITED**  
305 Horner Avenue, Toronto, ON M8W 1Z4  
1-800-461-0634      [www.canscale.com](http://www.canscale.com)

## Appendix D: Sample Composition by Building, Functional Area and Waste Stream

(Note: higher intensity of blue highlighting indicates higher sample mass/percent)

Sample Stream Building	Garbage		Co-Mingled		Mixed Papers		Organics		Total	
	kg	%	kg	%	kg	%	kg	%	kg	%
<b>DNA Buildings and Life &amp; Health Sciences Complex</b>	<b>20.61</b>	<b>6.67%</b>	<b>16.21</b>	<b>5.25%</b>					<b>36.82</b>	<b>11.92%</b>
DNA Labs	8.35	2.70%	1.43	0.46%					9.78	3.17%
Offices	5.35	1.73%	11.74	3.80%					17.09	5.53%
Public Areas	3.34	1.08%	3.04	0.98%					6.38	2.07%
Washroom	3.57	1.16%							3.57	1.16%
<b>Environmental Science Centre and Chemical Science Building</b>	<b>43.97</b>	<b>14.24%</b>	<b>5.83</b>	<b>1.89%</b>	<b>4.76</b>	<b>1.54%</b>	<b>1.61</b>	<b>0.52%</b>	<b>56.17</b>	<b>18.19%</b>
Classroom	3.89	1.26%							3.89	1.26%
Complex Lab	14.84	4.80%							14.84	4.80%
Office Area	6.14	1.99%							6.14	1.99%
Public Areas	12.26	3.97%	5.83	1.89%	4.76	1.54%	1.61	0.52%	24.46	7.92%
Washroom	6.84	2.21%							6.84	2.21%
<b>Enweying College</b>	<b>13.85</b>	<b>4.48%</b>	<b>7.66</b>	<b>2.48%</b>	<b>1.54</b>	<b>0.50%</b>	<b>4.56</b>	<b>1.48%</b>	<b>27.61</b>	<b>8.94%</b>
Offices	13.85	4.48%	4.51	1.46%					18.36	5.94%
Public Area							4.56	1.48%	4.56	1.48%
Public Areas			3.15	1.02%	1.54	0.50%			4.69	1.52%
<b>Enweying Dining Hall</b>	<b>1.31</b>	<b>0.42%</b>	<b>3.59</b>	<b>1.16%</b>	<b>4.57</b>	<b>1.48%</b>	<b>16.48</b>	<b>5.34%</b>	<b>25.95</b>	<b>8.40%</b>
Dining Hall	1.31	0.42%	3.59	1.16%	4.57	1.48%	16.48	5.34%	25.95	8.40%
<b>Julian Blackburn Hall</b>	<b>7.05</b>	<b>2.28%</b>	<b>8.15</b>	<b>2.64%</b>	<b>3.60</b>	<b>1.17%</b>	<b>2.76</b>	<b>0.89%</b>	<b>21.56</b>	<b>6.98%</b>
Offices	7.05	2.28%	3.69	1.19%					10.74	3.48%
Public Area							2.76	0.89%	2.76	0.89%
Public Areas			4.46	1.44%	3.60	1.17%			8.06	2.61%
<b>Lady Eaton College</b>	<b>21.28</b>	<b>6.89%</b>	<b>13.89</b>	<b>4.50%</b>			<b>2.20</b>	<b>0.71%</b>	<b>37.37</b>	<b>12.10%</b>
Classroom	7.65	2.48%							7.65	2.48%
Offices			9.42	3.05%					9.42	3.05%
Public Areas	13.63	4.41%	4.47	1.45%					18.10	5.86%
Unlabeled							2.20	0.71%	2.20	0.71%
<b>Otonabee College - Academics</b>	<b>9.20</b>	<b>2.98%</b>					<b>1.14</b>	<b>0.37%</b>	<b>10.34</b>	<b>3.35%</b>
Public Areas	9.20	2.98%							9.20	2.98%
Unlabeled							1.14	0.37%	1.14	0.37%
<b>Otonabee College - Dining Hall</b>	<b>21.99</b>	<b>7.12%</b>	<b>3.48</b>	<b>1.13%</b>	<b>2.39</b>	<b>0.77%</b>	<b>5.85</b>	<b>1.89%</b>	<b>33.71</b>	<b>10.91%</b>
Dining Hall	12.15	3.93%					5.85	1.89%	18.00	5.83%
Kitchen Services	9.84	3.19%							9.84	3.19%
Public Areas			3.48	1.13%	2.39	0.77%			5.87	1.90%
<b>Otonabee College - Residence</b>	<b>10.86</b>	<b>3.52%</b>	<b>1.59</b>	<b>0.51%</b>	<b>1.22</b>	<b>0.39%</b>			<b>13.67</b>	<b>4.43%</b>
Offices	10.86	3.52%							10.86	3.52%
Public Areas			1.59	0.51%	1.22	0.39%			2.81	0.91%
<b>Student Centre</b>	<b>38.40</b>	<b>12.43%</b>	<b>5.96</b>	<b>1.93%</b>	<b>0.79</b>	<b>0.26%</b>	<b>0.52</b>	<b>0.17%</b>	<b>45.67</b>	<b>14.79%</b>
Public Area							0.52	0.17%	0.52	0.17%
Public Areas			5.96	1.93%	0.79	0.26%			6.75	2.19%
Starbucks	24.23	7.84%							24.23	7.84%
Unlabeled	14.17	4.59%							14.17	4.59%
<b>Total</b>	<b>188.52</b>	<b>61.04%</b>	<b>66.36</b>	<b>21.48%</b>	<b>18.87</b>	<b>6.11%</b>	<b>35.12</b>	<b>11.37%</b>	<b>308.87</b>	<b>100.00%</b>



## Appendix E: Sample Composition (by Functional Area and Material)

Note: highlighted cells in **Blue** indicate higher material sample mass

Functional Area O.Reg 103/94 Type	Classroom		Complex Lab		Dining Hall		DNA Labs		Kitchen Services		Office Area		Offices		Public Area		Public Areas		Starbucks		Unlabeled		Washroom		Total	
	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%
<b>Mandatory Recyclables</b>	<b>2.41</b>	<b>20.88%</b>	<b>4.15</b>	<b>27.96%</b>	<b>3.73</b>	<b>8.49%</b>	<b>0.82</b>	<b>8.38%</b>	<b>0.74</b>	<b>7.52%</b>	<b>2.17</b>	<b>35.34%</b>	<b>28.84</b>	<b>43.39%</b>	<b>0.00</b>	<b>0.00%</b>	<b>23.48</b>	<b>27.29%</b>	<b>0.18</b>	<b>0.74%</b>	<b>1.22</b>	<b>6.97%</b>	<b>0.26</b>	<b>2.50%</b>	<b>68.00</b>	<b>22.02%</b>
Aluminum	0.85	7.37%	0.60	4.04%	0.37	0.84%	0.32	3.27%	0.00	0.00%	0.00	0.00%	2.98	4.48%	0.00	0.00%	6.38	7.39%	0.00	0.00%	0.29	1.66%	0.00	0.00%	11.79	3.82%
Cardboard	0.06	0.52%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	1.08	1.62%	0.00	0.00%	4.97	5.76%	0.00	0.00%	0.00	0.00%	0.00	0.00%	6.11	1.88%
Glass	0.00	0.00%	0.52	3.50%	0.79	1.80%	0.00	0.00%	0.51	5.18%	0.00	0.00%	4.48	6.71%	0.00	0.00%	4.16	4.82%	0.00	0.00%	0.20	1.14%	0.00	0.00%	10.64	3.44%
Newspaper	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.09	0.14%	0.00	0.00%	0.21	0.24%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.90	0.29%
Other fine paper	0.71	6.15%	0.85	5.71%	1.95	4.44%	0.50	5.11%	0.23	2.34%	0.96	15.64%	<b>11.96</b>	<b>17.39%</b>	0.00	0.00%	3.79	4.39%	0.18	0.74%	0.73	4.17%	0.26	2.50%	22.12	7.16%
paper/copier paper	0.00	0.00%	1.58	10.65%	0.52	1.18%	0.00	0.00%	0.00	0.00%	1.21	19.71%	6.91	10.40%	0.00	0.00%	3.36	3.89%	0.00	0.00%	0.00	0.00%	0.00	0.00%	13.58	4.40%
Steel Cans	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.10	0.15%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.10	0.03%
Trent-branded paper	0.79	6.85%	0.60	4.04%	0.10	0.23%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.66	0.99%	0.00	0.00%	0.61	0.71%	0.00	0.00%	0.00	0.00%	0.00	0.00%	2.76	0.89%
<b>Other Non-Recyclables</b>	<b>1.58</b>	<b>13.69%</b>	<b>1.54</b>	<b>10.38%</b>	<b>2.95</b>	<b>6.71%</b>	<b>1.90</b>	<b>19.43%</b>	<b>1.29</b>	<b>13.11%</b>	<b>1.07</b>	<b>17.43%</b>	<b>5.00</b>	<b>7.52%</b>	<b>0.27</b>	<b>3.44%</b>	<b>6.72</b>	<b>7.78%</b>	<b>1.01</b>	<b>4.17%</b>	<b>0.84</b>	<b>4.80%</b>	<b>0.44</b>	<b>4.23%</b>	<b>24.61</b>	<b>7.97%</b>
Ancillary Elements	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.14	0.21%	0.01	0.13%	0.01	0.01%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.16	0.05%
Coffee Pods	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.11	0.17%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.11	0.04%
Cold Beverage Wax-Lined Paper Cups	0.00	0.00%	0.00	0.00%	0.21	0.46%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.10	0.15%	0.02	0.26%	1.26	1.46%	0.00	0.00%	0.04	0.23%	0.00	0.00%	1.63	0.53%
Non-Recyclable	1.58	13.69%	0.79	5.32%	2.19	4.98%	1.21	12.57%	1.27	12.91%	0.77	12.54%	4.18	6.29%	0.03	0.38%	4.55	5.27%	1.01	4.17%	0.60	4.57%	0.44	4.23%	18.82	6.09%
Other packaging	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Plastic Strapping	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
PPE	0.00	0.00%	0.75	5.05%	0.15	0.34%	0.89	7.06%	0.02	0.20%	0.30	4.89%	0.13	0.20%	0.00	0.00%	0.47	0.54%	0.00	0.00%	0.00	0.00%	0.00	0.00%	2.51	0.81%
Service accessories	0.00	0.00%	0.00	0.00%	0.19	0.43%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.54	0.81%	0.21	2.68%	0.38	0.44%	0.00	0.00%	0.00	0.00%	0.00	0.00%	1.12	0.36%
Styrofoam	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.05	0.06%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.05	0.02%
Textiles	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Trent-branded items	0.00	0.00%	0.00	0.00%	0.21	0.48%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.21	0.07%
<b>Other Recyclables</b>	<b>7.55</b>	<b>65.42%</b>	<b>9.15</b>	<b>61.66%</b>	<b>37.27</b>	<b>84.80%</b>	<b>7.04</b>	<b>72.19%</b>	<b>7.81</b>	<b>79.17%</b>	<b>2.90</b>	<b>47.23%</b>	<b>32.63</b>	<b>49.09%</b>	<b>7.67</b>	<b>96.56%</b>	<b>56.12</b>	<b>65.01%</b>	<b>23.04</b>	<b>95.09%</b>	<b>15.46</b>	<b>88.24%</b>	<b>9.71</b>	<b>93.28%</b>	<b>216.26</b>	<b>70.02%</b>
Aseptic Containers	0.11	0.95%	0.00	0.00%	0.05	0.11%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.25	0.38%	0.00	0.00%	1.05	1.22%	2.68	8.58%	0.48	2.74%	0.04	0.38%	4.06	1.31%
Batteries	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Boxboard	0.00	0.00%	0.49	3.30%	0.97	2.21%	0.19	1.94%	0.50	5.08%	0.00	0.00%	4.87	7.33%	0.16	2.04%	4.83	5.60%	0.48	1.98%	0.84	4.80%	0.00	0.00%	13.33	4.32%
Coffee Cups	0.64	7.28%	0.00	0.00%	0.13	0.30%	0.00	0.00%	0.00	0.00%	0.00	0.00%	1.79	2.69%	0.03	0.39%	2.34	2.71%	0.00	0.00%	0.21	1.20%	0.00	0.00%	5.34	1.73%
Craft Paper	0.03	0.26%	0.44	2.96%	1.77	4.03%	0.00	0.00%	0.25	2.54%	0.67	10.91%	2.29	3.45%	0.38	4.81%	3.17	3.67%	4.72	19.48%	1.60	9.00%	0.00	0.00%	15.12	4.90%
Electronic Waste	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Gable Top Containers	0.00	0.00%	0.00	0.00%	0.26	0.59%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.81	1.22%	0.00	0.00%	1.53	1.77%	3.80	15.68%	1.58	8.91%	0.00	0.00%	7.96	2.58%
HDPE Plastic Containers #2	0.00	0.00%	0.00	0.00%	0.23	0.52%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.53	0.80%	0.00	0.00%	1.43	1.68%	0.90	3.71%	0.82	4.68%	0.00	0.00%	3.93	1.27%
LDPE (#4) Plastic Films	1.17	10.14%	0.47	3.17%	0.44	1.00%	0.24	2.45%	0.41	4.17%	0.20	3.26%	3.84	5.78%	0.18	2.30%	3.86	4.47%	0.34	1.40%	0.36	2.06%	0.30	2.88%	11.81	3.82%
organic take-out container	0.00	0.00%	0.40	2.70%	2.53	5.76%	0.00	0.00%	0.00	0.00%	0.00	0.00%	2.12	3.19%	0.29	3.70%	3.39	3.93%	0.00	0.00%	0.00	0.00%	0.00	0.00%	8.73	2.83%
Organics	3.01	26.08%	0.90	6.06%	<b>73.02</b>	<b>32.45%</b>	0.53	5.42%	4.40	44.72%	0.00	0.00%	4.98	7.49%	4.84	61.73%	7.69	8.91%	6.07	25.08%	5.78	33.01%	0.00	0.00%	61.27	19.84%
Paper Towels	1.50	13.00%	5.76	38.81%	6.43	14.63%	3.63	37.57%	2.21	22.46%	1.54	21.82%	6.09	9.16%	1.52	19.39%	6.23	7.22%	3.69	15.23%	3.63	20.73%	9.37	30.01%	53.40	17.29%
PET #1	0.12	1.04%	0.00	0.00%	0.50	1.14%	0.00	0.00%	0.01	0.10%	0.19	3.09%	3.15	4.74%	0.03	0.38%	9.58	11.10%	0.00	0.00%	0.37	2.11%	0.00	0.00%	13.96	4.52%
Polystyrene #6	0.10	0.87%	0.00	0.00%	0.01	0.02%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.26	0.39%	0.00	0.00%	0.17	0.20%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.54	0.17%
PP #5	0.67	5.81%	0.69	4.65%	0.85	1.93%	0.47	4.81%	0.00	0.00%	0.50	8.14%	1.56	2.35%	0.08	1.02%	<b>10.71</b>	<b>12.41%</b>	0.96	3.96%	0.00	0.00%	0.00	0.00%	16.49	5.34%
Scrap Metal	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
Scrap Wood	0.00	0.00%	0.00	0.00%	0.03	0.07%	0.00	0.00%	0.03	0.30%	0.00	0.00%	0.09	0.14%	0.06	0.77%	0.12	0.14%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.33	0.11%
<b>Total</b>	<b>11.54</b>	<b>100.00%</b>	<b>14.84</b>	<b>100.00%</b>	<b>43.95</b>	<b>100.00%</b>	<b>9.78</b>	<b>100.00%</b>	<b>9.84</b>	<b>100.00%</b>	<b>6.14</b>	<b>100.00%</b>	<b>66.47</b>	<b>100.00%</b>	<b>7.84</b>	<b>100.00%</b>	<b>86.32</b>	<b>100.00%</b>	<b>24.23</b>	<b>100.00%</b>	<b>17.51</b>	<b>100.00%</b>	<b>10.41</b>	<b>100.00%</b>	<b>388.87</b>	<b>100.00%</b>

## Appendix E: Sample Composition (by Building and Material)

Note: highlighted cells in **Blue** indicate higher material sample mass

Building	DNA Buildings and Life & Health Sciences Complex		Environmental Science Centre and Chemical Science Building		Erweyng College		Erweyng Dining Hall		Julian Blackburn Hall		Lady Eaton College		Otonabee College - Academics		Otonabee College - Dining Hall		Otonabee College - Residence		Student Centre		Total	
	O.Reg 103/94 Type	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg	%	kg
<b>Mandatory Recyclables</b>	<b>11.80</b>	<b>32.05%</b>	<b>13.61</b>	<b>24.23%</b>	<b>11.01</b>	<b>39.88%</b>	<b>3.53</b>	<b>13.60%</b>	<b>7.18</b>	<b>33.30%</b>	<b>15.22</b>	<b>40.73%</b>	<b>0.43</b>	<b>4.16%</b>	<b>2.38</b>	<b>7.06%</b>	<b>0.59</b>	<b>4.32%</b>	<b>2.25</b>	<b>4.93%</b>	<b>68.00</b>	<b>22.02%</b>
Aluminum	0.92	2.50%	1.62	3.42%	1.13	4.09%	0.35	1.35%	1.40	6.49%	4.58	12.26%	0.36	3.48%	0.48	1.42%	0.26	1.90%	0.39	0.85%	<b>11.79</b>	<b>3.82%</b>
Cardboard	0.32	0.87%	0.49	0.87%	0.75	2.72%	0.00	0.00%	0.84	3.90%	3.51	9.39%	0.00	0.00%	0.00	0.00%	0.20	1.46%	0.00	0.00%	<b>6.11</b>	<b>1.98%</b>
Glass	0.00	0.00%	1.76	3.13%	0.52	1.88%	0.79	3.04%	1.60	7.42%	4.41	11.80%	0.00	0.00%	0.81	2.40%	0.00	0.00%	0.75	1.64%	<b>10.64</b>	<b>3.44%</b>
Newspaper	0.43	1.17%	0.00	0.00%	0.47	1.70%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.90</b>	<b>0.29%</b>
Other fine paper	<b>7.06</b>	<b>19.23%</b>	<b>3.62</b>	<b>6.44%</b>	<b>3.76</b>	<b>13.62%</b>	<b>1.87</b>	<b>7.21%</b>	<b>1.20</b>	<b>5.57%</b>	<b>2.51</b>	<b>6.72%</b>	<b>0.07</b>	<b>0.68%</b>	<b>0.77</b>	<b>2.28%</b>	<b>0.13</b>	<b>0.95%</b>	<b>1.11</b>	<b>2.43%</b>	<b>22.12</b>	<b>7.16%</b>
paper/copier paper	2.94	7.98%	4.43	7.89%	3.77	13.65%	0.52	2.00%	1.70	7.89%	0.00	0.00%	0.00	0.00%	0.22	0.65%	0.00	0.00%	0.00	0.00%	<b>13.58</b>	<b>4.40%</b>
Steel Cans	0.00	0.00%	0.00	0.00%	0.10	0.36%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.10</b>	<b>0.03%</b>
Trent-branded paper	0.11	0.30%	1.39	2.47%	0.51	1.85%	0.00	0.00%	0.44	2.04%	0.21	0.56%	0.00	0.00%	0.10	0.30%	0.00	0.00%	0.00	0.00%	<b>2.76</b>	<b>0.89%</b>
<b>Other Non Recyclables</b>	<b>4.11</b>	<b>11.16%</b>	<b>7.40</b>	<b>13.17%</b>	<b>1.79</b>	<b>6.48%</b>	<b>1.08</b>	<b>4.16%</b>	<b>2.20</b>	<b>10.20%</b>	<b>1.18</b>	<b>3.16%</b>	<b>0.53</b>	<b>5.13%</b>	<b>3.38</b>	<b>10.03%</b>	<b>0.90</b>	<b>6.58%</b>	<b>2.04</b>	<b>4.47%</b>	<b>24.61</b>	<b>7.97%</b>
Ancillary Elements	0.01	0.03%	0.00	0.00%	0.05	0.04%	0.00	0.00%	0.14	0.63%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.16</b>	<b>0.05%</b>
Coffee Pods	0.11	0.30%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.11</b>	<b>0.04%</b>
Cold Beverage Wax-Lined Paper Cups	0.00	0.00%	1.08	1.92%	0.00	0.00%	0.20	0.77%	0.10	0.46%	0.03	0.08%	0.02	0.19%	0.11	0.33%	0.03	0.22%	0.06	0.13%	<b>1.63</b>	<b>0.53%</b>
Non-Recyclable	2.74	7.44%	4.90	8.72%	1.51	5.47%	0.57	2.20%	1.81	8.40%	1.15	3.08%	0.48	4.64%	2.97	8.81%	0.84	6.14%	1.85	4.05%	<b>18.82</b>	<b>6.09%</b>
Other packaging	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.00</b>	<b>0.00%</b>
Plastic Strapping	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.00</b>	<b>0.00%</b>
psg	0.97	2.63%	1.37	2.44%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.17	0.50%	0.00	0.00%	0.00	0.00%	<b>2.51</b>	<b>0.81%</b>
Service accessories	0.23	0.62%	0.05	0.09%	0.27	0.98%	0.10	0.39%	0.15	0.70%	0.00	0.00%	0.03	0.29%	0.13	0.39%	0.03	0.22%	0.13	0.28%	<b>1.12</b>	<b>0.36%</b>
Styrofoam	0.05	0.14%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.05</b>	<b>0.02%</b>
Textiles	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.00</b>	<b>0.00%</b>
Trent-branded items	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.21	0.81%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.21</b>	<b>0.07%</b>
<b>Other Recyclables</b>	<b>20.91</b>	<b>56.79%</b>	<b>35.16</b>	<b>62.60%</b>	<b>14.81</b>	<b>53.64%</b>	<b>21.34</b>	<b>82.24%</b>	<b>12.18</b>	<b>56.49%</b>	<b>20.97</b>	<b>56.11%</b>	<b>9.38</b>	<b>90.72%</b>	<b>27.95</b>	<b>82.91%</b>	<b>12.18</b>	<b>89.10%</b>	<b>41.38</b>	<b>90.61%</b>	<b>216.26</b>	<b>70.02%</b>
Aseptic Containers	0.07	0.19%	0.19	0.34%	0.20	0.72%	0.00	0.00%	0.26	1.21%	0.54	1.45%	0.07	0.68%	0.14	0.42%	0.01	0.07%	2.38	5.65%	<b>4.06</b>	<b>1.31%</b>
Batteries	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.00</b>	<b>0.00%</b>
Boxboard	1.08	2.93%	1.17	2.08%	2.97	10.79%	0.74	2.85%	2.14	9.93%	1.38	3.69%	0.33	3.19%	1.19	3.53%	0.73	5.49%	1.58	3.46%	<b>13.33</b>	<b>4.32%</b>
Coffee Cups	0.95	2.58%	1.03	1.83%	0.64	2.32%	0.02	0.08%	0.88	4.08%	0.51	1.38%	0.37	3.58%	0.28	0.83%	0.10	0.73%	0.56	1.23%	<b>5.34</b>	<b>1.73%</b>
Craft Paper	1.15	3.12%	2.37	4.22%	0.89	3.22%	1.03	3.97%	0.93	4.31%	0.45	1.20%	0.30	2.90%	1.34	3.98%	0.06	0.44%	<b>8.80</b>	<b>14.45%</b>	<b>15.12</b>	<b>4.90%</b>
Electronic Waste	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.00</b>	<b>0.00%</b>
Gable Top Containers	0.18	0.49%	0.53	0.94%	0.09	0.33%	0.14	0.54%	0.38	1.76%	0.48	1.29%	0.00	0.00%	0.50	1.48%	0.30	2.19%	<b>5.36</b>	<b>11.74%</b>	<b>7.96</b>	<b>2.58%</b>
HDPE Plastic Containers #2	0.35	0.95%	0.63	1.12%	0.10	0.36%	0.23	0.89%	0.21	0.97%	0.45	1.20%	0.00	0.00%	0.21	0.62%	0.00	0.00%	1.75	3.83%	<b>3.93</b>	<b>1.27%</b>
LDPE (#4) Plastic Films	<b>3.35</b>	<b>9.10%</b>	<b>2.09</b>	<b>3.72%</b>	<b>0.66</b>	<b>2.39%</b>	<b>0.12</b>	<b>0.46%</b>	<b>1.16</b>	<b>5.38%</b>	<b>2.12</b>	<b>5.67%</b>	<b>0.13</b>	<b>1.26%</b>	<b>0.65</b>	<b>2.52%</b>	<b>0.35</b>	<b>2.56%</b>	<b>0.98</b>	<b>2.15%</b>	<b>11.81</b>	<b>3.82%</b>
organic take-out container	0.05	0.14%	1.08	1.92%	0.94	3.40%	1.74	6.71%	1.08	5.01%	0.00	0.00%	1.03	9.96%	1.40	4.15%	1.41	10.31%	0.00	0.00%	<b>8.73</b>	<b>2.83%</b>
Organics	1.79	4.86%	4.09	7.28%	4.12	14.92%	<b>14.88</b>	<b>57.20%</b>	1.17	5.43%	5.21	13.94%	4.04	47.78%	<b>12.61</b>	<b>37.41%</b>	3.78	27.65%	<b>8.70</b>	<b>19.05%</b>	<b>61.27</b>	<b>19.84%</b>
Paper Towels	<b>9.54</b>	<b>25.91%</b>	<b>17.41</b>	<b>31.00%</b>	0.91	3.30%	1.23	5.13%	2.06	9.53%	1.50	4.01%	2.02	19.54%	<b>7.38</b>	<b>21.89%</b>	3.99	29.19%	<b>7.26</b>	<b>15.90%</b>	<b>53.40</b>	<b>17.29%</b>
PET #1	1.10	2.99%	1.87	3.33%	1.96	7.10%	0.42	1.62%	0.94	4.36%	4.77	12.76%	0.00	0.00%	1.52	4.51%	0.86	6.29%	0.51	1.12%	<b>13.95</b>	<b>4.52%</b>
Polystyrene #6	0.19	0.52%	0.10	0.18%	0.10	0.36%	0.00	0.00%	0.02	0.09%	0.00	0.00%	0.02	0.19%	0.04	0.12%	0.07	0.51%	0.00	0.00%	<b>0.54</b>	<b>0.17%</b>
PP #5	1.11	3.01%	2.54	4.52%	1.08	3.91%	0.73	2.74%	0.95	4.41%	2.56	6.73%	0.13	1.26%	0.41	1.22%	0.50	3.66%	<b>5.50</b>	<b>12.04%</b>	<b>16.49</b>	<b>5.34%</b>
Scrap Metal	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	<b>0.00</b>	<b>0.00%</b>
Scrap Wood	0.00	0.00%	0.06	0.11%	0.15	0.54%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.04	0.39%	0.06	0.24%	0.00	0.00%	0.00	0.00%	<b>0.33</b>	<b>0.11%</b>
<b>Total</b>	<b>36.82</b>	<b>100.00%</b>	<b>56.17</b>	<b>100.00%</b>	<b>27.61</b>	<b>100.00%</b>	<b>25.95</b>	<b>100.00%</b>	<b>21.56</b>	<b>100.00%</b>	<b>37.37</b>	<b>100.00%</b>	<b>10.34</b>	<b>100.00%</b>	<b>33.71</b>	<b>100.00%</b>	<b>13.67</b>	<b>100.00%</b>	<b>45.67</b>	<b>100.00%</b>	<b>308.87</b>	<b>100.00%</b>



## Appendix F: Estimated Annual Quantities Generated from Garbage/ Recycling/ Organics Streams

Waste Sample Composition and Estimated Annual Quantities Generated in the Garbage Stream (Note: **blue** data bars indicate higher annual quantities)

Material	Estimated Quantity Generated Through Garbage Stream (MT)	%
<b>Other Recyclables</b>	<b>193.36</b>	<b>71.66%</b>
Paper Towels	77.98	28.90%
Organics	43.49	16.12%
Craft Paper	15.38	5.70%
PP #5	11.74	4.35%
Gable Top Containers	8.78	3.26%
PET #1	8.49	3.15%
Boxboard	8.46	3.14%
organic take-out container	6.57	2.43%
Aseptic Containers	4.55	1.69%
Coffee Cups	4.35	1.61%
HDPE Plastic Containers #2	2.81	1.04%
Polystyrene #6	0.63	0.23%
Scrap Wood	0.13	0.05%
Academic Calendars	0.00	0.00%
Batteries	0.00	0.00%
Confidential Papers/Shredding	0.00	0.00%
Cooking Oil	0.00	0.00%
Ecotray	0.00	0.00%
Electronic Waste	0.00	0.00%
Lcbo (Kegs)	0.00	0.00%
Plates	0.00	0.00%
Scrap Metal	0.00	0.00%
Shipping Pallets	0.00	0.00%
Swap Shop	0.00	0.00%
Travel Mug	0.00	0.00%
<b>Mandatory Recyclables</b>	<b>39.20</b>	<b>14.53%</b>
Other fine paper	12.87	4.77%
paper/copier paper	10.57	3.92%
Aluminum	9.37	3.47%
Glass	3.14	1.16%
Trent-branded paper	2.34	0.87%
Cardboard	0.62	0.23%
Newspaper	0.30	0.11%
Steel Cans	0.00	0.00%
<b>Other Non-Recyclables</b>	<b>37.27</b>	<b>13.81%</b>
Non-Recyclable	21.21	7.86%
LDPE (#4) Plastic Films	10.72	3.97%
PPE	3.51	1.30%
Cold Beverage Wax-Lined Paper Cups	1.05	0.39%
Service accessories	0.39	0.14%
Ancillary Elements	0.19	0.07%
Coffee Pods	0.15	0.05%
Styrofoam	0.07	0.02%
Other packaging	0.00	0.00%
Plastic Strapping	0.00	0.00%
Textiles	0.00	0.00%
Trent-branded items	0.00	0.00%
<b>Total</b>	<b>269.84</b>	<b>100.00%</b>

## Appendix G: Site Photographs



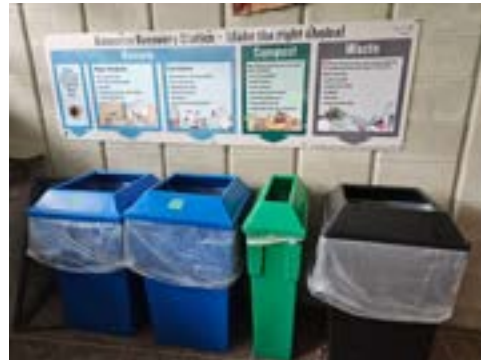
Site Tour (Dining Hall) - typical multi-stream dedicated receptacles



Site Tour - typical signage



Site Tour - Compostable cutlery and take-out containers



Site Tour - Typical bins with signage



Site Tour - red bin program and silverware dispenser



Site Tour - electronics, printer cartridges and battery collection



Site Tour - Swap Shop (donation bin)



Site Tour - Eco-Tray collection



Site Tour - water bottle filling stations



Waste Audit - paper towels



Waste Audit - organics



Waste Audit - fine paper



Waste Audit - fine paper



## Appendix H: Waste Reduction Work Plan