

Certified




Corporation



WASTE AUDIT

FEBRUARY, 2023

PREPARED FOR:
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► About enuf

enuf is a B Corp social enterprise from the student initiative, “Waste Not, Want Not”, that started at Concordia University in 2016. Since then, the Concordia community doubled its annual composting, and each Concordian reduced their annual overall waste by 16%- that is two months’ worth of garbage that disappeared per person every year. Our goal is to scale that impact via *enuf*, and our mission is to do whatever it takes to fix the waste crisis.

enuf is co-founded by three equal partners: one woman and two immigrant people of colour. We benefit greatly from a broad range of diverse perspectives within our team. We have recently become a “Benefit Corporation” (B Corp), which we pursued to ensure that we are anchoring our organization in sustainability best practices from the get-go. For example, our legal incorporation articles include the following text to ensure that executive officers can make decisions for social good, even if such decisions do not maximize financial profit, without being liable to shareholders:

“The purpose of the Company shall include, but is not in any way limited to or restricted by, the creation of a positive impact on society and the environment, taken as a whole, from the business and operations of the Company, which impact is material in view of the size and nature of the Company’s business”.



Introduction:

We conducted a waste audit for the Laurier Macdonald on the 25th of March 2022 and 20th of January 2023. In between, compost bins were provided by the Eco Quartier of St Leonard, and the *enuf* team conducted the following educational activities:

- 🌱 October 18th, 2022: Train the student green team to act as ambassadors during lunch time to help their fellow students with waste sorting.
- 🌱 November 1st, 2022: Provided school-wide educational workshops on waste sorting that were attended by over 615 students and 30 staff.

The 2022 audit data was provided in a previous report, and here we provide the 2023 audit data highlighting the progress relative to 2022. We were able to conduct a thorough and deep assessment of the waste sorting conditions, where we went through **5 days'** worth of recycling, **5 days'** worth of composting and **1 day** worth of landfill waste totalling **247 kg**.



The objectives of the work conducted by *enuf* were to:

- 🌱 Conduct a waste audit of waste at Laurier Macdonald,
- 🌱 Identify non-compliance in waste disposal to inform the logistics of organic waste integration, and waste sorting education.
- 🌱 Assess progress since the previous waste audit in 2022, and after introducing organic waste collection and conducting educational activities on waste sorting to the school's population.



Waste audit process summary:

This section outlines the process that the *enuf* auditors undertook in conducting the waste audit. All bins were kindly provided by LM staff member, Valerie Barnabé. The *enuf* auditors, **with the help of the school's student green team**, then proceeded to safely extract and separate items into separate containers for each waste stream:

- 1) Glass,
- 2) Paper,
- 3) Plastics,
- 4) Metals,
- 5) Organic waste,
- 6) Trash.



Waste audit parameters:

enuf is committed to providing the best quality of waste audit for the best price. Our processes adhere to general waste audit guidelines. The amount of waste generated by Laurier Macdonald allowed *enuf* to conduct a full waste audit without the need to sample the waste bins. These parameters give us a high confidence in the representativeness of our data and analysis.



Current state:

The total weight of waste captured in recycling bins in the audited five days is **165 Kg**. The total weight of waste captured in compost bins in the audited five days is **102 Kg**. The total weight of waste captured in landfill bins in the audited day is **31 Kg**. The composition of the audited waste is shown in **Figure 1**. On average, each person generated **35 grams** of trash and **33 grams** of recyclable waste, and **13 grams** of organic waste every day. The population data provided are as follows: LMAC has 622 students and 90 staff; Adult education centre has 175 students and 34 staff. Therefore, total population used is 921 persons. About **25%** of the waste produced is organic and can be composted. Less than a **15%** of the waste generated has to go to landfills. Note that there is a significant increase in the percentage of recyclable paper waste in 2023 relative to 2022. This is likely because the 2023 audit took place during a time where some offices were being cleaned.

Overall waste composition

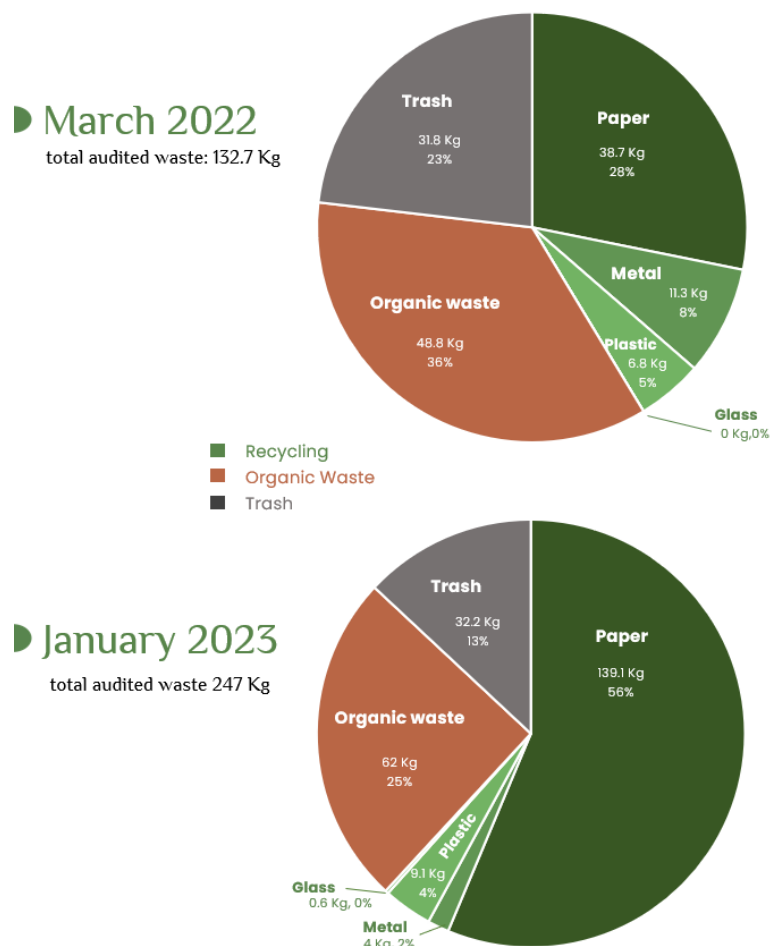


Figure 1: Overall waste composition.

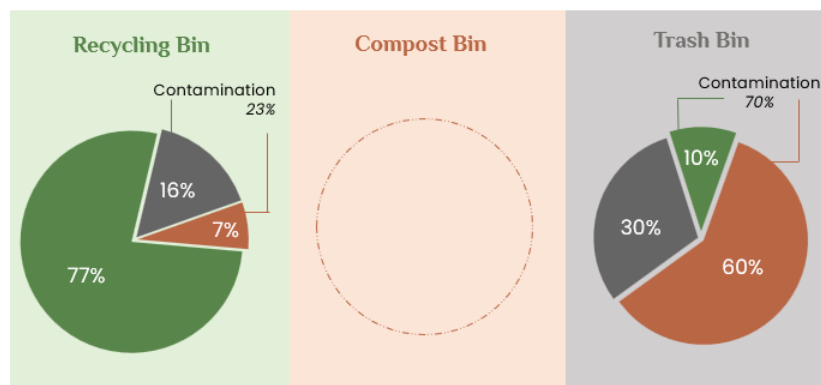
Takeaway: Identify the major sources of **paper** and target with **reduction** efforts.



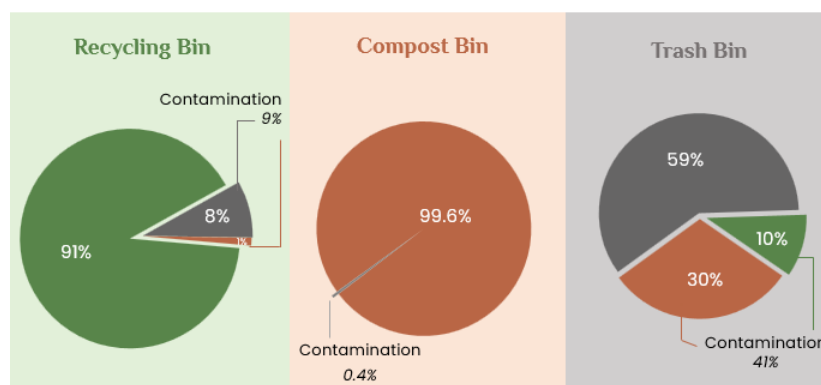
Figure 2 shows the composition of the contamination observed in both the recycling and landfill streams. The newly integrated compost bins are virtually **pure** organic waste, with contamination (non-compostable items) rate at a negligible **0.4%**. Contamination in recycling bins (non-recyclable items) decreased from **23%** in 2022 to **9%** in 2023. Further, **70%** of what was in the landfill bins in 2022 was either recyclable or compostable. In 2023, that percentage decreased to **41%**. The observed significant decrease in contamination across each of the three streams is a direct reflection of how much better the school population is sorting their waste. These improvements are a reflection of increased buy-in of the school’s administration and staff, the addition of compost bins, and school-wide education on waste sorting via workshops and trained student green team.

Contamination

► March 2022



► January 2023



- Recycling
- Organic Waste
- Trash

Figure 2: Composition of the recycling, composting and landfill bins.

Takeaway: School-wide waste sorting education activities were effective, and should be conducted on an annual basis especially for new students and personnel.



Figure 3 shows the capture rate of different waste streams, normalized per day. The amount of recyclable material captured in recycling bins increased from **59%** in 2022 to **91%** in 2023. The introduction of compost bins at the school helped capture **51%** of the organic waste generated at the school. Our observations from the waste audit indicate that most of the organic waste ending up in landfills are **brown paper towels from bathrooms**, as there were many landfill bins made of entirely of those towels that could have been composted instead. The lowest capture rates continue to be for metals (**50%** in 2023 up from **13%** in 2022), and plastic (**79%** in 2023, up from **18%** in 2022). However, the quantities of metals (**3 Kg** in 2023) and plastic (**1 Kg** in 2023) generated during in the audited period are small relative to the **21 Kg** of trash in 2023. Therefore, education must continue to focus on keeping trash out of recycling and composting to reduce contamination.



Figure 3: Capture rates of different waste streams.









Takeaway: Switching **bathroom** bins to **compost** is the biggest step the school can make to further improve its waste management, as it has the potential to **double** the amount of organic waste the school composts



Observations on the most common items

- 1) Compostable brown paper towels in landfill bins that can be composted instead if bathroom bins are switched to compost.
- 2) A lot of reusable school supplies such as binders, likely from the adult centre.
 - a) Extend waste sorting education workshops to the adult centre.
 - b) Consider donating or even creating a reuse shop or event where other students can take those school supplies.
- 3) A lot of full single-use plastic water bottles.
 - a) Consider replacing these with giving incoming students reusable water bottles, and put in place incentives and a process to reduce and eventually stop selling single-use plastic water. [This link](#) has some inspiration for going bottle-free at events.

Summary of recommendations

-  Include compost bins in bathrooms (alongside a small landfill bin to minimize contamination) with clear signage.
-  Identify major sources of paper and target them with reduction efforts such as digitization and reuse initiative for school supplies.
-  Stop providing single-use plastic water bottles, and replace with reusable ones.
-  Create a school supplies reuse shop or event so that other students can use the binders (and other supplies) that are currently ending up in recycling.
-  Include the adult education centre in future waste sorting education workshops.
-  Continue annual waste audits, and school-wide waste sorting education workshops.
-  Continue annual training to the school student green team to act as ambassadors during lunch time to help their fellow students learn how to sort their waste.
-  Communicate the progress reported in this report to BoG, staff, students and external community to sustain community engagement and buy-in.

