



WASTE AUDIT REPORT

SHERIDAN COLLEGE
TRAFALGAR & DAVIS CAMPUSES

2017 SOLID NON-HAZARDOUS WASTE
AUDIT O.REG. 102/94

PREPARED BY

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EXECUTIVE SUMMARY

This waste audit was conducted in April 2017 at the Trafalgar Campus of Sheridan College. The Trafalgar Campus is the second largest of the three Sheridan College campuses in terms of student population and the largest in terms of physical size. The Trafalgar campus has twenty buildings with a total floor area of approximately 1,055,000 sq. ft. This includes classrooms, studios, offices, cafeteria, washrooms, hallways, athletics centre, residences, etc. Eleven of the buildings in the main campus are multi-storied including both offices and classrooms/studios. Some of the office areas include kitchenettes and some only have microwave ovens on counters. There are over 1,800 employees and over 8,400 students (2014-15 data).

The Skills Training Centre in Oakville is set to close September 2017 at which time there will be three campuses at Sheridan:

- 1) Davis
- 2) Trafalgar
- 3) Hazel McCallion (HMC)

All three campuses of Sheridan College have implemented a number of diversion programs in an effort of getting to Zero Waste by 2020. Each of the campuses has a variety of single-stream recycling/reuse programs (Ex. cardboard, E-waste) as well as the three-stream Zero Waste (ZW) bins, implemented in 2014, which are the identically marked and colour-coded collection stations for organics, mixed recycling and waste to landfill that are found throughout the campus.

In addition to single stream recycling/reuse collection programs and the ZW bin program, Sheridan College has implemented several reduction programs including:

1. Installed water bottle refilling stations to reduce PET water bottle generation,
2. Implemented a program to eliminate paper towels from all washrooms by switching to air hand dryers instead of repairing broken paper towel dispensers (most washrooms have already eliminated paper towel usage),
3. Implemented a paper reduction program at all campus printers.

The waste reduction realized by these programs was not quantified for inclusion in this report.

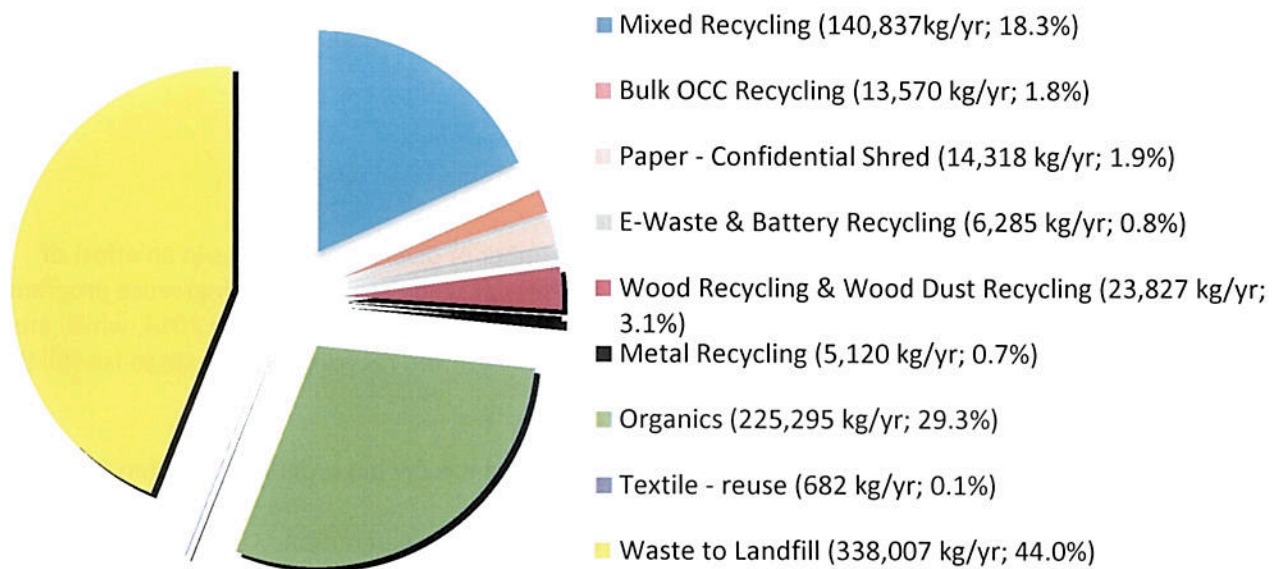
The ZW bin program was rolled out over the course of 2014 at the campuses so this program has matured: students and staff have are familiar with and knowledgeable of the ZW bin collection program. Sheridan continues to encourage participation through engagement and information programs. The weight based information for the 2017 waste audit was from 2016 data provided by the service providers. Though weight based information was reported on the hygiene waste collection program for 2016, this waste stream was not included in the report as the reported weights were strikingly high, were gross estimates and have not yet been verified. Hygiene waste from washrooms is collected for diversion from landfill and is disposed at an energy-from-waste facility. Sheridan will be undertaking a verification audit to determine weight-based information of this landfill diversion program for inclusion in the 2018 waste audit report. Note that this material diversion program, as energy-from-waste, will be considered disposal for the purposes of calculating waste diversion at the Campus.

Beyond the reporting of waste diversion at the Davis Campus and the inclusion of completed Ministry Environment waste audit reports in the appendix, the body of this report deals with the 2017 waste audit at the Trafalgar Campus.

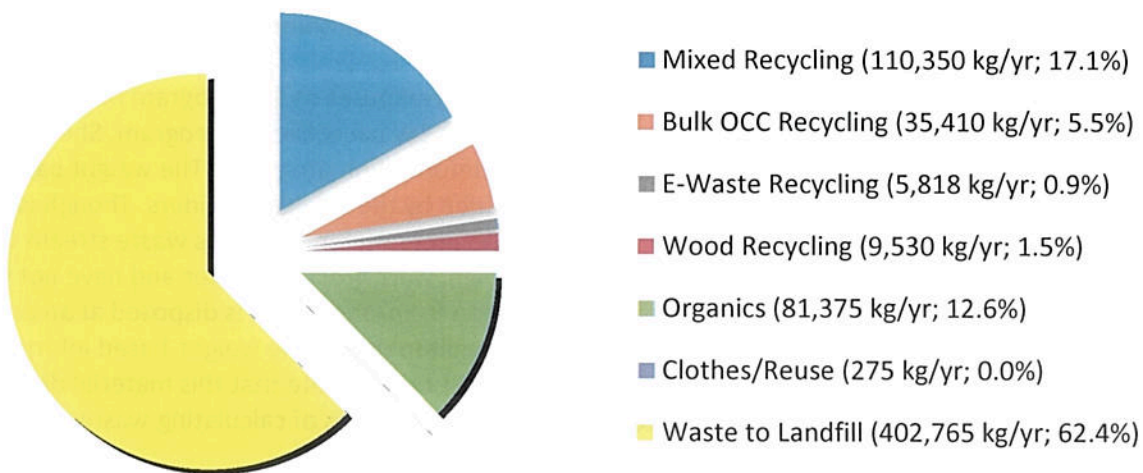
ANNUAL DIVERSION RATES 2017 (TRAFALGAR & DAVIS)

The 2017 waste diversion rates at the Trafalgar and Davis campuses are presented below. Diversion rates were calculated using calendar year 2016 weight-based information provided by Sheridan management and their waste service providers.

Trafalgar Campus 2017 Waste Diversion Rate: 56.0%

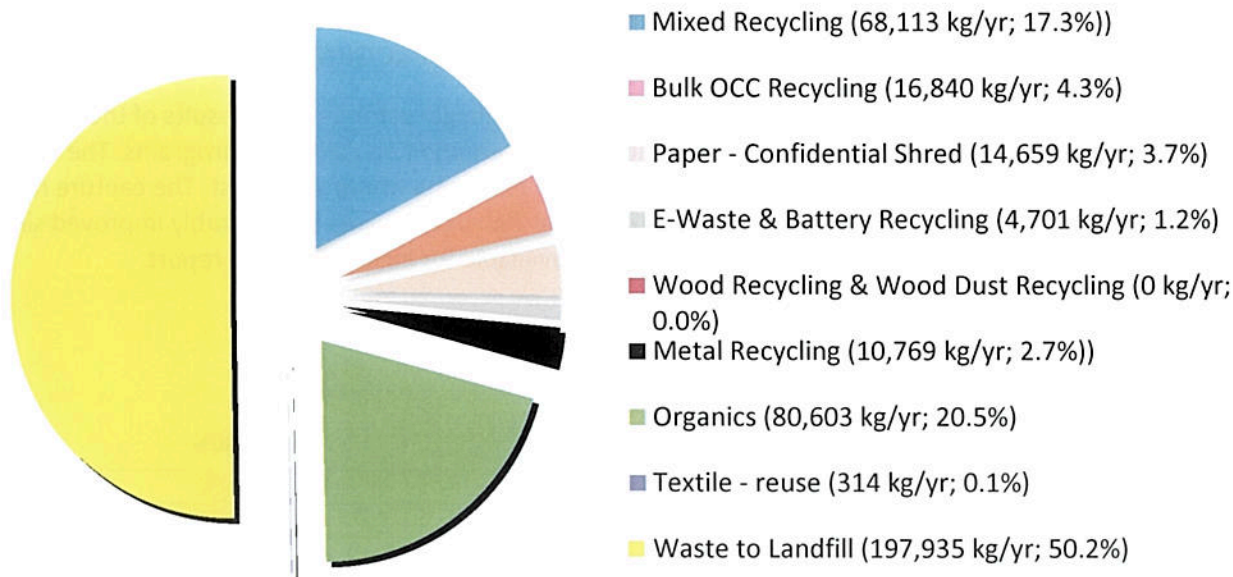


Trafalgar Campus 2015 Waste Diversion Rate: 37.6%

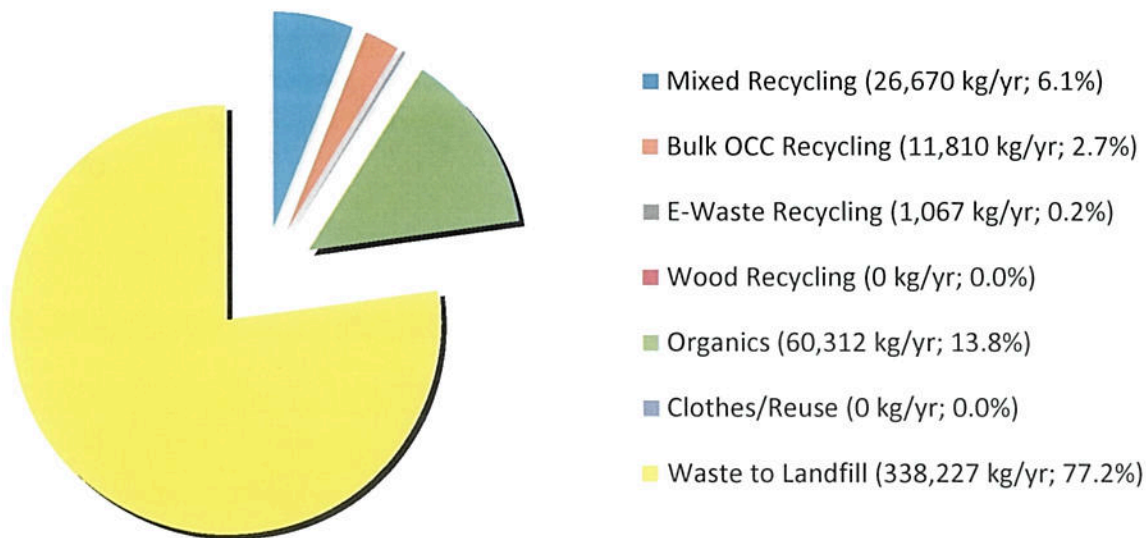


Trafalgar Campus waste diversion rate has improved consistently and dramatically from 37.6% in 2015, to 49.5% in 2016, to 56.0% in 2017. The 2016 chart is not reproduced, as it was not readily available for inclusion in this report. The increased diversion can be attributed to a significant improvement in organic waste diversion as well as, to a lesser extent, improvements in wood recycling, the new wood dust recycling program and the reporting of confidential paper shred recycling.

Davis Campus 2017 Waste Diversion Rate: 49.8%



Davis Campus 2015 Waste Diversion Rate: 29.5%

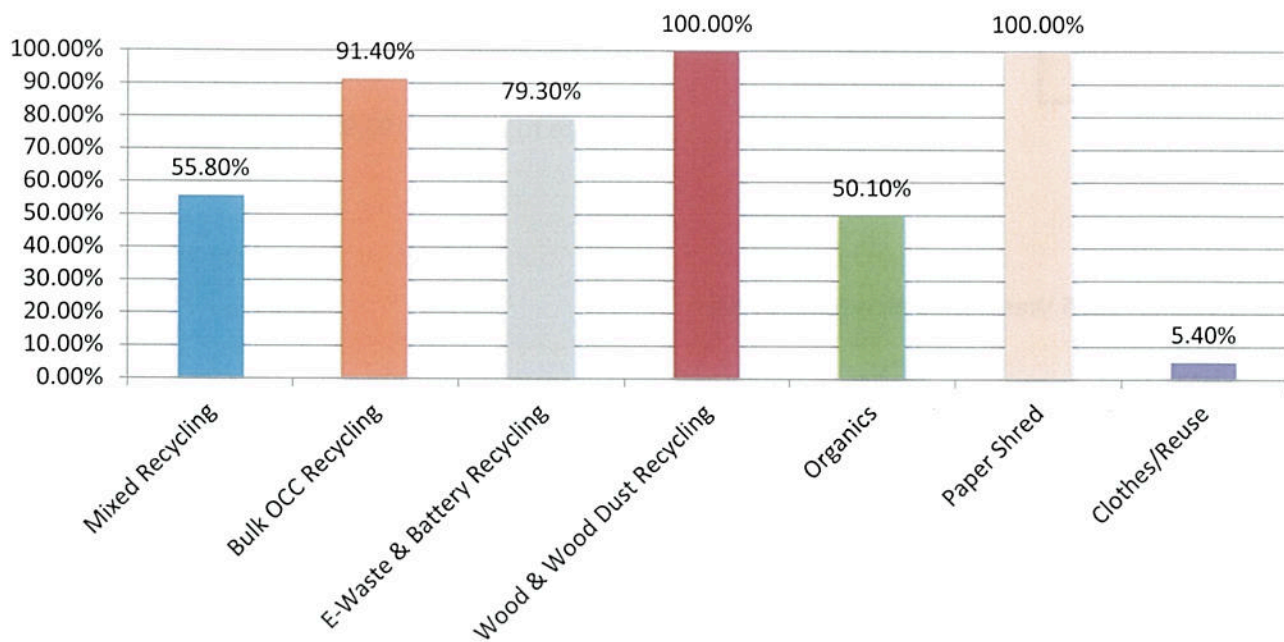


Davis Campus waste diversion rate has improved dramatically from 29.5% in 2015, to 49.8% in 2017. The 2016 chart is not reproduced, as it was not readily available for inclusion in this report. The increased diversion can be attributed to a significant improvement in mixed recycling diversion, to a somewhat lesser extent to an improvement in organic waste diversion, as well as reporting of metal recycling and confidential paper shred recycling.

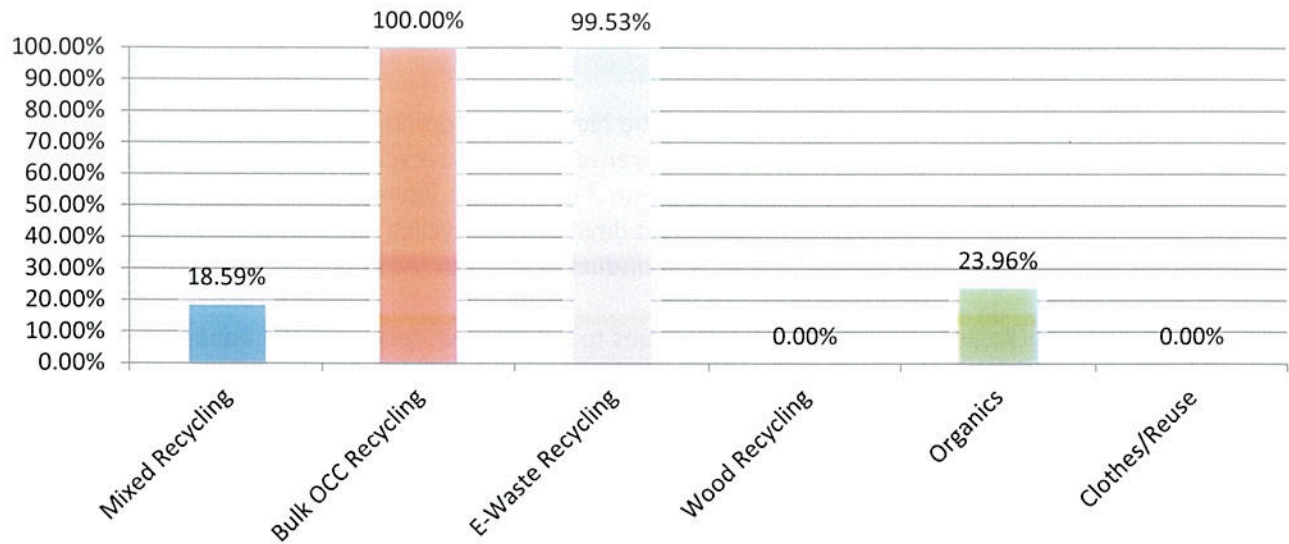
OVERALL CAPTURE RATES BY DIVERSION PROGRAM

Capture rates for each diversion program were calculated at the Trafalgar campus using results of the 2017 waste audit of the ZW bins, combined with 2016 weight based information on collection programs. The capture rates were consistently high for the bulk single-stream recycling programs where they exist. The capture rate for the ZW mixed recycling and to a somewhat lesser extent the ZW organics was considerably improved since 2015. The 2016 chart is not reproduced, as it was not readily available for inclusion in this report.

Capture Rates by Waste Diversion Collection Programs (2017)

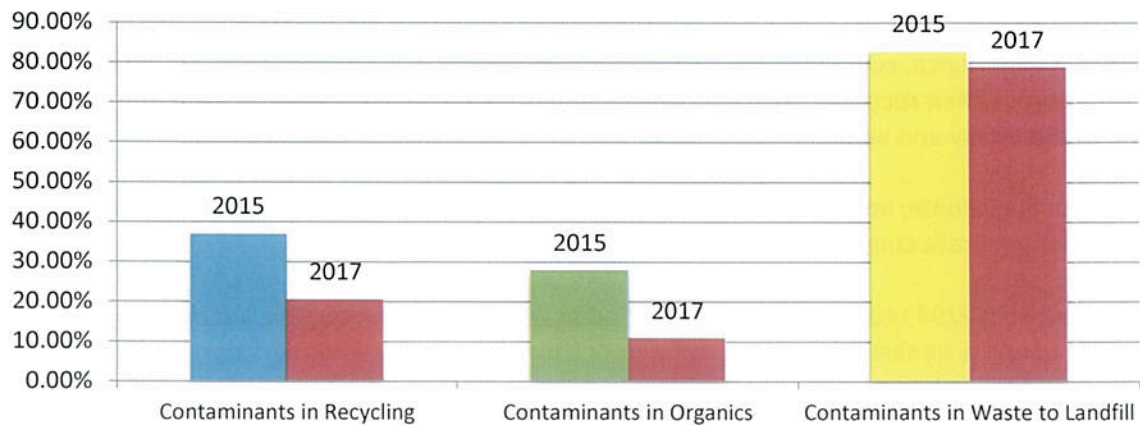


Capture Rates by Waste Diversion Collection Programs (2015)



COLLECTION PROGRAM CONTAMINATION RATES 2017

2017 contamination rates for each of the three ZW bin streams were calculated for the Trafalgar Campus and compared against contamination rates in 2015. All three streams have shown a significant decrease in contamination supporting the idea that, in general, the campus population is improving sorting into the three streams, though many are still defaulting in favour of using the ZW waste to landfill bins where contamination rates remain quite high.



GENERAL RECOMMENDATIONS

The recommendations appearing in this report are to be considered for implementation as Sheridan College feels appropriate and cost effective.

Ensure the campuses waste reduction workplans use the hierarchical components of the 3Rs. Reduction or elimination of waste should be given top priority, then reuse and lastly recycling. Similarly, choose suppliers who offer products with post-consumer recycled content. Purchasing supplies and materials with recycled content encourages and sustains growth in existing and developing recycling end-markets. The 3Rs Regulations require not only that these practices are conducted but also recorded and documented.

Review purchasing, packaging and environmental policies to ensure each reflects and emphasizes consistent hierarchical Reduce, Reuse, Recycle strategies. Reduction or elimination of waste should be given top priority, then reuse and lastly recycling. A consistent 3Rs policy will benefit the campuses by communicating its environmental stewardship to its employees, its suppliers and its patrons.

Given that the recycling programs are well established, the campuses need to examine ways of reducing waste. Many facilities fail to achieve waste reduction targets because they use the 3Rs in the reverse order. Unfortunately, many companies use this approach based on the misinformed belief that recycling is the easiest, most cost-effective and the least time consuming form of waste diversion. Consider some of the following costs associated with recycling that would not be incurred if the materials were not generated in the first place:

- Recycling requires additional material handling
- Cost of containers / floor space / storage areas
- Education and training of employees
- Promotion of the programs to maintain cooperation
- Removal service costs
- Contamination issues/disposal fees
- Sourcing available end-markets for materials

In the auditor's experience, companies that make substantial gains in waste reduction are those that periodically improve their recycling programs while continuously examining ways to eliminate materials that contribute to their daily and annual waste output.

Employees should evaluate, improve and expand waste reduction efforts in their own areas. Active employee involvement will generate cooperation and enthusiasm.

Ontario Regulation 102/94 requires that the audit findings be posted in accessible areas to inform employees of the sources of waste generation and the company's commitment to waste reduction. Further, posting waste audit findings and educating employees in waste diversion programs and including them in the successes, will generate continued compliance with and commitment to the waste diversion programs.

SPECIFIC RECOMMENDATIONS –THE WASTE REDUCTION WORKPLANS

Campus Wide Focus:

Sheridan Trafalgar campus has an excellent combination of diversion programs that address the divertible materials generated at the campus. Consequently, future waste diversion improvements will likely come from enhancing compliance with the three stream ZW bins across campus. Sheridan should undertake an assessment to identify barriers to sorting and develop area-specific action plans to increase participation.

Specific Recommendations:

1. **Enhancing Mixed Recycling Capture Rate Throughout the Campus:** Encouraging the proper disposal in mixed recycling of: steel food and beverage cans, boxboard, mixed fine paper, glass, #6 polystyrene, kraft paper & PET bottles through education/signage. Expected improvement in capture rate of 20%. Anticipated reduction in waste to landfill of 14,110 kg per year (20% of mixed recycling improperly disposed across the campus).
2. **Capturing Compostible (Anaerobically Digested) Coffee Cups in Organics:** 28,687 kg per year of compostible coffee cups are being disposed in mixed recycling, organics and waste to landfill at the Trafalgar Campus. 4,260 kg are being disposed improperly in mixed recycling and 11,594 kg are being improperly disposed in mixed waste to landfill. Launch a campaign to capture compostible coffee cups in organics. Expected improvement in capture rate of 50%. Anticipated reduction in waste to landfill of 7,927 kg per year (50% of coffee cups disposed in recycling and waste to landfill).
3. **Emptying Beverage Containers:** Continue to encourage the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable. Consider launching a campaign. Anticipated reduction in disposal of liquids in any stream: 40%. Anticipated reduction in waste to landfill of 5,278 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams (40% reduction in liquids in waste to landfill stream).
4. **Improve Sorting of ZW Materials with Particular Focus in i) Residence 1&2, ii) Tim Horton, iii) Cafeteria:** In these areas the diversion rates are well below the campus-wide diversion rate and contamination in the waste stream is high. Approximately 70% of the contaminants by weight are organic materials. Encouraging the emptying of food waste and napkins in the organics bin, then the disposal of the food packaging in the appropriate ZW recycling or ZW waste to landfill bin through education is required. A behavioural study may be instructional in determining structural and social/cultural barriers to participation and developing concrete area-specific action plans for implementation. Continue to engage students: identify and promote positive and motivating instructional messaging regarding environmental and cost savings associated with "good sorting behaviour". Based on a 24 hour sample these areas generate 40,564 kg of waste to landfill per year. Expected improvement of 10% reduction in waste to landfill in these four areas. Anticipated reduction in waste to landfill of 4,056 kg per year.
5. **Capturing & Reporting Material Weights for All Diversion Programs at the Campus:** Sheridan has made significant progress in reporting material diversion streams since 2015 however there may be other diversion programs in place at the Trafalgar Campus but the weight-based data is not

currently captured accurately for reporting purposes. For example, Trafalgar does capture feminine hygiene waste for energy-from-waste (not considered diversion, but represents diversion from landfill) though the weight-based reporting accuracy is under question and review. Sheridan should continue to conduct an inventory of all diversion programs, with particular focus on reduction and reuse programs, and should ensure there are procedures in place to collect, monitor and report on these programs.

Anticipated Result:

With the implementation of the above noted waste reduction plans, it is estimated that the waste diversion rate at the Trafalgar Campus will increase from 56.0% to 60.1% and the Trafalgar Campus will divert an additional 31,371 kg per year of waste from landfill in 2018.

1.0 INTRODUCTION

1.1 PURPOSE

The solid waste audits performed by *Spinnaker Recycling Corp.* ("Spinnaker") at the Trafalgar Campus of Sheridan College was designed to:

CALCULATE CURRENT DIVERSION RATES FOR RECYCLED, ORGANIC AND REUSED MATERIALS TO DETERMINE THE EFFECTIVENESS OF DIVERSION PROGRAMS

IDENTIFY OPPORTUNITIES FOR IMPROVEMENT AND EXPANSION TO DIVERSION PROGRAMS

DEVELOP A WASTE REDUCTION WORKPLAN THAT IDENTIFIES POLICIES, PRACTICES, TARGETS AND GOALS FOR NEW AND DEVELOPING WASTE REDUCTION PROGRAMS

COMPLETE & DOCUMENT THE AUDIT AS PER ONTARIO REGULATION 102/94 UNDER THE ENVIRONMENTAL PROTECTION ACT

Though the body of this report references the findings of the audit at the Trafalgar Campus, Ministry of Environment & Climate Change Reports of a Waste Audit and Waste Reduction Workplan for both Trafalgar and Davis are appended to this report. These waste audits have been conducted and documented to be compliant with Ontario Regulation 102/94. Beyond the reporting of waste diversion at Davis and the inclusion of completed Ministry Environment & Climate Change waste audit reports in the appendix, the body of this report deals with the 2017 waste audit at the Trafalgar Campus.

At the time of the 2017 audit, the Trafalgar and Davis campuses had implemented the following collection programs:

1. ZW Mixed Recycling (includes glass, metal, paper, plastic)
2. ZW Organics (rolled out in 2014)
3. ZW Waste to Landfill
4. Bulk Old Corrugated Cardboard (OCC) Recycling
5. Paper Shred Recycling
6. Metal Recycling
7. E-Waste Recycling
8. Battery Recycling (Trafalgar only)
9. Wood Recycling (Trafalgar only)
10. Wood Dust Recycling (Trafalgar only)
11. Textile Reuse

Sheridan College recycling programs meet and exceed Ontario Regulation 102/94 requirements for designated facilities as the recycling programs include the capture of the following recyclable materials:

- Aluminum food or beverage cans
- Cardboard
- Fine Paper
- Glass Bottles, Jars & Food/Beverage

- Newsprint
- Steel Food & Beverage Cans
- Polyethylene Terephthalate (PET)

1.2 METHODOLOGY

The waste audit results presented in this report were obtained from observations and information collected during one on-site meeting and on two days of on-site waste auditing conducted in April 2017 at the Trafalgar Campus.

Two data sets were employed to generate the annual waste generation rates of specific waste materials at the Trafalgar Campus. First, the 2016 annual weight information for the individual collection streams was obtained from the service providers and the second data set was generated during the sorting and weighing of a 24 hour accumulation of material in ZW bins during the April 2017 on-site waste audit at the Trafalgar Campus.

The 2016 single-material stream weights provided by the service provider were not audited and were assumed to be 100% single-stream without any contamination by other materials. Sheridan has implemented several of these single-material stream diversion programs including:

1. Bulk Old Corrugated Cardboard (OCC) Recycling
2. Paper Shred Recycling
3. Metal Recycling
4. E-Waste Recycling
5. Battery Recycling (Trafalgar only)
6. Wood Recycling (Trafalgar only)
7. Wood Dust Recycling (Trafalgar only)
8. Textile Reuse

The second source of data was generated through the on-site audit of the ZW bin streams at Trafalgar. All Sheridan College campuses have implemented a Zero Waste (ZW) program with a longterm goal of eliminating all landfill waste by 2020. The ZW program includes three regular collection streams in ZW bins:

1. Organics
2. Mixed Recycling (glass, metal, paper, plastic)
3. Waste to Landfill

These material streams are “mixed” composition so they were sorted and weighed to determine the relative proportions by weight of specific wastes in the individual ZW bin program streams. These relative proportions were applied to the 2016 annual weight information by ZW stream provided by the service providers. In this way, it is possible to determine contamination levels and identify specific materials that are being improperly disposed in these “mixed” waste streams.



One project manager and three waste analysts sorted, quantified and recorded the waste generated over a 24-hour sample accumulation period. In order to identify opportunities to improve waste diversion at specific

functional areas within the campus, the Trafalgar campus was divided into 14 areas for the purpose of the waste audit which represented most but not all of the campus. The areas audited included:

1. Cafeteria - Front of House
2. Cafeteria - Back of House
3. Tim Horton
4. Second Cup
5. Student Union
6. Residence 1
7. Residence 2
8. A Wing Ground Floor Hallways
9. A Wing 3rd Floor Hallways
10. B Wing 2nd Floor Office Areas
11. B Wing 3rd Floor Hallways
12. C Wing Ground Floor
13. J Wing Ground Floor Office
14. J Wing 2nd Floor Hallways

ZW bin material streams were collected by the cleaning personnel and labeled as to the area from where it was generated. The ZW mixed recycling, organics and waste to landfill bags were collected on-site and delivered to a designated area for sorting and weighing. All bags were sorted by generation area and ZW bin type (organics, recycling, waste to landfill), opened, and further sorted into labeled collection bins by specific waste category (Appendix). A Digital Receiving Scale was used for all measurements to the nearest one thousandth decimal. All recyclable material and organic material removed from the waste were discarded in appropriate containers for landfill diversion.

At the Trafalgar Campus, Spinnaker sorted, weighed and evaluated over 133 kilograms of organics, 205 kilograms of mixed recycling, and 267 kilograms of waste to landfill. Seven areas were audited on the first day and seven areas were audited on the second audit day.

Because the Trafalgar and Davis campuses are of similar size, have similar functional areas including classrooms, offices, hallways, washrooms, have the same ZW bin program in place and because historical evidence suggest the material generation and disposal practices at the two campuses will be similar, the material breakdown data from the waste audit at the 2017 waste audit at Trafalgar Campus was used in conjunction with the annual waste generation data provided by the service providers for Trafalgar. In this way the 2017 Davis Campus waste audit reported in the appendix is an amalgamation of 2016 weight-based information by stream for the Davis campus and the relative proportion by weight of the mixed waste ZW stream from the Trafalgar Campus 2017 audit. Beyond the reporting of waste diversion at Davis and the inclusion of completed Ministry Environment & Climate Change waste audit reports in the appendix, the body of this report deals with the 2017 waste audit at the Trafalgar Campus.

Specific waste categories were established before the audit based on *Ontario Ministry of Environment & Climate Change* guidelines and industry best practices. Additional categories were added to the list based on the waste composition observed during the audit. Though this facility is not designated by regulation, this audit surpasses the requirements outlined in the *Ontario Ministry of Environment & Climate Change's Guide to*

Waste Audits and Waste Reduction Work Plans and includes completed Ministry required audit report forms in the Appendix.

The annual diversion rate was calculated by adding total recycled with total reused and dividing by the amount of total waste generated. *Annual Diversion Rate = (Total Recycled+Total Reused) / (Total Recycled+Total Reused+Total Landfilled).*

1.3 TRAFALGAR CAMPUS: OBSERVATIONS

The Trafalgar Campus is the second largest of the three Sheridan College campuses in terms of student population and the largest in terms of physical size. The Trafalgar campus has twenty buildings with a total floor area of approximately 1,055,000 sq. ft. This includes classrooms, studios, offices, cafeteria, washrooms, hallways, athletics centre, residences, etc. Eleven of the buildings in the main campus are multi-storied including both offices and classrooms/studios. Some of the office areas include kitchenettes and some only have microwave ovens on counters. There are over 1,800 employees and over 8,400 students (2014-15 data).

Trafalgar Campus of Sheridan College is committed to its Zero Waste Program: a program guiding the institution to becoming a zero waste campus by 2020. An integral part of the program, the Zero Waste (ZW) stations were introduced to increase waste diversion at Sheridan. These ZW stations have replaced the old waste bins in the public and office areas in all of the four campuses. Three waste streams are provided: Organics, Mixed Recycling, and Waste to Landfill (see photo). All ZW stations have the same order, colour coding, labeling and signage.

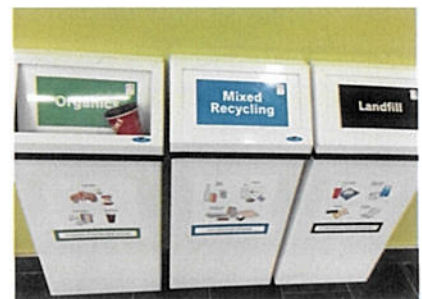
Cleaning of this facility is completed by a team of cleaners who use a cart system for the collection of the ZW bin material from the office staff and students. The different ZW streams are collected daily on an as needs basis. The campus operates 7 days a week with offices open generally 5 days a week during normal business hours while other buildings such as the library are open on weekends with shortened hours. At the time of the audit there were regular classes and no unusual activities taking place in the building that may have altered the audit results.



Staff collect materials from the three stream ZW bins and deposit the bags in dedicated receptacles: roll-carts for the organics, a compactor for the mixed recycling and a compactor for the waste to landfill.

Some additional comments made by the auditors at the waste audit include:

1. Polycarbonate cups still being disposed in all three streams and often with lids on



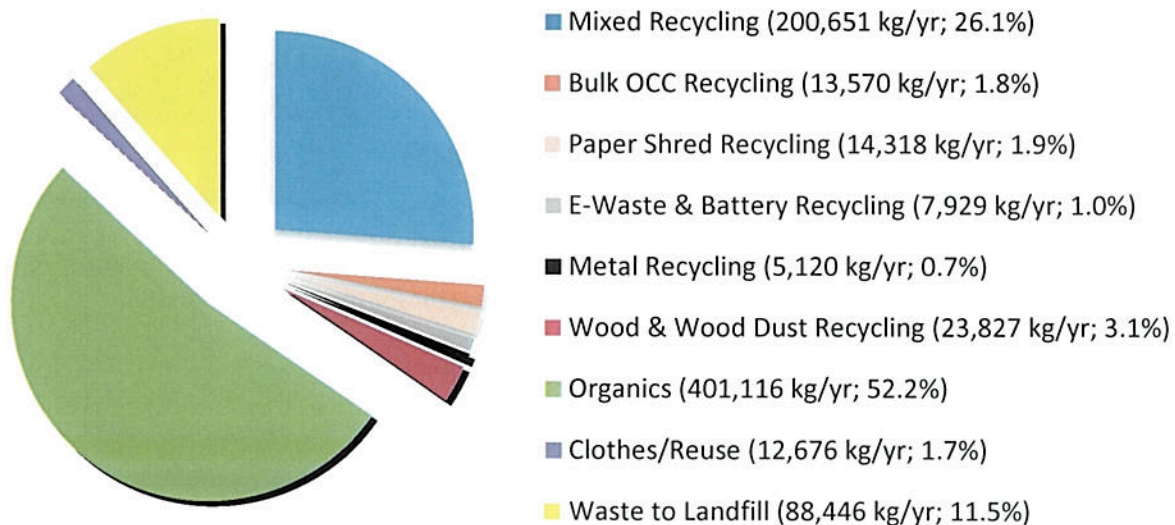
2. Inconsistent signage on some ZW Receptacles was observed



1.4 TRAFALGAR CAMPUS: WASTE DIVERSION

Analysis of all the specific wastes to be removed from Sheridan College Trafalgar Campus in 2017 reveals that the campus could potentially achieve a waste diversion rate of 88.5% through the existing diversion programs. Figure 1 below shows the weight of the specific wastes being disposed at the campus in 2017 grouped by existing diversion, reuse and waste to landfill programs. This figure represents the Trafalgar campus potential for waste diversion using existing programs and assumes a 100% capture rate for all programs.

Figure 1: Trafalgar Campus 2017 Material Generation



Using 2016 weight data from service providers, the Trafalgar waste diversion rate for 2017 is projected to be 56.0%. Figure 2 below shows the 2017 weight of material being collected through the existing waste collection programs. This represents actual waste diversion in 2017 at the Campus.

Figure 2: Trafalgar Campus 2017 Material Diversion

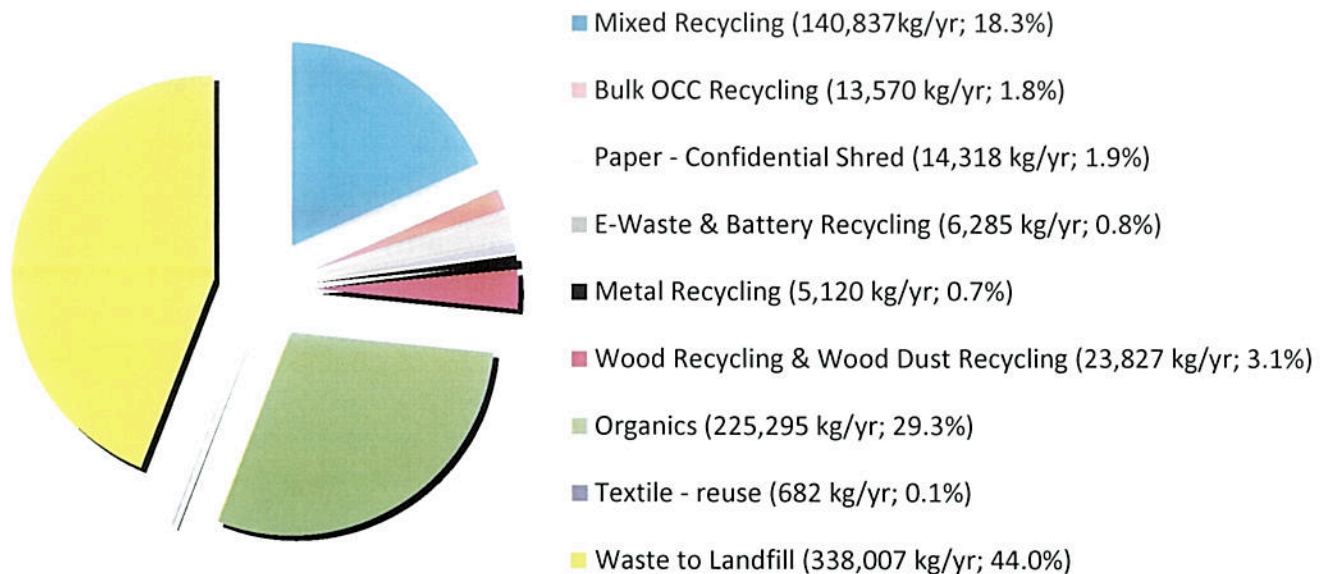
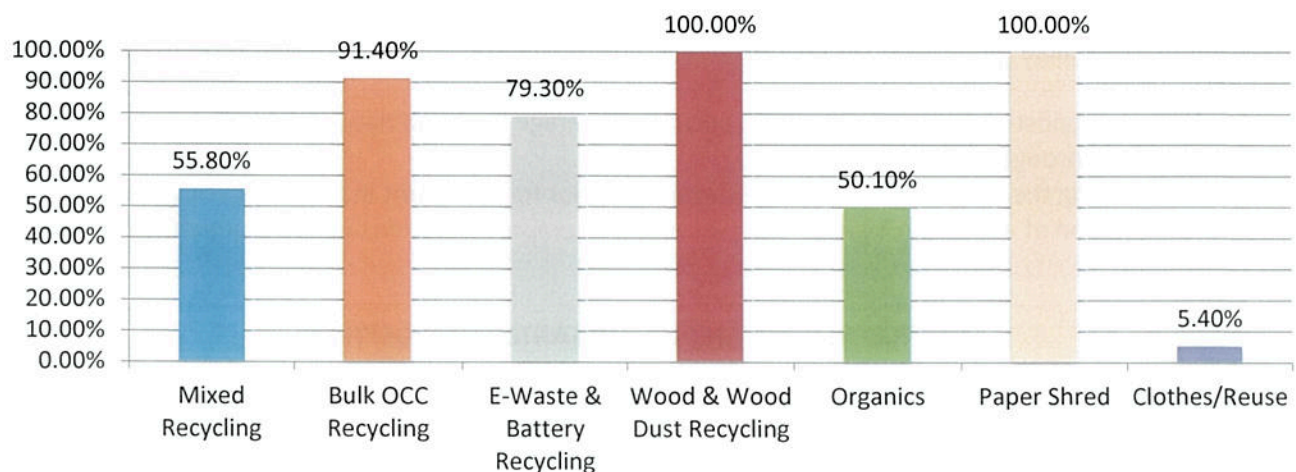


Figure 3 below shows the capture rates by the individual collection programs. The Trafalgar Campus has nine diversion programs but for the purpose of simplifying reporting E-Waste and Battery Recycling were combined, as were Wood Recycling and Wood Dust Recycling. Capture rates were calculated as follows: total weight of all divertible material correctly captured by the diversion stream exclusive of contaminants divided by the total weight of all divertible material generated at the campus in any stream.

The paper shred and wood recycling programs have a 100% capture rate; while the bulk OCC and E-Waste/ Battery Recycling programs are also highly effective. The ZW organics and ZW mixed recycling capture rates are good but could be improved. The clothing reuse program could also be improved as evidenced by the amount of clothing waste being disposed in waste to landfill in the Residences on campus.

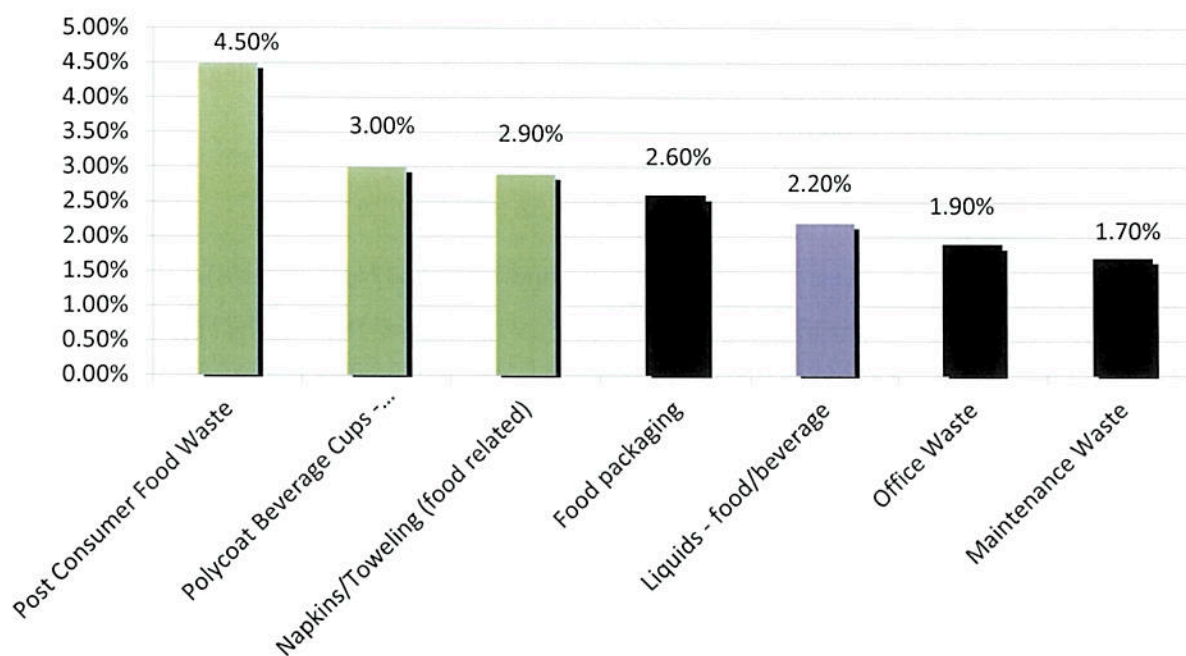
Figure 3: Trafalgar Capture Rates by Collection Program



1.5 TRAFALGAR CAMPUS: MIXED RECYCLING COMPOSITION

The ZW mixed recycling contamination rate was relatively low at 20.6% by weight. The most commonly disposed contaminants (i.e. non-recyclable specific wastes) disposed in the ZW mixed recycling at Trafalgar are presented in the Figure below. Specific wastes are colour coded: green are suitable for ZW organic bin, black are suitable for ZW waste to landfill bin and purple are reducible wastes.

**Figure 4: Trafalgar Contaminants in Mixed Recycling
(over 1.0% by weight of material stream)**



The waste reduction workplan should focus on those contaminants that can with minimal effort and cost be managed to be suitable for inclusion in ZW mixed recycling or eliminated from improper disposal. These include:

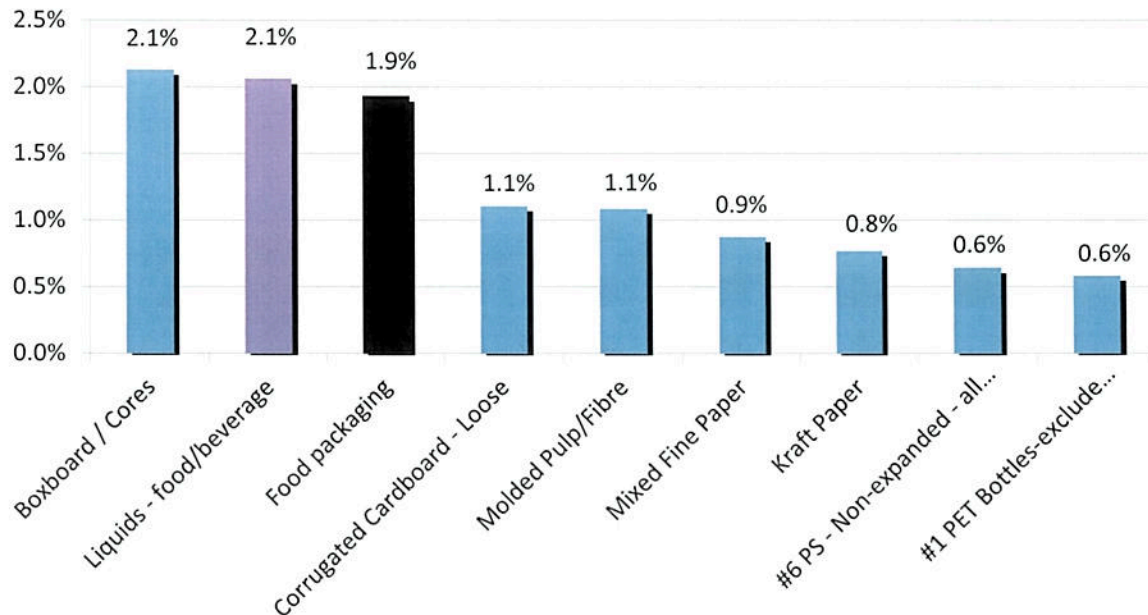
1. Minimizing post-consumer food waste, polycoat beverage cups and napkins/toweling in mixed recycling through education/signage.
2. Encouraging the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable.

1.6 TRAFALGAR CAMPUS: ORGANIC COMPOSITION

The contamination rate in the ZW organic bins was lower than expected at 10.9% by weight. The most commonly disposed contaminants (i.e. non-organic specific wastes) disposed in the ZW organics bins are

presented in the Figure below. Specific wastes are colour coded: blue are suitable for ZW mixed recycling bin and black are suitable for ZW waste to landfill bin.

**Figure 5: Trafalgar Contaminants in Organics
(over 0.5% by weight of material stream)**



The waste reduction workplan should focus on those contaminants that can with minimal effort and cost be managed to be suitable for inclusion in ZW organics or eliminated from improper disposal. These include:

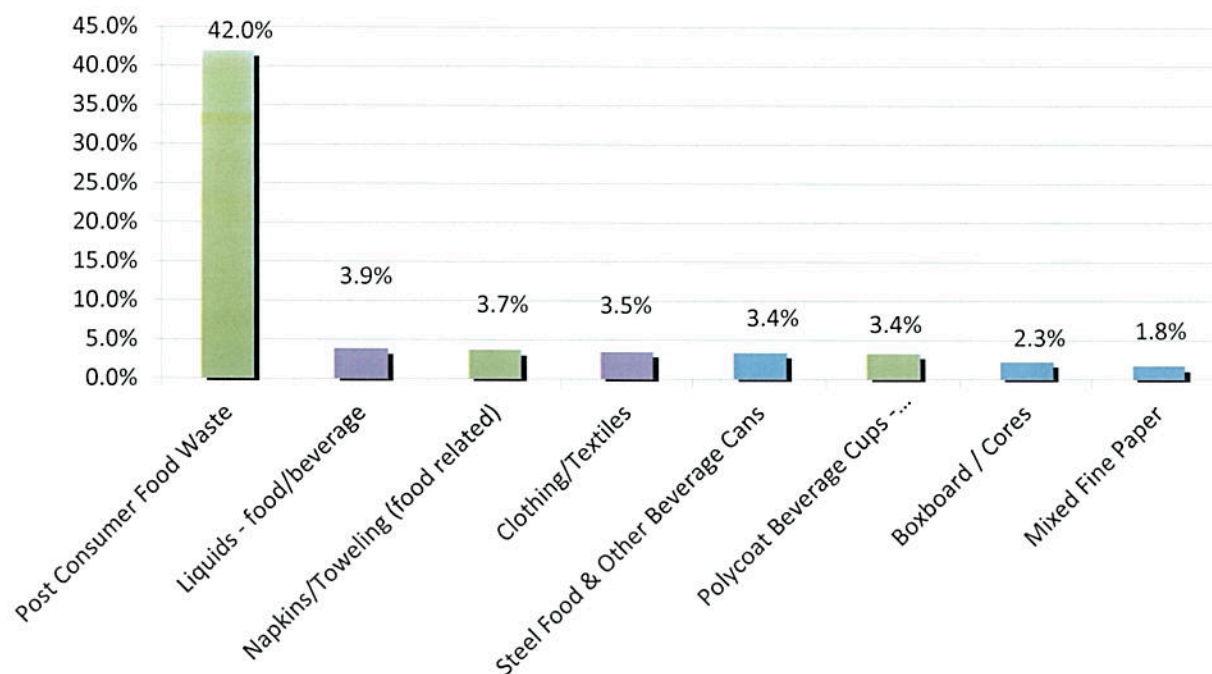
1. Encouraging the proper disposal in mixed recycling of boxboard/cores, cardboard, molded pulp/fibre, mixed fine paper, kraft paper, #6 PS and #1 PET through education/signage.
2. Encouraging the emptying of liquids then the disposal of the food packaging in the appropriate ZW recycling or ZW organics bin through education/signage.

1.7 TRAFALGAR CAMPUS: WASTE TO LANDFILL COMPOSITION

The ZW waste to landfill contamination rate was calculated by summing the weight of material that was disposed in waste to landfill for which there is a diversion program available on campus divided by the total weight of material disposed in waste to landfill. The ZW waste to landfill contamination rate was high at 78.9% and most of the contamination is food waste suitable for the ZW organics program. This suggests that users are defaulting to disposing of mixed food related materials in this stream and are not sorting food waste & containers/packaging into appropriate streams. The top 10 most commonly disposed contaminants (i.e.

organic or mixed recyclable wastes) disposed in the ZW waste to landfill bins at Trafalgar are presented in the Figure below. Specific wastes are colour coded: blue are suitable for ZW mixed recycling bin, green are suitable for ZW organics bin and purple are reducible.

**Figure 6: Trafalgar Contaminants in Waste to Landfill
(over 1.0 % by weight of material stream)**



Analysis of the ZW bin streams at this campus has indicated that the most significant impediment to improved diversion is the use of the ZW waste to landfill bin for the disposal of organic wastes. The waste reduction workplan must focus on those contaminants that can with minimal effort and cost be managed to be suitable for inclusion in ZW organics or eliminated from improper disposal. These include:

1. Encouraging the emptying of food waste, napkins and coffee grinds in the organics bin, then the disposal of the food packaging in the appropriate ZW mixed recycling or ZW organics bin through education/signage.
2. Encouraging the proper disposal in ZW mixed recycling of steel food and beverage cans, mixed fine paper, boxboard/cores, through education/signage.
3. Encouraging the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable.
4. Enhancing the clothing/textile donation program in the Residences (particularly in Residence 2).

1.8 TRAFALGAR CAMPUS: CONTAMINATION OF ZW BINS BY AREA

For the purpose of identifying opportunities to improve waste diversion, fourteen areas of distinct waste generation were identified and audited. This sampling did not include every area of the campus. To calculate

material generation by sample area, each 24 hour sample weight was multiplied by a 235 day operating year. This operating year was estimated based on the following assumptions:

1. The sample was taken on a fall/winter weekday.
2. There are 30 weeks in fall/winter session, 20 weeks in the summer session and 2 weeks of holiday.
3. Summer sessions will generate 50% the material of fall/winter session days.
4. Weekends will generate 40% of material of weekdays.

Each area generated a different amount of ZW mixed recycling, organics and mixed waste to landfill (Table 1). In order to maximize waste reduction, opportunities should focus on the areas generating the most ZW materials and those with the lowest diversion rate. At the Trafalgar Campus, those would be in order:

1. Residence 2
2. Residence 1
3. Tim Horton
4. Cafeteria

Table 1: Trafalgar Campus ZW Material Generation & Diversion Rate by Area

Area	ZW Material Generated (kg/a)	ZW Mixed Recycling (kg/a)	ZW Organics (kg/a)	ZW Waste to Landfill (kg/a)	ZW Diversion Rate
Cafeteria - back of house	19,467	0*	9,870	9,597	50.7%
Cafeteria - front of house	17,505	7,851	1,223	8,431	51.8%
C Wing G/FI	17,367	6,708	5,169	5,490	68.4%
Student Union	17,021	8,859	3,175	4,986	70.7%
Residence 2	14,595	4,112	0**	10,484	28.2%
Tim Horton	10,457	0*	2,905	7,552	27.8%
J Wing G/FI Office	8,084	4,135	882	3,066	62.1%
Residence 1	7,247	2,746	0**	4,501	37.9%
A Wing G/FI hallways	7,087	3,493	1,676	1,919	72.9%
B Wing 2/FI office areas	6,494	2,890	1,408	2,196	66.2%
J Wing 2/FI hallway	6,181	3,404	1,633	1,144	81.5%
A Wing 3/FI hallways	4,932	1,372	2,251	1,310	73.4%

Area	ZW Material Generated (kg/a)	ZW Mixed Recycling (kg/a)	ZW Organics (kg/a)	ZW Waste to Landfill (kg/a)	ZW Diversion Rate
B Wing 3/FI hallway	4,815	2,373	1,176	1,266	73.7%
Second Cup	1,286	299	0*	988	23.2%

* It is possible that the ZW mixed recycling and/or ZW organics was not delivered for the audit from these areas thereby understating the diversion rate of the areas and the campus

** There are no ZW organics collection bins in the Residences

The contamination rates for each of the fourteen areas sampled during the audit were analyzed to identify the best and worst performers. This analysis was done for all three ZW bins streams.

Table 2 below presents the percentage by weight of contaminants in ZW mixed recycling by area sorted to present the worst to the best performers.

Table 2: Percentage of Contaminants in ZW Mixed Recycling By Area: the Worst to the Best Performers

Area	Contaminants in ZW Mixed Recycling
J Wing 2nd Floor Hallway	43.2%
C Wing Ground Floor	42.7%
Cafeteria - Front of House	31.4%
A Wing Ground Floor Hallways	30.6%
A Wing 3rd Floor Hallways	22.1%
Second Cup	14.2%
Residence 1	12.3%
Residence 2	10.6%
B Wing 2nd Floor Office Areas	8.6%
J Wing Ground Floor Office	7.9%
B Wing 3rd Floor Hallways	6.4%
Student Union	2.4%
Cafeteria - Back of House	Not available*
Tim Horton	Not available*
Campus-Wide	20.6%

* It is possible that the ZW mixed recycling was not delivered for the audit from these areas thereby understating the diversion rate of the areas and the campus

Table 2 below presents the percentage by weight of contaminants in ZW organics by area sorted to present the worst to the best performers.

Table 3: Percentage of Contaminants in ZW Organics By Area: The Worst to the Best Performers

Area	Contaminants in ZW Organics
B Wing 3rd Floor Hallways	33.8%

C Wing Ground Floor	25.8%
J Wing 2nd Floor Hallway	21.0%
Cafeteria - Front of House	13.3%
Tim Horton	11.6%
A Wing Ground Floor Hallways	11.4%
A Wing 3rd Floor Hallways	11.0%
Student Union	9.7%
J Wing Ground Floor Office	5.3%
B Wing 2nd Floor Office Areas	2.8%
Cafeteria - Back of House	0.0%
Second Cup	Not available*
Residence 1	Not available*
Residence 2	Not available*
Campus-Wide	10.9%

** It is possible that the ZW organics was not delivered for the audit from these areas thereby understating the diversion rate of the areas and the campus*

Table 3 below presents the percentage by weight of contaminants in ZW waste to landfill by area sorted to present the worst to the best performers. The average contamination rate of ZW waste to landfill at the Trafalgar campus is 78.9%. The average is the sum of the weights of the contaminants in the ZW waste to landfill bin in all fourteen areas audited divided by the total amount of ZW waste to landfill material sorted.

Table 3: Percentage of Contaminants in ZW Waste to Landfill By Area: The Worst to the Best Performers

Area	Contaminants in ZW Waste to Landfill
Second Cup	97.8%
Student Union	94.2%
Residence 1	92.5%
Tim Horton	91.8%
C Wing Ground Floor	90.8%
J Wing 2nd Floor Hallway	85.7%
A Wing 3rd Floor Hallways	84.8%
Cafeteria - Back of House	81.0%
Residence 2	79.1%
Cafeteria - Front of House	66.9%
B Wing 3rd Floor Hallways	61.2%
A Wing Ground Floor Hallways	56.0%
B Wing 2nd Floor Office Areas	49.6%
J Wing Ground Floor Office	37.3%
Campus-Wide	78.9%

1.9 TRAFALGAR CAMPUS: SUMMARY OF RECOMMENDATIONS

Campus Wide Focus:

Sheridan Trafalgar campus has an excellent combination of diversion programs that address the divertible materials generated at the campus. Consequently, future waste diversion improvements will likely come from enhancing compliance with the three stream ZW bins across campus. Sheridan should undertake an assessment to identify barriers to sorting and develop area-specific action plans to increase participation.

Specific Recommendations:

1. **Enhancing Mixed Recycling Capture Rate Throughout the Campus:** Encouraging the proper disposal in mixed recycling of: steel food and beverage cans, boxboard, mixed fine paper, glass, #6 polystyrene, kraft paper & PET bottles through education/signage. Expected improvement in capture rate of 20%. Anticipated reduction in waste to landfill of 14,110 kg per year (20% of mixed recycling improperly disposed across the campus).
2. **Capturing Compostible (Anaerobically Digested) Coffee Cups in Organics:** 28,687 kg per year of compostible coffee cups are being disposed in mixed recycling, organics and waste to landfill at the Trafalgar Campus. 4,260 kg are being disposed improperly in mixed recycling and 11,594 kg are being improperly disposed in mixed waste to landfill. Launch a campaign to capture compostible coffee cups in organics. Expected improvement in capture rate of 50%. Anticipated reduction in waste to landfill of 7,927 kg per year (50% of coffee cups disposed in recycling and waste to landfill).
3. **Emptying Beverage Containers:** Continue to encourage the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable. Consider launching a campaign. Anticipated reduction in disposal of liquids in any stream: 40%. Anticipated reduction in waste to landfill of 5,278 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams (40% reduction in liquids in waste to landfill stream).
4. **Improve Sorting of ZW Materials with Particular Focus in i) Residence 1&2, ii) Tim Horton, iii) Cafeteria:** In these areas the diversion rates are well below the campus-wide diversion rate and contamination in the waste stream is high. Approximately 70% of the contaminants by weight are organic materials. Encouraging the emptying of food waste and napkins in the organics bin, then the disposal of the food packaging in the appropriate ZW recycling or ZW waste to landfill bin through education is required. A behavioural study may be instructional in determining structural and social/cultural barriers to participation and developing concrete area-specific action plans for implementation. Continue to engage students: identify and promote positive and motivating instructional messaging regarding environmental and cost savings associated with "good sorting behaviour". Based on a 24 hour sample these areas generate 40,564 kg of waste to landfill per year. Expected improvement of 10% reduction in waste to landfill in these four areas. Anticipated reduction in waste to landfill of 4,056 kg per year (10% of waste to landfill from these four areas).
5. **Capturing & Reporting Material Weights for All Diversion Programs at the Campus:** Sheridan has made significant progress in reporting material diversion streams since 2015 however there may be other diversion programs in place at the Trafalgar Campus but the weight-based data is not

currently captured accurately for reporting purposes. For example, Trafalgar does capture feminine hygiene waste for energy-from-waste (not considered diversion, but represents diversion from landfill) though the weight-based reporting accuracy is under question and review. Sheridan should continue to conduct an inventory of all diversion programs, with particular focus on reduction and reuse programs, and should ensure there are procedures in place to collect, monitor and report on these programs.

Anticipated Result:

With the implementation of the above noted waste reduction plans, it is estimated that the waste diversion rate at the Trafalgar Campus will increase from 56.0% to 60.1% and the Trafalgar Campus will divert an additional 31,371 kg per year of waste from landfill in 2018.

APPENDICES

GLOSSARY OF WASTE TERMS

In order to reduce potential confusion that may arise from the use of terms in this report, the following is a brief description of the waste and waste diversion terms.

TOTAL WASTE GENERATED

Total waste generated refers to all materials generated by the Facility's operations.

Total Waste Generated = Waste Disposed + Material Recovered From 3Rs Programs

RECOVERED WASTE

Recovered waste refers to materials diverted from the Facility's waste stream and from landfill as a result of 3Rs Programs.

CAPTURE RATES

Recycling rates for the Facility's 3Rs Programs based on the amount of material recovered versus the amount of the same material disposed into the waste stream.

Capture Rate = Recycled or Reused Material / (Material Disposed + Recycled or Reused)

ANNUAL DIVERSION RATE

The Facility's annual diversion rate is the percentage of waste material that it diverts from landfill versus what it generates in total.

Annual Diversion Rate = 3Rs Programs / Total Waste Generated

ONTARIO'S 60% REDUCTION TARGET

The *Ontario Ministry of Environment & Climate Change's* 60% reduction target is a comparison between a Facility's current year waste to landfill figure and a figure obtained from an earlier base year.

60% Reduction Target = (Waste Disposed 2015 - Waste Disposed Base Year) / Waste Disposed Base Year

SPECIFIC WASTE CATEGORIES & WASTE AUDIT DATA (TRAFALGAR CAMPUS)

The following is the list of specific wastes, the associated appropriate waste management collection program, and the amount by weight generated per year and disposed by collection program at the Trafalgar Campus in 2017. The specific wastes are listed alphabetically.

Specific Waste Category	Acceptable in Collection Program	All Streams (kg/yr)	ZW Mixed Recycling (kg/yr)	ZW Organics (kg/yr)	Other / Bulk Recycling (kg/yr)	Reuse (kg/yr)	ZW Waste to Landfill (kg/yr)
#1 PET - clear thermoform packaging	Mixed Recycling	4,380	1,328	527	0	0	2,525
#1 PET - other thermoform (coloured)	Mixed Recycling	1,792	308	59	0	0	1,425
#1 PET Bottles - excluding alcoholic beverage	Mixed Recycling	13,761	8,741	1,318	0	0	3,702
#2 HDPE Bottles and Jugs	Mixed Recycling	3,447	1,357	0	0	0	2,091
#2 Other HDPE Containers	Mixed Recycling	384	384	0	0	0	0
#5 Other PP Containers	Mixed Recycling	5,093	1,803	516	0	0	2,775
#6 PS - Expanded polystyrene	Waste	2,688	643	155	0	0	1,890
#6 PS - Non-expanded - all other	Mixed Recycling	11,218	4,551	1,452	0	0	5,214
#7 Other Plastics	Mixed Recycling	1,305	254	0	0	0	1,051
Aluminum beverage - alcohol	Alcohol Beverage Container Reuse	330	47	150	0	0	133
Aluminum Foil & Foil Trays	Mixed Recycling	868	71	70	0	0	727
Aluminum Food & Other Beverage Cans	Mixed Recycling	2,615	1,658	216	0	0	740
Aseptic Containers - (excluding alcoholic beverages)	Mixed Recycling	1,178	421	0	0	0	758
Batteries	Battery Recycling	495	0	0	210	0	285
Boxboard / Cores	Mixed Recycling	22,791	10,133	4,802	0	0	7,856
Clear Glass Other Beverage and Food	Mixed Recycling	0	0	0	0	0	0
Clothing/Textiles	Dropbox/Textile Reuse	12,676	0	0	0	682	11,994
Coffee Grinds	Organics	16,542	0	16,542	0	0	0
Coffee pods	Waste	88	0	88	0	0	0
Confidential Paper - Paper Shred	Paper Shred Recycling	14,318	0	0	14,318	0	0
Corrugated Cardboard - Bulk	Cardboard Recycling	13,570	0	0	13,570	0	0
Corrugated Cardboard - Loose	Mixed Recycling	34,080	29,990	2,499	0	0	1,592
Diapers	Waste	96	0	0	0	0	96
Feminine Hygiene Products	Hygiene Waste	0	0	0	0	0	0
Food packaging	Waste	30,530	3,656	4,356	0	0	22,518
Gable Top Containers	Mixed Recycling	4,529	2,432	69	0	0	2,027
Glass - Clear Other Beverage and Food	Mixed Recycling	2,303	1,507	0	0	0	796
Glass - Clear Alcoholic Beverage	Mixed Recycling	9,540	4,006	0	0	0	5,534
Kraft Paper	Mixed Recycling	8,662	2,216	1,744	0	0	4,702
Laminated Paper Packaging	Waste	228	0	228	0	0	0
Large HDPE & PP Pails & Lids	Mixed Recycling	20	20	0	0	0	0

Specific Waste Category	Acceptable in Collection Program	All Streams (kg/yr)	ZW Mixed Recycling (kg/yr)	ZW Organics (kg/yr)	Other / Bulk Recycling (kg/yr)	Reuse (kg/yr)	ZW Waste to Landfill (kg/yr)
LDPE/HDPE Film - Products (non-packaging)	Waste	18,828	1,106	918	0	0	16,804
Liquids - food/beverage	Organics	20,963	3,120	4,648	0	0	13,195
Maintenance Waste	Waste	6,270	2,428	0	0	0	3,842
Metal - Bulk	Metal Recycling	5,120	0	0	5,120	0	0
E-Waste	E-Waste Recycling	7,434	0	0	6,075	0	1,359
Mixed Fine Paper	Mixed Recycling	40,163	32,220	1,981	0	0	5,961
Molded Pulp/Fibre	Mixed Recycling	8,360	3,030	2,458	0	0	2,872
Napkins/Toweling (food related)	Organics	37,696	4,153	20,875	0	0	12,668
Newspaper – Dailys and Weeklys	Mixed Recycling	383	320	0	0	0	63
Office Waste	Waste	19,914	2,672	73	0	0	17,169
Other Metal	Mixed Recycling	90	90	0	0	0	0
Other Non-Recyclable Material (Laundry)	Waste	7,969	0	0	0	0	7,969
Other Paper (paper plates)	Mixed Recycling	3,305	77	0	0	0	3,228
Parchment Paper	Waste	0	0	0	0	0	0
Polycoat Beverage Cups - compostable	Organics	28,687	4,260	12,832	0	0	11,594
Polycoat Beverage Cups - non-compostable	Waste	52	0	52	0	0	0
Post Consumer Food Waste	Organics	294,288	6,377	145,952	0	0	141,959
Rubber & Nitrile Gloves	Mixed Recycling	1,876	346	220	0	0	1,310
Spiral Wound Containers	Waste	856	367	0	0	0	488
Steel Food & Other Beverage Cans	Mixed Recycling	15,439	3,779	0	0	0	11,660
Straws/Plastic Cutlery	Mixed Recycling	3,071	851	281	0	0	1,939
Tissue/Toweling (cleaning related)	Waste	926	0	232	0	0	694
Tissue/Toweling (washroom related)	Organics	2,940	137	0	0	0	2,803
Wood	Wood Recycling	19,850	0	0	19,850	0	0
Wood Dust	Wood Dust Briquette Recycle	3,977	0	0	0	3,977	0
	Grand Total	767,982	140,859	225,314	59,143	4,659	338,007

MINISTRY OF THE ENVIRONMENT WASTE FORM: REPORT OF A WASTE AUDIT (TRAFALGAR)

Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

For large construction and demolition projects, please refer to the forms included with "A Guide to Waste Audits and Waste Reduction Work Plans for Construction and Demolition Projects as Required Under Ontario Regulation 102/94" (revised July 2008).

I. General Information (Trafalgar)

Name of Owner and/or Operator of Entity(ies) and Company Name: Sheridan College Institute of Technology and Advanced Learning		
Name of Contact Person: Wai Chu Cheng	Telephone #: 905 845 9430	Email address: Waichu.cheng@sheridancollege.ca
Street Address(es) of Entity(ies): Trafalgar Campus of Sheridan College		
Municipality: Oakville, ON Canada		
Type of entity Educational Institution		

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. Description of Entity (Trafalgar)

Provide a brief overview of the entity(ties):
<p>This waste audit was conducted in April 2017 at the Trafalgar Campus of Sheridan College. The Trafalgar Campus is the second largest of the three Sheridan College campuses in terms of student population and the largest in terms of physical size. The Trafalgar campus has twenty buildings with a total floor area of approximately 1,055,000 sq. ft. This includes classrooms, studios, offices, cafeteria, washrooms, hallways, athletics centre, residences, etc. Eleven of the buildings in the main campus are multi-storied including both offices and classrooms/studios. Some of the office areas include kitchenettes and some only have microwave ovens on counters. There are over 1,800 employees and over 8,400 students (2014-15 data).</p> <p>The Zero Waste streams which include mixed recycling, organics and waste-to-landfill were audited for the purpose of identifying current diversion rates by specific waste category and to calculate contamination rates. A 24 hour sample of organics, mixed recycling and waste-to-landfill was sorted and weighed in each of the 14 areas audited. Weight based generation information from 2016 for the waste and diversion programs were obtained from the service provider(s) and were used in the calculation of diversion rates.</p> <p>At the time of the audit, the campus had fully implemented the following collection programs:</p> <ol style="list-style-type: none">1. ZW Mixed Recycling (includes glass, metal, paper, plastic)2. ZW Organics3. ZW Waste to Landfill

4. Bulk Old Corrugated Cardboard (OCC) Recycling
5. Paper Shred Recycling
6. Metal Recycling
7. E-Waste Recycling
8. Battery Recycling
9. Wood Recycling
10. Wood Dust Recycling
11. Textile Reuse

III. How Waste is Produced And Decisions Affecting the Production of Waste (Trafalgar)

For each category of waste that is produced at the entity(ies), explain how the waste will be produced and how management decisions and policies will affect the production of waste.	
Categories of Waste	How Is the Waste Produced and What Management Decisions/Policies Affect Its Production?
#1 PET - clear thermoform packaging	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#1 PET - other thermoform (coloured)	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#1 PET Bottles - excluding alcoholic beverage	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students. ZW water bottle refill stations installed to reduce PET water bottle generation/disposal.
#2 HDPE Bottles and Jugs	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#2 Other HDPE Containers	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#5 Other PP Containers	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#6 PS - Expanded polystyrene	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#6 PS - Non-expanded - all other	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#7 Other Plastics	Minimal amounts generated on campus.
Aluminum beverage - alcohol	Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others.
Aluminum Foil & Foil Trays	Small quantities generated on campus and should be included in the ZW recycling program.
Aluminum Food & Other Beverage Cans	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Aseptic Containers - (excluding alcoholic beverages)	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students

Batteries	Minimal amounts generated in campus. Should be included in battery recycling program.
Boxboard / Cores	Generated all over the campus as a packaging material for food products, office products and class material supplies.
Clear Glass Other Beverage and Food	Small quantities generated on campus and disposed as waste.
Clothing/Textiles	Little generated at the campus. Likely lost or intentionally disposed articles of clothing.
Coffee Grinds	Generated at coffee stations throughout the campus.
Coffee pods	Little generated at coffee stations around the campus.
Confidential Paper - Paper Shred	Generated across campus in offices and captured for shredding and recycling.
Corrugated Cardboard - Bulk	Generated in receiving area through delivery. Almost all captured in bulk recycling program.
Corrugated Cardboard - Loose	Generated across campus. Almost all captured in recycling program.
Diapers	Small quantities generated on campus and disposed as waste.
Feminine Hygiene Products	Generated across campus in washrooms. Material collected for diversion from landfill (incineration) though amounts have not been accurately quantified at this time for inclusion in this report
Food packaging	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Gable Top Containers	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Glass - Clear Other Beverage and Food	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Glass - Clear Alcoholic Beverage	Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others.
Kraft Paper	Paper products generated through campus activities. Most generated in printing and photocopying areas.
Laminated Paper Packaging	Small quantities generated on campus and disposed as waste.
Large HDPE & PP Pails & Lids	Minimal amounts generated on campus suitable for inclusion in the ZW recycling program.
LDPE/HDPE Film - Products (non-packaging)	Generated all over the campus. Suitable for waste to landfill.
Liquids - food/beverage	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students

Maintenance Waste	Minimal amounts generated on campus.
Metal - Bulk	Generated in receiving and maintenance areas. Well captured by bulk metal recycling program.
E-Waste	Generated throughout campus and suitable for the E-waste recycling program.
Mixed Fine Paper	Paper products generated through campus activities. Most generated in printing and photocopying areas.
Molded Pulp/Fibre	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Napkins/Toweling (food related)	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Newspaper – Dailys and Weeklys	Available for sale at Campus. Most should be captured in the ZW mixed recycling.
Office Waste	Generated in offices and classrooms around campus. Disposed as waste.
Other Metal	Minimal amounts generated on campus and suitable for inclusion in ZW recycling program.
Other Non-Recyclable Material (Laundry)	Generated and disposed in Residences. Disposed as waste.
Other Paper (paper plates)	Generated in cafeterias and lunchrooms across campus. Should be captured in ZW recycling program.
Parchment Paper	Minimal amounts generated on campus.
Polycoat Beverage Cups - compostable	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Polycoat Beverage Cups - non-compostable	Not available for sale on campus as not included in ZW recycling program. Likely brought in from off-site vendors by students/staff.
Post Consumer Food Waste	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Rubber & Nitrile Gloves	Generated in cafeterias across campus. Suitable for inclusion in the ZW recycling program.
Spiral Wound Containers	Minimal amounts generated on campus.
Steel Food & Other Beverage Cans	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Straws/Plastic Cutlery	Generated in cafeterias across campus. Suitable for inclusion in the ZW recycling program.
Tissue/Toweling (cleaning related)	Minimal amounts generated on campus.
Tissue/Toweling (washroom related)	Generated and disposed as waste in Residence. Have been removed from washrooms. Should be included in ZW organics program though much ends up in waste to landfill

Wood	Generated in receiving area through delivery. Almost all captured in bulk recycling program.
Wood Dust	Wood dust generated in the Furniture Studio is collected and compressed into briquettes which are then provided at no charge to employees. .
Note: When completing this form, write "n/a" in the columns where the entity will not produce any waste for a category of waste.	

IV. Management of Waste (Trafalgar)

For each category of waste listed below, indicate which waste items will be disposed or reused/recycled and how each item will be managed at the entity(ies).		
Category	Waste to be Disposed	Reused or Recycled Waste
#1 PET - clear thermoform packaging		Should be included in ZW Recycling Bin Program though some may end up in landfill
#1 PET - other thermoform (coloured)		Should be included in ZW Recycling Bin Program though some may end up in landfill
#1 PET Bottles - excluding alcoholic beverage		Should be included in ZW Recycling Bin Program though some may end up in landfill. Reduction in PET water bottles through installation of reusable water bottle filling stations.
#2 HDPE Bottles and Jugs		Should be included in ZW Recycling Bin Program though some may end up in landfill
#2 Other HDPE Containers		Should be included in ZW Recycling Bin Program though some may end up in landfill
#5 Other PP Containers		Should be included in ZW Recycling Bin Program though some may end up in landfill
#6 PS - Expanded polystyrene	Little generated and no diversion program currently available.	
#6 PS - Non-expanded - all other		Should be included in ZW Recycling Bin Program though some may end up in landfill
#7 Other Plastics		Should be included in ZW Recycling Bin Program though some may end up in landfill
Aluminum beverage - alcohol		Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others. Should be included in ZW Recycling Bin Program though some may end up in landfill.
Aluminum Foil & Foil Trays		Should be included in ZW Recycling Bin Program though some may end up in landfill
Aluminum Food & Other Beverage Cans		Should be included in ZW Recycling Bin Program though some may end up in landfill

Aseptic Containers - (excluding alcoholic beverages)		Should be included in ZW Recycling Bin Program though some may end up in landfill
Batteries		Should be included in E-Recycling or captured during E-Recycling Events.
Boxboard / Cores		Should be included in ZW Recycling Bin Program though some may end up in landfill
Clear Glass Other Beverage and Food		Should be included in ZW Recycling Bin Program though some may end up in landfill
Clothing/Textiles		None generated at this campus.
Coffee Grinds		Should be included in ZW Organics Bin Program though much ends up in landfill
Coffee pods	Little generated and no diversion program currently available.	
Confidential Paper - Paper Shred		Well captured in paper shred recycling
Corrugated Cardboard - Bulk		
Corrugated Cardboard - Loose		Should be included in ZW Recycling Bins throughout the campus, though some may end up in landfill
Diapers	Small quantities generated on campus and disposed as waste.	
Feminine Hygiene Products	Generated across campus in washrooms. Material collected for diversion from landfill (incineration) though amounts have not been accurately quantified at this time for inclusion in this report	
Food packaging	Little generated and no diversion program currently available.	
Gable Top Containers		Should be included in ZW Recycling Bin Program though some may end up in landfill
Glass - Clear Other Beverage and Food		Should be included in ZW Recycling Bin Program though some may end up in landfill
Glass - Clear Alcoholic Beverage		Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others. Should be included in ZW Recycling Bin

		Program though some may end up in landfill.
Kraft Paper		Should be included in ZW Recycling Bin Program though some may end up in landfill
Laminated Paper Packaging	Little generated and no diversion program currently available.	
Large HDPE & PP Pails & Lids		Should be included in ZW Recycling Bin Program though some may end up in landfill
LDPE/HDPE Film - Products (non-packaging)	Little generated and no diversion program currently available.	
Liquids - food/beverage		Should be included in ZW Organics Bin Program though much ends up in landfill
Maintenance Waste	Little generated and no diversion program currently available.	
Metal - Bulk		Generated in receiving and maintenance areas. Well captured by bulk metal recycling program.
E-Waste		Should be included in E-Recycling or captured during E-Recycling Events.
Mixed Fine Paper		Should be included in ZW Recycling Bin Program though some may end up in landfill
Molded Pulp/Fibre		Should be included in ZW Recycling Bin Program though some may end up in landfill
Napkins/Toweling (food related)		Should be included in ZW Organics Bin Program though much ends up in landfill
Newspaper – Dailys and Weeklys		Should be included in ZW Recycling Bin Program though some may end up in landfill
Office Waste	No diversion program currently available.	
Other Metal		Should be included in ZW Recycling Bin Program though some may end up in landfill
Other Non-Recyclable Material (Laundry)	Generated and disposed in Residences. Disposed as waste.	
Other Paper (paper plates)		Should be included in ZW Recycling Bin Program though some may end up in landfill
Parchment Paper	No diversion program currently available.	

Polycoat Beverage Cups - compostable (anaerobically digested)		Should be included in ZW Organics Bin Program though much ends up in landfill
Polycoat Beverage Cups - non-compostable	Not included in current recycling or organics program.	
Post Consumer Food Waste		Should be included in ZW Organics Bin Program though much ends up in landfill
Rubber & Nitrile Gloves		Should be included in ZW Recycling Bin Program though some may end up in landfill
Spiral Wound Containers	Little generated and no diversion program currently available.	
Steel Food & Other Beverage Cans		Should be included in ZW Recycling Bin Program though some may end up in landfill
Straws/Plastic Cutlery		Should be included in ZW Recycling Bin Program though some may end up in landfill
Tissue/Toweling (cleaning related)	Most is disposed as waste though some is contaminating the ZW program.	
Tissue/Toweling (washroom related)		Should be included in ZW organics program though much ends up in waste to landfill
Wood		Is captured by wood recycling program in deliveries.
Wood Dust		Is captured in the Furniture Studio where it is compressed into briquettes which are then provided at no charge to employees.

Note: When completing this form, write "n/a" in the columns where the entity will not produce any waste for a category of waste.

V. Estimated Quantity of Waste Produced Annually – Trafalgar

Estimated Amount of Waste Produced (kgs)												
Categories of Waste	Generated			Reused			Recycled			Disposed		
	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)
Cans/bottles/plastics (2012 grouping)	27,210		-27,210	0		0	10,470		-10,470	16,740		-16,740
Paper products (2012 grouping)	42,690		-42,690	0		0	36,320		-36,320	6,370		-6,370
Other Non-Recyclable Material (2012 grouping)	155,420		-155,420	0	0	0	0		0	155,420		-155,420
#1 PET - clear thermoform packaging		4,380	4,380		0	0		1,855	1,855		2,525	2,525
#1 PET - other thermoform (coloured)		1,792	1,792		0	0		367	367		1,425	1,425
#1 PET Bottles - excluding alcoholic beverage		13,761	13,761		0	0		10,059	10,059		3,702	3,702
#2 HDPE Bottles and Jugs		3,447	3,447		0	0		1,357	1,357		2,091	2,091
#2 Other HDPE Containers		384	384		0	0		384	384		0	0
#5 Other PP Containers		5,093	5,093		0	0		2,318	2,318		2,775	2,775

Food packaging		30,530	30,530		0	0		8,012	8,012		22,518	22,518
Gable Top Containers		4,529	4,529		0	0		2,502	2,502		2,027	2,027
Glass - Clear Other Beverage and Food		2,303	2,303		0	0		1,507	1,507		796	796
Glass - Clear Alcoholic Beverage		9,540	9,540		0	0		4,006	4,006		5,534	5,534
Kraft Paper		8,662	8,662		0	0		3,960	3,960		4,702	4,702
Laminated Paper Packaging		228	228		0	0		228	228		0	0
Large HDPE & PP Pails & Lids		20	20		0	0		20	20		0	0
LDPE/HDPE Film - Products (non-packaging)		18,828	18,828		0	0		2,024	2,024		16,804	16,804
Liquids - food/beverage		20,963	20,963		0	0		7,769	7,769		13,195	13,195
Maintenance Waste		6,270	6,270		0	0		2,428	2,428		3,842	3,842
Metal - Bulk		5,120	5,120		0	0		5,120	5,120		0	0
E-Waste		7,434	7,434		0	0		6,075	6,075		1,359	1,359
Mixed Fine Paper		40,163	40,163		0	0		34,202	34,202		5,961	5,961
Molded Pulp/Fibre		8,360	8,360		0	0		5,488	5,488		2,872	2,872
Napkins/Toweling (food related)		37,696	37,696		0	0		25,028	25,028		12,668	12,668
Newspaper – Dailys and Weeklys		383	383		0	0		320	320		63	63
Office Waste		19,914	19,914		0	0		2,745	2,745		17,169	17,169
Other Metal		90	90		0	0		90	90		0	0
Other Non-Recyclable Material (Laundry)		7,969	7,969		0	0		0	0		7,969	7,969
Other Paper (paper plates)		3,305	3,305		0	0		77	77		3,228	3,228

Parchment Paper		0	0	0	0	0	0	0	0	0	0	0
Polycoat Beverage Cups - compostable		28,687	28,687	0	0	0	0	17,092	17,092	11,594	11,594	0
Polycoat Beverage Cups - non- compostable		52	52	0	0	0	0	52	52	0	0	0
Post Consumer Food Waste	32,150	294,288	262,138	0	0	0	0	152,329	152,329	141,959	109,809	0
Rubber & Nitrile Gloves		1,876	1,876	0	0	0	0	566	566	1,310	1,310	0
Spiral Wound Containers		856	856	0	0	0	0	367	367	488	488	0
Steel Food & Other Beverage Cans		15,439	15,439	0	0	0	0	3,779	3,779	11,660	11,660	0
Straws/Plastic Cutlery		3,071	3,071	0	0	0	0	1,132	1,132	1,939	1,939	0
Tissue/Toweling (cleaning related)		926	926	0	0	0	0	232	232	694	694	0
Tissue/Toweling (washroom related)	4,060	2,940	-1,120	0	0	0	0	137	-23	2,803	-1,107	0
Wood		19,850	19,850	0	0	0	0	19,850	19,850	0	0	0
Wood Dust		3,977	3,977	0	3,977	3,977	0	0	0	0	0	0
FACILITY WIDE TOTALS	329,550	767,982	438,432	0	4,659	4,659	114,950	425,316	310,366	214,610	338,007	123,397
Percent Change (total C ÷ total A x 100) from Base Year:		133.04%			-			270.00%			55.99%	
2017 Current year Diversion Rate:	56.0%											
Note: When completing this form, write "n/a" in the "Estimated Amount of Waste Produced" column where the entity will not produce any waste for a category of waste.												

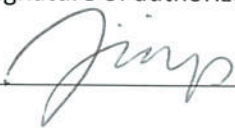
- Fill out these columns each year following the initial waste audit or baseline year to determine the progress that is being made by your waste reduction program.
- Specific waste categories appearing in RED were ones employed during 2012 base audit

VI. Extent to Which Materials or Products Used Or Sold By the Entity Consist of Recycled or Reused Materials or Products (Trafalgar)

Please answer the following questions (and please attach any additional page(s) as required):

1.	Do you have a management policy in place that promotes the purchasing and/or use of materials or products that consist of recycled and/or reused materials or products? If yes, please describe.
	<p>Sheridan's Sustainability Policy outlines one of its principles that is based on a model called The Natural Step as follows: "We must eliminate our contributions to the systematic physical degradation of nature and natural processes (e.g. overharvesting forests, destroying habitat and overfishing)".</p> <p>In the Request of Proposal documents, the contractors are required to outline how they demonstrate sustainability in their project proposals.</p>
2.	<p>Do you have plans to increase the extent to which materials or products used or sold* consist of recycled or reused materials or products? If yes, please describe.</p> <p>* Information regarding materials or products "sold" that consist of recycled or reused materials or products is only required from owner(s) of retail shopping establishments and the owner(s) or operator(s) of large manufacturing establishments.</p>
	<p>It is in Sheridan College's long term plan.</p>

I hereby certify that the information provided in this Report of Waste Audit is complete and correct.

<p>Signature of authorized official:</p> 	<p>Title: ASSOCIATE VICE PRESIDENT Planning, Facilities & Sustainability</p>	<p>Date: Feb 21, 2018</p>
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**MINISTRY OF THE ENVIRONMENT WASTE FORM: REPORT OF A WASTE REDUCTION WORK PLAN
(TRAFALGAR)**

Industrial, Commercial and Institutional Establishments
As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

I. General Information (Trafalgar)

Name of Owner and/or Operator of Entity(ies) and Company Name: Sheridan College Institute of Technology and Advanced Learning		
Name of Contact Person: Wai Chu Cheng	Telephone #: 905 845 9430	Email address: Waichu.cheng@sheridancollege.ca
Street Address(es) of Entity(ies): Trafalgar Campus of Sheridan College		
Municipality: Oakville, ON Canada		
Type of entity Educational Institution		

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. Description of Entity (Trafalgar)

<p>Provide a brief overview of the entity(ties):</p> <p>This waste audit was conducted in April 2017 at the Trafalgar Campus of Sheridan College. The Trafalgar Campus is the second largest of the three Sheridan College campuses in terms of student population and the largest in terms of physical size. The Trafalgar campus has twenty buildings with a total floor area of approximately 1,055,000 sq. ft. This includes classrooms, studios, offices, cafeteria, washrooms, hallways, athletics centre, residences, etc. Eleven of the buildings in the main campus are multi-storied including both offices and classrooms/studios. Some of the office areas include kitchenettes and some only have microwave ovens on counters. There are over 1,800 employees and over 8,400 students (2014-15 data).</p> <p>The Zero Waste streams which include mixed recycling, organics and waste-to-landfill were audited for the purpose of identifying current diversion rates by specific waste category and to calculate contamination rates. A 24 hour sample of organics, mixed recycling and waste-to-landfill was sorted and weighed in each of the 14 areas audited. Weight based generation information from 2016 for the waste and diversion programs were obtained from the service provider(s) and were used in the calculation of diversion rates.</p> <p>At the time of the audit, the campus had fully implemented the following collection programs:</p> <ol style="list-style-type: none">1. ZW Mixed Recycling (includes glass, metal, paper, plastic)2. ZW Organics3. ZW Waste to Landfill4. Bulk Old Corrugated Cardboard (OCC) Recycling5. Paper Shred Recycling6. Metal Recycling7. E-Waste Recycling
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8. Battery Recycling
9. Wood Recycling
10. Wood Dust Recycling
11. Textile Reuse

III. Plans to Reduce, Reuse and Recycle Waste (Trafalgar)

For each category of waste described in Part V of "Report of a Waste Audit" (on which this plan is based), explain what your plans are to Reduce, Reuse and Recycle the waste, including: 1) how the waste will be source separated at the establishment, and 2) the programs to reduce, reuse and recycle all source separated waste.	
#1 PET - clear thermoform packaging	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#1 PET - other thermoform (coloured)	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#1 PET Bottles - excluding alcoholic beverage	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#2 HDPE Bottles and Jugs	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#2 Other HDPE Containers	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#5 Other PP Containers	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#6 PS - Expanded polystyrene	Little generated.
#6 PS - Non-expanded - all other	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#7 Other Plastics	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aluminum beverage - alcohol	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aluminum Foil & Foil Trays	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aluminum Food & Other Beverage Cans	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aseptic Containers - (excluding alcoholic beverages)	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Batteries	Most captured through E-recycling programs.
Boxboard / Cores	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.

Clear Glass Other Beverage and Food	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Clothing/Textiles	Little generated.
Coffee Grinds	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Coffee pods	Little generated.
Confidential Paper - Paper Shred	Well captured in recycling program. No action required.
Corrugated Cardboard - Bulk	Well captured in recycling program. No action required.
Corrugated Cardboard - Loose	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Diapers	Little generated.
Feminine Hygiene Products	Accurately quantify hygiene waste generation/disposal. Research diversion options that are higher use than incineration.
Food packaging	Little generated.
Gable Top Containers	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Glass - Clear Other Beverage and Food	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Glass - Clear Alcoholic Beverage	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Kraft Paper	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Laminated Paper Packaging	Little generated.
Large HDPE & PP Pails & Lids	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
LDPE/HDPE Film - Products (non-packaging)	Little generated.
Liquids - food/beverage	Staff/students will be encouraged to empty then recycle containers education/signage.
Maintenance Waste	Little generated.
Metal - Bulk	No action required.
E-Waste	Most captured through E-recycling programs.
Mixed Fine Paper	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Molded Pulp/Fibre	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Napkins/Toweling (food related)	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Newspaper – Dailys and Weeklys	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Office Waste	Little generated.
Other Metal	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.

Other Non-Recyclable Material (Laundry)	Generated in Residence. Residence diversion performance is poor and behaviours should be assessed to identify barriers and/or impediments.
Other Paper (paper plates)	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Parchment Paper	Little generated.
Polycoat Beverage Cups - compostable	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Polycoat Beverage Cups - non-compostable	Not used at campus cafeterias or restaurants but brought to campus in small quantities. No action required.
Post Consumer Food Waste	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Rubber & Nitrile Gloves	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Spiral Wound Containers	Little generated.
Steel Food & Other Beverage Cans	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Straws/Plastic Cutlery	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Tissue/Toweling (cleaning related)	Little generated.
Tissue/Toweling (washroom related)	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Wood	Most captured through wood recycling program.
Wood Dust	Well captured. No action required.

IV. Responsibility for Implementing The Waste Reduction Work Plan (Trafalgar)

Identify who is responsible for implementing the Waste Reduction Work Plan at your entity(ies). If more than one person is responsible for implementation, identify each person who is responsible and indicate the part of the Waste Reduction Work Plan that each person is responsible for implementing.		
Name of Person	Responsibility	Telephone #
Wai Chu Cheng	Promoting, developing and implementing the Zero Waste program, tracking and assessing of data and evaluating the program.	905-845-9430 x 5423
Herbert Sinnock	Developing and evaluating the Zero Waste program	905-875-4405
James Fletcher	Evaluating the Zero Waste program	905-845-9430 x2156

V. Timetable for Implementing Waste Reduction Work Plan (Trafalgar)

Provide a timetable indicating when each Source Separation and 3Rs program of the Waste Reduction Work Plan will be implemented.	
Source Separation and 3Rs Program	Schedule for Completion
Example: Fine Paper 3Rs Program	"Desk side receptacles and centralized containers to be purchased in March. New collection contract for recycling to be arranged for April Kick off for program and instructions to staff regarding 3Rs program to occur in April" <u>OR</u> "3Rs Program currently in place."
1. Enhancing mixed recycling recovery	<p>Encouraging the proper disposal in mixed recycling of: steel food and beverage cans, boxboard, mixed fine paper, glass, #6 polystyrene, kraft paper & PET bottles through education/signage. Expected improvement in capture rate of 20%.</p> <p>Anticipated reduction in waste to landfill of 14,110 kg per year.</p> <p>Due date: 2017/2018</p>
2. Coffee Cup Management	<p>28,687 kg per year of compostible coffee cups are being disposed in mixed recycling, organics and waste to landfill at the Trafalgar Campus. 4,260 kg are being disposed improperly in mixed recycling and 11,594 kg are being improperly disposed in mixed waste to landfill. Launch a campaign to capture compostible (anaerobically digested) coffee cups in organics. Expected improvement in capture rate of 50%.</p> <p>Anticipated reduction in waste to landfill of 7,927 kg per year.</p> <p>Due date: 2017/2018</p>
3. Encouraging Emptying of Beverage Containers	<p>Continue to encourage the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable. Consider launching a campaign. Anticipated reduction in disposal of liquids in any stream: 40%.</p> <p>Anticipated reduction in waste to landfill of 5,278 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams.</p> <p>Due date: 2017/2018</p>
4. Improving Sorting of ZW Materials in Residences, Tim Hortons & Cafeteria	<p>In the most under performing areas (two residences, Tim Hortons and the Cafeteria) the diversion rates are well below the campus-wide diversion rate and contamination in the waste stream is high. Approximately 70% of the contaminants by weight are organic materials. Encouraging the emptying of food waste and napkins in the organics bin, then the disposal of the food packaging in the</p>

	<p>appropriate ZW recycling or ZW waste to landfill bin through education is required. A behavioural study may be instructional in determining structural and social/cultural barriers to participation and developing concrete area-specific action plans for implementation. Continue to engage students: identify and promote positive and motivating instructional messaging regarding environmental and cost savings associated with "good sorting behaviour". Based on a 24 hour sample these four areas generate 40,564 kg of waste to landfill per year. Expected improvement of 10% reduction in waste to landfill in these four areas.</p> <p>Anticipated reduction in waste to landfill of 4,056 kg per year.</p> <p>Due date: 2017/2018</p>
5. Capturing & Reporting Material Weights for All Diversion Programs at the Campus	<p>Sheridan has made significant progress in reporting material diversion streams since 2015 however there may be other diversion programs in place at the Trafalgar Campus but the weight-based data is not currently captured accurately for reporting purposes. For example, Trafalgar does capture feminine hygiene waste for energy-from-waste (not considered diversion, but represents diversion from landfill) though the weight-based reporting accuracy is under question and review. Sheridan should continue to conduct an inventory of all diversion programs, with particular focus on reduction and reuse programs, and should ensure there are procedures in place to collect, monitor and report on these programs.</p> <p>Anticipated reduction in waste to landfill: Effect on diversion rate likely significant but not quantifiable</p> <p>Due date: 2017/2018</p>

VI. Communication to Staff, Customers, Guests and Visitors (Trafalgar)

Explain how the Waste Reduction Work Plan will be communicated to employees, customers, tenants, guests/visitors and students:

The Waste Reduction Plan will be posted on the Sheridan Sustainability website. Comprehensive strategies will be adopted in promoting the Zero Waste program, including the weekly e-newsletter Insider, Sustainability website, campus TV screens, campus newspaper, Sheridan social media and the Zero Waste promotion booths across all campuses. These media as well as promotional material and additional signage will be employed, where practicable, to promote the implementation of each of the individual waste reduction work plans.

VII. Estimated Waste Produced By Material Type And The Projected Amount (Trafalgar)

	Estimated Annual Waste Produced * (kg)	Annual Amount Currently Diverted (2017) (kg)	Name of Proposed 3Rs Program (as stated in Part III)	Projections to Further Reduce, Reuse or Recycle Waste (kg)			Estimated Annual Amount to be Diverted ** (%)
				Reduce	Re-use	Recycle	
ZW Recyclable Material Grouping			1. Enhance ZW Recycling Capture throughout campus - education/signage 4. Improve Sorting ZW Materials in Residences, Tim Hortons & Cafeteria - behavioural study			14,110 (1) 4,056 (4)	
#1 PET - clear thermoform packaging	4,380	1,855	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#1 PET - other thermoform (coloured)	1,792	367	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#1 PET Bottles - excluding alcoholic beverage	13,761	10,059	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#2 HDPE Bottles and Jugs	3,447	1,357	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#2 Other HDPE Containers	384	384	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	

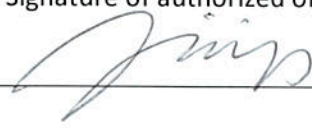
#5 Other PP Containers	5,093	2,318	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#6 PS - Expanded polystyrene	2,688	798	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#6 PS - Non-expanded - all other	11,218	6,003	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#7 Other Plastics	1,305	254	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aluminum beverage - alcohol	330	196	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aluminum Foil & Foil Trays	868	141	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aluminum Food & Other Beverage Cans	2,615	1,874	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aseptic Containers - (excluding alcoholic beverages)	1,178	421	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Batteries	495	210					
Boxboard / Cores	22,791	14,935	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Clear Glass Other	0	0					

Beverage and Food							
Clothing/Tex tiles	12,676	682					
Coffee Grinds	16,542	16,542					
Coffee pods	88	88***					
Confidential Paper - Paper Shred	14,318	14,318					
Corrugated Cardboard - Bulk	13,570	13,570					
Corrugated Cardboard - Loose	34,080	32,488	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Diapers	96	0					
Feminine Hygiene Products	0	0	5. Capturing & Reporting Material Weights	not known	not known	not known	
Food packaging	30,530	8,012***					
Gable Top Containers	4,529	2,502	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Glass - Clear Other Beverage and Food	2,303	1,507	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Glass - Clear Alcoholic Beverage	9,540	4,006	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Kraft Paper	8,662	3,960	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Laminated Paper Packaging	228	228***					

Large HDPE & PP Pails & Lids	20	20					
LDPE/HDPE Film - Products (non-packaging)	18,828	2,024***					
Liquids - food/beverage	20,963	7,769***	3. Promote the emptying of beverage containers prior to recycling (ongoing)	5,278			
Maintenance Waste	6,270	2,428***					
Metal - Bulk	5,120	5,120					
E-Waste	7,434	6,075					
Mixed Fine Paper	40,163	34,202	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Molded Pulp/Fibre	8,360	5,488	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Napkins/Toweling (food related)	37,696	25,028	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Newspaper – Dailys and Weeklys	383	320	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Office Waste	19,914	2,745					
Other Metal	90	90					
Other Non-Recyclable Material (Laundry)	7,969	0	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Other Paper (paper plates)	3,305	77	See ZW Recyclable Material Grouping			Included in ZW Recyclable	

						Material Grouping	
Parchment Paper	0	0					
Polycoat Beverage Cups - compostable	28,687	17,092	2. Capturing Compostible Coffee Cups			7,927	
Polycoat Beverage Cups - non-compostable	52	52***					
Post Consumer Food Waste	294,288	152,329	See ZW Recyclabe Material Grouping			Included in ZW Recyclabe Material Grouping	
Rubber & Nitrile Gloves	1,876	566					
Spiral Wound Containers	856	367					
Steel Food & Other Beverage Cans	15,439	3,779	See ZW Recyclabe Material Grouping			Included in ZW Recyclabe Material Grouping	
Straws/Plastic Cutlery	3,071	1,132	See ZW Recyclabe Material Grouping			Included in ZW Recyclabe Material Grouping	
Tissue/Towel ing (cleaning related)	926	232	See ZW Recyclabe Material Grouping			Included in ZW Recyclabe Material Grouping	
Tissue/Towel ing (washroom related)	2,940	137	See ZW Recyclabe Material Grouping			Included in ZW Recyclabe Material Grouping	
Wood	19,850	19,850					
Wood Dust	3,977	3,977					
CAMPUS WIDE TOTALS	767,982	429,975		5,278	0	26,093	60.1%

- * Estimated Waste Produced = Waste Diverted (3Rs) + Waste Disposed
- ** Estimated Waste Diversion Rate = Amount of Waste Diverted (3Rs) ÷ Estimated Waste Produced x 100%
- *** Waste to Landfill material that is being diverted as a contaminant in ZW organics and/or mixed recycling

I hereby certify that the information provided in this Waste Reduction Work Plan is complete and correct.		
Signature of authorized official: 	Title: ASSOCIATE V.P. Planning, facilities & sustainability	Date: feb 21, 2018

MINISTRY OF THE ENVIRONMENT WASTE FORM: REPORT OF A WASTE AUDIT (DAVIS)

Industrial, Commercial and Institutional Establishments

As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

For large construction and demolition projects, please refer to the forms included with "A Guide to Waste Audits and Waste Reduction Work Plans for Construction and Demolition Projects as Required Under Ontario Regulation 102/94" (revised July 2008).

I. General Information (Davis)

Name of Owner and/or Operator of Entity(ies) and Company Name: Sheridan College Institute of Technology and Advanced Learning		
Name of Contact Person: Wai Chu Cheng	Telephone #: 905 845 9430	Email address: Waichu.cheng@sheridancollege.ca
Street Address(es) of Entity(ies): Davis Campus of Sheridan College		
Municipality: Brampton, ON Canada		
Type of entity Educational Institution		

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. Description of Entity (Davis)

Provide a brief overview of the entity(ties):
Davis Campus is a college campus managed by Sheridan College in Brampton, Ontario. The campus has a total footage of more than 650,000 square feet. There are more than 12,000 students attending this campus with more than 1,000 employees.
Because the Trafalgar and Davis campuses are of similar size, have similar functional areas including classrooms, offices, hallways, washrooms, have the same ZW bin program in place and because historical evidence suggest the material generation and disposal practices at the two campuses will be similar, the material breakdown data from the waste audit at the 2017 waste audit at Trafalgar Campus was used in conjunction with the annual waste generation data provided by the service providers for Davis. In this way the 2017 Davis Campus waste audit reported here is an amalgamation of 2016 weight-based information by stream for the Davis campus and the relative proportion by weight of the mixed waste ZW stream from the Trafalgar Campus 2017 audit.
At the time of the audit, the campus had fully implemented the following collection programs:
1. Mixed Recycling (co-mingle including glass, metal, paper, plastic, paper)
2. Organics
3. Waste to Landfill
4. Bulk old corrugated cardboard (OCC) Recycling
5. E-Waste Recycling
6. Paper Shred Recycling

- 7. Textile Reuse
- 8. Metal Recycling

III. How Waste is Produced And Decisions Affecting the Production of Waste (Davis)

For each category of waste described in Part V of "Report of a Waste Audit" (on which this plan is based), explain what your plans are to Reduce, Reuse and Recycle the waste, including: 1) how the waste will be source separated at the establishment, and 2) the programs to reduce, reuse and recycle all source separated waste.	
#1 PET - clear thermoform packaging	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#1 PET - other thermoform (coloured)	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#1 PET Bottles - excluding alcoholic beverage	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students. ZW water bottle refill stations installed to reduce PET water bottle generation/disposal.
#2 HDPE Bottles and Jugs	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#2 Other HDPE Containers	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#5 Other PP Containers	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#6 PS - Expanded polystyrene	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#6 PS - Non-expanded - all other	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
#7 Other Plastics	Minimal amounts generated on campus.
Aluminum beverage - alcohol	Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others.
Aluminum Foil & Foil Trays	Small quantities generated on campus and should be included in the ZW recycling program.
Aluminum Food & Other Beverage Cans	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Aseptic Containers - (excluding alcoholic beverages)	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Batteries	Minimal amounts generated in campus. Should be included in battery recycling program.
Boxboard / Cores	Generated all over the campus as a packaging material for food products, office products and class material supplies.
Clear Glass Other Beverage and Food	None generated on campus
Clothing/Textiles	Generated all over campus and largely captured in the textile reuse program during move out period though some disposed in waste to landfill.
Coffee Grinds	Generated at coffee stations throughout the campus.

Coffee pods	Little generated at coffee stations around the campus.
Confidential Paper - Paper Shred	Generated across campus in offices and captured for shredding and recycling.
Corrugated Cardboard - Bulk	Generated in receiving area through delivery. Almost all captured in bulk recycling program.
Corrugated Cardboard - Loose	Generated across campus. Almost all captured in recycling program.
Diapers	Small quantities generated on campus and disposed as waste.
Feminine Hygiene Products	Generated across campus in washrooms. Material collected for diversion from landfill (incineration) though amounts have not been accurately quantified at this time for inclusion in this report
Food packaging	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Gable Top Containers	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Glass - Clear Other Beverage and Food	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Glass - Clear Alcoholic Beverage	Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others.
Kraft Paper	Paper products generated through campus activities. Most generated in printing and photocopying areas.
Laminated Paper Packaging	Small quantities generated on campus and disposed as waste.
Large HDPE & PP Pails & Lids	Minimal amounts generated on campus suitable for inclusion in the ZW recycling program.
LDPE/HDPE Film - Products (non-packaging)	Generated all over the campus. Suitable for waste to landfill.
Liquids - food/beverage	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Maintenance Waste	Minimal amounts generated on campus.
Metal - Bulk	Generated in receiving and maintenance areas. Well captured by bulk metal recycling program.
E-Waste	Generated throughout campus and suitable for the E-waste recycling program.
Mixed Fine Paper	Paper products generated through campus activities. Most generated in printing and photocopying areas.
Molded Pulp/Fibre	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Napkins/Toweling (food related)	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Newspaper – Dailys and Weeklys	Available for sale at Campus. Most should be captured in the ZW mixed recycling.
Office Waste	Generated in offices and classrooms around campus. Disposed as waste.
Other Metal	Minimal amounts generated on campus and suitable for inclusion in ZW recycling program.

Other Non-Recyclable Material (Laundry)	Generated and disposed in Residences. Disposed as waste.
Other Paper (paper plates)	Generated in cafeterias and lunchrooms across campus. Should be captured in ZW recycling program.
Parchment Paper	None generated on campus
Polycoat Beverage Cups - compostable	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Polycoat Beverage Cups - non-compostable	Not available for sale on campus as not included in ZW recycling program. Likely brought in from off-site vendors by students/staff.
Post Consumer Food Waste	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Rubber & Nitrile Gloves	Generated in cafeterias across campus. Suitable for inclusion in the ZW recycling program.
Spiral Wound Containers	Minimal amounts generated on campus.
Steel Food & Other Beverage Cans	Food packaging, beverage containers and organic waste is available for sale at Campus cafeteria and is brought to campus by staff/faculty and students
Straws/Plastic Cutlery	Generated in cafeterias across campus. Suitable for inclusion in the ZW recycling program.
Tissue/Toweling (cleaning related)	Minimal amounts generated on campus.
Tissue/Toweling (washroom related)	Generated and disposed as waste in Residence. Have been removed from washrooms. Should be included in ZW organics program though much ends up in waste to landfill
Wood	None generated on campus.
Wood Dust	None generated on campus.

IV. Management of Waste (Davis)

For each category of waste listed below, indicate which waste items will be disposed or reused/recycled and how each item will be managed at the entity(ies).		
Category	Waste to be Disposed	Reused or Recycled Waste
#1 PET - clear thermoform packaging		Should be included in ZW Recycling Bin Program though some may end up in landfill
#1 PET - other thermoform (coloured)		Should be included in ZW Recycling Bin Program though some may end up in landfill
#1 PET Bottles - excluding alcoholic beverage		Should be included in ZW Recycling Bin Program though some may end up in landfill. Reduction in PET water bottles through installation of reusable water bottle filling stations.
#2 HDPE Bottles and Jugs		Should be included in ZW Recycling Bin Program though some may end up in landfill
#2 Other HDPE Containers		Should be included in ZW Recycling Bin Program though some may end up in landfill
#5 Other PP Containers		Should be included in ZW Recycling Bin Program though some may end up in landfill
#6 PS - Expanded polystyrene	Little generated and no diversion program currently available.	
#6 PS - Non-expanded - all other		Should be included in ZW Recycling Bin Program though some may end up in landfill
#7 Other Plastics		Should be included in ZW Recycling Bin Program though some may end up in landfill
Aluminum beverage - alcohol		Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others. Should be included in ZW Recycling Bin Program though some may end up in landfill.
Aluminum Foil & Foil Trays		Should be included in ZW Recycling Bin Program though some may end up in landfill
Aluminum Food & Other Beverage Cans		Should be included in ZW Recycling Bin Program though some may end up in landfill

Aseptic Containers - (excluding alcoholic beverages)		Should be included in ZW Recycling Bin Program though some may end up in landfill
Batteries		Should be included in E-Recycling or captured during E-Recycling Events.
Boxboard / Cores		Should be included in ZW Recycling Bin Program though some may end up in landfill
Clear Glass Other Beverage and Food	None generated on campus	None generated on campus
Clothing/Textiles		Generated all over campus and largely captured in the textile reuse program though some disposed in waste to landfill.
Coffee Grinds		Well captured in the organics program.
Coffee pods	Little generated and no diversion program currently available.	
Confidential Paper - Paper Shred		Well captured in paper shred recycling
Corrugated Cardboard - Bulk		
Corrugated Cardboard - Loose		Should be included in ZW Recycling Bins throughout the campus, though some may end up in landfill
Diapers	Small quantities generated on campus and disposed as waste.	
Feminine Hygiene Products	Generated across campus in washrooms. Material collected for diversion from landfill (incineration) though amounts have not been accurately quantified at this time for inclusion in this report	
Food packaging	Little generated and no diversion program currently available.	
Gable Top Containers		Should be included in ZW Recycling Bin Program though some may end up in landfill
Glass - Clear Other Beverage and Food		Should be included in ZW Recycling Bin Program though some may end up in landfill
Glass - Clear Alcoholic Beverage		Alcohol is not available for sale on campus. Alcoholic beverage containers brought to campus by students, visitors and others. Should be included in ZW Recycling Bin

		Program though some may end up in landfill.
Kraft Paper		Should be included in ZW Recycling Bin Program though some may end up in landfill
Laminated Paper Packaging	Little generated and no diversion program currently available.	
Large HDPE & PP Pails & Lids		Should be included in ZW Recycling Bin Program though some may end up in landfill
LDPE/HDPE Film - Products (non-packaging)	Little generated and no diversion program currently available.	
Liquids - food/beverage		Should be included in ZW Organics Bin Program though much ends up in landfill
Maintenance Waste	Little generated and no diversion program currently available.	
Metal - Bulk		Generated in receiving and maintenance areas. Well captured by bulk metal recycling program.
E-Waste		Should be included in E-Recycling or captured during E-Recycling Events.
Mixed Fine Paper		Should be included in ZW Recycling Bin Program though some may end up in landfill
Molded Pulp/Fibre		Should be included in ZW Recycling Bin Program though some may end up in landfill
Napkins/Toweling (food related)		Should be included in ZW Organics Bin Program though much ends up in landfill
Newspaper – Dailys and Weeklys		Should be included in ZW Recycling Bin Program though some may end up in landfill
Office Waste	No diversion program currently available.	
Other Metal		Should be included in ZW Recycling Bin Program though some may end up in landfill
Other Non-Recyclable Material (Laundry)	Generated and disposed in Residences. Disposed as waste.	
Other Paper (paper plates)		Should be included in ZW Recycling Bin Program though some may end up in landfill
Parchment Paper	None generated on campus	None generated on campus

Polycoat Beverage Cups - compostable		Should be included in ZW Organics Bin Program though much ends up in landfill
Polycoat Beverage Cups - non-compostable	Not included in current recycling or organics program.	
Post Consumer Food Waste		Should be included in ZW Organics Bin Program though much ends up in landfill
Rubber & Nitrile Gloves		Should be included in ZW Recycling Bin Program though some may end up in landfill
Spiral Wound Containers	Little generated and no diversion program currently available.	
Steel Food & Other Beverage Cans		Should be included in ZW Recycling Bin Program though some may end up in landfill
Straws/Plastic Cutlery		Should be included in ZW Recycling Bin Program though some may end up in landfill
Tissue/Toweling (cleaning related)	Most is disposed as waste though some is contaminating the ZW program.	
Tissue/Toweling (washroom related)		Should be included in ZW organics program though much ends up in waste to landfill
Wood	None generated on campus.	None generated on campus.
Wood Dust	None generated on campus.	None generated on campus.

Note: When completing this form, write "n/a" in the columns where the entity will not produce any waste for a category of waste.

V. Estimated Quantity of Waste Produced Annually – Davis

Estimated Amount of Waste Produced (kgs)												
Categories of Waste	Generated			Reused			Recycled			Disposed		
	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)	"A" Base Year 2012 (kg)	"B" * Current Year (kg)	"C" * Change (A-B) (kg)
Cans/bottles/plastics (2012 grouping)	20,260		-20,260			0	8,340		-8,340	11,920		-11,920
Paper products (2012 grouping)	28,140		-28,140			0	22,810		-22,810	5,330		-5,330
Other Non-Recyclable Material (2012 grouping)	121,070		-121,070			0	0		0	121,070		-121,070
#1 PET - clear thermoform packaging		2,309	2,309			0		831	831		1,479	1,479
#1 PET - other thermoform (coloured)		1,004	1,004			0		170	170		834	834
#1 PET Bottles - excluding alcoholic beverage		6,866	6,866			0		4,698	4,698		2,168	2,168
#2 HDPE Bottles and Jugs		1,880	1,880			0		656	656		1,224	1,224
#2 Other HDPE Containers		185	185			0		185	185		0	0
#5 Other PP Containers		2,681	2,681			0		1,056	1,056		1,625	1,625
#6 PS - Expanded polystyrene		1,473	1,473			0		366	366		1,107	1,107
#6 PS - Non-expanded - all other		5,774	5,774			0		2,720	2,720		3,054	3,054
#7 Other Plastics		738	738			0		123	123		615	615
Aluminum beverage - alcohol		154	154			0		76	76		78	78
Aluminum Foil & Foil Trays		485	485			0		59	59		426	426
Aluminum Food & Other Beverage Cans		1,313	1,313			0		879	879		434	434

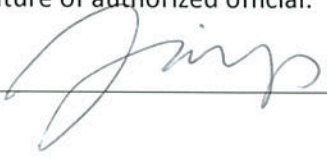
- Fill out these columns each year following the initial waste audit or baseline year to determine the progress that is being made by your waste reduction program.
- Specific waste categories appearing in RED were ones employed during 2012 base audit

VI. Extent to Which Materials or Products Used Or Sold By the Entity Consist of Recycled or Reused Materials or Products (Davis)

Please answer the following questions (and please attach any additional page(s) as required):

1.	Do you have a management policy in place that promotes the purchasing and/or use of materials or products that consist of recycled and/or reused materials or products? If yes, please describe.
	<p>Sheridan's Sustainability Policy outlines one of its principles that is based on a model called The Natural Step as follows: "We must eliminate our contributions to the systematic physical degradation of nature and natural processes (e.g. overharvesting forests, destroying habitat and overfishing)".</p> <p>In the Request of Proposal documents, the contractors are required to outline how they demonstrate sustainability in their project proposals.</p>
2.	<p>Do you have plans to increase the extent to which materials or products used or sold* consist of recycled or reused materials or products? If yes, please describe.</p> <p>* Information regarding materials or products "sold" that consist of recycled or reused materials or products is only required from owner(s) of retail shopping establishments and the owner(s) or operator(s) of large manufacturing establishments.</p>
	It is in Sheridan College's long term plan.

I hereby certify that the information provided in this Report of Waste Audit is complete and correct.

Signature of authorized official:	Title: <i>AUP</i> <i>Planning, Facilities & Sustainability</i>	Date: <i>Feb 21, 2018</i>
		

MINISTRY OF THE ENVIRONMENT WASTE FORM: REPORT OF A WASTE REDUCTION WORK PLAN (DAVIS)

Industrial, Commercial and Institutional Establishments
As required by O. Reg. 102/94

This report must be prepared 6 months after becoming subject to O. Reg. 102/94 and a copy retained on file for at least five years after it is prepared, and be made available to the ministry upon request.

I. General Information (Davis)

Name of Owner and/or Operator of Entity(ies) and Company Name: Sheridan College Institute of Technology and Advanced Learning		
Name of Contact Person: Wai Chu Cheng	Telephone #: 905 845 9430	Email address: Waichu.cheng@sheridancollege.ca
Street Address(es) of Entity(ies): Davis Campus of Sheridan College		
Municipality: Brampton, ON Canada		
Type of entity Educational Institution		

Note: O. Reg. 102/94 does not apply to multi-unit residential buildings.

II. Description of Entity (Davis)

<p>Provide a brief overview of the entity(ties):</p> <p>Davis Campus is a college campus managed by Sheridan College in Brampton, Ontario. The campus has a total footage of more than 650,000 square feet. There are more than 12,000 students attending this campus with more than 1,000 employees.</p> <p>Because the Trafalgar and Davis campuses are of similar size, have similar functional areas including classrooms, offices, hallways, washrooms, have the same ZW bin program in place and because historical evidence suggest the material generation and disposal practices at the two campuses will be similar, the material breakdown data from the waste audit at the 2017 waste audit at Trafalgar Campus was used in conjunction with the annual waste generation data provided by the service providers for Davis. In this way the 2017 Davis Campus waste audit reported here is an amalgamation of 2016 weight-based information by stream for the Davis campus and the relative proportion by weight of the mixed waste ZW stream from the Trafalgar Campus 2017 audit.</p> <p>At the time of the audit, the campus had fully implemented the following collection programs:</p> <ol style="list-style-type: none"> 1. Mixed Recycling (co-mingle including glass, metal, paper, plastic, paper) 2. Organics 3. Waste to Landfill 4. Bulk old corrugated cardboard (OCC) Recycling 5. E-Waste Recycling 6. Paper Shred Recycling 7. Textile Reuse 8. Metal Recycling

III. Plans to Reduce, Reuse and Recycle Waste (Davis)

For each category of waste described in Part V of "Report of a Waste Audit" (on which this plan is based), explain what your plans are to Reduce, Reuse and Recycle the waste, including: 1) how the waste will be source separated at the establishment, and 2) the programs to reduce, reuse and recycle all source separated waste.	
#1 PET - clear thermoform packaging	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#1 PET - other thermoform (coloured)	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#1 PET Bottles - excluding alcoholic beverage	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#2 HDPE Bottles and Jugs	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#2 Other HDPE Containers	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#5 Other PP Containers	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#6 PS - Expanded polystyrene	Little generated.
#6 PS - Non-expanded - all other	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
#7 Other Plastics	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aluminum beverage - alcohol	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aluminum Foil & Foil Trays	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aluminum Food & Other Beverage Cans	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Aseptic Containers - (excluding alcoholic beverages)	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Batteries	Most captured through E-recycling programs.
Boxboard / Cores	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Clear Glass Other Beverage and Food	None generated on campus
Clothing/Textiles	No action required.
Coffee Grinds	No action required.
Coffee pods	Little generated.
Confidential Paper - Paper Shred	No action required.

Corrugated Cardboard - Bulk	No action required.
Corrugated Cardboard - Loose	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Diapers	Little generated.
Feminine Hygiene Products	Accurately quantify hygiene waste generation/disposal. Research diversion options that are higher use than incineration.
Food packaging	Little generated.
Gable Top Containers	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Glass - Clear Other Beverage and Food	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Glass - Clear Alcoholic Beverage	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Kraft Paper	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Laminated Paper Packaging	Little generated.
Large HDPE & PP Pails & Lids	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
LDPE/HDPE Film - Products (non-packaging)	Little generated.
Liquids - food/beverage	Staff/students will be encouraged to empty then recycle containers education/signage.
Maintenance Waste	Little generated.
Metal - Bulk	No action required.
E-Waste	Most captured through E-recycling programs.
Mixed Fine Paper	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Molded Pulp/Fibre	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Napkins/Toweling (food related)	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Newspaper – Dailys and Weeklys	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Office Waste	Little generated.
Other Metal	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Other Non-Recyclable Material (Laundry)	Little generated.
Other Paper (paper plates)	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Parchment Paper	None generated on campus
Polycoat Beverage Cups - compostable	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.

Polycoat Beverage Cups - non-compostable	Little generated.
Post Consumer Food Waste	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Rubber & Nitrile Gloves	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Spiral Wound Containers	Little generated.
Steel Food & Other Beverage Cans	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Straws/Plastic Cutlery	Staff/students will be encouraged to include material in the ZW mixed recycling bin through education/signage.
Tissue/Toweling (cleaning related)	Little generated.
Tissue/Toweling (washroom related)	Staff/students will be encouraged to include material in the ZW organics bin through education/signage.
Wood	None generated on campus.
Wood Dust	None generated on campus.

IV. Responsibility for Implementing The Waste Reduction Work Plan (Davis)

Identify who is responsible for implementing the Waste Reduction Work Plan at your entity(ies). If more than one person is responsible for implementation, identify each person who is responsible and indicate the part of the Waste Reduction Work Plan that each person is responsible for implementing.		
Name of Person	Responsibility	Telephone #
Wai Chu Cheng	Promoting, developing and implementing the Zero Waste program, tracking and assessing of data and evaluating the program.	905-845-9430 x 5423
Herbert Sinnock	Developing and evaluating the Zero Waste program	905-875-4405
James Fletcher	Evaluating the Zero Waste program	905-845-9430 x2156

V. Timetable for Implementing Waste Reduction Work Plan (Davis)

Provide a timetable indicating when each Source Separation and 3Rs program of the Waste Reduction Work Plan will be implemented.	
Source Separation and 3Rs Program	Schedule for Completion
Example: Fine Paper 3Rs Program	“Desk side receptacles and centralized containers to be purchased in March. New collection contract for recycling to be arranged for April Kick off for program and instructions to staff regarding 3Rs program to occur in April” <u>OR</u> “3Rs Program currently in place.”
1. Enhancing mixed recycling recovery	<p>Encouraging the proper disposal in mixed recycling of: steel food and beverage cans, boxboard, mixed fine paper, glass, #6 polystyrene, kraft paper & PET bottles through education/signage. Expected improvement in capture rate of 20%.</p> <p>Anticipated reduction in waste to landfill of 9,564 kg per year.</p> <p>Due date: 2017/2018</p>
2. Coffee Cup Management	<p>Compostible coffee cups are being disposed in mixed recycling and waste to landfill at the Davis Campus. Launch a campaign to improve the capture of compostible (anaerobically digested) coffee cups in organics. Expected improvement in capture rate of 50%.</p> <p>Anticipated reduction in waste to landfill of 4,425 kg per year.</p> <p>Due date: 2017/2018</p>
3. Encouraging Emptying of Beverage Containers	<p>Continue to encourage the emptying of beverage containers prior to placement in mixed recycling through a combination of education/signage and placement of emptying stations where practicable. Consider launching a campaign. Anticipated reduction in disposal of liquids in any stream: 40%.</p> <p>Anticipated reduction in waste to landfill of 4,359 kg per year as well as a significant reduction in contamination in the mixed recycling and organic streams.</p> <p>Due date: 2017/2018</p>
4. Improving Sorting of ZW Materials	<p>Improve Sorting of ZW Materials with Particular Focus in Residences & Cafeterias: In these three areas the diversion rates are well below the campus-wide diversion rate and contamination in the waste stream is high. Encouraging the emptying of food waste and napkins in the organics bin, then the disposal of the food packaging in the appropriate ZW recycling or ZW waste to landfill bin through education is required. A behavioural study may be instructional in determining structural and social/cultural barriers to participation and developing concrete area-specific action plans for</p>

	<p>implementation. Continue to engage students: identify and promote positive and motivating instructional messaging regarding environmental and cost savings associated with "good sorting behaviour". Davis will send 197,935kg of waste to landfill in 2017. Expected improvement of 1.2% reduction in waste to landfill across the campus (same rate as expected at Trafalgar Campus: 4,056 kg additional diversion divided by 338,007kg waste to landfill).</p> <p>Anticipated reduction in waste to landfill of 2,336 kg per year.</p> <p>Due date: 2017/2018</p>
5. Capturing & Reporting Material Weights for All Diversion Programs at the Campus	<p>Sheridan has made significant progress in reporting material diversion streams since 2015 however there may be other diversion programs in place at the Trafalgar Campus but the weight-based data is not currently captured accurately for reporting purposes. For example, Davis does capture feminine hygiene waste for energy-from-waste (not considered diversion, but represents diversion from landfill) though the weight-based reporting accuracy is under question and review. Sheridan should continue to conduct an inventory of all diversion programs, with particular focus on reduction and reuse programs, and should ensure there are procedures in place to collect, monitor and report on these programs.</p> <p>Anticipated effect: Effect on diversion rate likely significant but not quantifiable</p> <p>Due date: 2017/2018</p>

VI. Communication to Staff, Customers, Guests and Visitors (Trafalgar)

Explain how the Waste Reduction Work Plan will be communicated to employees, customers, tenants, guests/visitors and students:

The Waste Reduction Plan will be posted on the Sheridan Sustainability website. Comprehensive strategies will be adopted in promoting the Zero Waste program, including the weekly e-newsletter Insider, Sustainability website, campus TV screens, campus newspaper, Sheridan social media and the Zero Waste promotion booths across all campuses. These media as well as promotional material and additional signage will be employed, where practicable, to promote the implementation of each of the individual waste reduction work plans.

VII. Estimated Waste Produced By Material Type And The Projected Amount (Davis)

	Estimated Annual Waste Produced * (kg)	Annual Amount Currently Diverted (2017) (kg)	Name of Proposed 3Rs Program (as stated in Part III)	Projections to Further Reduce, Reuse or Recycle Waste (kg)			Estimated Annual Amount to be Diverted ** (%)
				Reduce	Re-use	Recycle	
ZW Recyclable Material Grouping			1. Enhance ZW Recycling Capture throughout campus - education/signage 4. Improve Sorting ZW Materials in Residences, & Cafeteria - behavioural study			9,564 (1) 2,336 (4)	
#1 PET - clear thermoform packaging	2,309	831	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#1 PET - other thermoform (coloured)	1,004	170	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#1 PET Bottles - excluding alcoholic beverage	6,866	4,698	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#2 HDPE Bottles and Jugs	1,880	656	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#2 Other HDPE Containers	185	185	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#5 Other PP Containers	2,681	1,056	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	

#6 PS - Expanded polystyrene	1,473	366	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#6 PS - Non-expanded - all other	5,774	2,720	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
#7 Other Plastics	738	123	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aluminum beverage - alcohol	154	76	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aluminum Foil & Foil Trays	485	59	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aluminum Food & Other Beverage Cans	1,313	879	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Aseptic Containers - (excluding alcoholic beverages)	647	203	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Batteries	167	0					
Boxboard / Cores	11,218	6,618	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Clear Glass Other Beverage and Food	0	0					
Clothing/Textiles	7,338	314					
Coffee Grinds	5,918	5,918					
Coffee pods	32	32***					

Confidential Paper - Paper Shred	14,659	14,659					
Corrugated Cardboard - Bulk	16,840	16,840					
Corrugated Cardboard - Loose	16,328	15,395	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Diapers	56	0					
Feminine Hygiene Products	0	0	5. Capturing & Reporting Material Weights	not known	not known	not known	
Food packaging	16,513	3,326***					
Gable Top Containers	2,388	1,201	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Glass - Clear Other Beverage and Food	1,195	729	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Glass - Clear Alcoholic Beverage	5,178	1,937	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Kraft Paper	4,449	1,695	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Laminated Paper Packaging	82	82***					
Large HDPE & PP Pails & Lids	10	10					
LDPE/HDPE Film - Products (non-packaging)	10,703	863***					
Liquids - food/beverage	10,898	3,172***	3. Promote the emptying of beverage containers prior to recycling (ongoing)	4,359			

Maintenance Waste	3,424	1,174***					
Metal - Bulk	10,769	10,769					
E-Waste	5,497	4,701					
Mixed Fine Paper	19,780	16,289	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Molded Pulp/Fibre	4,026	2,344	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Napkins/Towel ing (food related)	16,894	9,476	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Newspaper – Dailys and Weeklys	192	155	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Office Waste	11,372	1,318***					
Other Metal	43	43					
Other Non-Recyclable Material (Laundry)	4,667	0	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Other Paper (paper plates)	1,928	37	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Parchment Paper	0	0					
Polycoat Beverage Cups - compostable	13,440	6,651	2. Capturing Compostible (Anaerobically Digested) Coffee Cups			4,425	
Polycoat Beverage Cups - non-compostable	19	19***					
Post Consumer Food Waste	138,426	55,296	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	

Rubber & Nitrile Gloves	1,013	246***					
Spiral Wound Containers	464	178					
Steel Food & Other Beverage Cans	8,655	1,827	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Straws/Plastic Cutlery	1,647	512	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Tissue/Towel ing (cleaning related)	490	83	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Tissue/Towel ing (washroom related)	1,708	66	See ZW Recyclable Material Grouping			Included in ZW Recyclable Material Grouping	
Wood	0	0					
Wood Dust	0	0					
CAMPUS WIDE TOTALS	393,934	195,999		4,359	0	16,325	55.0%

* Estimated Waste Produced = Waste Diverted (3Rs) + Waste Disposed

** Estimated Waste Diversion Rate = Amount of Waste Diverted (3Rs) ÷ Estimated Waste Produced x 100%

*** Waste to Landfill material that is being diverted as a contaminant in ZW organics and/or mixed recycling

I hereby certify that the information provided in this Waste Reduction Work Plan is complete and correct.		
Signature of authorized official:	Title: <i>AKP Planning, facilities & sustainability</i>	Date: <i>Feb 21, 2018</i>

