

TYPE:	Administrative
TITLE:	Solid Waste Management - Centre for Collaborative Education
NO.:	ADMIN-261
RESPONSIBILITY:	Chief Administrative Officer
APPROVED BY:	Durham College Leadership Team
EFFECTIVE DATE:	August 2018
REVISED DATE(S):	
REVIEW DATE:	August 2021

1. Introduction

This policy and procedure have been created to support the Centre for Collaborative Education (CFCE), as it aims to reduce the amount of waste generated by building occupants that is hauled to and disposed of in landfills or incineration facilities.

This policy and procedure have been written to meet the requirements of LEED® Canada EB: Operations and Management, should the property intend to pursue LEED certification. Therefore sections of this document have been copied directly from the LEED Canada for Existing Buildings: Operations and Maintenance Reference Guide, 2009. All practices shall comply with applicable local regulatory requirements.

The following boundaries apply to this policy and procedure:

Physical Boundaries: CFCE interior, exterior and site.

Programmatic Boundaries: This policy and procedure affects all waste generated at the CFCE and will affect maintenance staff and all building occupants.

This policy and procedure shall not supersede applicable local regulatory requirements.

2. Purpose

The purpose of this policy and procedure is to provide a framework for solid waste management at the CFCE including:

- Ongoing consumables,
- Durable goods,
- Fluorescent light bulbs, and
- Materials and products related to facilities alterations and additions.

3. Definitions

Refer to [Durham College's Standard Definitions](#).

4. Policy statements

4.1. With respect to the CFCE, Durham College shall:

- 4.1.1. Divert from landfill or incineration, or recycle, at least 50% of the ongoing consumables waste stream (by weight);
- 4.1.2. Collect and recycle at least 80% of batteries used (by weight);
- 4.1.3. Collect and recycle all discarded fluorescent light bulbs;
- 4.1.4. Divert/recycle at least 75% of the durable goods waste stream (by weight);
- 4.1.5. Divert/recycle 100% of products containing toxic materials from landfill or incineration; and
- 4.1.6. Divert/recycle at least 70% of waste (by volume) generated by facility alterations or additions from landfill or incineration.

5. Procedure

5.1. Ongoing Consumables

Management shall provide its tenants and employees with easy-to-use, openly visible recycling containers for the following ongoing consumables, i.e. materials with a low cost per unit that are regularly used and replaced through the course of business, where recycling facilities for such materials exist:

- Paper
- Food and Packaging Waste
- Glass
- Plastics
- Metals
- Cardboard
- Old Corrugated Cardboard
- Batteries
- Toner Cartridges

Separate containers shall be provided for the collection of batteries and toner cartridges.

The CFCE has storage facilities for the above materials located in the designated storage room and management has active contracts with waste haulers to remove recyclable materials, batteries, fluorescent bulbs and toner cartridges.

*The form provided in Appendix A should be used to track waste diversion of ongoing consumables.

5.2. Durable Goods

Durable goods are products that are replaced infrequently and/or may require capital program outlays to purchase. These include, but are not limited to the following:

- Office equipment (computers, monitors, copiers, printers, scanners and fax machines)
- Appliances (refrigerators, dishwashers and water coolers)
- External power adapters
- Televisions and other audiovisual equipment
- Furniture

Management acknowledges that many durable goods such as electronic devices and appliances contain hazardous and toxic materials that must be kept out of the waste stream. To manage and control the disposal of these products and materials, Management shall provide storage and disposal services for non-functioning products containing toxic or hazardous materials. Management shall contract hauling companies to dispose of toxic and hazardous materials according to applicable laws and regulations.

*The form provided in Appendix B should be used to track waste diversion of ongoing consumables.

5.3. Fluorescent Bulbs

Management shall provide separate containers for the collection of all lamps. Management has active contracts with waste haulers to remove lamp from the site and recycle them.

5.4. Facilities Alteration and Addition Materials

Management will integrate these measures into all contracts and construction documents, requiring contractors and sub-trades to adhere to this policy and procedure. Contracts should include stipulations for accountability and incentives to meet waste reduction goals, specifying at least 70% waste diversion through recycling and/or reuse.

The alterations and additions that are governed by this policy and procedure:

- Affect usable space in the building;
- Include construction activity by more than one trade specialty;
- Make substantial changes to at least one entire room in the building¹;
- Require isolation of the work site from regular building occupants for the duration of construction; and
- Increase the total building floor area by at least 5% (for additions).

Materials considered fixtures, furniture and equipment (FF&E) are not considered base building elements and are not included in facility alterations waste tracking. Mechanical, electrical and plumbing components and specialty items such as elevators are also excluded from this policy and procedure.

Management will employ waste reduction/diversion measures for all facility alterations and additions occurring at the property, and will strongly encourage all tenants to follow this policy and procedure. This applies to elements that enter the waste stream during facility renovations, demolitions, refits and new construction additions.

*The forms provided in Appendix C must be used during facilities alterations/additions projects to document waste diversion activities.

5.5. Suggested Strategies

- 5.5.1. Source reduction is the primary step in waste reduction, decreasing the amount of materials brought on site. Every opportunity should be taken to minimize factors that contribute to waste as outlined in Table 1.

TABLE 1: Source Reduction Strategies

ITEM	SOURCE REDUCTION STRATEGY
Design	Review designs and plans to ensure optimal use of material. Where possible, specify materials with a longer lifespan and potential for recycling or reuse after deconstruction.
Planning	Plan and schedule projects efficiently and continuously monitor material quantities to prevent leftover material.
Packaging	Request that suppliers deliver products with a minimum amount of packaging. Where possible, order in bulk to prevent excess packaging.
Storage	Store materials according to material requirements to prevent damage or contamination. Where possible, order materials as they are required to prevent long storage times and potential damage.
Ordering errors	Review material quantities carefully to ensure the correct amount is received.
Ordering excess	Order materials in sizes to match plans. Where possible, order pre-cut pieces to minimize waste on site or measure and cut accurately, collecting and storing reusable pieces.
Handling	Handle all materials with care to prevent damage, breakage, or contamination.

5.5.2. Reuse

All materials should be evaluated for reuse on site and/or evaluated for reuse at alternate sites. This should begin at the demolition stage and continue throughout construction. Where possible, materials from demolition should be salvaged for reuse in the construction phase. The following table provides strategies to institute reuse of common materials during construction.

TABLE 2: Construction Material Reuse

MATERIAL	REUSE STRATEGY
Wood	Salvage off-cuts to be used for bridging, blocking and back framing. Reuse palettes or return to vendors. Inspect wood forms to be reused to form other areas of the building or send with formwork trade to be reused on other job sites.
Metal	Save cuttings for possible reuse. Joist off-cuts can be cut up and used as stakes for forming or for headers around openings in the floor assembly.
Drywall	Reuse off cuts to finish off gaps, small bulkheads, etc.
Cardboard	Use boxes for storage of tools and materials or floor protection.
Masonry	Crush on site and use for fill or as bedding for driveways.
Rigid Insulation	Use as ventilation baffles in attics or in house envelopes at joist header assemblies

Whenever possible, salvageable materials that cannot be reused on site should be taken back by suppliers or trades to be used at other sites. Alternately, materials should be sold or donated to businesses that collect and resell used construction materials. Allowing private salvage companies access to the site can avoid removal costs.

5.5.3. Recycling

Tender documents should reflect the recycling protocol adopted for individual projects.

An area will be designated to recycle construction and demolition waste. Employees will be trained on the recycling protocols, and label recycling containers effectively, including labelling with graphics to overcome language barriers. Once collected, the waste hauling company will remove waste from site and submit a waste tracking summary to the Property Manager.

5.5.4 Performance Management

Management will hire a third-party to conduct waste audits on an annual basis. The information provided in that report will be used to determine whether the goals of this policy and procedure are being met.

The form for tracking the disposal and diversion of ongoing consumable waste, including fluorescent bulbs, are provided in Appendix A. A tracking form for the diversion of durable goods is provided in Appendix B.

6. Roles and responsibilities

- 6.1. The Chief Administrative Officer is responsible for ensuring this policy and procedure is fully implemented.
- 6.2. Management is responsible for reviewing the information provided in completed tracking forms on a quarterly basis.
- 6.3. Contractors are responsible for preparing tracking forms on a monthly basis as noted in Section 5 of this document.
- 6.4. All building occupants, building operators and cleaners and responsible for putting waste and recycles in the appropriate receptacles to ensure maximum diversion is realized.

7. Accessibility for Ontarians with Disabilities Act considerations

Accessibility for Ontarians with Disabilities Act (AODA) standards have been considered in the development of this policy and procedure and it adheres to the principles outlined in the College's commitment to accessibility as demonstrated by the Accessibility Plan (ADMIN-203).

8. Non-compliance implications

Consequences of non-compliance with this policy and procedure may result in sanctions under relevant legislation.

9. Communications plan

- A message will be posted on ICE alerting employees when new or revised policies and procedures are added to ICE.
- A message will be posted on MyCampus alerting students when new or revised policies and procedures are added.

10. Related forms, legislation or external resources

None.

APPENDIX B TRACKING FORM – DURABLE GOODS: WASTE DIVERSION TABLE

Project/Address:		Log No.:	
Completed by:		Log Start Date:	
Waste Mgmt Co:		Log End Date:	
Telephone:			

Total Durable Goods Waste Generated (specify units): _____

TYPE OF DIVERTED MATERIAL	DIVERSION METHOD	HAULER OR DESTINATION	VOLUME OR MASS QUANTITY	UNITS
Computers	<i>SAMPLE: Reuse</i>	<i>Markham P.S.</i>	<i>20</i>	<i>N/A</i>
Monitors				
Copiers				
Printers / Scanners / Fax				
Refrigerators				
Dishwashers				
Televisions				
Office / AV Equipment				
Other:				
Other:				
Total Diverted:				
Percentage Diverted:				

Note: Data recorded in this table should be raw data only, and not based on extrapolation.

Signature of Authorized Official Title Date

APPENDIX C TRACKING FORM – FACILITY ALTERATIONS AND ADDITIONS WASTE DIVERSION AND DISPOSAL TABLE

Project/Address:		Log No.:	
Completed by:		Log Start Date:	
Waste Mgmt Co:		Log End Date:	
Telephone:			

TYPE OF DIVERTED MATERIAL	TYPE OF DIVERSION (MT)				DISPOSED (MT)	
	RECYCLED	REUSED ON-SITE	REUSED OFF-SITE	OTHER (SPECIFY)	INCINERATION	LANDFILL
<i>SAMPLE: drywall</i>	25MT	0	0	0		75MT
TOTAL	25					75

Total Diverted = (Sum Recycled) + (Sum Reused On-site) + (Sum Reused Off-site) + Sum (Other)

Total Disposed = (Sum Incineration) + (Sum Landfill)

Diversion Rate = Total Diverted ÷ [(Total Diverted) + (Total Disposed)]

 Signature of Authorized Official Title Date