

YOUNG HIGH SCHOOL

HILLTOPS JOINT USE LIBRARY OPERATIONAL WASTE MANAGEMENT PLAN SSDA TO DPIE (SSD 18-9354)



REVISION NUMBER:

VERSION 3

REPORT DATE:

30/09/2019

SUBMITTED TO:

JAMES CRISTALLO

PROJECT LEADER - HAYBALL
11-17 BUCKINGHAM STREET SURRY HILLS

PRESENTED BY:

JO DRUMMOND

ECCELL ENVIRONMENTAL MANAGEMENT
35 WAVERLY CRST, BONDI JUNCTION 2022

www.eccellenvironmental.com.au

TABLE OF CONTENTS

1. INTRODUCTION	1
1.1. PURPOSE	1
1.2. PROJECT PROFILE	1
1.3. WASTE MANAGEMENT OBJECTIVES	2
2. LEGISLATION AND GUIDELINES	2
2.1. LEGISLATION	2
3. RISK MANAGEMENT	2
4. WASTE STREAMS & CLASSIFICATION	2
4.1. EPA WASTE CLASSIFICATION	2
4.2. SITE-SPECIFIC WASTE STREAM	3
5. WASTE GENERATION QUANTITIES	3
5.1. WASTE GENERATION SCHEDULE ESTIMATES	4
6. WASTE MANAGEMENT	4
6.1. WASTE HIERARCHY	4
6.2. WASTE STORAGE AREA	6
6.3. WASTE MOVEMENT	8
6.4. WASTE COLLECTION POINT	8
6.5. WASTE COLLECTION HOURS	8
6.6. WASTE COLLECTION CONTRACTOR	8
7. SIGNAGE	9
8. ONGOING WASTE MANAGEMENT PLAN	10
APPENDIX A WASTE PATHWAY DIAGRAM	11
APPENDIX B WASTE STORE DIAGRAM	12

1. INTRODUCTION

1.1. PURPOSE

This Operational Waste Management Plan (OWMP) has been prepared based on the requirements of the Secretary's Environmental Assessment Requirements Condition 20 Section 4.12 (8) of the Environmental Planning Assessment Act, Section 2 Environmental Planning and Assessment Regulation 2000. There is therein a requirement to prepare an OWMP.

The NSW Department of Education (the Proponent) must assess predicted waste generated from the project during the operation of the overall facility, including:

- a) classification of the waste,
- b) estimates / details of the quantity of each classification of waste to be generated,
- c) handling of waste including measures to facilitate segregation and prevent cross contamination,
- d) management of waste including estimated location and volume,
- e) waste minimisation and reuse,
- f) lawful disposal or recycling locations for each type of waste and
- g) contingencies for the above, including managing unexpected waste volumes.

1.2. PROJECT PROFILE

This OWMP has been prepared by EcCell Environmental on behalf of the Schools Infrastructure NSW (the Applicant). It accompanies an Environmental Impact Statement (EIS) in support of State Significant Development Application (SSD 18-9354) Hilltops Library & Community Facility.

An Early Works DA has gone to Hilltops Council (2019/DA-00085) which includes enabling works (Demolition of existing facilities / temporary and permanent replacement facilities). No additional GFA or Waste Generation is proposed in the Early Works Package.

Main Works SSDA to DPE (SSD 18-9354) for the Project include:

- Tree Removal
- New Block NN (Joint Use Library)
- Associated landscaping and permanent pathways to Block NN on Young High School (YHS) site and Carrington Park;
- Internal Refurbishment of Block EE (Proposed Staff Hub)
- Associated landscaping and permanent pathways to Block EE
- Removal of temporary demountable and temporary covered walkways.

1.3. WASTE MANAGEMENT OBJECTIVES

The waste management Objectives include:

- Meeting all waste management standards while ensuring the health and safety of the workers on the project;
- Maximising the quantities of materials diverted from landfill by reusing, recycling and reprocessing of diverted waste streams off-site;
- The diversion from landfill of 65% of waste by weight, to meet the criteria of the NSW State Government's waste legislation, waste policy settings and regulatory regime.

2. LEGISLATION AND GUIDELINES

2.1. LEGISLATION

Relevant key legislation and guidelines applicable to the project include

- Protection of the Environment Operations Act 1997,
- Protection of the Environment (General) Operations Act 1998,
- Waste Avoidance and Resource Recovery Act 2014,
- Protection of the Environment Operations (Waste) Regulation 2014,
- The Department of Planning, Secretary's Environmental Assessment Requirements Condition 20 Section 4.12 (8) of the Environmental Planning Assessment Act 1979.

3. RISK MANAGEMENT

The current relevant legislation determines that the generator of waste is the owner of the waste until the waste is documented having crossed a weighbridge into a licensed waste facility. Waste contractors are the primary facilitators and transporters of on-site waste to off-site reuse, recycling and disposal. Additionally, they are the source of subsequent waste reporting and the compilation of data verifying disposal in the format of monthly reports.

Accordingly, all waste contractors will be required to provide monthly reports on waste reused, reprocessed or recycled or generally, diverted from landfill and specifically, waste sent to landfill. These reports have a direct bearing on the generator's risk mitigation and regulatory liability.

All entries in the Waste Data File must include:

- Time and Date of waste removal,
- Description and volume (in litres) of waste removed from the school,
- Waste facility used for recycling and waste disposal and
- Vehicle registrations and the company name.

4. WASTE STREAMS & CLASSIFICATION

4.1. EPA WASTE CLASSIFICATION

The NSW EPA Waste Classification Guidelines (NSW EPA, 2014) provide for the classification of wastes into groups that pose similar risks to the environment and human health, these are defined in the Protection of the Environment Operations Act 1997.

Classes of waste described in the Guidelines are:

- Special waste,
- Liquid waste,
- Pre-classified waste, or wastes classified by chemical assessment as:
 - Hazardous waste,
 - Restricted solid waste,
 - General solid waste (putrescible),
 - General solid waste (non-putrescible).

4.2. SITE-SPECIFIC WASTE STREAM

Potential waste types and corresponding EPA classifications for the operation of Young High School are included in **Table 1**.

Table 1 - Potential Waste Types and Classifications

Waste Type	EPA Classification	Waste Management
Paper including all types of recyclable paper but excluding paper towels, toilet paper & tissues	General solid waste (non-putrescible)	Paper recycling
Cardboard, excluding waxed cardboard	General solid waste (non-putrescible)	Cardboard recycling
Plastics (recyclables)	General solid waste (non-putrescible)	Co-mingled recycling
Plastics (non-recyclables)	General solid waste (non-putrescible)	General waste
Garden waste	General solid waste (non-putrescible)	General waste
Glass including bottles and containers	General solid waste (non-putrescible)	Co-mingled recycling
Light bulbs, batteries, e-waste	Potentially hazardous waste	Specific recycling
General refuse such as food scraps and non-recyclable plastics.	General solid waste (putrescible) or General solid waste (non-putrescible)	General waste or compost
Chemical waste from a Science Laboratory or Materials Workshop, Visual Arts	Potentially hazardous waste	Specialist Waste Contractor
Sharps	Hazardous Waste	Specialist Waste Contractor

5. WASTE GENERATION QUANTITIES

The following guidance documents have been referenced to calculate expected waste generation quantities for the development:

- Better Practice Guide for Waste Management in Multi-unit Dwellings (NSW EPA, 2008)
- Hilltops Council Development Control Plan (DCP) Adopted 24 August 2011, Updated January 2019

To derive indicative quantities of waste, the following assumptions have been applied:

- The occupancy rate = full-time, 5 days a week
- It is estimated that 580 students will be in attendance at the school.
- Calculations are estimates only based on the above guidance documents

Only additional GFA proposed by the development has been considered. Operational waste generated by other works on-site (E.g. Refurbishment of Block EE) do not propose additional GFA or Waste generation, therefore are captured in existing waste figures provided by YHS.

5.1. WASTE GENERATION SCHEDULE ESTIMATES

Table 2 - General Waste Generation Schedule Estimates

Area	SQM	Day Rate	Total per Day Rate	Weekly Rate (5 days)
New Library and Learning Spaces	1980	7L/100m ² /day	138.6	693
Café	110	175/100m ² /day	192.5	962.5
Total			331.1	1655.5

Table 3 - Recycling Generation Schedule Estimates

Area	SQM	Day Rate	Total per Day Rate	Weekly Rate (5 days)
New Library and Learning Spaces	1980	10L/100m ² /day	198	990
Café	110	190/100m ² /day	209	1045
Total			407	2035

Table 4 - Estimated Average Waste and Recycling Generation Rates

Waste	Quantity Generated per Week	Clearance Frequency
General Waste	1655.5 litres	Minimum of once per week
Recycling	2035 litres	Minimum of once per week

It is estimated that the New Library and Learning Spaces and café will produce approximately 1,700 litres of general waste per week (5 working days) and 2,035 litres of recycling per week (5 working days).

6. WASTE MANAGEMENT

6.1. WASTE HIERARCHY

Figure 1 and Table 5 indicate the waste management practices in accordance with the Waste Avoidance and Resource Recovery Act 2001 (NSW EPA, 2014).

Figure 1 - Waste Management Practices

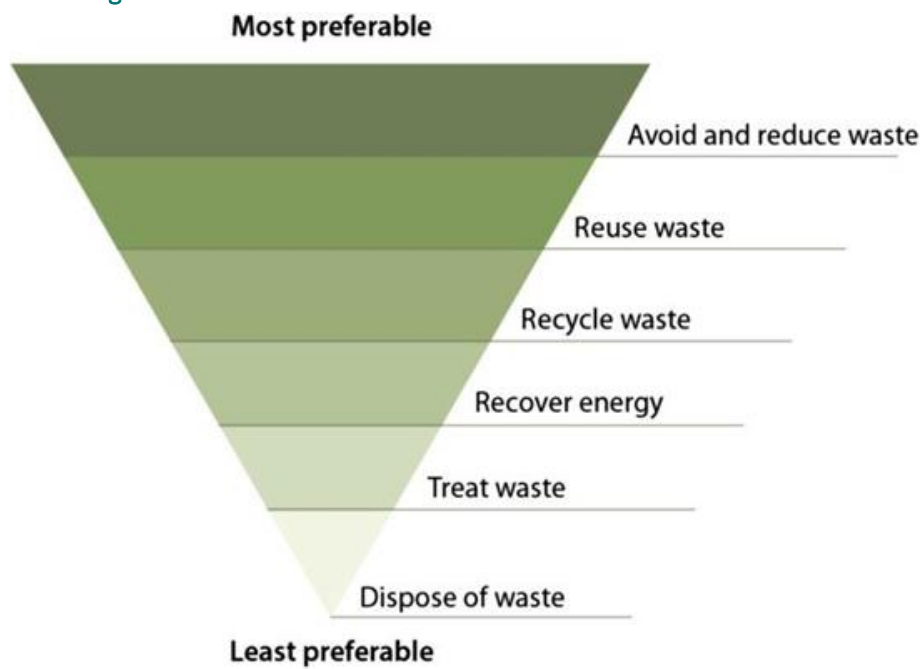


Table 5 - Implementation methods of the Waste Hierarchy

Implementing the Waste Hierarchy	
Reduce	
Conduct an audit on purchasing and use of an organization's materials e.g. paper, materials.	
Reduce waste at the source, determine changes in returnable delivery systems, packaging and purchasing.	
Develop and implement a printing policy including setting all machines to duplex, rationalizing printers/copiers, phasing out non-duplex machines and guiding what should be processed electronically.	
Institute "think before you print" policy aimed at eliminating unnecessary printing. Reduce font sizes/use word processing software to fit more text onto paper.	
Require suppliers to use returnable/stackable/reusable cartons instead of disposable cardboard boxes.	
Focus on minimizing waste (i.e. excess packaging, take-back, post use collection).	
Reuse	
Set up reuse area for excess materials and promote the contribution and reuse of excess materials.	
Conduct trial of recycled cartridges to determine quality and suitability for existing equipment.	
Donate to staff, charities, or sell at auction old (useable) computer/electrical equipment, furniture and fittings.	
Implement the Enviro Bank program.	
Recycle	
Introduce recycling systems for major waste streams including:	
• Paper and cardboard, • Bottles and cans, • Packaging and plastics.	
Conduct daily visual inspections of bin contents to assess contamination. Organize to retrain students and staff if bins are continually contaminated.	
Modify or refresh signage on recycling bins to promote correct recycling practice.	
Provide information and education to students and staff on appropriate usage and recycling bins.	
Recycle or reuse all electronic and IT equipment following replacement.	
Monitoring and assessment	
Request waste contractor to provide monthly data and reporting on recycled and materials sent to landfill.	
Report cost savings made from the "reduce, reuse, recycle" programming.	

6.2. WASTE STORAGE AREA

A dedicated area for the storage and collection of the applicable waste streams will be provided. The storage area will be sized to accommodate all bins or containers, for all applicable waste streams, for at least one collection cycle. The calculations used to demonstrate that the area provided are adequately sized to handle the recyclable waste streams based on:

- Waste generated by project,
- Collection frequency for each waste stream.

All waste facilities must comply with the Building Code of Australia (BCA) and relevant Australian Standards (AS) in accordance with the requirements of Hilltops Council DCP 2019. The BCA requirements for waste storage rooms are presented in Table 6.

YOUNG HIGH SCHOOL OPERATIONAL WASTE MANAGEMENT PLAN

Table 6 - Building Code of Australia (BCA) requirements for storage rooms

General	All waste management facilities will be compliant with the BCA and all relevant Australian Standards.
Surfaces	The floors, walls and ceilings of waste and recycling storage areas (room or bin bays) and chute room(s) must be finished with a rigid, smooth-faced impermeable material capable of being easily cleaned. The floors of waste and recycling storage areas (room or bin bays) must be graded and drained to drainage fitting approved by the relevant authority located in the room(s). The floor must be provided with a ramp to the doorway where necessary. The walls, ceilings and floors of the storage rooms will be finished with a light color.
Structure	The walls of the waste storage rooms will be constructed of approved solid impervious material and will be cement rendered internally to a smooth even surface coved at all intersections. The storage area will be constructed and finished to prevent absorption of liquids and odors and will be easily cleanable.
Doors	A close-fitting and self-closing door or gate operable from within the room must be fitted to all waste and recycling storage areas (rooms or bin bays). Doors/gates to the waste storage rooms must provide a minimum clearance of 1,200mm. At least one door or gate to the waste and recycling storage area must have sufficient dimensions to allow the entry and exit of waste containers of a capacity nominated for the development. Lightweight roller shutter-type doors or grilles should be considered for access to waste and recycling storage areas, as these do not impact on the available storage space. If these types of doors or grilles are used, the requirement for a close-fitting and self-closing door remains, so that waste collectors can access the waste storage area other than through the roller door or grille. The design shall restrict the entry of trespassers, vermin or other animals into the area.
Wash down area	Typical design includes provision for a water supply: • recessed with ramp access and graded floor, with a 1:10 gradient towards drain, • flush grate drain, • water proof epoxy applied to floor and walls to 20cm height, • water-proof bund/barrier along entry point.
Water	The waste and recycling storage area (room or bin bay) must be provided with an adequate supply of water for cleaning purposes with a hose cock. This does not include within chute rooms (if present).
Lighting	Waste and recycling rooms must be provided with artificial light controlled by switches located both outside and inside the room.
Pest Control	The waste storage rooms, areas and containers will be constructed in a manner as to prevent the entry of vermin.
Ventilation	The waste storage rooms will be supplied with an approved system of mechanical exhaust ventilation.
Safety	Any compactors or mechanical devices, if permitted for the mechanical handling and storage of waste, must be fitted with safety operating and cut-off systems. Smoke detectors will be fitted in accordance with AS1670 Automatic Fire Detection and Alarm Systems and connected to the fire prevention system of the building. The waste compactors will be fully fire proofed and child proofed. Only trained building management and waste contracting staff will have access to compactor equipment. All equipment will be protected from theft and vandalism.
Signage	Signs will be provided to demonstrate how to use the waste management system (including segregation of wastes for recycling, use of waste compactor), as well as appropriate safety signage. The different recycling and waste bins will be clearly identified and signed appropriately.

6.3. WASTE MOVEMENT

The school facility manager will place smaller bins throughout the school to collect waste. This includes the office, class rooms, playground areas and the canteen. Larger bins (240L) will be used near the canteen and the playground. The waste will be taken the waste storage area.

General Waste and recyclable waste will be collected in separate bins, which will be located around the school. Bins will be clearly labeled using colour-coding according to AS4123.7-2006 Mobile Waste Containers – Part 7. Bins will be kept in a good condition - any damaged, split or incomplete bins will be repaired or disposed of.

The cleaner will collect the waste on a regular basis and transport the collected waste by trolley if required, to the main waste storage compound. The cleaners will be advised to ensure bins are not too heavy risking injury, before taking them to the dedicated Waste Storage Area. Cleaners will be provided with appropriate personal protective equipment (PPE) for all people handling waste or bins. Appropriate gloves and other PPE will be used at all times.

Where smaller bins are to be emptied into larger bins, lifting equipment will be installed and used. Cleaners will be advised not to lift mobile and wheelie bins by hand as they are designed for mechanical lifting.

Adequate storage space will be available for easy maneuvering of bins within the school. The waste collection point will be free from obstacles and traffic hazards. The path from the compound to the truck will be level for easy transfer of waste and recycling.

6.4. WASTE COLLECTION POINT

The Waste Collection room has been provided in Block MM onsite near Block GFS allowing easy access from the existing driveway as shown in Appendix A. The waste collection room will aggregate all waste from the existing YHS site and proposed joint use Library Block MM and is being built as part of the Early Works DA which has gone to Hilltops Council (2019/DA-0085)

The waste collection truck will enter through Campbell Street and waste will be collected from the designated Waste Collection Point. The school also have a 1- and 5-meter front lift onsite for excess waste and a 1000 litre cart for removal of recycling. The 240 litre bins are taken to a waste storage area and brought out to a location where the waste contractor removes the material.

6.5. WASTE COLLECTION HOURS

The waste collection truck will schedule collection out of school hours to reduce any risk from the truck and bin movements to the school children. The collection of waste and/or any recycling activity must only occur before 8 am and after 4 pm on school days and undertake to minimize noise disturbance to the students.

6.6. WASTE COLLECTION CONTRACTOR

A contract with a licensed waste contractor for the collection and removal of all waste to a licensed facility will be arranged and concluded prior to the start of operations. The contract will also include specific provisions for the times, manner of collections, verification of recycling and/or disposal of all of the facility's aforementioned waste streams and potential intermittent streams. This includes but not exclusively: batteries, electronics, light bulbs, smoke detectors and any other fixtures or fittings that are generated as recyclable waste.

YOUNG HIGH SCHOOL OPERATIONAL WASTE MANAGEMENT PLAN

Upon engagement, a precondition is written evidence of a valid and current contract with a licensed collector for waste and recycling collection will be provided to the client of the school. The contract will, as stated above, include specific details on the method, timing and location of both the licensed recycling facilities used and/or licensed landfill(s) used for the disposal of non-recyclable waste.

A dedicated area for the storage and collection of the applicable waste streams will be provided. The storage area will be sized to accommodate all bins or containers, for all applicable waste streams, for at least one collection cycle.

7. SIGNAGE

Signage will be provided in all waste disposal, storage and collection areas demonstrating how to use the waste management system, including what materials are acceptable in each bins. All waste streams will be stored in clearly labeled, color coded bins as appropriate to ensure that waste streams are not inadvertently mixed.

Figure 2 – Examples of Signage



Figure 3 – Examples of waste disposal color coding



YOUNG HIGH SCHOOL OPERATIONAL WASTE MANAGEMENT PLAN

8. ONGOING WASTE MANAGEMENT PLAN

Number of students: 580

Number of levels: 1

Time of pick-up: before or after school

Pick Up Location Campbell Street, Young

Waste Contractor: Cleanaway

Material Type on Site	Estimated Volume (Litres or Weight (t) (Most Favourable → Least)			Proposed quantity of garbage bins	Clearance Frequency	
	Reuse	Recycling	Disposal	Proposed quantity of garbage bins	Clearance frequency of recycling bins	Clearance frequency of general bins
General Waste including: Food Scraps, Tissues/Napkins/Hand Towels, scraps from canteen.			1,655.5 L	7 X 240 litre bins		Weekly
General Recyclable Material including Paper, Mixed Plastic (1-7), Plastic Bottles, Cardboard, Mixed Metal & Aluminum Cans.		2,035 L		9 X 240-litre bins	Weekly	
Potential hazardous waste Chemical waste from a Science Laboratory or Materials Workshop, batteries, e-waste			As needed			As needed
Bulky goods and large school waste			As needed	1.5 front lift bin		As needed
			As needed	2.5 cubic meters x 3		As needed

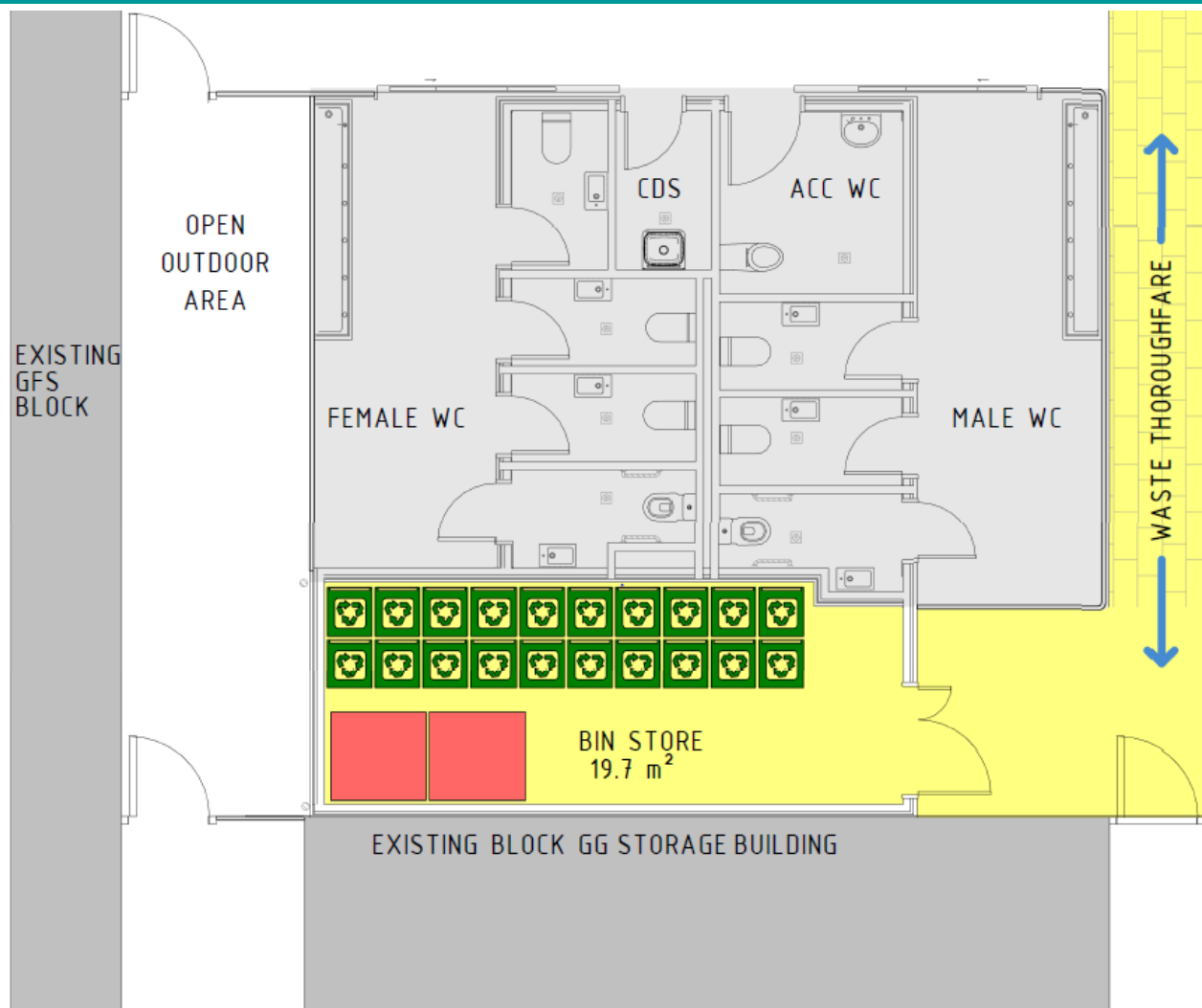
APPENDIX A WASTE PATHWAY DIAGRAM

Strategic Facilities Planning and Solutions Waste Management



YOUNG HIGH SCHOOL OPERATIONAL WASTE MANAGEMENT PLAN

APPENDIX B WASTE STORE DIAGRAM



Issued by
EcCell Environmental

Project Name
Young HS – Hilltops

Report Name
**Operational Waste
Management Plan**

Project No.
190319
Date
03/23/19

Drawn by
FS
Checked by
JD

Scale
1:50