

EAST LEPPINGTON PRIMARY SCHOOL OPERATIONAL WASTE MANAGEMENT PLAN



VERSION NUMBER: VERSION 1 REPORT DATE: 20/11/2018

PRESENTED BY:

JO DRUMMOND

SUBMITTED TO:

MARTIN FENN

ECCELL ENVIRONMENTAL MANAGEMENT PTYLTD 35 WAVERLY CRST, BONDI JUNCTION NSW 2022

SENIOR PROJECT MANAGER | TSA LVL 15, 207 KENT STREET | SYDNEY NSW 2000



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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 Operational Waste Management Plan.

1. 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

The new Leppington Primary School will be built within Stockland's Willowdale development and falls within the Raby Road Primary Schools Community Group as well as falls under Western City District Plan. The Raby Road Primary schools 'cluster' is identified in Sydney Metropolitan Plan; <u>"A Plan for Growing Sydney"</u>, with a significant focus for intensive growth and infrastructure investment over next 20 years.

The cluster falls within the Camden and Campbelltown Local Government area (LGA) and includes seven (7) new schools, one of which is New Leppington Primary School.

The projections for the Raby Road Primary School Community Group are for an increase in numbers of primary school age children, and demand for teaching space, and facilities to at least 2031. The expansions of existing schools and the building of new schools is required to cater for the anticipated population growth.

1.3. Project Description

This new primary school will be located on a 3.0 Ha vacant lot, on the Corner of Willowdale Drive and Commissioner Drive in Willowdale, within the Stockland development footprint.

The single stage construction will include:

- 44 new teaching spaces to accommodate 1012 student
- Core facilities, staff facilities and administration to Core 35 Standard
- Infrastructure
- Parking facilities
- Substantial landscaping including contemporary educational and recreational facilities.

1.4. 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 and
- 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
- Campbelltown Council DA

3. RISK MANAGEMENT

The current relevant legislation determines that *the generator of waste is the owner of the waste until the waste crosses a weighbridge into a licensed 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, thus diverted from landfill and waste sent to landfill. These reports have a direct bearing on the generator's regulatory liability.

All entries in the Waste Data File must include:

- Time and Date of waste removal
- Description and size (in liters) 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 guideline 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 Leppington Public School are included in **Table 1**.

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

Table 1: Potential Waste Types and Classifications



5. WASTE GENERATION QUANTITIES

It is estimated that 1012 students will be in attendance at the school.

As a conservative approach, the higher average waste and the lower recycling generation rates from the tables below have been adopted, thus it is estimated that the facility will produce approximately 4,432 litres of waste per week (5 working days) and 2,200 litres of recycling per week (5 working days).

Table 2: DCP (2014) Estimated Average Waste and Recycling Generation Rates

Premises Type	Average Waste Generation	Average Recycling Generation
Offices	10 L / 100 m²/ per day	10 L /100 m2 / per day
Takeaway	80 L / 100 m²/ per day	Variable

Table 3: EPA (2012) Estimated Average Waste and Recycling Generation Rates

Premises Type	Average Waste Generation	Average Recycling Generation
Primary Education	7 L / 100 m²/ per day	0 L /100 m2 / per day
Offices	8 L / 100 m²/ per day	6 L /100 m2 / per day
Takeaway	175 L / 100 m²/ per day	685 L /100 m2 / per day

Table 4: Estimated Average Waste and Recycling Generation Rates for Leppington Primary School

Waste	Quantity Generated per Week	Clearance Frequency
General Waste	4,432L	Minimum of once per week
Recycling	2,200 L	Minimum of once per week



6. WASTE MANAGEMENT

6.1. Waste Hierarchy

The following table indicates waste management practices in accordance with the Waste Avoidance and Resource Recovery Act 2001 (NSW EPA, 2014).



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, rationalising 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 minimising 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

Implementing the Waste Hierarchy

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

The bins will be placed in a designated outdoor waste storage pad or within a compound. The waste storage area or bin parking area will be designed as per government guidelines.

These include:

- The floor finish in the compound will be a sealed concrete slab, graded and drained to meet Sydney Water Guidelines and able to support various weights relating to machinery
- The skips used for storage will be stored on a level slab
- A screen will be provided to ensure the bin parking area is screened from view and integrated into the building design
- Drainage in the bin parking area be graded and drained to sewer and a potential grease trap installed compliant with Sydney Water's requirements
- The waste storage area is open and unenclosed, providing adequate ventilation
- All equipment will require a safe operation procedure be in place with appropriate safety signage
- Washing of bins will require a trapped gully with hot/cold water mix tap required
- The path of travel from the bin holding area and the waste stores to the truck needs to be level and will require no steps and a maximum gradient =1.14 (level for skips)
- All bins will be well maintained with lids attached to prevent vermin
- The waste storage area will be secured within the school compound to prevent theft or vandalism and
- There will be a secure outdoor fenced area that is approximately 5 x 10m (50m²) for bin storage.

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. The cleaner will collect the waste on a regular basis and transport the collected waste by trolley if required, to the main waste storage bins.

- General waste and recycling bins will be located around the school
- Bins will be clearly labelled using colour coding according to AS4123.7-2006 Mobile Waste Containers Part 7:
- General Waste and recyclable waste will be collected in separate bins
- The path from the compound to the truck will be level for easy transfer of waste and recycling

EAST LEPPINGTON – OPERATIONAL WASTE MANAGEMENT PLAN



- The cleaner will collect waste on a regular basis and transport in trolley to the main waste compound
- The cleaners will be advised to ensure bins are not too heavy risking injury, before taking them to the dedicated Waste Storage Area.
- Adequate storage space will be available for easy manoeuvring of bins within the school
- Bins will be kept in good condition, any damaged, split or incomplete bins will be repaired or disposed of.
- 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.
- The waste collection point will be free from obstacles and traffic hazards.
- 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.

6.4. Waste Collection Point

The Waste Collection point has been designed to be placed within the compound near the Community Hall and staff carpark allowing easy access as shown in Appendix A. Therefore, it is considered that both the waste storage and pad areas are located at an appropriate location near the buildings and the loading bay.

The waste collection truck will enter through the car park on Willowdale Drive and waste will be collected from the designated Waste Collection Point. The truck will complete a reverse entry where it will collect the 660L Mobile Garbage Bins (MGB) and will then move forward and exit by the carpark.

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 minimise noise disturbance to the nearby area.

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 commencement of waste removal. The contract will also include specific provisions for the times and manor of collections and the verification of recycling and/or disposal of all of the facility's aforementioned waste streams and potential intermittent streams including but not exclusively: batteries, electronics, light bulbs, smoke detectors and any other fixtures or fittings that are generated as recyclable waste.

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.



7. ONGOING WASTE MANAGEMENT PLAN

Number of students: 1012

Number of levels: Up to three

Location of pick up: Willowdale Drive, Willowdale

Time of pick-up: Before 8.00 a.m. and after 4.00 p.m.

Waste Contractor: TBA

equency	Clearance frequency of general bins	Weekly			
Clearance Fre	Clearance frequency of recycling bins		Weekly		
Proposed quantity of garbage bins	Proposed quantity of garbage bins	4 X 1,100L or 7 X 660L or 18 X 240L	2 X 1,100L or 4 X 660L or 9 X 240L		
(eight (t) → Least)	Disposal	4,432 litres			
Estimated (Litres or W Favourable -	Recycling		2,200 L	TBA	TBA
Volume (Most l	Reuse				
Material Tyne on Site		General Waste including: Food Scraps, Tissues/Napkins/Hand Towels, scraps from canteen.	General Recyclable Material including Paper, Mixed Plastic (1-7), Plastic Bottles, Cardboard, Mixed Metal, Aluminum Cans.	Potentially hazardous waste Chemical waste from a Science Laboratory or Materials Workshop, Visual Arts	Special Waste including, batteries, e-waste



APPENDIX A – WASTE COLLECTION ZONE



V1



APPENDIX B – TRAFFIC FLOW





EAST LEPPINGTON PRIMARY SCHOOL CONSTRUCTION WASTE MANAGEMENT PLAN



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1. INTRODUCTION

This report 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, Section 2 Environmental Planning and Assessment Regulation 2000. There is a requirement to prepare a Construction Waste Management Plan.

The Waste Management Plan will:

- a) Identify, quantity and classify waste streams to be generated during construction.
- b) Describe measures to be implemented to manage, reuse, and recycle and safely dispose of the waste.
- c) Identify servicing arrangements (including but not limited to waste management loading zones and mechanical plant for the site.
- d) Prepare a site drawing for Construction Waste Management Loading Zones.

2. PROJECT PROFILE

The new Leppington Primary School will be built within Stockland's Willowdale development and falls within the Raby Road Primary Schools Community Group, and falls under Western City District Plan. The Raby Road Primary schools cluster is identified in Sydney Metropolitan plan <u>"A Plan for Growing Sydney"</u> with a significant focus for intensive growth and infrastructure investment over next 20 years.

The Cluster falls within the Camden and Campbelltown Local Government area (LGA) and includes 7 new schools, one of which is New Leppington Primary School.

The projections for the Raby Road Primary School Community Group are for an increase in numbers of primary school age children, and demand for teaching space, and facilities to at least 2031. The expansions of existing and building of new schools are required to cater for the population growth.

3. PROJECT DESCRIPTION

The new primary school will be located on a 3.0 Ha vacant lot, on the Corner of Willowdale Drive and Commissioner Drive in Willowdale, within Stockland development, that is expected to generate substantial general population and school aged population growth.

Single stage construction will include as noted on CDR-East Leppington Binder 17028

- 44 new teaching spaces to accommodate 1012 students
- Core Facilities, Staff Facilities and Administration to Core 35 Standard
- Infrastructure
- Parking facilities
- Substantial landscape treatment to provide contemporary educational and recreational facility.



4. OBJECTIVES & TARGETS

The project 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 off-site.
- Disposal of no more than 20% of residual waste materials to a licensed landfill in accordance with both regulatory and legal requirements.
- The diversion from landfill of 80% of construction waste by weight, to meet the criteria of the NSW State Government's waste legislation, waste policy settings and regulatory regime.

5. LEGISLATIVE REQUIREMENTS AND GUIDELINES

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 2001
- Protection of the Environment Operations (Waste) Regulation 2014
- Secretary's Environmental Assessment Requirements

6. RISK MANAGEMENT

The current legislation determines that the generator of waste is the owner of the waste until the waste crosses a weighbridge into a licensed facility. Waste contractors including construction contractors are the primary transporters of waste off-site, accordingly contractors will be required to provide monthly reports on waste reused, reprocessed or recycled, thus diverted from landfill or waste sent to landfill. These reports have a direct bearing on the generator's regulations.

The WMP will be implemented on site throughout excavation and construction.

All entries in the Waste Data File must include:

- Time and Date of material removed
- Description and size of waste
- Waste facility used
- Vehicle registration and Waste Contractors Company name

The Waste Data File will be available for inspection to any authorized officer at any time during site works. At the conclusion of site works, the designated person will retain all waste documentation and make this validating documentation available for inspection.



7. WASTE MANAGEMENT STRATEGIES

The waste management strategy for the project will operate over the design, procurement, and construction including fit out of the project.

Management Strategies	Responsibilities
Design:	
Use of modular components in design	Architect & Engineer
Use of prefabricated components in design	Architect, Builder, Subcontractors.
Design for materials to standard sizes	Architect, Subcontractors
Design for operational waste minimization	Architect & Builder
Procurement:	
Select recycled and reprocesses materials	Architect, Engineer, Builder & Sub
Components that can be reused after	Contractors
deconstruction	Architect, Engineer & Builder
Pre-construction	
Waste management plan to be reviewed &	Builder
approved prior to construction	
Construction on-site:	
Use the avoid, reuse, reduce, recycle principles	Builder & Waste Contractor
Minimisation of recurring packaging materials	Sub-contractors
Returning packaging to the supplier	Builder & Sub-contractor
Separation of recycling of materials off site	Waste Contractor
Audit & monitor the correct usage of bins	Builder & Waste Contractor
Audit and monitor the Waste Contractor	Builder



8. WASTE MANAGEMENT PLAN FOR DEVELOPMENT APPLICATION

Brief Outline of Proposal:

The new primary school will be located on 3.0 Ha vacant lot, corner of Willowdale Dr and Commissioner Drive in Willowdale, within Stockland development, that is expected to generate substantial population and school aged population growth.

Single stage construction will include:

- 44 new teaching spaces to accommodate 1012 students.
- Core Facilities, Staff Facilities and Administration to Core 35 Standard
- Infrastructure
- Parking facilities

• Site will Undergo substantial landscape treatment to provide contemporary educational and recreational facility.

Project Site Address:

East Leppington, Corner Commissioner Drive and Elkhorn Street, Willowdale

Applicants Name

Martin Fenn (TSA Management) c/o Department of Education NSW

Applicant's Address:

Level 15, 207 Kent Street | Sydney NSW 2000

Phone Number:

Existing and other structures currently on site:

No existing structures the site is a Greenfields site

Signature of Applicant:

Date: / / 2018



PHASE DEMOLITION

Material Type on	Volur (Most	Estimated me (m³) or Wei t Favourable →	ight (t) • Least)	ON-SITE TREATMENT	0	F-SITE TREATMENT
Site	Reuse	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
Nil	Nil	Nil	Nil	Nil	N/A	N/A
Sub Total	Nil					
TOTAL	Reused or	ו site				
Narrative: There is no	demolition ;	as this is a gree	en fill site.			

PHASE EXCAVATION

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PHASE CONSTRUCTION

Material Type on	Volum (Most	Estimated ne (m³) or Wei Favourable →	ght (t) Least)	ON-SITE TREATMENT	Ō	FF-SITE TREATMENT
Site	Reuse	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
Concrete Brick Block-work & Tile		210 m ³		Co-mingled Bins	TBA	Crushed for road base
Metals		120m ³		Co-mingled Bins	TBA	Scrap Metal Dealer for smelting
Timber off-cuts		260m ³		Co-mingled Bins	TBA	Recycled for chips and mulch
Cardboard		180m³		Co-mingled Bins	TBA	Recycled into cardboard
Plasterboard		190m³		Co-mingled Bins	TBA	Recycled as soil conditioner
Plastics, plastic packaging, paint drums, containers		150m ^{3*}	30 m ³⁻	Co-mingled Bins	ТВА	 Styrene and plastic to landfill Paint drums nested and recycled
Pallets and Reels	140 units			Separated onsite	TBA	Returned to the supplier
Liquid Waste			20 m ³	Separated onsite	TBA	Transferred to licenced landfill
General Waste			180 m ³	Co-mingled Bins	TBA	Transferred to licenced landfill
Sub Total	NB: 140 units	1,110m ³	230 m ³			
TOTAL	1,340 m³			NB: Plus an additional	140 pallets (single un	ts returned to suppliers for reuse)
Narrative:			-	-		

All waste will be co-mingled and taken for off-site separation and reuse or recycling except Pallets and Reels and liquid waste to be sent to landfill As the contracts for all contractors have not been let there are still those including the waste contractor To Be advised (TBA). for processing.



9. APPENDIX A - WASTE MANAGEMENT LOADING ZONE



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