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CONSTRUCTION WASTE MANAGEMENT PLAN (CWMP)

THE NEW PRIMARY SCHOOL IN
MULGOA RISE

TEMPORARY FACILITIES



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SUBMITTED TO:

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DISCLAIMER

This report is based on information provided by Colliers.
To that extent this report relies on the accuracy of the information provided to the consultant This report is not a substitute for legal advice on the relevant environmental related legislation, which applies to businesses, contractors or other bodies. Accordingly, EcCell Environmental will not be liable for any loss or damage that may arise out of this project.

DOCUMENT CONTROL

ISSUE NUMBER	DATE	COMMENT	AUTHOR	REVIEW
DRAFT 01	26/06/2022	Issue	Patrick Nolan	Jo Drummond
Version 1	30/06/2022	Version 1	Patrick Nolan	Jo Drummond

INTRODUCTION

OVERVIEW

This Construction Waste Management Plan (CWMP) has been prepared by EcCell Environmental on behalf of the School Infrastructure NSW (the Applicant). It accompanies an Environmental Impact Statement (EIS) in support of State Significant Development Application (SSD-11070211) for temporary learning and support facilities (the Site) within the proposed development of a new primary school in Mulgoa Rise located at 1-23 Forestwood Drive, Glenmore Park.

The purpose of this CWMP is to meet the key waste requirements issues of the Secretary's Environmental Assessment Requirements (SEARs) Section 4.12 (8) of the *Environmental Planning Assessment Act 1979* and will:

- a) Identify, quantity and classify waste streams to be generated during construction.
- b) Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.
- c) To ensure storage and collection of waste is designed and managed having appropriate regard to space, location, amenity and ongoing management of waste management facilities.
- d) Describe measures to be implemented to manage, reuse, and recycle and safely dispose of the waste.
- e) To maximise reuse and recycling of construction materials and materials from development.
- f) To encourage building design techniques in general which minimise waste generation.
- g) To minimise the amount of waste being deposited to landfill with targets to reuse or recycle at least 90% of construction and demolition waste as per the EFSG DG02 2.7.1 Construction and demolition waste requirements.
- h) Address relevant requirements of the Waste Classification Guidelines (EPA, 2014).

PROJECT DESCRIPTION– TEMPORARY SCHOOL FACILITIES

The development will include the construction, operation and eventual removal of temporary school facilities on the southern end of the current site. The temporary facilities will be directly connected to the partially complete permanent facilities.

The proposed Temporary Facilities are all single storey demountable buildings and comprise:

- 9 General Learning Spaces.
- Support Unit Learning Spaces.
- 1 Administration Block.
- 1 Staff Facilities Block.
- 1 Library Block.
- Toilet Block Facilities.
- 1 Accessible Toilet Block facility.

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Figure 1 - Approximate Site Location (Source: Google Maps)

RESPONSE TO SEARS

The CWMP is required by the Secretary's Environmental Assessment Requirements (SEARs) for SSD. This table identifies the SEARs and relevant reference within this report.

Table 1 - SEARs Requirement & CWMP Page Reference

SEARs Item	Report Reference
Identify, quantify and classify the likely waste streams to be generated during construction and operation.	PROJECT PHASE
Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.	PROJECT PHASE
Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.	ON SITE WASTE MANAGEMENT REQUIREMENTS
Provide a hazardous materials survey of existing aboveground buildings that are proposed to be demolished or altered.	This is a brownfield site and no demolition or alteration of existing aboveground buildings will take place.

Table 2 – SSD Condition B 18

SSD Conditions B 18	Report Reference
B18 A The recording of quantities, classification (for materials Removed) and validation for materials to remain of each type of waste generated during construction and proposed use of material to remain	PROJECT PHASE
B 18 B information regarding the recycling and disposal locations	Appendix B Bingo
B 18 c confirmation of the contamination status of the development areas of the site based on validation results	Supplementary Geotechnical Investigation Dated 29 th July 2021

NSW 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 2014
- Protection of the Environment Operations (Waste) Regulation 2014
- Waste Classification Guidelines (EPA, 2014)
- NSW Department of Planning and Environment, Secretary's Environmental Assessment Requirements (SEARs)

WASTE MANAGEMENT STRATEGIES

SERVICING ARRANGMENTS

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

The CWMP will be implemented on site throughout including singularly or collectively the demolition, construction and fit out phases.

A Waste Data File must be maintained on-site and all entries are to include:

- The classification of the waste
- The time and date of material removed
- A description of and the volume of waste collected
- The location and name of the waste facility that the waste is transferred to
- The vehicle registration and the name of the waste contractor's company

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

Arrangement's will be made with the Waste Contractor to increase bin supply if there is an unexpected increase in waste generation.

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CONSTRUCTION WASTE MANAGEMENT EQUIPMENT, BIN SIZES AND COLLECTION FREQUENCY

All waste will be removed by a licensed waste contractor using 15-meter bins on site. The construction waste will be removed when bins are full and within the construction site hours to reduce disturbance of the neighbours.

ROLES AND RESPONSIBILITIES

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

Table 3 - Breakdown of Tasks and Responsibilities

Management Strategies	Responsibilities
<u>Design:</u> Use of modular components in design Use of prefabricated components in design Design for materials to standard sizes Design for operational waste minimisation Consider ways to avoid, reuse and recycle construction wastes	Architect & Engineer Architect & Builder Architect & Subcontractors Architect & Builder Subcontractors.
<u>Procurement:</u> Select recycled and reprocessed materials Select components that can be reused after deconstruction Prioritise suppliers that take back offcuts and unused product. Encourage contractors and subcontractors that use unneeded offcuts and unused product for use on other jobs Ordering the right quantities of materials (Purchasing Policy); Include prefabrication of materials	Architect, Engineer, Builder & Sub Contractors Architect, Engineer & Builder Sub-Contractors Sub-Contractors
<u>Pre-construction:</u> Waste management plan to be reviewed & approved prior to construction. Contract a Waste Contractor	Builder Waste Contractor
<u>Construction on-site:</u> Use the avoid, reuse, reduce, recycle principles Minimisation of recurring packaging materials Returning packaging to the supplier Separation of recycling of materials off site Audit and monitor the correct usage of bins Audit and monitor the Waste Contractor	Builder & Waste Contractor Sub-contractors Builder & Sub-contractor Waste Contractor Builder & Waste Contractor Builder

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Management Strategies	Responsibilities
<p><u>Avoiding construction waste</u></p> <p>Reduce extraneous packaging use reusable padding and careful packing.</p> <p>All packaging generated on site should be captured for reuse or recycling wherever possible.</p> <p>Reuse formwork;</p> <p>Use modular components</p> <p>Use reuse non-returnable containers on the job site to the maximum extent possible</p>	Builder

ON SITE WASTE MANAGEMENT REQUIREMENTS

There will be a designated waste storage area for the disposal and storage of construction waste prior to collection. This area will be located conveniently for the construction work team to use the bins as well as for waste contractors to collect. An indicative location has been provided in Appendix A. Other requirements include:

- The routes for movement of waste between work site and waste storage area are to be kept obstruction-free.
- The routes for movement of bins and waste between storage and collection points are marked in the site drawing, and will be kept obstruction-free (if waste is moved between the waste storage area(s).
- The waste bin collection point provided will be accessible for waste collection vehicles. There are no obstructions to turning or reversing, pulling up vehicles and lifting bins.
- Access for waste collection vehicles will not be compromised by construction-related activities vehicles or other consequences of construction staging.
- All waste not being reused on site will be removed during, or at the completion of, the construction stage.
- No waste will be left on site unless it is part of valid reuse on site, which is integral to and in place in the design.
- In order to manage noise levels, collection of waste from the construction site will only occur during hours approved for construction work.
- All vehicles entering or leaving the site must have their loads covered.
- All vehicles, before leaving the site, to be cleaned of dirt, sand and other materials, to avoid tracking these materials onto public roads.
- At the completion of the works, the work site is left clear of waste and debris.

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WASTE MANAGEMENT PLAN APPLICATION

PROJECT:
The New Primary School Mulgoa Rise TEMPORARY FACILITIES
ADDRESS:
1-23 Forestwood Drive, Glenmore Park
OWNERS:
School Infrastructure NSW (SINSW)
DETAILS OF APPLICANT
Department of Education
DESCRIPTION OF BUILDINGS AND OTHER STRUCTURES CURRENTLY ON THE SITE:
This school is planned to be built on a the oval,
BRIEF DESCRIPTION OF PROPOSAL:
The proposed Temporary Facilities are all single storey demountable buildings and comprise: <ul style="list-style-type: none"> • 9 General Learning Spaces. • Support Unit Learning Spaces. • 1 Administration Block. • 1 Staff Facilities Block. • 1 Library Block. • Toilet Block Facilities. • 1 Accessible Toilet Block facility.
IF MATERIALS / WASTE IS REUSED ON SITE OR OFF SITE, HOW WILL IT BE RE-USED:
There is minimal excavation of Excavated Natural Material (ENM), which will be used back on the site for landscaping. This material will be covered to reduce soil displacement and prevent air pollution.

	Name	Signed	Contact Number	Date
Prepared by:	Jo Drummond		0412214233	30/06/2022

PROJECT PHASE

EXCAVATION

MATERIAL TYPE ON-SITE	ESTIMATED VOLUME (m³) or WEIGHT (t) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Disposal	Proposed Reuse and/or Recycling Collection Methods	Disposal / Transport Contractor	Licensed Waste Depot, Recycling Outlet Or Landfill Site
Excavated Brown Fill	10m3			Separated to a designated stockpile and reused on-site for resurfacing	NA	N/A
Sub-Total	10m³					
Total	10m³					
Narrative: Excavated fill removed from site will be classified by a suitably qualified environmental consultant before reuse on the site or disposal off-site if contaminated and unsuitable.						

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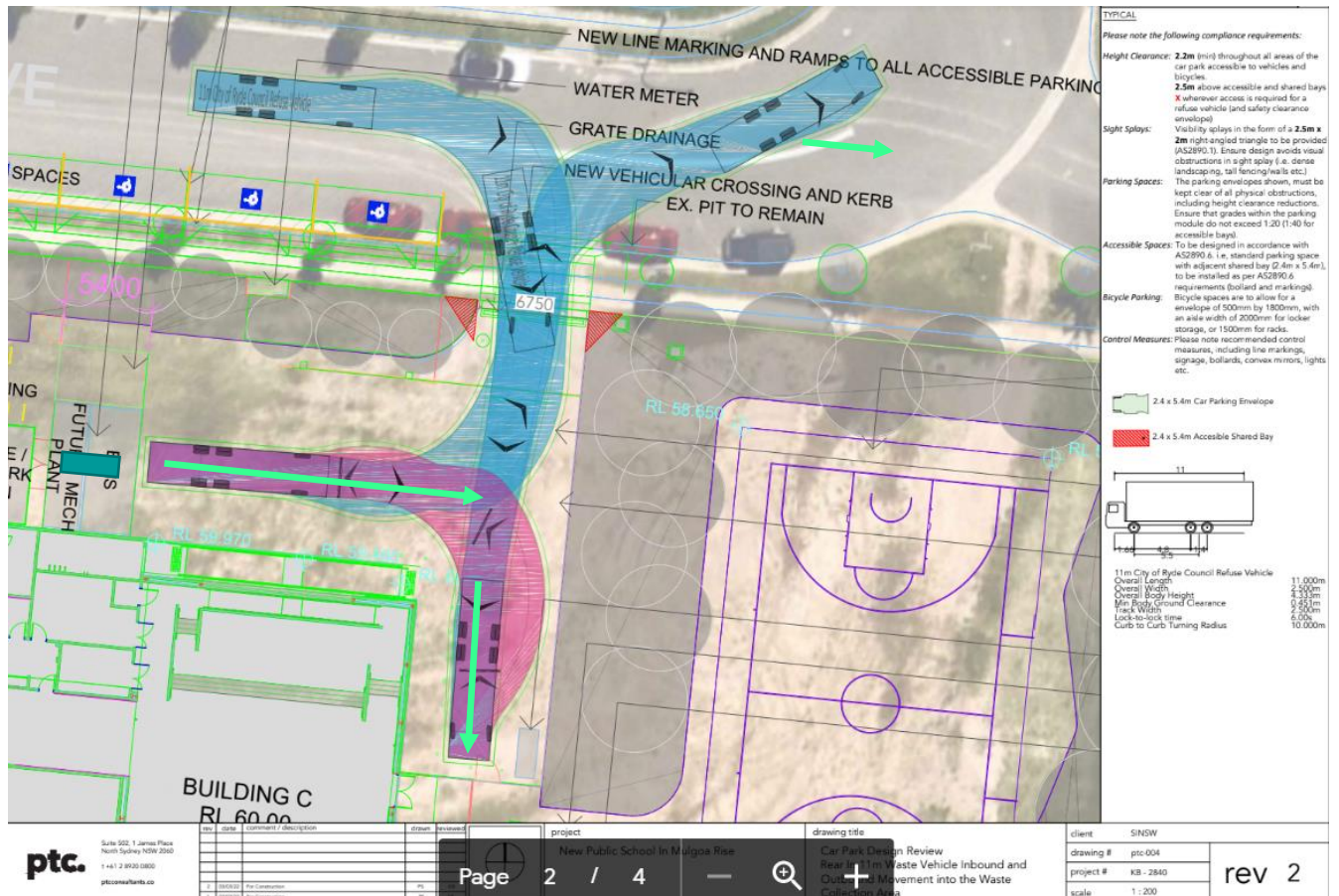
ASSEMBLY

CLASSIFICATION MATERIAL TYPE ON-SITE Waste Classification Construction and Demolition Liquid Waste	ESTIMATED WEIGHT (t) or VOLUME (m³)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Landfill Disposal	Proposed Reuse and/or Recycling Collection Methods	Disposal / Transport Contractor	Licensed Recycling Outlet or Landfill Site
Concrete, Brick, Block Work,		16 m³		Co-mingled Bins	Bingo	Crushed for road base
Metal joinery, Paint Tins & Lids (Stacked) & metal fencing		8 m³		Co-mingled Bins	Bingo	Scrap Metal Dealer for smelting
Timber Off-Cuts		12 m³		Co-mingled Bins	Bingo	Recycled for woodchips and mulch
Cardboard		5 m³		Co-mingled Bins	Bingo	Recycled into cardboard packaging
Containers, Plastics, Plastic Packaging		8 m³		Co-mingled Bins	Bingo	Recycled into future plastic
Pallets and Reels	25 units			Co-mingled Bins	Bingo	Returned to the supplier
Liquid Waste & Paint Washout			4 m³	Separated Container/Bin	Bingo	Return to supplier transfer to licenced landfill
General Waste			8 m³	Co-mingled Bins	Bingo	Transferred to licenced landfill
Putrescible Food Waste			1 m³	Separate bin	Bingo	Transferred to licenced landfill
Sub Total	25 units	49m³	13m³			
TOTAL	62m³			NB: An additional 25 pallets & reels (single units returned to suppliers for reuse).		
Narrative: Due to the pre-fabricated design and the nature of the temporary assembly and in the assembly and the later demounting reuse of excavation and off-cuts onsite, low volumes of waste are estimated.						

DISASSEMBLY

MATERIAL TYPE ON-SITE Waste Classification Construction and Demolition	ESTIMATED VOLUME (m³) or WEIGHT (t) (Most Favourable → Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Disposal	Proposed Reuse and/or Recycling Collection Methods	Disposal / Transport Contractor	Licensed Waste Depot, Recycling Outlet or Landfill
Concrete, Brick, Block Work,		5 m³		Comingled Bins	Bingo	Crushed for road base
Timber footings			5 m³	Comingled Bins	Bingo	Mulched for reuse
Pallets and Reels	10 units			Comingled Bins	Bingo	Return to the supplier
General Waste			5 m³	Comingled Bins	Bingo	Transferred licenced landfill
Putrescible Food Waste			1 m³	Separate bin	Bingo	Transferred licenced landfill
Sub Totals	10units m³		11 m³			
Total	15 m³					
Narrative: The timeframe for the disassembly of the modular units is approximate and the waste generated is expected to be minimal.						

APPENDIX A CONSTRUCTION WASTE PATHWAY



PROPOSED WASTE STORAGE AREA



COLLECTION VEHICLE DIRECTION



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APPENDIX B BINGO WASTE MANAGEMENT AND RECYCLING PLAN



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CONFIDENTIAL

Waste Management & Recycling Plan (NSW)

Client: Richard Crookes Constructions
Project: 1-23 Forestwood Dr, Glenmore Park

BINGO Industries offers a complete, comprehensive solution to the management and recycling of wastes to assure compliance with clients' waste management policy.

BINGO Recycling Centre's combine bin storage, waste collection, waste recycling and waste transfer to service the building and construction industry and domestic waste management needs in New South Wales. Wastes collected by BINGO Industries are taken directly to one of these facilities where approximately 90% of wastes are converted to recovered resources.

BINGO Recycling Centre Alexandria EPL No. 4679
BINGO Recycling Centre Artarmon EPL No. 20763
BINGO Recycling Centre Auburn EPL No. 10935
BINGO Recycling Ecology Park Eastern Creek EPL No. 20121
BINGO Recycling Centre Greenacre EPL No. 20847
BINGO Recycling Centre Kembla Grange EPL No. 20601
BINGO Recycling Centre Mortdale EPL No. 20622
BINGO Recycling Centre Patons Lane EPL No. 21259
BINGO Recycling Centre Revesby EPL No. 20607
BINGO Recycling Centre Tomago EPL No. 20585

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landfill. Waste materials inwards are processed to achieve the maximum recovery of resources and the minimum of un-recoverable material for disposal.

Typical Composition of BINGO's Wastes Inwards

Wastes Inwards	Percentage (approx.)
Heavy Recyclable Materials	45%
Light Recyclable Materials	35%
Metals	10%
Non-Recyclable Materials	10%
Total	100%

Heavy Recyclable Materials:

- Soil
- Dirt
- Sand
- Rubble
- Brick
- Concrete
- Tiles
- Stone
- Asphalt

Light Recyclable Materials:

- Timber
- Green Waste
- Cardboard/ Paper
- Plastic
- Plasterboard

Metals:

- Ferrous (steel, black iron)
- Non-Ferrous (copper, wire, aluminium, stainless)

At the Resource Recovery Facility an effective waste processing procedure is applied. See Materials Flow Diagram (below). Wastes inwards unloaded onto the sorting area where the waste is raked with a hydraulic excavator to expose the contents and where recyclable materials are hand and machine sorted.

**BINGO Recycling Centre
Materials Flow Diagram**



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In summary, BINGO Industries take all their mixed waste skip bins directly to EPA Licensed Recycling Centres. From there the waste is sorted and separated into the following material classes for processing and recycling.

Type of Material	Where Processed/ Recycled	How Processed/ Recycled
Heavy Recyclable Materials (soil, dirt, sand, rubble, concrete, brick, tiles, asphalt, stone)	<ul style="list-style-type: none"> BINGO Recycling Centres 	Re-processed into recycled products (such as aggregates and roadbase) by crushing and screening.
Timber / Green Waste	<ul style="list-style-type: none"> Clean & Green Organics BINGO Recycling Ecology Park 	Re-processed into woodchip and mulch by shredding.
Metal / Steel	<ul style="list-style-type: none"> Sell & Parker CMI SIMS Sydney Copper Scraps 	Re-processed into new metal and steel products by shearing, baling and re-smelting.
Brick / Concrete	<ul style="list-style-type: none"> BINGO Recycling Ecology Park 	Re-processed into recycled products (such as aggregates and roadbase) by crushing and screening.
Cardboard / Paper / Plastic	<ul style="list-style-type: none"> Polytrade Recycling J.J. Richards Orora 	Re-processed into new cardboard, paper and plastic products by breaking down the material into a form for re-use.
Plasterboard	<ul style="list-style-type: none"> ReGyp 	Re-processed into gypsum products by shredding and screening.
General Waste	<ul style="list-style-type: none"> Eastern Creek Landfill 	n/a

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- **BINGO Recycling Centres**
76-82 Burrows Road, Alexandria NSW 2015
10 McLachlan Ave, Artarmon NSW 2064
3-5 Duck Street, Auburn NSW 2144
Honeycomb Drive, Eastern Creek NSW 2766
35 Wentworth St, Greenacre NSW 2190
50 Wyllie Road, Kembla Grange NSW 2526
20 Hearne Street, Mortdale NSW 2223
Patons Lane, Orchard Hills NSW 2748
37-51 Violet Street, Revesby NSW 2212
29 Laverick Avenue, Tomago NSW 2322
- **Clean & Green Organics**
769 The Northern Rd, Bringelly NSW 2566
- **Sell & Parker**
45 Tattersall Road, Blacktown NSW 2148
- **CMI**
38 York Road, Ingleburn NSW 2565
- **SIMS**
43 Ashford Ave, Milperra NSW 2214
76 Christie St, St Marys NSW 2760
- **Sydney Copper Scraps**
130 Adderley St, Auburn NSW 2760
- **Polytrade Recycling**
32 South St, Rydalmere NSW 2116
40 Madeline St, South Strathfield NSW 2136
- **J.J. Richards**
12 Heald Rd, Ingleburn NSW 1890
8 Kommer Pl, St Marys NSW 2760
- **Orora**
1891 Botany Rd, Matraville NSW 2036
- **ReGyp**
330 Captain Cook Drive, Kurnell NSW 2231
- **Eastern Creek Landfill**
Honeycomb Drive, Eastern Creek NSW 2766