



New High School in Jerrabomberra Construction Waste Management Plan

JERRABOMBERRA HIGH SCHOOL - REVISION D

THIS DOCUMENT REFLECTS THE INTENT OF THE NATIONAL AND VARIOUS STATE LEGISLATIVE AND REGULATORY COMPLIANCE (OFSC, AS4801 & ISO9001) REQUIREMENTS

Construction
Development
Retirement
Capital



HINDMARSH
Leadership at work

Table of Contents

1. Document Control	2
1.1 Revision Status	2
1.2 Project Specifics.....	2
1.3 Approval for Implementation	2
1.4 Induction.....	2
1.5 Precedence	3
1.6 Abbreviation Used	3
1.7 Purpose	3
2. Introduction	4
3. Proposal.....	4
4. Site Description.....	6
5. NSW Legislative Requirements & Guidelines.....	8
6. Servicing Arrangements	8
6.1 Waste Management Equipment, Bin Sizes & Collection Frequency	8
6.2 Roles And Responsibilities	8
7. On Site Waste Management Requirements.....	9
8. Waste Management Plan Application	10
9. Construction.....	11
Appendix A – JHS Site Access Diagram	13
Appendix B – Standard EPA Signage	14
Appendix C – Project Phase Waste Estimates.....	15
C.1 DEMOLITION PHASE	15
C.2 EXCAVATION PHASE	16
C.3 CONSTRUCTION PHASE	17

1. Document Control

1.1 REVISION STATUS

Approved revisions to this document may be independently issued. On receipt of a revision notice, insert the issue number, revision number and date of issue in table below. Alphabetical Revisions to be utilised prior to Draft Submission.

Date Issued	Revision	Details	Section	Page
13/05/21	A	Preliminary CWMP	ALL	ALL
22/06/21	B	Combined Plan Separated for each School	ALL	ALL
26/08/20	C	Content Revisions	ALL	ALL
26/09/17	D	Preamble Revision Included	2	Multiple

1.2 PROJECT SPECIFICS

Company Name:	Hindmarsh Construction Australia
ABN	15 126 578 176
Project:	Jerrabomberra High School (Monaro Schools Cluster)
Project No:	2034
Location:	Jerrabomberra 300 Lanyon Drive, Jerrabomberra NSW 2619
Client:	SINSW
Contract:	SINSW VECI (Very Early Contractor Involvement) leading to GC21 [D&C]
Work Description:	New Construction

1.3 APPROVAL FOR IMPLEMENTATION

This revision of the Waste Management Plan has been reviewed with due regard to compliance with the Hindmarsh Construction Business Management Systems and contractual obligations of the contract and is authorised for use. Induction information is captured electronically within Aconex, please refer to the system for approval confirmation.

1.4 INDUCTION

Where required Hindmarsh Employees have been inducted into this Waste Management Plan (WMP), as well as acknowledging that they have read and understood their roles and responsibilities of this Plan and the knowledge management elements.

Induction information is captured electronically within Aconex, please refer to the system for Induction confirmation.

1.5 PRECEDENCE

This Construction Waste Management Plan (CWMP) does not in any way override any provisions of the Project Brief or brief issued by the Client. Where there is found to be a conflict in this CWMP with any requirements of the Project Brief, the Consultant is to refer the conflict to the Project Manager for direction.

1.6 ABBREVIATION USED

AFC	Approved for Construction	AS	Australian Standard
BCA	Building Code of Australia	CC	Construction Certificate
CCD	Competition Concept Design	CD	Contract Documentation
CWMP	Construction Waste Management Plan	D&C	Design and Construction
DA	Development Application / Approval	DD	Detailed Design
DM	Design Manager	DMP	Design Management Plan
DOS	Design Options Study	DR	Documentation Readiness (for tender)
ESD	Environmentally Sustainable Design	FDB	Functional Design Brief
FRD	Functional Relationship Diagram	PCA	Principle Certifying Authority
HCA	Hindmarsh Construction Australia	PM	Project Manager
PCG	Project Control Group	PSA	Professional Services Agreement
PDC	Principal Design Consultant	QS	Quantity Surveyor / Cost Planner
PMP	Project Management Plan	RL	Reduced Level
QA	Quality Assurance	SQE	Safety Quality and Environmental
R&O	Risk and Opportunity (Financial focus)	WOL	Whole of Life
SD	Schematic Design	Compass	Hindmarsh Management System
SoA	Schedule of Accommodation		
VM	Value Management		
ACONEX	Web-based Information Management System		

1.7 PURPOSE

This plan addresses the relevant Secretary's Environmental Assessment Requirements (SEARs), namely:

- SEARs 18

The purpose of this CWMP is to:

1. Identify, quantity and classify waste streams to be generated during construction.
2. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.
3. 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.
4. Describe measures to be implemented to manage, reuse, and recycle and safely dispose of the waste.
5. To maximise reuse and recycling of demolition and construction materials and materials from development.
6. To encourage building design techniques in general which minimise waste generation.

7. 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.

2.Introduction

This CWMP accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) in support of an application for a State Significant Development (SSD No 24461956). The SSDA is for a new high school located at Jerrabomberra.

This report addresses the Secretary's Environmental Assessment Requirements (SEARs), notably:

Table 1 – SEARs Requirement	Response
18. Waste Identify, quantify and classify the likely waste streams to be generated during construction and operation. Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.	
Classification of the waste.	Refer to Appendix C
Estimates / details of the quantity of each classification of waste to be generated during the construction of the project, including bulk earthworks and spoil balance.	Refer to Appendix C
Handling of waste including measures to facilitate segregation and prevent cross contamination.	Refer Section 6.2 Roles & Responsibilities
Management of waste including estimated location and volume of stockpiles.	Refer to Appendix C
Waste minimisation and reuse.	Refer Section 6.2 Roles & Responsibilities
Lawful disposal or recycling locations for each type of waste.	Refer Section 6 Servicing Arrangements
Contingencies for the above, including managing unexpected waste volumes.	Refer Section 6 Servicing Arrangements

3.Proposal

The proposed development is for the construction of a new high school in Jerrabomberra. The proposal will meet community demand and to ensure new learning facilities are co-located near existing open space infrastructure. The proposal generally includes the following works:

- Site preparation;

- Construction of a series of buildings up to three storeys including administration/staff areas, library, hall and general learning spaces;
- Construction of new walkways, central plaza and outdoor games courts;
- Construction of a new at-grade car park;
- Associated site landscaping and open space.

The proposal has been designed to accommodate approximately 500 students with Stream 3 teaching spaces, however the core facilities will be future proofed to a Stream 5 to enable possible future expansion to meet projected demand.

The proposal will include site preparation works, such as clearing and levelling to accommodate the proposed buildings and play areas. The proposal will involve the construction of a series of buildings housing general learning spaces, administration and staff wings, outdoor learning areas, a library and assembly hall.

The proposal will include construction of a new driveway and hardstand with access proposed off the northern stub road east of Environa Drive. Pedestrian access is proposed off Environa Drive and the northern stub road.

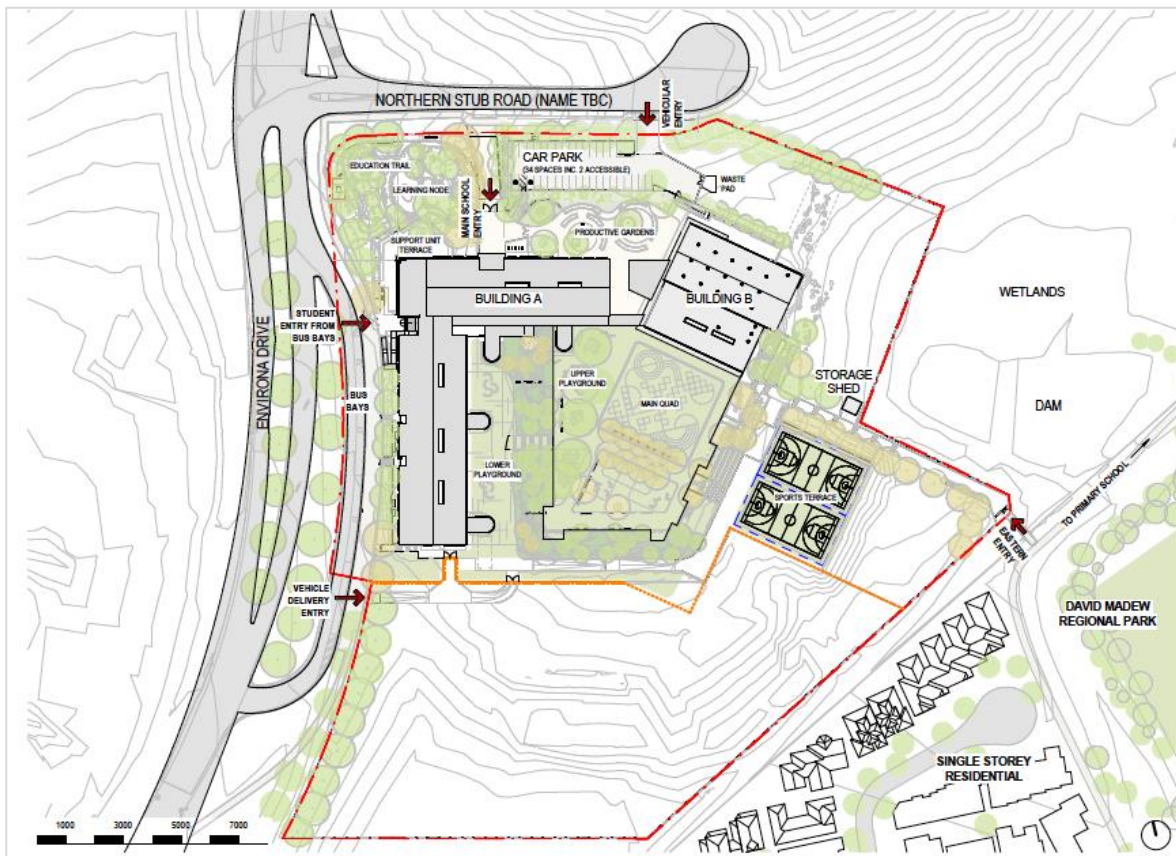


Figure 1: Proposed site plan
Source: TKD Architects

4.Site Description

The proposed development is located within the South Jerrabomberra Innovation Precinct, also referred as the Poplars Innovation Hub, in the local government area of Queanbeyan-Palerang Regional Council.

The school site- is part of an existing lot (Lot 1 in DP 1263364), which is approximately 65.49ha in area and will be characterised by a mix of business park and open space uses and a new north-south connector road named Environa Drive.

Delivery of the Precinct is underway with Environa Drive currently under construction. Most of the-lot, however, remains undeveloped.

The school site is subject to a proposed lot (Lot 2 in DP 1263364), which was approved by Council under DA332-2015 on 10 March 2021 but is not yet registered. The approved lot is irregular in shape, is largely cleared and is approximately 4.5ha in area. A small dam is located adjacent to the south eastern boundary of the site, which forms part of a broader wetland.

The site is located in excellent proximity to existing open space facilities. It adjoins David Madew Regional Park to the south east and is located 100m east of an existing recreational field associated with Jerrabomberra Public School.

A description of the site is provided in the table below.

Table 1 – New High School in Jerrabomberra Site Description	
Item	Description
Site address	School address yet to be determined however, it is located within the Jerrabomberra Innovation Precinct at 300 Lanyon Drive, Jerrabomberra.
Legal description	Lot 1 in DP 1263364 (existing) Lot 2 in DP 1263364 (proposed, but not registered)
Total area	Lot 1 – 65.49ha Lot 2 – 4.5ha
Frontages	The site provides frontage to Environa Drive and the northern stub road, both currently under construction.
Existing use	The site is undeveloped and contains a series of small vegetation clusters scattered across the site.
Existing access	Existing access is via an informal unsealed driveway off Tomsitt Drive along the northern boundary of the existing lot. The site will be accessed via Environa Drive and a secondary access road (North Road), which is currently under construction.

Table 1 – New High School in Jerrabomberra Site Description

Item	Description
Context	Land to the south is primarily residential in nature. Jerrabomberra Public School and David Madew Regional Park are located to the east/south-east, while land to the west is undeveloped and features Jerrabomberra Creek. The site is located within the South Jerrabomberra Innovation Precinct, which is currently under construction. The areas north and west of the site are currently undeveloped but the site is currently undergoing a transition from rural to business park uses. Development further north on the opposite side of Tomsitt Drive and along Edwin Land Parkway includes retail and commercial uses. Development immediately to the south includes existing low density residential development. Land in the south west has been identified for future low density residential, light industrial and business park uses.



Figure 2: Site aerial depicting the land subject to the proposed High School.
Source: TKD Architects

5.NSW Legislative Requirements & 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)

6.Servicing Arrangements

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 are 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.

This CWMP will be implemented onsite throughout including singularly or collectively the demolition, excavation, 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.

6.1 WASTE MANAGEMENT EQUIPMENT, BIN SIZES & COLLECTION FREQUENCY

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

6.2 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 the following Table 3.

Table 3 – Breakdown of Tasks and responsibilities

Management Strategies	Responsibilities
<u>Design:</u> Design for materials to standard sizes Design for operational waste minimisation Consider ways to avoid, reuse and recycle construction wastes	Architect, Subcontractors Architect & Builder Subcontractors.
<u>Procurement:</u> Select recycled and reprocesses 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 & 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
<u>Avoiding construction waste</u> Reduce extraneous packaging use reusable padding and careful packing. All packaging generated on site should be captured for reuse or recycling wherever possible. Reuse formwork; Use reuse non-returnable containers on the job site to the maximum extent possible	Builder

7. 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 demolition and 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.

8. Waste Management Plan Application

PROJECT: New High School in Jerrabomberra

ADDRESS: Refer Table 2 above

OWNERS: Schools Infrastructure NSW (SINSW)

DETAILS OF APPLICANT: Department of Education

DESCRIPTION OF BUILDINGS AND OTHER STRUCTURES CURRENTLY ON THE SITE:

This school is generally planned to be built on a brownfield site and will be a completely new school. Some reuse of existing Council buildings is proposed.

BRIEF DESCRIPTION OF PROPOSAL:

The proposed development is for construction and operation of a new high school in Jerrabomberra that will accommodate 500 students.

IF MATERIALS / WASTE IS REUSED ON SITE OR OFF SITE, HOW WILL IT BE RE-USED:

Generally excavation of ENM will be used onsite for fill and landscaping wherever possible. This material may be covered or drenched to reduce soil displacement and prevent air pollution.

	Name	Signed	Contact Number	Date
Prepared by:	Stefan Szczew		0427 429 244	20/08/2021

9. Construction

Prior to commencement of construction, Hindmarsh will undertake a full site investigation by an appropriately qualified person and any existing hazardous materials within the site will be removed in accordance with all relevant regulatory requirements.

Other waste building materials generated from demolition or construction activities will be recycled as far as practicable.

Hindmarsh will comply with the requirements of all relevant Authorities in relation to the disposal of all waste material.

The following measures will be adopted to encourage the management and reduction of waste to minimise the loss of natural resources and landfill space:

- Emphasise the importance of recycling and waste reduction;
- Encourage the use of recycled materials where it is reasonably practical;
- Minimise the use of packaging materials and recycle packaging materials where possible;
- Waste concrete to be sent to a concrete recycling plant where possible;
- Separate removed native vegetation from general construction waste, mulch and stockpile for re-use; and
- Dispose of any non-recyclable general waste at approved waste disposal facilities.

Reference will be made to Local Council's and Department of Education (DoE) Waste Management Guidelines to comply with any specific requirements.

Dangerous goods (such as petrol, diesel, oxy-acetylene, oils, glues etc) will be stored in a lockable compound with sufficient ventilation in accordance with relevant Codes of Practice and Standards.

Copies of all relevant Material Safety Data Sheets is retained on site as required.

A project-specific resource recovery and waste management plan will be developed, detailing the following:

- Efforts to minimise waste on site by avoiding over-estimation of purchasing requirements, minimising packaging materials and buying environmentally approved and recycled content products;
- Procedures for the collection and sorting of recyclable construction materials;
- The type and quantity of materials that are to be re-used or recycled;
- Provision of containers for recyclable materials, including cardboard, glass, metal, plastic and green waste;
- The re-use of timber, glass and other materials;
- The recycling of asphalt, metal, bricks, tiles, masonry, concrete, plasterboard, plastic, batteries, cardboard, carpet and other materials;
- Provision for collection of daily rubbish from workers;
- Procedures for removal of waste (materials that cannot be re-used or recycled) from the site;
- Procedures for removal of hazardous or dangerous materials from the site; and
- Buying environmentally approved and recycled content products.

Removal of hazardous and dangerous materials from the site shall be in accordance with State and Federal legislation, including WorkSafe requirements. Asbestos / soil waste will be removed (if applicable) according to WorkSafe Guidelines and placed in double-lined bins before being disposed of at a licensed landfill by a licensed transporter.

Waste material shall be stored on site neatly, in appropriate bins or stockpiles, in such a manner that stormwater run-off does not come into contact with waste.

Waste segregation areas and temporary storage locations for skips / waste for recycling / re-use / disposal shall be selected so as to minimise safety risks to site workers and to minimise adverse impact on the visual amenity of the site. For external bins, self-closing lids shall be installed to ensure waste does not become airborne.

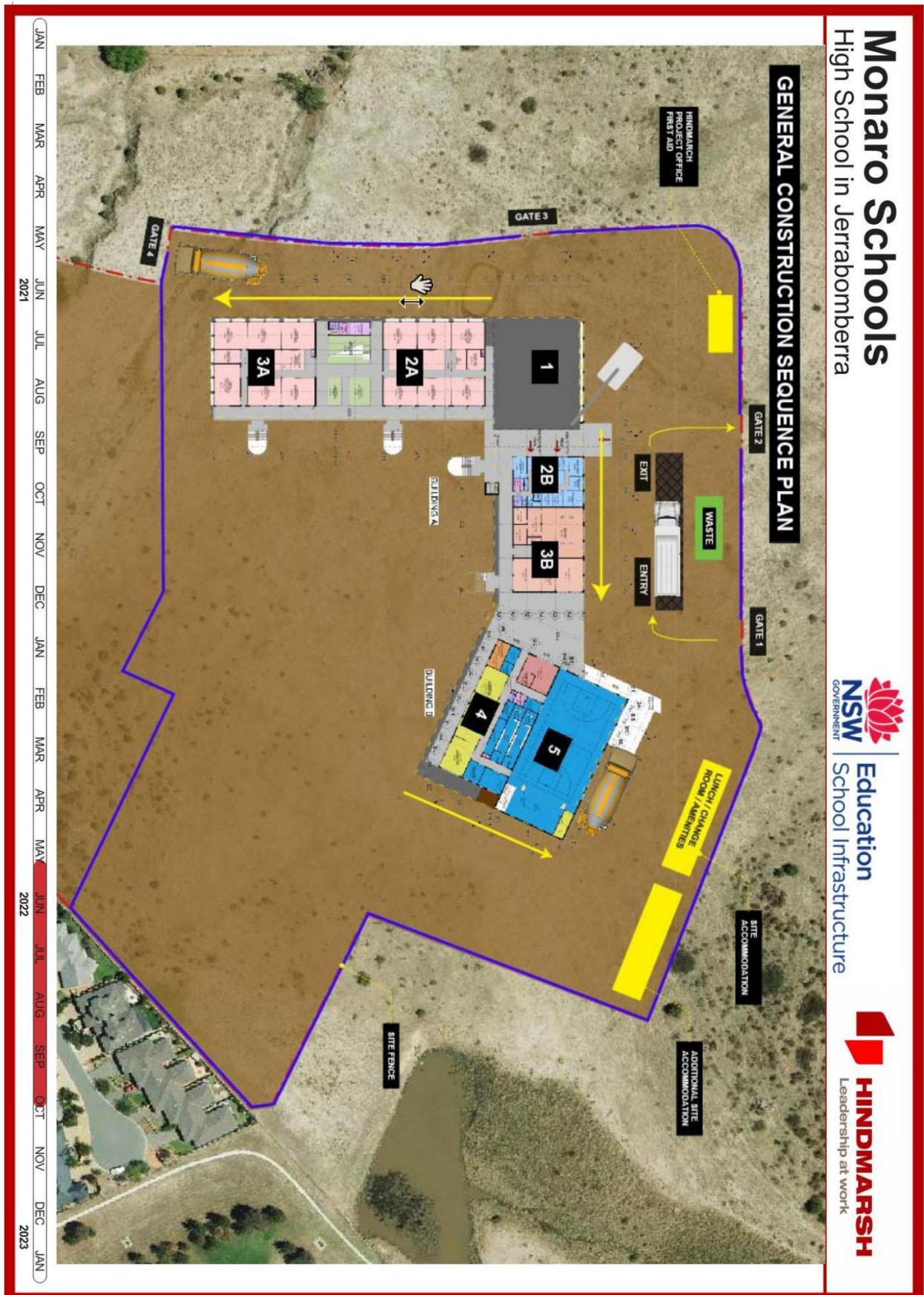
Waste collection shall only occur during permitted hours.

Litter and debris trapped against the site fence shall be regularly cleaned away. Burning off on site will be prohibited.

All waste disposed of (whether it be for recycling / re-use or landfill disposal) will be recorded on forms which will be part of the project records. Recycler and landfill disposal dockets will be used for confirmation of tonnages and proof of lawful disposal.

Hindmarsh shall be responsible for reporting any incident which causes, or threatens to cause, material environmental harm or breaches approval requirements to relevant project stakeholders as soon as possible.

13



Appendix B – Standard EPA Signage

General recycling



Instructional



Construction and demolitions



Public place



Recycling



Garden organics and food waste



Garbage



² Better Practice Guidelines For Waste Management And Recycling In Commercial And Industrial Facilities 2012. Sydney: NSW Environment Protection Authority, Accessed on 05/01/2017.

Appendix C – Project Phase Waste Estimates

C.1 DEMOLITION PHASE

Material Type on Site	Estimated Volume (m³) or Weight (t) (Most Favourable to Least)		ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Licensed Waste Depot, Licensed Recycling Outlet or Licensed Landfill site
Concrete Brick Block-work & Tile					
Asphalt					
Metals					
Timber off-cuts					
Cardboard					
Plasterboard					
General Waste					
Subtotal					
Total					

Narrative: There are no structures onsite requiring demolition

C.2 EXCAVATION PHASE

Material Type on Site	Estimated Volume (m ³) or Weight (t) (Most Favourable to Least)			ON-SITE TREATMENT	OFF-SITE TREATMENT	
	Reuse	Recycling	Disposal	Proposed reuse and/or recycling collection methods	Disposal / Transport Contractor	Waste Depot, Recycling Outlet or Landfill site
Excavated Natural Material (ENM) Greenfield site	19,600m ³	800m ³	Nil	Reuse for fill and landscaping	TBA	TBA
Sub Total	19,600m ³	800m ³	Nil			
TOTAL	3,190m ³					

Narrative: There is minimal excavation of ENM, which will be used back on the site for landscaping. This material will be covered to reduce soil displacement and prevent air pollution.

There may be potential contaminated soils, refer to the contamination reports prior to excavation and re-use of materials on site

C.3 CONSTRUCTION PHASE

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	Waste Depot, Recycling Outlet or Landfill site
Concrete Brick Block-work & Tile		165m³		Co-mingled Bins	TBA	Crushed for road base
Metals		85m³		Co-mingled Bins	TBA	Scrap Metal Dealer for smelting
Timber off-cuts		175m³		Co-mingled Bins	TBA	Recycled for chips and mulch
Cardboard		142m³		Co-mingled Bins	TBA	Recycled into cardboard
Plasterboard		165m³		Co-mingled Bins	TBA	Recycled as soil conditioner
Plastics, plastic packaging, paint drums*, containers		75m³	30m³	Co-mingled Bins	TBA	- Styrene and plastic to landfill - Paint drums nested and recycled
Pallets and Reels	65 units			Separated onsite	TBA	Returned to the supplier
Liquid Waste			20m³	Separated onsite	TBA	Transferred to licensed landfill
General Waste			151m³	Co-mingled Bins	TBA	Transferred to licensed landfill
Sub Total	65 units	807 m³	201m³			
TOTAL		1008m³				

Narrative:

As the contracts for all contractors have not been let there are still those including the waste contractor To Be Advised (TBA).

All waste will be co-mingled and taken for off-site separation and reuse or recycling except Pallets and Reels.