CONSTRUCTION WASTE MANAGEMENT PLAN (CWMP)

HAWKESBURY CENTRE OF EXCELLENCE

REVISION NUMBER:

VERSION 1

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24/06/2021

SUBMITTED TO:

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DOCUMENT CONTROL				
ISSUE NUMBER	DATE	COMMENT	AUTHOR	REVIEW
DRAFT 01	23/04/2021	Issue	Simon Lunn	Jo Drummond
DRAFT 02	28/04/2021	2nd Issue	Simon Lunn	Jo Drummond
Version 1	24/06/2021	Change drawing	Simon Lunn	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-15001460) for the Hawkesbury Centre of Excellence (the site).

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

This state significant development application seeks approval for construction and operation of a new Centre of Excellence (CoE) in Agricultural Education on Vines Drive, Richmond (Lot 2 DP1051798) (Figure 1) within the Western Sydney University (Hawkesbury Campus) site, Richmond NSW.
The CoE will provide new agricultural / STEM teaching facilities with general learning and administration spaces to be utilised by rural, regional, metropolitan and international school students. The CoE will accommodate up to 325 students and up to 20 full-time employees consisting of farm assistants, administration staff and teachers and up to five itinerant staff members. The CoE will also include short-term on-site accommodation facilities for up to 60 visiting students and teaching professionals from regional and rural NSW.
The CoE will include five science laboratories, ten general learning spaces, practical teaching areas, breakout areas, botany room, administration block and accommodation facilities. It will also include covered outdoor learning areas, dining / recreation hall, canteen and kitchen, agricultural plots, significant landscaping spaces, car parking and provision of necessary infrastructure.

The EIS seeks development consent for the following works:

- Three academic blocks (Block B, C and D).
- Short-term, dormitory site accommodation with capacity for 62 patrons (Block F).

- Dining hall, recreation space and canteen (Block E).
- Administrative building (Block A).
- Support facilities for management and maintenance of site.
- External works to accommodate circulation and covered walkways between buildings.
- Pedestrian walkways.
- Student and staff amenities.
- Covered Outdoor Learning Areas.
- Staff car parking area and mini-bus drop off and pick up area.
- Short-term accommodation car parking area.
- Green House or Glass house
- Various agricultural plots and associated agricultural workshop.
- Provision of waste facility area.
- Installation of all essential services including stormwater management devices where required.
- Operation of the CoE site.

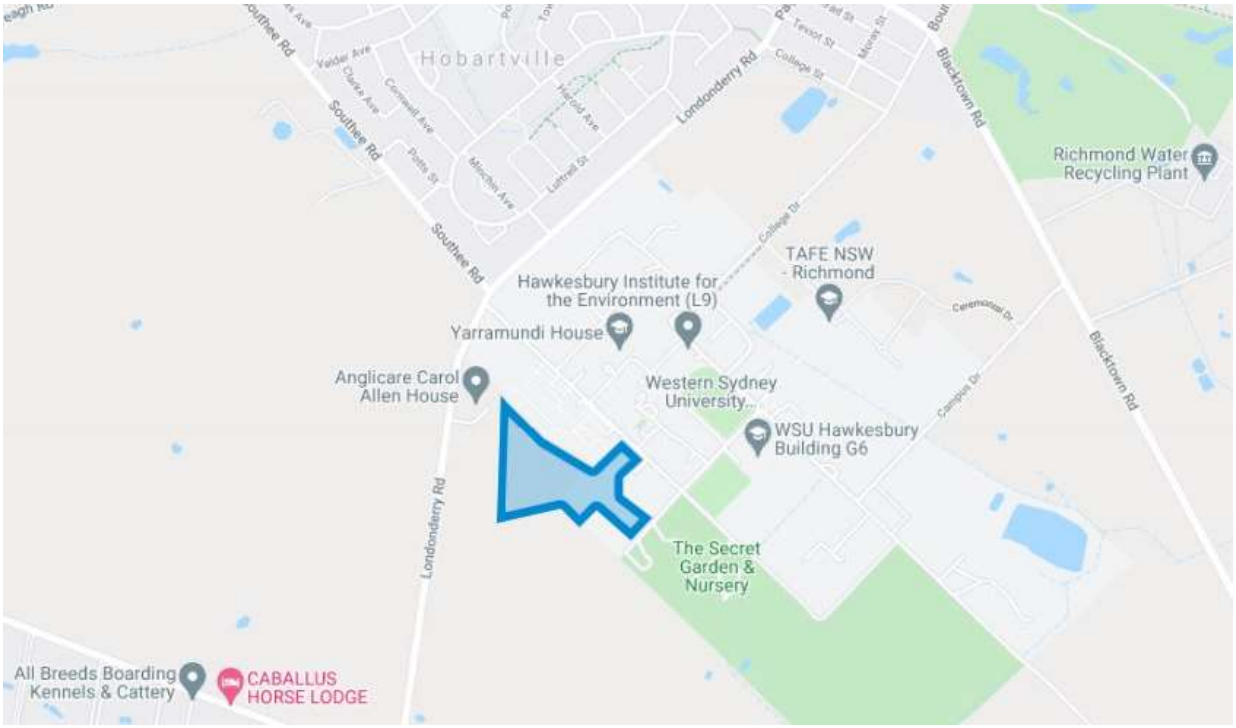

Figure 1 – Approximate Site Location (*Source: Google Maps)*

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
Classification of the waste.	Page 7-9 PROJECT PHASE
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.	Page 7-9 PROJECT PHASE
Handling of waste including measures to facilitate segregation and prevent cross contamination.	Page 4 ROLES AND RESPONSIBILITIES
Management of waste including estimated location and volume of stockpiles.	Page 7-9 PROJECT PHASE
Waste minimisation and reuse.	Page 4 ROLES AND RESPONSIBILITIES
Lawful disposal or recycling locations for each type of waste.	Page 3 SERVICING ARRANGMENTS
Contingencies for the above, including managing unexpected waste volumes.	Page 3 SERVICING ARRANGMENTS

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.

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 and demolition 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 2.

Table 2 - Breakdown of Tasks and Responsibilities

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

Management Strategies	Responsibilities
<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 modular components Use reuse non-returnable containers on the job site to the maximum extent possible	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.

WASTE MANAGEMENT PLAN APPLICATION

PROJECT:
New Centre of Excellence (CoE) in Agricultural Education
ADDRESS:
Vines Drive, Richmond (Lot 2 DP1051798) within the Western Sydney University (Hawkesbury Campus) site, Richmond NSW
OWNERS:
School Infrastructure NSW (SINSW)
DETAILS OF APPLICANT
Department of Education
DESCRIPTION OF BUILDINGS AND OTHER STRUCTURES CURRENTLY ON THE SITE:
This centre is planned to be built on a greenfield site and will be a completely new build.
BRIEF DESCRIPTION OF PROPOSAL:
The project consists of five science laboratories, ten general learning spaces, practical teaching areas, breakout areas, botany room, administration block and accommodation facilities. It will also include covered outdoor learning areas, dining / recreation hall, canteen and kitchen, agricultural plots, significant landscaping spaces, car parking and provision of necessary infrastructure.
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	Jo Drummond	0412214233	28/04/2021

PROJECT PHASE

EXCAVATION

Material Type on Site	Estimated Volume (m^3) 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
Excavated Natural Material (ENM) Greenfield site		Reused Volume $50m^3$	Nil	Used for site levelling / cut & fill of the site.	N/A	N/A
Sub Total		**$50m^3$**		$50m^3$		
TOTAL	**$50m^3$**					

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 any contamination reports prior to excavation and re-use of materials on site

CONSTRUCTION

Material Type on Site	Estimated Volume (m^3) 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		168m^3		Co-mingled Bins	TBA	Crushed for road base
Metals		88m^3		Co-mingled Bins	TBA	Scrap Metal Dealer for smelting
Timber off-cuts		180m^3		Co-mingled Bins	TBA	Recycled for chips and mulch
Cardboard		145m^3		Co-mingled Bins	TBA	Recycled into cardboard
Plasterboard		170m^3		Co-mingled Bins	TBA	Recycled as soil conditioner
Plastics, plastic packaging, paint drums*, containers		65m^3	35m^3	Co-mingled Bins	TBA	- Styrene and plastic to landfill * Paint drums nested and recycled
Pallets and Reels	70 units			Separated onsite	TBA	Returned to the supplier
Liquid Waste			22m^3	Separated onsite	TBA	Transferred to licenced landfill
General Waste			160m^3	Co-mingled Bins	TBA	Transferred to licenced landfill
Sub Total	**NB:70 units**	**816m^3**	**217m^3**			
TOTAL	**1033m^3**			**NB: Plus, an additional 70 pallets (single units returned to suppliers for reuse)**		

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.

APPENDIX A DEMOLITION AND CONSTRUCTION WASTE PLAN DRAWING