Construction Waste Management Sub-Plan

Integrated Nepean Hospital – Stage 2 Main Works

Project number: N01074
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Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
A	07/06/2023	D.Borgia	R.Vranjesevic	Marc Van Heemst	
Signature:		7/6/23	9/6/23	13/06/23	

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Details of Revision Amendments

Document Control

The Project Manager is responsible for ensuring that this plan is reviewed and approved. The Project Environmental Manager is responsible for updating this plan to reflect changes to environmental, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Manager and/or client before being distributed / implemented.

Revision Details

Revision	Details
A	Issued for Integrated Nepean Hospital –SSDA 16928008 Condition B18.

Contents

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1. Structure of this Plan

This Construction Waste Management Plan (CWMP) is a sub plan to the Construction Environmental Management Plan (CEMP) and outlines how we will achieve acceptable waste management and associated environmental outcomes on the Nepean Blue Mountains Local Health District Integrated Nepean Hospital Project Stage 2 Main works, for the project and by the application of the CPB Contractors Environmental Management System (EMS).

In addition to the Project Management Plan, other Project Plans that interface with the Environmental Management Plan include:

- Construction Management Plan
- Engineering and Design Management Plan
- Quality Management Plan
- Safety and Health Management Plan
- Completion Management Plan

2. Project Overview

2.1 Purpose and Scope

CPB Contractors has been contracted by Health Infrastructure NSW to provide a Waste Management Plan for the Integrated Nepean Hospital –Stage 2 Main Works SSDA.

This Plan is established in accordance with 'The Way We Operate' framework and is the key sub plan to our Environmental Management Plan that integrates waste requirements stipulated in the planning approval and client contractual waste requirements during project delivery.

This Plan addresses the management and reporting of waste streams generated on the project.

Under the NSW *Protection of the Environment Operations Act, 1997* (POEO Act), waste is defined as:

- any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, constituency or manner as to cause an alteration in the environment, or
- any discarded, rejected, unwanted, surplus or abandoned substance, or
- any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, processing, recovery or purification by a separate operation from that which produced the substance, or
- any processed, recycled, re-used or recovered substance produced wholly or partly from waste that is applied to land, or used as fuel, but only in the circumstances prescribed by the regulations, or
- any substance prescribed by the regulations to be waste.
- a substance is not precluded from being waste merely because it is or may be processed, recycled, re-used or recovered.

Activities conducted on the project that have the potential to generate waste are provided below in Table 1.

Table 1: Activities, Hazards and Risks

Project Activity	Environmental Hazard	Environmental Risk
Construction and demolition processes	Generation of waste product On-site storage of waste	Soil and water contamination Visual impact, littering Odours Increase in pests Wind blown waste leaving site
Plant maintenance	Generation of waste oil	Soil and water contamination
Operation and maintenance of offices, crib huts and camp facilities	Generation of general wastes	Unnecessary load on landfill availability
Waste Transportation	Handling waste	Noise and dust impacts Mud tracking on roads Unlicensed facilities transporting or receiving waste

Implementation of the Waste Management Plan will:

- Identify the waste management obligations attached to the tender / project and the hazards and risks associated with the works
- Assist in the prevention of unauthorised environmental harm
- Fulfil the Client's waste management requirements as defined in the Contract, including complying with relevant permits and approvals
- Comply with all relevant waste management and environmental legislation
- Minimise negative impacts on the community that relate to the Project's waste management and associated environmental impacts
- Identify and implement feasible opportunities to reduce and recycle waste to minimize the impact of the Project to the environment.to meet compliance requirements
- Fulfil CPB Contractors' waste management and environmental requirements enabling continued certification to ISO14001 and contribution to CPB Contractors' overall Business Plans.

The Project Director, with advice and input from senior construction staff, is responsible for the Plan.

2.2 Project Description

The scope for the Project is to complete a major re-development of Nepean Hospital Campus and provide an advanced integration with existing community health centres within the surrounding wider Penrith Local Government Area.

The Main Works Project's scope of work includes:

- Demolition of the existing Nepean Redevelopment Project Office, Hope Cottage, Doctor's Accommodation, North Block Pathology and TAMS Office.
- Detailed excavation, inground services and sub-structure piling works.
- Construction of an 8-storey structure that will connect into Stage 1 existing tower.
- Reconfiguration/Upgrade of the loading dock area & back of house functions.
- Barber Avenue upgrade and access road to Stage 2 tower.
- Landscaping and at-grade work within Stage 2 footprint.
- North Block Façade Replacement
- Tower 1 west façade cladding replacement.
- Removal of Temporary Link Bridge.
- Nuclear Medicine Fit out on Level 2 TB1.

2.3 Project Compliance Requirements

2.3.1 Waste Management Contract Requirements

The following table sets out the minimum client requirements as defined in Contract HI17167MW of the Preliminaries for the General Conditions (Main Works GC21 e2) as addressed within this Plan.

Table 2: Draft Contract Requirements for Environmental Management

Contract Reference	Content requirements	Where addressed
GC21 Preliminaries – 6.3	Implement waste minimisation and management measures, including: ▪ recycling and diverting from landfill surplus soil, rock, and other excavated or demolition materials, wherever practical; ▪ separately collecting and streaming quantities of waste concrete, bricks, blocks, timber, metals, plasterboard, paper and packaging, glass and plastics, and offering them for recycling where practical. Ensure that no waste from the Site is conveyed to or deposited at any place that cannot lawfully be used as a waste facility for that waste.	Waste Sub Plan
GC21 Preliminaries – 6.3	Monitor and record the volumes of waste and the methods and locations of disposal. Submit a progress report every two months, and a summary report before Completion, on the implementation of waste management measures, including the total quantity of material purchased, the quantity purchased with recycled content, the total quantity of waste generated, the total quantity recycled, the total quantity disposed of and the method and location of disposal in the form of a *Waste Recycling and Purchasing Report* available on the ProcurePoint website With the *Waste Recycling and Purchasing Report,* submit waste disposal certificates and/or company certification confirming appropriate, lawful disposal of waste.	Waste Sub Plan

2.3.2 Conditions of Approval

Conditions of approval that specifically address waste management are captured in Table 3. Note that control and monitoring requirements related to the removal and disposal of hazardous materials are addressed in detail in Section 9 of the Remedial Action Plan.

Table 3: Waste management Conditions of Approval

Contract Reference	Content requirements	Where addressed
SSDA 16928008 B18	The construction waste management sub-plan (CWMSP) must address, but not be limited to, the procedures for the management of waste including the following.	
	a. The recording of quantities, classification (for materials to be removed) and validation (for materials to remain) of each type of waste generated during construction and proposed use for materials to remain.	Appendix A
	b. Information regarding the recycling and disposal locations	Table 4
	c. Confirmation of the contamination status of the development areas of the site based on the validation results.	As required and addressed under the Remedial action plan.

2.3.3 Waste Management Licenses

A search of the POEO public register for licensed facilities local to the project include identified the premises in Table 4.

Table 4: Licensed Waste Facilities

License number	Operator	Address	Fee Based Activity
13426	Dial-A-Dump (EC) Pty Ltd – Eastern Creek Landfill (landfill)	Honeycomb Drive, Eastern Creek, NSW 2766	▪ Waste disposal by application to land ▪ Waste storage - other types of waste
20121	Dial-A-Dump (EC) Pty Ltd (recycling)	Honeycomb Drive, Eastern Creek, NSW 2766	▪ Composting ▪ Recovery of general waste ▪ Waste storage - other types of waste
4865	Enviroguard Pty Limited	50 Quarry Road, Erskine Park, NSW 2759	▪ Waste disposal by application to land
20593	Hi Quality Quarry (NSW) Pty Ltd	Hi Quality Kemps Creek Central 1503-1519 Elizabeth Drive, Kemps Creek, NSW, 2178	▪ Recovery of general waste ▪ Waste storage - other types of waste ▪ Crushing, grinding or separating ▪ Land-based extractive activity
3438	Penrith Waste Services Pty Limited	842 Mulgoa Road, Mulgoa, NSW, 2745	▪ Waste storage - other types of waste ▪ Waste disposal by application to land
12901	**Recycling Parks Pty Ltd**	16-23 Clifton Avenue, Kemps Creek, NSW, 2178	▪ Waste disposal by application to land ▪ Waste storage - other types of waste ▪ Non-thermal treatment of general waste ▪ Land-based extractive activity
20814	SRC Operations Pty Ltd	123 - 129 Patons Lane, Orchard Hills, NSW, 2748	▪ Waste disposal by application to land Land-based extractive activity
4068	Suez Recycling and Recovery Pty Ltd	Elizabeth Drive Landfill Facility, 1725 ELlizabeth Drive, Kemps Creek, NSW, 2178	▪ Generation of electrical power from gas ▪ Waste storage - other types of waste ▪ Waste disposal by application to land
12628	Cleanaway Co Pty Ltd	40 Christie St, St Marys, NSW, 2760	▪ Recovery of general waste ▪ Non-thermal treatment of hazardous and other waste ▪ Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste
12943	Cleanaway Co Pty Ltd	66 Links Road, St Marys, NSW, 2760	▪ Chemical storage waste generation ▪ Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste
20271	Cleanaway Co Pty Ltd	42-46 Charles St, St Marys, NSW, 2760	▪ Contaminated soil treatment ▪ Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste ▪ Non-thermal treatment of hazardous and other waste
11753	CMA Ecocycle Pty Ltd	52-54 Power St, St Marys, NSW, 2760	▪ Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste

License number	Operator	Address	Fee Based Activity
			▪ Non-thermal treatment of hazardous and other waste
5661	Solveco Pty Limited	38 Links Road, St Marys, NSW, 2760	▪ Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste ▪ Non-thermal treatment of hazardous and other waste

2.4 Objectives and Targets

The project has set the following Waste Management performance targets. These include current business plan environmental targets for the Business Unit and the whole of CPB Contractors:

Table 5 Waste management performance objectives

Metric/Measure	Objective	Timeframe	Accountability
% of waste quantified in waste management reports	100%	At all times	Project Environmental Representative
% of regulated/hazardous wastes for which transfer certificates are retained	100%	At all times	Project Environmental Representative
Number of enforcement notices and penalties received from regulators and/or client	Zero	At all times	Project Environmental Representative
% waste recycled	90%	12 months	Project Manager

2.5 Key Environmental and Waste Management Stakeholders

Key waste management stakeholders for the Project will include:

- Principal's Authorised Representative Health Infrastructure
- T&T
- CPB Contractors Pty Ltd
- Penrith City Council
- Office of Environment and Heritage (EPA)
- Building Compliance – Certifying Authority

3. Waste Streams

The waste streams and waste classifications in Table 6 have been identified for the Project works.

Table 6 Waste Streams

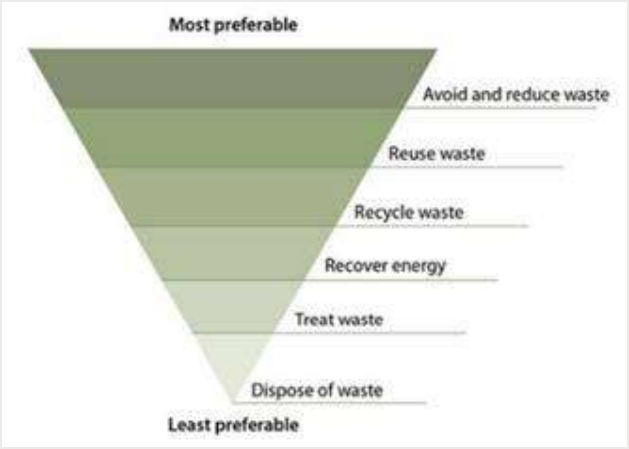
Waste	Classification	Potential Recovery/Reuse	Disposal (all tracked)
Green waste from vegetation clearing, pruning and timber off cuts	General Solid Waste (Non-putrescible)	▪ Green waste would be reused as mulch onsite or provided to local schools for landscaping.	▪ Green waste from vegetation clearance works or pruning to be removed by subcontractor. ▪ Timber off cuts to be segregated and removed by licensed contractor to licensed waste facility.
Excavated Natural Material (ENM) or Virgin Excavated Natural Material (VENM)	General Solid Waste (Non-putrescible) – Resource Recovery Exemption	▪ Where possible, all suitable fill materials would be used on site	▪ Wherever possible, ENM or VENM would be used on the project where possible and excess material would be transferred to appropriately approved sites requiring ENM.
Mixed Spoil	General Solid Waste (Non-putrescible)	▪ Where possible, all suitable fill materials would be used on site.	▪ Mixed unsuitable spoil would be transferred to appropriately approved waste facilities.
Demolition concrete	General Solid Waste (Non-putrescible)	▪ Stockpiled and transported to recycling centre and recycled for project construction activities.	▪ Nil. Valuable resource.
Building rubble and structural element demolition materials	General Solid Waste (Non-putrescible)	▪ Collected in designated collection areas and reused as much as practically possible.	▪ Mixed unsuitable materials would be transferred to appropriately approved waste facilities.
Waste metals	General Solid Waste (Non-putrescible)	▪ Stockpiled and transported to recycling centre.	▪ Nil. Valuable resource.
General office waste – paper, cardboard, used printer cartridges.	General Solid Waste (Non-putrescible)	▪ Office waste such as paper, cardboard boxes, comingled wastes (Cans, plastic bottles etc) and used printer cartridges would be recycled.	▪ Food wastes and non-recyclables will be sent to landfill.
Asbestos or Asbestos Containing Material	Special Waste	▪ Fragments of non-friable ACM identified from site investigations. Refer to JBS&G RAP.	▪ Asbestos will be remediated in accordance with the JBS&G RAP.
PCB containing capacitors	Special Waste	▪ None currently identified	▪ Prior to demolition when the power is disconnected, inspect the light fittings. ▪ Metal PCB containing capacitors are to be removed, placed in plastic lined 200 litre drums and disposed of as PCB Scheduled Waste.

4. Controls Used to Manage Waste

Controls that are adequate to ensure compliance and to reduce risk to the lowest acceptable rating achievable are planned before any relevant works commence. Elimination of the waste is the first preference of control, followed by reuse and recycling. Controls used on this project include:

Table 7: Waste management controls

Control	Accountability
All wastes need to be classified, stored, tracked, transported and treated in accordance with contractual and regulatory requirements, including the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014) and the use of licensed transporters and treatment facilities.	Supervisor Environmental Manager
The relevant licences of waste facilities utilised for the disposal or handling of waste will be obtained to ensure they are legally compliant.	Environmental Manager
Storage containers (bins, skips, tanks, etc) are provided at each work area in sufficient numbers to facilitate segregation of waste at the source of generation, wherever possible. The correct bin type must be used to avoid contamination.	All
Containers are clearly sign posted to inform all project personnel of the correct material to be placed within each bin type. Containers are emptied at a frequency that is sufficient to ensure their correct use. If a bin needs to be collected contact your Supervisor or Project Environmental Representative	Supervisor
Burial or burning of waste is not permitted.	All
Excess concrete and concrete washout is not to be discharged to land or storm water; a concrete washout facility must always be used.	Supervisor
All waste data must be collated and tracked using Material Tracking Forms.	Engineer / Environmental Manager
An adequate number of fully maintained concrete washout pits will be maintained on the site at all times.	Supervisor
A Demolition Waste Management Plan shall be prepared by an appropriately qualified contractor prior to the commencement of works. The Waste Management Plan should be prepared in accordance with DECCW's "Waste Classification Guidelines (2008)" and the Protection of the Environment Operations Act 1997. ***Note this plan forms the Demolition Waste Management Plan***	Environmental Manager
The Demolition Waste Management Plan is to include the following requirements and details: d. The type and volume of all waste materials (e.g. bricks, concrete, timbers, plasterboard and metals) is to be estimated prior to the commencement of works, with the destination for each waste identified. Waste should be re-used or recycled as much as practicable. Where not practicable, the location of a suitable waste disposal facility is to be identified. e. Non-recyclable waste and containers are to be regularly collected and disposed of at a licensed disposal site. Frequency of collection should be identified. f. No burning or burying of waste is permitted on the site. g. Any bulk garbage bins delivered by authorised waste contractors are to be placed and kept within the property boundary.	Environmental Manager
The worksite should be left tidy and rubbish free each day prior to leaving the site and at the completion of works.	Supervisor
No hazardous materials or dangerous goods are to be used or stored on site.	Supervisor

Control	Accountability
All materials on-site or being delivered to the site must be wholly contained within the site. The requirements of the Protection of the Environment Operations Act 1997 are to be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses.	Supervisor
The public way must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances.	Supervisor
All equipment and machinery should be secured against vandalism outside of working hours.	Supervisor
A copy of the approved and certified plans, specifications and documentation shall be kept on site at all times and shall be available for perusal by any officer of Council.	All
No vehicle maintenance is permitted in the demolition areas except in emergencies.	Supervisor
Any loose material stockpiles are to be stored within the temporary construction compound(s) and are to be protected from possible erosion.	Supervisor/Environmental Manager
Where available, recyclable site and construction waste are to be recycled in accordance with the NSW Government's Waste Reduction and Purchasing Policy (WRAPP guidelines). Any waste oil is to be sent to an approved recycler.	Supervisor
Non-recyclable waste and containers are to be regularly collected and disposed of at a licensed landfill or other disposal site in the area.	Supervisor
Any bulk garbage bins delivered by Authorised Waste Contractors are to be placed and kept within the property boundary.	Project Engineer
Waste management practices for the project are to follow the resource management hierarchy principles embodied in the Waste Avoidance and Resource Recovery Act 2001.  Figure 1 - Waste Management Hierarchy	Environmental Manager
Disturbed areas and haul roads must be treated with dust suppressants (e.g. water trucks or chemical suppressants) especially in high risk areas and/or on during high risk days.	Supervisor
Stabilised access, rumble grids, wash bays or similar must be established for the entries site and exits to site to minimise mud on public roads. Sweepers shall be used periodically to clean public roads where mud has been deposited.	Supervisor
Traffic speed limit(s) are determined to minimise dust generation and must be adhered to at all times.	All

Control	Accountability
All construction plant and equipment must be maintained so they do not emit visible smoke for any period greater than: ▪ 15 consecutive seconds for plant not being registered for use on public roads; and ▪ 10 consecutive seconds for plant registered for use on public roads.	Supervisor
Competently designed and constructed rumble pads shall be established for the ingress and egress of all vehicles.	Project Engineer
Air quality monitoring conducted in accordance with <insert relevant code, standard, guideline, etc. and at a frequency and at locations to confirm compliance with the regulatory limits will be conducted.	Environmental manager
Dust generated during demolition activities is to be controlled by regular control measures such as on-site watering	Supervisor
All necessary maintenance for construction vehicles and equipment is to be undertaken during the demolition period.	Project Engineer
Excessive use of vehicles and powered demolition equipment is to be avoided.	Supervisor
Exposed areas are to be progressively revegetated as soon as practical.	Supervisor
Vehicle wash down areas are to be established to ensure all mud and soil from construction vehicles is not carried onto public roads.	Project Engineer
All vehicles involved in any demolition and departing the site with demolition materials, spoil or loose matter must have their loads fully covered before entering the public roadway.	Supervisor Demolition sub-contractor
Any mud deposited on the road network due to truck movements to and from the site is to be cleaned up immediately.	Supervisor

5. Monitoring

Waste data is collected on the project to allow monthly reporting of the following:

- The quantity of each type of waste sent to landfill
- The quantity of each type of waste recycled
- The quantity of each type of waste reused
- The quantity of each type of hazardous/regulated waste generated on the project and:
  - Its method of treatment and disposal
  - The location of treatment and disposal
  - Copies of records confirming the legal transport, treatment and disposal
- Measurement of any reduction in waste generation that has been achieved

The quantity of waste in each solid waste stream is measured by weight and liquid waste stream by volume, with records provided by the waste transport contractor. Alternative measures may only be used when an economical alternative is not available.

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Appendices

Appendix A: Estimate of waste quantities for reuse, recycling and disposal locations

The table below will be completed once the final estimated quantities have been completed in conjuction with the demolition & civil trade contractors.

Table 8 Estimated quantities of waste types generated during early works phase

Description of Material	Waste Classification	Estimated Volume (m^3)	Onsite reuse	Offsite recycling	Offsite disposal
Asphalt/Bitumen	Pre-classified: Asphalt waste **General Solid Waste (non-putrescible)**		Nil	N/A	N/A
Concrete (Kerbs, gutters and concrete footpaths and footings)	Pre-classified: Building and demolition waste **General Solid Waste (non-putrescible)**		Nil	N/A	N/A
Excavation Material from Bulk Excavation	This material needs to be classified before it can be managed.		Nil	N/A	N/A
Metal (Demolition Light Poles, Bollards Crash Barriers & other miscellaneous steel/ metal work and off cuts)	Pre-classified: Building and demolition waste **General Solid Waste (non-putrescible)**		Nil	N/A	N/A
Block work, retaining walls, crib walls as required.	Pre-classified: Building and demolition waste **General Solid Waste (non-putrescible)**		Nil	N/A	N/A
PVC Pipe	Pre-classified: Building and demolition waste **General Solid Waste (non-putrescible)**		Nil	N/A	N/A
Terracotta/ Concrete Pipe	Pre-classified: Building and demolition waste **General Solid Waste (non-putrescible)**		Nil	N/A	N/A

Description of Material	Waste Classification	Estimated Volume (m^3)	Onsite reuse	Offsite recycling	Offsite disposal
Garden Organics	Pre-classified: Garden waste **General Solid Waste (non-putrescible)**	64 m^3	Nil	N/A	N/A
Packaging – used pallets	Pre-classified: Building and demolition waste **General Solid Waste (non-putrescible)**	20 m^3	Nil	N/A	N/A
Plasterboard	Pre-classified: Plasterboard **General Solid Waste (non-putrescible)**	7 m^3	Nil	N/A	N/A