



HEALTH INFRASTRUCTURE

# Construction Waste Management Plan

Cowra Hospital Redevelopment

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Version 1.1



Health  
Infrastructure



Health  
Western NSW  
Local Health District

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# 1 Executive Summary

Central West Project Management (CWPM) has prepared the Construction Waste Management Plan (CWMP) for the Cowra Hospital Redevelopment (the Project). The Project is at the Business Case phase.

## 1.1 Project background

The NSW Government has allocated a total of \$110M towards the redevelopment of the Cowra Health Service. The Project includes construction of new facilities to deliver contemporary, integrated models of health care to support and improve the health of residents in Cowra and surrounding districts including Grenfell, Canowindra, and Woodstock.

The current Cowra Health Service facilities are approximately 60 years old and located on the same site as earlier hospital buildings. The existing buildings are aged and have a number of functional and structural problems that will need to be addressed in the near future. Major redevelopment of the Cowra Health Service was identified in the 2017 Western NSW LHD Asset Strategic Plan as a priority for future capital investment.

The Cowra Hospital and Health Service Clinical Services Plan 2020-2030 (CSP) v1.5 was endorsed by the Ministry of Health in May 2021. The services to be included in the Cowra Redevelopment include:

- Emergency Services
- Acute and Subacute Medical and Surgical Inpatient and Day Services
- Peri-operative Services
- Maternity Services
- Paediatric and Child Health Services
- Ambulatory Care Services
- Cancer Services
- Aged Care and Rehabilitation
- Mental Health, Drug and Alcohol
- Primary and Community Health
- Oral Health
- Clinical support services including Medical Imaging Unit, Pathology Services and Pharmacy.

Master Planning for the project commenced in July 2021. Three redevelopment options were considered during Master Planning: extend and refurbish the existing hospital, a new hospital on the existing site and a new hospital on a greenfield site.

The preferred option includes building a new Hospital to the North side of the existing hospital over 2 levels. The building is oriented towards Liverpool Street which locates clinical services and back-of-house services on the first floor, and non-clinical services and main entry on the ground floor, along with the main entry.

## 1.2 Objectives

The key objectives of this Construction Waste Management Plan (CWMP) are to identify the types and indicative quantities of potential waste streams, and to establish management measures to prevent environmental harm, minimise waste and maximise resource preservation.

This CWMP specifically aims to:

- Promote waste minimisation through avoiding and reducing generation of waste;
- Minimise amenity and environmental impacts associated with the management of waste;
- Promote the recycling of demolition materials; and
- Specify safe and appropriate management of hazardous and/or potentially contaminated wastes.



## 2 Waste Quantities

### 2.1 Demolition

During the development of a detailed schedule of planned works, the quantity of waste generated, and the locations of temporary waste storage areas will be confirmed.

The demolition schedule will be developed to ensure appropriate temporary waste storage areas are available for storage of demolition waste. If required, waste shall be periodically removed from the site during the demolition works to ensure there is sufficient waste storage capacity available.

### 2.2 Construction

Indicative quantities of waste likely to be generated during construction (excluding excavation and other enabling works) will be determined when the detailed redevelopment plans have been established. It is expected that actual waste quantities and composition will vary depending on outcomes of detailed design, materials specification and construction planning and methods.

Strategies that shall be implemented to minimise waste generation and maximise reuse and recycling are outlined in Section 3.

## 3 Waste Management

### 3.1 Avoidance and Reduction of Waste

The Head Contractor will be required to avoid waste generation and aim to reuse waste where possible.

During construction, waste generation shall be avoided through strategic selection of materials during design and purchasing. This includes consideration of procurement of materials which are prefabricated, use minimal packaging, and are suitable for reuse across the site. Selection of construction materials should also consider the use of recycled items where practicable.

Opportunities to avoid wastes generated by construction include:

- Develop a procurement policy which considers waste avoidance measures, including
  - Where feasible, utilise prefabricated materials and materials ordered to size;
  - Consider the lifespan and reuse value of materials used for construction; and
- If achievable, engage suppliers who will accept returned excess building materials. Refine waste estimates to ensure adequate on-site storage and waste segregation;
- All packaging is to be removed before materials are delivered to site to minimise waste generation on site; and
- Determine estimated volumes of materials for construction.

### 3.2 Reuse and Recycling

Measures to separate waste streams shall be implemented to increase the opportunity for onsite waste reuse. This includes segregating wastes into dedicated bins or areas for reclamation, or transportation to a nominated recycling facility.

Where practicable, uncontaminated spoil should be stockpiled for use during construction. Materials containing asbestos cannot be safely recycled, and direct treatment and/or disposal is the most appropriate option. If asbestos is encountered during the works, the construction contractor shall liaise with a licensed asbestos removalist and local council to determine a suitable disposal facility.

To manage the reuse and recycling of waste materials, procedures should include:

- Incorporate waste management into development staging to promote reuse of materials;
- Easily accessible and clearly defined waste segregation areas;
- Familiarise contractors with onsite waste storage areas for appropriate waste segregation;

- Determine suitability of materials generated during demolition for use in construction; and
- Consider opportunities for materials reuse in local areas.

### 3.3 Treatment and Disposal

Project wastes may require treatment prior to disposal to reduce the risk of harm to human health or the environment. These materials are not suitable for reuse or recycling and shall be classified using the NSW EPA's *Waste Classification Guidelines*, segregated, and disposed of via a suitably qualified contractor.

Wastes shall only be sent to landfill or disposal facilities where the prioritised management methods in the hierarchy cannot be implemented in a cost effective or practical manner. The contractor should liaise with the local council to determine appropriate disposal locations for potential waste streams.

Measures to manage the treatment and disposal of waste materials during construction should include:

- Clear segregations between wastes which cannot be reused or recycled and require disposal, and those which have the potential to be reused;
- Provide segregated bins for disposal of construction waste;
- Contractors and staff to be inducted into site waste management practices;
- Hazardous materials including asbestos to be disposed of in accordance with the handling and disposal requirements of SafeWork NSW and NSW EPA;
- General wastes to be disposed of in accordance with local council requirements; and
- Toilet facilities must be regularly serviced and emptied by a licensed contractor.

### 3.4 Litter Management

An appropriate number of waste and recycling bins with lids shall be available at the site to prevent littering. Staff and subcontractors shall be encouraged to dispose of the litter in these bins. In addition, the site shall be inspected to identify and appropriately dispose of litter across the site.

### 3.5 Other Considerations

The numbers and size of waste storage bins, containers, stockpile areas and loading zones on site should be determined by the contractor. The location for the site's temporary waste storage area/s during the demolition and construction stages will be flexible as demolition and construction work progress and the site's characteristics change. The location of temporary waste storage areas should consider the following matters:

- The waste storage area should be appropriately sized to contain bins for non-recyclable landfill waste, general recyclable waste and materials that can be separated for reuse or delivery to a processor/recycler;
- Suitable vehicle and personnel access must be provided to the waste storage area;
- Consideration shall be given to topography, drainage, and existing vegetation before selecting a location for the waste storage area;
- The waste storage area shall be located to prevent adverse amenity impacts (such as odour and visual) on neighbouring properties;
- The waste storage area should be wholly located within the site's property boundary unless Council has granted approval; and
- The waste management area and bins should be signposted to enable the correct separation and storage of material.

The vehicles or trailers used to transport waste or excavated spoil from the site shall be covered before leaving the site to prevent spillage or escape of dust, waste or spoil from the vehicle or trailer.

## 4 Roles and Responsibilities

The CWMP will be developed following engagement of Head Contractor. They will be the key person responsible for ensuring implementation of the CWPM and adherence to applicable legislation, guidelines, licensing, and project conditions.

Role	Responsibility
Project Manager	Ensure Construction Site Manager reports details from site inspections, including corrective actions taken if appropriate.
Environmental Management Representative	<p>Compliance with applicable environmental licences, legislation and project conditions. Ensure environmental management plan(s) across the site are adhered to and accurate to site conditions.</p> <p>Undertake visual inspections daily to ensure waste management controls are implemented and maintained across the site.</p> <p>Undertake auditing of waste management across the site as a component of broader environmental site monitoring.</p>
Construction Site Manager	<p>Development of CWMP, in adherence with guidelines and legislations.</p> <p>Ensuring workers and subcontractors are inducted into the CWMP along with other applicable management plans.</p> <p>Responsible for undertaking procurement of construction materials in accordance with the waste management hierarchy.</p> <p>Segregation/classification of waste streams where required to ensure appropriate use, reuse, treatment and/or disposal.</p> <p>Ensure waste quantities generated are recorded, including tracking of receipts from waste recycling or disposal via the appointed waste contractor.</p> <p>Record waste classification and testing results.</p> <p>Review with the Project Manager the CWMP in light of any changes to construction activities or further information which may alter waste management practices.</p> <p>Undertake visual inspections daily to ensure waste management controls are implemented and maintained across the site.</p>
Health and Safety Manager	<p>Safety inductions for all staff, workers and visitors.</p> <p>Work with Construction Site Manager to determine safe handling of asbestos waste in compliance with regulatory requirements.</p>

### 4.1 Training and Awareness

Staff present on site during the construction stage of the project shall be required to undertake induction and awareness training inclusive of the CWMP and site-specific waste management. This includes:

- Induction to the waste management hierarchy and use across the site;

- Details of responsibilities for waste management and key personnel;
- Site specific waste management practices relevant to the project stage such as:
  - Waste storage and stockpiling locations;
  - Waste disposal requirements;
  - Hazardous or special wastes;
  - Record of waste disposal details and receipts; and
- Knowledge of emergency response procedures and contacts.

Signage shall be provided on site to ensure waste management measures are communicated across the site, particularly for contractors and visitors who are not regularly on site. Signage should highlight correct procedures for separating wastes where required, locations of bins and waste storage areas, labelling of designated bins, potential hazards associated with the waste streams and handling, and contact details should any issues be encountered.

## 5 Monitoring and Reporting

The following activities will be undertaken to inform the onsite waste management process and to determine the success of the CWMP:

- Ensure waste quantities generated are recorded, including tracking of receipts from waste recycling or disposal via the appointed waste contractor;
- Record waste classification and testing results;
- Review the CWMP in light of any changes to construction activities or further information which may alter waste management practices;
- Undertake auditing of waste management across the site as a component of broader environmental site audits; and
- Undertake visual inspections daily to ensure waste management controls are implemented and maintained across the site.

### 5.1 Corrective Action

Where formal auditing, daily visual inspections or incident reporting identify incorrect storage or disposal procedures, or maintenance or waste management issues, observations shall be promptly reported to the Construction Site Manager and recorded. The Construction Site Manager shall determine appropriate measures to rectify the issues in a timely manner in consultation with the Environmental Management Representative and Health and Safety Manager where required. The initiation, progress and close out of corrective actions shall be reported to the Project Manager on a weekly basis.

## 6 Recommendations

This Construction Waste Management Plan will need to be updated upon engagement of a contractor, who will determine demolition and construction volumes and identify temporary waste storage areas.

Prior to commencement of construction, a Construction Environmental Management Plan (CEMP) will be developed.