

# WASTE MANAGEMENT PLAN

UNSW Cliffbrook Estate Building CC3 Project

Belmadar Pty Ltd



**Waste Management Plan**  
**Project: UNSW CLIFFBROOK ESTATE**  
**43 Beach Street Coogee NSW 2034**  
**Developed by Brett Drew**

**CONTROLLED DOCUMENT**

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# 1.0 EXECUTIVE SUMMARY

This document provides a summary of the Waste Management practices for the UNSW Cliffbrook Estate Project.

Waste management facilities and practices are designed in accordance with best practice in resource recovery and ESD guidelines. For this project, this involves the management of demolition spoil, construction waste and food scraps from amenities.

The Waste Management Plan covers wastes at all project stages, from designing for minimizing future wastes and encouraging resource separation, through to the management of demolition, construction and amenity wastes on the construction site.

Waste will be disposed of via Tip Truck and skip bins that will load and unload in the laydown area located off Beach Street. All asbestos waste will be taken off site by a licensed waste transport company.

An overview of the Waste Management Strategies is shown in the following table:

## Overview of Waste Management Strategies

Area	Waste Type	Collection Rate	Type	No. of Bins
UNSW Cliffbrook Estate	General	1 x Fortnightly	12m3	12
	Recycling	1 x Weekly	12m3	12
	Food scraps	weekly	Otto	10

## 2.0 EXECUTIVE SUMMARY

The UNSW Cliffbrook Estate project will include alterations to Building CC3 as follows;

- Remove the bi-fold doors in the openings in the eastern elevation and replace with double doors for accessible access.
- Restore stone works.
- Remove and reconfigure internal wall.
- Install new floor finish and operable wall.
- Remove and install new kitchenette.
- Shutdown and shift electrical switchboard.
- Maintenance works, remove and replace roof

The purpose of this Waste Management Plan (WMP) is to provide strategies for the management of waste and recyclables from this facility for construction.

## 3.0 WASTE MANAGEMENT OBJECTIVE

The waste management objectives for this project are

- Plan for waste minimisation at all stages of refurbishment, following the waste hierarchy of 'reduce, reuse, recycle', rather than disposal to landfill.
- Implement a construction waste management plan that diverts at least 76% of all construction and demolition waste from landfill, as per industry best practice.
- Plan for wastes and recyclables to be collected on a regular basis by the Waste and Recycling Contractor and disposed or recycled/reused appropriately off-site.
- Implement strategies to ensure that waste management is an integrated part of the refurbishment phase.
- Manage all wastes generated by the facilities in accordance with best practice in waste minimization, current legislation, and waste guidelines.

## 4.0 MINIMISING WASTE THROUGH DESIGN TECHNIQUES

Consideration of waste management during design provides the best opportunity to minimize the volume of waste generated throughout the life of the project. Whilst recycling and reuse of

materials are important aspects of waste management, waste minimization techniques incorporated into the design can prevent materials from being brought onto the site that will eventually become waste.

This strategy is often referred to as dematerialization, that is design that produces a reduction in the total amount of materials used whilst providing the same functionality. Opportunities to minimise material use in design include:

- Specify materials in the design, which have been chosen for their life cycle performance, considering waste product, maintenance, replacement frequencies and eventual disposal costs and method. This is mainly applicable to the replacement roof tiles.
- Incorporate materials with a recycled content and chose local materials to reduce emissions and transport costs. Glazed window sections to be sought to match existing. These window sections are no longer in production and salvaged from other projects/ demolishers ETC.
- Ensure adequate access for the collection and removal of wastes by the contracted waste collection service.

## 5.0 MINIMISING CONSTRUCTION AND DEMOLITION WASTE

### 5.1 General

The construction phase of this development has the potential to generate moderate volumes of waste if not managed efficiently. The construction industry contributes at least 40% of wastes to landfill in Australia every year, although great reductions can be achieved with good waste management.

However, waste management on building sites has advanced significantly in recent years, with the majority of major construction projects now targeting off-site resource recovery in excess of 80% diversion from landfill. The OEH Waste Avoidance and Resource Recovery Strategy targets a NSW C&D waste reduction target of 76% by 2014,

To recognize these advances and contribute to the target listed above, The Cliffbrook Estate project should target a Construction and Demolition recycling and reuse rate of at least 76%. The only materials to be sent to landfill are those that cannot be recycled due to contamination, legal requirements, or lack of facilities to enable recycling.

The construction team will implement this site Waste Management Plan, incorporating the following best practice management techniques as a minimum:

### **Purchasing**

- The primary aim of waste management is to minimise waste generation, avoiding waste generation where possible. Arrangements shall be made to reduce the number of materials being brought onto site that immediately become waste, i.e. packaging. Where possible, arrange for packaging to be removed by the delivery company.
- Consider ordering materials cut to size to reduce waste material on site.

### **Handling**

- Ongoing training will be provided for all site workers to ensure correct handling and disposal of wastes and recyclables and to promote the developments commitment to waste minimization.
- Store materials in a secure area to prevent theft or vandalism.
- Store materials close to site to avoid damage during transfer of materials.
- Encourage sub-contractors to be responsible for the removal of their own wastes, for reuse or recycling off-site.

### **Recycling and Reuse**

- Materials should be salvaged and retained on site for re-use wherever feasible. Examples of on-site reuse include recycling of roof tiles for road base and crushed aggregate and salvaged timber for reuse in the building structure or landscaping.
- Encourage source separation to facilitate recycling and prevent cross contamination. On site separation is critical to low recycling costs, as end of the line separation of mixed recyclables can be an expensive process.
- Where materials cannot be reused on site, they should be removed for reuse or recycling at alternative locations.

### **Storage**

- There will be no onsite storage on the project materials will be removed off site daily.

### **Contractors**

- All contractors engaged for the construction phase must meet the waste reduction requirements of this WMP, as a minimum requirement in tender documents.
- All contractors on site will receive training in waste management in accordance with the site EMP. This should be a Toolbox session, as part of the general Construction Site Induction package. These sessions shall be managed and recorded by the Construction Contractor and shall occur throughout construction as necessary to update relevant personnel.

## Removal

- The construction team should be aware of the energy associated with the transport of materials to suitable recycling/ reuse facilities. Where no local demand exists for the recycled or salvaged product, the most resource efficient disposal method may be to send wastes to a suitable landfill site.
- Records should be kept of waste volumes being recycled and waste being transported off-site to landfill, particularly hazardous and Trade wastes. Records should be managed by the Construction Contractor.

Table 1 - Sample Construction Waste Report



Monthly Waste Report  
Belmadar Pty Ltd  
Site: 2 Montrose Ave, MERRYLANDS

Waste Type (tonnes)	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Totals
Recyclable Bricks/ Tiles	0.120	0.000	0.000	0.000	0.000	0.000	0.000	4.140	1.080						5.340
Recyclable Concrete	2.250	3.000	3.450	7.800	3.900	7.800	15.600	9.315	3.375						56.490
Recyclable Soil / Sand / Rubble Fines	0.140	1.400	0.966	3.640	0.000	1.456	2.184	5.796	3.150						18.732
Recyclable Metals (ferrous)	0.250	1.000	1.438	0.000	1.300	3.250	1.040	2.588	1.688						12.553
Recyclable Metals (non-ferrous)	0.025	0.000	0.000	0.000	0.000	0.000	0.130	0.000	0.000						0.155
Recyclable Timber	0.780	0.900	0.690	2.730	1.950	3.120	3.900	4.140	2.565						20.775
Recyclable Green Waste	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000						0.000
Recyclable Cardboard / Paper	0.240	0.400	0.506	0.000	0.520	0.780	0.936	1.380	0.900						5.662
Recyclable Plastic	0.120	0.360	0.414	0.000	0.390	0.520	0.780	1.035	0.675						4.294
Recyclable Plasterboard	0.000	0.000	0.000	0.780	0.000	0.832	0.000	0.000	0.810						2.422
General Waste (landfill)	0.200	0.480	0.552	1.040	0.520	1.040	1.040	1.380	0.900						7.152
<b>Total Recycled Waste (tonnes)</b>	<b>3.925</b>	<b>7.060</b>	<b>7.464</b>	<b>14.950</b>	<b>8.060</b>	<b>17.798</b>	<b>24.570</b>	<b>28.394</b>	<b>14.243</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>126.423</b>
<b>Total Landfill Waste (tonnes)</b>	<b>0.200</b>	<b>0.480</b>	<b>0.552</b>	<b>1.040</b>	<b>0.520</b>	<b>1.040</b>	<b>1.040</b>	<b>1.380</b>	<b>0.900</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>7.152</b>
<b>Total Waste (tonnes)</b>	<b>4.125</b>	<b>7.540</b>	<b>8.016</b>	<b>15.990</b>	<b>8.580</b>	<b>18.798</b>	<b>25.610</b>	<b>29.774</b>	<b>15.143</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>133.575</b>
<b>Total Waste (cubic metres)</b>	<b>10</b>	<b>20</b>	<b>23</b>	<b>26</b>	<b>26</b>	<b>52</b>	<b>52</b>	<b>60</b>	<b>45</b>						<b>323.000</b>
<b>Total Recycled Waste (percentage)</b>	<b>95.15%</b>	<b>93.63%</b>	<b>93.11%</b>	<b>93.50%</b>	<b>93.94%</b>	<b>94.47%</b>	<b>95.94%</b>	<b>95.37%</b>	<b>94.06%</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	
<b>Total Recycled Waste (percentage) To Date</b>															<b>94.67%</b>



## 5.2 Construction Waste Generation Rate

The construction waste volumes indicated here are estimates based on the amount of materials expected to be ordered for construction and should be used as a guideline only. These volumes may be reduced with the successful implementation of all the guidelines for waste minimization specified in this plan.

Table 2 - Estimated Construction Waste Volumes

### Demolition Phase

Material	Volume (m <sup>3</sup> )	Weight (tonnes)	Re-use/Recycle On Site	Re-use/Recycle Off Site	Percentage Recyclable
Timber	4	5	N/A	Timber Recyclers	100%
Concrete Rubble	2	3	N/A	Concrete Recyclers	100%
General- Including Packaging,	3	2	10%	80%	10%

### Construction Phase

The intention is to maximise the diversion of all waste from landfill, and this will be monitored and reported monthly, with the expectation that this will be exceeded.

## 5.3 Waste Liquids

All solvent-based liquid wastes (waste oils, paints, etc.) shall be contained within the site boundary until removal by the approved waste contractor. Waste paint should be reused where possible. Water based liquids may be directed to sewer subject to a Trade Waste agreement, or to a liquid waste treatment facility.

Liquid waste storage during construction is the responsibility of the Construction Contractor and shall be carried out in accordance with Safework NSW and Work Health and Safety legislation.

## 5.4 Waste Storage and Collection

A designated waste storage area will be allocated for the collection of all waste and recyclables. The waste storage area shall have appropriate signage to clearly identify the area to construction workers and to prevent unauthorised access to the area.

The waste area shall include for the following segregation of materials as a minimum:

- Plastics
- Paper and card
- General waste

Due to the highly restricted nature of access to the site and small footprint of built upon area waste storage and collection will need to be carefully planned and managed over the duration of the construction project.

The construction waste storage area does not have to be enclosed. However, containers should be covered where possible to prevent odour, vermin and vandalism or theft. Containers will be stored on a hardstand area with drainage to stormwater. Any spillages in the waste storage area should be treated immediately using a spill kit. Contaminated or hazardous wastes will be removed from site on a daily basis.

Wastes be collected directly from the storage areas. Waste collection shall be on a level surface away from gradients or ramps. Regular collection allows greater control of the waste and recycling volume generated and keeps the waste storage area to a minimum. The Construction Contractor should arrange for collection of bins when full, or on a scheduled pick-up day for off-site resource recovery, recycling or disposal.

Allowance must be made for site access by the Construction Contractor to accommodate the nominated waste contractor's collection vehicles. These vehicles must be assessed to ensure that access to site can be achieved. All waste vehicles shall enter and leave the site in a forward motion and be carefully managed when accessing the site due to restricted access via Berwick Lane.

## 6.0 Hazardous Substances

The Site manager will ensure that all hazardous substances are identified, and that the manufacturers label is legible prior to being used or stored on site.

Prior to the arrival of Hazardous substances onsite the Site Managers and or Site Engineers will be required to send **Form H1.3 Hazardous substances & Dangerous Goods Risk Assessment** to the subcontractors' supervisors to be filled out and attached to the SDS. Any substances that identify hazardous chemicals listed in appendix F of the COP "Managing the Risk of Hazardous Chemical in the Workplace 2014" will be required to be monitored as per the COP recommendations. If a worker has been exposed previously to the hazard, copies of monitoring records, medical reports and any implementation strategies required will be sent to the site team from the subcontractor's supervisor for record and further monitoring if required by a registered practitioner.

Hazardous substances, including all those used by subcontractors on site, will be recorded on **Form H1.2 Hazardous Chemical Register** by the site engineer the register will be updated as new substances are introduced to site or as recorded substances are no longer on site.

A current copy of the Hazardous Substances Register and Safety Data Sheets (SDS) for each hazardous substance will be located in the site office or adjacent to the first aid kit.

Hazardous substances will be stored and separated as required by the Dangerous Goods Regulation with relevant signage, bund, barricading.

### 6.1 Asbestos Management

#### Risk Identification & Assessment

The project manager will ensure the risks associated with the management and removal of asbestos-containing material are identified, assessed, and controlled in accordance with the Hierarchy of Control. **Refer to the Risk Identification & Assessment Procedure.**

#### Asbestos Register and Asbestos Management Plan

The Site Manager will ensure a written asbestos management plan and or scope of works is prepared by the Asbestos removalist contractor in conjunction with a specialist hygienist for the workplace if asbestos or ACM has been identified or assumed present or is likely to be present from time to time at the workplace. The Site Manager will ensure the asbestos management plan is maintained to ensure the information is up to date.

The Site Manager will ensure an asbestos register **Refer to form H1.7 Asbestos Register** is prepared and kept at the workplace. The asbestos register must be maintained to ensure the information in the register is up to date. The asbestos register is intended to ensure workers and others in the workplace do not accidentally disturb asbestos.

The Site Manager will ensure any areas that contain asbestos, including plant, equipment and components, should be signposted with warning signs to ensure the asbestos is not unknowingly disturbed without the correct precautions being taken. Where it is not reasonably practicable to use labels or warning signs to indicate the presence and location of asbestos the Site Manager must consult with fellow workers about the location of Asbestos. **Refer to Form D 1.1 Toolbox Talk Record.**

### **Asbestos Removal Control Plan and notifications made to the regulator, client, workers and other affected parties**

The Site Manager will review and approve the Asbestos Removal Plan to contain the following criteria as a minimum,

- Notification requirements have been met and required documentation will be on site (e.g., removal licence, control plan, training records)
- Details of asbestos to be removed identified (e.g., the locations, whether asbestos is friable/non-friable, its type, condition and quantity being removed)
- Consult with relevant parties (health and safety representative; workers; person who commissioned the removal work, licensed asbestos assessors)
- Assigned responsibilities for the removal Program commencement and completion dates.
- Emergency plans
- Asbestos removal boundaries, including the type and extent of isolation required and the location of any signs and barriers
- Control of other hazards including electrical and lighting installations
- Details of air-monitoring program Control and clearance
- Name of the independent licensed asbestos assessor or competent person engaged to conduct air monitoring

The Site Manager will ensure the licensed asbestos removalist will notify the regulator in writing at least five days before the licensed asbestos removal work commences. The following information must be included in your notification as a minimum criteria:

- name, registered business name, Australian Business Number, licence number and business contact details
- name and business contact details of the supervisor who will oversee the removal work
- name of the licensed asbestos assessor or competent person engaged to carry out a clearance inspection and to issue a clearance certificate for the work
- client name and contact details
- name, including registered business or corporate name, of the person with management or control of the workplace
- address of the workplace, including the specific location if it is a large workplace
- kind of workplace where the removal work will be performed (for example an office building or construction site)
- date of notification
- the start date of the removal work and an estimation of how long it will take
- whether the asbestos to be removed is friable or non-friable
- if the asbestos is friable, the way the removal area will be enclosed
- estimated quantity of asbestos to be removed
- Tracking information and location of registered tipping facility for disposal of asbestos
- For all asbestos removal and facility receiving asbestos waste in NSW weighing more than 100 kilograms or consisting of more than 10 square metres of asbestos sheeting in one load must track and report this waste to the EPA using WasteLocate.
- Waste classification must be conducted for material that is not pre-classified by the NSW EPA (2014) Waste Classification Guidelines
- Notification of the truck route to RMS before any removal.
- number of workers who will perform the removal work, and
- details of each worker's competency to carry out removal work

### Refer to inspection Asbestos Removal Control Plan Checklist on Procore

The Project Manager will advise the client of adverse/latent site conditions on discovery of Asbestos. On receipt of Asbestos Management Plan Belmadar will send the client via Procore the current version of the Asbestos Management Plan and Asbestos register.

The Site Manager will Toolbox talk the site with current locations of Asbestos removal and will update the site via the same consultation method if conditions change. The Site Manager will also communicate the Asbestos removal to other parties by signage attached the perimeter fencing.

### Qualifications and Training

The Site Manager who commissions the removal of asbestos at the workplace must ensure asbestos removal work is carried out only by a licensed asbestos removalist (**See below for details of different licence class**) and in accordance with the Code of Practice: How to safely remove asbestos August 19 and AS/NZS 4801:2001

The Site Manager will ensure the licence to undertake the types of asbestos removal will be either Class A or Class B. The type of licence required will depend on the type and quantity of asbestos, asbestos-containing material (ACM) or asbestos-containing dust (ACD) that is being removed at a workplace. See below licence and competencies requirements;

Type of Licence	Licence Capability	Competencies
<b>Class A</b>	Can remove any amount or quantity of asbestos or asbestos containing materials (ACM), including: <ul style="list-style-type: none"> <li>- any amount of friable asbestos or ACM</li> <li>- any amount of asbestos contaminated dust (ACD)</li> <li>- any amount of non-friable asbestos or ACM</li> </ul> Note: Friable asbestos fire doors and safes – separate licence	CPCCDE3015 or CPCCDE3015A – Remove friable asbestos <ul style="list-style-type: none"> <li>• CPCCDE4008 or CPCCBC4051A – Supervise asbestos removal</li> </ul> & 3 year experience of Class B Licence.
<b>Class B</b>	Can remove: <ul style="list-style-type: none"> <li>- any amount on non-friable asbestos or ACM</li> </ul> (Note: A Class B licence is required for removal of more than 10sqm of non-friable asbestos or ACM) <ul style="list-style-type: none"> <li>- ACD associated with the removal of non-friable asbestos or ACM</li> </ul> (Note: A Class B licence is required for removal of ACD associated with the removal of more than 10sqm of non-friable asbestos or ACM)	CPCCDE3015 or CPCCDE3015A – Remove friable asbestos <ul style="list-style-type: none"> <li>• CPCCDE4008 or CPCCBC4051A – Supervise asbestos removal</li> </ul>
<b>Asbestos Assessor</b>	An asbestos assessor licence is required to carry out certain functions connected with class A asbestos removal work. If you are licensed as an asbestos assessor, you can conduct the following: <ul style="list-style-type: none"> <li>- air monitoring for Class A asbestos removal work</li> <li>- clearance inspections for Class A asbestos removal work</li> </ul>	CPCCDE3015A – Remove friable asbestos as evidence of training, knowledge and skills of a relevant asbestos removal industry practice or CPCCDE5001 – Conduct air monitoring and clearance inspections for asbestos removal work

	- issuing clearance certificates in relation to Class A asbestos removal work	
<b>No Licence Required</b>	<p>Can remove:</p> <ul style="list-style-type: none"> <li>- up to 10sqm of non-friable asbestos or ACM ACD that</li> <li>- is associated with the removal of less than 10sqm of non-friable asbestos or ACM, or</li> <li>- is not associated with the removal of friable or non-friable asbestos and is only a minor contamination.</li> </ul>	

### **Air Monitoring and Clearance Certificate**

The Site Manager will ensure that where there is the requirement to monitor the air for possible exposure to hazards found onsite during construction, a third-party licenced contractor (Hygienist) is to undertake the monitoring and provide clearance certification to deem the site safe.

The Site Manager who commissions asbestos removal work that requires a Class A licence must ensure that an independent licensed asbestos assessor undertakes air monitoring of the asbestos removal area at the workplace. Control air monitoring must be conducted by the third-party licenced contractor immediately before and during Class A asbestos removal work.

Clearance inspections must be carried out and clearance certificates issued by an independent licensed asbestos assessor, for work that must be carried out by a Class A licensed asbestos removalist.

The Asbestos removalist contractor who commissions licensed asbestos removal at the workplace requiring a Class A licence must ensure the results of the control monitoring are given to the following people:

- workers at the workplace
- health and safety representatives for the workplace
- PCBUs at the workplace, and
- other people at the workplace.

The Site Manager will communicate the results to the above stakeholders on receipt of results from the asbestos removal contractor.

### **Asbestos and Lead Health Surveillance and Monitoring**

The Site Manager will ensure health monitoring is provided to workers if they are at risk of exposure to asbestos & led when carrying out works in accordance with NSW Work Health and Safety Act 2011, code of practice as How to safely remove asbestos 2012.

Health monitoring includes a medical examination to provide an initial baseline medical assessment. Health monitoring must include the following, unless another form of health monitoring is recommended by a registered medical practitioner.

- consideration of the worker's demographic, medical and occupational history
- consideration of records of the worker's personal exposure, and
- a physical examination of the worker with emphasis on the respiratory system, including standardised respiratory function tests, unless another form of health monitoring is recommended by a registered medical practitioner.

If a worker is carrying out licensed asbestos and Led removal work, the health monitoring must be conducted prior to the worker commencing the work. Health monitoring should also be provided to the worker at regular intervals (at least once every two years) after the worker commences the asbestos-related work.

The Site Manager must obtain the health monitoring report from the registered medical practitioner as soon as practicable after the monitoring is carried out and saved on Belmadar Server

The health monitoring report must include the following information:

- the name and date of birth of the worker
- the name and registration number of the registered medical practitioner
- the name and address of the PCBU who commissioned the health monitoring
- the date of the health monitoring
- any advice that tests results indicate the worker may have contracted a disease, injury or illness as a result of carrying out the work that triggered the need for health monitoring
- any recommended remedial measures, including whether the worker can continue to carry out the work, and
- whether medical counselling is required for the worker

**Note: Not all work that involves lead is 'lead risk work'.**

'Lead risk work' means work carried out in a lead process that is likely to cause the blood lead level of a worker carrying out the work to exceed:

5 µg/dL (0.24 µmol/L) for a female of reproductive capacity  
 20 µg/dL (0.97 µmol/L) in other cases.

To determine if a task is 'lead risk work', check past medical records, injuries and illnesses. Also check the type of lead you use, the airborne lead levels, how and how much workers are exposed, and examine your work practices.

## 6.2 Health Surveillance

**Health monitoring of a person** refers to monitoring the person to identify changes in the person's health status due to exposure to certain substances. It involves the collection of data to evaluate the effects of exposure and to confirm that the absorbed dose is within safe levels. This allows decisions to be made about implementing ways to eliminate or minimise the worker's risk of exposure, for example, reassigning to other duties that involve less exposure or improving control measures. Monitoring is recommended by a registered medical practitioner with experience in health monitoring and or third-party professional as detailed below if hazardous substances are found onsite during work activities or require clearance before site activities commence.

**Health surveillance** can be described as a system of ongoing health checks. These health checks may be required by law for employees who are exposed to noise or vibration, ionising radiation, solvents, fumes, dusts, biological agents and other substances hazardous to health. This must be completed by a registered health professional.

If the project identifies risk of exposure to hazardous substances (e.g. via hygienist reports and/or hazardous registers) and or at the start of the project to ensure all hazardous are identified. This should be documented in Belmadar **Form H1.6 Health Risk Assessment**, completed by the site Manager and/or Project Manager who has either a Certificate IV in work health and safety or 5 years' experience in a manager's position. Suitable controls must be adopted by the site manager and/or the project manager using Appendix F of the COP located on the intranet in folder *F1.6.1 Health Specifications*. Any risks/controls identified within the health risk assessment must be transferred into the "**Project Risk Register**" under a separate heading titled "**Health Monitoring Requirements**". Subcontractors should include for any health hazards which may impact workers and/or their ability to perform their tasks within their WMS. If site teams identify the requirement of further measurement after completing the health risk assessment, teams should in the project risk assessment outline the additional controls such as monitoring of registers, the requirement of a third-party professional such as hygienist or acoustic specialist to maintain a safe work environment.

Specific task level health surveillance risk assessment (HRA) process will be evaluated and monitored by way of task observation on Procore. The HSEQ Director will attend the site as a minimum once a month to undertake task specific observations and the alignment of these task with the Belmadar Project Risk Register and the Subcontractor SWMS. Any corrective action required will be captured in the task observation sent to the project Team for action and implementation. The Site Manager will undertake Task Specific HIRAC process observations as a minimum 3 per month and the Project Manager 1 per Month in addition to the HSEQ Directors observations or if site conditions change.

Below is a list of potential health hazards to guide the site teams when completing the health risk assessment **H1.6**. Site Teams are to refer to Appendix F of the COP “Managing the Risk of Hazardous Chemical in the Workplace 2014” for a list of hazardous substances which require monitoring.

### **BIOLOGICAL HAZARDS:**

Biological hazards can be defined as organic substances that present a threat to the health of people and other living organisms.

Biological hazards include.

- Viruses
- Toxins from biological sources
- Spores
- Fungi
- Pathogenic micro-organisms
- Bio-active substances

Biological hazards can be tested, and exposure can be monitored through testing of levels or its metabolites in by a registered medical practitioner with experience in health monitoring through testing of:

- Body fluids urine or blood
- Body Tissues such as lung testing or exhaled breath

### **PHYSICAL HAZARDS:**

Physical hazards can be defined as factors or conditions within the environment that can harm your health.

Physical Hazards include.

- Body Stress
- Confined space
- Electricity
- Heat
- Heights
- Noise
- Vibration

Physical hazards can be tested and controlled by Psychosocial testing and or Biomechanical testing being.

Psychosocial- Where aspects of one’s job demands, control, support, financial concerns and or relationship issues contribute to a physical hazard where testing and support can be gained from a councillor or where required a clinical psychologist or psychiatrist.

Biochemical- Physical damage to one’s body, soft tissue damage, muscular, tear, sprain or indirect exposure (heat or light) which leads to symptoms which may accumulate to cause further degeneration and injury. Testing and support will be gained using a registered GP or specialist.

### **CHEMICAL/ATMOSPHERIC CONTAMINATES:**

A chemical/atmospheric hazard can be defined as solid, liquid or gas which ones exposed to a person can harm a person’s health.



Chemical hazards include:

- skin irritants
- carcinogens
- respiratory sensitisers.

Physicochemical hazards include:

- chemical explosions and fire
- corrosion
- chemical reactions.

These hazards generally result from a substance's physical and chemical properties. The harmful effect on a worker's health is from direct contact or exposure to the chemical, usually through inhalation, skin contact or ingestion. Testing and monitoring of this hazard can be through a registered medical professional.

Where there is the requirement to monitor possible exposure to hazards found onsite during construction, a third-party licenced contractor is to undertake the monitoring and provide clearance certification to deem the site safe. Where practical before site establishment, records of site conditions such as the dilapidation report, acoustic report, hazmat report and the like should be analysed for hazards which are identified onsite and require a licenced contractor to monitor and or remove the hazard before site personnel commence works. See below hazards which may require ongoing monitoring.

Hazard	Health Monitoring Contractor
Noise / Vibration	Acoustic Specialist
Asbestos	Asbestos assessor / Hygienist & unrestricted Demolition certificate and have a licence with EPA to transport asbestos waste
Lead	Hygienist & unrestricted Demolition certificate

If during the project site personnel are exposed to any of the hazards listed in appendix E of the COP 'Managing the Risk of Hazardous Chemical in the Workplace 2014', the Site Manager and or Project Manager will organise the need for health/medical surveillance as well as a hygienist to be engaged to provide a report and recommendation for the treatment of this health hazard. A licenced contractor will then remove the hazardous substance and hygienist to provide clearance certification. With any reports and or recommendations to be sent to the HSEQ director and monitored/implemented by the Site and or Project Manager.

Belmadar site management will request health monitoring records/evidence from the applicable contractor, prior to commencement of the activity were identified in appendix E of the COP if the contractor has been exposed previously to any health hazard which may require monitoring. Health monitoring is not an alternative to implementing control measures. If the results indicate that a worker is experiencing adverse health effects or signs of exposure to a hazardous chemical, the control measure must be reviewed and if necessary revised.

## 7.0 OPERATIONAL WASTE MANAGEMENT

### 7.1 Approach

The waste management hierarchy is a nationally and internationally accepted guide for prioritising waste management practices with the objective of achieving optimal environmental outcomes. It sets out the preferred order of waste management practices, from most to least preferred.

**Avoid**

Reducing the volume of materials brought onto the site that immediately become waste. Ensuring that orders are correct to minimise excess stock and by arranging with suppliers to reduce the amount of packaging used in deliveries.

Products should be considered using a life cycle approach, choosing materials that result in minimal or no waste.

### Reuse

Promotion of the concept of waste as a usable product to increase the volume being reused and recycled on and off site.

### Recycle

Separate all recyclables at source, into appropriate recycling containers.

Colour code waste containers to prevent contamination of recyclables. The appropriate colours should be incorporated into training and waste signage to educate staff on the importance of waste minimisation and to facilitate effective source separation.



## 7.2 Waste Collection Services & Access

All waste bins will be removed by a waste contractor from the secure waste storage area for emptying and return. The waste contractor must be able to service all waste containers to the rates shown above, providing consistency in waste collection and disposal. The storage area will be secured to ensure that it is accessible by the waste removal contractor.

## 8.0 REFERENCES

- Green Building Council of Australia (2021) <http://www.gbca.org.au>
- Clause B37 - Construction Waste Management Plan of the development consent issued on 19<sup>th</sup> February 2018.
- NSW EPA (2007) *NSW Waste Avoidance and Resource Recovery Strategy*
- OEH (2010) *Waste Avoidance and Resource Recovery Strategy Progress Report 2010*
- The Waste Avoidance and Resource Recovery Act, 2001
- Protection of the Environment Operations Act, 1997
- Environmental Planning and Assessment Act, 1979
- WHS act 2011
- WHS legislation 2011
- NSW EPA (2014) *Waste Classification Guidelines*
- Protection of the Environment Operations (Waste) Regulation 2014
- SafeWork NSW (2019) *Code of Practice How to Safely Remove Asbestos*
- SafeWork NSW (2019) *Code of Practice How to Manage and Control Asbestos in the Workplace*



