

Water Quality Monitoring Plan

Cross River Rail Project – Tunnel, Stations and Development Package (TSD)

REV	DATE	PREPARED BY NAME & SIGNATURE	REVIEWED BY NAME & SIGNATURE	APPROVED BY NAME & SIGNATURE	REMARKS

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Revision: 4

Compliance Matrix

Table 1 Compliance matrix

CRRDA REFERENCE	REQUIREMENT	ADDRESSED IN SECTION
Coordinator-General’s change report Section 5.1.2.		
Section 5.1.2	Consistent with the evaluated project, any contaminated land that is encountered through construction activities will need to be remediated or disposed at an approved landfill under a DES approved soil disposal permit. Contaminated land will be managed in accordance with the OEMP and the Contaminated Land Management sub-plan that I require the proponent to update based on the proposed changes to the project.”	This Plan

Details of Revision Amendments

Document Control

The CBGU Project Director is responsible for ensuring that this Plan is reviewed and approved. The Project Environment & Sustainability Manager is responsible for updating this Plan to reflect changes to the Project, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the CBGU Project Director before being distributed / implemented.

Distribution and Authorisation

The CBGU Project Director is responsible for the distribution of this Plan. The controlled master version of this document is available for distribution as appropriate and maintained on TeamBinder. All circulated hard copies of this document are deemed to be uncontrolled.

All personnel employed on the Project will perform their duties in accordance with the requirements of this Plan, supporting management plans, and related procedures.

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Referenced Documents

The following provides a list of referenced documents either as a sub-plan to this plan or referenced from.

Table 2 Referenced Documents

Document Number	Document Name	Location of Controlled Version
Referenced Project Plans include:		
CRRTSD-EN-ENMP-CBGU-000001	Air Quality Management Plan	TeamBinder
CRRTSD-EN-MPL-CBGU-000019	Construction Environmental Management Plan	TeamBinder
CRRTSD-EN-ENMP-CBGU-000011	Contaminated Land Management Plan	TeamBinder
	Contaminated Land Management Procedure (Including Unexpected Contamination and Asbestos Finds)	TeamBinder
CRRTSD-CU-MPL-CBGU-000018	Communications and Stakeholder Engagement Management Plan	TeamBinder
CRRTSD-EN-ENMP-CBGU-000016	Erosion and Sediment Control Plan	TeamBinder
CRRTSD-EN-ENMP-CBGU-000002	Waste Management Plan	TeamBinder

Note: this Management Plan may not contain the current version of the document listed above. Refer to the 'location of controlled version' for the most current version.

Glossary of Terms

Table 3 Terms

Term	Meaning
µm	Micrometre
ACM	Asbestos Containing Material
AF	Asbestos Fines
AMP	Asbestos Management Plan
AQMP	Air Quality Management Plan
BCC	Brisbane City Council
CBD	Central Business District
CBGU	Design & Construct Contractor comprising a joint venture with CPB Contractors Pty Ltd, BAM International Australia Pty Ltd, Ghella Pty Ltd and UGL Engineering Pty Ltd
CEMP	Construction Environmental Management Plan
CG	Coordinator-General
CGCR	Coordinator-General change reports
CLMP	Contaminated Land Management Plan
CRR	Cross River Rail
CSEP	Communications and Stakeholder Engagement Plan
DA	Delivery Authority
DEHP	Department of Environment and Heritage Protection (now DES)
Delivery Authority	Cross River Rail Delivery Authority
DES	Department of Environment and Science
EMR	Environmental Management Register
EP Act	Environmental Protection Act 1994 (Qld)
EPP (Water)	Environmental Protection (Water) Policy 2009 (Qld)
ERA	Environmentally Relevant Activity
ESCP	Erosion and Sediment Control Plan
FA	Fibrous Asbestos
km	Kilometre
HGMP	Hazardous Goods Management Plan
m	Metre
ml	Millilitre
mm	Millimetre
NATA	National Association of Testing Authorities
NEPC	National Environment Protection Council

Term	Meaning
NEPM	National Environment Protection (Assessment of Site Contamination) Measure (as amended on 16 May 2013) (NEPM)
OHSMP	Occupation Health and Safety Management Plan
Project	Cross River Rail Project
PPE	Personal Protective Equipment
PSTR	Project Scope and Technical Requirements
QLD	Queensland
QR	Queensland Rail
RNA	Royal National Agriculture and Industrial Association
RPE	Respiratory Protective Equipment
SDP	Soil Disposal Permit
SDS	Safety Data Sheets
SID	Safety in Design
SWMS	Safe Work Method Statements
TeamBinder	Proprietary software used as part of the Project wide Electronic Document Management System
TSD	Tunnel, Stations and Development
VENM	Virgin Excavated Natural Material
WHSQ	Work Health and Safety Queensland
WMP	Waste Management Plan

1 Introduction

1.1 Background

The Design and Construction Joint Venture comprising of CPB Contractors Pty Ltd, BAM International Australia Pty Ltd, Ghella Pty Ltd and UGL Engineering Pty Ltd (CBGU D&C JV or CBGU) is responsible for delivering the Cross River Rail (CRR) Project (the Project) on behalf of the Cross River Rail Delivery Authority (the Delivery Authority).

This Asbestos Management Plan should be read in conjunction with the Project's overarching Construction Environment Management Plan (CEMP).

The CEMP provides specific details regarding the background of the Project, the scope of the Project and the staging and timing of key milestones associated with the construction of the Project.

1.2 Context

This Asbestos Management Plan (AMP) has been developed as a requirement of the Contaminated Land Management Plan (CLMP). The CLMP and this AMP form part of the CEMP developed for the construction of the Project. The AMP describes how the CPBU D&C JV will manage asbestos and minimise impacts during construction of the Project

1.3 Objectives

The objectives of this AMP which is a sub-plan of the CEMP are to:

- To effectively identify, assess and manage the risk to a worker's health and safety when working with asbestos.

1.4 Legislative Framework

1.4.1 Commonwealth Legislation

No Commonwealth legislation is specifically relevant to this AMP.

1.4.2 State Legislation

State legislation that is relevant to the Project and this AMP includes:

- *Cross River Rail Delivery Authority Act 2016*
- *State Development and Public Works Organisation Act 1971*
- *Environmental Protection Act 1994*
- *Environmental Protection Regulation 2008*
- *Environmental Protection (Regulated Waste) Amendment Regulation 2018*
- *Environmental Protection (Waste ERA Framework) Amendment Regulation 2018*
- *Waste Reduction & Recycling Act 2011*
- *Waste Reduction & Recycling (Waste Levy) Amendment Bill 2019*

- *City of Brisbane Act 2010*
- *Local Government Act 2009*
- *Planning Act 2016*
- *Work Health and Safety Act 2011*
- *Work Health and Safety Regulation 2011.*

1.4.3 Approvals, Permits and Licences

CBGU will obtain licences, permits and approvals as required by law and maintain them as required throughout the delivery phase of the project. No condition of the Infrastructure Approval removes the obligation for CBGU to obtain, renew or comply with such necessary licences, permits or approvals.

Approvals expected to be required for the Project that relate to contaminated land, including asbestos, management are identified in Table 4 below.

Table 4 *Environmental approvals, permits and licences*

Approval / Permit / Licence	Regulatory Authority	Responsibility / Timeframe	Items approved
Contaminated Soil – Disposal Permit	Department of Environment and Science	CBGU Minimum 10 day approval timeframe.	Disposal of contaminated material
Waste Levy Exemption – Contaminated Material	Department of Environment and Science	CBGU Minimum 30 day approval timeframe.	Waste as exemption waste

1.4.4 Guidelines and Standards

The main guidelines, specification and policy documents relevant to this AMP include:

- Department of Environment and Science (2018). Queensland Auditor Handbook for Contaminated Land: Module 6: Content requirements for contaminated land investigation documents, certification and audit reports
- National Environment Protection Council (NEPC) (1999). National Environment Protection (Assessment of Site Contamination) Measure (as amended on 16 May 2013) (NEPM)
- Standards Australia (1999). Guide to the investigation and sampling of sites with potentially contaminated soil Part 2: Volatile substances (AS4482.1)
- Standards Australia (2005). Guide to the investigation and sampling of sites with potentially contaminated soil Part 1: Non-volatile and semi-volatile compounds (AS4482.1)
- Department of Health, 2009, Guidelines for Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia

- enHealth, 2005, Management of Asbestos in the Non-Occupational Environment
- MRTS96 Management and Removal of Asbestos
- Workplace Health and Safety Queensland (WHSQ) 2011, How to Safely Remove Asbestos Code of Practice
- Workplace WHSQ 2011, How to Manage and Control Asbestos in the Workplace Code of Practice.

2 Required Outcomes

The following environmental design requirements and environmental outcomes must be achieved throughout construction of the Project. The environmental outcomes may be achieved by meeting the performance criteria in this AMP.

2.1 Environmental Outcomes

The following environmental outcomes in relation to waste are to be achieved for the Project:

- Construction activities avoid, or minimise the environmental and public health risks from contaminated soil, specifically asbestos, intercepted during Project Works.

2.2 Performance Criteria

The following performance criteria must be achieved throughout construction of the Project:

- Management of asbestos occurs in accordance with the EP Act and the *Work Health and Safety Regulation 2011*, and relevant Queensland Codes of Practice
- Contaminated Land Site Investigations are to be undertaken in accordance with the CLMP
- Each project must ensure that no worker is exposed to airborne asbestos fibres.

3 Impacts and Mitigation Measures

A range of potential impacts to the environment and potential environmental mitigation measures are outlined below.

3.1 Impacts

During the construction phase of the project, the following potential impacts have been identified (noting that the mitigation measures appropriate to these potential impacts are outlined in section 3.2):

- Asbestos will remain in the environment for extended periods with limited degradation and can migrate through physical disturbance which potentially leads to the release of dangerous fibres.
- The inhalation of asbestos fibres creates a significant health risk to individuals. These fibres may become deposited in lungs producing health effects such as asbestosis, lung cancer and mesothelioma.

The NEPM (2013) Schedule 1 guideline divides asbestos contamination into three groups, while Work Health and Safety (Safe Work Australia, 2011) terminology divides asbestos contamination into two groups. An equivalency of terms is provided in Table 5.

Table 5 Equivalency of terms used in NEPM 2013 & Safe Work Australia 2011

NEPM terminology	Work Health and Safety terminology
Bonded asbestos containing material or 'Bonded Asbestos Containing Material (ACM)'	Bonded asbestos/non-friable asbestos
Fibrous Asbestos, FA	Non-bonded/friable asbestos
Asbestos Fines, AF	

The NEPM (2013) guideline asbestos contamination terminology is described further below:

- Bonded ACM which is in sound condition although possibly broken or fragmented. Asbestos is bound in a matrix such as asbestos cement sheeting or fencing. Usually represents a low human risk if undisturbed.
- Fibrous Asbestos (FA) is asbestos material which is in a degraded condition and can be broken or crumbled by hand pressure. Encompasses severely weathered ACM and loose fibrous material such as insulation. Represents a high risk to human health if made airborne.
- Asbestos Fines (AF) encompasses free fibres of asbestos, small fibre bundles and ACM fragments which can pass through a 7 mm x 7 mm sieve. Represents a high risk to human health if made airborne.

The primary human health exposure pathway is the generation, release and inhalation of airborne asbestos fibres associated with excavation works and adverse weather conditions.

Refer to CLMP for further information regarding site-specific asbestos related impacts.

3.2 Mitigation Measures

The following mitigation measures may be implemented to achieve the nominated environmental outcomes and performance criteria. Additional mitigation measures can be applied to achieve the environmental outcomes and performance criteria.

3.2.1 General requirements

The following requirements are:

- CBGU requires that the Primary Control for all asbestos related tasks must be an Above the Line control, at the highest possible level (Refer to Figure 1). The hierarchy of controls in regard to asbestos management must be followed. This knowledge document places emphasis on the use of Above the Line controls that can be used to prevent exposure to a risk by eliminating the risk and only where this cannot be achieved, can consideration be given to substitution, isolation and engineering controls.

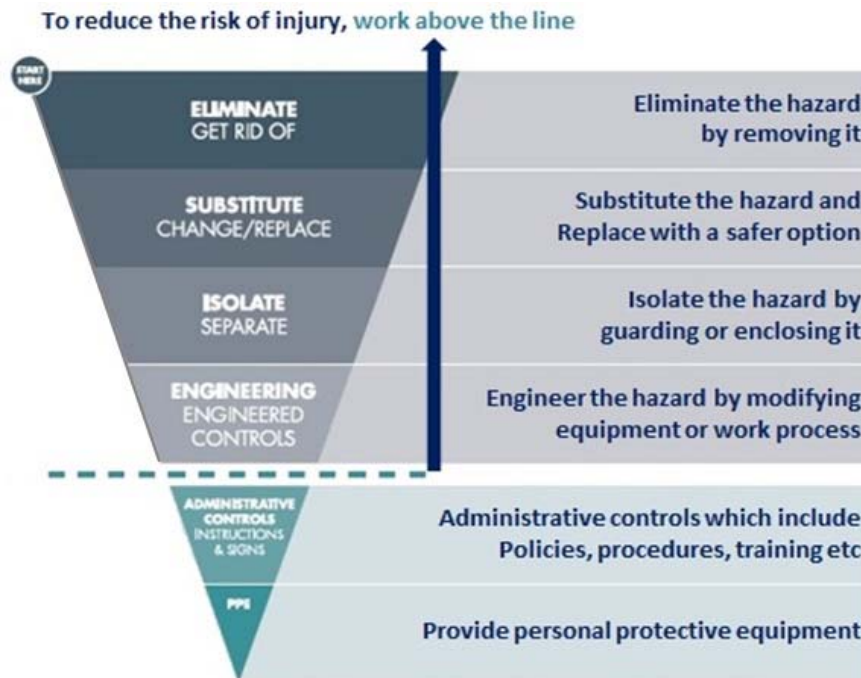


Figure 1 Hierarchy of Control

- Administrative controls are necessary as a safety management system is required to manage safety and these often operate to support above the line controls, e.g., engineer certifications and inspections (Below the Line controls) are key components of an effective edge protection system (Above the Line control).

3.2.1.1 Elimination

All efforts must be made to identify activities where there is a risk to a worker’s health and safety from working with asbestos. A Safety in Design Workshop must be conducted and all opportunities to eliminate the risk must be considered.

3.2.1.1.1 Safety in Design (SID)

Where CBGU has obligations as a designer or can influence the design and/or the pre-construction review of a design; a Safety in Design workshop will be held to identify all tasks where there is a risk to a worker's health and safety from working with asbestos.

When assessing the risks associated to working with asbestos, the following issues must be considered:

- The condition and location of the asbestos
- Proximity to other workers in the area
- Identification and signage
- Whether the asbestos can be safely removed
- The method for removal and selection of competent person/s
- Selection of Personal Protective Equipment
- Adverse weather conditions
- Selection of tools.

The Safety in Design workshop must consider every opportunity to eliminate risk to a worker's health and safety from working with asbestos, on the Project. Some examples of elimination are:

- Removal of asbestos if it is likely to be disturbed before maintenance, service, demolition or refurbishment work commences
- Not conducting the work or reviewing the location if work is in a naturally occurring asbestos area.

3.2.1.1.2 Constructability Workshop

Where the CBGU is unable to contribute to or influence the design, then a Constructability Workshop (conducted as a Safety in Design Workshop) must be undertaken to determine if a risk to a worker's health and safety from working with asbestos, can be eliminated during construction.

3.2.1.1.3 Asbestos Removal

. Asbestos removal shall be carried out by an appropriately licensed asbestos removal contractor unless exempted by the WHS Regulation for the size and class of the proposed asbestos removal work. CBGU will ensure an Asbestos Removal Control Plan is in place prior to any asbestos removal.

Any CRR system and temporary works affecting existing underground utility infrastructure located in asbestos concrete pipes, ducts, conduits or pits shall be in accordance with the following:

- Relevant legislation
- How to Management and Control Asbestos in the Workplace Code of Practice
- How to Safely Remove Asbestos Code of Practice
- MRTS96 Management and Removal of Asbestos
- Relevant Authority's approved specialists and established risk assessed procedures.

Once the licensed removal work is complete, an asbestos clearance inspection certificate must be obtained before the work area can be reoccupied for ordinary use.

Any earthworks and excavations at the worksites must take into consideration the potential for contamination to be present. The following procedures should be undertaken:

- Dust mitigation is to be undertaken in accordance with the Air Quality Management Plan AQMP.
- Soil stockpiling, transportation and disposal is to be undertaken in accordance with the Waste Management Plan (WMP) and Erosion and Sediment Control Plan (ESCP).

Where an asbestos vacuum cleaner is used, it must comply with the requirements in Australian and New Zealand Standard 60335 Household and similar electrical: Particular requirements for wet and dry vacuum cleaners, including power brush, for industrial and commercial use.

Household vacuum cleaners must never be used where asbestos is or may be present, even if they have a HEPA filter.

Other than the following dot points below, work with asbestos must not be undertaken:

- Sampling and identification in accordance with the applicable WHSQ Regulations
- Maintenance of, or service work on, asbestos fixed or installed before 31 December 2003, in accordance with the applicable WHSQ Regulations
- Removal or disposal of asbestos, including demolition, in accordance with the applicable Regulatory provisions and by a competent person
- Management of asbestos in accordance with the applicable WHSQ Regulations of in-situ asbestos that was installed or fixed before 31 December 1989
- Naturally occurring asbestos managed in accordance with this AMP.

3.2.1.2 Substitution

There are no relevant substitution controls.

3.2.1.3 Isolation

Relevant isolation controls may include:

- Installation of barriers to prevent or restrict access into the asbestos work area
- Sealing and encapsulating, to prevent the release of asbestos fibres.

3.2.1.3.1 Physical Barrier

Physical barriers must be installed to prevent or restrict access into the area containing asbestos. Signs must accompany the barriers to communicate that access to the area is restricted during the activity.

3.2.1.3.2 Encapsulating Asbestos

Asbestos in soil encapsulation can occur by covering the contaminated area with a geofabric membrane and placing imported fill material on top (minimum of 0.5m thick). The installation of any capping material should be planned in consultation with a geotechnical engineer or landscaping consultant in order to ensure the covering layer is adequately stable and durable. Note, if this is conducted, this occurrence will need to be documented on the site's Asbestos Register and Asbestos Management Plan (AMP).

Encapsulation helps protect the asbestos from mechanical damage, increases the length of serviceability of the product and may also be used to prevent the asbestos fibres from becoming airborne during the removal process.

If encapsulation is recommended, the worker undertaking the task must:

- Be trained, competent and licensed to work with asbestos
- Isolate the area
- Use suitable Respiratory Protective Equipment (RPE) that complies with Australian and New Zealand Standard 1716 Respiratory Protective Devices
- Wear suitable protective clothing such as disposable overalls
- Follow a safe system of work that reduces the risk of creating airborne asbestos
- Follow a decontamination procedure upon completion of the task.

3.2.1.4 Engineering

Where a risk to a worker's health and safety from working with asbestos cannot be isolated, then engineering controls must be considered to manage the risk. Engineering controls may include:

- Enclosing the area by building a structure where the asbestos is located
- Ensuring power tools have dust suppression / extraction fittings.

3.2.1.4.1 Enclosures

Where it is not reasonably practicable to remove the asbestos, the preferred alternative control measure is enclosure. Enclosure must only be used asbestos where removal is not reasonably practical and where the asbestos is at risk of damage from work activities.

Enclosure is the creation of a structure built around the asbestos so that it is completely covered to prevent exposure of the asbestos to air and other substances. Enclosure creates a separate physical barrier that prevents access to the asbestos and therefore minimises the potential for exposure to airborne fibres.

Consideration must be given when designing the enclosure for the need to provide access to the asbestos for regular inspection of its condition.

3.2.1.5 Administration

Where there is a risk to a worker's health and safety from working with asbestos cannot be engineered out, then administrative controls must be considered to manage the risk.

Administrative and Personal Protective Equipment controls are classed as 'Below the Line' controls. Administrative controls may be achieved by:

- Toolbox talks which discuss any asbestos works being undertaken at the worksites
- Asbestos Identification and measuring Exposure Standards
- Referring to Asbestos Register and Asbestos Management Plan
- Referring to the Stage 1 Site Investigations results
- Signage and labelling
- Training and Consultation
- Safe Work Method Statements
- Decontamination areas

- Safe disposal
- Health monitoring.

3.2.1.5.1 Asbestos Identification

All asbestos must be identified by a competent person. If there is uncertainty as to whether work is asbestos-related work, then the presence of asbestos must be assumed. In those cases, an analysis of a sample of the assumed asbestos must be undertaken in accordance with Australian Standard 4964: Method for the qualitative identification of asbestos in bulk samples, to determine if asbestos is present. Where a part of the workplace is inaccessible and is likely to contain asbestos it must be treated as such until it can be verified.

Asbestos can be identified by arranging for a sample of material at the workplace to be analysed. A sample must be analysed by either:

- A National Association of Testing Authorities Australia (NATA) accredited laboratory for the relevant test method
- A laboratory approved and / or operated by the Regulator
- Any sample taken must be sealed within a container, or a 200 µm polythene bag, and appropriately labelled. If asbestos is stable, non-friable and will not be disturbed, it must be left alone. Only material that is damaged or will be disturbed must be sampled. If the material may contain asbestos and it is decided not to take samples, an assumption must be made that the material contains asbestos.

3.2.1.5.2 Regulatory Required Licencing

To be a competent person a worker must have acquired knowledge and skills to carry out the task through training, a qualification or experience and hold the appropriate regulatory licence.

A person must not carry out the removal of friable asbestos or Asbestos Contaminated Dust (ACD), unless they hold a Class A asbestos removal licence.

A person must not carry out the removal of the following, unless they hold a Class B or Class A asbestos removal licence:

- More than 10 square metres of non-friable asbestos or ACM
- ACD associated with the removal of more than 10 square metres of non-friable asbestos or ACM.

Any person removing asbestos must comply with this AMP and the overarching CEMP and sub-plans and training requirements.

3.2.1.5.3 Areas Inaccessible for Sampling

If there are inaccessible areas in the workplace that a competent person has identified as likely to have asbestos it must be assumed that it contains asbestos until the area is accessed and it is determined whether asbestos is present or not.

3.2.1.5.4 Measuring exposure standards

The exposure standard for asbestos must not be exceeded at the workplace. Where there is uncertainty as to whether the exposure standard is likely to be exceeded, a competent person must carry out exposure monitoring of the work area.

Exposure monitoring must include environmental monitoring of the area and also personal monitoring to determine the levels of respirable fibres in the breathing zone of a worker. Where asbestos removal work

requires a Class A asbestos removal licence, the Project must ensure that an independent licensed asbestos assessor undertakes air monitoring of the asbestos removal area at the workplace. The air monitoring must be carried out immediately before the licensed asbestos removal work commences (unless glove bags are used) and while the licensed asbestos removal work is carried out. Where the exposure monitoring and air monitoring shows that a level more than 0.05 fibres/ml and 0.02 fibres/ml, respectively, the following must occur:

- Immediately stop work
- Notify SafeWork QLD
- Investigate the cause of the high levels. Work is not to recommence until fibre levels are at or below 0.01 fibres/ml
- Implement controls to prevent exposure and further release.

3.2.1.5.5 Asbestos Register

In Queensland, an Asbestos Register is not required if a workplace has been constructed after 31 December 1989 or if no asbestos has been identified.

The Asbestos Register lists all identified (or assumed) asbestos. Due to the difficulties in fully describing the location and extent of naturally occurring asbestos deposits in an Asbestos Register, there is no requirement for naturally occurring asbestos be listed in an Asbestos Register. However, any naturally occurring asbestos identified or assumed must be included into the Asbestos Management Plan.

Where an Asbestos Register does not exist and asbestos is identified, the Project Manager must be notified and a competent person must determine if Asbestos exists and also develop an Asbestos Register.

The Asbestos Register must include all the presumptions made about materials, by example: 'Roof sheeting is presumed to contain asbestos' or 'All underground conduits are presumed to contain asbestos.'

The Asbestos Register must at least record the following information:

- The date on which the asbestos was identified
- The location, type and condition of the asbestos
- Details of any asbestos assumed to be in the workplace
- Detailed drawings and or photographs showing the location of any asbestos identified
- Results of any analysis that confirms a material at the workplace is or is not asbestos
- Details of inaccessible areas
- It may also be useful to attach photographs or drawings to visually show the location of the asbestos in the workplace
- Where asbestos is not identified, but known to be present, the Register must record that no asbestos was identified
- The Register must be reviewed at least every five years to ensure it is kept up-to-date.

3.2.1.5.6 Accessing the Asbestos Register

A copy of the Asbestos Register must be readily accessible to a worker or organisation who has carried out, or intends to carry out work or have carried out work and a workers' Health & Safety Representative.

3.2.1.5.7 Transferring the Asbestos Register

A copy of the Asbestos Register must be given to Client at the conclusion of the Project.

3.2.1.5.8 Accessing the Asbestos Management Plan

The Asbestos Management Plan must be readily accessible to a worker or organisation who has carried out, or intends to carry out work.

3.2.1.5.9 Signage & Labels

All identified or assumed asbestos, including where the asbestos is inaccessible, must be clearly indicated either with labels or signs in accordance with Australian Standard 1319 Safety Signs for the Occupational Environment.

Labels must be used to identify the material as containing asbestos. A competent person must determine the number and positions of the labels required. The location of labels must be consistent with the location listed in the Asbestos Register.

Any areas that contain asbestos, including plant, equipment and components, must be signed with warning signs to ensure the asbestos is not disturbed.

All areas where asbestos work is being undertaken must be signed and barricaded.

3.2.1.5.10 Safe Work Method Statements

A Safe Work Method Statement (SWMS) must be developed where workers will be performing tasks involving working with asbestos.

Where work is required to be carried out with asbestos, one or more of the following techniques may be considered as part of the SWMS to prevent or minimise the asbestos fibres from becoming airborne:

- Wetting of asbestos using surfactants or wetting agents, such as detergent water
- The use of shadow vacuuming
- Performing the task in a controlled environment (for instance, a ventilated enclosure).

3.2.1.5.11 Decontamination

Decontamination facilities must be made available when removing friable asbestos within a structure. These facilities must allow for the decontamination of workers, equipment and the items that have been involved in asbestos related work.

Any items that are used in an asbestos-related work area, must be decontaminated prior to being removed. Any material that cannot be decontaminated must be sealed within a container, which is then decontaminated and labelled to indicate the presence of the asbestos and disposed of at an appropriately licensed disposal facility as soon as is practicable.

All contaminated clothing must be removed damp and thoroughly wet, then placed in impermeable containers or bags the outside of which are decontaminated and labelled to indicate the presence of

asbestos before being sent to the commercial laundering facility. Under no circumstances can the clothing be permitted to dry out.

3.2.1.5.12 Disposal

Stockpiling of ACM should be considered a temporary measure. Any excavated material required to be stockpiled is to be stockpiled separately in accordance with waste classification determined during excavation per depth interval. Refer to ESCP for erosion and sediment control procedures.

Individual components and wiping rags must be placed in heavy-duty 200 µm (micron) thick plastic bags marked with the label '**Caution Asbestos – Do not open or damage bag. Do not inhale dust**'. Each bag must be tied separately prior to placing them in the container. Single-use Personal Protective Equipment used during maintenance and service work must also be disposed of.

ACM and any disposable items used during removal works, including plastic sheeting and disposal tools can be classified as exempt waste under the *Waste Reduction and Recycling (Waste Levy) Amendment Act 2019*.

Disposal requirements are provided in the WMP. Note any removed material suspected of containing contaminated material must be sampled for characterisation prior to disposal.

3.2.1.5.13 Quality assurance checks – plant and equipment

If plant or other materials are imported from countries where asbestos is not yet prohibited, a quality assurance system must be put in place to ensure that the plant or materials do not contain asbestos prior to supplying or using it in the workplace.

3.2.1.5.14 Managing naturally occurring asbestos

The release of airborne asbestos must be minimised at every opportunity, this can be achieved by:

- Wetting surfaces to reduce the dust levels
- Suppressing, containing and extracting dust in processing operations (water sprays or local exhaust at transfer points and vibrating screens)
- Using wet drilling or other approved in-hole dust suppression
- Preventing the spread of contamination by using wash down facilities
- Providing information to and training and supervision of all workers potentially at risk
- Using Personal Protective Equipment where indicated.

Training on the hazards and risks associated with naturally occurring asbestos must be provided to workers who carry out work where naturally occurring asbestos is found.

3.2.1.6 Personal Protective Equipment

Personal Protective Equipment (PPE) is the lowest level of control to manage a worker's exposure to asbestos.

PPE must to be selected to prevent the contamination of clothing and provide adequate respiratory protection to minimise the consequences of a worker being exposed to airborne fibres. PPE for workers working with asbestos includes:

- Respiratory Protective Equipment (RPE)
- Disposable clothing e.g. coveralls

- Footwear and gloves.

Where PPE is used and contaminated with asbestos it must be managed in accordance with the section above on Decontamination.

Although PPE can be effective in controlling the risk from airborne asbestos fibres, the successful implementation and maintenance requires that:

- The correct selection of PPE, including respirator, cartridge and coveralls, is made;
- The PPE is given to each worker;
- All workers who are working with asbestos, wear the PPE correctly by being given adequate training and supervision to enable them to fit and use the equipment and conduct the task in a safe manner; and
- PPE be appropriately maintained by checking before and after use to ensure the components are in good working order and are not damaged.
- In relation to specific items of PPE, the following expectations must be met:
 - Disposable overalls must have fitted hoods and cuffs and be rated type 5, category 3 (prEN ISO 13982-1); and must be either disposed of or suitably bagged for laundering as asbestos-contaminated clothing:
 - Open pockets and/or velcro fastenings must not be used. Fitted hoods must always be worn over the straps of respirators and loose cuffs must be sealed with tape
 - Any clothing worn under coveralls must be disposed of or suitably bagged for laundering as asbestos-contaminated clothing.
 - Footwear must be laceless e.g. gumboots. Where boot covers are worn, they must be of a type that has anti-slip soles to reduce the risk of slipping; and be:
 - Either decontaminated before being removed from the asbestos work area or
 - Disposed of as asbestos waste at the end of the work.
 - Disposable gloves must be risk assessed according to the task to be performed, and be:
 - Disposed of as asbestos waste at the end of the work
 - Effective hygiene of the hands, fingers and fingernails must be carried out each time workers leave the asbestos work area.
 - Respiratory Protective Equipment (RPE) must be selected depending on:
 - The nature of the asbestos work
 - The maximum probable concentration of asbestos fibres to be encountered
 - Any personal characteristics of the wearer that may affect the facial fit of the respirator
 - The most efficient respirator for the task should be, as determined by a competent person
 - Always be worn under fitted hoods and remain worn until all contaminated clothing has been vacuum cleaned and/or removed and bagged for disposal
 - Personal washing has been completed

- It's ability to comply with Australian and New Zealand Standard 1716 Respiratory Protective Devices
- Be selected, used and maintained in accordance with Australian and New Zealand Standard 1715 Selection, Use and Maintenance of Respiratory Protective Devices.

3.2.1.7 Unexpected Finds Protocol

In the event that any material is suspected of containing potentially hazardous substance is found, the Contaminated Land Management Procedure (Including Unexpected Contamination and Asbestos Finds). This includes a stop work order.

4 Compliance Management

4.1 Roles and Responsibilities

The organisational responsibilities and accountabilities in relation to environmental management throughout Project construction works are outlined in the overarching CEMP.

4.2 Induction and Training

4.2.1 Environmental Induction

All CBGU staff, subcontractors and visitors to worksites must attend general induction training that covers general environmental management requirements, site-wide controls and site-specific and work specific risks and mitigation measures. Further details regarding environmental induction requirements have been outlined in the overarching CEMP.

4.2.2 Environmental Training

Details regarding environmental training requirements have been outlined in the overarching CEMP.

Train CBGU staff and subcontractors on waste management procedures and principles including opportunities for reuse and waste management procedures for segregation of recyclable materials and storage of waste, where practicable.

All workers who are carrying out asbestos-related work including its removal must be trained in the identification and safe handling of asbestos including the required control measures and be appropriately qualified, regulatory licensed and formally trained in accordance with the relevant legislation, codes of practice and relevant Australian Standards. Workers who carry out work where naturally occurring asbestos is likely to be found, must be trained in hazards and risks associated with naturally occurring asbestos.

The information, training and instruction provided to a worker must include:

- Types, uses and likely presence of asbestos in the workplace
- Exposure standard and control levels for asbestos
- The location of the Asbestos Register
- The location of the work procedures to be complied with during the work
- The nature of the work being carried out
- The risks associated with the work
- The control measures that must be in place including the use of any Personal Protective Equipment required including respiratory protective equipment (RPE)
- Purpose of any exposure monitoring or health monitoring that may occur.

Records of all training must be kept for five years and available for Regulatory inspection.

4.3 Communication

Communication strategies including internal communication, external and Government Authority consultation, and stakeholder and community liaison must be undertaken in accordance with the CEMP and the CSEP.

4.4 Incidents and Emergencies

4.4.1 Incident Notification

The immediate response to all incidents is to make the area safe and undertake measures to prevent further environmental harm. The Environment and Sustainability Manager, Shared Services Director and Project Director should be notified immediately in the event of an environmental incident.

Further details regarding Incident Notification, have been outlined in the overarching CEMP.

4.4.2 Incident Types

Incidents include, but are not limited to:

- Any breach of the legislation or an approval or permit condition
- Contamination of land
- Unauthorised dumping of waste
- Spills of fuel, oil chemical or other hazardous material.

4.4.3 Incident Prevention Management

Incident Classification and Procedure has been identified within the overarching CEMP.

4.4.4 Incident Investigation

The Incident Investigation process has been specified in the overarching CEMP.

4.4.5 Complaint Management

All complaints are to be dealt with in accordance with the complaints management procedure outlined in the CEMP.

5 Inspections, Monitoring, Auditing and Reporting

This section outlines the compliance processes that have been adopted by CBGU to ensure compliance with the Coordinator-General Conditions and any other legislative requirements. The section below details specific requirements relating to Inspections, monitoring, auditing requirements have not been outlined in the overarching CEMP.

5.1 Environmental Monitoring

5.1.1 Performance Monitoring

Monitoring will be undertaken at various sensitive receptors to validate the impacts predicted for the Project and to measure the effectiveness of environmental controls and implementation of this AMP. The monitoring also helps in addressing any potential Community Complaints that may be made. The monitoring requirements specific to waste are outlined below.

- In areas where asbestos has been identified, an asbestos clearance inspection is to be undertaken in accordance with relevant Australian standards, legislative requirements and code of practices.
 - The Asbestos Clearance Inspection Certification is to be provided prior to the area being reoccupied and returning to normal use.
 - The inspections should comprise a gridded walkover across areas of potential asbestos impact. The walkovers may include raking where surface conditions allow. Where raking is undertaken, ideally a minimum of three (3) raked passes in two directions (with 90 degrees' directional change between each pass) over the area with either a mechanical or manual rake which is capable of probing to 10 cm depth will be conducted. Site features such as rock walls and hard compacted ground may limit the feasibility and effectiveness of raking.
- Ensure that sign-off from a licensed asbestos contractor (or competent person) has been obtained and documented prior to any partial or full demolition of buildings and structures.
- Daily site inspections may be undertaken and documented by the CBGU throughout the construction phase and are to include identification of any actual or potential contamination issues or risks.

5.1.2 Auditing

Audits will be undertaken to assess the effectiveness of environmental controls, compliance with the CEMP, compliance with Environmental Design Requirements, and other relevant permits, approvals, and guidelines. There will be a monthly internal audit undertaken by CBGU as per the CEMP, who is to report findings to the Environmental Monitor and the Authority. This includes reporting on compliance with the CEMP and the Imposed Conditions.

Audits will be undertaken in accordance with the overarching CEMP.

5.1.3 Corrective Action

Corrective actions must be undertaken where monitoring or validated complaints indicate the environmental outcomes or Imposed Conditions are not achieved in relation to particular works, either because the

performance criteria have not been met, or mitigation measures have not been implemented. Where corrective actions become necessary, the works that do not achieve the environmental outcomes or meet the Imposed Conditions must cease until the corrective actions have been developed and implemented.

The process for developing and implementing Correction Actions has been specified within the overarching CEMP.

5.2 Reporting

5.2.1 Monthly Report

To ensure compliance with Coordinator-General Condition 6 and where relevant the CEMP, CBGU will prepare and submit a monthly report within 6 weeks from the end of the month to the Delivery Authority.

The specific requirements of the Monthly Report have been identified in the CEMP.

5.2.2 Incidents and Non-Compliance Reporting

Environmental incidents meeting the criteria of an NCE shall be notified verbally as soon as practical and in writing within 48 hours of becoming aware of an incident occurring to the Development Authority. Notification will generally be undertaken by the Environment and Sustainability Manager or a member of the CBGU environment team. Additional notification of the incident to the relevant authorities, EM and parent companies will also be undertaken as required.

Further details regarding reporting, including provision of interim and detail reports have been provided in the overarching CEMP.

5.3 Documentation and Communication

5.3.1 Environmental Records

The process for managing and collecting environmental records is detailed in the overarching CEMP. All relevant records in relation to water quality must be maintained in accordance with these requirements.

5.3.2 Document Control

Document control requirements have been specifically addressed within the overarching CEMP.

5.3.3 Review

The AMP must be reviewed and, if necessary, revised at least once every five years or when:

- There is a review of the Asbestos Register or another control measure
- Asbestos is removed, disturbed, sealed or enclosed
- The Plan is no longer adequate for managing the asbestos
- A Health and Safety Representative requests a review if they reasonably believe the health and safety of a worker may be affected by asbestos and the Asbestos Management Plan was not adequately reviewed.

Revisions to this AMP may be required during the Project to reflect changing circumstances or identified deficiencies. Revisions may result from:

- Management Review

- Audit (either internal or by external parties)
- Complaints or non-conformance reports
- Changes to the Company's standard system.

Revisions shall be reviewed and approved prior to issue. Updates to this AMP are numbered consecutively and issued to holders of controlled copies.

5.3.4 Communication

All internal and external communication with all stakeholders including the public, Coordinator-General, government agencies and the Delivery Authority must be done in accordance with the requirements of the CEMP.