



CPB Contractors Pty Ltd
Asbestos Management Plan (Buildings)

Nepean Hospital Redevelopment Stage 2
Kingswood NSW

9 September 2022
63096-147437 (Rev 0)
JBS&G

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1. Introduction

1.1 Background

JBS&G Australia Pty Ltd (JBS&G) was engaged by CPB Contractors Pty Ltd (CPB, the client) to prepare an Asbestos Management Plan (AMP) for structures located at the Nepean Hospital Redevelopment Stage 2, Nepean Hospital, Kingswood, NSW 2747 (the site).

A hazardous building materials survey (HBMS) was conducted by JBS&G (JBS&G 2019) of the satellite buildings, with non intrusive HBMS undertaken on North Block by JK Environmental Pty Ltd (JKE 2020). The previous HBMS's identified the presence of non-friable asbestos containing materials (ACM) and lead paint within the structure. The HBMS included the sampling of suspected ACM and details of the ACM locations, conditions and quantities.

An additional destructive HBMS is proposed to be undertaken of some areas of the site within the coming weeks. Future destructive HBMS will be undertaken following decanting of patients/staff from the remainder of the building proposed to be demolished. This AMP will be reviewed following completion of the upcoming HBMS. A standalone AMP will be required in the future for inground/soil asbestos contamination.

This AMP has been prepared to comply with current Work Health and Safety (WHS) legislative requirements for workplaces with known ACM present.

This AMP has been prepared in accordance with the requirements outlined in:

- WHS Act (2011);
- WHS Regulation (2017);
- Safe Work Australia's (2018) Code of Practice: How to Manage and Control Asbestos in the Workplace (SWA 2018a); and
- Safe Work Australia's (2018) Code of Practice: How to Safely Remove Asbestos (SWA 2018b).

This AMP is based on the identified ACM as reported in JBS&G 2019 and JKE 2020. Additional asbestos or ACM may be present at the site in previously inaccessible areas.

1.2 Objectives

The objective of this AMP is to detail the procedures required to minimise the risk of exposure to asbestos for all site occupants/workers, maintenance contractors, visitors or future site occupants for the ongoing operation of the site and to properly outline the correct procedures to manage any maintenance, removal or disposal of the remaining non-friable ACM, if required.

2. Asbestos Summary

Asbestos is a general term that covers a number of fibrous minerals. Asbestos is the fibrous form of mineral silicates belonging to the serpentine and amphibole groups with the most common types being crocidolite (blue asbestos), amosite (brown or grey asbestos) and chrysotile (white asbestos).

Asbestos and asbestos containing materials were used in a variety of domestic and commercial applications from the 1950s up until the mid 1980's, however, it was not until 31 December 2003, that asbestos and all products containing asbestos were banned throughout Australia. It is currently illegal to import, store, supply, sell, install, use or reuse materials that contain asbestos.

ACM can be classified as being present in either a non-friable form or friable form.

Non-friable ACM is defined in SWA 2018a as being *"...material containing asbestos that is not friable asbestos. Including materials containing asbestos fibres reinforced with a bonding compound"*.

Friable asbestos is defined in SWA 2018a as being *"...material that is in a powder form or that can be crumbled, pulverised or reduced to a powder by hand pressure when dry, and contains asbestos"*.

Asbestos materials in a non-friable form (e.g. contained within cement or resins) do not present an immediate health risk, if they remain undisturbed and in a good condition. It is the inhalation of fibres from friable forms of asbestos or dusts generated by disturbing/breaking non-friable materials may lead to the risk of asbestos related disease.

3. Summary Site Condition

This AMP applies only to the building materials associated with the structure located at the site and does not include any other areas of the site including the sub-slab soils, surrounding soils, mechanical items and hazardous building materials other than asbestos.

Non-friable ACM has been confirmed to be present within the structure at the site via laboratory testing and visual assessment in various quantities and locations and is outlined in the asbestos registers presented in JBS&G (2019) and JKE (2020).

4. Application of AMP Responsibilities

This AMP and the requirements set out within shall apply during all future site operations within the structure at the site until such time as the ACM is removed from the site or is otherwise shown to not present a risk to human health if exposed.

The requirements of this AMP are intended to apply for the ongoing operation of the site as a commercially leased premises and to any activities within the site which could involve disturbance or exposure of ACM.

The following detail is provided below on the key responsibilities for specific personnel.

4.1 Site Owner/Controller

It is the responsibility of the Site Owner/Controller to ensure that:

- A person in a senior management position in the organisation is appointed as Site AMP Manager and given the responsibility for ensuring the maintenance of the provisions of this AMP. The Site AMP Manager may appoint appropriate personnel to implement the AMP day to day but will remain the responsible manager to whom the appointed personnel must report.
- Site personnel or contractors that must undertake works that may disturb or damage the identified non-friable ACM or require to remove any amount of non-friable ACM to complete their works are inducted into the AMP and are aware of their responsibilities with regard to health and safety and protection of the environment.
- Any incidents that may occur with reference to the identified non-friable ACM are reported in a timely manner to the appropriate statutory authorities, as necessary in accordance with current legislation.

4.2 Site AMP Manager

The Site AMP Manager shall be responsible for:

- Ensuring known and identified occurrences of ACM are appropriately labelled (**Section 5.2**) and replacing labels if required.
- Ensuring any re-inspection requirements are met (**Section 5.3**).
- Ensuring the Site Asbestos Register is kept up to date and any changes to the status of ACM at the site is recorded in the Site Asbestos Register.

In the event that works are required to be conducted which may disturb or damage the identified non-friable ACM or require to remove any amount of non-friable ACM, the Site AMP Manager shall be responsible for:

- Ensuring that any persons or sub-contractors, who are engaged on the site, are inducted into the AMP and are aware of their responsibilities in relation to the presence of ACM.
- Management of all operations, employees and subcontractors.
- Ensure compliance with all requirements outlined in this Plan and statutory requirements.
- Where necessary, co-ordinate exposure or control asbestos air monitoring, data assessment and reporting.
- Where necessary, review environmental reports and inspections and initiating any actions to rectify.
- Participate in incident investigations regarding the proposed works.

- Participate in meetings and programs regarding the proposed works.
- Oversee the implementation of control measures at the site for the duration of the proposed works.
- Ensure that there is no residual risk of exposure to remaining asbestos following the completion of the proposed works.

4.3 All Other Site Personnel

It is the responsibility of all other site personnel, including staff, contractors and visitors to:

- Comply with the requirements of this AMP and any associated procedures.
- Attend and comply with any AMP related training when required.
- Ensure no ACM is removed from the site without prior notification to and approval from the Site AMP Manager.
- Report any asbestos related incidents to the Site AMP Manager.

5. Asbestos Management Plan for Ongoing Operational Areas

The following sections detail the requirements for the management of ACM identified within areas of ongoing operation of the site. Areas subject to imminent removal and demolition works are exempt from the requirements.

5.1 General

In-situ non-friable ACM at the site must be maintained in a good and stable condition for the duration of the sites future operation to ensure there is no asbestos exposure hazard presented. To remain in a good and stable condition, the remaining *in-situ* non-friable ACM must be suitably sealed with no exposed or damaged edges or surfaces and be in a location that is not likely to be damaged by general site use.

5.2 Labelling and Signage

In-situ non-friable ACM must be labelled with asbestos warning signs in accordance with Australian Standard AS1319 *Safety Signs for the Occupational Environment*. Examples of typical warning signs are shown below.



In addition to this, asbestos warning signs should be installed at all entrances to the structure to inform personnel of the presence of ACM. In the event that all occurrences of ACM cannot be labelled, a 'permit to work' system must be implemented to ensure occurrences of ACM are identified to any site personnel prior to commencing works.

5.3 Re-Inspections

Re-inspections of the *in-situ* non-friable ACM should be undertaken at least once every 5 years by a competent person or a Licensed Asbestos Assessor (LAA). The purpose of the reinspection is to undertake a visual assessment of the status and condition of the remaining *in-situ* non-friable ACM. The results of the re-inspections shall determine if remedial works (e.g. removal, encapsulation) is required.

The existing Site Asbestos Register shall be updated after each re-inspection with the details of the re-inspection, including the date of re-inspection, the competent person or LAA's name and comments to reflect the observations made during the re-inspection and any required actions recommended.

5.4 Record Keeping

The Site AMP Manager shall keep detailed records of all works related to the *in-situ* non-friable ACM at the site including, but not limited to:

- Copies of all asbestos survey and/or other relevant survey reports.
- Site induction / AMP induction records indicating that site employees/occupants have been made aware of the present asbestos hazard at the site (**Appendix B**).
- Records of any asbestos removal works that may have taken place at the site (**Appendix D**).
- Clearance certificates with any accompanying airborne asbestos fibre monitoring reports indicating that the asbestos removal areas are suitable to be reoccupied.
- All records and documents relating to asbestos at the site are to be retained by the site owner for 70 years after the ACM is removed or the building is demolished.

6. Asbestos Removal (Refurbishment/Demolition Areas)

The following sections detail the requirements for the removal and handling of ACM identified within the structure as detailed in the Hazardous Materials Register (**Appendix A**) in the event that remedial works are proposed to occur or any disturbance of the identified ACM is required.

6.1 General

Prior to the removal of any non-friable ACM from the site, a Class A (friable and non-friable) or Class B (non-friable only) licensed asbestos removal contractor shall be engaged to undertake the works. No friable asbestos has been identified at the site to date.

It is the responsibility of the licensed asbestos removal contractor to:

- Submit a SafeWork NSW permit to remove non-friable ACM where greater than 10 m² is proposed to be removed.
- Prepare a site specific asbestos removal control plan (ARCP) for the proposed removal works.
- Prepare Safe Work Method Statements (SWMS) / Job Risk Analysis (JRA) for the proposed removal works.

The engaged asbestos removal contractor must have suitably professional indemnity and public liability insurance policies prior to commencing the works.

All asbestos removal works must be undertaken in accordance with the conditions of the asbestos removal contractor's licence, removal contractors ARCP and SWA 2018b or the relevant legislative requirements enforceable at the time.

A competent person or LAA should be engaged to review the licensed asbestos removal contractor's documentation and supervise the removal works, however, it is not compulsory.

6.2 Airborne Asbestos Fibre Monitoring

It is considered best practice to undertake airborne asbestos fibre monitoring in accordance with the National Occupational Health and Safety Commission's *Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres – 2nd Edition* [NOHSC: 3003(2005)].

An independent competent person or LAA should be engaged to complete the air monitoring for the duration of the asbestos removal works. Safe Work Australia's *Workplace Exposure Standards for Airborne Contaminants* (SWA 2018c) identifies the current exposure standard for a standard 8 hour shift as:

- Chrysotile Asbestos – 0.1 fibres/mL;
- Amosite Asbestos – 0.1 fibres/mL;
- Crocidolite Asbestos – 0.1 fibres/mL; and
- Other forms of asbestos or a mixture of any forms of asbestos – 0.1 fibres/mL.

Conservative trigger action levels for daily concentrations of airborne fibres have been outlined in SWA 2018b to identify potential fibre releases prior to an exceedance of the national exposure standard. These trigger action levels are shown below.

Trigger Action Level	Action
< 0.01 fibres/mL	Works are suitable to continue without any additional control measures
0.01 - 0.02 Fibres/mL	Review control measures currently in place
> 0.02 fibres/mL	Cease work, notify the regulator and identify the cause of fibre release

6.3 Dust Monitoring

Static dust monitoring must be undertaken during all hazardous material removal and demolition works. The monitoring shall generally occur between the hours of main construction works (0700-1700). A minimum of four locations is recommended, however the final number and location of dust monitors will depend on the nature and extent of removal/demolition works as well as the proximity to sensitive receptors. A maximum concentration limit of 50 µg/m³ (0.05 mg/m³) for particles 10 microns or less (PM₁₀) has been adopted from the *National Environment Protection (Ambient Air Quality) Measure (NEPM)* (2015¹) as the daily site criterion.

6.4 Storage and Disposal of Asbestos Waste

All asbestos waste generated during any asbestos removal works, including used disposable personal protective equipment (PPE), shall be double bagged in 200 µm thick polyethylene bags. Bags should be filled to no more than 50% of capacity and contents should be 'wetted' down before sealing. Bags should be 'goose-neck' tied and sealed with suitable gaffe tape or similar. Asbestos waste bags should be decontaminated prior to removal from site and should be labelled with appropriate asbestos warning labels indicating the waste bag's contents.

All asbestos waste is to be transported and disposed off site to a suitably licensed waste facility in accordance with the requirements of the NSW EPA *Waste Classification Guidelines – Part 1: Classifying Waste* (NSW EPA 2014).

6.5 Clearance Certification

Clearance to re-occupy an asbestos removal work area shall be determined by undertaking a thorough clearance inspection by a competent person or LAA. Asbestos removal work boundaries shall remain in place until clearance has been provided by the competent person or LAA. Clearance air monitoring may be deemed necessary by the inspecting competent person or LAA and the results of which shall form part of the clearance certificate and must comply with action levels outlined in **Section 6.2**.

It is compulsory for a clearance certification to be completed following any non-friable asbestos removal greater than 10 m², or any friable asbestos removal, and is considered best practice for any other minor asbestos removal programs.

6.6 Record Keeping

The Site AMP Manager shall keep detailed records of all asbestos removal works undertaken at the site (**Appendix D**) and shall update this AMP and the Site Asbestos Register accordingly for each asbestos removal event to reflect:

- Location of asbestos removal works;
- Extent of asbestos removal works;
- Dates of completed asbestos removal works;
- Licensed asbestos removal contractor details; and
- Clearance certification details including name of competent person or LAA.

¹ *National Environment Protection (Ambient Air Quality) Measure*, Department of the Environment (NEPM, 2015)

7. Unexpected Finds Protocol

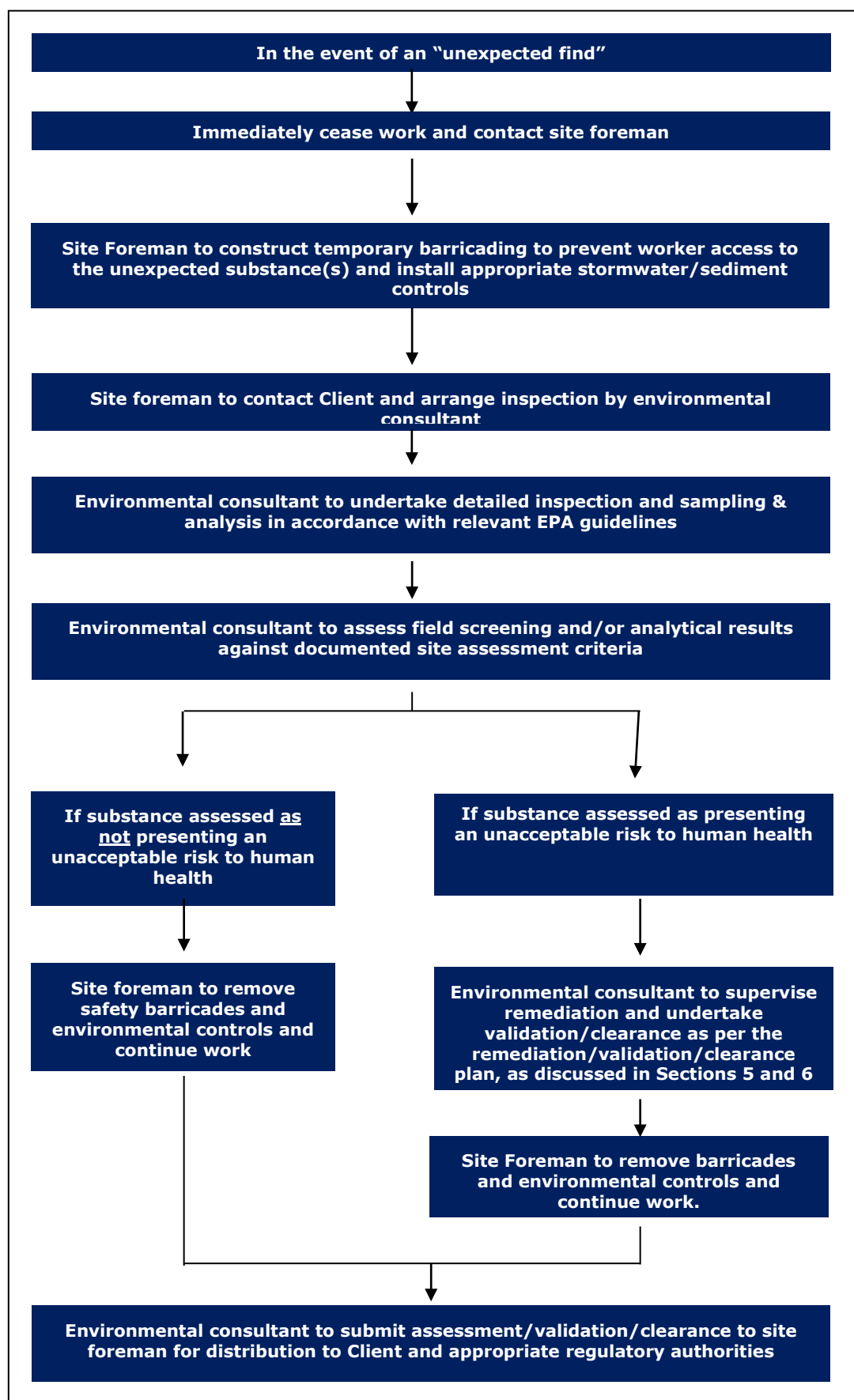
It is acknowledged that previous investigations of the site have been undertaken to assess the identified contaminants of potential concern in selected parts of the site. However, ground/material conditions between sampling points may vary, and further hazards may arise from unexpected sources and/or in unexpected locations during removal/remediation. The nature of any residual hazards which may be present at the site are generally detectable through visual or olfactory means, for example (presented in **Appendix E** for use on-site):

- Bonded ACM;
- Friable ACM such as lagging (visible);
- bottles / containers of chemicals (visible);
- construction / demolition waste (visible);
- ash and/or slag contaminated soils / fill materials (visible);
- petroleum contaminated soils (staining / discolouration visible) beyond the identified impact, or at levels that prevent off-site disposal without treatment; and
- volatile organic compound contaminated soils (odorous).

As a precautionary measure to ensure the protection of the workforce and surrounding community, should any of the abovementioned substances be identified (or any other unexpected potentially hazardous substance), the procedure summarised in **Flowchart 7.1** is to be followed.

An enlarged version of the unexpected finds protocol, suitable for use on-site, should be posted in the Site Office and referred to during the Site Specific Induction by the Contractor.

Flowchart 7.1 – Unexpected Finds Protocol



8. Limitations

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based in part on information obtained from the client and other parties.

The advice herein relates only to this project and all results conclusions and recommendations made should be reviewed by a competent person with experience in asbestos related management projects, before being used for any other purpose.

JBS&G accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced without prior approval by the client, or amended in any way without prior approval by JBS&G, and should not be relied upon by other parties, who should make their own enquiries.

Sampling and chemical analysis of environmental media is based on appropriate guidance documents made and approved by the relevant regulatory authorities. Conclusions arising from the review and assessment of environmental data are based on the sampling and analysis considered appropriate based on the regulatory requirements.

Limited sampling and laboratory analyses were undertaken as part of the investigations undertaken, as described herein. Conditions between sampling locations and media may vary, and this should be considered when extrapolating between sampling points. Chemical analytes are based on the information detailed in the site history. Further chemicals or categories of chemicals may exist at the site, which were not identified in the site history and which may not be expected at the site.

The conclusions and recommendations reached in this report are based on the information obtained at the time of the investigations.

This report does not provide a complete assessment of the environmental status of the site, and it is limited to the scope defined herein. Should information become available regarding conditions at the site including previously unknown sources of contamination, JBS&G reserves the right to review the report in the context of the additional information.

Figures

NOTE: ALL EARTHWORKS QUANTITIES ARE THEORETICAL AND INDICATIVE ONLY, BASED UPON BANKED VOLUMES WITH NO ALLOWANCE FOR BULKING FACTORS. CONTRACTOR TO MAKE THEIR OWN ASSESSMENT OF EARTHWORKS QUANTITIES

CUT / FILL QUANTITIES - OVERALL	
TOTAL CUT	-21,000m³
TOTAL FILL	0m³
TOTAL BALANCE	21,000m³ (CUT)

NOTES:

1. BULKING AND COMPACTION FACTORS HAVE NOT BEEN APPLIED TO THE CUT AND FILL QUANTITIES.
2. A BOXING OUT OF 300mm FOR THE TOWER FLOOR SLAB HAS BEEN ALLOWED FOR IN THE CUT AND FILL CALCULATIONS.
3. DETAILED BULKING AND CUT / FILL QUANTITIES FOR FOOTINGS, TRENCHING AND THE LIKE HAS NOT BEEN INCLUDED IN THE CUT AND FILL ASSESSMENT.
4. ALL TOPSOIL SHALL BE RETAINED ON THE DEVELOPMENT SITE AND UTILISED EFFECTIVELY TO ENCOURAGE APPROPRIATE RE-VEGETATION.
5. CONTRACTOR TO ALLOW FOR SACRIFICIAL PROTECTION LAYER OF 200mm COMPACTED THICKNESS OF DG540 FOR BULK EXCAVATION SURFACE.
6. ALL EARTHWORK BATTERS ARE TO BE PROTECTED AND STABILISED WITH GEOFABRIC (BIDIM A24 OR EQUIVALENT) TO PREVENT EROSION FOR THE DURATION OF WORKS AND UNTIL THE MAIN WORKS CONTRACTOR TAKES POSSESSION OF SITE.
7. ALL EARTHWORKS AND CIVIL WORKS ARE TO BE COMPLETED IN STRICT ACCORDANCE WITH PROJECT GEOTECHNICAL REPORT AND CIVIL WORKS SPECIFICATION.
8. THE CONTRACTOR IS TO ENSURE THAT ALL EXCAVATIONS ARE ADEQUATELY DRAINED AND DE-WATERED TO PREVENT DAMAGE TO THE FINAL EARTHWORK LEVEL.
9. CONTRACTOR TO INSTALL SOIL SEDIMENT AND EROSION CONTROLS TO BE IN ACCORDANCE WITH THE BLUE BOOK FOR THE DURATION OF WORKS
10. CONTRACTOR TO ADVISE DURING TENDER ALTERNATIVE CONSTRUCTION METHODOLOGY FOR THE ONSITE CONTAINMENT OF CONTAMINATED MATERIAL
11. CONTRACTOR TO ALLOW TO DEMOLISH AND CUT DOWN EXISTING STRUCTURAL PILES TO 500mm BELOW BULK EARTHWORKS LEVEL.
12. CONTRACTOR IS TO ALLOW FOR THE LOWERING OR DIVERSION OF EXISTING SERVICES TO ALLOW FOR THE CONSTRUCTION OF THE PROPOSED STORMWATER DIVERSION.

NOTE: ALL EARTHWORKS QUANTITIES ARE THEORETICAL AND INDICATIVE ONLY, BASED UPON BANKED VOLUMES WITH NO ALLOWANCE FOR BULKING FACTORS. CONTRACTOR TO MAKE THEIR OWN ASSESSMENT OF EARTHWORKS QUANTITIES

BARBER AVENUE

STAGE 2
LEVEL 00
BEL 48.70

STAGE 2
LEVEL 01
BEL 53.24

PART EXISTING NORTH
BLOCK TO REMAIN
(FFL 54.34)

EXISTING EAST BLOCK

Appendix A Site Hazardous Materials Register

Refer to JBS&G 2019 and JKE 2020 reports.

Appendix B AMP Induction Form

Date	Name	Signature

Appendix C Asbestos Register Review and Reinspection

DATE	AREA INSPECTED	COMMENTS	INSPECTIG COMPANY AND PERSONNEL DETAILS	SITE AMP MANAGER SIGNATURE

Appendix D Asbestos Removal Works Record

[illegible]

Appendix E Unexpected Finds Protocol

**BE AWARE
UNEXPECTED HAZARDS MAY BE PRESENT**



drums



asbestos



chemical bottles



odour

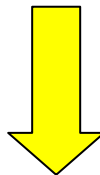


ash / slag

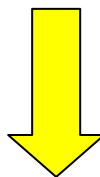


demolition waste

if you SEE or SMELL anything unusual



STOP WORK & contact the Site Foreman



do not restart working before the area has been
investigated and cleared by an Environmental
Consultant

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