Mulgoa Excavations Pty Ltd C/-
Precise Planning

Hazardous Material Protocol:
25 Martin Road,
Badgerys Creek, NSW.

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martens consulting engineers

ENVIRONMENTAL

WATER

WASTEWATER

GEOTECHNICAL

CIVIL

PROJECT MANAGEMENT

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All enquiries regarding this project are to be directed to the Project Manager.

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1 Introduction

1.1 Overview

This hazardous material protocol (HMP) is prepared by Martens and Associates (MA) Pty Ltd for Mulgoa Excavations Pty Ltd C/-Precise Planning for the purpose of outlining control strategies and operating procedures for hazardous material management at a proposed resource recovery facility located at 25 Martin Road, Badgerys Creek, NSW ('the site').

1.2 Objectives and Scope

HMP objectives are to document recycled material handling procedures at the facility to provide:

- Safe work environment for site workers and surrounding sensitive receptors.
- Minimise the risk of hazardous material being received and processed onsite.
- Procedures to deal with unexpected finds (UXF).

This HMP covers procedures associated with the receipt, processing and management of material to be processed onsite.

1.3 Regulatory Requirements

Statutory documents referred to in preparing this HMP include:

- Work Health and Safety Act (2011).
- Work Health and Safety Regulations (2011).
- Code of Practice For The Safe Removal of Asbestos 2nd Edition [NOHSC: 2002(2005)].
- Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)].
- Safe Work Australia Code of Practice - How to Manage and Control Asbestos in the Workplace.
- Safe Work Australia Code of Practice - How to Safely Remove Asbestos.

- Safe Work Australia Code of Practice - How to Manage Work Health and Safety Risks.
- Safe Work Australia Code of Practice - Managing the Work Environment and Facilities.

1.4 Definitions

Asbestos means the asbestiform varieties of mineral silicates belonging to the serpentine or amphibole groups of rock-forming minerals, including actinolite asbestos, grunerite (or amosite) asbestos (brown), anthophyllite asbestos, chrysotile asbestos (white), crocidolite asbestos (blue) and tremolite asbestos.

Asbestos containing material (ACM) means any material or thing that, as part of its design, contains asbestos.

Competent person means a person who has acquired, through training, qualification or experience, the knowledge and skills to carry out the task.

Construction and demolition waste means materials in the waste stream which arise from construction, refurbishment or demolition activities.

Friable material is material that is in a degraded condition such that it can be broken or crumbled to a powder form by hand pressure.

Green Waste is biodegradable waste that can be composed of garden or park waste, such as grass or flower cuttings and hedge trimmings.

Processing means the crushing, screening and blending of different materials to create a recycled product.

Personal Protective Equipment (PPE) means anything used or worn by a person to minimise risk to the person's health.

Unexpected Finds (UXF) is any potentially hazardous material that is found in waste that has failed to be detected during the waste receivable inspection process.

2 Details of Onsite Processes and Identification of Potential Hazardous Sources of Waste

MA understands that the following types of waste are proposed for storage and or processing at the site:

- Demolition and construction waste.
- Concrete waste.
- Green waste.

Hazardous waste is broadly defined as waste material that is dangerous or potentially harmful to human health or the environment. When considering the proposed waste types to be stored and processed onsite, asbestos waste is considered the most probable source of hazardous waste to be encountered onsite. The protocols outlined in this report are aimed at reducing the risk of asbestos (and other potentially hazardous materials) from entering the site.

Any material entering the site which is determined to be outside waste streams listed above, is to be treated as an unexpected find (UXF) and relevant UXF protocols (Section 6 and Attachment A) are to be undertaken.

Material, the presence of which would warrant rejection of a load, include:

- Fibrous cement sheeting.
- Asbestos cement pipes.
- Treated pine products (Koppers logs, treated pine sleepers and fence palings etc.).
- Electrical components such as transformers (potential for PCBs).
- Painted timber.

3 Roles and Responsibilities

3.1 Overview

The following sections outline roles and responsibilities of future site employees and workers under this HMP. Site employees are to be competent people who have undergone site specific training to complete the roles outlined in this protocol.

3.2 Site Manager

The Site Manager is responsible for:

- Administering and implementing this HMP.
- Ensuring that the site operations are conducted following the procedures outlined within this HMP.
- Ensuring that all staff meet the definition of 'competent person' and acquire the necessary training to carry out their duties.
- Monitoring the ongoing operation of the HMP to assess its efficiency.
- Ensuring that the rejected load register is completed and rejected load certificates are issued if necessary.
- Managing the removal process for any UXF found on the premises.

3.3 Weighbridge Operator

The Weighbridge Operator is responsible for:

- Discussing with delivery drivers the contents of their loads as they are presented at the weighbridge.
- Visually inspecting waste loads at the weighbridge for any signs of visible asbestos (or any form of unacceptable material listed in Section 2) within the load.
- Assigning the waste load with either a low or high risk category (Section 4).
- Managing the load rejection process for any loads rejected due to containing asbestos or other unaccepted material.

- Managing the rejected loads register.
- Issuing a docket for each load detailing material type and classification and issuing it to the driver.
- Directing loads to the appropriate dumping area based on initial classification.

3.4 Dump Area Worker

The Dump Area Worker is responsible for:

- Wearing the correct PPE at all times to minimise any exposure to potential hazardous material within loads.
- Communicating with the driver to direct the load to the appropriate dump area.
- Isolating any suspect load awaiting further inspection.
- Obtaining the docket from the driver to check the load has been initially inspected.
- Inspecting the load once tipped and prior to it being placed in a stockpile. Where unacceptable material (Section 2) are identified, load to be rejected.
- Signing the inspection report to signify that the second inspection has been carried out and notifying where loads are rejected.
- Collecting all reports and delivering them to the weighbridge.
- Informing the Site Manager of any unacceptable material / rejection loads discovered within the waste stockpile area.

3.5 Plant Operators and Process Workers

Plant Operator and Process Workers are responsible for:

- Keep alert for any unacceptable material listed in Section 2.
- Informing the Site Manager of any UXF discovered.
- Following the UXF procedure outlined within this HMP.

4 Operation Procedures

4.1 Overview

This following section outline standard operating procedures (SOP) that shall be undertake at the site in relation to material handling including:

- Procedures for material inspections and material acceptance protocols.
- Controls at each stage of the recycling process.
- Procedures and disposal protocols for UXF finds.
- Details of compliance and performance audits.

4.2 Pre-acceptance Procedure

The following pre-acceptance procedures shall be in place to minimise the likelihood of acceptance of unacceptable material at the site:

- Clear communication in company advertising material (website, brochures, price lists etc.) that Mulgoa Excavations Pty Ltd does not accept asbestos or potentially asbestos containing waste.
- Clearly visible signage at the site entry and weighbridge detailing that 'no asbestos containing material is accepted at this facility'.
- Establishing a register to record all material loads entering the facility. Register is to record the person responsible for delivering the load, the origin, a material description, weight of material, results of the visual inspection (Section 4.3) and risk rating (Section 4.4).

4.3 Weighbridge Controls

The following controls are to be in place during weighbridge operation:

- Material entering the site is to be confirmed as containing a waste type as listed in Section 2 of this protocol.
- A record of every load entering the facility is to be recorded in a site register (as outlined in Section 4.2).
- Each load is to be visually inspected by the weighbridge operator. The following check points are to be recorded:

- Material meets the general definition of an acceptable site waste type as outlined in Section 2 of this report.

- The material is 'visually free of unacceptable material listed in section 2 of this protocol'.

o Any load that fails a visual inspection is determined to not consist of waste listed in Section 2 of this report to be issued with a rejection certificate and a record noted in the site register.

4.4 Acceptance Procedures

Following the initial weighbridge visual inspection, material shall be classified as low or high risk for ACM impacts based on the risk matrix table outlined below.

Table 1: Material risk matrix.

Material Type	Risk rating
Clean concrete (no formwork)	Low
Clean brick / roofing tiles	Low
Clean asphalt	Low
Mixed construction and demolition waste	High
Green waste	Low

4.5 Dump Area Procedures

Based on the classification given to the load by the weighbridge operator, the load will undergo further inspection and processing.

4.5.1 Low Risk Procedure

Loads classified as low risk by the weighbridge operator, will be unloaded and visually inspected by the dump area workers while the material is being unloaded to determine whether any unacceptable material can be identified.

Where the visual inspection confirms that the load is clear of any unacceptable material, the load shall be added to the waste stockpiles waiting processing.

If unacceptable material is detected, the load must be rejected, wetted down and reloaded. The transporter of the reloaded rejected loads will be redirected to an appropriately authorised disposal facility. The rejected load must be noted in the rejected load register and a reject load certificate completed and provided to the transporter.

4.5.2 High Risk Procedure

Loads classified as high risk by the weighbridge operator, must be unloaded, spread out, turned or raked over by site equipment to enable a comprehensive visual inspection by the dump area workers is completed of all material.

Where visual inspection confirms that the load is clear of any unacceptable material, the load may then be added to the waste stockpiles waiting further processing.

If unacceptable material is detected, the load must be rejected, wetted down and reloaded. The transporter of the reloaded rejected loads will be redirected to an appropriately authorised disposal facility. The rejected load must be noted in the rejected load register and a reject load certificate completed and provided to the transporter.

5 Workers Health and Safety Plan

A site specific workers health and safety plan (WHSP) is to be prepared by the site operator to provide relevant health and safety information for all personnel undertaken work or visiting the site.

Worker health and safety of all onsite workers or visitors is the responsibility of the site operator (Mulgoa Excavation Pty Ltd).

All onsite personnel and visitors must read the WHSP and acknowledge the requirements prior to entering the site.

The WHSP address legislation and relevant guidelines (Section 5.1) and the following:

- Hazardous materials identification (including fuel and chemical management).
- Induction requirements.
- Worker facilities.
- Designation, delineation and control of access to various work zones.
- Community notification.
- Contingency management.
- Roles and responsibilities.
- Training and competency.
- Control measures including personal protective equipment (PPE).
- Incident and emergency response.
- Safe work method statement.
- Audits.

5.1 WHS Legislation and Standards

All onsite works should comply with current legislation, regulation and standards. As a minimum all work is to comply:

- Workplace Health and Safety Act (2011).
- Workplace Health and Safety Regulation (2011).
- Work Safe Australia – How to Safely Remove Asbestos: Code of Practice (2011).

Additional codes of practices and standards that may be applicable to site operations include:

- AS 1940 (2004) – The Storage and Handling of Flammable and Combustible Liquids.
- AS 2436 (2010) – Guide to Noise and Vibration Control on Construction, Demolition and Maintenance Sites.
- Managing the Work Environment and Facilities Code of Practice (December 2011).
- Managing Noise and Preventing Hearing Loss at Work Code of Practice (December 2011).
- Hazardous Manual Tasks Code of Practice (December 2011).
- Work Health and Safety Consultation, Co-operation and Co-ordination Code of Practice (December 2011).

6 Contingency Plan for Processing Stages Operation

6.1 Overview

It is considered possible that during the processing stages of work, unexpected situations may occur including the possibility to uncover unidentified hazardous (or otherwise unacceptable) material. A formal contingency plan for managing unexpected situations should be prepared outlining protocols for managing unexpected situations. Unexpected situations that may arise include:

- Uncovering unacceptable material as listed in Section 2 of this protocol.
- Detection of friable material.
- Generation of unacceptable dust.
- Generation of unacceptable noise.
- Excessive rainfall.

The following sections shall outline procedures to be adopted should any of the above listed events occur.

A flow chart outlining unexpected finds protocol is found in Attachment A.

6.1.1 Unknown Materials

If during material inspection or processing work, material is encountered which may be 'unacceptable material' as listed in Section 2 the following procedures are to be applied:

1. Suspicious material is to be stockpiled on bunded, strong, impermeable plastic sheeting, protected from erosion, with seepage retained.
2. Based on visual inspection, an appropriately qualified environmental consultant will provide interim advice on health and safety, material storage and if required, material disposal to allow site operations to proceed if practicable.
3. Sampling and analysis of the material by the environmental consultant may be required to provide final advice relating to human health, potential environmental impacts and waste disposal.

In the context of the above, some examples of "suspicious" material would include oily or odorous material, drums or metal or plastic chemical containers, friable material.

6.1.2 Friable Material

During the initial visual inspection at the site weighbridge and during dump area inspection works, should any material be identified as potentially friable or weathered to the point of generating fibres, all processing work is to cease and an suspected load is to be immediately wetted down and reloaded.

6.1.3 Control of Dust

Contingency measures are to be prepared and implemented if dust levels exceed acceptable levels (based on onsite observation, measurements by dedicated dust monitoring equipment or community complaints). Possible measures shall include:

- Increased use of water sprays.
- Sheeting utilised to cover exposed areas.
- Changing work protocols i.e. avoid work on windy days.

6.1.4 Control of Noise

Should excessive noise be generated during site works, contingency measures shall be implemented which include:

- Identification and isolation of the source.
- Modification of the action of the source.
- Erection of temporary noise barriers.

6.1.5 Excessive Rainfall

Contingency measures to be undertaken in the event of excessive rainfall include:

- Ensure that sediment and surface water controls are operating correctly.
- Diversion of surface water away from material stockpiles and active work areas.
- Appropriate cover over stockpiles.

7 References

Code of Practice For The Safe Removal of Asbestos 2nd Edition [NOHSC: 2002(2005)].

Code of Practice for the Management and Control of Asbestos in Workplaces [NOHSC: 2018 (2005)].

Safe Work Australia Code of Practice - How to Manage and Control Asbestos in the Workplace.

Safe Work Australia Code of Practice - How to Safely Remove Asbestos.

Safe Work Australia Code of Practice - How to Manage Work Health and Safety Risks.

Safe Work Australia Code of Practice - Managing the Work Environment and Facilities

Work Health and Safety Act (2011).

Work Health and Safety Regulations (2011).

Work Safe Australia – How to Safely Remove Asbestos: Code of Practice (2011).

8 Attachment A – Unexpected Finds Protocol

Unexpected Finds Protocol