



Waste Management Plan

Prepared by
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For

Hanson Construction Materials Pty Ltd
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Specialist Deconstruction Services

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1 PURPOSE

Liberty Industrial (the company) is committed to the promotion of waste avoidance and reduction, and resource recovery and efficiency actions. This aim is achieved through conserving the environment, recycling demolition waste and using recycled products on all of our projects where practicable, aiming to achieve over 90% recycling by weight.

The purpose of this Waste Management Plan is to:

- Identify the types and quantities of waste that would be generated during the undertaking, and the areas in which waste will be stored prior to removal;
- Outline standards and performance measures for dealing with this waste;
- Outline a detailed description of how this waste would be reused, recycled and, if necessary, appropriately treated and disposed of in accordance with New South Wales Environmental Protection Authority (NSW EPA) guidelines on the management of regulated wastes;
- Outline a description of how the effectiveness of these actions and measures would be monitored over time; and
- Outline a description of what procedures would be followed to ensure compliance if any non-compliance is detected;

2 SCOPE

To ensure that all site waste is managed in a lawful and responsible manner meeting Hanson Construction Materials targets, objectives and contract requirements.

3 REFERENCES

- Contaminated Land Management Act 1997;
- Dangerous Goods (Road and Rail Transport) Act 2008;
- Environmentally Hazardous Chemicals Act 1985;
- Protection of the Environment Operations Act 1997;
- Ozone Protection Act 1989;
- Waste Avoidance and Resource Recovery Act 2001;
- Protection of the Environment Operations (Waste) Regulation 2014.
- Work, Health and Safety Act 2011 (NSW)
- Work, Health and Safety Regulation 2017 (NSW);
- How to safely remove asbestos: Code of practice
- Liberty Industrial Management System
- NSW EPA Waste Classification Guidelines (Part 1: Classifying waste)

4 WASTE TYPES AND QUANTITIES

Material	Estimated Quantity Produced / Used (t)	Recyclable (Y/N)	Estimated Quantity Recycled	% Recycled
Concrete & Brick	4508t	Y	4508t	100%
Steel	250t	Y	250t	100%
General rubbish/ Mixed Demolition	53t	N	0	0%
Asbestos	5t	N	0	0%

Notes: All above quantities are estimated figures only. Liberty Industrial will manage all types of waste on site complying with relevant guidelines and regulations listed in section 3 - Reference.

5 OTHER BUILDING WASTE

5.1 FLUOROCARBONS - AIR CONDITIONING UNITS

Depending on their age air conditioning units may contain CFCs, HCFCs or other fluorocarbon refrigerants. It is an offence to discharge fluorocarbon to the atmosphere as they may deplete the ozone layer. The Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 require the recovery, return and safe disposal of ozone depleting and synthetic greenhouse gas refrigerants.

A Restricted Refrigerant Recovery License holder shall degas all of the air conditioning units across the site prior to their removal and disposal.

5.2 SYNTHETIC MINERAL FIBRES - INSULATION

Insulation used in the buildings across the site will likely contain Synthetic Mineral Fibres (SMFs). SMFs are amorphous (non-crystalline) fibrous material. Dust generated from SMFs may cause:

- Discomfort, tickling and dryness of the nose, throat and respiratory tract, especially for those who suffer hay fever, asthma or bronchitis;
- Temporary skin irritation, particularly where there is rubbing from clothing such as cuffs and collars; and
- Severe irritation to eyes.

All workers in contact with SMFs are to wear appropriate PPE including safety glasses, P2 disposable respirators, and disposable coveralls as required. A mist spray is to be applied to the SMF wherever practicable to do so.

SMF is mixed with general waste and disposed of as mixed demolition waste.

5.3 CAPACITORS

Capacitors will be tested for PCB's. Capacitors found to contain PCB's will be stored separately from other wastes, identified and disposed of as regulated waste.

Capacitors not containing PCB's will be disposed of as general waste.

5.4 FLUORESCENT TUBES

Fluorescent tubes will be segregated from other waste onsite.

Fluorescent tubes will be disposed of with a specialist recycler.

5.5 CONTAMINATED SOIL

All contaminated soil will be tested, classified and disposed of as per the determined waste classification.

Potential contaminated soil will be segregated and signposted until results of testing are known.

6 STANDARDS AND PERFORMANCE MEASURES

In order to achieve the waste avoidance and minimisation objectives (90%) recycle rate, Liberty Industrial follows the following hierarchy of waste management principles in all aspects of operations:

Avoid	unnecessary resource consumption
Reduce	waste generation and disposal
Re-use	waste resources without further manufacturing
Recycle	waste resources to make the same or different products
Recover	waste resources, including the recovery of energy
Treat	waste before disposal, including reducing the hazardous nature of waste
Dispose	of waste only if there is no viable alternative

6.1 WASTE TRACKING

The company uses a Waste Tracking System (FRM-123 Waste Register) to record waste types, quantities and disposal methods for all waste streams in the form of a waste register spreadsheet. This spreadsheet records the disposals and contains the following information:

- Tracking of each waste stream;
- Dates of waste disposal;
- Transport information (contractor, rego, truck etc.);

- Licensed facility accepting the waste;
- Records of Waste Transport Certificates;
- Disposal weights of all waste streams, including cumulative total of each waste stream;
- Percentage Recycling Rate;
- Monthly, Quarterly and Yearly analysis of waste quantities and movements;
- Provide corrective actions to rectify any accidental spillage of waste;

This record keeping demonstrates a step towards better waste management, as it allows for the establishment of standard waste levels. Records of waste quantities allow the Project Manager to assess the performance of the undertaking in line with the above waste management principles to avoid and minimise waste to landfill.

6.1.1 Waste Documentation

Liberty Industrial uses FRM-350 Transport/Tipping Form to track daily waste transportation and disposal activities. FRM-350 Transport/Tipping Form is a docket for all waste contractor drivers to sign off when they are transporting the waste off site. FRM-350 records landfill location, vehicle rego, time in/out and weight of the waste.

Records from FRM-350 will directly reflected in FRM-123 Waste Register.

Ref: FRM-123 Waste Register

FRM-350 Transport/Tipping Form

7 WASTE MANAGEMENT

All Asbestos will be managed in accordance with the Asbestos Removal Control Plan.

7.1 MONITORING AND MEASUREMENT

The company will monitor the site waste and record all waste movements from site utilising the waste register as the tracking medium. Waste tracking audits will be undertaken to ensure that the licensed waste removalist take the waste to a lawful facility.

7.2 REPORTING REQUIREMENTS

Waste Register Reports will be produced monthly and include the following details:

- audits and inspections;
- corrective actions;
- training and awareness;
- water use data;

- waste disposal;
- recycled materials;

7.3 WASTE TRACKING SYSTEM PROCEDURE

7.3.1 Objective

The objective of the Waste Tracking System (WTS) is to account for the relocation and/or disposal of all waste material, in addition to any recyclable material removed from site. Asbestos containing materials will be managed separately and removed from site packaged pursuant to the “How to Safely Remove Asbestos Code of Practice”.

The responsibility for recording, maintaining and reporting of this rests with the site Project Manager.

7.3.2 Controls

The Waste Tracking System (WTS) will be used to manage and monitor the movement of waste.

The WTS will:

- Record and document the transfer of each waste load using a waste tracking docket;
- Retain dockets to validate the final destination of all hazardous and nonhazardous waste;
- Document the off-site disposal of waste material using the docket system and the appropriate environmental permits for removal of controlled waste from the site pursuant to the Protection of the Environment Operations (Waste) Regulation 2005.

7.3.3 Actions

The following actions will be used to effectively manage the movement of waste material across and out of the site:

- An initial site induction for all worker(s) involved with the movement and relocation of the waste. They will be informed of the site/location of waste and transport routes to be used;
- A General Waste Register will be used to identify the description of the waste, docket number, transport company, vehicle registration, disposal facility and quantity of the waste;
- A NSW EPA permit must be obtained prior to removal for wastes classified as trackable. The form will be in duplicate with the original retained by the landfill operator and the duplicate retained by the transport driver, once signed as received by the landfill operator;

7.4 INTERNAL WASTE HANDLING PROCEDURE

7.4.1 Objective

As part of the demolition works, site waste will be sorted into waste streams to avoid contamination of the various waste.

Soil and possibly some waste material will be excavated, transported across the site and either temporarily stockpiled, or taken directly off-site for disposal. The objective of this procedure is to ensure the transportation and handling of all waste material within the project area is undertaken in a safe and lawful manner.

7.4.2 Controls

This procedure will be used to control the following tasks and items:

- Regulate the transfer of waste within the project area;
- Identify location of stockpiles; and
- Rate of placement of waste based on compliance to air quality, noise, vibration criteria, stockpile height and any safety concerns.
- Hazardous waste will be separated and segregated, sign posted and clearly marked up. Hazardous waste will be stored in designated skip bins as required.
- Areas to be cleaned up as practically as possible.
- Waste will be segregated and locally stockpiled in the most commercially viable option and housekeeping standard will be upheld at all times.
- Waste management procedures to be emphasised and discussed to the workforce on a regular basis in team meetings such as toolbox talks and monitored by site supervision throughout.

7.4.3 Actions

The following actions are to be used for managing the excavation, transfer, and stockpiling of waste fill including the placement of the final cover.

Excavation

In the event that work has to be undertaken below grade the follow shall apply:

- Penetration and Break-in Permit must be issued before a surface penetration occurs;
- All waste material is to be removed in a damp condition to reduce the potential for dust generation and adverse air quality as per the requirements of the Environmental Management Plan;
- Waste material is to be placed directly into trucks for immediate transfer to the temporary stockpile;

Ref: LI-FRM-014 Work Permit

LI-FRM-036 Excavation, Penetration and Break-in Permit

Transportation

- All loads are to be wet down with a fine water spray to prevent dust emissions prior to leaving the exclusion zone;
- Trucks loading scrap out are to follow the route identified on the Traffic Management Plan and is to be clearly defined with signage where required and kept damp to prevent nuisance dust;
- Spill kits will be located in designated work areas close to haulage routes; and

Stockpiles

- Stockpile locations for waste material will be streamed as identified by the Project Manager in consultation with the client representative, stockpile locations;
- Waste material may only be temporarily stockpiled on top of existing waste fill material or on top of compacted material if on natural ground;
- All temporary stockpile locations are to be inspected daily by the Site Supervisor and at regular intervals by the Project Manager;
- Dust suppression techniques are to be used on the temporary stockpiles in accordance with the Environmental Management Plan.

7.4.4 Monitoring and reporting

Monitoring and reporting will include:

- Accidents involving the spillage of waste material from trucks and the corrective action undertaken using an Incident Report form;
- Earthmoving and traffic accidents are to be reported verbally (radio communication) and in writing directly to the Site Supervisor immediately following the incident; and
- Routine random checks will be undertaken by the Project Manager of waste handling practices to ensure conformance to this procedure;

Ref: FRM-031 Incident Report

7.4.5 Domestic Waste

Domestic waste generated on site will mainly consist of general rubbish from the demolition zones. This rubbish will be located in skips, and recycled or disposed of by a licensed contractor.

7.5 OFF-SITE WASTE DISPOSAL PROCEDURE

7.5.1 Objective

Waste material excavated during the demolition work will only be stockpiled on-site temporarily. These stockpiles will be transported to an approved landfill or recycling facility.

The objective of this procedure is to ensure that all waste material is transported off-site to a lawful appropriate class of landfill in a safe and environmentally responsible and lawful manner.

7.5.2 Controls

This procedure will be used to control the following tasks and items:

- Characterisation of the material for class of landfill;
- Movement of material off-site; and
- Transport route to landfill;
- Waste tracking by Liberty Industrial Transport / Tipping Docket
- Waste Register to be kept: record of information from Transport / Tipping Docket

Ref: FORM 123 – Waste Register

Ref: Liberty Industrial Transport / Tipping Docket

7.5.3 Actions

The following actions will be followed for managing the off-site disposal of any waste material:

- Stockpiles of material for off-site disposal will be characterised in accordance with the Waste Tracking Guidelines (NSW EPA). If necessary, stockpile samples will be tested for heavy metals including the leachable fraction;
- Material will be transported off-site to approved EPA landfill sites by certified waste transport contractor

If required, application for a waste transport certificate to be approved by the NSW EPA;

- All movement of material offsite is to be recorded using the General Waste Register;
- Trucks are to be roadworthy and operated in accordance with transport regulations;
- Two-way radios or mobile phone to be provided in all trucks in case of emergency;
- Truck loads are to be covered with tarpaulins prior to leaving the site to prevent dust emissions whilst in transit (excluding scrap metal loads);
- Trucks to exit site utilising the Traffic Management Plan;
- Off-site transport routes will be decided upon prior to any loads being removed from site; and
- The road condition at the entrance/exit to the work site will be monitored continuously and swept/washed as necessary;

Ref: Traffic Management Plan

7.5.4 Monitoring and reporting

Monitoring and reporting will include:

- Accidents involving the spillage of material from trucks and the corrective action undertaken is to be reported in an Incident Report form;
- Traffic accidents are to be reported to the Police, and verbally to the Project Manager immediately following the incident; and
- Routine random checks will be undertaken by the company Supervisor to ensure the loads are secure and conform to this procedure;

7.5.5 Asbestos transport NSW

In NSW the transport of more than 10 square meters of asbestos sheeting, or 100 kilograms of asbestos waste must be reported to the EPA. Asbestos transporters and facilities receiving asbestos waste must report the movement of this waste to the EPA using WasteLocate. Each load of asbestos waste needs to have a unique EPA consignment ID, which the transport company must generate using WasteLocate. The unique EPA consignment ID will allow each load to be monitored from the place of generation to the site of disposal.

The following actions will be followed for managing the off-site disposal of Asbestos in NSW:

- Quantity and description of asbestos waste will be advised to transport company when engaged.
- The unique EPA consignment ID will be sited before the Asbestos waste is allowed to leave site.
- The transport company will supply Liberty Industrial with a copy of the WasteLocate consignment after delivery to designated waste facility.
- A copy of the WasteLocate consignment note will be saved by Liberty Industrial.

7.6 SURFACE RUNOFF MANAGEMENT PROCEDURE

7.6.1 Objective

The objective of this procedure is to prevent soil erosion of disturbed ground surfaces and potentially waste runoff from entering waterways.

7.6.2 Actions

- The following actions are to be followed for managing surface runoff from waste material.
- All stormwater inlets servicing the project area are to be protected with sediment controls as per the Environmental Management Plan and stormwater sediment control plan drawing;
- Stockpiles of waste will be stored only on exposed surfaces of waste to prevent contaminating clean ground as per the Environmental Management Plan and stormwater sediment control plan drawing, and will also form part of the weekly inspections;

- If required, a dust suppressant will be applied over the clean soil cover following placement to stabilise the ground surface.

7.6.3 Monitoring and reporting

Monitoring and reporting will include:

- Routine random checks will be undertaken by the Site Supervisor of the stormwater system and any bunding to ensure conformance to this procedure; and
- Should there be any uncontrolled surface runoff or uncontained erosion of waste, the incident and any corrective action undertaken is to be reported and recorded in QSE.

Ref: Soil and Erosion Management Plan