1 Introduction

1.1 Overview

This Waste Management Plan (WMP) has been prepared on behalf of Deicorp Pty Ltd.

Development consent is sought for a mixed-use development comprising of student housing and associated common areas.

The proposed development will be consistent with the guiding waste management principles of:

- Reduce;
- Reuse;
- Recycle.

2 Council Requirements

2.1 Council DCP

This WMP has been prepared having regard for the specific waste management objectives of the City of Sydney Council DCP, which for new developments are:

- Reduce the amount of construction and demolition waste going to landfill.
- Reduce amount of waste generated in the operation of a development from going to landfill.
- Ensure waste from within developments can be collected and disposed in a manner that is healthy, efficient, minimises disruption to amenity, and is conducive to the overall minimisation of waste generated.

And the 2005, "Policy for Waste Minimisation in New Development" whose objectives are:

- To avoid waste through design and ordering correct material quantities
- To encourage improved environmental outcomes through increased source separation of materials
- To ensure more efficient management of waste and recyclable materials.
- To maximise reuse and recycling of building construction materials, household generated waste and industrial commercial waste.

3 Demolition

Table 1: Demolition waste generation.

	REUSE	RECYCLE	DISPOSAL	COMMENT
TYPE OF WASTE GENERATED	Estimate Volume (m³)	Estimate Volume (m³)	Estimate Volume (m³)	Specify method of on-site reuse, contractor and recycling outlet and/or waste depot to be used
Excavation material	NA	NA	NA	No waste will be generated. Refer to construction table.
Timber (Side façade / dressed)	NA	NA	NA	Transferred to waste management facility or recycling facility.
Gyprock / Cladding	NA	NA	NA	Transferred to waste management facility or recycling facility.
Concrete	NA	NA	300m³	Any concrete waste will be crushed and transported to other construction sites.
Masonry (Hebel Block/Fibre cement sheeting/ Pavers / bricks / stone)	NA	50m³	NA	Transferred to waste management facility or recycling facility.
Tiles (roof)	NA	NA	NA	Transferred to waste management facility or recycling facility.
Metal (roofing / framing / rebar)	NA	3m³	NA	Transferred to waste management facility or recycling facility.
Glass	NA	NA	1m³	Transferred to waste management facility or recycling facility.
Furniture	NA	NA	NA	Furniture will be removed prior to demolition.
Fixtures / Fittings	NA	NA	5m³	Transferred to waste management facility or recycling facility.
Floor coverings	NA	NA	NA	Transferred to waste management facility or recycling facility.
Packaging (used pallets / pallet wrap)	NA	NA	NA	No packaging will be used during the demolition.
Garden organics	20m³	NA	NA	Reused as mulch.
Containers (cans / plastic / glass)	NA	NA	2m³	Transferred to waste management facility or recycling facility.
Paper / cardboard	NA	2m³	NA	No paper will result from the demolition.
Residual waste	NA	NA	2.5m³	Transferred to a Council Waste Management Facility.
Hazardous / special waste (specify)	NA	NA	NA	Should any asbestos be found on the site it will be removed and disposed of by a qualified demolition removalist in accordance with the relevant standards.
Other -Asphalt	NA	NA	300m³	Transferred to a Council Waste Management Facility.

4 Construction

Table 2: Construction waste generation.

	REUSE	RECYCLE	DISPOSAL	COMMENT
TYPE OF WASTE GENERATED	Estimate Volume (m³)	Estimate Volume (m³)	Estimate Volume (m³)	Specify method of on-site reuse, contractor and recycling outlet and/or waste depot to be used
Excavation material	10000m³	NA	NA	Excavated materials will be reused as fill on other developments; or on-site.
Timber (Side façade / dressed)	20m³	20m³	NA	Transferred to waste management facility or recycling facility.
Gyprock / Cladding	NA	64m³	NA	Transferred to waste management facility or recycling facility.
Concrete	7m³	NA	lm³	Any excess concrete will be retained in the truck and used elsewhere.
Masonry (Hebel Block/Fibre cement sheeting/ Pavers)	NA	100m³	NA	Transferred to waste management facility or recycling facility.
Tiles (roof)	NA	NA	NA	Transferred to waste management facility or recycling facility.
Metal (roofing / framing / façade)	NA	70m³	NA	Transferred to waste management facility or recycling facility.
Glass	NA	NA	lm³	All glass will be made to order
Furniture	NA	NA	NA	Not at this stage.
Fixtures / fittings	NA	15m³	10m³	Fixtures will be made to order.
Floor coverings	NA	60m³	40m³	Transferred to waste management facility or recycling facility.
Packaging (used pallets / pallet wrap)	NA	NA	70m³	Pallets will be transferred to a Material Recovery Facility. Wrap and packaging will be a transferred to Councils Waste Management Facility.
Garden organics	5m³	NA	NA	Organics will be ordered to size in accordance with the quantity survey.
Containers (cans / plastic / glass)	NA	20m³	15m³	Containers will be a transferred to Councils Waste Management Facility.
Paper / cardboard	NA	30m³	6m³	Transferred to waste management facility or recycling facility.
Residual waste	NA	16m³	20m³	Residual waste will be transferred to Councils Waste Management Facility.
Hazardous / special waste (specify)	NA	NA	NA	No hazardous materials will be utilised in the construction.
Other	NA	NA	NA	NA

Table 6: Construction waste reduction measures.

CONSTRUCTION DESIGN

The following outline waste avoidance measures.

- All fixtures and fittings will be made to measure;
- All materials will be ordered in accordance with a bill of quantities;
- Recycled materials will be utilised where ever possible;
- Measures will be taken to ensure the demolition contractor appropriately disposes of waste and where possible recycles materials; and
- Measures will be taken to ensure the construction contractor is aware of the waste management procedures and adheres to appropriate guidelines.

5 Plans and Drawings

The following checklists are designed to help ensure WMP are accompanied by sufficient information to allow assessment of the application.

Drawings are to be submitted to scale, clearly indicating the location of and provisions for the storage and collection of waste and recyclables during:

- Demolition;
- Construction; and

Table 8: Waste operation indicated on plans.

Size and location(s) of waste storage area(s)Access for waste collection vehiclesAreas to be excavatedTypes and numbers of storage bins likely to be requiredSignage required to facilitate correct use of storage facilitiesCONSTRUCTIONSize and location(s) of waste storage area(s)Access for waste collection vehiclesAreas to be excavatedTypes and numbers of storage bins likely to be required	TICK YES
Areas to be excavatedTypes and numbers of storage bins likely to be requiredSignage required to facilitate correct use of storage facilitiesCONSTRUCTIONSize and location(s) of waste storage area(s)Access for waste collection vehiclesAreas to be excavated	TICK YES
Types and numbers of storage bins likely to be requiredSignage required to facilitate correct use of storage facilitiesCONSTRUCTIONSize and location(s) of waste storage area(s)Access for waste collection vehiclesAreas to be excavated	TICK YES
Signage required to facilitate correct use of storage facilities CONSTRUCTION Size and location(s) of waste storage area(s) Access for waste collection vehicles Areas to be excavated	TICK YES
CONSTRUCTION Size and location(s) of waste storage area(s) Access for waste collection vehicles Areas to be excavated	TICK YES
Size and location(s) of waste storage area(s) Access for waste collection vehicles Areas to be excavated	TICK YES
Access for waste collection vehicles Areas to be excavated	
Areas to be excavated	
Types and numbers of storage bins likely to be required	
Signage required to facilitate correct use of storage facilities	
ON-GOING OPERATION	TICK YES
Space	
Size and location of waste storage areas	
Recycling bins placed next to residual waste bins	
Space provided for access to and the manoeuvring of bins	
Any additional facilities	
Access	
Access route(s) to deposit waste in storage room/area	
Access route(s) to collect waste from storage room/area	
Bin carting grade not to exceed 10% and travel distance no greater than 100m	
Location of final collection point	
Clearance, geometric design and strength of internal access driveways and roads	
Direction of traffic flow for internal access driveways and roads	
Amenity	
Aesthetic design of waste storage areas, including being compatible with the main building/s and adequately screened and visually unobtrusive from the street	
Signage – type and location	
Construction details of storage rooms/areas (including floor, walls, doors, ceiling design, sewer connection, lighting, ventilation, security, wash down provisions, cross & longitudinal section showing clear internal dimensions between engaged piers and other obstructions, etc)	

*Details provided at construction certificate stage.

Refer to the architectural plans for further detail.



Annexure H Demolition Methodology

ACE Demolitions and Excavations Demolition Methodology for 77 to 89 Eveleigh St

ACE DEMOLITION & EXCAVATION PTY LTD

PO Box 63, Auburn NSW 2144 Ph: 9644 5596 Fax: 9644 5595 A.B.N: 15 107 709 151

DEMOLITION

WORK

PLAN

PROJECT TITLE:

Pemulwuy Precinct 3 77 - 89 Eveleigh Street Redfern NSW 2016

DA NO.:

JOB NO.:

REVISION NO.: 1

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Section 2 – Site Specific Safety Management Plan

SSMP SWMS Safety Data Sheets Independent Docs Attached

Development

Separable Portion No. 1 Pemulwuy Precinct 3 | 77 - 89 Eveleigh Street, Redfern NSW 2016



SECTION 1 - PROGRAM

1. Program

1.1. The Demolition Package for Separable Portion No. 1, demolition of 77 – 89 Eveleigh Street, Redfern and removal of trees along the Railcorp boundary. This package includes Site Establishment, Preliminaries and Bulk Demolition of the existing 2 storey concrete building which has been stripped down to the existing concrete structure. All content for remaining SOW including all other portions will be contained in DWP – Precincts 1 & 2.

As part of the Demolition Package the following activities will take place as noted:-

Demolition

- General Conditions
- Deicorp to make application to council to modify existing DA Conditions regarding noise and permitted operations. A Jack Hammer and Road Saw are requested to be approved for use.
- Preliminaries [WorkCover Work Permits, Council Permits, etc.]
- Protection, Scaffold supply and erection
- Establishment
 - Traffic Control including set out
 - Sedimentation and Dust Controls.
 - Signage Requirements
 - Plant, equipment and personnel
- Site Investigation
 - Disconnection, Relocation or Isolation of Services
- ACM Removal from building per the client's Hazmat Report, including Clearance Certification issued on completion
- Internal Strip out of structure will not be required as the building has previously been stripped down.
- Manual and mechanical demolition of the existing structure and surroundings including all slabs, internal and external walls.
- Site Clearance including strip and remove all landscape debris and trees.
- Implementation of Unexpected Finds Protocol for potential hazardous finds underneath removed slabs or potential hazardous finds contained in previously obstructed / non-visible areas of the structure.

2. Construction Timetable

Deicorp will provide a submission to Railcorp for approval prior to works commencing. The scheduled commencement is pending this process.

3. "No Work" Day Calender

Calendar Schedule 2017: -

Monday February 27 Monday March 27 Friday April 14 Saturday April 15 Sunday April 16 Monday April 17 Monday April 24 **Tuesday April 25** Monday May 22 Saturday June 10 Sunday June 11 Monday June 12 Tuesday June 13 Monday July 17 Monday August 14 Monday September 11 Saturday September 30 Sunday October 1 Monday October 2 **Tuesday October 3** Monday November 6 Saturday December 2 Sunday December 3 Monday December 4 **Tuesday December 5** Saturday December 23 Sunday December 24 Monday December 25 **Tuesday December 26** Wed December 27

RDO (flexible) RDO (flexible) No Work Public Holiday No Work Saturday No Work Sunday No Work Public Holiday RDO (fixed) No Work Public Holiday RDO (flexible) No Work Saturday No Work Sunday No Work Public Holiday RDO (fixed) RDO (flexible) RDO (flexible) RDO (flexible) No Work Saturday No Work Sunday No Work Public Holiday RDO (fixed) RDO (flexible) No Work Saturday No Work Sunday No Work — Industry Picnic Day RDO (fixed) No Work Saturday No Work Sunday Christmas Day No Work Public Holiday RDO (fixed)

4. Preliminaries

- 4.1. Site Establishment
 - 4.1.1. This DWP has been prepared at the client's request based on the documentation provided to date. It is a working document which complies with all relevant codes of practice and Australian Standards. The DWP and supplementary documentation are working documents and will be amended on site by the relevant parties as and when site conditions require.
 - 4.1.2. Notification of Intention to Commence Non-Friable Asbestos Removal Works will be given to the regulator. Subsequently issued Non-Friable Asbestos Removal Permit will be attached to this DWP as Annexure C (ARMP).
 - 4.1.3. Notification of Intention to Commence Demolition Works will be given to the regulator. Subsequently issued Demolition Permit will be attached to this DWP as Annexure B.
 - 4.1.4. Consultation with stakeholders have and will commence prior to site establishment and will continue throughout the project.
 - 4.1.5. The following References, Authorities and / or Permits have been identified for these works:
 - 4.1.5.1. Client's Authority to Work Structural Demolition including the conditions of SOP Demolition
 - 4.1.5.2. Client's SOW for the Demolition Package
 - 4.1.5.3. Asbestos Removal Management Plan
 - 4.1.5.4. SafeWork NSW Asbestos Removal Permit as mentioned above (for ACMs finds in building).
 - 4.1.5.5. SafeWork NSW Demolition Permit as mentioned above.
 - 4.1.6. Temporary toilets will be provided during all stages of the works.
 - 4.1.7. Area for storage of equipment and materials will also be established.

5. General Conditions – Australian Standard 2601

5.1. GENERAL PRECAUTIONS (AS2601)

5.1.1. Supervision

At all times demolition work shall be supervised by a competent person.

5.1.2. Stability of the structure

The structures to be demolished and all of its components shall be maintained in a stable and safe condition at all stages of the demolition work. Temporary bracing, guys, shoring, or any combination of these, shall be added for stability where necessary. Slabs and beams, which are either pre-tensioned, or post-tensioned with fully grouted tendons, may be demolished as for reinforced members. Tilt-up panels, post-tensioned slabs and beams in which the tendons are ungrouted, or only partially grouted, shall not be demolished without prior written direction from an engineer conversant with this type of construction. Considerable care needs to be exercised to avoid cutting a prestressed tendon that is ungrouted or only partially grouted.

5.1.3. Loading on floors

Suspended floors and their supporting members shall not be loaded by machinery, or by falling or accumulated rubble or debris, to the extent that there is excessive deflection, permanent deformation, or danger of collapse.

Prior to any live loading on any of the slab levels an Engineer's Certificate will be obtained which confirms the acceptable size of the Excavator and any maximum dead load weight.

5.1.4. Loading against walls

Walls shall not be laterally loaded by accumulated rubble or debris, to the extent that they are in danger of collapse.

5.1.5. Protection of openings

Openings in existing walls and floors, through which there is a risk of persons falling to a lower level, shall be either properly guarded or boarded over and the boarding secured against unauthorized or accidental removal.

5.1.6. Glass

Precautions shall be taken to prevent glass from falling onto persons in or outside the building.

5.1.7. Weather

Precautions shall be taken to ensure that the stability of all parts of the structure, and the safety of persons on and outside the site, will be maintained in the event of sudden and severe weather changes. Severe weather changes refer to the localized high winds that often accompany rapidly moving cold fronts, as well as tropical cyclones. In these circumstances inadequately braced walls and columns may be blown over and loose debris can become airborne, particularly if it is in sheet form. The wind forces can be calculated in accordance with AS 1170.2 for the design of bracing or restraint systems.

5.1.8. Site access

The site shall be secured at all times against the unauthorized entry of persons or vehicles. Provision shall be made for ready access to the site by emergency services personnel, in the event of fire or accident.

5.1.9. Access within the structure

At least one access and egress route, connecting all undemolished floors to the nearest street and clearly marked, shall be provided as an emergency exit. The marked route shall be kept free of accumulations of demolished materials at all times and provision shall be made for illuminating the entire route in the event of an emergency.

5.1.10. Live services

Services within a demolition site required to be maintained during the demolition shall be protected and made safe.

5.1.11. Disconnected services

Services within the structure not required to be maintained during the demolition work shall be properly disconnected and sealed before any stripping or demolition commences.

Prior to demolition works to the buildings a Certificate confirming disconnection shall be provided.

5.1.12. Damaged or Ruinous Buildings

Appropriate safety precautions shall be taken during the assessment and demolition of buildings that have been identified as being fire damaged, ruinous or otherwise dangerous.

5.2. REMOVAL OF HAZARDOUS SUBSTANCES

5.2.1. General

Removal of hazardous substances shall be carried out only by competent persons, or competent and registered persons if so required prior to the start of any demolition or stripping work

5.2.2. Removal of asbestos

Removal of asbestos or materials containing asbestos fibre shall be in accordance with the NOHSC (WorkSafe Australia), Code of practice for the safe removal of asbestos.

These works will be done prior to the commencement of any demolition works.

Bonded Asbestos and asbestos impacted soil removal are all applicable to these works, as well as an unexpected finds protocol in place in the event any additional asbestos finds occur on site during the works.

5.2.3. Removal of other materials

Precautions to be observed, and procedures to be adopted during the removal of hazardous substances, shall be in accordance with the relevant State or Territory regulations appertaining to those materials.

5.3. SEQUENTIAL METHODS

5.3.1. General

5.3.1.1. Sequence of demolition

Generally, structures shall be demolished in the reverse order to that of their construction. The order of demolition for

buildings shall be progressive, storey by storey (where structure(s) are multi-storey), having proper regard to the type of construction, and retaining the stability of the structure

5.3.1.2. Removal of demolished materials

Demolished material shall not be allowed to fall freely outside the structure, unless it is confined within a chute or similar enclosure. Demolished material shall not be allowed to fall freely within a structure, unless it is confined within a shaft, similar enclosure, or demolition zone / Drop Zone.

Drop Zones will be at least 10m and will be physically barricaded with barricades. Further signage and warning tape will also be installed.

Demolished material shall be removed progressively from the site and, at any time, shall not be allowed to accumulate to the extent that it presents a hazard to the public or to site personnel.

5.3.1.3. Cutting and lowering of large members

If necessary to suit the capacity of the available hoisting equipment, large members shall be cut into smaller sized portions before lowering. Whole or large portions of members shall be lowered in a controlled manner so that there is no likelihood of them falling freely.

Wherever possible, a crane or similar lifting device, shall be used to support beams or columns while they are being separated from the remainder of the structure.

NOTE: Where appropriate, sample pieces of members should be cut and test-weighed and the weight per unit length, or weight per unit area, of a member determined. This will provide a guide to the maximum length or area that can be safely handled by the available equipment.

5.4. MANUAL DEMOLITION

Personnel shall be permitted to work only from a safe work area or from a safe access system. Where concrete members are being demolished manually, the reinforcement shall not be cut while breaking out of the concrete is in progress.

During the progressive removal of individual rafters or trusses from a pitched roof, sufficient purlins and bracing shall be retained to ensure stability of the remaining roof rafters or trusses. Where necessary to maintain stability, temporary bracing shall be added. Particular care shall be taken to provide safety measures against personnel falling through or off the roof.

5.5. MECHANICAL DEMOLITION

5.5.1. By load-shifting equipment

Where demolition is carried out by load-shifting equipment operating from ground level, Clause 1.5 shall apply. In addition, care shall be taken to minimize the risk of the equipment tilting by ensuring that it is operated from firm, stable ground.

5.5.2. On suspended floors

Load-shifting equipment, and the like, shall not be operated on a suspended floor unless $-\!\!\!-$

- the type, size, weight and usage of the particular piece of equipment has been specified in the work plan;
- it has been demonstrated by calculations based on principles of structural engineering that the floor is capable of sustaining the static and operating load of the equipment including attachments plus demolished materials, without excessive deformation or collapse, either without additional support from below; or
- where it is determined for propping to be applied from below, props used for supports shall be structurally sound and in an operational condition, braced, in each storey, in two directions approximately at right angles to one another, spaced and arranged so that the loads they transmit do not exceed their manufacturer's specified rating; or
- it is moved between suspended floor slabs by appropriate hoist equipment; or a fabricated ramp designed by a practicing structural engineer, detailed and certified in the work plan and supported by the principles of structural engineering.
- Effective communication shall be maintained between the equipment operator and the demolition supervisor while the equipment is operating. Where a particular piece of equipment

has been specified in the work plan, another piece of equipment of the same type and usage may be substituted for it, provided that the substituted equipment is neither larger nor heavier than the specified equipment.

NOTE: Load-shifting equipment should, as far as practicable, be located on a beam. Skid steer loaders using a breaker may not be appropriate to be used on suspended floors with their limited reach.

6. Site Specific Content

Scope of Work and Sequence of Work Operations

6.1. Disconnect and cap services to Buildings

Deicorp to engage an appropriately licenced electrical contractor to disconnect services to the building prior to commencement of any demolition works. An Electrician's Certificate confirming disconnection will be required.

Connection for Water Services will be retained for use throughout the project, specifically for use during demolition and earthworks as a dust mitigation strategy.

HOLD POINT – no works to proceed until Disconnection Certificate provided confirming no live services in building.

6.2. Removal of Hazardous Materials

Hazardous building materials should be removed prior to any significant disturbance including from manual strip out works and demolition work.

Hazardous building components containing asbestos, SMF, lead or other materials identified during the visual inspection and / or in the Asbestos Materials Survey Reports, will be removed and disposed of by a Licenced Contractor as required in accordance with current regulations and practice using licensed asbestos removal personnel. The material identified in Hazmat Report comprises bonded classes of asbestos.

Detailed, site specific documentation for submission to client include: -

Doc Printed on 9-Jun-17

- > Asbestos Removal Management Plan
 - Unexpected Finds Protocol
 - WorkCover Asbestos Licence
 - WorkCover Asbestos Permit
 - SWMS No. 1 Bonded ACM Removal
- > All ACM Removal Works will be in accordance with the abovementioned documentation and will generally include for the following items: -

6.2.1. Preparation

- Prior to the commencement of the removal of asbestos at the site a WorkCover Notification must be sent to WorkCover NSW and a Safe Work Method Statement will be prepared for the proposed asbestos removal work.
- The majority of removal works cannot be contained within buildings as they apply to internal areas of the building.
- Prepare a restricted access / 10 15m Exclusion Zone
- Install asbestos warning signage at prominent points
- Erect isolation fence around the working area using barrier tape
- All persons engaged in the work and/or entering the work area, are to wear disposable coveralls and a half face Class P2 respirator.
- Persons engaged in the work are to have completed formal training in asbestos removal work and are to be supervised by a person who has completed an asbestos removal supervisor's course.
- The Supervisor will also be a Registered Competent Supervisor on the current WorkCover NSW Database.
- A decontamination area is to be located at the entry to the asbestos removal area at the site. All persons entering an asbestos removal work area are to change into and out of their asbestos PPE in the decontamination and change area.
- Provide for all required safety equipment and asbestos PPE including (but not limited to);
 - Asbestos Warning Tape as above the tape will serve to delineate the required exclusion zone. It provides a visual warning and physical barrier of the restricted area.
 - Signage signage will be supplied and erected around the exclusion zone and specifically on building entry points to alleviate unauthorised and / or accidental entry during internal removal works.
 - 200um Plastic Bags will be utilized to avoid ACMs tearing the plastic

- 200um Plastic Sheets will also be utilized to avoid ACMs tearing the plastic. Sheets will be used to line bins and truck bins and as a load cover on departing trucks. Sheets will also be used in place of bags where the ACMs are larger in size so the ACM can be removed in-tact, without breakage as per the current regulation. ACMs will be enclosed in the plastic sheets and will be appropriately sealed. Bulky and / or oversized parcels will require team lifting as per Manual Handling requirements.
- Industrial Strength Tape will be utilized to seal all plastic bags and sheets. Industrial quality tape will ensure that all ACMs remain contained and will not be exposed during periods of handling and loading.
- Water-fed device a hand held hose or other water spray device to be supplied and used for wetting down ACMs prior to their removal. Water spraying will wet the ACM encapsulating potential particles and preventing them from becoming airborne.
- Coveralls disposable overalls worn during the asbestos removal works that will be removed when exiting the exclusion zone. Coveralls and other disposable PPE items will be bagged in 200um plastic bags and will be disposed of as asbestos waste.
- Half-face Class P2 Respirator breathing apparatus is a compulsory PPE item. Dispose of when leaving the exclusion zone in the area provided.
- Gloves to prevent skin contact and is also a compulsory PPE item. Dispose of when leaving the exclusion zone in the area provided.
- The transport of the asbestos waste is to be undertaken in covered leak proof vehicles and is to be disposed of at a landfill site that can lawfully receive this waste in accordance with 'Section 42 – Special Requirements Relating to Asbestos Waste' as detailed in the Protection of the Environment Operations (Waste) Regulation 2005
- EPA Licenced transporters only place the vehicles adjoining the target areas and line bins
- Due to the requirement to hand load asbestos bags, provide access to the truck body or bin where the fall potential is in excess of 1.2m
- 6.2.2. Removal Works | Per El Australia Hazardous Building Materials Survey (Report E23309 AB_Rev0)

Hazardous building materials including asbestos, synthetic mineral fibre (SMF), lead dust and polychlorinated biphenyls (PCBs) were identified or assumed present during the survey as outlined in Appendix A of the Hazmat Report.

Limited or no access was available to certain areas of the site. Inaccessible areas should be assumed to contain hazardous building materials as a precaution until inspection and assessment of these areas by a Competent Person confirms otherwise.

- Please note that a detailed Site Specific SWMS and Asbestos Removal Control Plan has been provided to the client and has been subsequently approved by the client prior to any site establishment.
- SWMS No. 1 is both detailed and site specific and should be the referenced documentation when performing ACM Removal, however they will generally include for the following items: -
- The 'Wet removal method' will be adopted for these works
- In accordance with the National Code of Practice for the Safe Removal of Asbestos NOHSC2002 (2005), all hazardous materials will be removed by hand with all care taken to prevent breakage of ACMs. Labourers and other personnel within exclusion zone to hold minimum competency 'Bonded Asbestos Removal Ticket'.
- Using a hand held hose or other suitable water-fed device, thoroughly wet down the ACM (where practical), prior to removal, alternatively mist / spray with a hand held water spray.
- In the event any PCBs or lead paint contamination are found any PCBs and/or lead paint affected materials will be encapsulated in a glue based spray as opposed to a water spray.
- Asbestos Labourer to remove the ACM in-tact, by hand and deposit directly into 200um plastic bag and/or wrap in 200um plastic. Continue to remove ACMs until all visible ACMs have been collected. For asbestos eves / roof sheeting and other work areas at heights, use a mobile scaffold or other suitable EWP to access the area.
- Where evident, any localised asbestos debris in soil will be thoroughly wetted down with water before being sparrow-picked by hand and deposited directly into 200um plastic bags. Heavily contaminated soil will be mechanically excavated with soil scrapping every 50 – 100mm.

- Asbestos Labourer to seal the 200um plastic bag and/or plastic sheet with industrial strength tape to avoid opening.
- Hand-load the bags directly onto truck bin to avoid bags ripping.
- Transportation in leak-proof vehicles authorized to transport hazardous waste. Cover all loads prior to departing the site. All collection, handling, storage, transportation and disposal to be in strict accordance to Clause 29 of the Protection of the Environment Operations (Waste) Regulation 1996.
- Tipping documentation to be made available to client for submission to Council and / or PCA as evidence of proper disposal at a licensed landfill, if specified in DA Conditions of Consent.

6.2.3. Disposal

There will be no waste sorting and / or recycling of ACMs (asbestos containing materials) on this site. The following disposal methods will be adopted for the waste stream ACM:

- ACM waste will be placed directly into 200um plastic bags / lined bins and then hand loaded onto a truck bin and covered prior to transportation
- PPE consumables including disposable coveralls and gloves will also be disposed of as asbestos waste.
- All ACMs, Lead Paint and PCBs removed from site will be disposed of in accordance with EPA regulations at an approved and licenced facility
- At this stage the company nominates Veolia Environmental Services as a disposal site. The company / address details for these facilities are as follows:
 - Veolia Environmental Services Horsley Park Waste
 716 – 752 Wallgrove Road
 Horsley Park NSW 2175
 P. 9620 1944 | F. 9620 2867

HOLD POINT – no works to proceed until a Competent Person has provided a Clearance Certificate confirming ACM removal complete.

6.3. Tree Protection

There is no requirement to protect any trees contained within the site boundary.

6.4. Demolish existing structure complete

6.4.1. Protection and Hoarding / Scaffolding Erection

The existing chain wire enclosure will be utilized as perimeter fencing.

The North / East corner adjoining property boundary of 91 Eveleigh will be supplied with custom built protective devices made to fit to the existing solar paneling.

Demolition Scaffolding combined with chain wire and shade cloth will be supplied and erected to the site boundary: -

 Northern boundary along adjoining property boundary (except for the North/East corner as mentioned above)

Demolition Scaffolding combined with A Class Hoarding will be supplied and erected to the site boundary: -

• Western boundary along Eveleigh Street frontage

A Vertical Demolition Screen will be mounted on the rail side of the Rear Railcorp Boundary Wall as a protection device to ensure debris cannot fall freely on the Railway Tracks, Cable Tray or Overhead Transmission Lines. The screen will be a modular type to enable progressive removal in panels in conjunction with the demolition of the wall. When mounted the screen will project approximately 300 – 400ml and will be enclosed on the rear panel.

Deicorp will provide protection to the Railcorp Cable Tray and will arrange for the tiger tailing of all overhead Ausgrid electrical wires.

Following removal of the rear Railcorp Boundary Wall a fence will be erected on top of the footings as protection to the rail corridor for the remainder of the demolition.

► HOLD POINT – no works to proceed until the client has provided Hoarding/Scaffold Certificates.

6.4.2. Propping

- i. Per Appendix E Shore Hire Propping Plan the Roof Slab will be propped using Acrow Props to facilitate live loading and demolition processes.
- ii. Per Appendix E Shore Hire Propping Plan the First Floor Slab will be propped using Acrow Props to facilitate live loading and demolition processes.
- iii. Per Appendix E Shore Hire Propping Plan the rear Railcorp Boundary Wall will be propped using tilt props to ensure the wall is structurally sound and not undermined throughout the demolition process.
- 6.4.3. Post Tensioned Cable Investigation
 - i. The Roof Slab is Post-tensioned therefore we will investigate to ensure the cables are grouted.
 - ii. Cut penetration in slab as marked out below and inspect.

Mark up for Penetration Locations for Grout Investigation



6.4.4. <u>Structure Demolition of 77 – 89 Eveleigh St, Redfern</u>

Demolition Works – Multi level standalone concrete structure previously stripped back to concrete roof, external and internal walls, concrete slab flooring and stair wells.

⇒ All works in accordance to the current regulations, codes and standards. SWMS No 2 to be submitted to the client for the demolition works.





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Staging Plan

Stage 1	Demolition Sequence 1 – 9 per plan Roof Slab Sawcut slab to disconnect from boundary wall Demolish in 1500mm rows from Stair No. 1 to Northern boundary	Grid 1
Stage 2	Rear Railcorp Boundary Wall First Floor Brick courses by hand	Grid 1
Stage 3	Demolition Sequence 1 – 9 (repeated) per plan First Floor Demolish in 1500mm rows from Stair No. 1 to Northern boundary	Grid 1
Stage 4	Rear Railcorp Boundary Wall Ground Floor Brick courses by hand	Grid 1
Stage 5	Pulverize Roof Slab First Floor Columns First Floor Slab 30 – 40T Excavator on Ground	Grid 2
Stage 6	Pulverize Roof Slab First Floor Columns First Floor Slab 30 – 40T Excavator on Ground	Grid 3
Stage 7	Ground Slab	Grid 2 – 3
Stage 8	Trees to Railcorp Boundary	Boundary

See marked up Staging Plans attached as Appendix F

- → The building has been assessed as being structurally adequate to handle mechanical demolition methods.
- Labourers using a hand held concrete saw to complete two cuts to separate slab structure from rear Railcorp boundary wall.
- □ Drop slab in 1m sections to lower floors and extract debris.
- ☑ Establish 5T Excavator on Roof Slab by crane.
- Demolish Grid 1 in 1500mm rows commencing from Stair No. 1 to the northern end (right to left).
- \square Travel to Southern stair end and complete 1500mm rows 1 6.
- ☑ Per engineer, leapfrog props.
- ▶ Excavator and demolition direction to remain per plan to coincide with prop locations.
- Labourers to demolish rear Railcorp boundary wall in First Floor by hand. Remove each brick and brick course by hand to slab level.
- Establish 5T Excavator to First Floor and repeat 1500mm rows to demolish First Floor Slab to entire Grid 1 as per plan.
- \square Travel to Southern stair end and complete 1500mm rows 1 6.
- ▶ Excavator and demolition direction to remain per plan to coincide with prop locations.
- \supseteq Per engineer, leapfrog props.
- Labourers to demolish rear Railcorp boundary wall in Ground Floor by hand. Remove each brick and brick course by hand to slab level.
- ❑ Loadshifting Operator is to demolish all remaining structure mechanically using Excavator situated from the ground outside of the building envelope.
- ☑ Commencing with Grid 2 pulverize the concrete demolishing the roof slab, first floor columns, first floor slab concurrently moving through the building as per the marked up plan.
- ❑ Continue process onto Grid 3 pulverize the concrete demolishing the roof slab, first floor columns, first floor slab concurrently moving through the building as per the marked up plan.
- \supseteq Demolish ground slabs to Grid 2 and 3.
- $\ensuremath{\,\supseteq}$ $\ensuremath{\,\supseteq}$ Per the marked up SOW trees along the Railcorp boundary are to be removed.

6.5. TECHNIQUES AND METHODS OF DEMOLITION TO BE ADOPTED

6.5.1. Manual Demolition

These works will require a combination of both manual and mechanical methods of demolition.

Personnel shall be permitted to work only from a safe work area or from a safe access system. Where concrete members are being demolished manually, the reinforcement shall not be cut while breaking out of the concrete is in progress.

6.5.2. Mechanical Demolition

This structure has been assessed as being capable of handling mechanical demolition methods. The site layout provides for establishment of Loadshifting Machinery to be safely situated outside of the building envelope. We will be establishing a 30 - 40T Excavator in the south western corner on the existing hardstand area for mechanical demolition to building.

At this stage live loading on any building slab will only be relevant to Grid 1 Roof Slab and First Floor Slabs. Engineer approval has been provided for live loading and will follow the Engineer's Plan for sequencing and directional instructions to coincide with the propping plan.

Effective communication shall be maintained between the equipment operator and the demolition supervisor while the equipment is operating. Where a particular piece of equipment has been specified in the work plan, another piece of equipment of the same type and usage may be substituted for it, provided that the substituted equipment is neither larger nor heavier than the specified equipment.

6.6. PLANT AND EQUIPMENT

Plant items identified for the demolition works include: -

- 30 40T Excavator w/ Hammer, Bucket, Grab & Pulveriser Attachments
- 5T Yanmar Excavator

Equipment items identified for the demolition works include: -

- Drill
- Concrete Saw
- Kanga Hammer
- Grinder
- Oxy Set
- Demolition Pinch Bars, Sledge Hammers, etc.

6.7. MANAGEMENT OF VIBRATION, NOISE & DUST

To mitigate vibration, noise and dust we will utilize the strategies set out below: -

- Perimeter scaffolding combined with chain wire and shade cloth will mitigate dust to surrounding areas.
- Stockpiled debris are to be covered or dampened when moving.
- All work faces will be hosed down to control dust. We acknowledge that dust control will be closely monitored and will ensure all resources and materials necessary to control dust are provided.
- Noise and vibration emissions are expected to be minor due to our selection and use of new acquired plant. These plant items are new model machinery, regularly serviced and maintained and are therefore in good working order.
- Operators will operate plant in slow controlled motions and will ensure that sudden turns and abrupt operations which cause vibrations do not occur.
- Noise and Vibration is to be managed in accordance with the site requirements. If required by the client, monitors will be installed and monitored and any occurrences will be dealt with on site with the relevant parties.

6.8. LIGHTING / VENTILATION

Works to buildings will not require lighting of any kind as there is ample natural light.

6.9. PROPOSED ACCESS / EGRESS TO THE DEMOLITION SITE

Existing access and egress to the worksite will be utilized for these demolition works.

All access and egress routes will be kept clear of debris, rubbish, plant and equipment at all times. At no time will any point of exit be blocked.

6.10. PRECISE DETAILS OF ANY PRE-WEAKENING OF THE STRUCTURE

Not applicable.

6.11. NATURE, EXTENT AND LOCATION OF PUBLIC PROTECTION REQUIRED (EG. FENCING, HOARDING, ETC.)

All scaffolding requirements will be installed as part of our establishment.

Specific controls for the work areas will apply due to the plant movements. These will be in place for worker protection and will include: -

- Plant travel routes marked up
- Stockpile site marked up
- Exclusion Zone around mechanical demolition works will apply

6.12. TYPE AND LOCATION OF BRACING AND SHORING TO BE USED

 Propping Plan per Drawing Number 100 attached as Annexure E (slab and wall propping).

6.13. ISOLATION / DISCONNECTION OF SERVICES

All required isolation and/or disconnection of services to the buildings be completed by the client. No additional requirement exists.

6.14. METHOD OF HANDLING AND DISPOSING DEMOLISHED MATERIALS

Demolished material shall not be allowed to fall freely outside (or inside) the structure.

Demolished material shall be removed progressively from the site and, at any time, shall not be allowed to accumulate to the extent that it presents a hazard to the public or to site personnel.

Demolition debris will be progressively removed to a stockpile area and will be loaded onto construction trucks for removal offsite.

Nothing is to be retained and we have allowed for the correct disposal of all waste streams.

6.15. METHOD OF HANDLING AND DISPOSING CONTAMINATED MATERIALS

Refer to the ACM sections above, the Asbestos Removal Management Plan and the Unexpected Finds Protocol.

6.16. PPE / RPE REQUIREMENTS FOR PERSONNEL



Refer to the task specific SWMS for additional information.

6.17. EMERGENCY PLANNING

All Emergency Plans per the principal Deicorp.

All personnel must attend the PCs Site Induction where Emergency Plans such as First Aid and Evacuation will be delivered. Location of Emergency Wall Charts and Evacuation Point will also be made available at the Site Induction.

All Emergency Planning per the Principal Contractor.

6.18. CERTIFICATION BY SPECIALIST PERSONNEL

Should unexpected ACM finds be encountered, this DWP therefore notes the requirement of a competent person to undertake clearance certification prior to any structural demolition commencing.

We therefore note our engagement of Phil Clifton & Associates Pty Ltd as our competent person for the provision of Asbestos Clearance Certificate to clear buildings on completion of ACM removal.

6.19. QUALIFICATIONS / CERTIFICATION OF DEMOLITION PERSONNEL

ACE will appoint a Designated Officer for the Supervision of these works. The D.O will hold, as a minimum competency, a registration with WorkCover NSW as a Nominated Competent Person and will hold a Demolition Supervision competency.

ACE nominates Mr Hamzeh Allam as the nominated competent person to supervise all works in relation to asbestos removal and demolition.

Demolition workers will hold various competencies including: -

- Asbestos Removal Tickets
- Safe Work at Heights for works at a height
- Manual Handling
- Plant Competencies (RTO issued VOCs) for the operation of:
 - Excavators

6.20. REGULATORY AUTHORITY REQUIREMENTS OR NOTIFICATIONS

Notification of Intention to Commence Demolition and Asbestos Removal Works will be given to the regulator a minimum of five days prior to the expected commencement date. SafeWork NSW are to issue Permits for Demolition and Asbestos. (Permits attached to DWP as noted Annexures).

7. Communication

This communication plan outlines the communication activities and key messages that are designed to achieve best practice in delivering the project.

Personnel	Position	Primary Contact	Fax Number	Email Address	Postal Address
Sami Allam	Director	0414 424 884	9644 5595	sami@acedemolition.com.au	
Munaf Al Sarray	Contracts Manager	0420 280 480		munaf@acedemolition.com.au	-
Hamzeh Allam	Site Supervisor / DO	0404 859 702		hamzeh@acedemolition.com.au	PO Box 63 Auburn NSW
Nicole Anthony	WHS, RTW	0404 859 716		nicole@acedemolition.com.au	2144
Bashar Allam	Allocations	0455 554 444		bash@acedemolition.com.au	_
ACE Head Office		9644 5596	9644 5595	mail@acedemolition.com.au	362 Park Road, Regents Park NSW 2143

7.1. ACE Project Contacts

7.2. Emergency Contacts

Site Address	77 – 89 Eveleigh Street, Redfern			
Emergency Evacuation	Exit via the Site Gate and assemble out the front of the site			
Location of First Aid Kit:	A First Aid Kit can be found in the Site Shed			
Doctor / Medical Centre				
Hospital				
Ambulance	000			
Fire	000			
Police	000			
Police Station				
Water	132 090	Sydney Water Emergency Repairs		
Electricity	131 388	Ausgrid Emergencies		
Gas	131 909	AGL Emergencies		
EPA	131 555	Pollution Line		
Safe Work Australia	13 10 50	Safe Work Australia Sydney		
Emergency Co-ordinator – ACE	0414 297 117	Hamzeh Allam		
1 st Aid Officer – ACE	0414 297 117	Hamzeh Allam		

7.3. Communication Plan

Refer to Appendix A: Communications Plan

Appendix A: Communications Plan

Name/Nature of Communication	From	То	Content Provided By	Frequency	Format Used	Delivery Media	Comments
Induction / Training Matters	Site Manager	Site Personnel, Client, Subcontractors and Suppliers	Site Manager, WHS Team Members	(1) Initially(2) As needed	Induction Sheets / WMS / Tool Box Talk Forms	Site Induction Meeting	Record all inductions on both Induction Register and SWMS Sign-Off Sheet
Urgent Issues	Site Manger	Client Project Manager	Site Manger	As needed	Any	Verbal, E-mail, Fax, Telephone	The Site Manager will collect any information regarding the issue and add an entry in the Daily Report for future reference.
Project / Team Meetings	Site Manger and/or Contracts Administrator	Client Project Manager & other Client Reps	Stakeholders	Weekly	Weekly Site Meetings with Client. Determinatio n of Progress Claim Percentage Complete	Meeting & Issues/Action Items section of meeting minutes	The scribe will capture issues/action items and maintain a running log through the meeting minutes document. Progress Claims anticipated with clients input.
New Issues/Action Items	Site Manager	Site Personnel	Site Manager	As needed or bi-weekly as a minimum	Discussions during bi- weekly Tool Box Talks	Meeting	Exchange any information and document discussion items, personnel present and required actions on Tool Box Talk Form. Any critical information will be distributed to ensure knowledge transfer
Safety Checks / Audits	Site Manager / Client WHS Rep	Site Manager / Client WHS Rep	Site Manager / Client WHS Rep	Daily by Site Manager and Weekly by Site Manager and Client WHS Rep	Safety Check Form	Site Walk-around	Review hazards, issues, and risks To identify and communicate potential risks and issues that may effect the health & safety of site personnel and/or members of the public.
Non Conformance / Resolutions	Site Manager and/or Client Project Manager	Site Manager and/or Client Project Manager	Site Manager and/or Client Project Manager	As needed	Non- Conformance	Email, Fax, in person	Any non-conformance to be issued in writing to the relevant party for immediate resolution.
Internal Team Meetings	Contracts Manager	Team	All	As needed or weekly	Status Report	Office / Site Meetings	Internal project status meetings for the purpose of correctly allocating resources and monitoring timely project completion. Any outstanding issues from site or the client will be addressed and completed. Complete internal audit of site processes to ensure effective running of project.
Appendix B: Demolition Permit

To be inserted on issue

Appendix C: ARMP & Permit

Appendix D: Unexpected ACM Finds Protocol

Demolition & Excavation Pty Ltd

Unexpected Asbestos Finds Protocol

In the event Asbestos Containing Materials (ACMs) are unexpectedly found on site during the course of our scope of works, the following protocol will apply: -

- 1. Should unexpected potential contamination be found on site, works are to stop immediately.
- 2. Notify your direct Supervisor and the Principal Contractor's Representative.
- In the event an item of plant has come in contact with the potential contaminant (eg. Drilling Rig whilst drilling, Excavator whilst excavating), the plant is to be thoroughly washed to remove all traces of the contaminant and prevent the risk of cross contamination to other areas of the site.
- Erect Warning Signage specific to the Asbestos Hazard per Australian Standard 1319-1994 Safety Signs for the Occupational Environment.
- Create an Exclusion Zone around the affected area of at least 10 square meters to secure against unauthorized / accidental entry. The Exclusion Zone should be set using physical barricades, temporary fencing or other similar method and install Warning Tape around the perimeter.
- The affected area should be dampened with water, unless an electrical risk is present. Once adequately dampened cover the area with plastic sheeting, preferably 200um, and secure sheeting to ensure it does not dislodge.
- The affected area should be isolated with a minimum ten meter radius barrier to minimize potential disturbance to the affected soils.
- Dampen the suspected material with water (unless an electrical risk is present) and cover the area with plastic sheeting.
- Notify an Occupational Hygienist. The Hygienist will need to attend site to carry out an assessment of the nature and extent of the unexpected contamination, which may include sampling, laboratory analysis and reporting.
- 10. The Hygienist will provide a written report which details, amongst other items,:
 - a. Classification of Material
 - b. Recommendation for Removal and Remediation
- The location of the identified asbestos material will be identified and documented into an Asbestos Register which will be maintained for the life of project.
- 12. All work associated with asbestos will be undertaken under the Companies AS2 Non-Friable Asbestos License. In the event the ACM is classified Friable an AS1 License Holder will be engaged to complete the works.
- 13. Notify WorkCover 5 days prior to commencing works for the obtainment of the appropriate Permits.
- Prior to commencement an Asbestos Removal Control Plan (ARCP) and a Site Specific Work Method Statement (SWMS) must be prepared and implemented.
- 15. Air Monitoring for Friable works or Soil-based Bonded works is required for the duration of the removal works.
- 16. Only ticketed personnel are allowed access to the Exclusion Zone.
- All ACMs will be disposed of at an appropriately licensed waste facility with evidence of correct disposal to be provided to the PC.
- On completion of the removal works the Hygienist is to be contacted to attend site for re-inspection. A Clearance Certificate is to be provided as confirmation that the area is safe to access.
- 19. Validation of the remediated area should be carried out to assess the success of the remediation works.
- 20. On receipt of the above Clearance the Exclusion Zone is to be decommissioned and normal work may continue.

Rev 2 dated 2-Dec-2014

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Appendix E: Shore Hire Drawing No. 100



















