



DEMOLITION WORK PLAN



ST ANTHONY OF PADUA CATHOLIC COLLEGE

140 ELEVENTH AVE, AUSTRAL, 2179

STAGE 3C

Details	Title	Name	Signature	Date
Prepared By:	Project Mgr	Gareth Collin		10/9/20
Approved By:	General Mgr.	Robert Stevenson		10/9/20

Contents

1.	Introduction.....	5
1.1	General.....	5
1.2	Document Design.....	5
1.3	Supporting Documents.....	5
1.3.1	Safe Work Method Statements	5
1.4	Client Requirements.....	6
1.5	Licensing Requirements.....	6
2.	Project Information	7
2.1	Project Scope of Works.....	8
2.2	Project Working Hours	8
2.3	Project Site Aerial Photograph	9
3.	Investigation	10
3.1	Investigation of Structures.....	10
3.1.1	Description of Structures	10
3.1.2	Structural System	10
3.1.3	Hazardous Materials	10
3.1.4	Height of Structures and Distance to Boundaries	11
3.2	Investigation of Site.....	11
3.2.1	Description of Site	11
3.2.2	Underground Structures	11
3.2.3	Retaining Structures.....	11
3.2.4	Hazardous Chemicals / Dangerous Goods Storage or Dumps	11
3.2.5	General Condition of Land and Structures on Adjoining Sites.....	12
3.3	Investigation of Services	12
3.3.1	Services to be disconnected	12
3.3.2	Services to be maintained	12
3.4	Hazard Investigation / Identification	12
3.5	Suspended Slabs and No-Go Areas for Machine's	13
4.	Demolition Exclusion Zone.....	14
5.	Details of Demolition	14
5.1	Sequence	14
5.2	Detailed Work Method.....	15
5.2.1	Receive Handover of Site and Sign-off on Services	15
5.2.2	Site Induction.....	15
5.2.3	Demarcate Site and Define Exclusion Zones.....	15

5.2.4	Install Environmental Controls	16
5.2.5	Practical Removal of Hazardous Materials	18
5.2.6	Create Drop Zones	18
5.2.7	Soft Strip Structures	18
5.2.8	Erect Scaffold and Protection	19
5.2.9	Mechanical Demolition	19
5.2.10	Remove Rubbish and Rubble from Site	20
5.2.11	Handover Site to Client Representative	21
5.2.12	Demobilise from Site	21
6.	Permits by Authorities	21
7.	Personnel Qualifications	21
8.	Notes	21
9.	Forms	22
	Appendix A – Hazardous Materials Survey / Register	23
	Appendix B – Service Disconnection Signoffs	24
	Appendix C – Engineer Certificates and Instructions	25
	Appendix D – Permits by Authorities	26

DWP - Revision Control

This DWP issue number	Date Issued	Amended Page(s)	Action / Amendment Description	Approved By
00		NA	Draft	RS
01		NA	Created	RS

DWP - Review

Date Reviewed	Reviewed By	Was Revision Required (Record Section Numbers where changes occurred)

DWP Controlled Document Distribution

Issued To	Name & Organisation	Date	Issued by
SCS	CTPG – Jim Gilvarry	9.9.20	Project Manager

1. Introduction

1.1 General

This Demolition Work Plan (DWP) has been developed by Steve-Watt Constructions Pty Ltd and sets out the method of demolition to be adopted for the 2-10 Cottonwood Crescent Project during the course of contractual works and meet Client/Contractual/legal and other requirements. Steve-Watt Constructions Pty Ltd forms part of a group of companies known as Steve-Watt Constructions (SWC). For simplicity any reference to Steve-Watt Constructions Pty Ltd will be referred to as SWC in this document.

1.2 Document Design

This Project DWP has been developed to meet the requirements of:

- *Work Health and Safety Regulation 2017 (NSW) Part 4.6, 6.3 and 8.6*
- *Code of Practice: Demolition Work August 2019 (SafeWork, NSW)*
- *AS 2601:2001 Demolition of structures*
- SWCs Integrated QSE Management System requirements

1.3 Supporting Documents

This DWP is to be read in conjunction with the Safety Management Plan (SMP) and Environmental Management Plan (EMP) and / or other plans developed for the project. These developed plans are considered to be the overarching documents to manage and control foreseeable work health and safety risks, environmental risks and meet legislative requirements for the project. Other supporting documents that may be used during the project include:

- Quality Management Plan (QMP)
- Traffic Management Plan (TMP)
- Traffic Control Plan (TCP)
- Asbestos Management Plan
- Asbestos Control Plan

1.3.1 Safe Work Method Statements

The following key SWMS will be developed prior to staged works;

1. Hand Strip Out and Enabling Works
2. Operation of Excavator
3. Operation of Skid-Steer Loader
4. Operation of Forklift & Telehandler
5. Operation of EWP
6. Operation of Materials & Personnel Hoist
7. Working At Heights - on Live Edges
8. Oxy Cutting Reo Bar on Live Edge
9. Placing beams into building with crane
10. Installing structural steel beams in building
11. Installing needles from within a building
12. Installing Propping - Acrow
13. Temporary Crossover - Layback
14. Ramping Down Plant
15. Installing Propping - Formwork Frames
16. Mechanical Strip Out
17. Lift Shaft Strip Out

18. Demolish Members Using Oxy LPG Equip
19. Sampling ACM
20. Control of the Load Out Area

1.4 Client Requirements

This DWP takes into consideration the Client's requirements for implementation through such documents/processes as:

- e.g. Hot Works Permit, Fire Impairment Form etc., noting modification where required of SWC IMS procedures, this Plan content or forms.
- Where no client specifications are required record – "No Client Specifications detailed for this project".

1.5 Licensing Requirements

The type of work involved in this project is classified as unrestricted demolition work by SafeWork NSW. As such the company undertaking this demolition (Yascorp Demolitions) are required to carry an Unrestricted Demolition License and the Supervisor in charge of the works must carry an Unrestricted Demolitions Certificate.

2. Project Information

Client Details:	Is the client the Principal Contractor		<input type="checkbox"/> Yes <input type="checkbox"/> No
Company Name:	SCS - STAP		
ABN:	NA		
Address:	38 Renwick St Leichhardt		
Phone:	95696111		
Fax:			
Email:	Jim.gilvarry@ctpg.com.au		
Client Contact Name:	Gareth Collin		
Client Contact Phone Number:	0434315973		
Demolition Contractor Details:	Is the contractor the Principal Contractor		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Company Name:	SCS - STAP		
ABN:	70002214128		
Address:	34 EGERTON ST, SILVERWATER		
Postal Address:	As above		
Phone:	0434315973		
Fax:	02 9516 2746		
Email:	info@steve-watt.com		
Project Specifics:			
Project Name:	St Anthony of Padua Stage 3B		
Project Address (Location):	140 Eleventh Ave - Austral		
Start Date:	22.09.2020	Completion Date:	June 2021
Peak number of people on site:	50		
Project Contacts:			
Project Manager:			
Name:	Gareth Collin		
Phone Number:	Mobile: 0434315973	Office: 02 96472600	
Email:	gcollin@steve-watt.com		
Competent Person On Site:			
Supervisor 1 – Name:	Matthew Allen		
Phone Number:	0409 838 144		
Supervisor 2 – Name:	Ahmed Yassine		
Phone Number	0416 737 777		
Site Engineer/WHS Person:			
Name:	Matthew Allen		
Phone Number:	0409 838 144		
Other			

2.1 Project Scope of Works

The scope of works consists of the demolition and removal of residential blocks located at:

- STAP – Austral

Projects scope of works includes:

- Demolition and removal of buildings elements and infrastructure including basement levels, including
 - Concrete slab on ground
 - Section of walls acting as retaining structures
- Disconnect and cap all utilities/services at relevant property boundaries or as per provided location
- Traffic management
- Waste sorting and removal
- Site remediation where required
- Asbestos removal
- Decommissioning of plant
- Designing and installation of Temporary Works
- Remove all water meters and return to Sydney Water
- Protection of structures
- Transport of waste
- Prepare Management Plans
- Prepare and submit Survey Plan
- Coordination of the interface Work

Key stages of the project will be carried out as described later on in this document and in a detailed sequence as per the Demolition Programme prepared for the project. Work will generally follow the sequence as indicated below.

1. Receive Handover of Site and sign off services
2. Site induction
3. Demarcate site and define Exclusion Zones
4. Install Environmental Controls
5. Practical Removal of Hazardous Materials
6. Soft strip structure
7. Erect scaffold and protection
8. Mechanical Demolition
9. Remove rubble and rubbish from site
10. Handover
11. Demobilisation.

All works will be completed in accordance with *Code of Practice: Demolition Work (SafeWork, NSW)* and *AS2601: The demolition of structures* and shall meet legislative requirements contained in the *Work Health and Safety Act 2011 (NSW)* and *Work Health and Safety Regulation 2017 (NSW)*.

2.2 Project Working Hours

Working hours for
normal works are:

- 7.00am to 6.00pm Monday to Friday
- 7.00am to 1.00pm Saturdays
- No work on Sundays and Public holidays

2.3 Project Site Aerial Photograph



3. Investigation

An investigation of the structures to be demolished and surrounding environment has been undertaken in accordance with the *Code of Practice: Demolition Work (SafeWork, NSW) and AS2601: The demolition of structures*. The observations from this investigation is broken up into three (3) sections 'Investigation of Structures', 'Investigation of Site', and 'Investigation of Services' and is recorded below.

3.1 Investigation of Structures

3.1.1 Description of Structures

The sites consists of several blocks of houses constructed of brick masonry, fibro, timber construction. They are 1 level walk-ups with undercover parking/garages. They have driveways and footpaths with site landscaping. The rear of the properties back onto a council reserve. The site is runs off Waterloo Road which would be the main entry to and from the site.

3.1.2 Structural System

Walk-up three story concrete and brick masonry structures with undercover parking/garages. Tiled roofs and concrete slab driveways and footpaths.

3.1.3 Hazardous Materials

A full destructive hazardous materials investigation will be undertaken and this DWP will be updated with the new report when it is made available.

No strip out, demolition or other work that has the possibility of disturbing any asbestos containing materials is to commence until a sign off in the affected area is received prior to commencing.

Any hazardous materials removal will be undertaken by a licenced Hazmat removalist. The licensed asbestos removal contractor will take possession of various areas throughout site setting up containment walls, sheeting, negative air equipment, decontamination units and other controls (where required). Areas will be demarcated, for persons requiring access contact the SWC Site Supervisor who will liaise with the Asbestos Removal Site Supervisor to organise appropriate measures. Do not under any circumstances enter an asbestos exclusion zone, tamper with warning signage or tamper with their equipment. Air monitoring will be undertaken daily throughout the structure, in site sheds and to the perimeter of the site. The results of monitoring will be posted daily in site sheds. The location of temporary and localised asbestos removal zones will be tool boxed talked daily.

A clearance certificate will be obtained by a qualified Occupational Hygienist prior to demolition.

In the case of encountering unidentified asbestos, work will stop in that area and the asbestos removal contractor will seal the area and make safe. The occupation hygienist will be notified and their advice sought, sampling and identification of the suspect material may be undertaken. The asbestos removal contractor will otherwise remove the asbestos in accordance with the Asbestos Removal Control Plan which will be amended if necessary, to cover the unexpected find. This

unexpected find will then be included in the clearance certificate document issued by the occupation hygienist and provide a clearance certificate for the same.

3.1.4 Height of Structures and Distance to Boundaries

Single story with ground level parking/garages ranging from 3-4 metres high.

3.2 Investigation of Site

3.2.1 Description of Site

No heritage listed structures have been identified on site.

All neighbouring buildings are to remain operational throughout the demolition process. SWC works must not in any way hinder the operation of these surrounding buildings.

3.2.2 Underground Structures

There may be services running under the ground slabs of the sites. An investigation will happen once possession of site has been achieved.

3.2.3 Retaining Structures

There has been no retaining structures identified on site at this point, further investigation once site possession is granted will be investigated and this DWP will be updated accordingly.

3.2.4 Hazardous Chemicals / Dangerous Goods Storage or Dumps

No major hazardous chemicals or dangerous goods (e.g. munitions, chemical storage systems, underground storage tanks, compressed gas cylinders, fire retardant cylinders, medical gases, dumps of noxious or toxic or hazardous substances, etc.) have been identified on site or have been communicated by the Client.

Work involving removal of hazardous chemicals / dangerous goods is not in SWCs scope of works and is the responsibility of the Principal Contractor to remove unexpected findings of hazardous chemicals / dangerous goods on site.

In the event of encountering any unexpected findings of hazardous chemicals / dangerous goods, the following is to apply before work commences in the immediate area:

1. Work in the immediate area will stop
2. The Site Supervisor will be notified of the find
3. The Site Supervisor will notify the Project Manager
4. The Project Manager will notify the Principal Contractor
5. The Principal Contractor will organise the safe removal of the substance (which may necessitate the engagement of specialist contractors), work will not recommence in the area until the Principal Contractor has given approval

3.2.5 General Condition of Land and Structures on Adjoining Sites

The buildings, paths, roadways and other items surrounding the site are in sound structural condition. A full Dilapidation Survey is to be undertaken by the Principal Contractor prior to demolition starting. SWC do not anticipate any physical impacts on the surrounding structures.

Care will be taken to minimise impacts on adjoining sites and structures. Various methods will be employed to minimise the disruption to the surrounding buildings or adjoining sites and structures.

3.3 Investigation of Services

3.3.1 Services to be disconnected

All services shall be disconnected / made safe prior to commencement of demolition work. A sign-off on services will be received by the client prior to the commencement of any demolition works.

For early works prior to full disconnection of power, areas will be isolated and a sign off on the power in those areas received. For some minor demolition in localised areas where it is clearly evident that there is no power services going to be disturbed (e.g. removal or demolition of ceiling grids, furniture and fixings that do not contain power) the demolition may occur without a signoff.

For complex structures that involve many operational 'live' Client critical services (pressurised piping systems, other water/chemical/steam/air systems, electrical, communication, gas, etc.) requiring identification, relocation and decommissioning or isolation by the Client (and where SWC is the Principal Contractor). The following form may be used to assist SWC in obtaining required signoffs ***Request to Client for Service Id, Decommission & Approval to Remove*** form.

Where fire sprinkler systems are unable to be isolated due to Client operational needs, care shall be taken during works to prevent disruption to this service.

Refer Service Disconnection Signoffs - **Appendix B**.

3.3.2 Services to be maintained

Water and temporary power will be used during the course of demolition works. Some emergency access lighting will be installed and temporary power boards will be used to provide task lighting in the darker areas of the structures. Power will also be used by the Asbestos Removal Contractor to run vacuums, decontamination units (where required), negative air units and lighting within their enclosures.

Water will be used for dust suppression and also for any decontamination unit (where required).

3.4 Hazard Investigation / Identification

The following key hazards associated with demolition work have been identified:

- Unplanned structural collapse
- Falls from one level to another
- Falling objects

- The location above and underground essential services, including the supply of gas, water, sewerage, telecommunications, electricity, chemicals, fuel and refrigerant in pipes or lines
 - Exposure to hazardous chemicals – these may be present in demolished material or in the ground where demolition work is to be carried out (contaminated sites)
 - Hazardous noise from plant
 - The proximity of the building or structure being demolished to other buildings or structures
- Each of the above risks has been investigated and control measures outlined in the Safe Work Method Statement (SWMS) developed for demolition and associated works. Refer SMP and EMP for more details.

3.5 Suspended Slabs and No-Go Areas for Machine's

The following areas are no-go areas for machinery unless an engineer's approval is sought first:

1. All suspended slabs
 2. The high side of any retaining walls from the edge of the wall, back a distance equal to the height of the wall
 3. On top of any underground structures including fuel tanks and the like. Note: where the walls of underground structures are retaining walls, they should be treated in accordance with the above point
- All levels of the structures to be demolished with the exception of the basement slabs are suspended. No machines are to be placed on these slabs without first getting engineers approval. Certification will be sought as to the heaviest Skidsteer, EWP, truck and excavator types that can be places on area of the building prior to bringing any machines on site. Prior to heavier machines being brought onto site, temporary propping will be designed by a structural engineer, installed and finally certified by the design engineer for the areas the machine will be working in. A third party engineer will also check all temporary works including back propping and bracing.
 - Prior to installation of back propping a SWMS will be developed for the installation of the props. See SWC Demolition SWMS – *Installation of Back Propping*.

4. Demolition Exclusion Zone

The demolition Exclusion Zone will encompass the entire site with the exception of the site amenity areas (and access ways to and from), which will be deemed construction zones.

All personnel on the Principals contractor site have to be inducted into their system. In addition, all personnel not inducted by SWC will be required to visit the site office and not enter the demolition site until they have been inducted and signed on the Site Sign-In Register or brought on site with the permission of the SWC Site Supervisor under the supervision of an inducted person and have signed in the Site Visitors Register.

As well as the whole demolition site being a demolition zone, various areas inside the site will be demarcated with chain wire fencing and signs 'Warning Drop Zone, Do Not Enter', Jersey curbs, steel plates and other engineering barricades will also be used in the Drop Zones. The locations of these Drop Zones are also marked up on an Exclusion Zone Plan. The location of smaller temporary localised Drop Zones will be tool box talked daily and detailed in the demolition site sign on location.

All Exclusion Zones, Asbestos Removal Zones and Drop Zones will be properly demarcated. No unauthorised persons shall be permitted into the demolition work area. All personnel and visitors will follow Site Personnel and Visitor Registration Procedure.

5. Details of Demolition

5.1 Sequence

Demolition

Work will follow the sequence below. Amended to this sequence may occur to suit. For more detail see separate Demolition Program.

1. Receive Handover of Site and sign off services
2. Site induction
3. Demarcate site and define Exclusion Zones
4. Install Environmental Controls
5. Practical Removal of Hazardous Materials
6. Create Drop Zones
7. Soft strip structure
8. Erect scaffold and protection
9. Mechanical Demolition
10. Install Man and Material Hoist
11. Mechanical Demolition
12. Remove rubble and rubbish from site
13. Handover
14. Demobilisation

More details on the sequence and flow of the work including durations see the separate Demolition Program and updated monthly programs.

Note: Where temporary works are necessary (propping, scaffolding needles and the like) the following sequence MUST be adhered to prior to the use of the temporary works item:

1. Design
2. Specialist Engineer Sign Off on Design
3. Tall Sign off on Design
4. Installation
5. Inspection and Certification (engaged specialist Engineer)
6. Use

Temporary Works

Note: Where temporary works are necessary (propping, scaffolding needles and the like) the following sequence MUST be adhered to prior to the use of the temporary works item:

1. Design
2. Specialist Engineer Sign Off on Design
3. Second engineer to check design
4. Installation
5. Inspection and Certification (engaged specialist Engineer)
6. Use of temporary works structure/item

5.2 Detailed Work Method

5.2.1 Receive Handover of Site and Sign-off on Services

Demolition will begin only when the site has been officially handed over and a sign off on services has been received by the appropriate service providers for appropriate areas.

5.2.2 Site Induction

A site induction is to be held before any work commences on site. The site induction includes the following:

- ☐ Induction into this DWP, other plans and SWMS
- ☐ Induction into the Principal Contractors Work Health and Safety Management Plan/system
- ☐ Induction into the Clients Work Health and Safety Management Plan/system (where required)

5.2.3 Demarcate Site and Define Exclusion Zones

The entire site will be fenced with 1.8m chain wire fencing. Other areas of site may be demarcated as hazard removal areas, exclusion or Drop Zones. The access gate will be closed during demolition works and manned during load out.

Site notices to be displayed in a prominent position are:

- ☐ Unauthorised entry prohibited
- ☐ Warning Demolition in Progress

- ☐ Warning Asbestos Removal
- ☐ Mandatory PPE information signage
- ☐ SWC Site Supervisor in charge of works
- ☐ 24 hour site emergency contact number

5.2.4 Install Environmental Controls

SWC is a responsible demolition contractor and will endeavour to ensure the unimpeded operation of the surrounding sites throughout our works. Particular importance will be placed on sensitive receivers and close proximity to adjacent buildings. SWC will endeavour to do everything reasonably practicable to make what is by nature a noisy and disruptive process as quiet and dust free as possible. A summary of the key environmental methods that will be used on site include:

- ☐ **Sediment Control**
 - Leaving all hardstands in place until the very end of the project. All truck movements will be on hardstand where practically possible
 - Installing sediment settling and filtration system in the sumps of building to collect and filter sediment prior to it being released into the storm water system. Prior to releasing any water into the storm water a testing system will be put in place
 - A mechanical vacuum type street sweeper is to be employed wherever sediment or dust becomes an issue on the external roadways and on the internal hardstand on site. It is expected that initially there will be not much need for the sweeper however towards the peak load out period of the project the sweeper may need to return to site daily. The need for the sweeper will be assessed on a daily basis with input from interested parties and stakeholders.
 - All drains will be covered in a Geotech material, with Geotech lined hay bales placed up stream of the flow to these drains. All fencing to the perimeter of site will be lined with shade cloth
- ☐ **Noise Management**

Demolition is a noisy process, however many measures can be taken to minimise this noise. SWC believe that with the following noise reduction measures when implemented will minimise noise disruption to the surrounding buildings:

- Demolition will be undertaken by as large as possible machines as they are far less obtrusive than the rapid crescendo of smaller machines.
- External walls of each floor will be left in place until the very last stage of each floors demolition. The walls act as a sound barrier shielding the neighbourhood buildings from much of the noise generated by machines on that floor.
- At least two decks of scaffolding will be lined with Metro Mesh to the full height of the perimeter of building providing a noise dampening measure.
- Drop Zones will be located to ensure minimum noise from their operation
- Material that generates a lot of noise when removed via Drop Zone (large steel members, etc.) will be craned off the structure
- The base of drop zones will be covered with 500mm of rubble prior to their use

- A 3m high 'A Class' hoarding that will be erected to the perimeter of the demolition site will greatly reduce ground level noise from escaping the confines of site.

□ **Dust Control**

Demolition of brick and concrete can generate excessive amounts of dust however through the following dust suppression measures SWC anticipate the dust leaving the confines of the building being demolished will be kept below a level that adversely affects the surrounding billings and site:

- Installing a minimum of 2 water points (with 3 outlets on each point) or as needed on every level of the building with booster pumps used to achieve sufficient water pressure at the top levels of the building (as required).
- Each machine used in the demolition process will be accompanied by a labourer with a water hose to ensure water is available on each separate demolition face and provide adequate dust suppression. Water runoff will be minimised.
- All scaffolding will be lined with Metro Mesh which reduces the wind over the active demolition faces and the possibility of dust permeating through the scaffolding screen
- Material will be saturated prior to being removed via the Drop Zone
- During load out of material, material will be wet down to minimise dust being generated
- The 3m high 'A Class' hoarding will be erected reducing ground level dust from escaping the confines of the site

□ **Vibration Management**

Vibration on this site will emanate from the excavator mounted hydraulic hammers used in the process of breaking down the concrete and brick structure into rubble and also from items reaching the base of the Drop Zone. The following measures will ensure that disruptive vibration will not travel beyond or site:

- Physical links from structure being demolished to adjoining buildings and structures will be demolished (e.g. overhead walkway etc.)
- Physical separation will be done by saw cutting a slice of the slab
- Breakup of slabs, beams and columns into smaller pieces of rubble to reduce vibrations being felt from Drop Zone operation
- Structural steel and large heavy objects will be craned off site
- Covering of the base of Drop Zone with 500mm of rubble prior to use.

□ **Truck Movements**

- Providing traffic controllers to control pedestrian and vehicular traffic
- Ensure trucks are covered prior to leaving site
- Providing drivers information on access, routes and site conditions and sensitive receivers
- Space allocated for trucks within hoardings

Refer [*Environmental Management Plan*](#) (EMP) for full details.

5.2.5 Practical Removal of Hazardous Materials

The management of asbestos on site will be conducted in accordance with the Safety Management Plan (SMP) and Asbestos Management Plan (AMP) developed for the project. Where hazardous materials removal is to be undertaken an Asbestos Removal Control Plan is to be developed by the asbestos removal contractor including specific SWMS for the activity. The Asbestos Removal Control Plan is to incorporate the requirements of the Asbestos Management Plan (AMP).

Hazardous materials removal work will be conducted in accordance with the *Work Health and Safety Regulations 2017 (NSW)* and the *Code of Practice: How to safely remove asbestos*.

The hazardous materials removal will be undertaken by the asbestos removal contractor in all areas of site prior to demolition in those particular areas. A clearance certificate will be obtained by a qualified Occupational Hygienist prior to demolition.

Refer [Asbestos Management Plan](#) and (ARC) Asbestos Removal Control Plan and SWMSs for further details on the asbestos removal and associated risks analysis.

5.2.6 Create Drop Zones

The existing Lift shafts will be utilised as drop zones for transport of demolished materials from the levels being demolished to the load out area below.

A lift servicing company (Otis or the like) will be engaged to decommission the lifts and provide advice and personnel to assist in the removal of the lift car and counterweight. A detailed methodology will be developed and this DWP will be updated to reflect this methodology once further investigations and consultations have been undertaken with the lift service company.

Lift shafts to be used as drop zones will be stripped out by use of speciality designed purpose built lift shaft stripout platforms. The platforms are set up on the lower floor and moved up floor by floor allowing the inside of the lift shaft to be stripped of all rails etc, leaving a smooth shaft for demolished material to fall through.

A site specific SWMS is to be developed for this works. Refer to MD SWMS *Stripping Lift Shaft* for further details.

Drop Zones will be controlled in accordance with the Drop Zone Management Plan. A site specific SWMS is to be developed to support the Drop Zone Management Plan. Refer MD SWMS *Control of the Load Out Area* for further details

5.2.7 Soft Strip Structures

The structures will be stripped-out by hand and appropriate hand tools where required, prior to mechanical stripping in appropriate areas.

Bounded material such as non-loading bearing walls, partitions, and doors that may not be removed by machines will be removed by a combination of hand, picks, crow bars, and other associated tools, and stockpiled in the building or a secure area of site for load out by machines.

5.2.8 Erect Scaffold and Protection

The structure will be scaffolded with heavy-duty 5 board demolition scaffolding covered with chain and shade) as required to safely demolish the structures. 'A Class' hoardings will be erected to the perimeter by the Principal Contractor.

See SWMS provided by scaffolders for further details on the scaffolding erection and associated risk analysis.

When undergoing demolition of a slab, 2 levels of scaffold below will be fitted with carpet and plywood to stop rubble falling through them. Alternatively an exclusion zone will be set up for all the below floors and scaffolds preventing personnel from gaining access to beneath the scaffolds.

During demolition the scaffolding is always to remain at least 2m higher than the top floor being demolished.

5.2.9 Mechanical Demolition

Mechanical demolition will be by hydraulic excavator. 5, 12 and 20 tonne hydraulic excavators with shear, pulveriser, hammer and bucket attachments. These machines will be on suspended slabs and transported from one level to the next via ramps. An engineer's approval will be sought regarding the size of machine that can be put on any particular slab. The engineer's directions in regard to loads on each slab, back propping to the slabs and sequence of demolition will be followed and are included in this document as **Appendix C**.

Hydraulic excavators with shear attachments will cut down steel elements of structure in sections. Hydraulic excavators with hammer / pulveriser attachments will break up brick walls and concrete slabs of the structures in sections and removed via the Drop Zone.

A spotter will work with plant and equipment operators at all times.

Water will be maintained at the face of demolition for dust suppression where required.

During demolition the floor area under the excavators and the bay area's being demolished will be closed off with warnings signs, ATF fence panels and existing wall's. No plant or personnel will be allowed in these areas.

Shear wall that is on the perimeter of the building will be demolished in the following sequence:

1. Excavator will punch a vertical line in the wall, leaving steel reinforcement intact
2. The excavator will then make a horizontal line at the base of the wall keeping the steel reinforcement intact. Leaving 300mm concrete between the vertical cut and the start of the horizontal cut
3. A worker will then cut the back steel reinforcement in the horizontal line and all the steel reinforcement in the vertical line
4. The machine will then fold the wall inside the building

The pulling in of perimeter beams will be done in the following sequence:

1. An excavator will hammer both ends of the beam leaving steel reinforcing intact
2. Chains will be attached to the beam at one end

3. All steel reinforcement will be oxy cut at the chained end and the only top reinforcement will be cut on the other end
4. The chained end will be towed in and placed on the slab
5. The remaining bottom steel will be oxy cut
6. The remaining end will fall onto some rubble or steel to cushion the impact on the slab
7. The beam can then be safely dragged in by the excavator

Removal of double story walls will be carried out in the following sequence:

1. Excavator will punch a vertical line in the top of the wall, leaving steel reinforcement intact
2. The excavator will then make horizontal line mid height of the wall keeping the steel reinforcement intact. Leaving 300mm concrete between the vertical cut and the start of the horizontal cut
3. A worker will then cut the back steel reinforcement in the horizontal line and all the steel reinforcement in the vertical line
4. The machine will then hammer the folded in wall
5. The procedure for removing perimeter shear walls will then be followed for the lower segment of the wall

Mechanical demolition of lower structure from ground level will be by hydraulic excavator. 20, 30 and 40 tonne hydraulic excavators with shear, pulveriser hammer and bucket attachments. None of these machines will be placed on suspended slabs. All buildings and structure can be reached from the ground.

5.2.10 Remove Rubbish and Rubble from Site

Both strip out material and load out from floors being demolished, will be removed via Skidsteer. Demolition rubble will be removed from the floor below the one being demolished. The Skidsteer will transport the rubble to the Drop Zones and drop it over the edge. The Skidsteer operator will need to stay in constant communication with the excavator machines above to coordinate between demolition and load out crews. The Skidsteer operator will also need to stay in constant communication with the machine loading out from the Drop Zone at ground level to ensure when material is being dropped into the Drop Zone the base of the Drop Zone is evacuated.

The reinforced concrete up stand to the edge of the Drop Zone is to be left in place to ensure there is no possibility of the Skidsteer travelling over the edge of the building. The Skidsteer will lift the material over this up stand and tip through the opening. Only suitable material of a suitable size will be placed into the Drop Zone to avoid blockages.

An excavator operating at ground level (Drop Zone) will remove the rubble from the Drop Zone and load trucks. The area this machine is working in will be clearly demarcated and posted as a Drop Zone and is also out of bounds for all personnel unless under the express permission of the operator of the load out machine who will be in constant contact with the operators on the roof and other demolition crews using the Drop Zone via 2 way radio.

Concrete jersey curbs, steel columns and steel plates will be installed at the base of the Drop Zone to ensure material does not escape the confines of the demarcated area.

Demolished material will be separated and stock piled ready for load out.

A combination of hydraulic excavator with grapple attachments or bucket and/or Skidsteer with grapple attachments will load out demolished material into appropriate bins for transportation to an EPA approved tipping or recycling facility.

Water will be maintained on stockpiles at all times for dust suppression. Care shall be taken to watch for pedestrians when entering and leaving site.

Approved Traffic Control Plan will be adhered to at all times. All trucks will follow the truck route and guidelines on entering and exiting the site.

A SWC RTA tickets traffic controller will assist trucks for site access and egress when required.

5.2.11 Handover Site to Client Representative

Where areas are to be progressively handed back to the Client or Principal Contractor the **Project Area Handover Form** is to be used and a copy provided to the Client.

On practical completion of works, a site meeting with the Clients representative and SWC will occur. SWC will hand over the site following the completion of all activities on the scope of works.

5.2.12 Demobilise from Site

The site demobilisation will take place following the site handover to Clients representative. Truck floats will take plat off site, the mobile amenities (where used) will be towed off site and the site fencing dismantled (where installed by SWC) and carted off site.

6. Permits by Authorities

All relevant permits required by authorities will be sought and displayed on-site at all times. These permits include but are not limited to (refer **Appendix D**):

- ☐ SafeWork NSW Permit for demolition
- ☐ SafeWork NSW Permit for asbestos removal
- ☐ Council approval for temporary footpath closures (if necessary)
- ☐ Council approval for Hoardings and laybacks (if necessary)

7. Personnel Qualifications

All personnel onsite shall hold a General Construction Induction Card (White Card).

The Site Supervisor shall be a SafeWork NSW recognised Demolition Competent Person with considerable expertise in the demolition of similar structures.

All plant will be operated by SafeWork NSW ticketed and experienced personnel.

SWC is committed to ensuring ongoing Work Health and Safety compliance. All personnel will be site inducted prior to commencement of work on-site.

8. Notes:

- ☐ During mechanical demolition, a competent observer will work with the operator at all times

- ☐ An RTA ticketed traffic controller will assist trucks accessing and egressing the site
- ☐ The structure is to be demolished in a controlled manner
- ☐ SWC will maintain a competent SafeWork NSW recognised person on site at all times
- ☐ Each day a daily toolbox talk and checklist will be conducted by a site foreman and is to be read in conjunction with this DWP and the task specific SWMSs
- ☐ Personnel will sign off daily toolbox talks prior to proceeding to the work face
- ☐ All SWC personnel will hold a General Construction Induction Card (White Card) and will wear appropriate PPE
- ☐ Site specific SWMS and DWP can be altered in the Tool Box Talks, by altering the actual documents and by creating new SWMS on the blank forms provided. These changes will be outlined in a toolbox talk and orally if the competent person on site identifies additional risks. Further revisions of the documents will be issued as soon as practicable.

9. Forms

- ☐ Request to Client for Service ID, Decommission & Approval to Remove F-QSE-024.A
- ☐ Project Area Handover Form F-QSE-003.H

Appendix A – Hazardous Materials Survey / Register

TBA

Appendix B – Service Disconnection Signoffs

TBA

Appendix C – Engineer Certificates and Instructions

TBA

Appendix D – Permits by Authorities

Copy of demolition permit to be placed on

noticeboard TBA