

DEMOLITION WORK PLAN



412 St Kilda Road Melbourne

PROJECT NO: Q4427-18

PRINCIPAL CONTRACTORS DETAILS

MANN GROUP VIC Pty Ltd	33/139 Cardigan St Carlton Vic 3053
ABN: 90 155 871 337	info@manngroup.com.au
Demolition Unlimited:	Registration Number: BD-U 38345

PROJECT WORK PLAN DETAILS:

412 St Kilda Road St Kilda

REVISION:	B	
DISTRIBUTION:	Mann Group VIC Office	Mr. Mahmoud Moukahal
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PREPARED BY:	Moe Moukahal/ Melissa Clerke	
SIGNATURE & DATE:		3 rd April 2018



Revision: B

Issue Date: 03/04/18

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1.0 Project Information:

1.1 Project Name:

Mayfair

1.2 Project Addresses:

412 St Kilda Road, Melbourne

1.3 Dates:

Date of Commencement: July 2018
Date for Completion: March 2019

1.4 Work Method Author/Project Manager:

Name: Melissa Clerke/ Moe Moukahal

Signature: _____

Phone: 0448 912 861/ 0422 723 563

1.5 Competent Person/s on Site:

Demolition Supervisor 1

Name: TBA

Phone:

Signature: _____

Demolition Supervisor 2

Name:

Phone:

Signature: _____

Asbestos Supervisor

Name: Veng Chour

Phone: 0423 940 024

Signature: _____

Name & Address of the Contractor Undertaking Demolition/Excavation Works, Disposal of Excavated Materials & Transport Contractor:

Mann Group VIC
33/139 Cardigan St
Carlton VIV 3053

2.0 Introduction:

This Demolition Work Plan sets out the method of works to be adopted by Mann Group VIC during the course of our proposed works contract on this project. This document forms part of Mann Group VIC WHS Management Plan and is to be read in conjunction with all Management Plans and the like related to this project.

This document and the attached High Risk Construction Work Safe Work Method Statements are designed to comply with OHS Regulations 2017 and Australian Standard 2601-2001 The Demolition of Structures Clause 2.3.

This document may be reviewed and updated during the course of works. Daily changes to this Demolition Work Plan may be made by the sites competent person and communicated to the workforce via toolbox talk, pre-starts, SWMS revisions etc.

All structural engineering components such as propping, bracing, structural alterations, plant on suspended slabs, loading on suspended slabs, shoring, underpinning, etc. can only be designed, approved and altered by a certified structural engineer.

3.0 Scope of Works

The scope of works for this project, is the demolition of existing building bounded by St Kilda Road, Bowen Cres and Queens Lane, St Kilda Victoria including temporary shoring to the existing perimeter walls, bulk and detail excavation including filling.



412 St Kilda Road, Melbourne: Demolition Site Plan

All works will be completed in accordance with AS2601 – The Demolition of Structures, the February 2016 Demolition Work Model Code of Practice and shall meet all legislative requirements contained in OHS Regulations 2017.

- Workplace safety legislation: The Act
- Workplace Safety legislation: The Regulations
- AS/NZS 1269.3 Hearing protection
- AS/NZS 1337 eye protection for industrial situations (1992)
- AS/NZS1801 industrial safety helmets (1997)
- AS/NZS 2210.1 and AS/NZS2210.2 safety footwear
- Elevated Work Platform >11m AS2250
- Crane, Hoist or Winch (AS 2550)
- AS 2601 Demolition of structures
- AS 2397 Safe use of lasers in the building and construction industry
- AS/NZS 1891 Industrial fall-arrest systems and devices –Safety belts and harnesses
- AS/NZS 1892 Portable Ladders
- AS4839 The safe use of portable and mobile oxy fuel gas systems for welding, cutting and allied processes
- AS 1940 The storage and handling of flammable and combustible liquids
- Barricade or Guarding (Legislation)
- SWA NOHSC Publication: Code of Practice for the Safe Removal of Asbestos 2nd edition [NOHSC:2002(2005)]
- SWA NOHSC Publication: Code of Practice for the Management and Control of Asbestos in the Workplace [NOHSC:2018(2005)]
- AS/NZS 1596 The storage and handling of LP Gas
- AS 2601 Demolition of structures
- AS 2159 Piling – Design and Installation
- Hazard Warning Signs (AS 1319)
- AS 3798 Guidelines on earthworks for commercial and residential developments
- SWA ASCC Publication: National Code of Practice for the Prevention of Musculoskeletal Disorder for Performing Manual Tasks at Work
- National Standard for Construction Work [NOHSC: 1016(2005)]
- Explosive Power Tools (AS 1873)
- Fall Arrest/Restraint Systems (AS 1891)
- Scaffold (AS 1576 and AS 4576)
- Ladder (AS 1892)
- Code for Occupational Health & Safety Induction Training for Construction Work 2007
- ASNZS 3012:2010 Electrical Installation on Construction & Demolition Sites
- ASNZS 4836:2011 Safe working on/or near low-voltage electrical installations & equipment
- AS 4687:2007 Temporary Fencing and Hoarding
- AS 3745:2010 Planning for Emergencies in Facilities
- AS 1940:2004 Storage & Handling of Flammable & Combustible Liquids
- AS 4332:2004 Storage & Handling of Gases in Cylinders
- AS 2436:2010 Guide to Noise & Vibration Control on Construction & Demolition Sites
- AS 4839:2001 Safe Use of Portable Mobile Oxy Fuel Gas System for Welding Cutting Heating and Allied Processes

4.0 Investigation

An investigation of the structures to be demolished and surrounding environment has been undertaken in accordance with the Australian Standards for Demolition of Structures, AS2601 – 2001. The observations from these investigations are broken up into 3 sections 'Investigation of Structures', 'Investigation of Site' and 'Investigation of Services' and is recorded below.

4.1 Investigation of Structures

4.1.1 Description of Structures

The existing building is located along St Kilda Road, Bowen Cres and Queens Lane. The existing building is an 18 Storey commercial office building with two level plant room. The building also has two basement parking levels. The basement slabs are to be demolished, however the slab on ground is to remain.

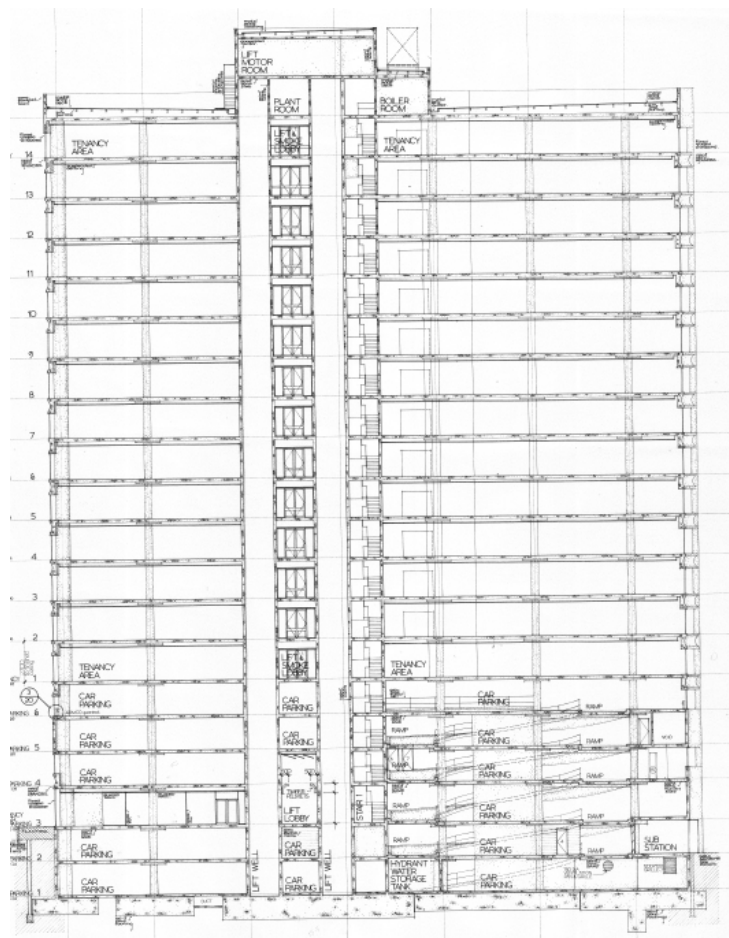


Figure 1 Cross section 412 St Kilda Road

4.1.2 Structural System

The existing office building is a reinforced concrete structure. The columns and beams supporting the structure are reinforced concrete.

The Southern elevation external wall is a full height concrete wall. The Northern, Eastern and Western elevation external walls are scalloped beams and glazing.

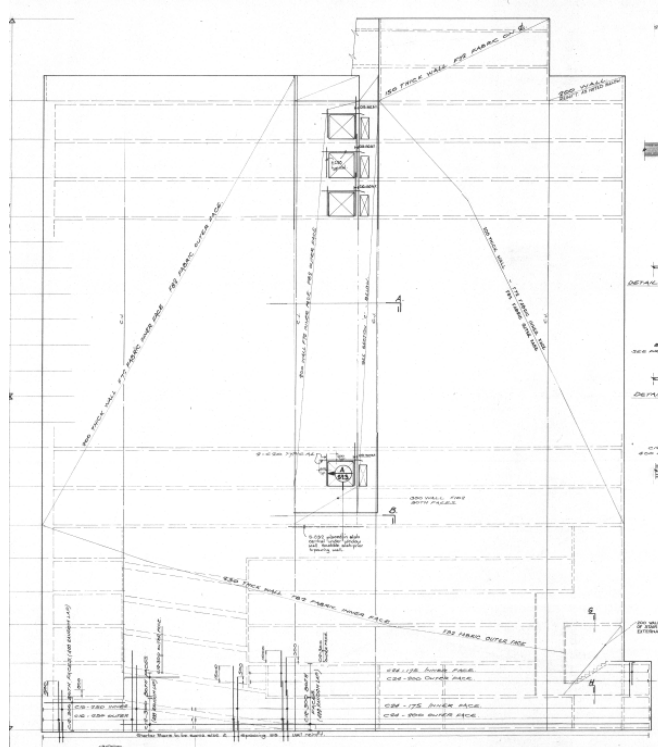


Figure 2 Southern Elevation - Full height concrete wall

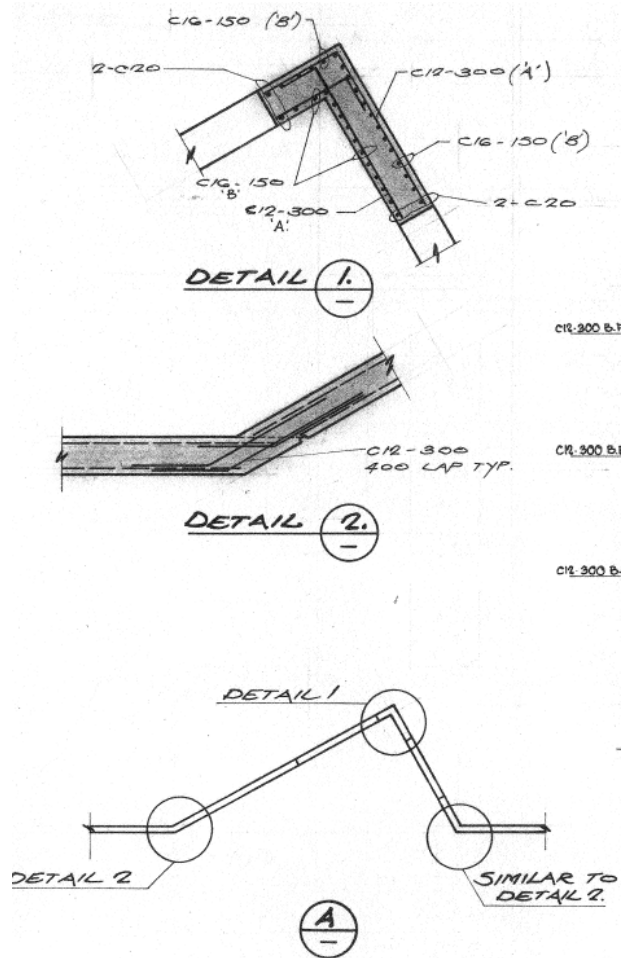


Figure 3 Typical Concrete Wall Detail - Southern Elevation

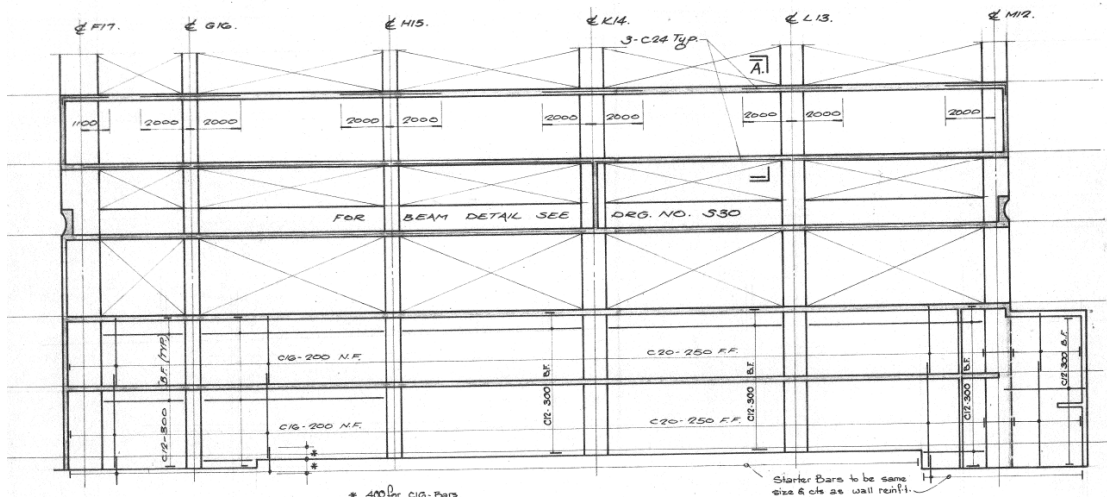


Figure 4 Typical Wall Elevation - Northern, Eastern and Western

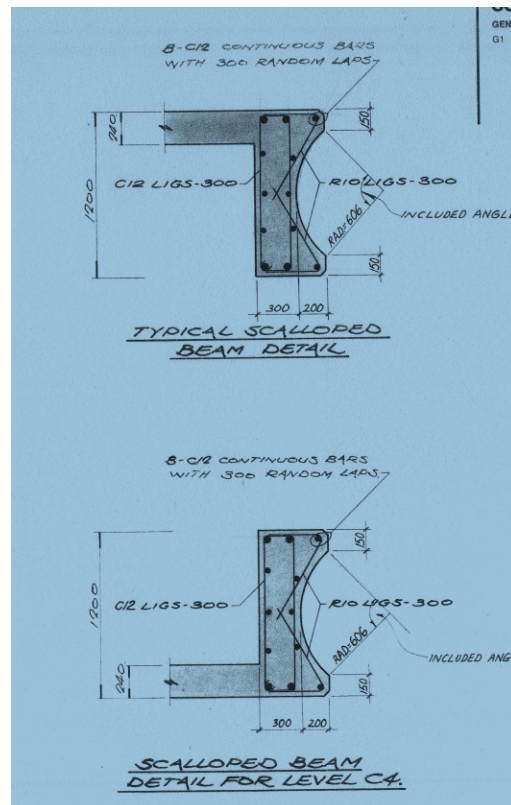


Figure 5 Scalloped Beam Details

4.1.3 Hazardous Materials

Hazardous material investigation report has been conducted on site by both Noel Arnold in 2008 and Greencap in November 2016. A further destructive investigation is required prior establishment including to areas not inspected and/or ensure all hazardous materials are identified prior to demolition activities commencing.

The hazardous materials survey has identified lead paint, SMF, mould, and potentially non-friable asbestos.

The hazardous material will be removed by Mann Group in accordance with their Hazardous Removal Control Plan and How to Safely Remove Asbestos Code of Practice (2011) and applicable SWMS.

Following removal works, a qualified Occupational Hygienist will provide a clearance certificate and all materials disposed of to a licensed landfill and disposal dockets provided upon receipt.

In the case of encountering unidentified asbestos, work will stop in that area and MANN Group will seal the area and make safe. The hygienist will be notified and their advice sought, sampling and identification of the suspect material will be undertaken. MANN Group will otherwise remove the asbestos in accordance with the MANN Group Asbestos Removal Control Plan which will be amended if necessary to cover the unexpected find. This unexpected find will then be included in the hazardous materials register and in the clearance certificate document issued by the occupational hygienist and provide a clearance certificate for the same.

4.1.4 Height of Structures and Distance to Boundaries

The main building structure is approximately 58m in height. The plant room, located on the roof is approximately an additional 6m in height. There is no set back from the boundary on all 4 elevations. As such, overhead protection will be required as per the requirements of AS2601.

4.2 Investigation of Site

4.2.1 Description of Site

The building has 3 street frontages to St Kilda Road, Bowen Crescent and Queens Lane. The buildings surrounding the site are high rise residential apartments and multistorey commercial office buildings.

4.2.2 Technical Management of Temporary Works

1. Temporary Works Requirements

This section describes requirements in relation to Temporary Works engineering that forms part of Mann Group's activities. To control risks to personnel public and works associated with Temporary Works, this section describes minimum checks to be performed for the design and implementation of the Temporary Works, including responsibilities for performing these checks, and how they should be performed and documented. Mann Group VIC will engage Structural Engineers to design Temporary Works in accordance with the SafeWork Demolition Work Model Code of Practice Feb 2016, AS2601 - The Demolition of Structures – 2001, and AS1170-0-2002, AS1170-1, 2002 and AS1170-2.

2. Structural Engineer

Mann Group VIC will engage a Structural Engineer to undertake designs of the following Temporary Works:

- (i) General demolition Temporary Works designs for activities including back propping of slabs; modification of structures to allow materials handling and vehicle access through buildings; support of heavy equipment; designs required by Third Party Agreements, etc;
- (ii) Hoarding;
- (iii) Scaffolding including Cantilever Section.

Mann Group VIC's Structural Engineers must be a member of the Australian Institute of Engineers with a minimum 15 years' experience in this type of work. Mann Group VIC's Structural Engineer will;

- (i) Design Temporary Works;
- (ii) Certify Demolition Methodologies; and
- (iii) Inspect the demolition work to ensure the designs and methodologies are being implemented safely.

3. Construction Compliance with Temporary Works Design

Mann Group VIC will manage the demolition process such that:

- (i) Mann Group VIC's activities comply with the Design Documentation;
- (ii) Any proposed change to a design solution during the demolition is reviewed and approved by Structural Engineer;
- (iii) Any proposed change to a design solution that affects the safety regime during demolition and is referred to the Principal's Representative for review; and
- (iv) ITPs are developed in accordance with Safety Management Plan.

The Structural Engineer must be engaged during the implementation of Temporary Works to ensure that the design, and the intention of the design, is implemented. Mann Group VIC will arrange for the structural engineer to:

- (i) Undertake regular inspections of the Contractor's Activities;
- (ii) Release relevant Hold Points; and
- (iii) Attend relevant Witness Points.

4.2.3 Underground Structures

The existing office building located along St Kilda Road, Bowen Crescent and Queens Lane consists of two basement levels. The basement levels are to be demolished and backfilled with rubble to retain walls.

4.2.4 Retaining Structures

There are retaining structures along all elevations of this building structure i.e. two basement floors. The existing retaining walls will not be demolished as part of these works. However basement slabs will be demolished and backfilled with rubble to retain basement walls.

4.2.5 Dumps of Noxious, Toxic, or Hazardous Substances

No major in ground dumps of noxious, toxic or hazardous substances have been identified within the hazardous materials report.

4.2.6 General Condition of Land and Structures on Adjoining Sites

The surrounding area of land is generally in satisfactory condition. Care will be taken to minimise disruptions to adjoining properties and infrastructure. Dilapidation Reports to be conducted prior onsite commencement and managed throughout the project.

4.3 Investigation of Services

4.3.1 Services to be disconnected

All services shall be disconnected / made safe prior to commencement of demolition work by licensed trades. A sign-off on services will be received prior to the commencement of any demolition works. Electrical supply to building will be disconnected from the main switch board and all cables cut away from the existing cable tray until terminations outside the boundary are completed. Main switchboards and sub-boards will be checked and a service sign-off provided prior to demolition. Other existing services such as fire hydrant, gas and telecommunications will be disconnection at the boundary and sign offs provided upon completion. If any live power remains within the site, it shall be identified and documented with site personnel inducted with the knowledge of any live power within the site. (Refer to the Dial before Dig information in Appendix)

4.3.2 Services to be maintained

Domestic water will be tapped and maintained during the course of the demolition works for dust suppression and firefighting. Water will be run via temporary poly lines and water hoses to the working areas by a licensed plumber. A temporary electrical supply line will also be run to service the project. During the course of the demolition, the switch room will be isolated and temporary power will be made available directly from a nominated supply.

4.4 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. Outside the radius specified by the structural engineer
3. Within the specified exclusion radius of another machine

5.0 Demolition Exclusion Zone

Personnel not inducted by Mann Group will be required to visit the site office and not enter the Demolition site until they have been inducted and signed in on the *Site Personnel Register* or brought on site with the permission of the 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 as asbestos removal zones (see previous section 4.1.3) and drop zones. Drop zones will be demarcated with chain wire fencing and signs with wheel stops 'WARNING DROP ZONE, DO NOT ENTER'. Jersey kerbs, hard fencing, steel plates and other barricades may also be used in the main drop zone.

All exclusion zones will be properly demarcated. No unauthorised persons shall be permitted into the demolition work area. All personnel and visitors will follow the Site Personnel and Visitor Registration Procedure and be escorted within the site during works.

All vehicle access to be channeled through Queens Lane and managed by traffic management at all times for the works.

6.0 Details of Works

6.1 Sequence

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

1. Receive Handover of Site and sign-off on services
2. Site Induction
3. Demarcate site and define exclusion zones
4. Establishment including Amenities
5. Install Environmental controls
6. Removal of hazardous materials
7. Install Hoarding, Cantilever Frame for Scaffold, Hoist & Scaffolding. These items will be progressively dismantled as the building is demolished.
8. Placement of Plant & Equipment
9. Strip-Out of Building Structure
10. Structural Demolition of Structure
11. Fill existing basements with concrete demolition rubble for future platform for drilling rig.
12. Remove remaining Demolition Debris from Site
13. Site de-mobilization

There will be no works undertaken under confined spaces. Should this task arise, a confined space permit is required.

Steps 9-12 will run concurrently

6.2 Detailed Work Method

6.2.1 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 the structure to be demolished any remaining live services within the site clearly identified.

- Electricity: The electrical contractor will confirm the disconnection of power to the building and provide a sign off on completion. Note comment on section 4.3.1

- Water: The plumbing contractor will confirm the disconnection of domestic and hydrant water supply to the building and provide sign off on completion. Firefighting services on site are to be maintained at all times during strip-out demolition works and ensure water is available throughout the levels at all times. Access to fire services in the street must not be obstructed.
- Refrigerant gas: The refrigeration contractor will recover refrigerant gas from identified equipment and provide sign off on completion.
- Gas: The authorised gas company to isolate gas line entering the building.
- Drainage and sewerage: Extent to be confirmed on site by plumber performing further investigations, location of these services will be conveyed to all site personnel via tool box talks and induction.
- Communications: Telstra & Optus services will be disconnected and sign offs provided on completion.
- Alternative services/supplies: Further investigations required by relevant services trades.

6.2.2 Site Induction

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

1. Project Specific Induction and Site Specific Induction
2. Induction into this Demolition Work Plan, Hazardous Materials Management Plan, Work Health & Safety Plan, Safe Operating Procedures and HRCW SWMS's.

6.2.3 Demarcate Site and Define Exclusion Zones

The site is will be demarcated with gantry to the street elevations. Other areas of site may be demarcated as hazard removal areas or drop zones using crowd control barriers, temporary fencing or the existing structure. Hazardous removal areas or drop zones will be clearly communicated to all working personnel and visitors and sign-posted. Physical barriers will be utilised to demarcate these areas.

Prior to the demolition of adjoining or occupied residencies, the occupant of the neighboring building is to be notified that the demolition works are occurring. Mann Group will implement control measures to minimise the impacts of noise and vibration.

All demolition will occur during business hours; no explosive or extensive hammering will occur. Where there is potential for machinery or plant to affect a resident's peace & quiet, Mann Group & the stakeholder will notify the tenant prior.

Site notices to be displayed in a prominent position are;

- Unauthorised Entry Prohibited.
- Warning Demolition Work in Progress.
- Warning Asbestos Removal.
- Mandatory PPE Information Signage.
- Sign Saying; Mann Group VIC, Khaled Awad 0401 001406

6.2.4 Establishment Including Amenities

The site and work areas will be secured with A-Class Hoarding. The following plant & equipment will be used:

• A-Class Hoarding	• Amenities	• Temporary Fencing
• 30t Excavators (attachments)	• Cantilever Frame	• Scaffolding
• 20t Excavators (attachments)	• Hand Tools	• Jersey Kerbs
• 12t Excavators	• Trucks	• Bins
• 8t Excavators	• Oxy Cutting Equipment	• Barricades
• 5t Excavators	• Shade mesh	• Scaffold Sound Barriers



412 St Kilda Road, Melbourne: Location of Site Amenities

6.2.5 Install Environmental Controls

All affected drains will be covered in a geo-tech fabric material and or sediment socks. An Environmental Management Plan with a detailed Environmental Controls Map will be supplied once the Environmental Controls have been put in place. In addition, the Environmental Management Plan must be read in conjunction of this Demolition Work Plan

Sediment control on site will primarily be controlled by two methods:

1. Leaving all surrounding hardstands in place until the very end of the project. All truck movements will be on hardstand.
2. Installing sediment control to all drains and stormwater entry points within the site.

In addition to the above measures which should all but eliminate sediment entering the storm water system, external to the site and inside the site, where storm water grates and gutters exist, all grates will be covered in a geo-tech material, with geo-tech lined and filled socks placed in the gutter up stream of the flow to these drains.

6.2.5.1 Noise and Vibration Management

During the nominated programme works will incur various demolition activities and show variance to noise and vibration management during the course of the works. The structures to be demolished reinforced concrete floors, beams and columns which governs the demolition methodology to use various limited noise and vibration excavator attachments such as rippers, buckets, hydraulic hammers and pulverisers to conduct the works. Hydraulic hammering is required to demolish the majority of the concrete structures during the course of the project. The demolition sequence will provide a barrier to the neighboring residential & commercial properties in the vicinity of the demolition works.

As stated above, our proposal is to demolish the structures using a combination of mechanical means, thus limiting noise and vibration within the approved working hours.

Control: All noise-creating activities are to be limited to the hours of the building demolition approval. No work is to be carried out on Sundays or Public Holidays. All plant and equipment is to be muffled in accordance with manufacturers' requirements. The existing structure is to be used where possible to screen noise. The use of hydraulic hammers is to be limited and the size of equipment to be used will be increased to enable the increased use of bucket/ripper/pulverisers attachments in lieu of hydraulic hammers.

Monitoring: Regular inspections will be performed by the Project Manager to determine the extent of noise/vibration on the site. The complaints register will be checked daily and any corrective action necessary taken immediately to ensure minimal interruptions.

Contingency: In the event of excessive noise/vibration is being created by the demolition process, work will stop immediately. Demolition methods will be modified to ensure that noise emissions during demolition work is minimised and vibration mitigation measures are taken such as the modification of demolition methodology.

6.2.5.2 Dust Management

Demolition of concrete structures can generate excessive amounts of dust however dust suppression methods, through hand held hoses and or sprinklers will be used to control dust at the source point. Demolition staging, such as demolishing perimeter walls last, will be used to minimise the exposure duration of adjoining neighbors to dust creating activities. During high winds demolition methods will be modified or ceased to prevent dust exposure beyond the site boundaries. Rubble and spoil stockpiles will be soaked to prevent dry loading. Shade cloth will encapsulate scaffolding to contain dust during demolition works.

6.2.5.3 Odour Suppression

Controls – Odor generating materials will be identified and either masked or suppressed using suitable agents; or the extent of the works will be limited such that the odors are kept to a minimum. Odors on site are expected to be a minimum because of no odor creating agents anticipated.

Monitoring – Regular monitoring is to check for any evidence of excess odors. The complaints register is to be checked weekly and any suitable corrective action taken immediately.

Contingency – In the event of excessive odor being generated by the works, demolition will cease immediately and the source of the odor will be identified and suitable action taken before commencement of demolition. The Superintendent's Representative will be notified immediately.

6.2.5.4 Water Pollution

Water used for dust suppression must be channeled & remain onsite, i.e. Lower Basement. All vehicles to be wholly loaded within the site boundary before exiting and vehicle tyres must also be cleaned. Ensure sediment control to all drains and pits are installed prior commencement. Proposals must be in accordance with the Protection of the Environmental Operations Act 1997).

6.2.6 Removal of Hazardous Materials

Identified hazardous materials removal work will be accordance with 'How to Safely Remove Asbestos' Code of Practice, and WHS Regs-2011. Refer to section 4.1.3 for the identified hazardous materials.

The Hazardous materials removal will be undertaken by MANN Group in all areas of site prior to demolition in those particular areas. A detailed SWMS and methodology will be provided prior to asbestos removal works commencing. A clearance certificate will be obtained by a qualified Occupational Hygienist upon completion of any hazardous material removal.

Hazmat Material Removal Sequence:

1. Bonded Asbestos Removal:

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- This activity will be carried out manually utilising hand tools and access equipment.
- Removal area for bonded asbestos will be isolated utilizing barricades and warning signs.
- All bonded asbestos material to be sprayed with water and PVA, to be removed in one piece and placed in a skip bin lined with plastic.
- Mastic asbestos windows are to be removed under bonded asbestos condition by removing the entire window with the mastic. Windows are to be wrapped in plastic and dispose as asbestos.
- Personnel to be wearing the appropriate PPE at all time as listed in the asbestos removal SWMS.
- Personnel to decontaminate after each shift as per hazmat material removal SWMS.
- Air monitoring during bonded asbestos removal is recommended.
- Clearance from a Qualified Hygienist to be issued.

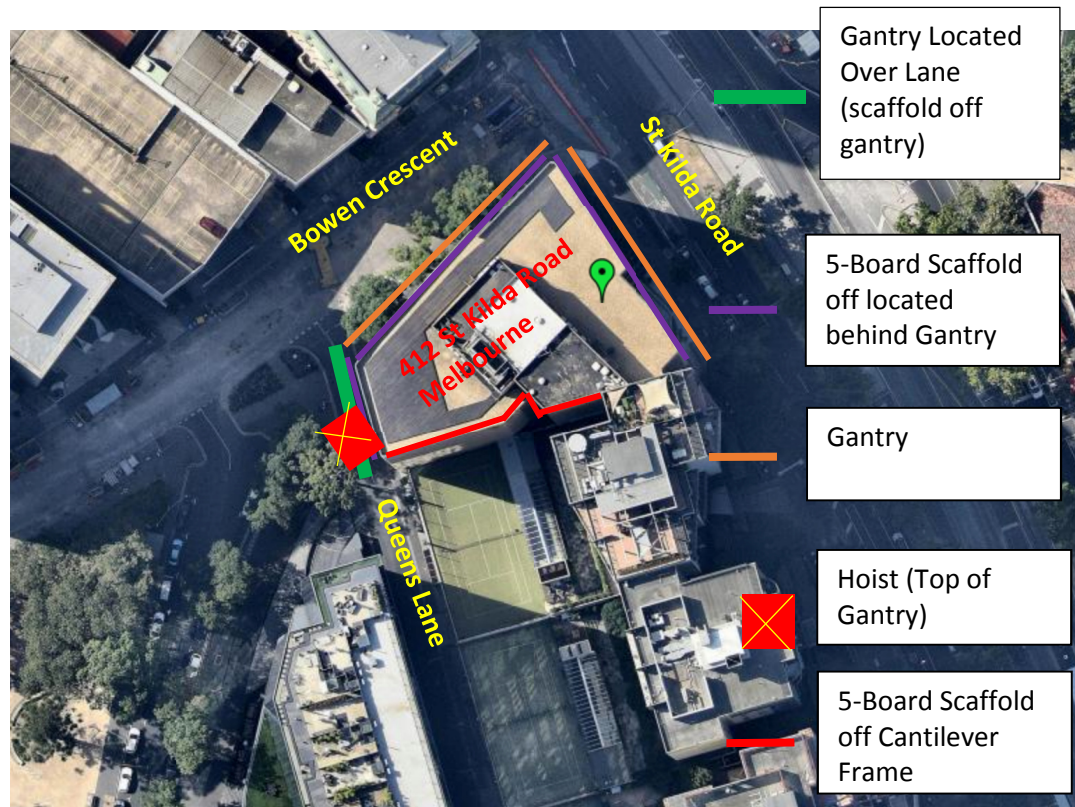
2. Removal of SMF:

- This activity will be carried out manually utilising hand tools and access equipment.
- SMF to be collected and placed into plastic bags. Removed SMF to be placed into a skip bin and removed off site.
- Personnel to be wearing the appropriate PPE at all time as listed in the hazmat removal SWMS
- Clearance from a Qualified Hygienist to be issued.

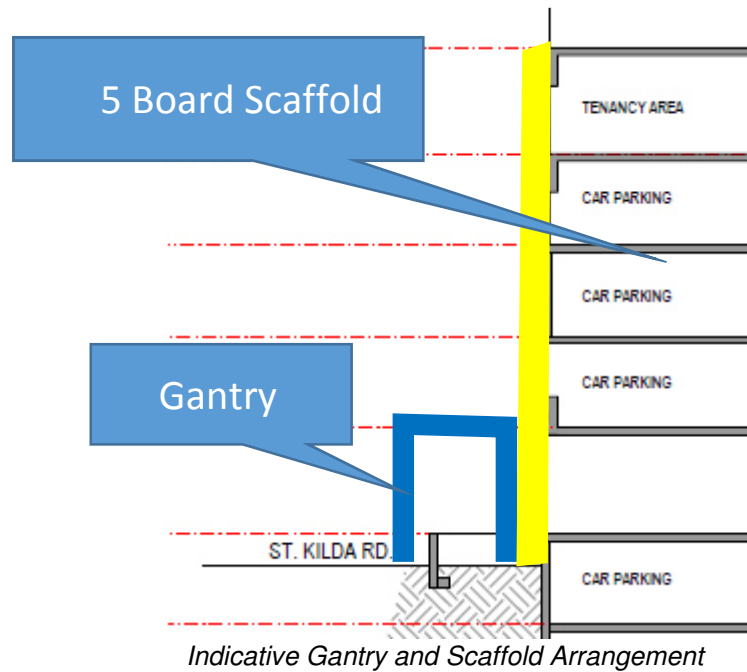
6.2.7 Placement of Plant & Equipment

During the initial set-up, all plant will be delivered and unloaded within the constraints of the site boundary and in accordance with the approved Traffic Management Plan & TCP. Furthermore, a man & materials hoist will be installed to service the project & to assist personnel to access the building safely. Hoist to be installed under traffic management with authority approvals & is required to safely demolish the building structures and assist with the lowering of scaffolding, cantilever frame, thus eliminating noise & vibration.

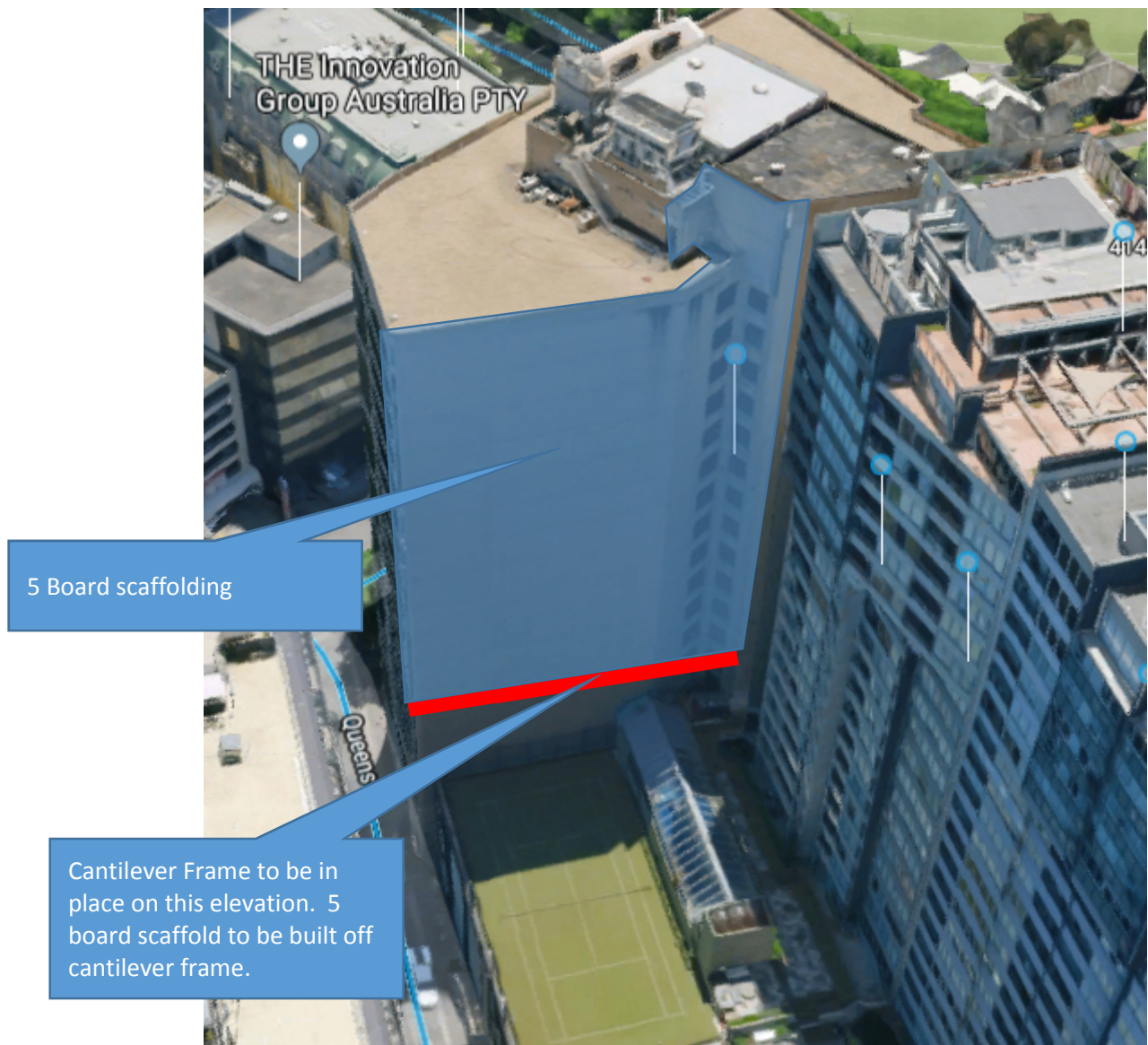
6.2.8 Installation of Gantry, Cantilever Frame (Scaffold), Hoist & Scaffolding



412 St Kilda Road: Gantry, Cantilever Frame for Scaffold, Hoist & Scaffold Plan



Prior the installation of the cantilever frame, the working & catch deck will be installed under footpath closure and traffic management to enable safe erection and dismantle of the scaffold system.



412 St Kilda Road, Melbourne:: Location of Cantilever Frame Above Adjoining Building (East)

6.2.9 Strip-out of Building Structure

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

Where a skid steer and/or small excavator, mechanically demolish or light weight structure to assist personnel with the strip-out phase of the works on all levels throughout the structure.

Bounded material such as non-load 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 via the drop zone.

The risks and controls associated with strip out works have been assessed in site specific SOP's.

All debris to be transferred into the nominated loadout zone and placed directly into bins on Ground floor then transferred on Basement Floor with an approved engineering investigation.

Internal Strip Out Sequence:

- This activity will be carried out manually utilising hand tools.
- This activity will include removal of all loose joinery and furniture, floor covering and blinds.
- Removed material to be placed in a skip bin and removed off site.

6.2.10 Create Truck Access from Queens Lane

Truck access will be created to the site from Queens Lane. The head height of the existing driveway will be increased to allow trucks to enter the site and be loaded fully within the site. Temporary propping/ bracing will be installed as specified by Mann Group's structural engineer prior to the entrance sized been increased.



Figure 6 Proposed access

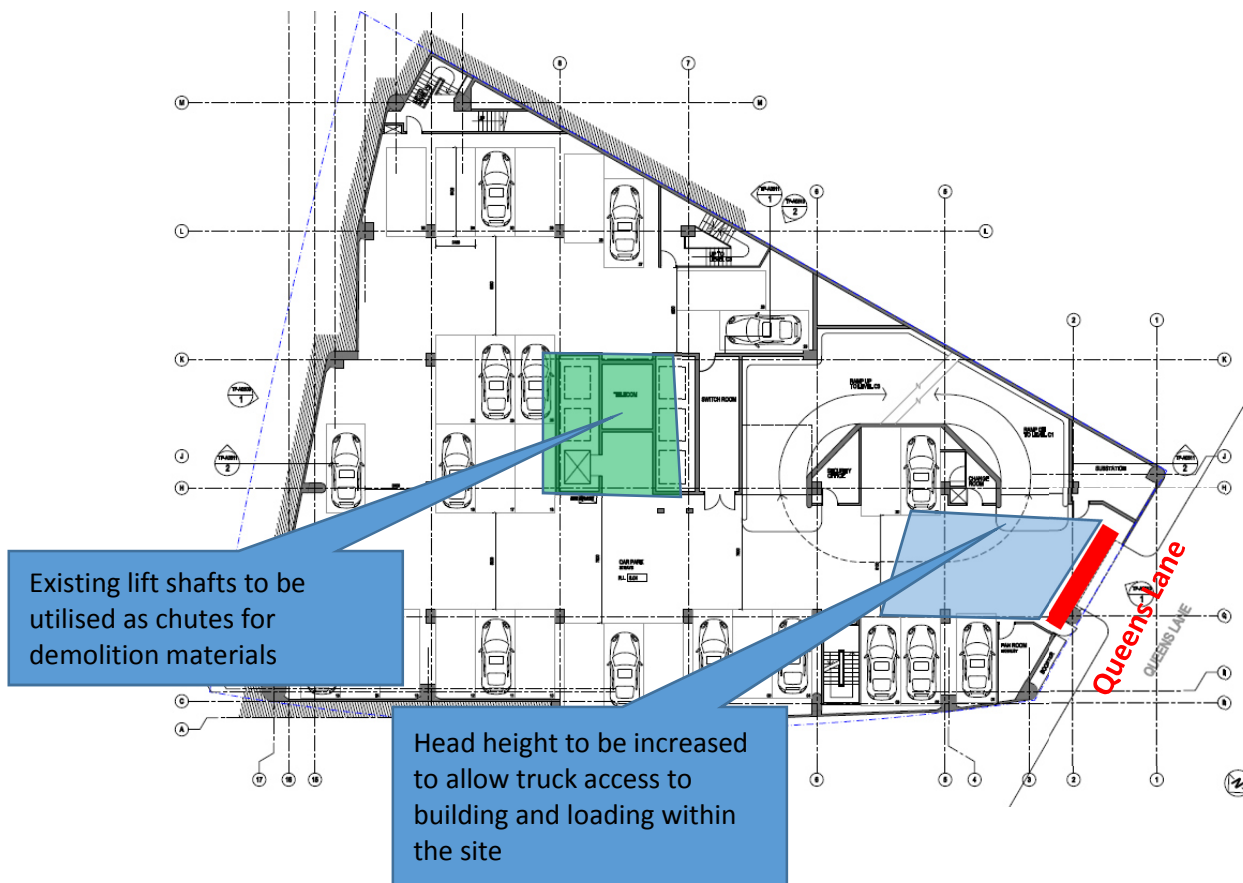
6.2.10 Structural Demolition of Structure

Loading Out Materials

All truck loading will occur within the building structure (Basement Level) ensuring all debris management is contained within the site.

The initial materials to be loaded out will be materials from the soft strip out such as carpets, partitions and the like.

Initially, all concrete rubble will be used to fill the two basement levels. Skidsteer loaders and excavators will be used to spread this material within the existing basement area. Once the rubble has filled the basements, materials will be loaded out via Queens Lane.



Plant Establishment

A mobile crane to set-up on Queens Lane under traffic management and relevant regulatory approvals. The mobile crane will be used to lift plant and equipment onto roof level to demolish the plant room structure.

Plant Room

The plant room will be demolished by excavators working from the roof level. Materials will be dropped down the existing lift shafts to basement level. Scaffold to the Southern elevation will be progressively dismantled as the plant room structure is demolished.

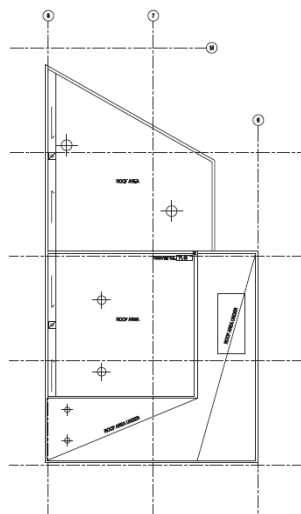


Figure 7 Plant Room

Roof Level

Once the plant room structure is demolished, the roof slab will be demolished. Excavators sitting on the roof slab will progressively hammer out the slab. In generally, demolition will occur from South to North direction.

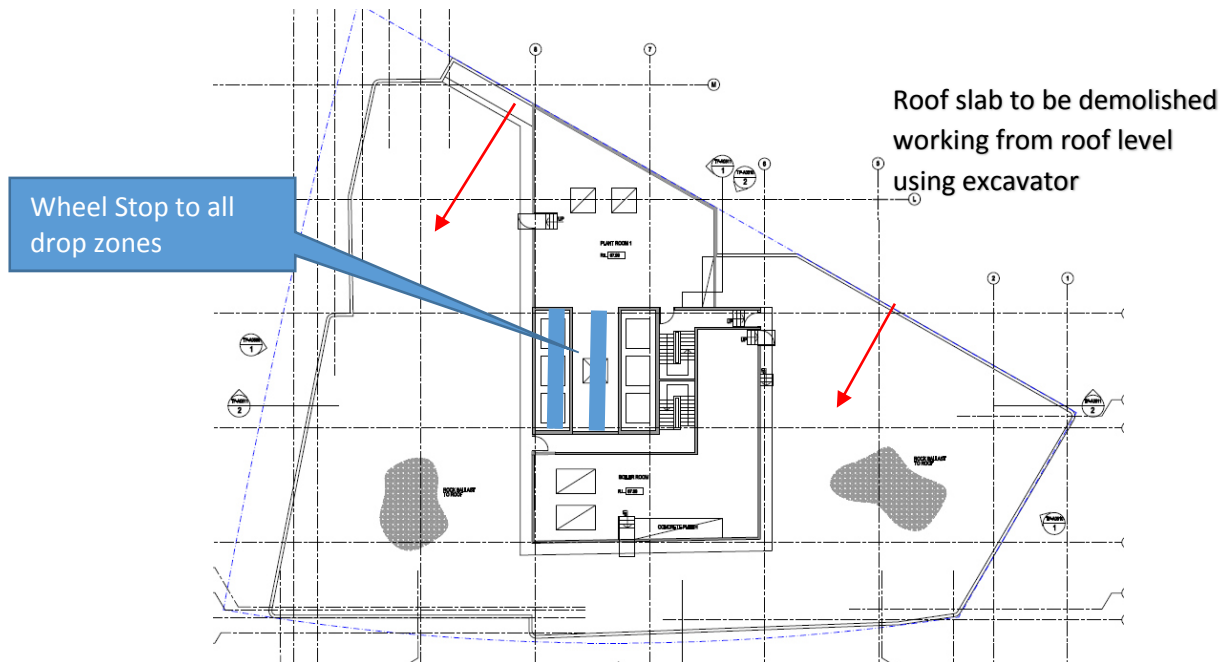


Figure 8 Roof Slab Level

Rubble materials will be collected from the slab below by skidsteers and placed into chutes for removal to basement levels.

Once the excavators have demolished as much of the roof slab as possible while still remaining on the slab, ramps will be installed to allow the excavator to move to the next level. Ramps are to be secured to a beam as per engineer's specification.

Concrete beams and columns are to be demolished working from the slab below. The excavator will reach out and de-clad the connections between the beam and columns, exposing reinforcement. The excavator will hold the beam, allowing reinforcement to be cut on one side. The excavator will then carefully lowered the beam to the ground.

Columns will be de-clad at the base using the excavator, exposing reinforcement. The excavator will then carefully pull the beam over. A rubble pad may be laid under the beam to reduce impact/noise/vibration on the slab as the column is pulled over.

Typical Levels

The process for the demolition of building level slabs and beams will be as per the roof level. External concrete walls will be progressively hammered down in strips to ensure they maintain structural stability during the demolition process.

In summary, the process is;

1. Excavator to demolish floor slab, working from slab
2. Skid steer will work on the level below to remove rubble from the slab via chutes created in the lift shaft.
3. Once no space remains on the slab for excavator, steel ramps will be installed (fixed to beam as specified by engineer) to allow excavator to move to lower floors
4. Excavator will work from the slab below to demolish remaining floor slab
5. External walls and glazing will be demolished using the excavator
6. Beams and columns will be demolished using the excavator.

7. Internal core walls will be demolished using the excavator

This process will be repeated for all building levels.

Drop Zone

The use of the drop zone is considered a high risk activity and therefore will be strictly controlled on site. A drop zone procedure will be prepared and all personnel will be inducted to it.

The drop zone will only be used during set times throughout the day. Physical barricades, such as full-height temporary fencing or locked lift doors will be provided to chute entries and at the base of the chute when not in use.

When in use, a spotter with radio contact to the floor materials are being dropped from is to be in place at all times. No load is to be dropped until verbal confirmation is received from the spotter. When using drop zone, ensure all steel members do not exceed 1 to 2m in size when placing into the drop zone. Regular inspections of the lift shaft must be conducted ensuring the structural integrity is maintained at all times. Ensure all non-working areas are barricaded and lift doors closed, fixed & secured ensuring they do not open. In addition, place plywood on all lift doors and maintain a full bay clearance at all times if access is required. Do not access non-working floors without permission from the site manager.

General Items Throughout the Works

A spotter will work beside the plant and assist dust suppression with a water hose and act as a lookout during the works. Spotter to be in plant operator's line of sight at all times and not within the excavator's slew.

Maximum loading of debris on a typical floor is typically the debris generated above maximum 200mm. To avoid overloading the slabs ensure the skidsteer is continuously clearing suspended floor.

The demolition sequence will be detailed within the SWMS.

Approved design for all cantilever frame, hoarding, temporary works, scaffold must be provided prior commencement.

6.2.11 Remove Rubbish and Rubble from Site

Demolished material will be separated and stockpiled ready for load out. Load out areas within Basement Level (Queen Lane Street Level) and will be determined on site and will be carried out generally within the site confines and away from the nearby sensitive neighbours and other construction activities. A combination of hydraulic attachments, grapple and bucket attachments will load out demolished material into appropriate trucks/bins for transport to an approved tipping or recycling facility.

Trucks will drive into site through Queen Lane under authorised traffic control and be loaded by an excavator. All ingress and egress to the site will be conducted in accordance with the approved working hours, TCP and TMP.

Water will be used to dampen stockpiles and during loading of the trucks as required for dust suppression.

During ingress and egress of vehicles care shall be taken to watch for pedestrians and vehicles when entering and leaving site. The approved traffic control plan will be adhered to at all times during the works. All trucks will follow the truck route and guidelines on entering and exiting site and shall their loads covered when carting general debris i.e. (rubbish, rubble).

6.2.12 Installation of Shoring System

7.0 Permits

All relevant permits will be sought and displayed on-site at all times. These permits include but are not limited to

- A building permit to demolish
- WorkSafe Victoria permit for asbestos removal
- Gantry regulatory approvals
- Authority approval for temporary footpath/road closures

8.0 Personnel Qualifications

All MANN Group personnel onsite shall be industry WHS inducted (White card). The Site supervisor shall be a recognised Demolition Competent Person with considerable expertise in the demolition of similar structures. All plant will be operated by VOC, competent and experienced personnel. Mann Group is committed to ensuring ongoing WHS compliance. All personnel will be site inducted prior to commencement of work on-site. Refer to F42 Competency Matrix.

9.0 Notes:

- During mechanical demolition, a competent observer will work with the operator at all times;
- Authorised traffic controllers will assist trucks accessing and egressing the site;
- The structure is to be demolished in a controlled manner;
- Mann Group will maintain a competent recognized 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 Demolition Work Plan and the task specific Safe Work Method Statements;
- Personnel will sign off daily toolbox talks prior to proceeding to the work face;
- During 'hot works' either a fire extinguisher or water hoses to be present. Hot works permit must be attained prior commencement.
- All Mann Group personnel have been industry WHS inducted (White Card) and will wear appropriate P.P.E.

10.0 Waste Management Plan

This plan has been developed to implement procedures which will be in keeping with the State Government's policy of reducing the quantity of material that goes to landfill and current Environmental guidelines.

Materials to Be Recovered

The following lists of materials have been identified on site as being those which can be practically and economically recovered for reuse or recycling.

Concrete, Brick, Structural Timber, & Steel Ferrous and Non-Ferrous Metals

Demolition material will be separated and sorted on each of the floors at the source of the material. The sorted material will be loaded on to trucks for carting to the relevant recycling centre. We have estimated that on this project, at least 90% by weight of total waste generated from the demolition works will be reused or recycled.

No waste contaminated by hazardous material will be recycled. The contaminated waste will be sent to the appropriate landfill site that is licensed to accept that category of waste.

Materials to Landfill

The following list of materials have been identified on site as being those which will go to landfill as neither the infrastructure nor markets are in place to provide for practical or economical recovery.

Plasterboard Ceilings/Partitions Carpets (worn) Worn Doors Scrap Timber Asbestos

Landfill: Transported by **Mann Group** to **licensed landfill facility** for disposal.

Recovery Plan

Materials to be recovered will be treated in the following manner:

Concrete/Brick: Transported by **Mann Group** to **recyclers** for crushing and screening to produce alternatives to quarry products.

Carpets: Worn carpet will be reused on site for the sediment control. It will then have no further value and will be taken to land fill as detailed in part 3.

Metal: Transported by **Mann Group metal recyclers** for recycling

Estimated Quantity of Material

Material	Quantity	Percentage
Debris (Brick, Concrete & Bitumen)	10,800 m ³	70.27%
Ferrous & Non-Ferrous Metals	2,400 m ³	15.61%
Waste (Building Waste & Asbestos)	770 m ³	5.01%
Excavated Material	1,400 m ³	9.11%
Total	15,370 m ³	100%

Estimated recycling of material on site: **94.99%**

11.0 Traffic Management Plan

Introduction

This Pedestrian and Traffic Management Plan has been developed for demolition and excavation works associated with the development of 412 St Kilda Road, Melbourne. It is anticipated that rigid tipper trucks, and bogies will be used in undertaking the demolition works. All load-out on site will occur from a hardstand within the site boundary and no trucks or other vehicles will travel on any unpaved/unsealed areas, this will ensure truck wheels are clean and the surrounding amenity is kept free of spoil from site.

Pedestrian Management

Pedestrian activity in the immediate vicinity of the site is medium. Traffic control will be utilised at all times during the lead-out of demolition debris. Vehicles will drive into site in a forward direction under the guidance of authorised traffic control and leave site in a forward manner. All site traffic is to give way to pedestrians at all times. Truck movements will work in with traffic signals to reduce

adverse vehicular impacts. Traffic controllers will ensure that gaps in vehicular movements will be utilised to negotiate vehicles entering / exiting the site.

Given a “work zone” will not be used for the demolition, no queuing of vehicles shall be permitted.

No unauthorised personnel will be permitted within the demolition zone unless accompanied by the site supervisor. Whilst within the confines of the demolition works all personnel will attire in Hi-viz vests to ensure that visible to moving traffic. There will be no public access in the site and notification boards (signs) will be implemented across the site noting company name, site supervisor name and phone number.

Heavy Vehicle Movement

It is proposed that heavy vehicles entering and exiting the site will use existing major roads where possible to minimise the disruption to surrounding residences.

Ingress Route

Ingress route will be via Queen Lane.

Egress Route

Egress route will be via Queen Lane

Transport Vehicles Type

Demolition material will be transported by rigid tipper trucks and bogies and excavated material will be transported by Truck & Trailers.

Transport Frequency:

An average of 12 truck movements per day and all trucks to enter & exist in a forward facing direction under traffic management.

Surrounding Road Rules

All existing road rules will be complied with as well as additional authority requirements subject to the authority traffic committee’s approval of the TMP and authority conditions.

Emergency Services Pick Up Point

Emergency access will be off the main site access point at Queen Lane; In the event of Emergency Services being called, all truck movements will be suspended the internal route to the incident point will be cleared prior to their arrival. A traffic controller will wait at the site entrance to and assist getting them onto and leaving site.

On-Site Car Parking

Onsite parking is permitted with the authorisation of the Site Supervisor within the building.

12.0 Quality Management Strategies

Mann group Risk & Quality Management Strategies:

- Mann Group risk management processes and procedures are dictated by adhering to the relevant legislation, Australian Standards and Codes of Practice; in particular, the OHS Regulations, S2601 Standard for Demolition and the Demolition & Construction Codes of Practice.
- Mann Group Hazard Identification, Risk Assessment and Controls (HIRAC) risk management procedure is ingrained throughout the Mann Group workforce.

- The procedure is implemented on all Mann Group Projects to reduce the likelihood of incidents or accidents occurring.
- Mann Group Quality system is not accredited, however due to the nature of the High Risk Activities that Mann Group undertakes, all Quality Procedures are implemented, operating and reviewed to ensure that all projects are completed safely, on time and on budget. Our series of Quality Management processes ensure the company maintains a reputation as an outstanding performer in the deconstruction Industry.

13.0 Signature of Employees

Project No: Q4427-18
Project Name: 412 St Kilda Road, Melbourne
Client: Hickory Group
Location: 412 St Kilda Road, Melbourne
Date: __/__/____
Induction Presenter: _____

Note: You are signing to say you understand and will work to this Demolition Work Plan; SOP's **and attached HRCW SWMS's** in their entirety. Do **NOT** sign if you are not comfortable, do not understand or are unqualified / untrained to undertake the works outlined in this HRCW SWMS, if you feel you cannot sign then talk to the site supervisor and he will find alternative tasks for you.

Name:	Company:	Signature:	Date:
	Mann Group		
	Mann Group		
	Mann Group		
	Mann Group		
	Mann Group		
	Mann Group		
	Mann Group		

A1 – High Risk Construction Work SWMS

To be provided

A2 – Engineers Certificates and Instructions

To be advised following detailed investigation

A3 – Building Permit

A4 – Service Disconnection Signoffs

To be provided during site establishment

A5 – Hazardous Materials Inspection/Report

To be provided

A6 – Safe Operating Procedure

Please see attached our Safe Operating Procedures relevant to this project within the WHS Plan

A7 – Mud Map

Mud map is to be provided following site establishment informing all personnel of emergency exits, evacuation points, offices and amenities.

A8 – Demolition Programme / Time Chart

Refer to WHS Plan.

A9 – Traffic Control Plan

To be inserted post approval

A10 – Dial Before You Dig Information

Refer to WHS Plan

