

Outline Demolition and Construction Management Plan

2 - 4 Whitworth Street West

1.0 INTRODUCTION

This Outline Demolition & Construction Management Plan (OD&CMP) shall be read as indicative and subject to further detailed input from a Main Contractor and review and agreement with the local Planning Authority via two conditions: one requiring a Demolition Construction management plan in advance of demolition commencing and one which is a detailed construction management plan prior to below ground works.

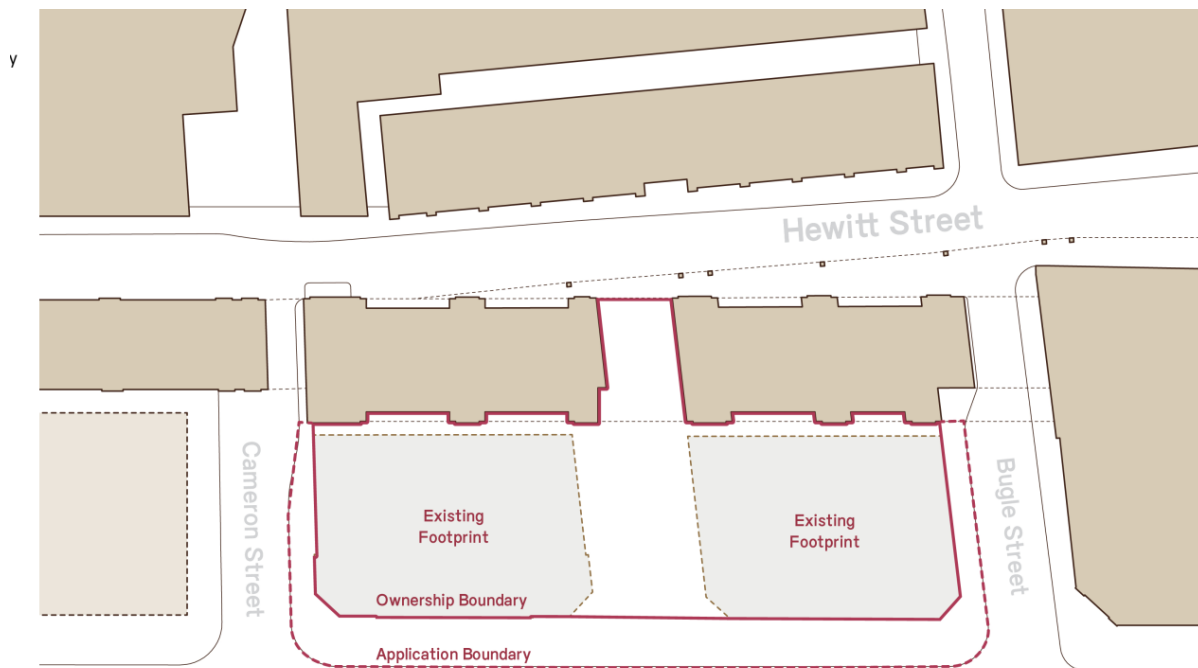
This will include preparation of detailed plans to incorporate Construction Management, Construction Phase Health & Safety, Environmental Management as well as site Waste Management, Logistics and Traffic Management.

The main aim throughout the demolition and construction period is to minimise the impact on the public, surrounding properties and highways for the duration of the construction programme. Close collaboration with all project teams of all nearby construction projects will be maintained at all times.

The following narrative provides a high-level methodology and programme envisaged at the time of planning submission.

1.1 The Site

The Site is located on Whitworth Street West and is formed of two buildings sitting either side of Rowendale Street. 2 & 4 Whitworth Street will be demolished, and Rowendale Street stopped up as part of the initial works to prepare the site for construction.



1.2 Summary of the works

The project involves the construction of a 44-storey residential tower with all associated incoming utilities, plant rooms and servicing areas. The scheme will include three levels of amenity at ground, first and second floors.

1.3 Programme

At the time of planning submission, it is proposed that demolition and site clearance will be carried out in advance of the main construction programme. The demolition works are anticipated to be completed in 16 weeks. A full and detailed demolition construction management plan will be provided as part of condition one as noted within the introduction section 1.0.

The total construction programme is approximately 3 years during which there will be elements of ground works, foundations, frame construction, façade cladding, internal fit out and external landscaping. The scheme is anticipated to be delivered in a single construction phase.

2.0 SITE SET UP AND HOURS OF OPERATION

2.1 Working hours

Working hours will be in accordance with MCC requirements. These are anticipated to be 07.30am – 6.00pm Monday to Fridays and 08.30am – 2.00pm Saturdays. No works are planned for Sundays or Bank Holidays.

Some specific operations may require works outside of these hours, for example tower crane erection and dismantling, which will be arranged by agreement with the Environmental Health Officer (EHO) and local residents through a series of neighbourly engagements. The frequency of these will vary and respond to demand.

Access to the Site will only be permitted a maximum of 30 minutes prior to the working day. Any noisy works will be kept to a minimum for the first half hour of each day. We acknowledge the close proximity of neighbouring properties. We will endeavour to ensure the working hours are adhered to in order to protect their amenity.

3.0 SEQUENCING OF WORKS/ METHODOLOGY

The following is a brief overview of the methodology to be adopted for the construction and fit out of the proposed development.

3.1 Site Logistics

The development will be serviced from offices and welfare accommodation that is still yet to be determined. The welfare provisions will be suitably sized for the anticipated quantum of operatives and will be located in close proximity to the site. The final agreed location will form part of both the Demolition Management Plan and Construction Management Plan. Similarly, it is envisaged that material storage will be arranged off site.

Any temporary public road or footpath closures associated with the construction phase will be agreed with Manchester City Council Highways Department and relevant diversion signage put in place.

Access to the site entrances will be controlled by biometric scanner through a secure metal turnstile. This will monitor operatives' movements and prevent unauthorized public access.

The main gates will be locked and secured at all times with the exception of when a

delivery is being made. The gates will be manned by qualified bankspersons who will co-ordinate traffic will, deliveries and ensure the road and pavement areas are kept clean.

Where required, appropriate wheel and vehicle wash facilities will be in place to ensure delivery wagons leave the Site clean and tidy with regular cleaning of Whitworth Street West using road sweepers.

Loading and unloading of material deliveries will occur within the site boundary unless exceptional circumstances require special measures to be instigated. Waste materials will be placed in skips, and these will be removed on a regular basis.

The Site will employ security as appropriate to prevent and discourage nuisance. Regular patrols will take place throughout the shift. As an additional measure, CCTV will be installed to elements of the Site to aid early identification of potential issues.

3.2 Construction

3.2.1 Demolition

In accordance with the refurbishment and demolition survey to be carried out at 2 & 4 Whitworth Street, a licensed contractor shall remove all identified asbestos in accordance with the Control of Asbestos Regulations 2012.

Given the location and proximity of the project to the viaduct and railway the demolition will adopt a top-down methodology deconstructing the building floor by floor. This method provides a more robust level of control in terms of the structural integrity of the respective building, whilst also protecting those working in and around the demolition site, including the residents living close by. This method also affords additional control in reducing vibration, noise and dust migration.

The method of top-down demolition will involve a clad scaffold being erected around the buildings and machinery being tracked or lifted onto the working level.

The sequencing of the demolition will generally comprise of;

- Soft strip
- Installation of scaffold
- Installation of back propping to all floors
- Hand / remote floor by floor demolition / deconstruction

- Hand demolition of the exterior walls
- The removal of props floor by floor following demolition
- Top 3 levels of scaffolding removal floor by floor
- Strike scaffolding at 1st floor level and remove from site
- Mechanical demolition of the ground to first floor using a 20 tonne base machine fitted with the appropriate attachment
- Reduce the height of the ground floor/basement walls to below ground level
- Inspection
- Remove plant and work equipment from the site
- Hand-over to the Principal Contractor for the construction phase

3.2.2 Piling and substructure works

The piling rig and concrete agitator will be delivered and operate within the site boundary, working on the pile mat. Once the piling works have been completed, excavation of the ground floor pile assisted raft will begin as will the installation the cast in drainage runs.

Drainage runs outside of the main raft bases will be cast as the first activity to allow them to be backfilled for storage and transport movement purposes.

When the ground floor slab has been cast, the Contractor will begin setting up for the columns and core.

3.2.3 Jump / Slip formed core

The Contractor will erect the core. During the pre- construction period they will design and procure the equipment, ensuring that the structural stability of the core is maintained in its temporary condition. The rig will be fully encapsulated to ensure that no materials fall out or blow off the structure.

As the core progresses, The Contractor will install the pre-cast stairs to gain permanent access up the building. A hoist will be progressively installed to feed personnel and light materials to the top of the construction work face.

3.2.4 Floor construction

Work will commence on the construction of the main floor construction. When the

structure is up to finished level, The Contractor will then use the Tower Crane to install and lift in to place the Building Maintenance Unit (BMU). Please see section 4.2 on crane strategy for further information.

3.2.5 Double high-speed hoists.

Two high speed passenger and goods hoists will be utilised.

3.2.6 Unitised curtain walling

The unitised curtain walling will commence when the structure is sufficiently advanced. A team will work ahead of the installation, fitting brackets to line and level into the channels cast into the floor slab.

The Contractor will load out the curtain walling frames using the main hoists that will be distributed on to each floor plate or via crane onto loading platforms at floor level.

The facade will be installed using the method of positioning the individual curtain walling panels on a sliding table, connecting on to the overhead floor crane and pushing the units out over the floor edge, turning the panels and connecting them to the lower floor, whilst securing them using the overhead fixing bracket. The process will be repeated until the whole elevation is complete. For the larger end glass panels, the Contractor will need to utilise the Tower Crane to lift them in to position.

The unitised curtain walling system will be designed so as to leave out the bay where the hoists need to access the building. The intention is to strip out the landing bridges when the floor has been sufficiently loaded out and substantially complete, then infill the unitised windows and panels on that floor, to allow the final fit out of the last unit.

3.2.7 Lift Installation

When The Contractor has completed the core structure and sufficiently advanced the core area floor slabs, they will commence with the installation of the passenger lifts. Owing to access restrictions and handling of materials we will fit out each lift shaft, before commencing the next and so on.

By completing the lifts early, The Contractor will obtain beneficial use of the lifts progressively. This will mean that the upper floors of the project will be serviced by the two high speed lifts as well as a minimum of two passenger lifts.

3.2.8 Fit out

Once a floor has become fully watertight floor, The Contractor will complete the high-level corridor services, including any temporary electrics, power and lighting.

The first fix will commence with the metal stud walls, one side of plasterboard and the noggin brackets that carry the electrical back boxes as well as any structural supports required for door frames, kitchen units etc.

The completed first side boarded apartment will be handed over to the mechanical and electrical contractor for their first fix works to all services as well as ventilation and ductwork, electrical, comms and control wiring, sprinkler pipework and all pipework including all testing prior to handing back for second side boarding and ceiling works.

The apartments will be plastered, and mist coated when dry. The walls will be snagged and repaired where necessary ahead of second fix joinery, kitchen installation and final decorations.

Final fix electrical and lighting will be followed by floor finishes, builders clean and commissioning of services. The team will instigate an inspection and snagging process with the client team to clear all defects before final sparkle clean and lock up of the completed apartment.

As the accommodation is completed, the Contractor will finish the corridor fit out, including lift architraves etc. and protect any finished surfaces necessary.

From completion of the apartments, the Contractor and appropriate parties will instigate an inspection process to ensure the integrity of the apartments up until overall final project practical completion.

4.0 TRAFFIC MANAGEMENT PLAN

The site is served primarily from Whitworth Street West with additional access available on Hewitt Street, Cameron Street and to a lesser extent Bugle Street. A full Traffic Management Plan will be developed with the Main Contractor to address the following issues:

- Integration of traffic management scheme with surrounding construction developments and calming measures.
- Access, egress, drop off and turning areas.
- Temporary and/or permanent alterations to local traffic routes (both vehicular and pedestrian).
- Additions, alterations and positions of any temporary signage, road markings or protection barriers.
- Pedestrian access around site and relevant protection, lighting and signage schemes.
- Temporary suspension / relocation of any parking bays or bus stops.
- Segregation of plant, materials and pedestrians on site and safe access routes between welfare and site areas.
- The provision of car parking, offsite and public transport strategy for staff and operatives

- Loading bays, hoist positions and tower crane areas.
- Any other measures to ensure the safe integration of pedestrians, cyclists and road users both on, off and surrounding the development.

In preparation of the above document a protocol of timed and booked deliveries, off peak deliveries and prefabrication will be incorporated.

4.1 Deliveries & parking

Delivery routes are expected via Whitworth Street West & Hewitt Street where appropriate. The Principal Contractor will endeavour to deliver outside of peak traffic hours to minimise local disruption and the normal workings of the surrounding properties. There will be limited or no key staff parking within the compound area.

Site personnel will be encouraged to utilise the extensive public transport options available to them. Any personnel who must attend by car will be asked to avoid parking in residential areas and instead utilise nearby formal carparking areas.

The site will operate a strict vehicle one-way access regime, with only one vehicle being allowed into site at any time, the rest will be held off site and called in to site when the space is available. No vehicle holding will be allowed in the adjacent streets. The final traffic management plans are subject to agreement with MCC Highways.

4.2 Crane Strategy

Glenbrook WWS Limited have developed an outline lifting strategy around a two-tower crane approach to the project, within the site boundaries.

TC 1 to construct frame and floor plates until level 6-7 and the core and then TC2 will be installed and supported off the core, no oversailing will be required apart from a small amount on the Highways, which will be concluded with the requisite Oversailing license from MCC.

Road Closures and extended working hours will be required to rig and de-rig the cranes and this will be agreed with MCC once exact dates are known.

4.3 Working Adjacent to Operational National Rail

Initial co-ordination has taken place with Network Rail as part of the projects design development and construction methodology.

At the appropriate time the Contractor will liaise and co-ordinate with the appointed Network Rail Asset Protection Manager (Stephen Bowles) with support from the Contractors CEM (Construction Engineering Manager) who will be responsible for submissions and monitoring/control of operations on site in accordance with Network rail requirements.

The methodology will be agreed in principle and relevant applications forms processed to enable commencement of the enabling works. Works will not commence on site until formal approval is received from Network Rail.

Clear 24-hour access will be maintained to Network Rail assets.

Any work required that could potentially impact Network Rail infrastructure will be submitted to Network Rail with RAMS in full consideration of the minimum notice periods.

5.0 HEALTH AND SAFETY

The project will be carried out in accordance with the Construction, (Design and Management) Regulations 2015, and all other relevant legislation and guidance.

The Principal Contractor will produce a Construction Phase Health and Safety Plan prior to works commencing on site that will be reviewed and signed off by the Client and their Principal Designer. This document will form the basis of the procedure for managing health and safety during the construction phase and will be periodically reviewed as the work progresses.

5.1 Environmental management

An environmental plan will be developed to address and monitor the following issues;

- Construction noise and vibration
- Dust and mud

5.1.1 Construction noise and vibration

Consideration will be given to noise and vibration at the pre-construction stage for all the various activities involved with delivering the buildings, The Contractor will take specialist contractor advice to minimise excessive noise and vibration, and as such we have identified the noisiest activities which are as follows: -

- Demolition
- Piling
- Bulk excavation
- Concrete structure

Suitable measures to mitigate noise impacts will be provided in the detailed D&CMP. In general the following steps will be carried out on site to minimise noise on site within Best Practicable Means (BPM), as defined in Section 72 of the Control of Pollution Act 1974 and Section 10 of BS 5228 part 1):

- Use methods, machinery, and equipment that will have a lower vibration level impact.
- Deploy machines and equipment that has been recently serviced and will be routinely serviced during the project to minimise the amount of noise and vibration from those machines and equipment.
- Attitude of operatives to the making of noise to be addressed, to have an understanding that work activities have an effect on those around not just operatives but residents and the public. This will be achieved through toolbox talks and daily activity briefings
- Screens surrounding the concrete slabs and proprietary formwork wrapping the stair and lift core to minimise noise break out from concreting activities
- Acoustic screens used to shield metal pipe cutting or concrete cutting activities on site.
- Cutting stations for cutting metal wall studs will be in suitably acoustically sheltered locations.
- Electric forklifts and pallet trucks in lieu of diesel forklifts where available
- All site operatives will be inducted on the potential impact on the surrounding community of site activities. This should cover principles of BPM pertaining to all site activities, highlight any particularly sensitive or high impact activities and precautions to be taken.
- No shouting.
- Stereos will not be permitted on site.
- All contractors/sub-contractors will demonstrate and undertake best working practices to avoid exceeding noise or vibration limits which have been agreed with Manchester City Council control limits.
- Sub-contractors shall highlight in their method statement and/or risk assessment any activities that will create significant noise and vibration levels. Sub-contractors will demonstrate how they will mitigate/ manage the emissions.
- All plant and equipment will be switched off when not in use, or where this is not practicable, throttled down to a minimum.
- Wherever practicable, all plant and equipment should be powered by mains electricity in preference to locally powered sources such as diesel generators.
- All compressors and generators shall be models fitted with properly lined and sealed acoustic covers or enclosures which remain closed when in use.
- Noisy plant or equipment should be sited as far away as possible from noise sensitive buildings. Wherever practicable, the use of barriers in the form of acoustic barriers or enclosures will be employed.
- All vehicles, plant and machinery used during operations shall be fitted with effective exhaust silencers and all parts of the machinery, plants and vehicles will be maintained in good working order and repair in accordance with the manufacturer's recommendations.
- Screening from existing features will be maximised or the use of full or partial enclosures will be employed for fixed plant. Fixed or semi-static plant will be located and orientated away from noise sensitive receptors where feasible to do so.
- Identification and use of low noise and vibration techniques. Where construction plant which is known to generate significant levels of noise and vibration then it will be used with consideration, and the construction process closely monitored to minimise noise and vibration impacts on and off the site.

- Vibratory compaction equipment will be used in a mode which minimises the incident vibration at nearby residential and other sensitive properties. Consideration will be given to engaging concentric weights only when running at speed to avoid run up, run down resonances, the use of smaller equipment, or turning off the mechanical vibration on vibratory rollers and undertaking more passes for areas where there is a particular risk that disruption may occur at neighbouring properties.
- Noisy works will be controlled utilising the hierarchy of risk control and measured using noise monitoring equipment to ensure safe levels are not compromised and noisy work hours are not breached. In all noisy work cases substitution of equipment for machines or processes which reduce the noise levels to acceptable levels and therefore minimise the impact on both site personnel and the general public. Where this is not possible, engineering controls will be employed utilising such control measures as baffles and 'noise screens.

5.1.2 Dust

Good practice measures will be adopted at the development to control the generation and dispersion of dust such that significant impacts on all permanent and transient stakeholders is minimised.

The hierarchy for mitigation will be:

- Prevention
- Suppression
- Containment

The following section provides detail on the general mitigation to be incorporated into the Proposed Development:

- Providing a hard surface where vehicle movements occur;
- Control measures and dust suppression techniques;
- Minimise stock piling and positioning in a manner that reduces risk of dust arising through wind action;
- Measures such as screening and covering;
- Installation of appropriate wheel and body wash facilities;
- Keeping of adjacent roads and pavements clean;
- Ensure plant is turned off and not left running when not in use; and,
- Selection of electrically powered plant where possible in lieu of diesel or petrol plant.

5.1.3 Light Pollution

Site lighting will be carefully considered to ensure the required level of safety and security is achieved without causing excessive nuisance to neighbours.

Floodlights will be located to provide the necessary site illumination, and the lamp-heads will be specified to minimise overspill and directed to shine onto site. All tower cranes will have air-craft warning lights fixed to the upper part of the crane and jib.

5.1.4 Site Housekeeping

Throughout the project we will encourage and enforce a good housekeeping regime. A strategy will be developed and incorporated into the site rules which will be sent to suppliers and supply chain partners alike. The strategy will also form an essential part of the supply chain / suppliers pre-order interview.

The Contractor will ensure that all operatives engaged on the works are familiar with the work in progress, skilled at their task, aware of their duties and responsibilities to others and knowledgeable of the site rules. All persons working on site will attend the site safety induction and commit to the site rules.

6.0 FIRE PROTECTION

On contract commencement the project manager will appoint a competent person to act as fire safety co-ordinator to control fire evacuation and muster checks.

The project manager and the fire safety co-ordinator will conduct a fire assessment to determine all potential fire hazards, the employees and other site users at risk and the fire safety arrangements. This will be recorded on the fire assessment and arrangements form.

Following completion of the fire assessment and arrangements an action plan will be produced by the project manager and fire safety co-ordinator to ensure all potential hazards are eliminated and all fire safety controls are in place prior to taking occupancy.

The project manager and fire safety co-ordinator will ensure the content of the completed fire assessment and arrangements is added to the contract management plan.

The project manager will ensure the fire arrangements form part of the induction process and that all individuals are aware of the fire evacuation process. The project manager will ensure a drawing showing site / office layout and firefighting arrangements is displayed at strategic locations. A fire notice is available to record

this.

The project manager will nominate and arrange training for fire wardens. Consideration must be given to cover holiday and illness absences. The names of the fire wardens will be communicated. A fire notice is available to record these. The fire wardens will attend the relevant training, ensuring they fully understand the content and their overall responsibility.

The fire safety co-ordinator will establish a fire safety inspection record for each location for each calendar year. This will be used to record weekly checks, emergency evacuation drills and annual equipment checks.

The fire safety co-ordinator (or his nominee) will undertake weekly checks on fire extinguishers; fire escape routes; fire signs; fire alarms and fire brigade access. This will be recorded on the fire safety inspection record

The fire safety co-ordinator will undertake practice emergency evacuations at approximately six-monthly intervals for locations where there is a static workforce, for locations where there is a high turnover of staff this frequency will be increased. During the emergency evacuation the fire wardens will adequately perform their duties and feedback any issues to the fire safety co-ordinator.

Where the alarm goes off for an unknown reason, but it becomes apparent there is not an emergency situation the alarm should be allowed to continue, and the building evacuated to prevent confusion in the evacuation and treated thereafter as a practice drill. The fire safety co-ordinator will record the details on the emergency evacuation record and the fire safety inspection record. Where actions have been identified these will be transferred to the fire assessment and arrangements form.

The fire safety co-ordinator will ensure all firefighting equipment is tested on an annual basis by a competent person. These will be recorded on the fire safety inspection form. The fire assessment and arrangements will be reviewed on an annual basis or after any event which may affect its content, such as alteration or substantial changes in occupancy.

7.0 WASTE MANAGEMENT PROTOCOLS

We will operate a site wide waste segregation removal procedure. Recycling areas will be located on the service yard level and ground floor of the site. Waste wheelie bins will be situated in designated areas which will be filled by the subcontractors and taken by them to the recycling areas.

Waste reports will be created on a regular basis which will detail the quantity, type and percentage of waste being produced, with the percentage of recycling achieved.

Waste control will be reviewed with the sub-contractors during the procurement

process to minimise packaging on deliveries and encourage removal of their own waste such as plasterboard, pallets, paint pots and cable drums.

The specialist contractors will work with the design team during the design stages to find the most efficient and economical solutions in reducing waste during the construction phase. In addition, the strategy for maximising the levels of works through prefabrication off site will further reduce waste generation.

To reduce the volume of waste sent to landfill, waste from site will be segregated at the waste transfer station into the following categories;

- CAT A: Hazardous waste – Paint tins, mastic etc
- CAT B: Metal
- CAT C: Timber
- CAT D: Plasterboard
- CAT E: General Waste

All carriers of waste will hold a valid waste transfer license and provide certification to the main contractor for all elements of the process.

8.0 COMMUNITY LIAISON & PUBLIC RELATIONS

We will keep our neighbours well informed before and during the construction phase through various means: A member of the Contractor team will be designated as the project community liaison manager responsible as a single-point contact to ensure good neighbour relations.

A regular residents' meeting will be established at a frequency agreed with the residents to bring them up to speed with project progress and key elements of the work. It also provides an open discussion for residents to voice concern or highlight issues.

Newsletters will be widely distributed to identify completed works and focus on forthcoming activities to give neighbours early notice of such works. Information displays in prominent locations will contain various project-specific information.

A 24-hour emergency contact number will be established to allow concerns to be raised, these will be actively dealt with by the Contractor project community liaison manager until the issue is resolved.

9.0 SUMMARY

The demolition and construction stages of the project will undergo a pre-risk assessment, and appropriate control measures will be put in place. Subcontractors will be thoroughly vetted before being engaged, and they will be required to meet comprehensive pre-contract obligations for information exchange and risk assessment.

A key responsibility of the Principal Contractor is the creation of a Construction Management Plan, which will address all known risks identified during the pre-construction phase by the Principal Designer/CDM Consultant, the Design Team, and through site investigations. This plan will outline the procedures and arrangements for managing these key risks in greater detail, as well as any potential future risks. It will also specify the resources, including personnel, allocated to the project to ensure the health and safety of all workers and others impacted by the project.

The Principal Contractor will continuously monitor health and safety standards throughout the duration of the project. This monitoring will typically be carried out by the site management team through regular inspections, toolbox talks, and the ongoing risk assessment process. The effectiveness of implemented risk control measures will also be monitored.

Site managers will conduct regular safety reviews, including investigations into any accidents or incidents, with any issues being addressed as needed. Health and safety will be a central component of the overall project review.

The Principal Contractor appointed for the project will demonstrate competence in managing and executing health and safety requirements. Early collaboration with the Principal Designer will allow the Principal Contractor to influence the design process and eliminate construction-related and residual safety risks.

Before construction begins, the Principal Contractor will engage with all relevant parties, including neighbours, to ensure effective coordination throughout all phases of the project.