

Construction Management Plan

Project: Back Turner Street

Date: 08/12/2020

Revision: 2

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1.0 Introduction

1.1 Statement of intent and overall control strategy

Domis are committed to maintain a dynamic and robust integrated management system. This will ensure that we deliver everything we do in a safe sustainable manner and to a high standard which meets or exceeds our customer's expectations.

We are committed to achieving excellence through:

- Preparing and implementing programmes and systems to benefit the integrated management system to ensure that it is continually improved and remains effective.
- Establishing and setting objectives and targets and closely monitoring their implementation.
- Empowering our people and our supply chain to be proactive in suggesting improvements to the processes, procedures and related documentation.
- Developing and training our people in both quality management and delivery.
- Engaging with our people on all matters to improve and embed learning across the business.
- Providing sufficient resources to enable this policy to function effectively and to ensure that this policy is regularly reviewed and communicated to all employees, our supply chain and stakeholders
- Complying with applicable regulatory, customer and other requirements.
- Conducting regular internal audits and management reviews.
- Seeking feedback on performance from stakeholders, our supply chain and employees.
- Implementing mechanisms which encourage the identification of best practice and drive innovation.
- Generating a commitment amongst all employees and our supply chain to provide the service delivery and workmanship required by our customers.

Domis's policy will be delivered by generating a culture which actively encourages exemplary management practices and insuring the real involvement and participation of all our people, our supply chain and stakeholders.

1.2 Existing development site

The current site located on Shudehill, Back Turner Street and Soap Street and is currently a site which is formed at ground level and has existing buildings to an area of the site. As covered under planning permission 126638/FO/2020

1.3 Summary of new works proposed

The project involves the construction of a commercial office building across 3 blocks, including a 17 storey new element on Shudehill, five storey retained façade block B and five storey new build block C, all merged together.

2.0 Overview- Nuisance mitigation measures

2.1 Health and safety

The risks associated with each identified hazard and their specific management controls are recorded on the Overall Project Risk Assessment form held in the Construction Phase Health & Safety Plan.

Control measures are generally; activity risk assessments, point of work risk assessments, method statements, inspection and test plan and permits. Information from the assessment is issued to subcontractors to identify the particular control documents required before starting the work. Records of the preparation, approval, receipt, issue and communication of all risk assessments, method statements and permits are maintained on file.

2.2 Minimising disruption to ongoing use of adjacent buildings

The continuity of existing site operations will be at the heart of all our planning and delivery of the project. We will use the following hierarchy:

1. Protect and maintain all existing adjacent buildings operations and services
2. Protect and maintain all existing highway and footpath operations and services contained within
3. Management strategy for working in close proximity to the TfGM asset.
4. Use construction methods that are appropriate when working close to site users and staff
5. Plan and communicate on the above basis.
6. Deliver, monitor and control activities

We will continue to develop our plans in more detail as we move through to the next stage ensuring that, at any one point in time, all site users can continue to access the site unimpaired, that all site ME&P services remain live, that deliveries and visitors can access necessary areas and that site fire escape and muster points are protected.

Clear and safe dividing lines between site and construction operations will be created and adapted to suit controlled changes.

2.3 Construction noise and vibration

Operations such as piling and reduced level dig can produce significant levels of noise close to the site boundary. We will minimise the impact of this and other noise pollution through the following processes:

- Use construction methods that minimise noise i.e. crushing as opposed to percussion tools; CFA piles as opposed to driven piles etc
- Ensuring haul roads and busy access routes are positioned away from occupied buildings
- Use of temporary enclosures local to the work area
- Ensuring the machinery or tools are in proper working order
- Positioning of plant as far as possible from adjacent buildings
- Advance notice of noisy works

Regular meetings with site staff and neighbours will highlight their concerns, and our construction methods and programming will be reviewed and adapted around their requirements.

Liaison will also occur with the LA pollution team to ensure 'Control of Pollution Section 61 agreements' are maintained.

2.4 Dust and Mud

The control and management of dust created through activities such as traffic movement, excavating material, breaking out of the existing brickwork/concrete piles or drilling operations will be managed through the following processes:

- Dampening of the ground surface to prevent air borne particles being carried by the wind
- Avoiding dry cutting materials such as concrete or bricks
- A traffic speed limit on the site to minimise disturbance of dust on the ground by site transport and delivery vehicles
- Using surfaced roads where possible for traffic movements on site
- The use of screens around the working space to contain any dust disturbed
- The use of debris netting to the perimeter of the concrete structures to contain loose debris
- Ensuring spoil being transported from site is in covered wagons

Road sweeping will take place on a regular basis to the site compound, access road and local highway to eliminate mud and debris being transferred the surrounding road network from site.

2.5 Fire protection

On contract commencement the Project Manager will appoint a competent person to act as Fire Safety Coordinator to control fire evacuation and muster checks.

The Project Manager and the Fire Safety Coordinator 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 Coordinator 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 Coordinator 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 Coordinator 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 Coordinator (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 Coordinator 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 Coordinator.

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 Coordinator 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 Coordinator 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.

2.6 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.

2.7 Ground and watercourse pollution

Method statements for the works will be devised to take account of contamination risk and the effective management of that risk:

- All materials / processes will be handled / undertaken strictly in accordance with the suppliers / manufacturer's recommendations
- All bulk solid, granular, liquid materials will only be stored on site in (limited) quantities necessary to meet the requirements of the construction process
- All liquid materials will be stored in suitable containers, adequately bunded to comply with Health, Safety and Environmental legislation / recommendations
- Sensitive areas will be subjected to specific protection regimes
- Spillage reaction / clean-up plans will be in place to be undertaken by a trained squad of personnel
- Specialist cleaning equipment will be placed in key locations around site to minimise any spillage should it occur
- All waste materials will be controlled / sorted into the appropriate waste containers on site prior to removal by an authorised / licensed waste carrier
- Interceptors will be used to remove solids etc from any site discharges, which may, with the agreement of the Local Authority be made into the surface water drainage system

2.8 Trees and existing hedge rows

This section is not applicable due to the fact that there are no hedgerows or trees on site.

2.9 Site Housekeeping

Throughout the project we will encourage and enforce an excellent 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.

We 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.

2.10 Waste management proposals

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 monthly 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 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.

2.11 Liaison with community.

We will keep our neighbours well informed before and during the construction phase through various means: A member of the Domis 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 Domis Project Community Liaison Manager until the issue is resolved.

2.12 Site hours

Working hours will be in line with the LA planning requirements. These are anticipated to be 07.30 – 18.00 Mondays to Fridays and 08.30 – 14.00 Saturdays. No work on Sundays or Bank holidays unless agreed otherwise by MCC.

3.0 Construction Logistics and Construction Processes

This section contains statements and plans for traffic management and construction logistics for the works. Statements and plans to cover the following

3.1 Traffic management, Construction Logistics and Construction Methodology

3.1.1 3rd Party Consultation

We have consulted with and will continue to consult with various 3rd parties over the construction of the Back Turner Street office scheme, these include;

Manchester City Council (MCC) –

Initial discussions were commenced between Domis Construction and Veronica Wong at Manchester City Council Highways department to discuss the development and construction phasing and methodology, these have been subsequently developed with Catherine Spencer “Events and Co-Ordination Manager” – Highways, footpaths and other city centre developments and the plans attached to this CMP are as provided to Catherine.

TfGM

Initial meetings have been held with TfGM to enable discussions on both the temporary and permanent conditions of the development, working zones and restrictions have been discussed and are incorporated into our plans.

3.1.2 Site Vehicle access restrictions

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. Parking for site staff and operatives will not be allowed on site and they will have to use the existing public car parking in the city and through the use of public transport. There are a number of public car parks in close proximity of the site such as Tibb Street, Arndale car parking and a variety of flat car parking areas and the train and tram networks are all within walking distance, e.g. Manchester Piccadilly, Shudehill Interchange.

3.1.3 Tower Cranes

We have developed our lifting strategy around one tower crane approach to the project.

TC 1 will be erected to construct the slip formed core and frame, 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 will be required to rig and de-rig the cranes and this will be agreed with MCC once exact dates are known, at present the erection is shown;

- October – December 2021 and dismantle;
- September – November 2023

We will be seeking oversailing licenses from MCC for the use of the tower crane.

3.1.4 Site Commencement

We will initially have an oasis unit which will be one cabin containing a small office and welfare unit. This will be set up within our site hoarding area, that will service the initial operations on site, they will be set out to ensure they do not affect the operational plant on site. As below the main welfare and site offices will be within an area within an existing building off site either on High St. or Back Turner St. These will service the operations on site.

4.0 Main project methodology

4.1 Site Vehicle access restrictions

The site will operate a strict vehicle access regime, with only one vehicle being allowed in to 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. No curbsiders will be allowed due to delivery restrictions and all deliveries must be on small flatbed wagons.

To ensure the project has the least impact on the surrounding area, deliveries will be split into smaller loads which will be picked up from designated points on Back Turner St and Soap Street and then double handling will be required prior to the materials being lifted into position. These smaller vehicles which will be taken out onto Shudehill taking due care of the tram line, banksman will be in attendance to ensure no vehicles can cause any congestion on the tram network and enter back onto the street.

The main delivery route for larger deliveries is as shown below from High Street, avoiding as many deliveries as possible down Back Turner Street.



The M-Site delivery record system will be used to effectively manage the logistics on the site and no waiting will be allowed on the surrounding road networks.

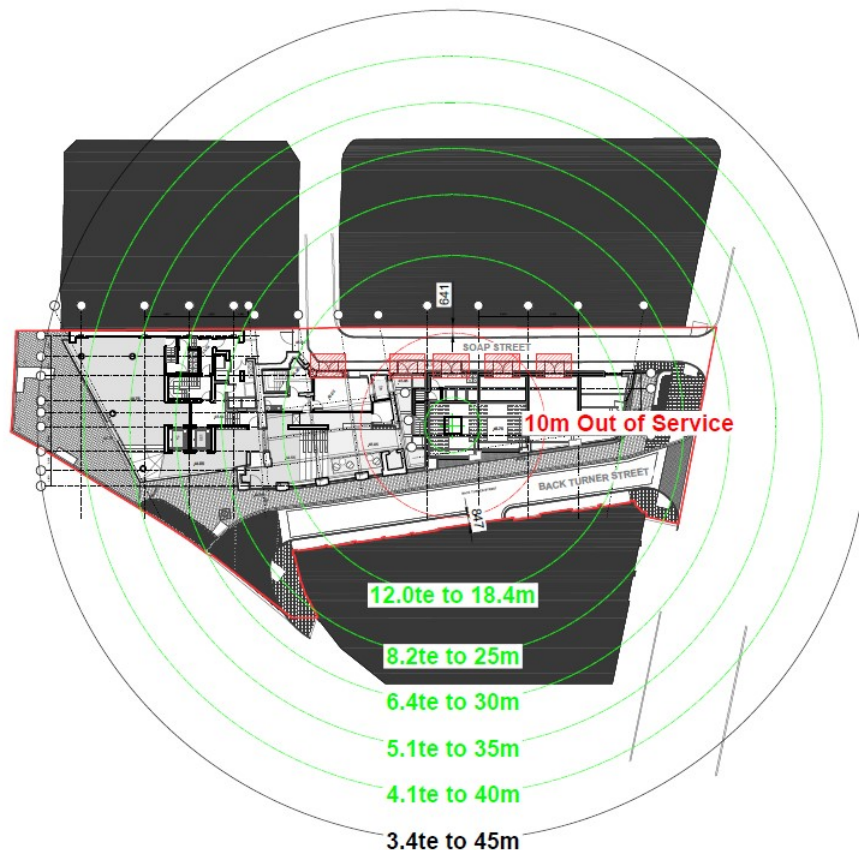
4.2 Tower Cranes

We have developed our crane strategy to avoid oversailing issues and to locate the crane in the most efficient position for serving Block A, B and C;

Road Closures on the High St. will be required to rig and de-rig the cranes, these are to be negotiated and agreed with Manchester City Council Highways department.

Oversailing licenses will be required for the tower crane from MCC Highways.

Draft plan shown below for the WK166B luffing crane.



4.3 Site Establishment and Enabling Works

4.3.1 Site Commencement

There are a number of enabling type activities prior to being able to commence works on site, for both the retained facade building, block B and party wall issues on Block A against Scuttlers Wine Bar, these being;

Block B:

Completion of opening up works to the structure to allow final temporary and permanent works design.

Retained façade works

Block A:

Trial holes within existing building basement and against the party wall with Scuttlers wine bar.

Further intrusive site investigation works to confirm the Engineers foundation design, which has been based on a number of schemes within a close vicinity.

Once these are complete, final construction stage design can be complete to these areas to allow permanent construction to commence.

Site Establishment

Site offices and main welfare units will be within an area within an existing building off site either on High St. or Back Turner St. these will service the operations on site.

During the early works whilst numbers of operatives are limited there will be a smaller set up on site.

Depending on the nature of the restrictions place upon us due to Covid-19, a site specific covid-19 continuity plan will be completed and this will be reflected in the final site establishment information, examples are attached to this document as appendix d.

4.4 General Methodology section

4.4.1 The general sequence of the works is as follows;

Phase 1 – Completion of opening up works and surveys for party wall design items.

Phase 2 – Site preparation of block C and façade retention to Block B, foundations to block B and C

Phase 3 – Demolition of the Hi-Fi shop and the Nail bar, temporary works to the party wall, piling matt installation including any necessary works to the existing basement.

Phase 4 – Construction of block A sub structures and super structure to Block A, B and C

Phase 5 – façade installation to all blocks and repairs and window installation to Block B

Phase 6- Internal fit out and site commissioning

4.4.2 Block A Methodology

Piling and substructure Works

The Piling Rig, Crawler Crane and concrete agitator will be delivered and operate within the site boundary, working on pile mat. A layout plan showing the construction sequence of piles and direction of rig travel will be produced for TFGM understanding. Temporary works in the form of underpinning will be installed to facilitate the excavation of the perimeter pile caps without affecting the stability of the Scuttlers wine bar. Sheet piling will be installed to allow the excavations required without effecting the local highway or tram network.

When the piling works have been completed, we will commence excavation of the pile caps in a sequence to maintain access to construct the pile caps as well as install the cast in drainage runs.

The pile caps will be cast when all of the reinforcement and waterproofing membranes have been installed.

Slip Formed Core – Block A

TC 1 will construct of the slip form rig. During the pre-construction period we 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 slip form core progresses we will install the pre-fabricated stair landings and strings to gain permanent access up the building and on completion of the core we will cap this off. A hoist will be progressively installed to feed men and light materials to the top of the construction work face.

We will progressively install the temporary electrical services to the core to provide safety lighting and power to the stair and landing areas.

Floor Construction – Block A-B and C

When the slip form is complete, work will commence on the construction of the lower floors, the ground to second floor area will have exposed concrete double height columns to build the atrium, Self-erecting 4 storey external protection screens will be erected at ground floor level and will be jacked up to suit the progress of the frame.

The floor plate for all blocks is programmed on 3 week cycles per floor.



Image of sliding frame safety screens from Crescent project

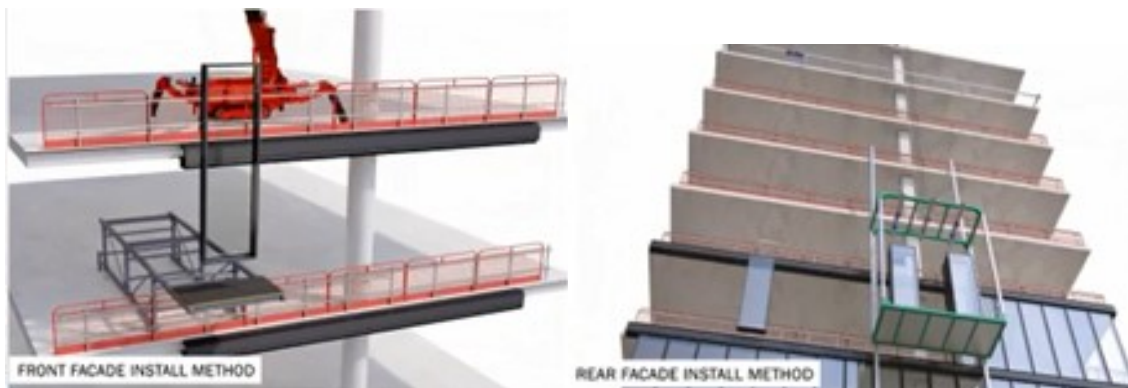
The upper floors will follow a similar sequence, overhead decking formwork will be constructed in line with the flat slab Reinforced in-situ concrete design. Reinforcement will be installed, and the floors cast in either side of the core. The sequence will be repeated up the building, with floor shutters being stripped and moved up to the next level, replaced by back propping. The self-erecting climbing screens will ensure that the working floors are fully protected against falls of debris and dust.

When the structure is up to roof level we will then use the Tower Crane to install the Building Maintenance Unit (BMU) and air conditioning units.

Unitised Curtain Walling option– Block A

A team will work ahead of the installation fitting brackets to line and level into the pre-cast halfen channels cast into the floor slab.

The unitised curtain walling will either 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 high level glass panels we will need to utilise the Tower Crane to lift them in to position or a lifting frame and running rail as described below.



For the top floor unitised curtain walling a lifting frame that will be linked to an overhead running rail may be used, the panels will be unloaded at ground floor level and be taken through the building to the rear area and positioned in the designated lifting zone. Each panel will be lifted up the building to the floor level and then moved horizontally into the correct position and permanently fixed into place.

Lift Installation

When we have completed the core structure and capped off we 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 in this manner we will get beneficial use of the lifts early in the construction activities meaning the hoist usage will be limited to the frame construction and commencement of façade works.

Office Fit out

Fit out of the office areas is minimal and will be completed floor by floor with a 2 week stagger between each floor, with each floor having a 16 week duration.

4.4.3 Block B – retained façade building

Once design is concluded temporary works will commence including a full internal façade retention system.

At this point the sectional sprinkler tanks and water tanks within the basement will be delivered and constructed.

The concrete frame within the existing structure will be constructed with blocks A and C, at this point there is a designed option for this element at a RIBA stage 2 stage, which will be further developed during the Stage 3 development period.

The 5th floor of this building will be capped and waterproofed to allow internal works to commence.

The façade works consist of repointing the brickwork and installing new aluminium windows, the brickwork clean will be carried out from a scaffold and windows will be installed and internally glazed.

4.4.4 Block C

Piling and Sub-structure works

The works to this area include completing a piling matt to the footprint of block C, sheet piling to the footpath boundaries on Soap Street and Back Turner Street to provide support for the Tower Crane base followed by CFA piling, pile caps and ground beams, drainage and ground floor slab.

Concrete frame

The concrete frame construction will be carried out and completed with the Blocks A and B frame construction, protection fans will be used as the frame progresses.

Façade;

The façade is traditionally constructed rather than pre-fabricated or unitised so scaffold will be erected to the perimeter of the site and the elements of brick, cladding and curtain walling will be installed progressively floor by floor until completion.

Interior fit out

Fit out will commence at a point within the façade completion.

5.0 Details of how measures will be in place for safe working in relation to the working adjacent to the Metrolink network, including

Access to any part of the asset to keep the network moving

Within the site plan, we have shown we do not affect any part of the asset in terms of TfGM/Metrolink being able to access or egress to maintain or operate the asset.

Demolition methods at the closest point to the tram network

The demolition method for the buildings on Shudehill closest to the tram network is as follows;

A full hoarding will be installed on the line of the building, dimensions of hoarding shown below, this will have a fan installed on top of the hoarding which is 3m away from the TfGM assets but does effect the clearance shown on the site plans for the pedestrian footway past site, this will be in place for approximately 2 weeks prior to the hoarding line being pulled in to allow full pedestrian access.

The building will be demolished via machines sitting in the Block A area pulling in the building away from the pedestrian footpath and tram network.

Security hoarding and footpath access on Shudehill

We have enclosed our logistics plans and also enclosed these overlayed onto dwg formats so exact dimensions can be shown. An image of the hoarding that is used on all Domis sites is shown below;



Craneage and working zones to the tram network

We have placed the Tower Crane in a position where the crane location is away from the tram network the crane radius and lifting zone is 3.2m away from the closest element of the TfGM network and 4.5m away from the track, this is shown on the crane radius plan above.



Back Turner Street, Manchester
Outlined Constuction Programme 103 Weeks

