

Construction Management Plan

Project: St. Michaels Development Phase Three

Date: 25/07/2023

Revision: 4

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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

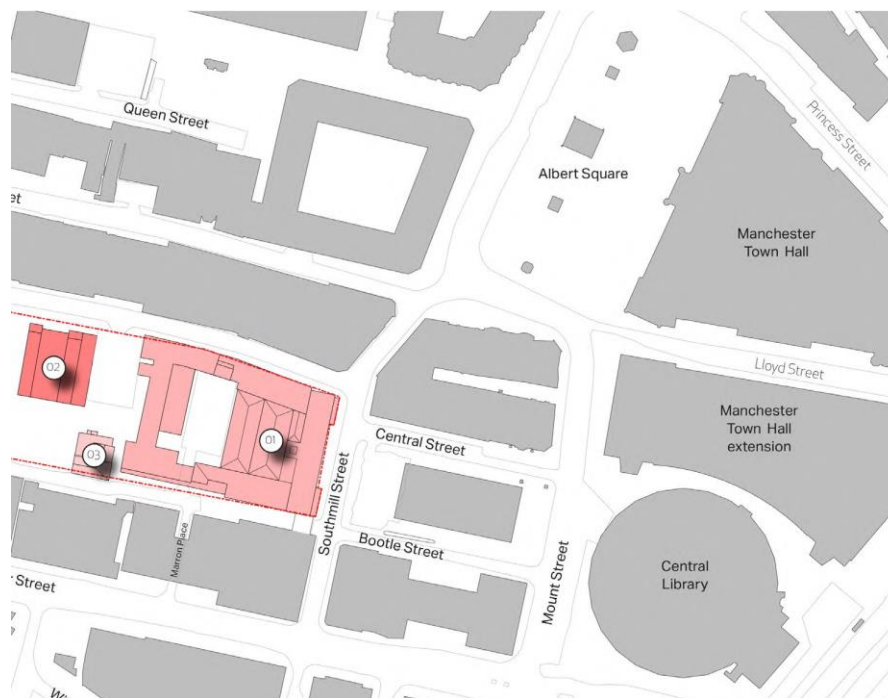
The site is in a strategic location at the heart of the city centre, in close proximity to the town hall and Albert Square. This prime location is adjacent to the Civic Quarter, the Central Business District, Spinningfields and, in the future, St John's. The area consists of multi-phase streets with buildings of varied ages and architectural styles. The quality of these varies widely but does include some individual buildings of high quality. There is a high concentration of high Gothic-style buildings a short distance from the site, including Manchester Town Hall, John Rylands Library, Lloyd's House, and Lawrence Buildings, along with seven listed statues, as well as a series of large early 20th century civic and commercial buildings, such as the Midland Hotel and Central Library, which occupy large footprints close by.

The site is bounded by Jackson's Row to the north, Bootle Street to the south and Southmill Street to the east. The site incorporates a number of buildings, including Bootle Street Police Station, Manchester Synagogue, the Sir Ralph Abercromby pub and car parking space.

The site is surrounded by key pedestrian routes that follow the existing 'urban grid', including Deansgate/Spinningfields and Cross Street/Albert Square/St Peter's Square. The site therefore plays an important potential role in adding to and reinforcing such routes.

1.3 Summary of new works proposed

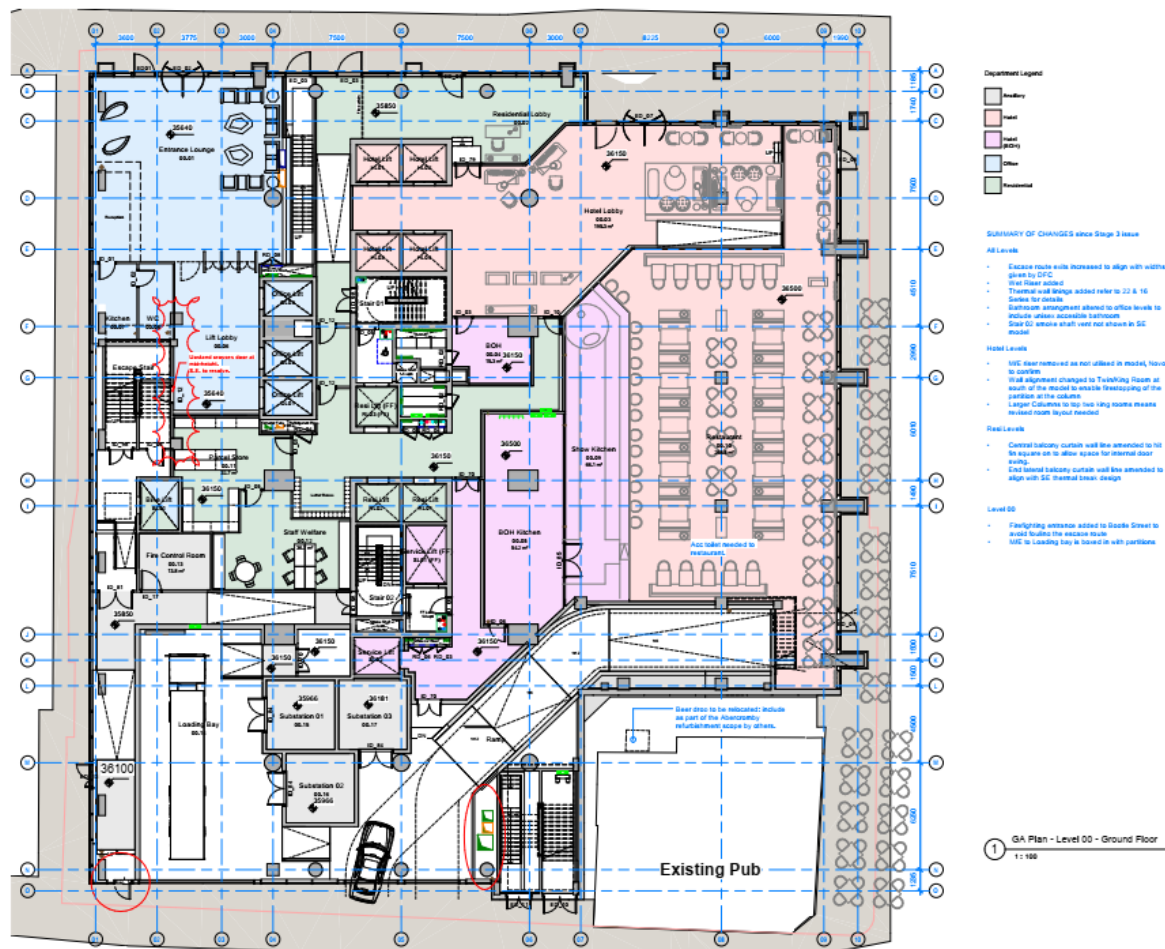
The project involves the construction of a 41-storey mixed use tower development, including five storeys of office accommodation, 10 storeys of hotel accommodation and 25 storeys of residential accommodation, and all associated amenity space including a three storey basement to service the development and for hotel spa/amenity space. The building is located on Jacksons Row and Bootle Street.



Key to existing site plan

- 01 Police headquarters and station building
- 02 Manchester Reform Synagogue
- 03 Sir Ralph Abercromby public house

Site plan for St. Michaels – Phase 3



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 to accommodate the adjacent phase one development being constructed by Bowmer and Kirkland.
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

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

- | | |
|----------------------------------|-----------------------------------|
| • Contiguous Flight Auger Piling | - September 2023 to November 2023 |
| • Bulk Excavation | - November 2023 to April 2024 |
| • Concrete Structure | - April 2024 to October 2026 |

The following table illustrates expected levels of noise from the various types of machinery to be used on this project: -

Plant Type	BS 5228 Reference	Sound Pressure Level Leq (dBA) at 10m
Tower crane	C4.49	77
Passenger/goods hoists	C4.62	66
Cutters, drills, and small tools	C3.35	65
Pulveriser on Excavator	C1.4	76
Fork lift truck	C4.55	70
Lorries and vans	-	73
Mobile crane	C4.46	67
Mobile lorry mounted concrete pump	C4.30	79
Poker vibrator	C4.33	78
Ready mixed concrete lorry	C4.21	77
Concrete splitters/saws	C1.6	83
Scaffolding and hydraulic access platforms	C4.58	63
Tipper lorries	C2.32	74
Flatbed articulated vehicle	-	73
Large rigid lorries	-	75
Track mounted piling rigs	C3.15	82
Water pumps	C2.45	65

In order to minimise the effect these activities will have on our adjacent neighbours and the general public; we will undertake a series of mitigation procedures coupled with a suite of extensive real time monitoring.

Noise and vibration mitigation to be undertaken on site:

The following steps will be carried out 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):

- We will use methods and machinery and equipment that will have a lower vibration level impact.
- We 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.
- Use cast in Halfen brackets for the cladding in lieu of post drilling into concrete.

- 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 from the Domis fleet of electric plant.
- 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 neighboring 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'.

Monitoring and control of noise and vibration

The critical construction activities have been identified, as follows: -

- | | | | |
|---|--------------------------------|---|---------------------------------|
| • | Contiguous Flight Auger Piling | - | September 2023 to November 2023 |
| • | Bulk Excavation | - | November 2023 to April 2024 |
| • | Concrete Structure | - | April 2024 to October 2026 |

We would propose to carry out week-long environmental noise and vibration monitoring at the beginning of each of these phases of work at the site boundary nearest to the two identified sensitive receptors (Nags Head public house and 201 Deansgate).

The monitoring will capture hourly dB LAeq noise levels and PPV (mm/s) vibration levels continuously throughout the week.

At the end of each survey, the results will be quickly analysed and the risks of exceeding the pre-agreed noise/vibration limits shall be evaluated.

1. If the verified survey deems that activities fall comfortably below the pre-agreed limits, risks of adverse impact would be deemed low, and the works would continue without the need for continuous monitoring. Occasional sample (spot check) noise and vibration level measurements may be taken periodically throughout the remainder of the identified period of works. These sample measurements will be carried out by the project's independent acoustic consultant, Jameson Acoustics, with visiting days chosen by them at random.
2. If the verification survey deems that activities are below the pre-agreed limits, but only by a margin that may suggest that, on certain days/times, the limits could be reached or exceeded, then validation monitoring would continue for another week. If after this week, the levels remain consistently below the limits with a reasonable margin, then works would continue without the need for continuous monitoring. However, occasional sample (spot check) noise and vibration level measurements would be taken throughout the remainder of the identified period of works.
3. If the verification survey deems that activities have reached or exceeded the pre-agreed limits, the continuous noise and vibration monitoring station shall be installed.

In the event of scenario 3 occurring, noise and vibration levels will be monitored onsite 24/7 via a live online monitoring system.

The monitor will transfer data via cellular connection to a dedicated, secure website showing real-time historic data and in addition real-time alarms will be sent via email and/or SMS to the project manager and construction manager.

The locations of the monitoring equipment are shown in the image at the end of this section.

The monitoring equipment will be stationed where there is a suitable power supply, accessible mounting point and where the equipment can be maintained and be safe and secure for the project duration.

*Noise trigger levels Noise trigger levels will be set at the following (based on the guidance in BS5228-1, E.3.2 at the nearest dwelling:

- 75 dB(A) Leq (10 h) Monday to Friday working day (08:00-18:00)
- 75 dB(A) Leq (5 h) Saturday working day (08:00 – 13:00)

Noise triggers may be adjusted according to the mounting locations as it may not be practical or reasonably possible to mount the noise monitor onto the receptor's façade. If noise measurements are to be taken at the site boundary, the noise limits will be recalculated according to account for the noise reduction over distance to the receptor's façade from the site boundary. This will be calculated in noise prediction software CadnaA. We can confirm that suitable mounting locations can be achieved at the site boundary.

The monitors will have trigger level set for working 1-hour periods, above which an alert will be sent by text and email to the allocated site contacts.

The 1-hour alert is intended to inform the construction management of potential issues onsite. The intent is that measures can be taken to reduce the noise activities such that the working period average is not breached.

Following receipt of an alert, the response procedure will be followed as soon as is reasonably practical.

The Project Manager / Frame Project Manager will be informed of the breach and the following action will be taken.

We will review the monitoring results to:

- Cease all works likely to be causing any potential noise or vibration.
- Determine the activities / plant that is responsible for the exceedances.
- Ascertain if there are any practicable means of reducing the measured levels including alternative working techniques.
- Determine whether this reduction can be practically employed and if so, the measures will be implemented.

Monitoring records will be regularly reviewed by the site team to review the effectiveness of the noise management activities onsite.

Class 1 sound level meters will be used in compliance with relevant British Standards (Noise and Vibration).

Vibration will be monitored by real-time, cellular connected vibration monitors and will measure and conform to the standard BS5228-2 which provides guidance on monitoring vibration on construction and open sites.

Limits in the document are based on measuring vibration at the receptor, at the base of the building on the outer wall.

Vibration affecting occupied buildings shall not exceed levels that are likely to give rise to damage to the building or discomfort to the occupants of the building. It will normally be appropriate to set limits in terms of Peak Particle Velocity (PPV), in accordance with BS 5228-2. Human response/discomfort to vibration will be triggered with vibration levels far lower than those required to cause building damage. In accordance with BS 5228-2, a vibration limit of < 1mm/s PPV shall be applied for residential receptors. It shall be achieved at the point of entry to the residential building (e.g., at the foundations or base of the ground level wall of the residential property). Appropriate corrections (e.g., ground attenuation with distance) may need to be applied to vibration levels monitored at the site boundary. This will be calculated conservatively based on the relative distances from the primary source of the construction works vibration, and the monitoring position/receptor location, and with reference to BS 5228-2 source data for different machinery operating at a range of distances.

Vibration monitoring will be carried out during earthworks, demolition, piling, excavation, or any other ground/sub-structure works. Vibration monitors will upload data every 24 hours or at the point of exceedance, where the data will be available to print and download from the cloud service. Waveform & frequency data can be collected by the monitor where required.

Please see Section 2.11 for details of our complaint's procedure.

The at-risk noise and vibration receptors?

We have identified that we have a series of neighbours that may be potentially impacted by our works on site. We have addressed this in part by contacting these parties and included them in the first of our quarterly updates that includes information about our works, our contact details for the site team and our out-of-hours contact customer service centre.

As part of this review, we have determined that our closest (and thus at most risk) receptors are the residents of the Nags Head Public House [NSR A] and the occupants of the 201 Deansgate commercial office building [NSR C]. As such, we are proposing the following receptor locations. These have been positioned as the three nearest locations in relation to where we believe our noise generation locations will occur.

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.

Within the section 2.4 above we have outlined the principle steps we will take to comply with the contents of the EIA, and for further clarity have provided further detail on our management plan to comply with the IAQM.

Communications Plan; as defined in this document we have provided details of our communication strategy and action plan within 2.11 and 3.1 of this plan, this provides details of the display of contact details, newsletter production, emergency and complaints contact information.

Our dust management plan is shown in principle above, 2.4, however we would add the following:

The first phase of construction is within the three-storey basement and is next to an ongoing construction site, this is for the piling, earthworks and groundworks element of the project and the programme duration is for approx. 72 weeks commencing May 23. The second phase of construction to form the structure for the tower above this will involve very delicate and controlled works which as stated above will have a number of dust mitigation measures in place such as:

- Screening off works areas
- Dampening and using techniques which mitigate dust production.

To align with the above, visual monitoring of dust on access and egress routes and adjacent to the site will be carried out, including parked vehicles, visible surfaces and if any concerns arise then activities will be reviewed.

As required, we will also assess the need for monitoring over and above the visual inspections via suitably located frisbee gauges.

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 banded 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, the initial response time to concerns being raised is agreed at 12 hours as per the requirements of Manchester City Council.

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

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; these include:

Manchester City Council (MCC) Ben Phillips Event and Traffic Management Officer for Manchester City Centre Piccadilly and Deansgate wards.

Manchester City Council

We have developed a site layout that is based on the minimal interference with transport network, a copy of the same is attached and we are in the process of confirming further meetings and dialogue with the Council, as necessary.

Wider Manchester City Centre Issues

There is a large amount of construction work going on in the city centre and the roads around the site will be subject to road closures and diversions over the course of the project.

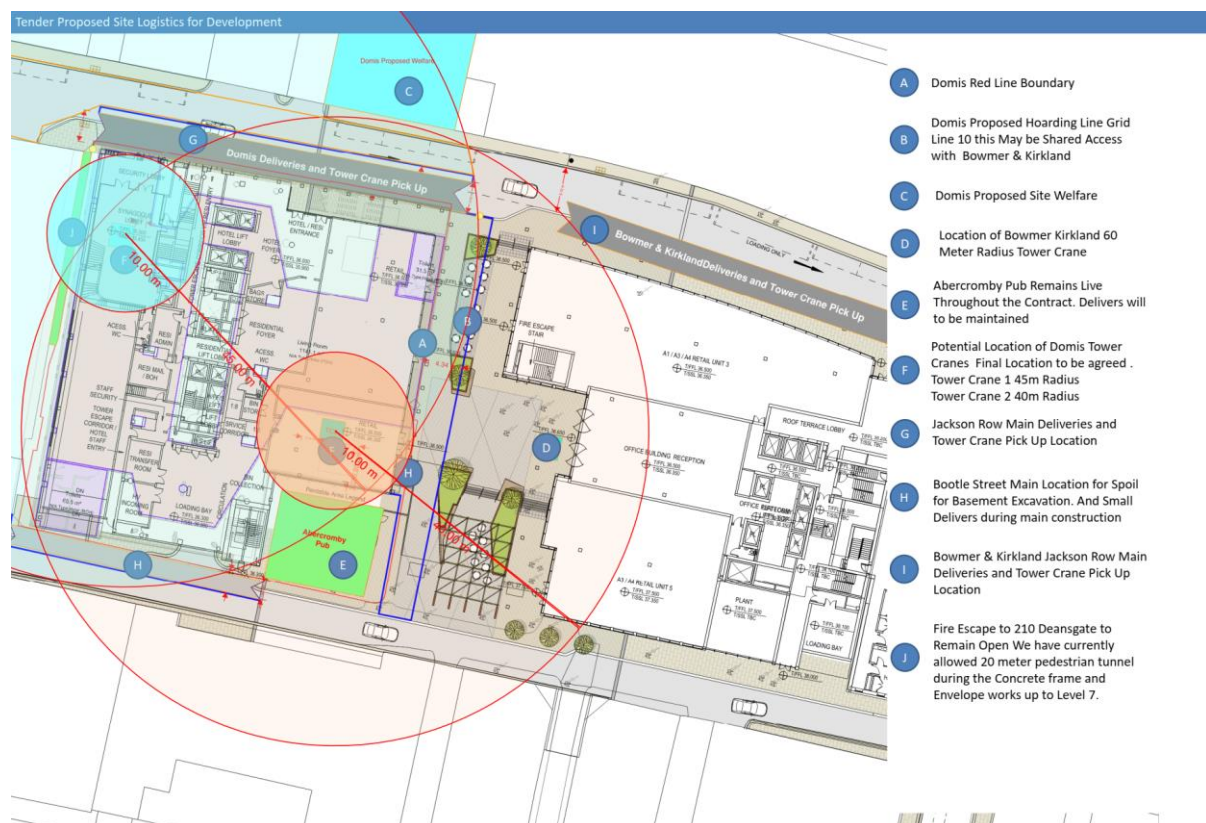
3.1.2 Site Vehicle access restrictions

The site will operate a strict vehicle one-way access regime to align with the current one-way system, vehicles 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 the Great Northern Warehouse, Little Peter St. Q-Park at First St. and the train and tram networks are all within walking distance, e.g. Deansgate, Manchester Oxford Rd, St. Peters Square

3.1.3 Tower Cranes

We have developed our lifting strategy around a two-tower crane approach to the project.

TC 1 will be erected to construct the slip formed core and frame from levels B3-41, no oversailing of MCC land will be required apart from a small amount on the Highways, which will be concluded with the requisite Oversailing license from MCC. TC2 will be erected and assist with construction from Grd – 41.



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:

TC1 Erection: 07-08-2024 Luffing Jib 40 Meter Radius 6.1t at 40 Meters

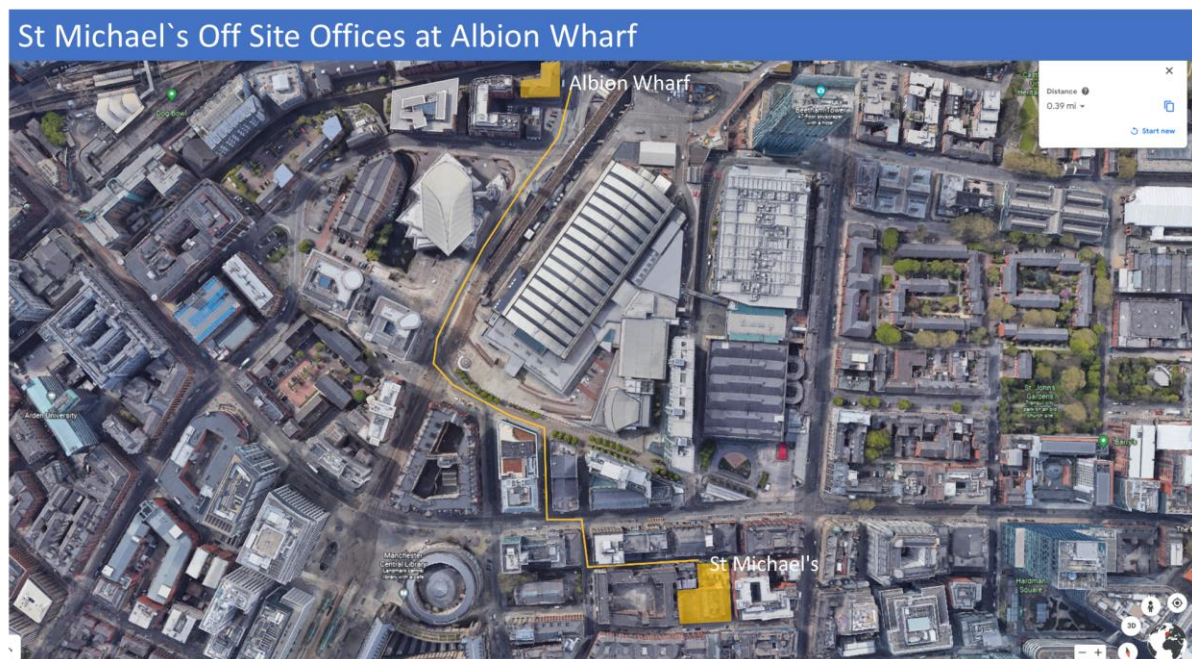
TC2 Erection: 24-08-2024 Luffing Jib 45 Meter Radius 4.6t at 45Meters

TC1 Dismantle: 07-11-2026

TC2 Dismantle: 27-10-2025 Tower Crane 1 Dismantles Tower Crane 2

3.1.4 Site Establishment and Enabling Works

The main site establishment and accommodation is located on the land marked in the diagram below:



General Methodology section

The general sequence of the works is as follows:

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

Phase 2 – Demolition, site preparation and archaeological dig.

Phase 3 – Contig wall Piling

Phase 4 – Basement construction

Phase 5 – Frame construction.

Phase 5 – façade installation to all blocks

Phase 6- Internal fit out and site commissioning

3.1.5 Site Commencement

We will have site offices, welfare units set up off-site within the Albion Wharf Chambers building highlighted, that will service the operations on site.

3.1.6 Piling, Basement, and substructure Works

The piling rig and concrete agitator will be delivered and operate within the site boundary, The piles will commence with the contiguous piled wall commencing along Jackson Street.

When the piling works have been completed, we will commence excavation of the basement.

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 Basement B3 floor slab has been cast, we will begin setting up for the columns and core and the related breaking through works to the arches.

A full sequence/movement and monitoring strategy has been completed by the Structural engineer, which is included, as appendix 3.

3.1.7 Slip Formed Core.

We will erect TC 1 and commence construction 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-cast stairs to gain permanent access up the building. A hoist will be progressively installed to feed men and light materials to the top of the construction work face.

3.1.8 Floor Construction

When the slip form is commenced floor slabs will be ongoing.

The slip form rig will be de-constructed and craned off the top of the core, the capping slab will be constructed.

When the structure is up to finished level, we will then use the Tower Crane to install lift in to place the Building Maintenance Unit (BMU).

3.1.9 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 halfen channels cast into the floor slab.

We 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, we will need to utilise the Tower Crane to lift them in to position.



We will design the Unitised Curtain Walling system so that we can 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.

3.1.10 Lift installation

When we have completed the core structure and capped and have sufficiently advanced the core area floor slabs, 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 early, we will get 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.

3.1.11 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.

3.1.12 Hotel fit out

Hotels Bedrooms are based on a pickup rate of 5 per week and 8 weeks fitout String.

3.1.13 Residential fit out

The Apartments are based on a 16 week build period and picking up 1 apartment per day 5 number per week.

Appendix A – Project Programme

Appendix B – Project logistics plans

Appendix C – Renaissance structural engineers basement strategy document.

END OF DOCUMENT