

Ducie Street

Construction Management Plan



<u>Revision</u>	<u>Date</u>	<u>Author</u>	<u>Notes</u>
01	13/01/2022	JH	Planning
02	17/01/2022	SD	Planning
03	24/02/22	SL	Planning

1 Introduction

- 1.1.1 The purpose of the Construction Management Plan (CMP) is to address the detailed procedures, sequencing and construction methodology anticipated by the project team engaged in the planning, liaison and construction of the project. The plan outlines proposals on traffic and environmental measures to be adopted during construction and provides supplementary information to the relevant technical reports on construction related issues.
- 1.1.2 It is not to be confused with the Construction Phase Health & Safety Plan, which will provide the contractor with a mechanism to comply with its legal responsibilities when acting as principal contractor in respect to the Construction (Design & Management) Regulations 2007.
- 1.1.3 The CMP incorporates 3 main elements;
- Background and description of the construction of the building.
 - Traffic management considerations.
 - Environmental considerations.

2 Consideration of the Building

2.1 Background

- 2.1.1 The development comprises an 8-storey reinforced concrete framed apartment block which sits between Ducie Street and Lomax Street. The scheme includes 41 apartments. Some of the apartments will come with balconies. The ground floor provides ancillary space required for an inner-City residential building including a secure lobby, plant, refuse and cycle stores.

2.2 Site Location

- 2.2.1 The site is situated on an existing car park Between 57 And 59 Ducie Street, Manchester, M1 2JQ.



Figure 1 : Site Location

2.3 Description of the Site

- 2.3.1 The site is currently used as an open car park, which can be accessed from Ducie Street.

2.4 The Building

- 2.4.1 The building consists of an 8 storey main body. The building will be accessed from Lomax Street. Apartments facing Ducie Street have balconies. The building will consist of a concrete frame enveloped in 65mm brick with 5mm mortar joints. Areas around windows will be in a Bronze colour anodised or PPC aluminium cladding.

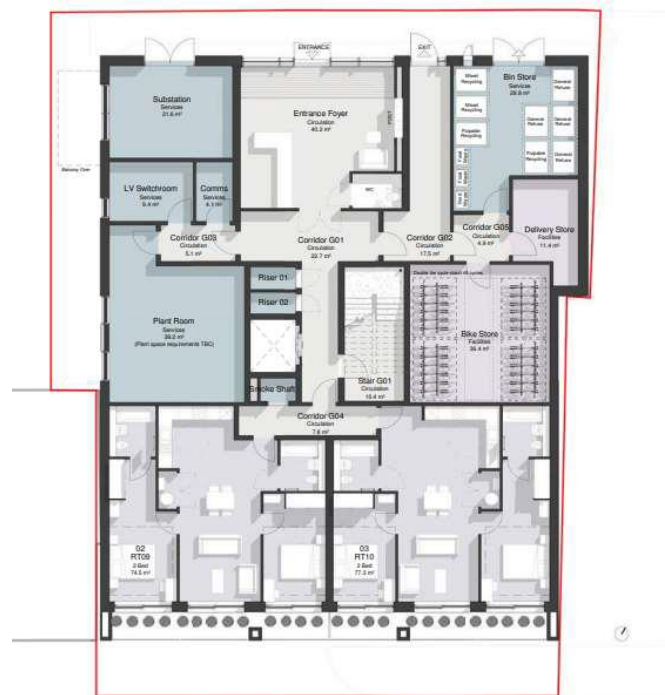


Figure 3 : Ground Floor Plan



Figure 2 : Elevations

2.5 Programme

- 2.5.1 The construction duration is expected to take approximately 68 weeks. Works will commence upon completion of Site welfare being completed with groundworks taking the site to formation levels inc drainage, piling and making good. This element is expected for the first 10-12 weeks. The contract will then move into the next phase of Superstructure concrete frame works and will continue with envelope masonry and scaffolds continuing through to circa project week 50 with the internal elements of works starting later in the year taking the works to the planned duration.

3 Site Safety

3.1 Risk Management and Control Assessments

- 3.1.1 Risk Assessments and Control Procedures - Element specific risk assessments will be developed during the course of the works in conjunction with the specialist sub-contractors, these will be in line with requirements of the construction phase health and safety plan, the designers risk assessments etc.

- 3.1.2 Below is a list of Site Specific items relating to Health and Safety where particular attention will be given during pre-construction phase that the team will develop specific Method Statements and Risk control procedures to manage;

- Footpath Public Safety to Lomax and Ducie Streets
- Highway proximity and adjacent working operations
- Lifting operations, delivery locations etc,
- Site operative safety during the frame works
- Site operative safety – tight site – access routes
- Major plant installations – tower crane install, swap over and dismantle
- Frame falling objects – netting and screens

Whilst this list is not exhaustive, it will be used as discussion points for the team developing the project Construction Phase Health and Safety Plan.

3.2 Working Hours

- 3.2.1 The construction hours will be as prescribed by the local authority in the planning decision notice letter, as stated below:

- 7.30am – 6.00pm Monday to Friday
- 8.30am – 2.00pm Saturday's
- Closed Sundays and Bank Holidays

- 3.2.2 There will be certain circumstances where construction work will be required to take place outside of these hours. Where work outside of prescribed hours is required, the exact phasing and timescales of this will be communicated to our neighbours and direct to the relevant Environmental Health Officer for the area for the necessary section 60 approval.

3.3 Pre-Start Survey

- 3.3.1 A preliminary survey of the works has been undertaken, prior to commencement a full joint survey will be undertaken with the client team, party wall surveyor and MCC taking account.
- 3.3.2 A photographic record of the boundary conditions will be stored, including:
- Existing structures
 - Boundaries
 - Kerb lines
 - Road conditions
 - Pavements
 - Lighting columns
 - Street furniture

3.4 Construction Site Compound and Accommodation Welfare and Storage

- 3.4.1 We have allowed for a portable cabin setup here with limited storage facilities. The intention being that 'Portakabin' type units are double stacked with offices over the top of Welfare.
- 3.4.2 A site compound layout can be found in Appendix 1.

3.5 Car Parking

- 3.5.1 There will be no car parking on site. We recognise that construction car-parking within the area is very limited as there is a considerable amount of construction work ongoing within close proximity. Our operatives will be encouraged to utilise all forms of public transport, car sharing opportunities in line with COVID guidelines and local car parks.
- 3.5.2 The site is located in close proximity to New Islington Tram stop. Our operatives will be encouraged to utilise this where practical to do so. During the procurement stage operative numbers will be established and appropriate allocation established in the area. We are conscious of the local resident parking and will account for this in discussions with the supply chain. This will be re-iterated at induction to the work force.

3.6 Safety / Highways & Adjacent Community

- 3.6.1 We have yet to meet with MCC highways to discuss the proposed hoarding and access requirements. Once the building design is finalised and our logistical needs fully established, we will review these with Highways, and subsequently make the formal applications.

- 3.6.2 Access into the site and accommodation compound will be via security turnstile operated by use of biometric scanning.
- 3.6.3 The Northern Quarters Residential Entrance - We recognise the close proximity of the construction site and that of the adjacent Northern Quarters Residential Entrance.
- 3.6.4 We Envisage a partial road closure on Ducie street to the area just outside the proposed construction site. This road closure would take in the public footpath and adjoining the site and part of the one-way road down Ducie street. This would be to allow a safe unloading / loading area within the site hoarding /boundary and would also mitigate mud transfer onto the public highway. This proposal is shown on the attached Site Set Up plan. A partial footpath closure and diversion will be required and temp parking on street parking suspension for the duration of the works.

3.7 Deliveries

- 3.7.1 Vehicles will enter the site drop off situated within the hoarding line zone for removal of goods/materials internally within the confines of the site. During the early pre-construction stage, we will collate all delivery needs from the supply chain and develop a contractor specific delivery strategy for each element of the works. For example, A dedicated full-time compound gateman will be engaged to direct site and public traffic alike. Once developed we will review this delivery strategy with MCC Highways and agree a site-specific delivery protocol.
- 3.7.2 Delivery Vehicles Swept Path Analysis – The works have been planned to keep vehicles wherever possible from reversing and turning. All vehicles will enter Ducie street via the A665 Ring Road and drive straight down into the “drop off “zone set within the hoarding line within confines of the site, after they have been offloaded they will drive straight out back on to Ducie street -Ducie street is a one way street and this method will assist in reducing risk associated with the additional construction traffic relating to the works.

3.8 Materials Storage

- 3.8.1 COSHH assessments will be completed for all hazardous substances. The Project Manager or Site Manager will pass appropriate information to the site operatives regarding the safe system of work to be followed for each hazardous substance. Access to Hazardous materials will be controlled by the Project Manager or Site Manager/Site Engineer by holding a key to a lock container.
- 3.8.2 All fuels will be kept in bunded tanks/bowlers which will be kept in a designated area where all refuelling will be undertaken. Spill kits will be available on site and all necessary fire fighting equipment will be sited adjacent to the refuelling areas and shown on the site fire plan.

- 3.8.3 All hand tools and work equipment will be stored in a site container when not being used.

3.9 Construction Environmental Management Plan

- 3.9.1 The CEMP defines responsibilities and methods during the construction phase of this development to manage potential impacts on the environment by the control of contaminants arising from the construction works.
- 3.9.2 The CEMP addresses the following issues associated with the development:
- Dust Emissions
 - Ecology
 - Water Pollution
 - Waste Management
 - Contaminated Land and
 - Community Responsibility.
- 3.9.3 The CEMP will be developed during the Pre-construction phase of the scheme by using our company Construction Environmental Policies and Procedures as an operational framework. By using this we will integrate the specific requirements of this CEMP into site specific operational procedures on the project.
- 3.9.4 All proposed sub-contractors on the project have confirmed their compliance with both BigRed's Environmental Policies and the CEMP.

3.10 Early Works

- 3.10.1 Enabling Work & Site Investigations - To further inform the design additional Site investigation works are needed, such as slip trenched to identify services and existing underground structures, bore holes to inform the structural engineer of the ground bearing strata.
- 3.10.2 Temporary Works - Piling Mat - The piling mat will be designed by the enabling works contractor, we are undertaking Temporary Works Category 3 engineering check this with our independent Temporary Works Engineering practice (ARC Engineering) to withstand the loads imposed upon it by the Piling Rig during operation, once this has been selected from the successful Contractor.

3.11 Piling & Adjacent Structures

- 3.11.1 Over a 4-week period the CFA piles will be installed. Particular attention will be made when piling adjacent to existing structures. Where we will undertake;
- Pre-commencement workshop with all parties prior to risky elements / tasks
 - Area specific method statements for works in close proximity to boundaries
 - Full time site engineer – monitoring and controlling works
 - Daily attendance from the structural engineer

3.11.2 The piling rig to be used is to be confirmed, however, vibration monitoring is included on all rigs.

3.12 Hoardings & Site Set-Up

3.12.1 We have allowed to operate and maintain secure site boundary hoardings on all boundaries:

- Ducie and Lomax Streets – by agreement with MCC highways, fencing lines will be extended into the highway of Ducie street to create a safe working space for site operations(and members of the public), namely the unloading /loading of goods and materials within Ducie street which will require the temporary removal of the street light which will be re-instated upon completion of works
- Site Pedestrian access to site will be via a turnstile entry /exit point sited off Lomax Street
- Hoardings will be solid and of high quality. Appropriate for the location.

3.13 Tower Crane Plan

3.13.1 Due to the limited nature of the site access a tower crane will be needed for construction of the building frame and installation of the pre-cast envelope system. We have selected a luffing style crane as the optimal balance between efficiency of operation and capacity. This will avoid any oversailing of adjacent properties. This will be installed out of hours at a weekend.

3.13.2 Deliveries will be picked from within the site compound. Our Crane specialist is developing a safe erection and dismantling plan. We will discuss the necessary over-sail of this with MCC Highways however currently no formal application has been made. The client's party wall surveyor has established the appropriate agreements with adjacent property owners. The tower cranes and hoists will be run from acoustically silenced generators until permanent power is available.

3.14 Scaffold & Hoisting Access Plan

3.14.1 As the building design is of masonry, we propose to fully traditionally tube and fitting scaffold the building. We will co-ordinate this with MCC Highways to ensure public safety as per their requirements.

3.14.2 A detailed programme of deliveries will be developed with each trade contactor.

3.15 Traffic and Management

3.15.1 The Site Management Team is aware of the importance to segregate operatives and pedestrians from operated plant and site vehicles. The Site Management team will ensure that pedestrian access and egress routes remain unobstructed and clear of debris and material.

3.15.2 The following safety controls will be considered where practicable within the traffic management plan.

- Segregated site entrance for people and plant
- One-way traffic gate route to be used on site
- Physical barriers to separate people/plant throughout site where practical
- Barriers and warning signage to prevent direct egress from building/ structure/ welfare onto plant movement route
- Turning circles to be used
- Barriered reversing zones
- Daily inspection of vision aids, flashing beacons & reversing warning on mobile plant
- Banksman to be used for reversing operations
- Additional lighting
- Erection of information and warning signage
- Fencing around openings in the ground
- Speed limits imposed on site
- Inspection and maintain traffic routes
- Instruct all site operatives to "KEEP CLEAR FROM MOVING PLANT"

3.15.3 The traffic management plan will be reviewed for all construction phases and form part of the to date induction.

3.16 Public Walkways

3.16.1 If required, public routes will be agreed with MCC Highways in advance of any works. Signage / directional arrows will identify the routes and will be clear and visible. Routes will be lit to the relevant standard as required. Our full-time gateman will be on hand to direct members of the public should it be necessary.

3.17 Signage

3.17.1 Adequate signage will be erected on the lead up to the entrance to site to enable safe traffic movements on the public highway. Particular attention will be given to the signage and communication with the residents and users of neighbouring properties. Signage to D.O.T/MCC Highways standard are identified on the traffic management plan and will be agreed with the MCC Highways during the application stage.

3.18 Site Signage

- 3.18.1 Company branded signage will be erected around the site and the compound advising all safety obligations of the company to its workforce and visitors, signage will be subject to weekly inspection and daily monitoring.

4 Environmental Considerations and Minimising the Environmental Impacts

- 4.1.1 The project team and all its employees recognise the sensitivity of and proximity of this building to its surroundings. As part of the Environmental Management System, personnel are made aware of issues which may impact on the environment and key receptors.
- 4.1.2 Environmental issues will be communicated to staff and operatives at site induction and specific environmental toolbox talks will be delivered with records of attendance maintained.
- 4.1.3 Specific actions will be:
- Site surface water during the early stages of the project will be settled via a specific treatment facility and discharged to the mains sewer
 - Daily inspection of the footpath and hoardings and barriers
 - Permanent gateman on Ducie and Lomax Streets with a responsibility to constantly check the road and access areas and ensure they are kept clean and tidy
 - Mesh hoardings will be debris netted to catch any wind debris
 - Scaffolds will be netted to assist in containing construction noise and dust within the site
 - Construction related dust has been considered in relation to the construction and a significant element of the construction material will be manufactured off site minimising dust related activity.
 - There will however inevitably be a small element of localised works that could potentially create construction related dust, these activities will be minimal and undergo site specific control measures, such as water suppression and controlled environments.
 - We recognise that as the construction works are taking place there will be the need to illuminate the site to ensure safe working conditions for staff, visitors and contractors, there will be localised lighting within the confines of the site that will not spill out into the neighbouring area, this lighting will be confined to within the footprint of the structure. This lighting will be operational during site working hours and switched off during non-site working hours. There will also be element of external lighting that will be located at locations around the site externally – this lighting will be designed to target site operations within the site boundary and to minimise light pollution outside of the site perimeter by means of focusing the lighting downwards and into the site. The use of low lux level led lighting will also aid in the reduction of any light pollution to the neighbouring area .

4.2 Archaeology

- 4.2.1 A report is currently being prepared. These works will be complete before works commence.

4.3 Water

- 4.3.1 During the works any directly related run off will be managed within the boundary of the site, in accordance with our agreed method statement and company policies. The main elements of directly related potential water runoff will be linked to the jet washing element when wheel washing as and when the need arises, this will be controlled within the site boundary and the run off into a small settlement area , this will be periodically removed by mean of muck away removal from site, this In principle will be a boundary bund to prevent any migration into to the local streets thereby containing within the site.

4.4 Drainage Connections

- 4.4.1 The drainage works are planned to take place very early on in the project .Once these works have been completed there will be conditional survey carried out.
- 4.4.2 Even though the prevention of pollution activities is of prime importance, it is recognised that emergency procedures need to be put in place. Spillage response will form part of the RAMS from each sub-contractor.

4.5 Concrete Wash Out

- 4.5.1 The concrete washout will be undertaken on site. A specific washout skip will be positioned at street level during concrete pouring operations for this. Concrete vehicles will be offloaded and cleaned at street level thereby ensuring no debris is deposited on the street.

4.6 Noise and Vibration

- 4.6.1 It is not envisaged that any construction activity will create a large amount of noise issues over and above those to be reasonably expected of a normal construction site.
- 4.6.2 We can foresee no extraordinary causes for noise or vibration and will introduce standard control measures as specified by Method Statements and Risk Assessments
- 4.6.3 The risk of damage to the health from noise or vibration will be assessed as part of the activity task Risk Assessments completed by the site management team.

- 4.6.4 The Contractor will employ the use of noise monitors if necessary to establish the need for any further control measures if needed.
- 4.6.5 Exposure to vibration will be monitored by the Site Manager.
- 4.6.6 The Contractor is adhered to permitted times for work as per the planning conditions. The working hours are specified to restrict noisy activities to certain periods of the day. The times are outlined in paragraph 3.2.1 of this report.
- 4.6.7 Construction Noise Mitigation:
- Plant and equipment will be maintained and operated following manufacturer's instructions to run efficiently generating minimal noise.
 - Where possible plant producing less noise or has noise control equipment (i.e. mufflers, silencers) will be used.
 - Plant will be switched off when not in use.
 - Plant and equipment supplied with acoustic enclosures will be operated with all panels closed.
 - Site staff will enforce a policy whereby all plant is shut down when not in use.
 - All stationary equipment with significant noise outfall will be sited to minimise noise nuisance to local residents.
 - Site Staff will liaise with the local community and other affected parties in advance of the works to provide information on what activities we will be carried out on site and the reasons why these works are needed. E.g. leaflets delivered to residents within 300M of the site boundary. Information provided will include a full description of the proposed works, the duration, sources and character of noisy activities and the levels of noise expected to arise, with a contact name and telephone number.
 - Works to be carried out within the permitted working hours
 - Consideration taken for alternative construction methods for higher risk noise activities
 - Careful consideration and selection of work equipment prior to work activity commencing using equipment conforming to the relevant national or international standards recommendations to noise control
 - Keeping voices and noise related site activity to a minimum this will form part of the site induction as part of the consideration towards the local environment
 - Noise monitoring during higher risk activities where mitigation has also taken place will be in place and the findings recorded and stored on site for view to those who wish to review (EHO or the likes)
 - No plant or machinery will be permitted to start up prior to 7.30am Monday to Friday or before 8.30am on Saturdays, we will look to start up site-based plant and machinery sequentially rather than all together.
 - Wherever possible the use of acoustic site enclosures will be adopted and sited as far away from residential buildings to mitigate noise.
- 4.6.8 Vibration Mitigation:
- Vibration is not a significant factor for this project over the duration of the construction works. Whilst the piling works are undertaken, suitable vibration monitoring stations will be provided, and results recorded and stored on site. The period for piling works will be minimal in relation to the overall duration of the project and suitable Party Wall Awards will be entered in as per the Statutory Requirements.

- For any works that fall into the medium to high-risk categories for vibration we will inform the residents and business of said works and their durations along with a contact name and number should there be the need of locals to raise concerns directly relating to the activities
- Works will be considered in relation to any locally raised sensitive times and re scheduled if necessary so far as is reasonably practicable.
- Delap surveys will be taken within proximity to the works prior to the works commencing and upon completion of works.
- Vibration works mainly associated with the piling works will be monitored by the vibration monitors within the plant.
- When loading materials into bins/lorries the material must be gradually lowered in and not dropped from height. Once a layer of material is in the bottom of the bin this will act as a cushion for the remaining material to be loaded in.
- As bins get full, they may need to be compacted down using the attachment of the excavator. This is to be done carefully by pressing down on the contents of the bin and not hitting it from height. Excessive plant movements must be avoided when working close to the boundary lines with neighbouring properties. To help reduce the impact of vibrations travelling through the ground where possible machines are to sit on a bed or demolition debris to act as a cushion.

4.7 Air Quality

- 4.7.1 Potential construction phase air quality impacts have been assessed by Idom Merebrook in Section 6 of an Air Quality Impact Assessment Report (Ref. AQA-21613-18-186) dated April 2018.
- 4.7.2 According to the Air Quality Impact Assessment Report, potential emissions during the construction phase includes dust and other forms of air pollution. In terms of vehicle movements within the site (plant exhaust), the impact of emissions would be very small.
- 4.7.3 The results from their investigations conclude that risk of dust impacts during the construction phase has been assessed as 'low' in the absence of mitigation.
- 4.7.4 Notwithstanding this, Section 7 of the report recommends a number of mitigation measures that reference the IAQM guidance. Various mitigation measures have been recommended relating to communication and responsibility; site management; preparation and maintenance of the site; operation of machinery; operations of wider site and waste management. These will be adhered to within and around the construction site.

4.8 Dust Control Measures

- 4.8.1 The objective will be to carry out the works in such a way that emissions of dust and other air pollutants including odour are limited and that best practicable means are employed to avoid the creation of a statutory nuisance and risks to human health and to avoid unnecessary impacts on sensitive habitats.

- 4.8.2 All tools will be fitted with dust suppression in the form of dust collection bags, vacuum attachments or water suppression to ensure that construction dust is minimised.
- 4.8.3 A vacuum should be used to reduce the circulation of dust, this will be an M or H-Type vacuum constructed to BS5415 and with 3-stage filtration – the risk assessment will consider the level of vacuum specification and how the filters are changed without exposing operatives to dust. Brushing/ sweeping is permitted but only when the area is dampened down prior to sweeping
- 4.8.4 In addition, all operatives who may be subjected to the risk of dust exposure will be face fit tested for a suitable and adequate RPE. PPF3 respirators are the only standard accepted on site.
- 4.8.5 If exposure to dusty works cannot be avoided, then adequate PPE must be provided to personnel on site. For all respiratory equipment used on site a valid face fit test must have been completed.
- 4.8.6 Where stockpiles of material are being left on site, they must be kept dampened to prevent the wind from blowing off the stockpile and will be sited as far away from residential building so far as reasonably practicable.
- 4.8.7 Strategically placed dust monitoring devices will be placed within the site boundary. The equipment will monitor noise levels and notify the project team and other key personnel who require the readings, should levels exceed those set by the local authority/EA suggested levels.
- 4.8.8 The risk of dust impacts during the construction phase has been assessed as 'low' in the absence of mitigation. Provided appropriate mitigation is employed throughout the construction phase the overall effect on local air quality is assessed as 'not significant'.
- The use of covered skips will be adopted to mitigate local air quality , all skips and higher risk dust creating traffic will be sheeting prior to leaving site.
 - Minimise the need for vehicles to enter the live working area to mitigate the creation of dust during the early stages of the project , these vehicles will sited on the current hard standing of Ducie street
 - Regular use of water assisted road sweeper will be used of local roads to remove any materials that may be tracked outside the site boundary.
 - Avoid dry sweeping
 - Any nuisance as a direct result of construction activity can be reported direct to the Site Management and these reports will recorded and stored and actioned ,all such records will be available to view when required.

4.9 Waste Management

- 4.9.1 The proper management and handling of waste on site is essential to ensure that pollution and increased levels of contamination are minimised.
- 4.9.2 Effective management of waste on site will consist of the following measures:
- Closed skip container (food waste etc.)
 - Regular clean-up of the site
 - All waste removal from site will be sheeted over prior to leaving site.
 - Careful handling and transportation to avoid damage
 - Efficient ordering
 - Off-site manufacturer (envelope)
 - Skips will be located within the footprint of the site hoarding situated off Ducie Street. The wastes removed from site will be segregated off site and recycled accordingly by an approved waste management company.

4.10 Wheel Washing

- 4.10.1 Site confines preclude the use of a permanent washdown station. We have allowed for daily attendance from a road sweeper during the ground works also during the piling and ground floor slab works whilst vehicles are entering and exiting the drop off zone we will employ a dedicated operative and plant (jet wash) to clean vehicles wheels prior to leaving site, we will supplement this with the use of a truck mounted road sweeper.
- 4.10.2 To be read in conjunction with additional documents during construction stage:
- Construction Environmental Management Plan
 - Construction Phase Health and Safety Plan
 - Site Waste Management Plan (SWMP)

5 Emergency Contact Details.

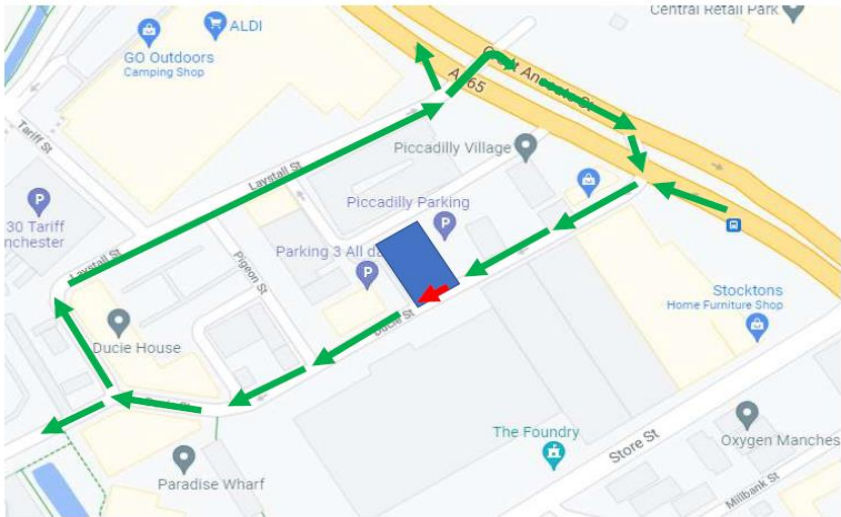
- 5.1.1 Emergency contact details will be displayed on the site hoarding and within the site, this information will be apportioned to the Site Emergency plans which incorporates, fire evacuation, first aid etc

5.2 Contact Details.

- 5.2.1 Big Red PC Ltd, Pre-Construction Director, Mike Pickles, T: 01484 432890

Appendix 2: Traffic Management Plan

Site TM Plan



DUCIE STREET
TRAFFIC PLAN(One way st)

Site related construction traffic would access Ducie street which is a one way controlled highway from the A665 . These vehicles would drive into the confines of the controlled environment of the site compound prior to being escorted back onto the highway via qualified banksmen once loaded/unloaded

- Green arrow: All vehicles
- Red arrow: Off street Unloading /loading
- Blue square: Site Location

Appendix 2 TMP All Vehicles

Ducie Street – Street view with proposals



DUCIE STREET
TRAFFIC PLAN(One Way st)

- Green arrow: All Construction traffic
- Orange rectangle: Secure site perimeter vehicle gates ,gates to be manned opening inwards
- Orange trapezoid: Temp footpath closure/diversion for duration of works
- Yellow trapezoid: Temp on road parking suspension for duration of works 4 bays
- Red sign: FOOTPATH CLOSED DIVERSION

Appendix 2 TMP All Vehicles

Ducie Street -Street view from virtual area inside site



Appendix 2 TMP All Vehicles

Ducie Street -Street view looking back towards site area



Appendix 2 TMP All Vehicles

