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Argosy Drive – Phase One 2025

Construction and Environmental Project Management Plan.

COLUMBIA THREADNEEDLE INVESTMENTS®

QUARTZ

rps

Burrows Graham

Construction and Environmental Project Management Plan

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1.0 Overview

This document is set out to describe the Construction and Environmental Method Statement to accompany the planning application for 6 no. Industrial Warehouses namely Unit 1A, Unit 1B, Unit 1C, Unit 1D, Unit 1E & Unit 1F at 305 Argosy Drive, Phase 1.

This report has been produced by McLaren Construction Group based on the outline design information made available to us and the information submitted in support of the Planning Application. It reflects our understanding of the site conditions and likely site constraints to be faced during the completion of the scheme.

1.1 Project Directory

Client: Threadneedle Curtis Limited, Cannon Place, 78 Cannon Street, London EC4N 6AG
Employers Agent: Quartz, Centurion House, 129 Deansgate, Manchester, M3 3WR.
Telephone 0203 8412288
Contractor: McLaren Construction Group McLaren House, 6090 Knights Court, Birmingham Business Park, Birmingham, West Midlands, B37 7WY
Structural Engineers: Burrows Graham, 5 Ambassador Place, Stockport Road, Altrincham WA15 8DB 0161 804 8046
M&E Engineer's: CPWP
Quantity Surveyor: Quartz, Centurion House, 129 Deansgate, Manchester, M3 3WR. Telephone 0203 8412288
Principal Designer: Abacus Cost Management, 4th Floor Cotton House, Queen Street, Manchester, M2 5HS
Approved Inspector: To be Confirmed

1.2 The Site Location & Development Proposals

Site Address: 305 Argosy Drive, Manchester, M90 5PZ

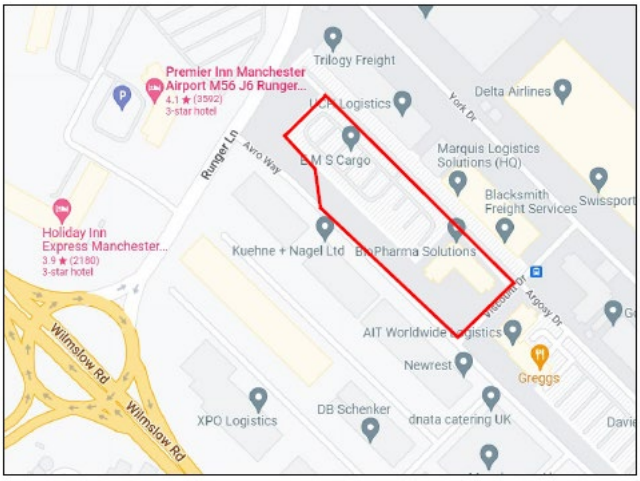


Fig 1: Site Outlined in RED

Development Proposal

The site comprises a rectangular parcel of designated employment land (Strategic Industrial Location), located within the wider Manchester Airport Estate. The site is bounded by industrial units to the north, south and east, and Runger Lane to the west.

The site currently comprises significant amounts of hardstanding for a large carpark and previously on the southern side contained a small office unit which has been demolished under a separate permission. The site is currently used as a carpark.

The development proposal is to provide a comprehensive re-development of a designated employment site to provide 6 no. New Warehouse Units Linked with office space, Approx 5798sqm and all other associated infrastructure works, access arrangements, parking, hard and soft landscaping.

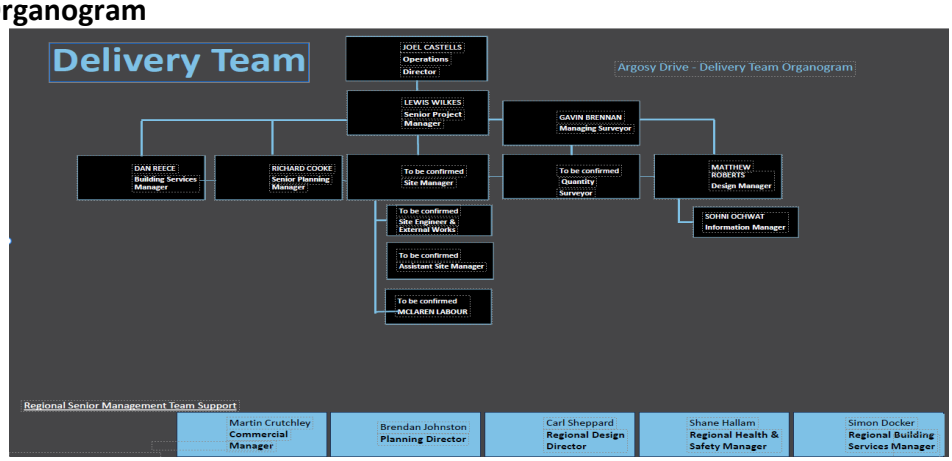
Existing Carpark

1.3 Working Hours

Monday to Friday – 8.00am – 6.00pm
Saturday – 8.00am – 1.00pm (If required)
Sundays and Bank Holidays – The local authority does not permit any works on these days unless specified by a section 61 consent granted under the Control of Pollution Act 1974.
Noisy work will not take place outside these hours unless otherwise agreed through the Control of Pollution Act 1974 section 61 prior consent in special circumstances (for example, to meet police traffic restrictions, in an emergency or in the interests of public safety).
Best Practice Means (BPM) will be followed on site to ensure that the level of nuisance caused to site sensitive receptors is kept to a minimum

1.4 Site Management Structure, Roles and Responsibilities and Site / Project Managers Details

Project Organogram



Roles and Responsibilities
All site-based Staff:
• Should follow good practice and are responsible for carrying out their activities without detrimental effects on the neighbouring properties, residents where applicable & the environment
• Should comply with the system of works, including the Construction Management Plan, Method Statements and risk assessments and should carry out their tasks in accordance with their training
• Are responsible for reporting any H&S and Environmental concerns and incidents to their supervisors, including suggestions for improvements
Site Engineers/ Foreman:
• Should understand the project H&S, Environmental, Logistical Arrangements & Planning Conditions obligations and the practical measures needed to comply with them
• Should ensure that the controls measures identified are effectively carried out
• Identify the need for and deliver regular Toolbox talks
Project Manager/Site Manager:
• General day to day management of the site
• Acting as the Primary point of contact for neighbours and the local community
- Principal responsibility for H&S and Environmental management on site by ensuring:
- All measures in this document, including consents, are obtained, and implemented on site. This includes ensuring that adequate resources are allocated to the H&S and environmental management.
- H&S and Environmental issues in method statements/risk assessments are effectively communicated on site and that training is delivered
- H&S and Environmental instruction from the client are carried out
- Incidents and non-conformances are investigation, corrected and prevented from reoccurring

H&S and Environmental Manager:
• Produce relevant site documentation
• Liaison with 3rd parties
• Inspection and audits carried out
• Delivering regular training and toolbox talks
• Investigation of incidents and non-conformances are corrected, and preventive action implemented
• Reporting H&S and environmental performance to senior management
• Providing help and advice to the site managers and site engineers and the foremen
• Reviewing and inputting into risk assessments and method statements
• Reviewing site set up & logistical arrangements.
• Provide back up, guidance, advice etc. to the site team.

Project Managers Details
Details of Senior Project Manager: Lewis Wilkes
Mobile: 0333 0168854
Email: lewis.wilkes@mclarengroup.com

Details of Project & Site Manager shall be displayed on a contact display poster at the main site entrance gate on Viscount Drive.

1.5 Security controls

We will be responsible for ensuring the identity and qualifications of all staff, subcontractor's staff, and any/all persons they require to be provided access to the site.

All persons entering the site must agree to comply with the following security procedures upon first arriving at the site entrance on Viscount Drive:
• Provide photographic proof of identification in the form of a passport or photo type driver's licence
• When requested, persons wishing to enter the site to work over an extended period will agree to submit to biometric processing
• Provide proof of current address
• Declare any previous criminal convictions.
• Agree if necessary to a background security check (if required).

At the site entrance on Viscount Drive, a Biometric Fingerprint Scanner shall be provided to control access and egress of personnel to and from site.
The site perimeter shall have a security fencing / hoarding 2.4m high and secure access & egress gates which whilst in operation shall be always manned. All access and egress gates shall be locked at night and when site is closed I.e., Weekends and Bank Holidays. Perimeter fencing / hoarding & access gates shall be maintained regularly throughout the project. In case of an emergency Site Access Emergency Routes shall be always kept clear. This shall be enforced by the gatemen & traffic marshals onsite.
Emergency evacuation procedures to be displayed and signage provided onsite.
A manned security office shall be installed at the main pedestrian and vehicle entrance at the junction of Viscount Drive & Argosy Drive. Security shall be in operation full time. Security measures shall be provided onsite during out of hours, weekends, and bank holidays.

See in Appendix Site Logistics Plan DWG 001 detailing site layout and security measures

1.6 Health and Safety Controls

A Construction Phase Plan (CPP) will be in place for the project. The document will cover the health and safety controls on site, monitoring requirements, emergency arrangements, site specific risk assessments, permits to work, COSHH and asbestos assessments for the site. The site induction will cover the special requirements for works and task covered on site. Internal and external health and safety inspections are to be carried out. Identified non-conformances will be closed out and the corrective and preventive actions will be logged. Emergency arrangements cover all types of emergencies, including major events. A response procedure for each the following emergencies will be available in the CPP:

- Electrical cable strike
- Gas Service Strike
- Water Service Strike
- Telecommunication Cable
- Contact with plant/services
- Ill Health from existing or the onset of an illness
- Explosion
- Hazardous materials
- Unexploded bomb
- Snow/Ice
- Strong gale wind
- Flooding
- Structure collapse
- Traffic accident
- Pandemic/epidemic
- Environmental incidents

- Act of Terrorism

Permits

Given the site is located at Manchester Airport and forms part of the MAG infrastructure, MCG will be required to apply for several permits before works commence on site:

- Project authorisation permit
- Permits to dig
- Isolation /Disconnection permits
- Discharge permits

1.7 Emergency Arrangements

MCG will follow its own Health and Safety procedure for site security. A dedicated site team will provide security during site working hours and a separate team will provide security to the site during out of hours, bank holidays and weekends, this to prevent any trespassing or theft actions.

The emergency arrangements will be briefed on site during the induction stage and displayed on the site information boards.

MCG will plan the emergency arrangements in accordance with the legal requirements.

A comprehensive community emergency plan will be put in place for the duration of the works. In case of any of the emergencies mentioned in 1.6, the community can be kept fully informed and adequate arrangements will ensure that evacuation of an affected area is conducted in a safe fashion.

1.8 Environmental Emergency Arrangements

MCG shall display the environmental emergency response plan in the environmental information board. This will be communicated to all site team during induction and safe start briefings.

The Environmental emergency response plan will cover the step-by-step action response for the following incidents:

- Spills
- Fire Emergency
- Discovery of potentially contaminated land
- Discharge of silt or other pollutants into a drain or watercourse
- Disturbing or damaging protected species and/or adjacent residents

The site team will be trained in spill response by the environmental manager.

Ample provision of oil/fuel and general maintenance spill kits will be provided.

1.8a. Water & Hydrology

Not applicable to this project

1.8b. Archaeology and Built Heritage

Details of mitigation measures to protect archaeology and built heritage

No archaeology or built heritage is anticipate being found during the project. In the unlikely event something is discovered English Heritage will be notified immediately.

1.8c. Urban Ecology

Existing Trees, shrubs and vegetation that are to be retained onsite shall have adequate fencing and protection installed to protect during construction works.

1.9 Fire Procedures

A Fire and Emergency plan shall be drafted and put in place for the project. It shall contain the arrangements for organisation of personnel, communications for arrangements, fire protection measures, fire prevention measures and risk assessments.
The file will be made available to any interested parties.
In general fire control points will be established in suitable locations around the site and as the new buildings are being constructed, within these buildings at appropriate locations.
These shall contain:

- Clear instructions in the event of a fire
- Fire bell / Remote Alarm
- Fire escape routes will be displayed together with assembly points
- Array of suitable fire extinguishers

Fig 4: Example of typical fire point

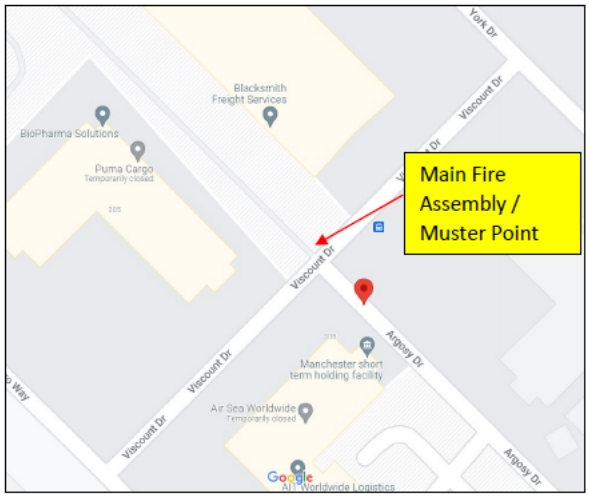


Fig 5: Fire Assembly / Muster Point will be Located at the Junction of Argosy Drive & Viscount Drive.

See location marked above.

2.0 Liaison with Neighbours & Interested Parties

Prior to works being initiated on site, interested parties such as the surrounding neighbours, businesses, local authorities, Manchester Airport, and the Fire Department will be contacted by means of an introduction letter, providing a point of contact between interested parties and the site team.
This letter will be followed by monthly newsletters, which will update interested parties on the development of works or any other relevant information.
Any complaints received during the works are to be immediately forwarded to the MCG's community liaison manager and the client's project manager. If the impacts of construction can be further mitigated such options will be fully investigated and further monitoring may be implemented if necessary. The results of any such assessment and investigation will be reported back to any interested parties.

2.1 Liaison with Nearby Sites

As good practice and to create a positive environment for workers, neighbours etc. MCG will liaise with nearby sites to reduce the cumulative impacts from construction. This shall be by regular communication, newsletters, advising of upcoming works etc. This will be monitored as the works progress.

2.2 Considerate Constructors Scheme

The site will be registered to the Considerate Constructor Scheme

2.3 Emergency Contact Details

Project Lead: Senior Project Manager
Lewis Wilkes: 0333 0168854

Regulator	Contact number
Local Police	999 - emergency 101 – Non emergency
Emergency Services Hospitals	**Trafford General Hospital:** 0161 748 4022 **North Manchester General:** **0161 795 4567** No Number provided **Withington Community Hospital:** 0161 434 5555
Environmental regulator Incident Hotline (EA)	03708 506 506
British Waterways	02075 175558
Manchester Airport	Contact TBC
Planning Enforcement	TBC
Complaints for Noise, vibration, and dust	TBC
Emergency electricity UKPN	0800 4587

Table 1 Emergency Contacts

2.4 Temporary relocation/suspension of bus stop in Viscount Drive.

The bus stop suspension will play a vital role in facilitating our planned infrastructure works maintaining public safety and transport continuity. A full guide is tailored to support efficient processing, stakeholder coordination, and regulatory compliance is attached.

3.0 Construction Methodology

The following is the anticipated sequence and methodology to be following during the various stages of works.

Stage 1: Site Set up, Enabling Works, Disconnection & Diversions of existing services

• Prior to the commencement of any construction works, a dilapidation survey of all areas around the boundary of the site including footpaths, kerbs, roads, and existing buildings will be carried out jointly with all relevant stakeholders, including the Highways Engineer and Manchester Airport. (Scope of works attached)

• A report will be developed with written and photographic records detailing any conditions relevant to the site boundaries and access roads. A copy will be made available to the Employer/Employers Agent for future consultation.

• Of particular importance will be the condition of the roads servicing the site, namely Avro Way, Viscount Drive & Argosy Drive.

• Erection of Site Perimeter Hoardings 2.4m high and Secure Access Gates shall be undertaken

• Installing Security Office and Turnstiles for pedestrian access & egress.

• Installation of the Site Welfare & Offices Facilities onsite. These shall be double stacked and located as per the logistics drawing in appendix.

• Installation of Temp Site Electrics, Fire Points etc. around the site.

• Disconnections & Diversions of existing services which cross the site.

• The main contractor shall undertake due diligence with respect to the location of existing services across the site and services which are required to be diverted to make way for the new works. The services which will require checking but are not limited to the following:

- ☐ Gas Main
- ☐ Existing Water
- ☐ Existing HV cables
- ☐ Existing LV cables
- ☐ Street lighting along Argosy Drive & Viscount Drive
- ☐ CCTV cameras
- ☐ Main Foul Sewer
- ☐ Surface Water Sewer

• The Services Isolations, Disconnections & Diversions shall be undertaken once the site has been secured and prior to the main construction activities commencing onsite.

• A strict Permit System shall be in operation during the Services Diversions, Disconnections & Isolation works. The relevant stats bodies shall be contacted, and written consent shall be required.

• Once services have been diverted / disconnected the existing hardstanding's in the carpark area and foundations of the previous building which was located onsite shall be broken out.

Stage 2: Preparation works for Subbases & Foundations

• The hardstanding's across the site shall be broken out using 35-ton excavators with hydraulic breakers.

Fig 6: 360 Excavator & Hydraulic Breaker

• The area will be segregated and all operatives, 3rd parties will be kept from within the Excavators working ranges.
• Consideration will be given to the risk of noise and ejected materials, broken out concrete to others near the breaking activities. Exclusion Zones will be set up by MCG Team with suitable Warning/Notification signage displayed, this will be moved around as required.
• Dust suppression shall be used as required
• As the breaking out progresses the excavator will switch to the bucket and start to grub out the broken-out concrete and remove to a designated stockpile ready for crushing.
• The excavators will then reduce dig to formation for the preparation of subbases and foundations, excavated material will be disposed offsite with a certain quantity retained onsite for future use in the soft landscaping areas.
• Once the existing carpark and external hardstanding's have been broken out the team shall then mobilise a mobile crusher to site. This will be set up in a designated position ahead of the site crushing works.

Fig 7: Mobile Crusher

• Hardstanding's arisings and hard-core shall be crushed onsite and reused to form the subbases and haul roads around the site. Surplus material shall be removed from site.
• Probing and grubbing out shall be carried out to a depth of 1.2m to remove any obstructions.

• During breaking and crushing activities onsite the potential for noise and vibration will be minimised by using acoustic screens and control of dust by means of a dust suppression system.
• A wheel wash facility shall be provided prior to the commencement of the breaking out & excavation work and shall be set up inside the site gates. This shall prevent muck and loose material being carried out onto the adjoining roads network.
• Hardstanding's arisings and hard-core shall be crushed onsite and reused to form the subbases

Stage 3: RC Pad Foundations, Ground Beam Foundations & Site Wide Drainage
• Following the removal of the existing hardstanding's across the site and the reduced level excavation to formation level the existing ground as identified in the Structural Engineers Drawings shall require Ground Improvement to increase the Ground Bearing Pressures under the Ground Bearing RC Slab and Pad Foundations. This shall be carried out by a specialist subcontractor.
• Once the ground has been satisfactorily improved and tested the RC Pad Foundations & Ground Beams shall be constructed. Concrete, Reinforcement & Materials shall be received via the site entrance gates.
• The Gates shall be always marshalled with lorries carefully directed in and out of site.
• A wheel washing facility shall be in place during the works.
• 25 Ton Excavators shall excavate the ground for the ground beams and pad foundations. The ground will be reduced to the required formation level by using a Laser Level set up to control grading levels.
• 50 mm concrete blinding shall be laid and allowed to cure.
• Any water found in the excavation shall be pumped out and controlled as necessary.
• Following the installation of the concrete blinding the works will progress to install the ground beam and pads reinforcement.
• Notes on Preparing the Rebar. A clear, safe access to the working area will be maintained throughout the works. All materials will be delivered to the site as previously described. The area to be worked on will be cleared of all unnecessary plant/materials.
• Installing Rebar. The rebar will be tied Insitu in accordance with Construction Issue Site Drawings.
• Checks will be made prior to fixing that the correct specification for the steel has been ordered and delivered.
• Where cutting of Reinforcement is required these shall be cut using Petrol Saw and 12" Metal cutting blade. These should be mounted and operated by authorised persons.
• Suitable PPE to be worn to include gloves and eye protection as a minimum. Tying wire will be cleared away to prevent trip hazards with site working area kept clear of obstructions.
• Where necessary suitable walkways will be provided for those who need access over the Reinforcement being fixed.
• Where required, projecting steel bars will be capped off using mushroom cones or boxed off to prevent injury.
• Any service penetrations / builders work ducts shall be installed and cast into the beams / pads with a hydrophilic water bar sealant positioned around the service duct and in compliance with the Waterproofing system.
• Once reinforcement beams and pads have been placed, then sacrificial beam form permanent formwork system shall be installed and the ground backfilled.
• Holding down bolts for the structural steel frame shall be positioned and fixed into the reinforcement cage. Lined and Levelled by the site engineer.
• Pre-Concrete Pour Checks. Prior to concreting the area will be blown out using compressed air lances, fitted with suitable control valves. Care will be taken to ensure that the debris is

directed away from other persons. Eye protection will be worn by those using the lances and by other nearby persons.
• Finally, any formwork and construction joints will be checked by the site Engineer with Pre-Pour Check Sheets being completed and signed off prior to pouring. Prior to pouring the nominated Building Control representative shall visit site and inspect as necessary.
• Pouring Concrete. NOTE prior to accepting any loads the site supervisor shall check the Ready-Mix concrete tickets to ensure the correct mix is being delivered.
• The ground beams and pads shall be poured using a Mobile Concrete Pump set up at the works location.
• The area where the mobile pump is positioned shall be protected using polythene sheeting laid flat on the ground and an overspill box positioned under the chute of the pump. Following pours, the area shall be washed clean of any overspill material.
• Ready Mix concrete wagons will be carefully directed to the mobile pump by the Banksman /gateman. From there concrete shall be discarded into the pump's hopper.
• Concrete shall then be pumped to the pour location and levelled and tamped off using a lightweight aluminium box section. Finished levels shall be controlled by Laser Level and checked by the site engineer.
• A vibrating poker will be used to consolidate the concrete.
• Operatives shall wear Wellington boots, gloves and goggles as standard PPE issue. They will be reminded to wash off any concrete splashes with clean water as soon as possible.
• Tests cubes will be taken 7 Day (2no) & 2 no. @ 28 Days with 1 Spare and laboratory tested to ensure the required strength has been met as per the structural engineer's specification.
• Following completion of pour area shall be cleaned down and all tools and equipment washed down with area left in a clean, tidy condition.
• The day following the pouring of the slab the Site Engineer shall carry out an as Built Level survey with results and completion handover cert being issued.
• Once the ground beams and pads have been cast the team shall then commence with the new site drainage & services under the new buildings and around the site.

Site Wide Drainage & Services Installations
• The site engineer shall set out the services, drainage runs and internal & external manholes /chambers.
• Service Trenches, Drain Runs and manholes shall be excavated using 25-ton excavator.
• Earth work support to drainage runs where required shall be by trench boxes moved along by the excavator as the drainage works progress.
• The drainage shall be installed to the correct levels using laser levels.
• All site wide drainage shall be installed in accordance with the structural engineer's specification.
• The site wide services ducts for the new connections shall be laid in trenches and in accordance with the structural engineers' specifications.
• Careful coordination of site wide services will be required to ensure all new service ducts and connections are installed prior to casting the permanent RC Slabs and External Concrete Loading Areas
• Once the site wide services, external & internal drainage, manholes / chambers have been installed the works shall then progress to prepare for the New Ground Floor RC Slab.

Ground Floor RC Slab Preparation.
• Following on behind the services & drainage installation a 25 Ton Excavator shall grade the existing ground to the required formation level again by using a Laser Level set up to control grading levels.

• 50 mm concrete blinding shall be laid to the underside of the ground floor slab and allowed to cure.
• Following the installation of the concrete blinding the team shall then progress to install the ground floor slab area reinforcement.
• Sequence of works will be to progress from Unit 1A to Unit 1B and so on finishing out at Unit 1F.
• Reinforcement shall be lifted into the works location by site excavators.
• Installing Rebar. The rebar will be tied Insitu in accordance with Construction Issue Site Drawings.
• Checks will be made prior to fixing that the correct specification for the steel has been ordered and delivered.
• Where cutting of Reinforcement is required these shall be cut using Petrol Saw and 12" Metal cutting blade. These should be mounted and operated by authorised persons.
• Suitable PPE to be worn to include gloves and eye protection as a minimum. Tying wire will be cleared away to prevent trip hazards with site working area kept clear of obstructions.
• Where necessary suitable walkways will be provided for those who need access over the Reinforcement being fixed at ground floor level.
• Where required, projecting steel bars will be capped off using mushroom cones or boxed off to prevent injury.
• Any service penetrations / builders work ducts shall be installed and cast into the slab with a hydrophilic water bar sealant positioned around the service duct and in compliance with the Waterproofing system.
• The RC Slabs shall be poured in bays with suitable designed expansions / construction joints detailed by the structural engineers.
• Pre-Concrete Pour Checks. Prior to concreting the area will be blown out using compressed air lances, fitted with suitable control valves. Care will be taken to ensure that the debris is directed away from other persons. Eye protection will be worn by those using the lances and by other nearby persons.
• Finally, any formwork and construction joints will be checked by the site Engineer with Pre-Pour Check Sheets being completed and signed off prior to pouring. Prior to pouring the nominated Building Control representative shall visit site and inspect as necessary.
• Pouring Concrete. NOTE prior to accepting any loads the site supervisor shall check the Ready- Mix concrete tickets to ensure the correct mix is being delivered.
• The Ground Floor RC slab shall be poured using a Mobile Concrete Pump set up at the works location.
• Ready Mix concrete wagons will be carefully directed to the mobile pump by the Banksman /gateman. From there concrete shall be discarded into the pump's hopper.
• Concrete shall then be pumped to the pour location and levelled and tamped off using a lightweight aluminium box section. Finished levels shall be controlled by Laser Level and checked by the site engineer.
• Ground Floor Slabs shall be finished using Easy Float and then a Power Floated Pan finish across the slab. A vibrating poker will be used to consolidate the concrete.
• Operatives shall wear Wellington boots, gloves and goggles as standard PPE issue. They will be reminded to wash off any concrete splashes with clean water as soon as possible.
• Tests cubes will be taken 7 Day (2no) & 2 no. @ 28 Days with 1 Spare and laboratory tested to ensure the required strength has been met as per the structural engineer's specification.
• Following completion of pour area shall be cleaned down and all tools and equipment washed down with area left in a clean, tidy condition.
• The day following the pouring of the slab our Site Engineer shall carry out an as Built Level survey with results and completion handover cert being issued.

• Once Ground Floor RC Slab has been cast the team shall then commence with construction of Structural Steel Frame above ground floor to Units 1A, 1B, 1C, 1D, 1E & 1F.

Stage 4: Superstructure Construction and External Envelope
Superstructure Construction Units 1A, 1B, 1C, 1D, 1E & 1F
• Following completion of the Ground Floor RC Slab the Structural Steel Frame, Roof Sheeting and External Envelope shall commence.
• The Structural Steel Frame from Ground to Roof shall follow on once the Ground Floor RC Slab has sufficiently cured.

Fig 8: Structural Steel Frame erected using Mobile Crane & MEWPS

• Firstly, the Precast RC Retaining walls shall be lifted into position by mobile crane.
• Structural steel frame members shall be delivered to site on artic trailers. Deliveries shall be directed to the works area by traffic marshal.
• The works shall commence at the rear of the site at Unit 1A working out towards unit 1F.
• A mobile crane shall be utilised to erect and lift the structural steel frame members into place.
• All lifting shall be under the supervision of a competent banksman.
• Access by steel erectors to the connections shall be made using MEWPS working off the ground floor slab.
• Mobile crane outriggers and mat design shall be carried out and checked prior to commencement.
• A site-specific method statement & risk assessment shall be undertaken and approved prior to the works commencing.
• The roof purlins & twin-therm built up trapezoidal profile roof system sheeting shall be lifted into position as the steel frame structure is being erected.
• All operatives working at height shall have appropriate training.
• Appropriate fall arrest system to be utilised during the superstructure steel frame and roofing installation.
• The new first floor slabs for open plan office space, kitchens and toilets shall comprise of Hollowrib decking with mesh reinforcement and Concrete slab. This shall be constructed as the steel frame advances.
• Reinforcement shall be placed insitu with concrete then pumped to the first-floor slabs using mobile concrete pump.
• Quantity checks shall be undertaken and pre pour sign off in place prior to placement of any concrete onsite.

• Concrete shall be placed, compacted, and finished in accordance with the performance specification.
• The new stairs access from ground to first floor shall be precast concrete and these shall be lifted into position by mobile crane as the building advance.
• The external structural steel fire escape staircases shall also be constructed as the building advances.
• The external envelope of the building comprises of an Insulated twin-therm built up wall system vertically laid, thermally insulated double glazed curtain aluminium walling system, vertical lift insulated level access roller doors and double manual push /pull doors to match surrounding curtain walling. This shall be manually installed off MEWPS and to the perimeter.
• The windows & glazing's shall be manually installed as the building external envelope is being installed.
• All deliveries to site for the superstructure shall be received via main access off Argosy Drive.

See Logistics and Swept Path Analysis Drawings in appendix.

- Deliveries to be received and escorted onto site by a full-time traffic marshal.

Fig 9: External Cladding Installation

Stage 5: Internal Fit Out & Finishes
• Following the completion of the Steel Frame Superstructure, Roofing & Perimeter cladding will be the internal fit out. The Internal masonry Party Walls between each unit will be constructed.
• Once the building is weather tight with shell and core complete the M&E and internal fit out shall commence.
• Materials shall be received to site via the main entrance gates on Argosy Drive and loaded into the loading areas at each unit within the site.
• The materials shall then be lifted in with a forklift into the units and distributed throughout the building.
• The Fit out shall involve fitting out the Open Plan Office Space, Staircases, Toilets and facilities within the warehouse units. The works shall involve the following trades of which task specific method statements and risk assessments shall be developed:

☐ Electricians

- ☐ Plumbers
- ☐ Tilers
- ☐ Carpenters and Jointers
- ☐ Ceiling & Floor Installers
- ☐ Painters & Decorators

All Waste during the construction phase shall be segregated and removed into the relevant skips in the designated waste control zone.

Stage 6: External Works & Landscaping

- The External works to the site, final drainage, hard paving's, concrete hardstanding's, security bollards installations, cycle shelters, smoking shelters, pedestrian access footpaths, kerbing, white lining, signage etc shall be installed in accordance with the Structural Engineers and Architects specification.
- The external hard and soft landscaping shall also be undertaken.
- The Final Phase of the Construction Phase will be the testing and commissioning of the warehouse units 1A to 1F.
- All Mechanical & Electrical equipment & Firefighting measure shall be tested along with the new drainage systems.
- The perimeter site hoardings, welfare facilities etc shall be dismantled and areas made good where necessary.
- The buildings shall then receive building control sign off where it shall then be handed over to the client's team.

4.0 Logistics & Traffic Management Plan

During the Construction Phase the site will be serviced from Argosy Drive. The main entrance gates for deliveries will be off Argosy Drive and will be 8m wide. Gates shall not open outwards onto the road. Ideally the gates should be 2 no. leaf's each 4m wide and sliding on rails. These Gates will be wide enough to cater for the anticipated construction vehicles which will be attending site.

A traffic marshal shall be present at the main vehicle entrance at the junction of Argosy Drive & Viscount Drive where he / she shall direct all deliveries to the appropriate entrance gate and then to the unloading areas onsite.

As the main entrance route on Argosy Drive will be constantly manned and monitored during site working hours by an experienced Traffic marshal this will ensure access to neighbouring buildings, car parking areas which are to be retained and emergency service vehicles will remain uninterrupted.

The construction vehicles shall exit site and a one-way system shall operate for example enter through Gate 1, exit through Gate 2. Similarly enter through Gate 3, exit through Gate 4.

See Proposed Site Set Up and Logistics Plan

4.2 Logistics Plan Standards

All vehicles/deliveries that will attend site will notify site at least of 24 hours prior to arrival.

The site logistics manager shall co-ordinate all deliveries and notify the site team of deliveries planned each day.

Vehicles/deliveries shall arrive at the main site entrance at the junction of Viscount Drive & Argosy Drive. Site Security & a Traffic Marshal shall meet the delivery. Once checked the traffic marshal shall direct the delivery to the appropriate entrance gate on Argosy Drive where a traffic marshal will meet then guide the vehicle into the site unloading area.

All deliveries will be unloaded/loaded within the site boundaries.
Vehicles will exit onto Argosy Drive and then onto Viscount Drive as directed by the traffic marshal.
There will be no manoeuvring of vehicles outside the site other than to drive directly into the site and when unloaded to drive directly out of the site.

4.3 Traffic Management Accreditations

MCG shall employ traffic marshals that have the appropriate training and experience to safely carry out the task.
MCG shall diligently select the suppliers and the supplier's vehicle drivers shall be made aware of the traffic routes and delivery procedures to and from site. They shall also be committed to improving road safety for vulnerable road users.

4.4 Expected Vehicles type

- 4 Axle Rigid HGV's (Concrete Mixer Wagons, Muck away Lorries, Flatbeds etc.)
- 6 Axle Mobile Crane (Site Lifting)
- Articulated Lorries & Low Loaders for Structural Steelwork, Cladding, Roof Sheeting deliveries. Large plant and prefabricated steel beams / panels
- 3 Axle Rigid HGV's (Delivery Trucks/Mobile Concrete Pump)
- 2 Axle Rigid (7.5 Tonnes)
- Large Panel Vans (Light Deliveries)
- Panel Vans (Light Deliveries)

4.5 Delivery Hours

Site Working Hours are Monday – Friday 08:00 – 18:00
Saturdays – 08:00 – 13:00
Deliveries Weekdays only between 8am – 6pm

4.6 Material Storage

Delivered materials will be off-loaded at the dedicated working zone offloading area within the site.
No offloading shall take place outside the site boundaries.
Material shall be stored within the site boundaries. No materials shall be stored on the highway or on the footpaths.
Site materials to be securely tied down and waste packaging etc, disposed immediately in waste skips provided onsite to prevent Foreign Object Debris (FOD).

4.7 Vehicle Call up Procedure

All deliveries shall be given the logistics managers contact number at time of order and informed of the traffic route to site.
Drivers to call site manager 10 – 15 minutes prior to arrival to confirm site access gate is clear.
The dedicated Traffic Marshall shall meet the delivery vehicle at the main site entrance and shall direct the vehicles to the offloading area.
Radio communication will form part of the delivery procedure between the main traffic marshal and the site supervisors.

4.8 Footpath Arrangement

The Traffic Marshal at the main site entrance junction between Viscount Drive & Argosy Drive shall be mindful of the needs of vulnerable highway users, these will include wheelchair users, the elderly, people with walking difficulties, young children, people with prams, blind and partially sighted people, etc.
The adjoining public highway and footpaths will be kept clean and free from obstructions.
Care shall be taken not to damage the footpath during the transit of plant and materials into site.

Regular maintenance shall be carried out to ensure its integrity is maintained throughout the duration of the site works.

4.9 Monitoring of the Plan & Dealing with Complaints

The Project Manager will constantly monitor the traffic plan throughout the project and undertake a review every 8 weeks.
As the works are contained within the site boundary throughout, the works therefore should not affect the Traffic Plan, but any changes that might be needed will be highlighted during the reviews.
Site contact details will be displayed on the site hoarding / notice board at the main pedestrian site entrance off Viscount Drive and any complaints received will be formally documented and lead to a traffic plan review if needed.
Prior to commencement onsite the project manager shall check the adjoining area for any developments which may impact on the traffic management plan. If there are developments in proximity, the project manager shall liaise with their site supervisor on deliveries etc. This Construction and Environmental Outline Method Statement Plan shall also be discussed to help co-ordinate each sites activity.
The project manager shall be responsible for liaison and co-ordination of these elements.

4.10 Communication of the Traffic Management Plan

The Traffic Management Plan will be communicated to all operatives and visitors to the site during the Site Induction.
Utilities providers will be contacted and notified of the planned works and the traffic management plan prior to commencement to ensure the planned site operations won't interfere with any of their works.
If there are to be new utilities connections planned around the development, the utilities companies shall be made aware of this traffic management plan by means of site induction / briefing. All suppliers
and deliveries to and from site shall receive a copy of the Traffic Management Plan prior to deliveries taking place and they must ensure compliance with the routing and plan contained here within.

4.11 Anticipated Construction Works Programme

Phase	Duration (Approx.) Weeks	Type of Delivery Vehicle	No. of Deliveries
Stage 1: Site Set up, Enabling Works, Disconnection & Diversions of existing services	9 Weeks	(Low Loader, Artic Lorry, 4 axle rigid /Tippers / skip lorry, 2 axle rigids, Large Panel Vans (Light Deliveries)	6 to 8 Per day.
Stage 2: Preparation works for Subbases & Foundations	7 Weeks	(Low Loader, Artic Lorry, 4 axle rigid /Tippers, 2 axle rigids, Large Panel Vans (Light Deliveries)	4 to 6 per day.
Stage 3: RC Pad Foundations, Ground Beam Foundations & Overall Anticipated Construction Programme	19 Weeks	(Low Loader, 4 axle rigid /Concrete Lorries /Tippers, 2 axle rigids, 3 Axle Rigid	14 to 16 Per day.

52 Calendar Weeks (49 Working weeks) Note: Some of the above activities will overlap.			
		HGV's (Delivery Trucks/Mobile Concrete Pump), Large Panel Vans (Light Deliveries)	
Stage 4: Superstructure Construction and External Envelope	20 Weeks	(Artic Lorries, 4 axle rigid delivery lorries, 3 Axle Rigid HGV's delivery trucks, Large Panel Vans (Light Deliveries)	10 to 12 Per day.
Stage 5: Internal Fit Out & Finishes	15 weeks	(4 axle rigid, 2 axle rigids, 3 Axle Rigid HGV's, Large Panel Vans (Light Deliveries)	8 to 12 per day.
Stage 6: External Works & Landscaping	16 Weeks	(4 axle rigid /Concrete Lorries /Tippers, 3 Axle Rigid HGV's Large Panel Vans (Light Deliveries)	6 to 8 per day.

Overall Anticipated Construction Programme 52 Calendar Weeks (49 Working weeks)

4.12 Hoardings, Protective Walkways & Scaffolding Requirements

All site hoardings will be standard 2.4 meters high. These shall be maintained throughout the project duration. A minimum of 1.2m clear width of footpath shall be always maintained where the hoarding line is positioned adjacent to an existing footpath.

The main site offices and welfare shall be positioned within the site. See Site Logistics Plan Drawing - 001

Scaffolding will only be required in localised areas during the construction stage. There is no requirement for scaffolding to be positioned along the boundary or externally to the site.

4.13 Road Closures

There will not be a requirement for a Road Closure for these works.

4.14 Abnormal Loads

There will not be the need for any abnormal loads for this project

4.15 Wheel Washing & Cleaning of Highway

The highway on Argosy Drive & Viscount Drive shall be kept clean and tidy and will receive regular cleaning / jet washing by the contractors Traffic Marshall. A manual wheel washer shall be used onsite to ensure no mud or debris is carried out onto the surrounding roads network. All vehicles where necessary shall be cleaned down using the jet washer from within the site boundaries.

4.16 Potential to Transport Materials Via River

Due to the location of the site, this option is not feasible.

4.17 Parking onsite & Use of Public Transport.

There will be limited parking available onsite during the construction stage. Site workers, site staff and visitors will be encouraged to use public transport, cycle, or walk to the site.

The nearest Train Station is Manchester Airport Railway Station. Local Bus routes are available.

5.0 Noise, Vibration, Dust Control & Waste Management

5.1 Noise and Vibration

Noise and vibration monitoring will be undertaken during the construction of the development. This will be undertaken periodically throughout the project to ensure noise & vibration at boundary line are within local authority limits.

Background monitoring will be undertaken prior to commencement to provide accurate levels prior to construction works.

As part of the noise and vibration strategy, toolbox talks on the subject shall be carried out to the workforce on the topic.

Mandatory calibration for maintaining plant in good order will ensure that plant and machinery run in optimal conditions.

Deliveries to the site will be scheduled to distribute vehicle movements throughout the delivery hours and to avoid more than one vehicle delivering to the site at any one time.

Noisy work on site will be carried out in accordance with guidance provided by the Local Borough and Manchester Airport, MAG, for example:

- Restricting the hours that noisy work is carried out
- Using well-maintained and silenced plant and equipment including compressors, generators, and power tools.

MCG will endeavour to use suppliers and contractors that use electrically powered vehicles where possible. Plus use experienced contractors with knowledge of mitigations methods and procedures for mitigating the impact of noise and vibration from construction works.

Consultation and regular weekly nuisance assessments will be undertaken with the adjoining sensitive receptors. Any complaint of excessive noise, dust or vibration will result in heightened mitigation measures and periods of respite instigated.

Plant insulation and use of the most modern and efficient technology (such as mufflers and exhaust filters) are all employed to affect any excessive anticipated noise or vibration. All plant used shall be newly acquired such that it complies with the most recent maximum noise emission limits.

Wherever possible, quieter construction methods will be utilised.

MCG will measure noise levels with a Class 1 decibel meter, taking readings on site and building up a log of readings throughout the project duration. MCG will aim to achieve a daily limit of 70dB (LAeq, 10hr) at the nearest sensitive façade and 73dB (LAeq, 5 minutes) at the first action level trigger.

The measures to be taken to reduce noise pollution will be as follows:

- MCG will work closely and cooperate fully in terms of working in normal site hours, as set out by MAG & the Local Borough

- Well, maintained, sound attenuated plant will be used to carry out all operations
- Reducing plant noise to acceptable levels
- Solid hoarding / Screened Fencing will be used

Noise arising from site vehicles and plant will be managed first by rigorously implementing the site hours.
Careful selection of plant and vehicles is essential. All plant used on the site shall be sound attenuated and will be regularly serviced/maintained to ensure it is operating correctly. The site induction will cover the issue of noise.
In terms of misbehaviour of operatives and staff on the site this will be guarded against by strict rules being out in place that will form part of supply chain method statements and will be covered in site induction and toolbox talks.
Any operative found in contravention of the required standards will be warned for a first offence and removed from the site should there be a re-occurrence.

5.2 Dust and Air Pollution

MCG shall keep a record of all plant used on site.
As part of the Dust Management Strategy the proposals and actions as follows:

Communications

Develop and implement a stakeholder communications plan that includes community engagement before work commences on site.

Display the name and contact details of person(s) accountable for air quality pollutant emissions and dust issues on the site boundary. This will be the Project Manager.

Site Management

Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken.

Make the complaints log available to the local authority & MAG when asked.
Record any exceptional incidents that cause dust and/or air emissions, either on- or off- site, and the action taken to resolve the situation in the logbook.

Monitoring

Carry out regular site inspections which will ascertain the success of the implemented dust management controls. These inspections will be recorded and any recommendation which results from these inspections is to be followed up by site management.

Preparing and maintaining the site -

Avoid site runoff of water or mud.
Keep site fencing, barriers and scaffolding clean using wet methods
Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site. If they are being re-used onsite cover as described below
The hardstanding surfaces will be kept for as long as possible.

Operating vehicle/machinery –

Ensure all vehicles switch off engines when stationary - no idling vehicles. Avoid the use of diesel- or petrol-powered generators and use mains electricity or battery powered equipment where practicable.
Produce a Construction Logistics Plan to manage the sustainable delivery of goods and materials.

Operations –
Only use cutting, grinding, or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g., suitable local exhaust ventilation systems.

Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non potable water where possible and appropriate.
Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management
No burning of waste or materials on site.

Demolition
Bag and remove any biological debris or damp down such material before demolition.
Ensure effective water suppression is used during breaking out and demolition operations.

MCG shall regularly carry out dust monitoring during the works.
The Site exit shall have a jet washing facility which will reduce dust and spoil leaving site.
Dampening down measures will be adopted during breaking out of hardstanding's, breaking of obstructions and construction by means of a dust suppression system.
Hoardings around site will be 2.4 meters high to help ensure dust emissions are kept inside site.

5.3 Waste Management
All waste will be collected and stored separately so that it can be re-used and recycled as much as possible. Separate waste bins shall be provided onsite to segregate the waste.
A waste recovery rate of between 90 and 95% is expected. This target will be monitored by the Environmental Manager, who will request waste reports from waste contractors. These reports will include total waste removed from site and its recycling rate and will be made available to interested parties.
Before the start of works, site operatives will undergo toolbox talk training in waste management and waste segregation.

5.4 Site Waste Management Plan
A Site Waste Management Plan (SWMP) shall be produced by The Contractors for the project, and it shall consist of a detailed log of all waste movements. Information for each of these waste movements
includes:

- When was the waste moved?
- What type of waste was moved?
- Which registered Waste Carrier has taken the waste offsite?
- Which facility with a valid waste permit received the waste?
- Overall waste recovery for the project.

After a pre-construction stage audit has been carried out this information will then be incorporated into the SWMP to compare the estimated waste arising with the actual waste sent off-site.

5.5 Asbestos & Ground Contamination
A Pre-Construction Asbestos Survey & Ground Contamination testing & reporting shall be carried out where required. The results shall then be reviewed, and any impacts of Asbestos and ground contamination shall be assessed with an action plan then put in place for its removal if required.

5.6 Lighting Control around the Site

As part of the site lighting strategy the Contractor shall:

- Identify the sensitive receptors surrounding the site
- Position/direct lighting away from these sensitive receptors
- Use directional lighting
- Use appropriate levels of illumination
- Light areas when and where required
- Install hoods, shields, reflectors, and baffles to mitigate or reduce light spillage.

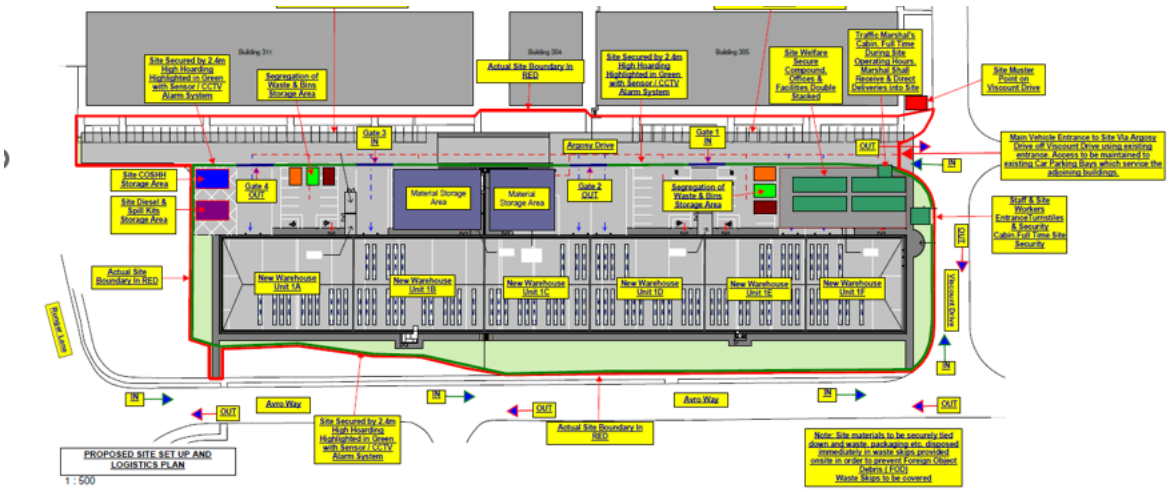
5.7 Water Resource

The existing Water connection shall be retained and used for the builders site supply during construction works. The usage of water shall be carefully controlled, and the system maintained through the build to ensure no loss of excess water.

Spill kits shall be available onsite with bunds to be used when filling plant & machinery with fuel to prevent spillages into the ground water course.

Rainwater shall be removed using puddle pumps and again discharged into the storm water system.

5.8 Pest & Bird Control

During the works the site and welfare facilities shall be always kept clean and tidy to prevent the buildup of waste and rubbish that attracts vermin. Also waste that attracts birds shall be stored in sealed covered skips. Waste shall be regularly removed from site and all waste bins shall have sealed covers.

A pest control services shall be deployed onsite from the outset to check and keep any vermin and birds at bay during the works.