

OVG Manchester:

Appendix 5.1 – Construction Management Plan



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Outline Construction Management Plan

OVG Manchester

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 **OVG**
OAK VIEW GROUP

The OVG logo icon consists of a stylized tree or plant symbol inside a circle.

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1 Introduction

The arena forms the next part of the Eastlands Etihad Campus Commercial Zone redevelopment, delivering diversity to the campus uses. The proposed arena provides a campus pull point through all year round usage of the facility, contributing to the destination role of the Etihad Campus in the local and wider communities.

This Construction Management Plan (CMP) has been prepared to outline the approach to managing the risk and impact associated with the execution of the works to construct a new 5 storey event arena (Class D2) with associated public realm and landscaping on a brownfield site located within Eastlands, and in support of the applicable planning application.

This CMP provides an overview of anticipated key site and construction activities, including:-

- Site access and logistics.
- Site establishment.
- Construction operations.
- Control and management of construction activities.
- Waste management.
- Impact of associated highways improvement works (S.278)

and the measures implemented to mitigate their impact on local businesses and residents.

The primary objective of this document is to identify and provide narrative on the envisaged construction processes and the measures implemented to provide a safe working environment whilst practically minimising disruption to local businesses and residents.

Assessments of suitable *Contractors* for the project will be undertaken to establish capability/ suitability, ability to work within confined sites and management procedures to be implemented to ensure successful project delivery. In executing the works, the appointed *Contractor* will implement the appropriate RAMS to ensure the works are executed in a safe and suitable manner and in accordance with the CDM 2015 regulations whilst fulfilling his obligations as *Principal Designer* and *Principal Contractor*.

Whilst defining the obligations and limitations placed on the *Contractor* when executing the works, this will form the basis for the Construction Phase Health & Safety Plan (CPHSP). The CPHSP will identify key project specific risks associated with the execution of the works and measures implemented place to reduce or mitigate these risks.

A further detailed CMP will be prepared by the appointed *Contractor* in due course and updated as appropriate to reflect comments received. This document will form a primary mechanism for maintaining the communicative relationship with Council and other third parties in understanding the nature of the proposals and the associated construction activities in providing the works. Where comments or third party approvals affect the CMP, the plan will be reviewed and updated as appropriate.

The CMP will be periodically updated as required advising of any proposed changes/ improvements to the proposed construction methodology.

Key Performance Indicators (KPI's) will be used to benchmark the *Contractor's* performance against the requirements of this plan.

2 The Site

2.1 Site Context

The site is approximately 4.46 hectares in size, and is located to the North of Manchester City Football Club's Etihad Stadium. The site is bounded by Sportcity Way and surface parking to the North, Alan Turing Way (A6010) to the East, the Ashton Canal to the South and James Mercer Way to the West.

North – Sportcity Way is the un-adopted access route to access Manchester Tennis centre to the West of the site and Campus surface parking to the North. Sportcity Way is four/ five lanes wide, with manual gates at the Junction with Alan Turing Way for management of the area by the Campus team.

East – Alan Turing Way is a four lane adopted highway. A pavement and dedicated cycle path separate the site from the north bound carriageway. The south bound carriageway is further separated by a central reservation.

South – The Ashton Canal is an existing waterway used by leisure boaters. Immediately south of the Ashton Canal, the Metrolink tram line links Ashton to Manchester city centre. Forge Lane Bridge links the site to the Wider Campus.

West – Joe Mercer Way is a private pedestrian footpath on the Eastlands Campus. Construction drawings identify its construction along much of the boundary length to be mass fill, retained within a crib wall system. This construction changes to a suspended bridge structure where the route crosses the Ashton Canal and Metrolink line.



Source: Google Maps

2.2 Site Description

The site has a cross fall of approximately 4 meters, rising from road level to the North of the site Southwards. The canal to the South of the site is approximately 3m lower than the highest point on the site with a c.45 degree ground battering to accommodate the level difference.

Gated access to the site is to the North via two gated entry points from Sportcity Way. Access to the site can be gained from the South of the site via the existing Forge Lane Bridge, linking the site to the existing surface carpark accessed via Gibbon Street.

Remediation works on the site were completed in 2011, with the site being utilised for overspill car parking for events at the Etihad Campus. 'Pop up' type events have been undertaken on the site in an 'ad hoc' manner since the remediation of the site.

We understand a series of dykes were installed on the site as part of the site remediation to aid surface water drainage due to limited absorption of the capping layer installed.

3 Overview of the Works

The primary construction activities related to these proposals can be summarised as follows: -

- Highways alterations (incl. S278 works).
- Site clearance, removal and disposal of existing vegetation and scrub as defined within the proposals.
- Service diversions and removal/ capping of redundant services.
- Site levelling & preparation
- Earthworks (incl. formation of retaining walls and piled foundations etc.).
- Construction of the new events area.
- Public Realm and associated landscaping works.

3.1.1 Highways Alterations

Section 278 alterations will be limited to works required to facilitate the proposals.

Works will be undertaken at the 'Gate 1' access point from the North carpark to allow left-in and left-out vehicle movements from Alan Turing Way to manage and improve access / egress. This area will also be remodelled to form a new servicing slip road into the North carpark.

In Sportcity Way, the pavement will be widened adjacent to the proposed building and rising bollards installed adjacent to the Joe Mercer Way crossing to create new Operations options for event days

3.1.2 Ground Works

To maximise the use of the site and contain the building massing, a reduced level dig approach has been adopted. This utilises the levels on Sportcity Way for vehicular access into the proposed loading bay areas to the East of the site. Due to the proximity of the building to adjacent highways, a sheet piled/ contiguous piled solution will be adopted to the site boundary where adjacent structures and roadways are vulnerable to the reduced level works. This perimeter piling will be incorporated into the overall substructure design as permanent works.

3.1.3 Substructure

The substructure is a piled solution, consisting of piles, pads and ground beams. Due to the proximity of adjacent properties, a combination of bored and Continuous Flight Auger (CFA) piling

will be used for the building foundations. Pile sizes and depths will be determined by the *Contractor*. The *Contractor's* preferred build methodology and design will dictate the quantity of waste form these activities, therefore this cannot be quantified at this stage. The quantity of material will be calculated by the *Contractor* and addressed as part of the *Contractors' Site Waste Management Plan*.

Below ground retaining structures will be constructed adjacent Alan Turing Way and the canal tow path to retain the banked earth. Ground retaining structures will be constructed adjacent to Alan Turing Way and the canal towpath to retain the banked earth. The crib wall to Joe Mercer Way will be reinforced as required.

As identified within the Coal Mining Assessment (Appendix 7.2), further on the site probing will be undertaken as part of the early works to verify the position any additional coal mining shaft on the site. Any mine shafts identified will be grouted and capped with foundations adjusted to bridge this obstruction. Evidence of these surveys and works will be provided by the *Contractor* to demonstrate the risk has been suitably mitigated.

3.1.4 Superstructure

The superstructure comprises of a combination of steel and concrete frame with a ground bearing ground floor slab and insitu concrete upper floors. Vertical restraint to the building will be provided through a combination of vertical cores, bracing and shear walls.

3.1.5 Building Facade

The elevational treatment is split as follows: -

Lower Accessible Levels – Levels 00 & 01

The vertical concrete panel system provides a robust and durable solution to all pedestrian accessible areas, thereby reducing future building maintenance and replacement of exposed building components.

Upper levels – Levels 02 and above

Composite type cladding panel with bracketry spacer zone for the installation of an outer cloaking panel. Façade lighting is provided within designated areas of the spacer zone. Due to the stepped nature of the façade, construction and maintenance of the façade will be undertaken using a combination of MEWP and scaffolding.

The building façade has been designed to be constructed, accessed and maintained from within the site.

The general arrangement of the building has taken into account the adjacent site topography, creating access points into the building on levels 00 and 01.

3.1.6 Health & Safety

Health and Safety in connection with the *Works* is of paramount importance to ensure safe working conditions for site operatives. Activities pertaining to the works will be reviewed and assessed at every stage of the construction process ensuring the appropriate Risk Assessments and Method Statements (RAMS) are in place and adhered to at all times.

The *Contractor* will undertake the *Principal Designer* and *Principal Contactor* roles for the duration of the works. A *Principal Designer* role will be retained by the *Employer* to assist in compliance with his duties under CDM2015.

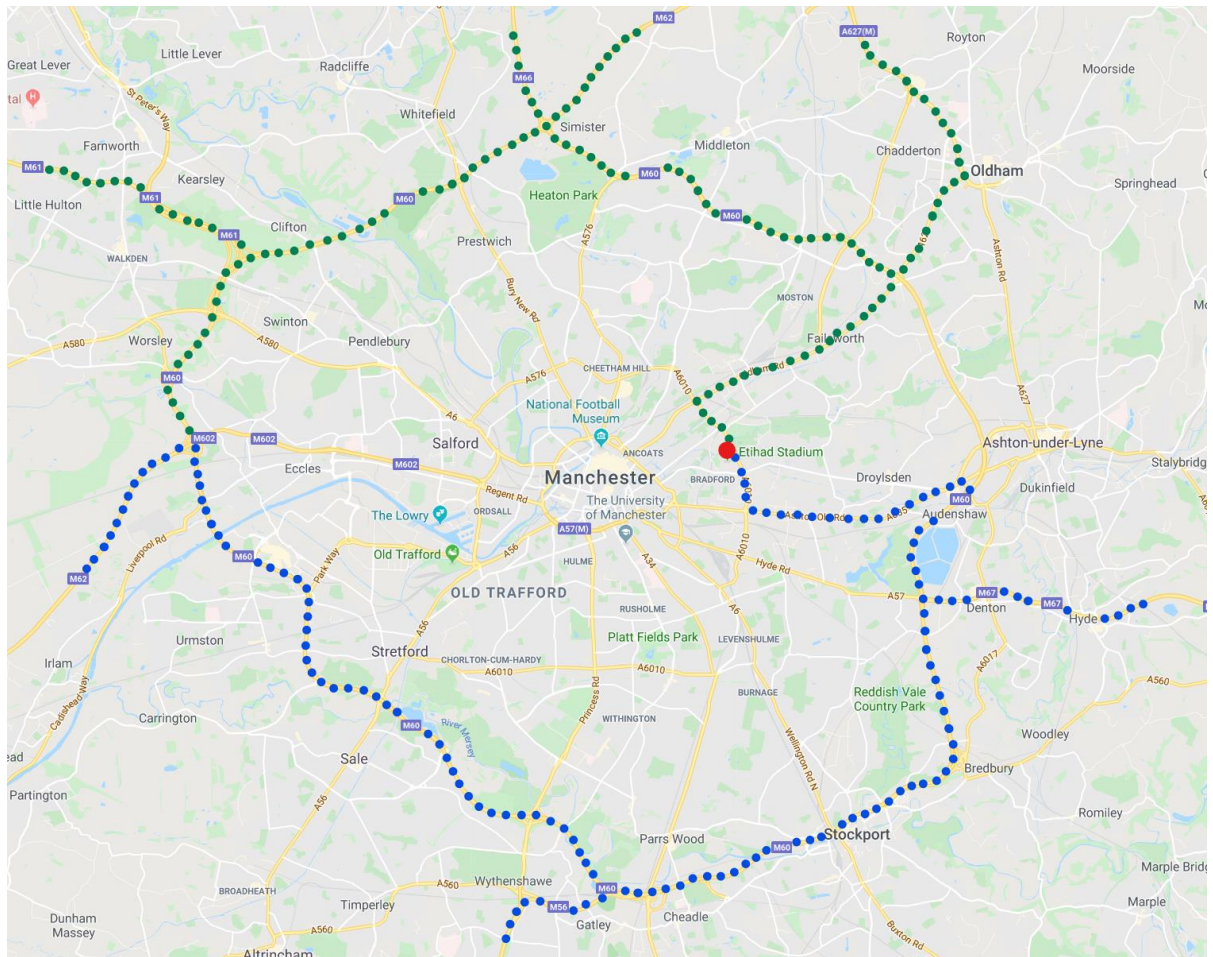
Work will be undertaken in accordance with Health and Safety at Work Act 1974 and other legislative requirements including (but not limited to) the Manual Handling Operations Regulations 1992 and the working at Height Regulations 2005. Designer's risk assessments will be provided to the *Contractor* to provide a greater understanding of any design considerations or assumptions in the preparation of the RAMS.

Trained first aid personnel will be available and clearly identifiable on site at all times. The *Contractor* will develop a site fire plan, identifying evacuation procedures and muster points. Trained fire marshals will be clearly identifiable.

3.2 Construction Activities

3.2.1 Site Access

Vehicles accessing the site from outside the city centre will utilise the motorway network to access the M60 Manchester circular. Appropriate delivery routes will be established to limit the duration of vehicles occupy the network. Diverse routes will be managed by the *Contractor* to distribute vehicle movements across the network. Where possible, deliveries will be scheduled outside of peak traffic flow times to minimise the impact on the surrounding areas.



- Delivery/ removal
- Vehicle size and load
- Route from source to completion
- Timings associated with the vehicle movements, with an infrastructure network assessment

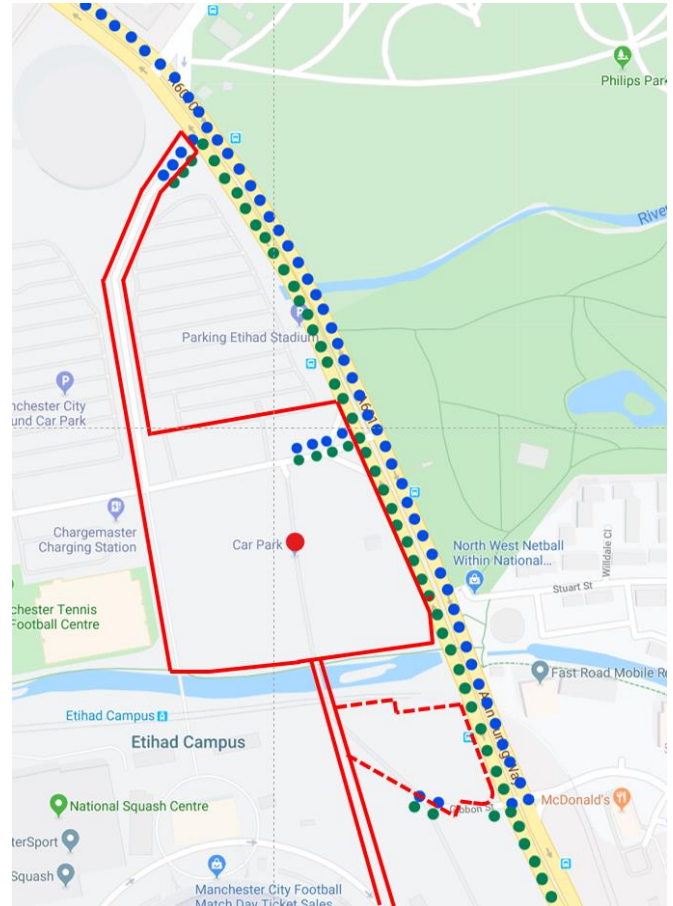
3.2.2 Deliveries & Removals

Primary access to the site for larger deliveries will be made via Sportcity Way to the North of the site, or via the access point further north of the Campus parking. Loading or unloading of plant and materials will not be permitted outside of the campus.

Smaller/ regular deliveries to the site will be made from the site compound to the south of Ashton Canal, accessed via Gibbon Street. Access to the site from the site compound is via Forge Lane Bridge. The site compound will encompass a material holding area for unloading and interim holding of materials prior to delivery to site.

Where practical, offsite construction and 'just in time' deliveries will be promoted. Deliveries and waste removal will be managed by the *Contractor*. No offsite stacking of deliveries is permitted.

Materials and components will be locally sourced where practical to minimise transportation distances.



Source: Google Maps

3.2.3 Contractor Transport & Parking

The *Contractor* provides and maintains a Construction Travel Plan for all Contractor and *Subcontractor* employees for the duration of the works promoting public transport reduce the vehicular movement associated with the *works* and promote the project's sustainability approach to construction.

Contractor parking will be managed on campus within the site compound and the North carpark. Where the North carpark is unavailable on event days, the *Contractor* will manage and monitor parking, ensuring the workforce use dedicated localised parking areas (not on street parking) to minimise the impact on surrounding areas.

3.2.4 Plant and Equipment

Crane coverage of the site may be provided by up to four tower cranes, used primarily for moving materials around the site. Mobile Elevating Work Platforms (MEWP) and mobile cranes will be utilised for the construction of the arena with crawler cranes for the movement and positioning of primary structure. Where practical, construction techniques and the associated plant and equipment will be selected to minimise acoustic intrusions on surrounding areas.

The *Contractor* will develop a detailed schedule of plant and equipment to confirm these assumptions in due course

3.2.5 Construction Sequencing

To improve the accessibility of the site and reduce the impact of the construction works on the surrounding areas and infrastructure, the S278 works associated with Highways alterations will be undertaken as 'first task' in the construction process. Piling to the perimeter of the site will be undertaken to ensure stability of adjacent structures and facilitate the reduced level dig. The implementation of a single or split level piling solution is still to be established, and will be dependent on the *Contractor's* preferred method of construction.

Where reasonably practical, material will be retained and reused on site.

3.2.6 Operating Hours

Site operating hours will adhere with Manchester City Council's (MCC) 'Environmental Protection Information for Developers': -

Monday – Friday 07:30 – 18:00hrs

Saturday 08:30 – 14:00hrs

Sunday/ Bank Holidays No works permitted

To reduce the impact on the existing transport and public transport infrastructure of operatives attending site, arrival of the workforce on site 30 minutes prior to the permitted operating hours for setting up will be encouraged. No works will commence outside of the above permitted times without prior agreement by Manchester City Council.

4 Programme

4.1 Key Dates

The current master programme is a development based programme with the following key dates: -

Planning Submission	Q1 2020
<i>Contractor</i> Appointment (Stage 1)	Q1 2020
RIBA Workstage 4	Q2 2020
Contract Award (Stage 2)	Q2 2020
Site Mobilisation	Q3 2020
Completion	Q3 2023

The works will be undertaken in a single phase, with an early works contract to prepare the site to include: -

- Site Clearance
- Service diversions
- Section 278 highway works
- Perimeter piling
- Site levelling to formation level

A detailed programme of construction activities and sequencing will be provided by the *Contractor*.

5 Site Setup and Operations

The following site setup and operational requirements apply to these proposals and will be developed further detail by the *Contractor*.

5.1 Site Establishment

The site compound will be located on the wider campus to the South side of the Ashton Canal. Access to the site from the site compound will be via Forge Lane Bridge. Construction activities will be contained within the site and Eastlands Campus where possible. Highway improvement works will be undertaken outside of the core construction site boundary. The following will be provided for the works as temporary facilities: -

- Project offices
- Meeting and conference facilities
- Induction and training centre
- Canteen and rest area
- Toilets and washroom facilities

Material storage and waste segregation will be managed by the *Contractor* to prevent cross contamination of materials whilst promoting recycling and reducing landfill. All flammable waste streams and those with potential environmental impacts will be appropriately contained and managed by the *Contractor*.

Fuel and oil will be stored in accordance with the Control of Pollution (oil storage) (England) Regulations 2001 with refuelling and transfer of fuel oils undertaken in designated areas by trained personnel, equipped with the appropriate spill kits and emergency action plans.

Lighting associated with the site and site establishment will be designed to minimise light spillage to limit the impact on adjacent properties and highways.

5.2 Site/ Boundary Fencing

The site is secured to the North, East and South by 2.4m high palisade fencing. This will be retained and adjusted to suit construction activities during the works. To the West, access to the site is restricted by site topography and the elevated Joe Mercer Way. Additional fencing will be installed on site along Joe Mercer Way to secure the site.

Solid faced site hoarding will be used to the perimeter of the site and sealed to the ground to further reduce dust arising and further prevent materials and debris leaving site and potentially entering water bodies. Site hoardings will be utilised to inform others of the proposals and coloured as appropriate.

Areas outside of the core working site area in relation to the S278 works and drop off areas will be appropriately secured to protect against public injury and potential theft of plant and materials.

5.3 Access Routes/Points

The method of deliveries for plant and materials/ removal of waste from the site will be defined by the *Contractor* using key access roads into the site and surround areas.

Turnstiles to secure the site from unauthorised access will be in place at all pedestrian access points. Banksman will be present at all vehicular access points.

Details of the proposed site access arrangements are identified on the Site Logistics Plan within **Appendix A**.

5.4 Housekeeping

The *Contractor* will maintain a high level of site cleanliness to: -

- Reduce potential H&S issues arising from poor working conditions
- Improve working conditions and operational productivity
- Reduce waste material on site
- Remove the potential for waste material inadvertently leaving site (wind conditions etc.)

In maintaining the cleanliness of the site the *Contractor* will also ensure: -

- The appropriate behaviour of the works force (incl. Sub-*Contractors*) is appropriate both on and offsite.
- Waste is removed from site at regular intervals to prevent local wildlife being attract onto site and the potential for fire hazards on site.
- Cleanliness of adjacent roads affected by the works are maintained (wheel washing, road sweepers etc.)

No fires are permitted on site.

5.5 Wheel Wash Facilities and Road Sweeping

To reduce the quantity of spoil on highways, the *Contractor* provides wheel wash facilities at exits from the site. These will be accompanied by tyre inspection points to remove any large/ solid material from vehicles.

In addition, a road sweeping regime will be implemented and tailored to suit on site activities and associated vehicular movement off site to maintain cleanliness of the adjacent highways.

5.6 Lighting of the Site

To minimise light spill form the site and reduce the impact of the localised townscape, directional lighting will be used to illuminate the site. Localised task lighting will be provided as required by the *Contractor* to execute the *Works*.

5.7 Energy

In line with UK National Energy Efficiency Action Plan the *Contractor* will consider (and implement where possible) greener sources and more energy efficient plant to assist in cutting carbon dioxide emissions by: -

- Monitoring and reducing energy consumption during construction
- Maximising plant and equipment fuel/ energy usage efficiency
- Maximising renewable energy sources
- Reducing workforce travel and promoting sustainable modes of transport
- Utilising localised supply chains to reduce transportation

Where practical (and to minimise reliance on diesel generators), the *Contractor* shall provide, monitor and record all temporary electrical connections associated with providing the *works*, demonstrating a programme of improvement.

5.8 Materials

In the selection of material, consideration will be given to the embodied carbon footprint, its recyclability and recycled values/ content. The *Contractor* will employ procurement procedures to esnure the environmental impact of materials are considered in their selection.

The use of local supply chains will be promoted to reduce the transportation impact of materials to and from site, whilst investing capital into the local economy and supply chains.

All timber used on site will be FSC compliant and obtained from sustainable sources.

5.9 Waste

Prior to commencing the works, the *Contractor* shall establish a Construction Waste Management Plan (CWMP) in accordance with The Site Waste Management Plans Regulation 2008 This plan identifies: -

- the various waste streams generated by the works
- methods of waste segregation
- estimated quantity of each waste type
- the waste management action for re-using, recycling, recovery or disposal for each waste type

Periodically the *Contractor* will:-

- Review the plan
- Record quantities and types of waste produced
- Record the types and quantities of waste that have been:
 - Reused (on or off site)
 - Recycled (on or off site)
 - Sent of other forms of recovery (on or off site)
 - Sent to landfill
 - Otherwise disposed of
- Update the plan to reflect the progress of the project

Where practical, offsite modular construction will be promoted to reduce waste material going off site.

6 Construction Methodology

At this stage of design development, the building structure can be summarised as follows: -

- Pile substructure with pile caps and ground beams
- Ground bearing Insitu concrete slab to ground floor
- Insitu concrete columns and beams to ground floor areas.
- Steel frame to first floor and above
- Insitu concrete floors over profiled metal decking first floor and above.
- Concrete cores to provide vertical stability

Following site preparation completed as part of the enabling works, the outline construction programme and methodology can be summarised as follows: -

Wk 0-74	Substructure	Installation of CFA piles, pile caps and ground beams to support the primary structural frame. Installation of retaining walls, below ground structures and structural waterproofing. Temporary ground profiling to facilitate the works. Installation and connection of foul and surface water drainage systems.
Wk 37-97	Superstructure (up to and including Level 02)	Installation of structural concrete/ steel frame complete with Insitu composite floors and vertical cores. Installation by mobile cranes for precast concrete and steelwork solutions.
Wk 79-114	Superstructure & Bowl Arena (above Level 02)	Floor by floor sequential installation of the superstructure and raking tiers forming the bowl, complete with Insitu composite floors and vertical cores.
Wk 84-108	Roofs	Insitu composite roofs with single ply type membrane over and parapet upstands.
Wk 99-134	Bowl Roof	Installation of roof trusses from within the site/ Sportcity Way using crawler cranes, installation of acoustic treatment and roof finishes.
Wk 110-145	Building Facade	Installation of building façade and façade activation measures via MEWP access.
Wk 85-149	Fit out	Installation of partitions, ceilings and finishes etc.
Wk 85-149	M&E Installations	Installation of base build and specialist M&E equipment
Wk 150-170	Testing & Commissioning	Testing and commissioning of the M&E installations, including witnessing by the Local Authority.
Wk 135-170	External Works	Installation of hard/ soft landscaping and planting

The above is an indicative construction timeline and construction methodology. A detailed programme of construction activities and sequencing will be provided by the *Contractor*.

7 Control Measures

7.1 Personnel Protection

In maintaining a safe site, the *Contractor* will implement a Health & Safety regime for all site operatives and site visitors to ensure a standardised ethos to safety through the implementation of appropriate PPE. The *Principal Contractor* will review operation specific Risk Assessments and Method Statements (RAMS), ensuring process specific measures are implemented as appropriate.

7.2 Protection of Environmental Features

Due to the Brownfield nature of the site and previous remedial measures, environmental features to be retained are limited. All trees within the site retained as part of the proposals will be protected during the works to BS: 5837(2012).

The integration and interaction of the towpath with further enhance the local areas. Site activities with the potential to pollute watercourses will be undertaken away from such features. Spill kits will be available at all times.

The *Contractor* will undertake regular inspections of the measures in place, and adjust these as required by the *Works*.

7.3 Noise and Vibration

Noise and vibration of site activities will be kept to a minimum as far as reasonably practical for the duration of the works and particularly during the first operating hour of the site. Where the *Contractor* is required to operate the site outside of these times, this will only be permitted following consultation and agreement with Manchester City Council's Environmental Health Officer. The *Contractor* will prepare a specific Management Plan for the control and monitoring of noise and vibration relating to the works, identify noise generating plant and equipment used on site (including type, size and quantity).

The *Contractor* makes the necessary Section 61 Control of Pollution Act 1974 applications to the local authority at least 28 days prior to the works, obtaining the relevant consents prior to undertaking the works. Works will be executed in accordance said consents.

https://secure.manchester.gov.uk/forms/form/687/en/apply_for_prior_consent_noise_from_constructiondemolition_sites_section_61

In addition to any restrictions, limitation and or obligations imposed by the Section 61 consent, the *Contractor* complies with the requirements of the statutory code of practise BS: 5228.

The *Contractor* provides draft and final copies of the applicable consents to the *Employer's Project Manager* for acceptance.

7.4 Air Quality

Prior to the commencement of the works, the *Contractor* undertakes an air quality assessment and management plan identifying the management and monitoring of dust, smoke and other airborne pollutants.

Following completion of the air quality assessment, the *Contractor* makes all necessary applications pertaining to the Works, seeking consent from the relevant Pollution Control Authority (Local Authority and/or Environment Agency) in accordance with the Environmental Protection Act 1990 and Pollution Prevention Control Act 1999.

Measures undertaken by the *Contractor* shall include but not limited to: -

7.4.1 Site Deliveries

Selection of appropriate vehicles sizes relative to the delivery load will be managed by the *Contractor* to minimise vehicle pollutants. Where possible these will be co-ordinated with deliveries to nearby sites to minimise vehicles mileage to and from distribution centres.

Vehicles carrying loose material to and from site will be sheeted to prevent spillage and reduce dusty emissions during transit.

Implementation of these measures is the responsibility of the *Contractor*. The *Contractor* records and reports activities in relation to these measures and any subsequent corrective measures employed, ensuring records are available at all times.

7.4.2 Construction Vehicles

All vehicles regularly used on will comply with the relevant emissions standards/ legislation and will be serviced in accordance with the manufacturer's recommendations. Vehicles also using public highways will comply with all MOT requirements. The *Contractor* shall provide all MOT and service documentation for Local Authority inspection upon request and a running log of: -

- Any complaints relating to emissions alleged to be as a result of construction activities, received from either a resident or local business
- The date and vehicle identification number of any construction vehicle observed to be carrying material that has the potential to release dust and does not have the appropriate sheeting measures in place; and
- The date and location of any cleaning of paved areas and roads

The *Contractor* ensures no construction plant or vehicle engines are left running when not in use except when the *Employer's Project Manager* considers there is a valid operational reasoning or justification. The *Contractor* is encouraged to use low pollutant vehicles or 'green' vehicles in the execution of the *Works*.

All construction vehicles tracking the site will adhere to the site speed limit and route controls.

7.4.3 Dust Suppression

The *Contractor* employs dust suppression systems as appropriate during the *Works* to reduce the quantity of airborne pollutants, providing suitable water bowsers and/or sprays for the task.

To limit the generation of dust on and off site, the *Contractor* will employ appropriate dampening and wheel wash measures for all vehicles trafficking site.

Unloading of loose material (spoil) will adhere to the control drop height to control dust release.

Smaller hand held tools will be fitted with localised dust collectors or dust suppression systems.

To reduce any windblown dust arising from stacked materials, the *Contractor* ensures stacked materials are profiled to minimise wind and rain impact and subsequent erosion. Earth mounds will be kept sufficiently damp to further limit wind impact. Where appropriate, seeding of earth mounds will be encouraged. Where possible, stacked materials with the potential to create dust emissions will be located away from site boundaries.

7.4.4 Hard Standings

The use of existing hard standings will be promoted to reduce site churn and airborne dust during site operations. Extensions of existing hardstanding will promoted in favour of new hardstanding. Hardstanding will be incorporated within the permanent works where practical.

7.5 Water Quality and Drainage

In executing the *works*, the *Contractor* will adopt good construction management practices to reduce the risk of accidental discharge and contamination of rivers, streams, ponds and ground water. These practises will be incorporated into the CMP and include: -

- The extent and status of all ground water to the land below the *Works* and any temporary works and land use for the removal of material from site and;
- Compliance with the 'Policy and Practice for the Protection of Groundwater Environment Agency TSO 1998'.
- Control of sediment and loads to surface water systems.
- The Pollution Control and contingency plan to identify the requirements for pollution control and emergency procedures for the *Works*.
- Measures for minimising water consumption during the construction process.
- Details of the construction phase drainage strategy during the works (using permanent drainage systems where possible) and the use of site dykes to catch surface water runoff.

Within his proposals, the *Contractor* details the use of settlement tanks to remove surface water sediments (incl. sediment from dewatering of excavations) and pollutants from surface water prior to discharge into watercourses.

7.5.1 Aquifer – River Medlock

Due to the proximity of the site to the River Medlock, stockpiling of any contaminated soils is to be avoided with materials removed from site as soon as reasonable practical. Where stockpiling is require, the *Contractor* ensures stockpiles are placed on impermeable surfaces and appropriate measures implemented to prevent leaching.

7.5.2 Ashton Canal

The *Contractor* instigates control measures to prevent the contamination of the canal by the Works, ensuring the implementation of good construction practises. The *Contractor* controls surface water runoff, ensuring safe discharge using appropriate drainage systems and undertakes periodic sampling of the canal waters during the *Works*.

7.6 Flood Risk

The *Contractor* ensures all Construction workers are made aware of the risks associated with excessive surface water and overland flows resulting in standing water. Site cut levels are to be at least 0.5m above the groundwater level. Where this proves impractical, groundwater measures such as dewatering are implemented to protect construction workers, plant and materials.

7.7 Unexploded Ordinance

The *Employer* has completed a desktop study for the potential for UxO on the site. The site has been deemed as moderate risk for the presence of UxO. The potential and procedures for discovery of UxO will be identified to all operatives during the *Contractor's* 'toolbox talks'. An ongoing watching brief will be undertaken by the *Contractor* and his competent Explosive Ordnance Disposal Engineer.

7.8 Vapour/ Ground Gases

Prior to execution of the *Works*, the *Contractor* assess the potential and extent of any ground gasses associated with the *Works*. Within his designs, the *Contractor* ensures appropriate gas protection measures are implemented to protect the building and its occupants, and are addressed in connection with undertaking the *Works* to ensure safety of all site operatives. The control measures implemented for entering and working within confined spaces will be clearly identified within all RAMS.

7.9 Archaeology and Cultural Heritage

Due to the previous industrial usage of the site and completed site remediation works, no designated sites of archaeological sensitivity have been identified in connection with the site.

7.10 Contaminated Land

Contaminated soils on site have been identified. Removal/ remediation of contaminated soils will be undertaken in accordance with the Environmental Protection Act 1990.

The *Contractor* will avoid stockpiling and contaminated soils to prevent leaching and surface water runoff contaminating localised water courses. Where stockpiling is required the *Contractor*, this will be limited where possible and away from water courses as far as reasonably practical.

8 Pollution Control and Contingency Plan

A Pollution Control and Contingency Plan (PCCP) will be developed by the *Contractor* to reflect construction activities and will be included within the detailed CMP.

Measures will be developed by the *Contractor* to minimise and control site runoff to prevent contamination. These measures will take account of the Environment Pollution Prevention Guidelines: -

PPG1	General guide to the prevention of pollution
PPG5	Works and maintenance in or near water
PPG6	Working at construction and demolition site
PPG18	Managing fire-water and major spillages
PPG21	Pollution incident response planning
PPG22	Dealing with spillages on highways

8.1 Definition of a Pollutant

Pollutants are substances that pollute the environment which renders the air, soil, water, or other natural resource harmful or unsuitable for a specific purpose. Environmental incidents occur when an activity or event causes or has the potential to cause harm to people or damage to property and or the environment.

8.2 Pollution Prevention

Due to the nature of site, *Works* will be undertaken in close proximity to the Ashton Canal and existing drainage networks. *Works* may also affect the existing ground water table.

Potential pollutants as a result of the *Works* and prevention measures include: -

8.2.1 Concrete and Cementitious Materials

Concrete and cementitious based materials are alkaline and are potential pollutants. To reduce the risk of any runoff entering watercourse, mixing will be undertaken a minimum of 10 meters away from and watercourses. Wash from concrete and cement works is not discharged into a watercourse. A designated concrete washout area will be provided for the washing out of concrete delivery lorries, pumps and lines with a suitable storage vessel for controlled disposal.

Where mixing or pumping is within 10m of a water course, an appropriate method to prevent discharge into watercourses will be developed by the *Contractor*. Prior to piling works, the

Contractor will establish any redundant mining works have been sealed to prevent the pumped concrete from CFA piling contaminating any watercourses.

8.2.2 Oils and fuels

All oil and fuel will be stored in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001, ensuring safe storage of material and controlled access at all times and: -

- Storage areas are not located within 10 meters of a watercourse or highway gully
- Mobile bowzers are bunded and comply with the requirements of Control of Pollution (Oil Storage) (England) Regulations 2001
- Storage drums are contained within bunded areas with a minimum of 25% of the total volume of the volume contained within the bund or, 110% of the largest container, whichever is the greater.
- Refuelling of plant and equipment is undertaken by trained operatives
- Plant is regularly checked for leaks and is regularly maintained.
- Drip trays are placed below any standing plant and equipment.
- Static combustion engine plant (e.g. compressors etc.) are fully integrally bunded or placed on drip trays.
- Spill kits are provided within close proximity to oil and fuel storage areas, ensuring operatives are trained in their use.

The use of non-toxic biodegradable fluids and oils is encouraged and must be used in all sensitive locations or areas of increased pollution risk.

8.2.3 Plant Maintenance

Maintenance of any plant will be undertaken at least 10 meters from any watercourse or drain. Spill kits must be available and on hand during all maintenance operations with drip trays to contain any leakage of oil or fuels.

Any plant or equipment considered a pollutant risk will be repaired or removed from site.

8.2.4 Ground Material and Control of Sedimentation

Disturbance and handling of soils (particularly in wet weather) can lead to the transfer of particles by running water into watercourses. Potential sedimentation of watercourse as a result of these works include Ashton Canal and highway gullies. The *Contractor* will employ soils management procedures, ensuring: -

- Activities likely to give rise to sedimentation of watercourses are located away from water courses.
- Silt fencing is in place to suspend particles from running water
- Settlement tanks or silt tanks are utilised to suspend particles prior to its release into any watercourse

8.2.5 Excavated Spoil

Excavated spoil will be removed from site as works progress. Where practical materials will be reused on site. Removed materials will treated off site or disposed of as appropriate. Vehicle movements associated with the material of spoil from site will be in accordance with Chapter 12 of the Environmental Statement.

8.2.6 Construction Waste Materials

Waste materials will be controlled in line with the CWMP, and secured to prevent cross contamination of waste streams or pollution of any water courses. Any liquid waste will be secured in a suitably lined container within a bunded area.

8.2.7 Trade Effluent

Trade effluent (toilets etc.) will be connected to a foul water drainage system for the duration of the works. Where temporary chemical recirculating toilets are used, their use will be limited as far as reasonably practical and appropriately secured/ weighted to prevent spills. Emptying and refilling will be undertaken by a licensed *Contractor*.

8.3 Notification Procedures

Procedures for the notification and reporting of spillages, pollutants or environmental incidents will be clearly set out within the *Contractor's* CMP and reinforced through site inductions and toolbox talks.

The procedure will include details of the recording and reporting process of incidents and details of those notified.

Contact details for key on site personnel and emergency response persons responsible for environmental protection will be displayed in key locations around the site and include details of: -

- *Contractor's* Project Manger
- Construction Site Manger
- *Contractor's* Environmental Manager
- *Employer's* Project Manager
- Community Liaison Officer
- Emergency Services
- Environment Agency

The *Contractor* will promote a system good working practices, actively encouraging suggestions from operatives to improve operational procedures to reduce the risk of environmental incidents, and anonymous reporting of works not being undertaken in accordance with the CMP.

9 Roles and Responsibilities

The following key personnel are responsible for the delivery of these proposals: -

Role	Responsibility
<i>Employer Representative</i>	Provides overall guidance on the requirements of the project, taking guidance from his advisors as appropriate.
<i>Employer's Project Manager</i>	Responsible for ensuring delivery by the <i>Contractor</i> of the relevant requirements and commitments agreed for the <i>works</i> .
Designer(s)	Person(s) responsible for the production of construction information pertaining to the <i>works</i> , assisting the <i>Contractor</i> in connection with health and Safety and Environmental aspects of the proposals.
Principal Designer	Responsible for the co-ordination (with the <i>Contractor</i>), reduction and mitigation of health and safety matters associated with <i>works</i> .
Construction Manager	Responsible for the overall co-ordination and management of onsite activities during the construction phase.
Site Operatives/ Attendances (workforce)	Person(s) engaged in undertaking the <i>works</i> , appropriately trained for specific operational tasks and general site activities identified within the site induction to include Health & Safety/ RAMS, environmental management and on site waste management.
Construction Environmental Manager	<i>Contractor</i> appointed supervisor for compliance with environmental legislation, targets and project commitments, and obtaining any consents required associated with the <i>works</i> .
Site Materials & Waste Manager	Dedicated person(s) responsible for the implementation of the site waste management plan, assessing any excess materials to site, reducing site waste and ensuring compliance with the relevant targets and commitments.
Community Liaison Officer (CLO)	<i>Contractor</i> appointed dedicated point of contact undertaking community liaisons, providing regular update on planned construction activities.

10 Communications

10.1 Project Communications

To ensure the Health and Safety, Operational and Environmental requirements of the project are communicated effectively and efficiently, this CMP will be distributed to all members of the project team (Incl. sub-*Contractors*). Control and mitigation measures associated with key activities or potentially environmentally sensitive operations will be agreed and regularly reviewed between the *Contractor* and *Employer*. The *Contractor* will ensure copies of the following are available on site for review at all times: -

- this outline CMP and/or *Contractor's* CMP
- the project, Employer and any company environmental policies
- the list of key contacts associated with the works

During the construction phase of the works, regular internal meetings will occur to identify: -

- Progress over the period
- Works planned over the next period
- Inductions and training undertaken over the period
- Health and safety issues incurred (incl. near misses etc.)
- Records on inspections and audits, with a schedule of non-conformances issued
- Feedback from Community liaisons, copies of any complaints received and mitigation measures implemented.
- Visits and inspections by third parties, including statutory bodies and H&S monitoring officers.
- Records and compliance with the environmental performance and objectives.

Internal and external communication methods will be defined by the *Contractor*, maintaining dialogue through the Community Liaison Officer as appropriate. External communications will be coordinated with the *Employer's Project Manager* to ensure effective and appropriate communications.

10.2 Community Liaisons

Community liaisons will be undertaken by the CLO during the construction process, providing the community with regular updates on the works.

The CLO's responsibilities include: -

- Gathering and sharing information pertaining to the works.
- Fostering an environment, encouraging and supporting community involvement and engagement.
- Presentations to community organisations.
- Hosting or attending community meetings, allowing attendees to express concerns and raise issues.
- Lead community interaction, ensure compliance with the project's social responsibility objectives (employment, work experience schemes etc.)
- Building a 'community spirit' around a project.

11 Compliance

Successful implementation of this CMP relies on regular review and updates in response to evolving site conditions. The *Contractor* will define appropriate measures and procedures to review activities against the CMP and legal/ statutory requirements and any measures implemented in response to CCIs.

11.1 Recording

The *Contractor* maintains a register of compliance issuing Non-Conformance Reports (NCR's) identifying actions or works not undertaken in accordance with the CMP, method statements or legislative requirements and obligations. The NCR will be accompanied with the appropriate Corrective Action Report (CAR) detailing: -

- action owner(s)
- corrective measures required
- monitoring/ inspection and signoff procedures to be implemented
- timescales for close out
- 3rd party approvals upon completion of the corrective measures

As part of the CAR process, a lessons learnt workshop will be conducted to prevent reoccurrence of the event.

11.2 Monitoring

Environmental monitoring of the works will be undertaken during the construction phase to evaluate the environmental impact of the works. This information will be assessed in conjunction with the CMP and improvements/ revisions to the CMP made where appropriate.

A programme of environmental monitoring will be established by the Construction Environmental Manager to suit the construction programme and works on site. Monitoring will be undertaken and assessed against the legal/ legislative requirements, consents and project targets/ requirements.

11.3 Review Process

Records of waste management and environmental aspects pertaining to the works will be maintained in accordance with the CMP or respective organisational requirements (which is ever is the greater). Records are to be maintained in both digital and hard copies to protect against damage, deterioration or loss and made available to the *Employer's Project Manager* upon request. Disposal will be upon express consent of the *Employer's Project Manager*.

12 Complaints, Compliments and Inquires

12.1 Procedures

A complaints, compliments and inquires procedure (CCI) will be implemented to ensure members of the public wishing to complain, provide feedback or make inquires can do so. Contact details will be published for use by members of the public with the public actively encouraged to engage as part of the Community Liaison. Liaisons with local councillors, Town/ Parish Councils and the local authority (incl. environmental health) will be undertaken to address any concerns or issues raised directly to councillors by the general public.

Any CCI's received will be recorded and reported to the *Employer's Project Manager* and include: -

- Parties affected/ reporting
- Timing
- Location
- On site activities being undertaken

complete with details of any reactive measures implemented where appropriate.

12.2 Reporting

Any CCIs raised will be reported at internal progress meetings to ensure appropriate measures are being implemented, improving the impact on the community during the construction phase.

The LA Environmental Health Team may be the first to be contact for residents affected by the works. Ongoing dialogue with the will be undertaken with the Environmental Health Team to ensure responses to any complaints can be provided swiftly.

Due to the nature of the proposals and proximity of adjacent residents, the works may be subject to a Section 61 application under the Control of Pollution Act 1974 prior to commencing the works. The *Contractor* will agree any mitigation measures in connection with this application with the Local Authority, obtaining the required permits/ licenses prior to commencing the works.

12.3 Feedback

To validate the CCI process, feedback on any CCIs raised will be provided as part of the community liaison process. Feedback sessions will identify: -

- Details of the CCI.
- Assessment undertaken.
- Mitigation measures implemented.

Any additional beneficiary measures and options will be discussed with the community to further improve the impact on the community during the construction phase.

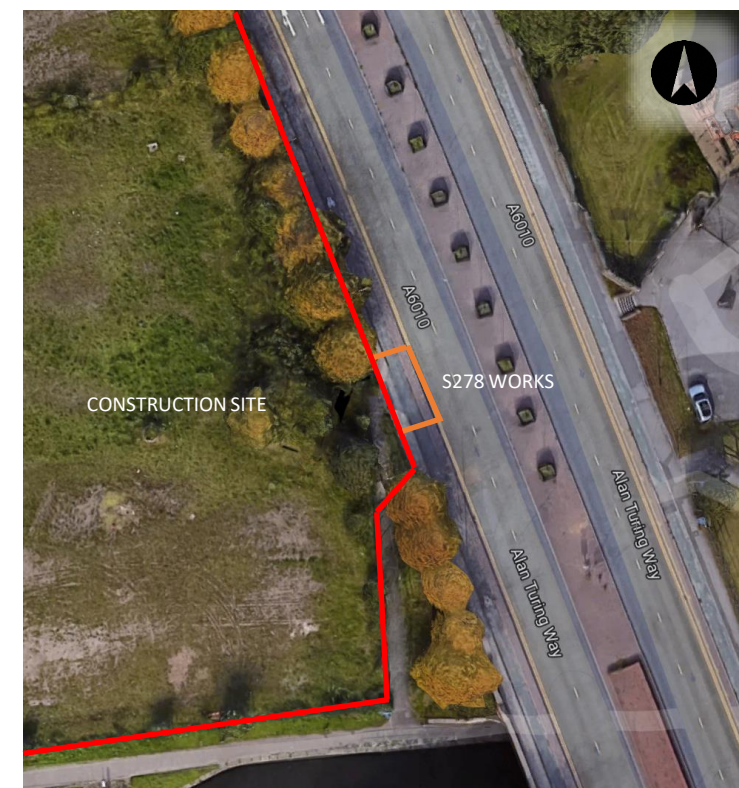
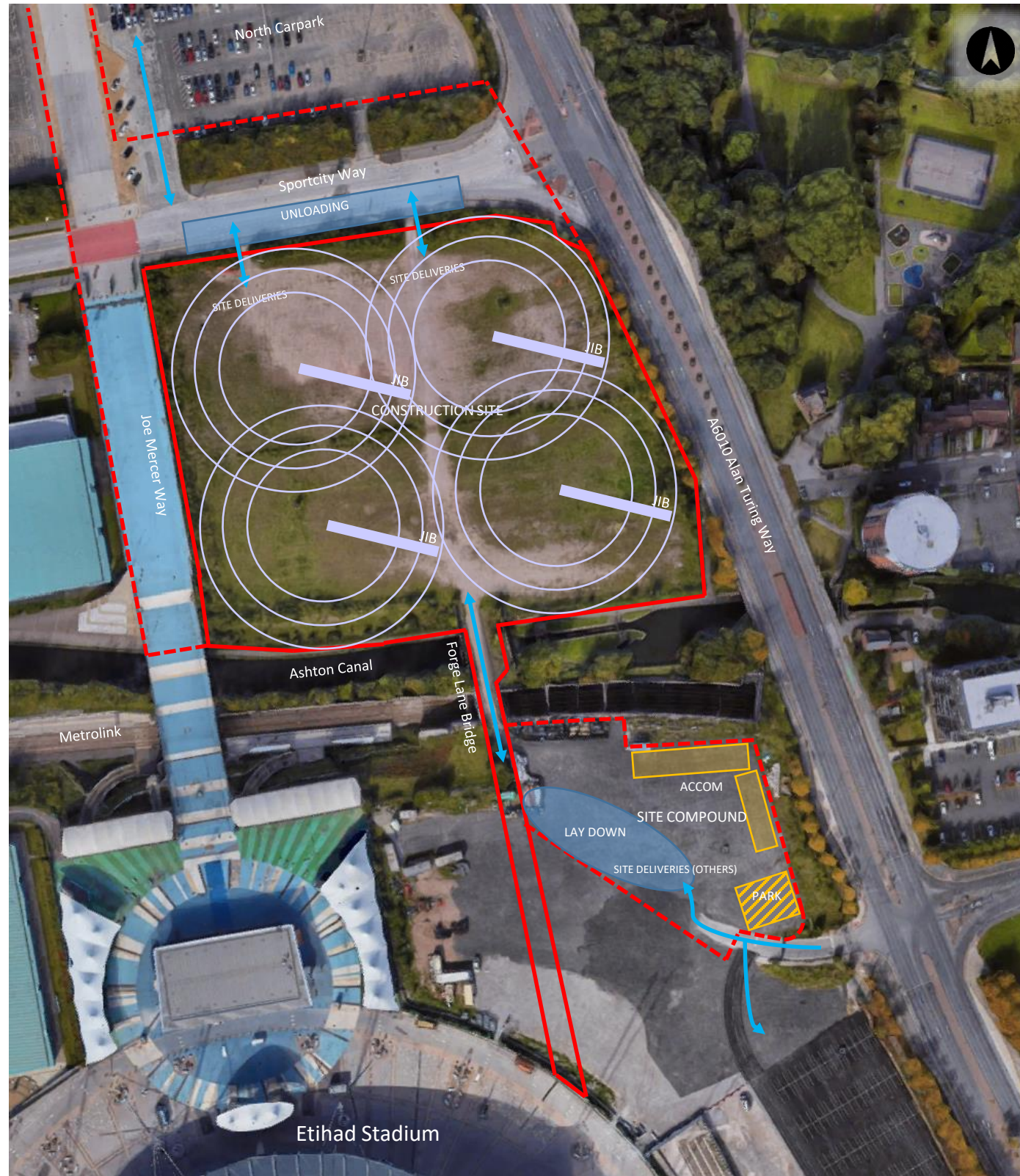
13 Legal Requirements

The following identifies licenses and consents which may be applicable to these works: -

Legislation	License /Permissions requirement
Town & Country Planning Act 1990	LPA approval of the proposals, to include pre commencement and post completion conditions.
Highways Act 1980	Section 278 agreement for the alteration and adaptation of adopted highways.
Environmental Protection Act 1990	For disposal of contaminated land off site.
Control of Pollution Act 1974	Pre-commencement consent to carry out the works from the Local Authority under Section 61.
Coal or Coal Mine permit(s)	For works affecting coal seams or coal workings.
Conservation of Habitats and Species Regulations 2010	Any license in connection with Bat corridors.
Water Resources Act 1991	For discharge of surface water into the River Medlock via existing connections.
Land Drainage Act 1991	For change or adaptation to existing land drainage installation.
Party Wall etc. Act 1996	Consents for shared boundary walls and or structures.

The *Contractor* will obtain other licenses/ permissions as required to execute the works.

14 Appendix A – Site Logistics Plan



- Key:
- Denotes Site Boundary
 - - - Denotes Extent of Construction Works
 - Denotes S278 Works
 - Denotes potential crane position (subject to Contractor's detailed methodology)

OUTLINE SITE LOGISTICS PLAN

Source: Google Maps