



Echo Street – Construction Logistics Plan

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1.0 Introduction

This document is the Construction Logistics Plan for new build of Echo Street student accommodation in Manchester. The plan outlines the implementation and management of project logistics by the contractor for the delivery of the works.

2.0 Purpose of the Construction Logistics Plan

This document specifically details the management of logistics and traffic on the roads in particular Granby Row & Echo Street adjacent to the development during the construction of the new student accommodation.

During the construction works, the principle purposes and benefits arising from this CLP are to:

- Manage vehicle journeys and minimise traffic congestion and disruption on the public roads;
- Improve the security, efficiency and reliability of deliveries by utilising a managed delivery system;
- Ensure the safety of all public road users within and near the redevelopment;
- Optimise the efficiency of deliveries and waste removal;
- Rationalise unnecessary journeys; and
- Minimise environmental impacts, including traffic noise and visual intrusion.

This CLP does not consider traffic management within the construction site after off-load in the delivery zone.

3.0 Name of the Site

The site is known as 'Echo Street Manchester' and is located to the south of Manchester city centre close to Manchester Piccadilly railway station.

4.0 Construction Logistics Plan

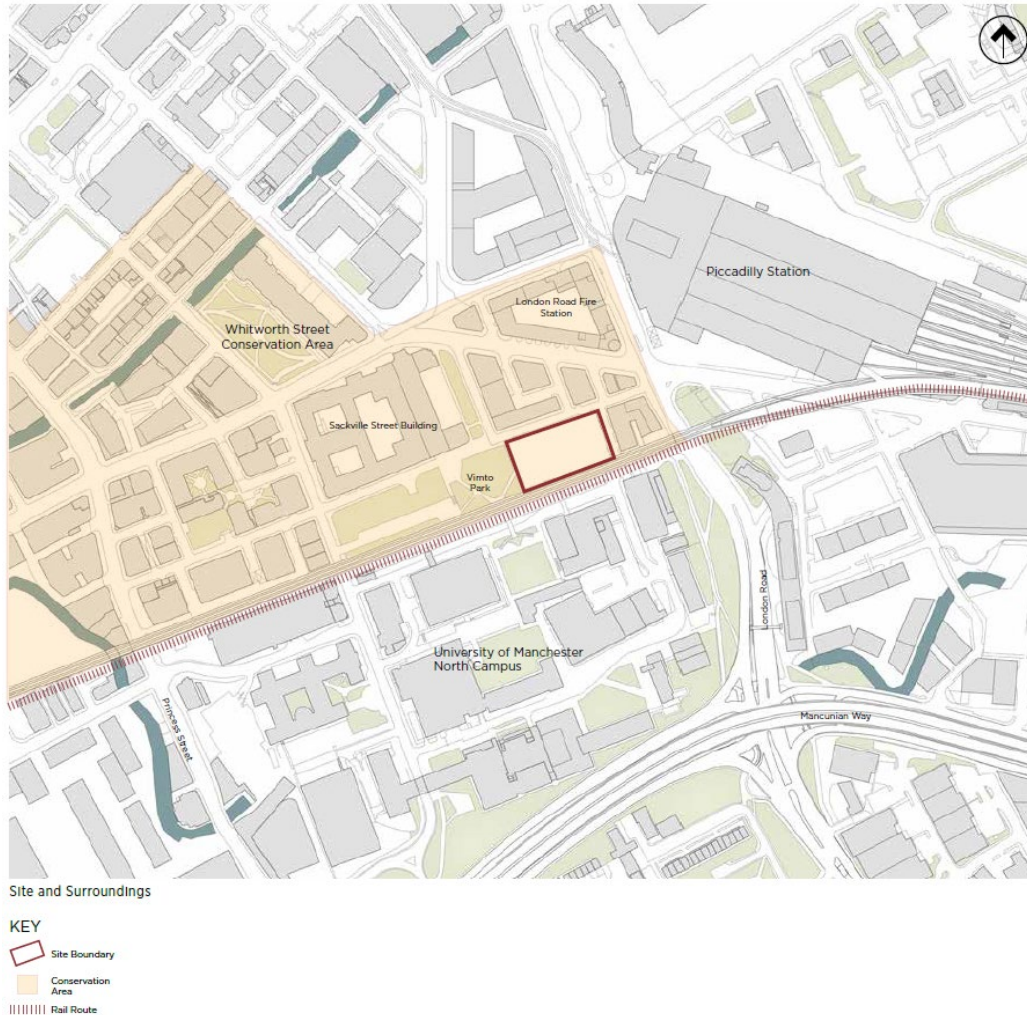
This document has been prepared to provide Manchester City Council (MCC) with the detail of the logistics activity expected during the construction phase of the project, in as much as it interacts with the surrounding roads and neighbourhood.

5.0 Considerations

- Management and co-ordination of the construction operations with the adjacent roads and public areas
- Managing deliveries and co-ordinating delivery times by promoting & utilising a delivery management and booking system
- Considering the interface and co-ordination of construction logistics activities with vehicles and pedestrians on the adjacent land

- Notification of third parties regarding construction logistics activities

6.0 Site location



The site is an enclosed area and is not on any major roadways. Whilst the roads around the site are subject to through vehicular traffic, they are more commonly used by vehicles approaching the station from the south as a right turn off London Road towards the station for taxi & private hire/drop off area is not permitted. Vehicles therefore utilise the roads around the site to facilitate a route to the station from the south via the west.

The site is enclosed by:

- Echo Street to the east,
- Granby Row to the north
- A Network Rail owned viaduct - Manchester/Liverpool main line to the south
- A conservation area owned by University of Manchester – Vimto Park to the west

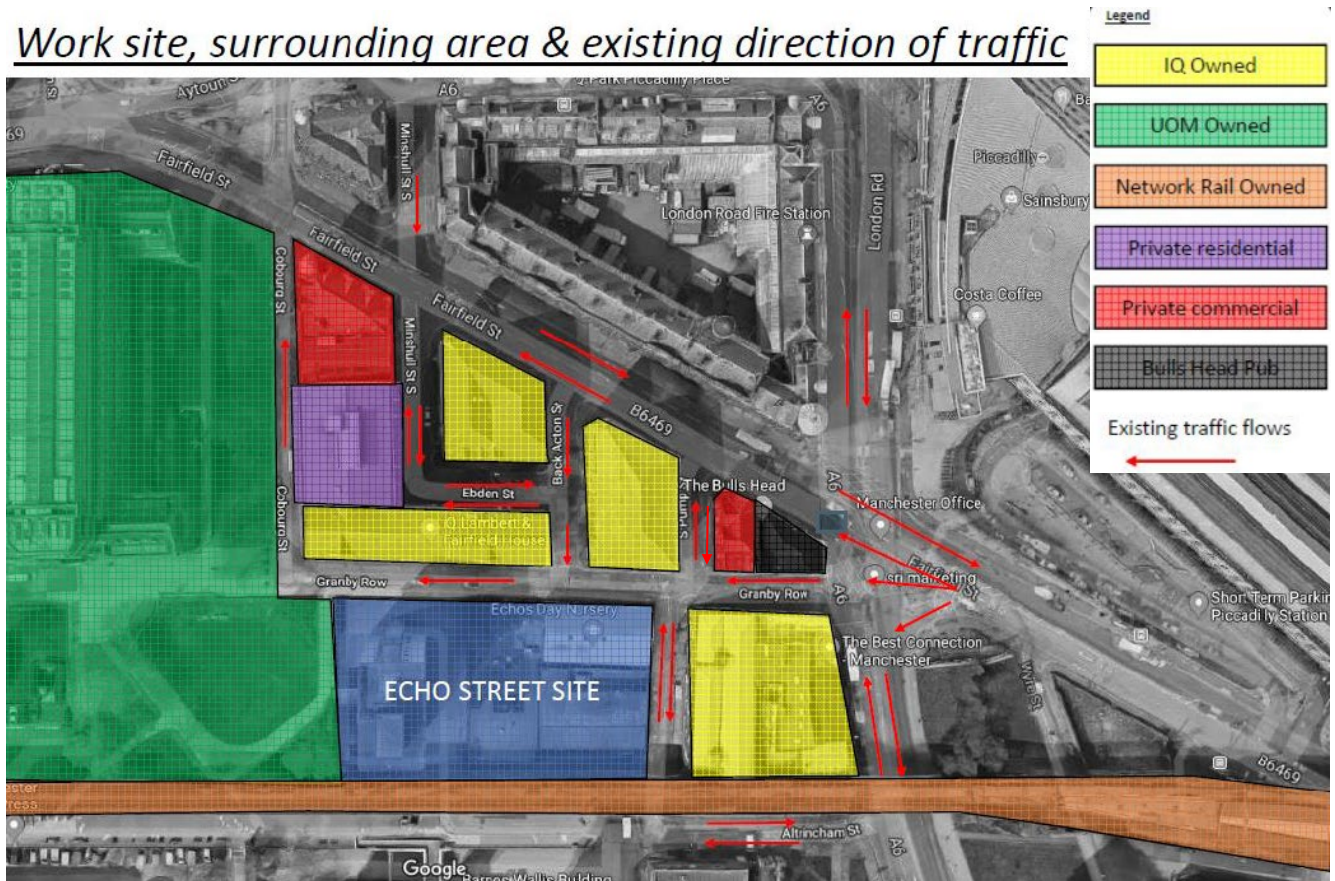
Vehicle access for construction will be via Granby Row for larger deliveries and Altrincham St/Echo

Street for smaller deliveries (no larger than a concrete wagon) due to access and vehicle tracking restrictions.

The redevelopment of the site will take place over a 3 year period and the anticipated commencement date for the main contract is Q1 2024.

7.0 Surrounding Area & Traffic Flow

Work site, surrounding area & existing direction of traffic



As noted earlier the site is surrounded by two side streets in Echo Street and Granby Row, traffic flow being two and one way respectively, linking to the South Pump, Altrincham, Back Acton & Cobourg streets which junction with London Road & Fairfield Street.

Traffic entering the area from London Road & Fairfield Street must exit out on to Fairfield St due to flow restrictions. Access to the west end of Granby Row from the east is prevented at the junction with Cobourg Street as a pedestrianised area has been constructed to halfway down Granby Row. Traffic must therefore utilise Cobourg Street to exit Granby Row beyond South Pump St.

Immediate neighbours to the construction project are 2no. existing iQ (the Client & Developer) student accommodation blocks to the north, an iQ office facility to the east. There are no immediate 'neighbours' to the south and west.

Private, small business premises and a pub are located close by in Cobourg St and at the junction of

London Road/Fairfield St respectively as indicated on the above plan.

Access and egress to the local properties has been considered in conjunction the project requirements to establish a co-ordinated plan for the immediate area. The plan below indicates all known 3rd party access and egress requirements used to inform the CLP.

8.0 Traffic Survey

In addition to the traffic assessments undertaken as part of the planning process, a further traffic survey was carried out in February 2019 to provide a further indication of traffic flows in Echo Street and Granby Row to assist the logistical appraisal. The outputs of this survey are indicated below.

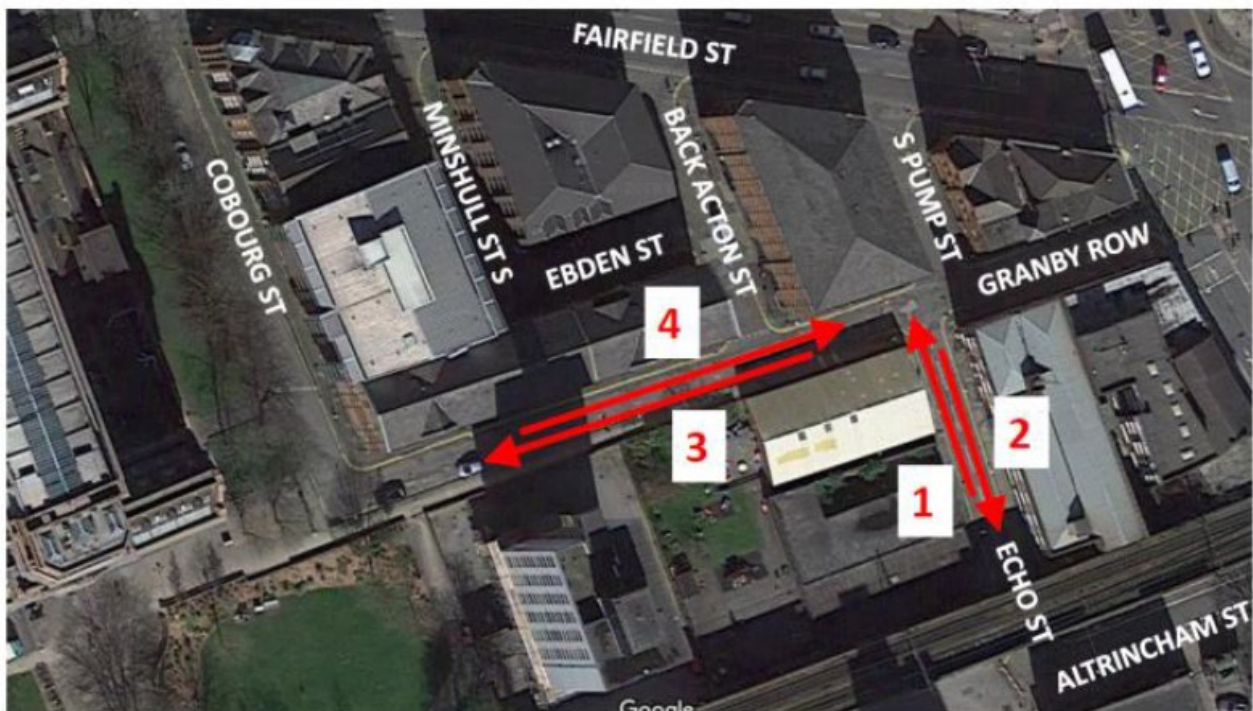
The survey was undertaken on the one-way street Granby Row (although two-way was witnessed) from London Road to Cobourg St and on the two-way Echo Street from Altrincham St to Granby Row.

It was noted that the traffic travelling against the flow of Granby Row were predominantly private hire vehicles traversing from Echo Street to South Pump St.

Also at the time of the survey the children's nursery on the corner of Echo Street and Granby Row was open. It has subsequently been relocated to Sackville St in March 2019 and the premises has now been demolished.

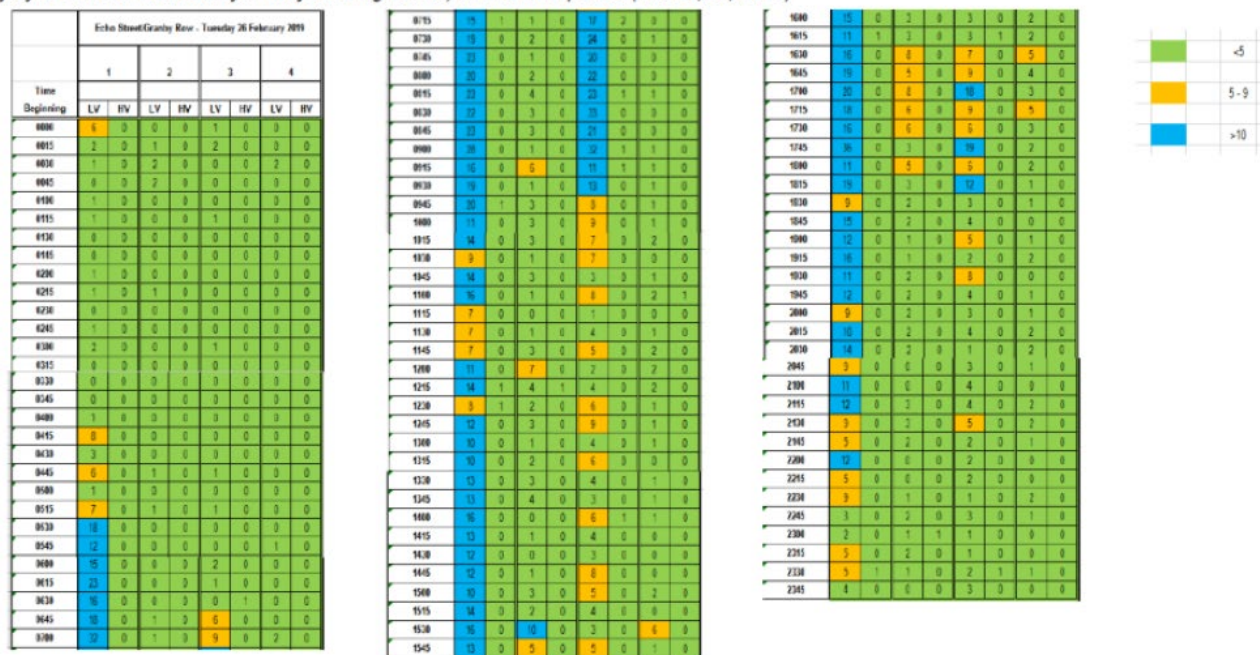
Traffic Flow Analysis

Traffic flows were monitored for the following routes, over a 24hr period (Tue 26/02/2019)



Traffic Flow Analysis

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The results of the survey indicate that the number of vehicles using the street relatively low and that the peak flows generally reflect the rush hours. It is visible on viewing that the majority of road usage is by traffic requiring to approach the station, utilising Echo St and South Pump & Back Acton (although flow restricted) and to a lesser extent Cobourg Street in order to access Fairfield St to traverse across London Road to the station and the east end of Fairfield Street (as a right turn into Fairfield Street from London Road to travel towards the station) isn't permitted).

The survey recorded around 90-100 two-way vehicle movements on Echo Street in each of the morning and evening peak hours, averaging at around 1-2 vehicles per minute. Outside of the peaks, the flows were generally much lower e.g. between midday and 1pm the two-way flow was 56 vehicles averaging at less than 1 per minute. Along Granby Row, the flows are at a similar level with around 1-2 vehicles per minute in the morning peak hour but much lower outside of this timeframe e.g. around 1 vehicle every 2 minutes between midday and 1pm.

Given the above there were limited traffic movements from Echo Street to Cobourg St.

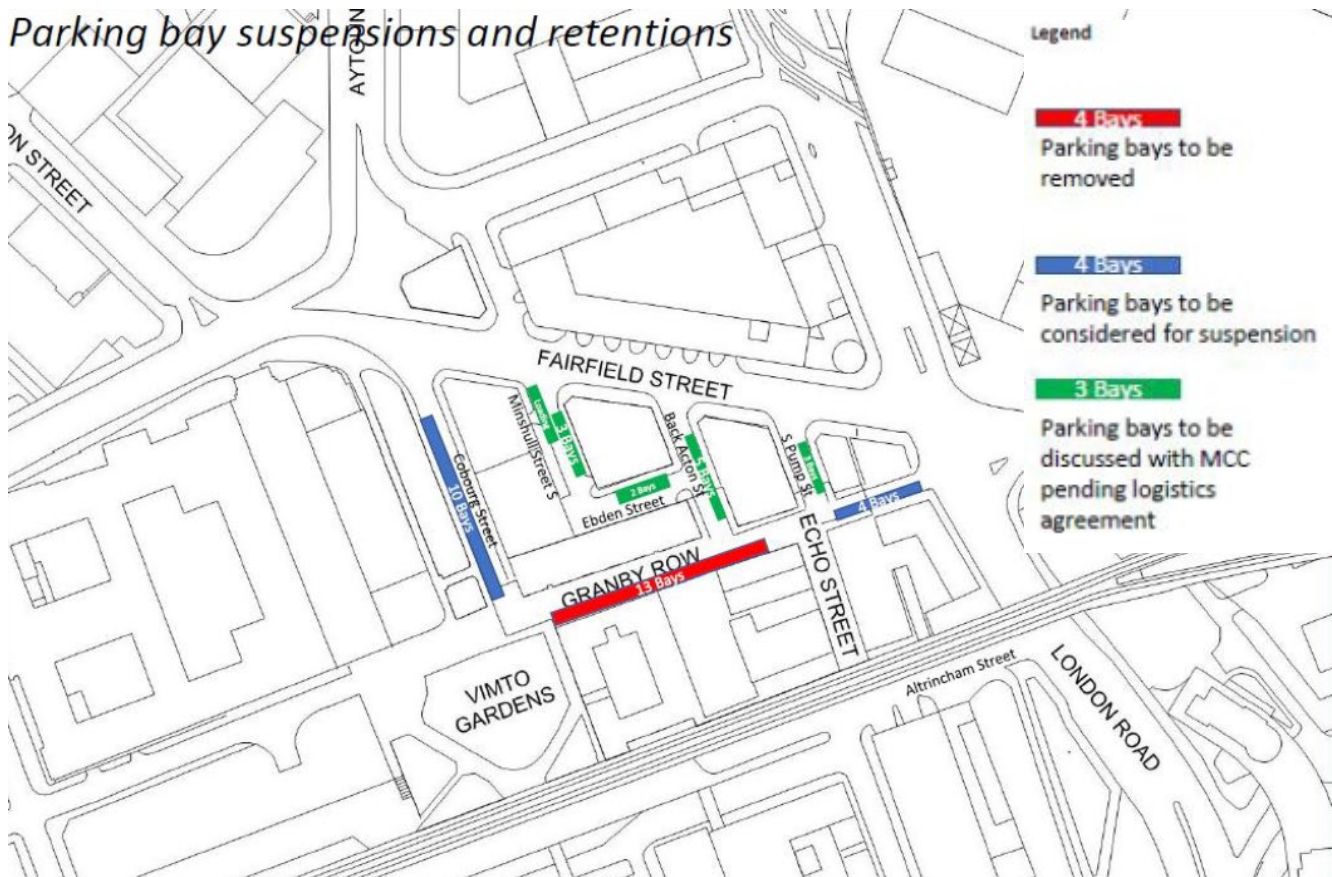
The survey was undertaken in 2019 pre-Covid and therefore traffic levels are likely to have reduced since then due to the change in work patterns etc. Furthermore, at the time of the survey, the children's nursery on the corner of Echo Street and Granby Row was in operation and this will have generated some of the traffic recorded in the survey. Now that this nursery has relocated, this traffic will no longer be on this local network and flows are likely to be lower now as a result.

It should be noted that if Echo Street and the section of Granby Row from Back Acton Street to Cobourg St were not available then traffic from London Road would still be able to utilise Granby Row, South Pump & Back Acton to facilitate access to the station prevented by the no right turn from

London Road into Fairfield St and the taxi/private hire & pick-up zone.

9.0 Parking Provision Near The Site

In accordance with a revised external Section 278 scheme several parking bays will be replaced by a hard landscaping scheme. It will also be necessary to suspend a number of additional car parking bays adjacent to the development in order to facilitate safe construction traffic movements and we would look to develop this further with MCC. The consideration of this is indicated below:



10.0 Details of Site Access & Deliveries

Construction deliveries will be managed via an electronic Delivery Management System and delivery routes will be re-affirmed as part of this process.

There will be two principal entries/gates to access the project; the primary route being via Granby Row and secondary route restricted to smaller vehicles up to a concrete wagon via Altrincham Street.

Site specific directional signage will be fixed in close proximity to the site to provide improved visibility of the project.

Delivery Access to the Site

Primary Gate/Access – Granby Row: Larger construction vehicles will be advised to access the site via

Granby Row and will exit the site via Cobourg Street.

Swept Path Analyses – Access to site via London Road

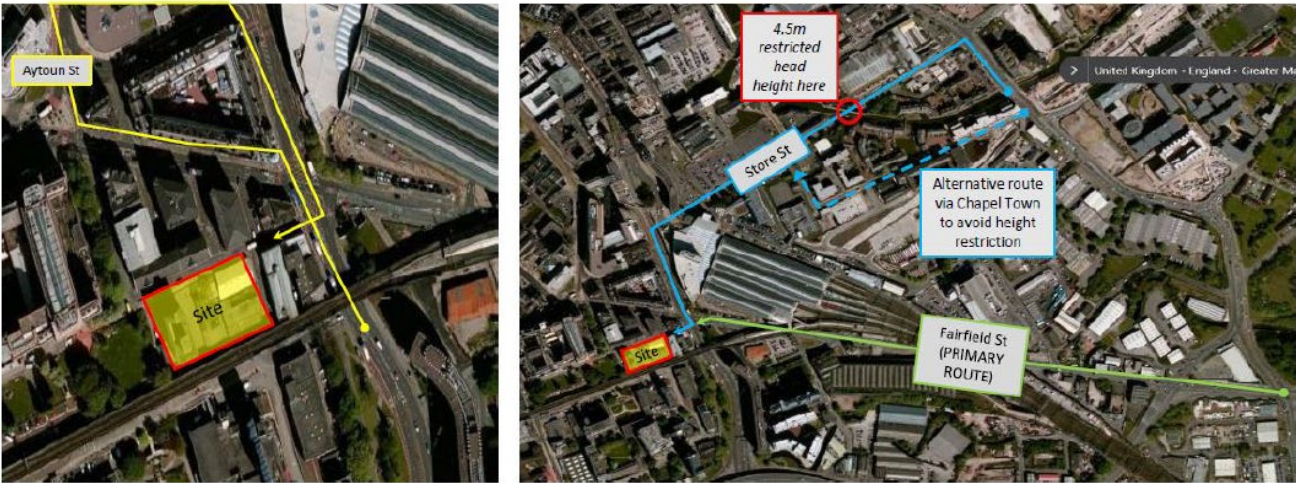
The tracking for the proposed left-hand turn onto Granby Row from London Road has also been checked:



Alternative approaches to the primary gate/access have been discussed with MCC Highways and the approach from Fairfield Street west side is the preferred option for the project. Other options have also been provided.

Primary & Alternative Delivery Routes to Site

To avoid the left-hand turn into Granby Row from London Road, the following alternative routes are proposed.



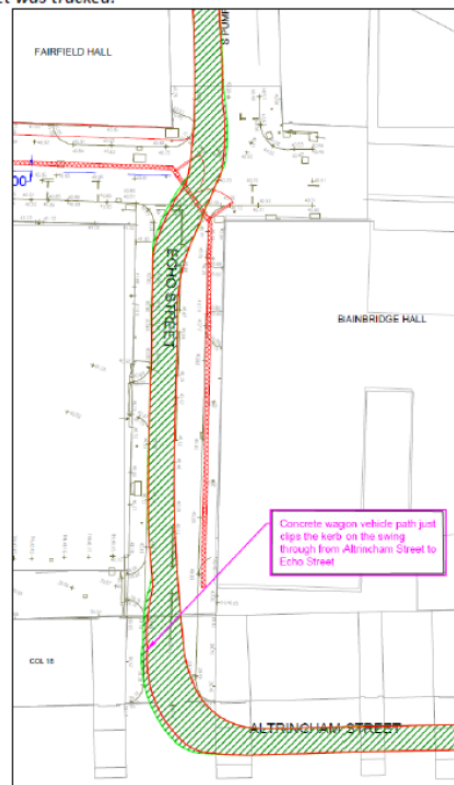
- | | | |
|--|--|---|
| <ul style="list-style-type: none">• Approach from London Road (A6)• Turn Left toward Whitworth St• Turn Right onto Aytoun St• Turn Right onto Auburn Street• Turn Right onto London Road (A6)• Turn Right onto Granby Row | <ul style="list-style-type: none">• Approach from Ashton Old Road or Mancunian Way• Turn Left onto Great Ancoats Street• Turn Left onto Store Street• Turn Left onto London Road• Turn Right onto Granby Row | <ul style="list-style-type: none">• Approach from Ashton Old Road or Mancunian Way• Enter Fairfield Street• Cross London Road (A6)• Enter Granby Row |
|--|--|---|

There are several alternative routes for traffic to access the taxi / private hire pick up zone at the station and drivers would quickly adapt their routes to the station accordingly. It is likely that the displaced traffic would be distributed across several alternative routes and the overall number of vehicles re-routed will be low, as shown by the traffic survey results.

Secondary Gate/Access – Echo Street: Construction vehicles limited to a concrete wagon will be permitted to access the site from Altrincham St via the arch beneath the viaduct and into Echo Street. Larger vehicles will be prevented from undertaking this approach by appropriate traffic management.

Swept Path Analyses – Altrincham Street

The route to Echo Street from Altrincham Street was tracked:



Notes

Only concrete wagons and small delivery vehicles are able to make the turn onto Echo Street from Altrincham Street; the route is unsuitable for an articulated or a 10m rigid vehicle.

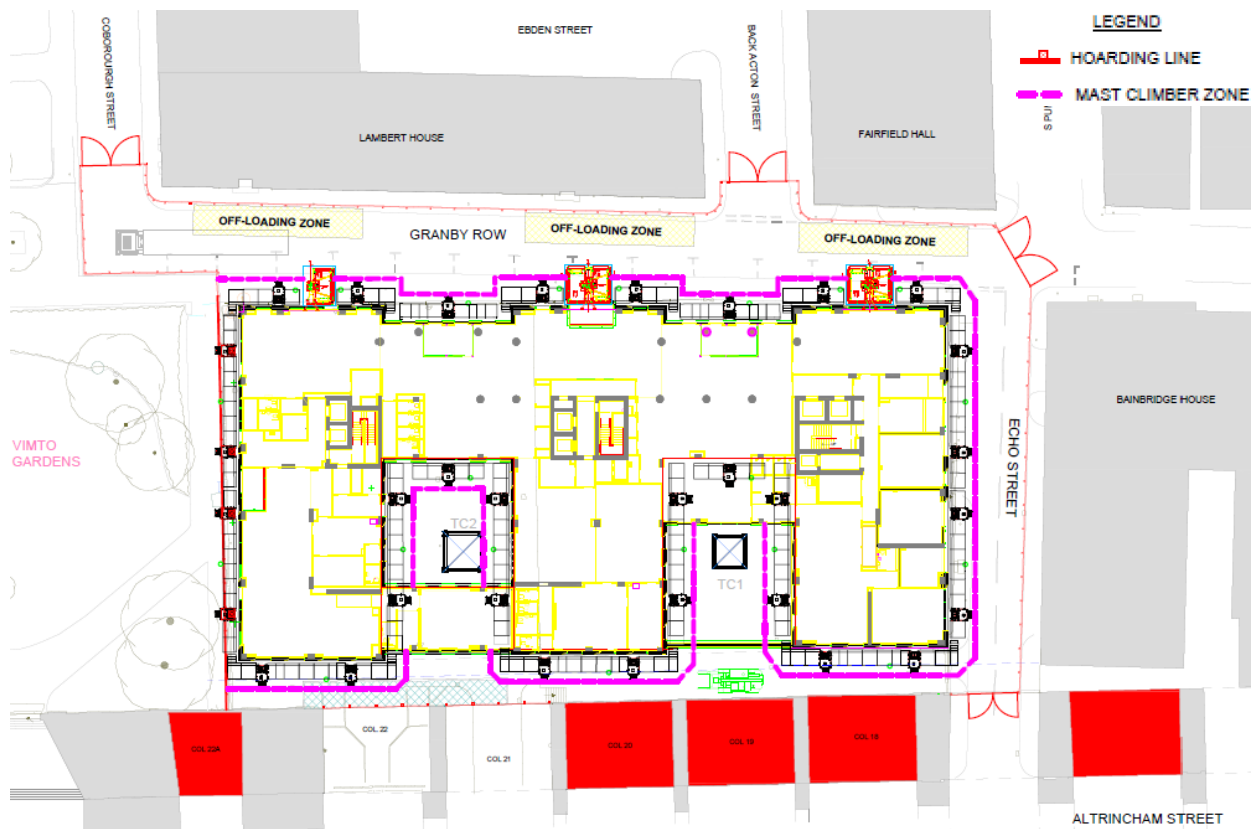
Note: The wider route to the project from the motorway network will be clarified during the further development of this plan.

11.0 Signage & Marshalling

Signage will identify the route to and from the construction site on the approach to Granby row from London Road and Altrincham Street.

The contractor will provide clearly identifiable uniformed traffic marshals to guide and manage all construction vehicles and deliveries.

12.0 The Project 'Close-Up'



The overall logistics approach and strategy has been developed in consideration of health & safety requirements, the footprint of the site, proximity to adjacent properties and 3rd parties, construction design and construction methodology.

The directional sections of the building provide the perspective of the height and location of the new building to adjacent properties and highways.

The proximity of adjacent properties and 3rd parties are significant in respect of the construction works and the health & safety and interface risk needs to be considered and managed in particular during all lifting operations around the site.

Detailed lifting plans, risk assessments & method statements will be produced in advance of the works and the operations will be managed by appropriately trained and competent personnel to ensure that a safe environment is maintained at all times and operations are controlled to satisfy this requirement.

In conjunction with the above considerations the design in respect of structural dependency between the blocks and construction programme is also a factor in the consideration of the logistical approach.

The build-up of the external envelope, materials and installation thereof is also a factor in the consideration of the logistics strategy.

13.0 Original Logistics Proposal

Given the constraints detailed above the contractor will be looking to seek approval for the closure of Echo Street and Granby Row as detailed below.

This logistics strategy included:

- Full closure of Echo St and Granby Row as a single option for HGV's
- Fixed perimeter hoarding and associated gates
- 3no. off-loading zones within the footprint of Granby Row; positions defined by limits of tower crane capacity & lifting radius
- Tower crane located in courtyards; position fixed by foundations and drainage and de-rated 25% to meet with Network Rail requirements
- 5no. hoists located on the Granby Row elevation; reducing interface with the building and limiting distribution routes
- Suitable space for telehandler offloading movements along Granby Row
- Mast climbers to all elevations to be founded at ground level

MCC Highways have advised that the full closure to Granby Row requested for the duration of the works would not be possible due to the existing traffic flows, movements and the impact on adjacent roads and the local community/area.

Consequently, a single lane closure has been discussed with MCC Highways as the preferred option to maintain traffic flows through Granby Row whilst the closure of Echo Street would be permitted for the duration of the works.

14.0 Development of Logistics Proposal

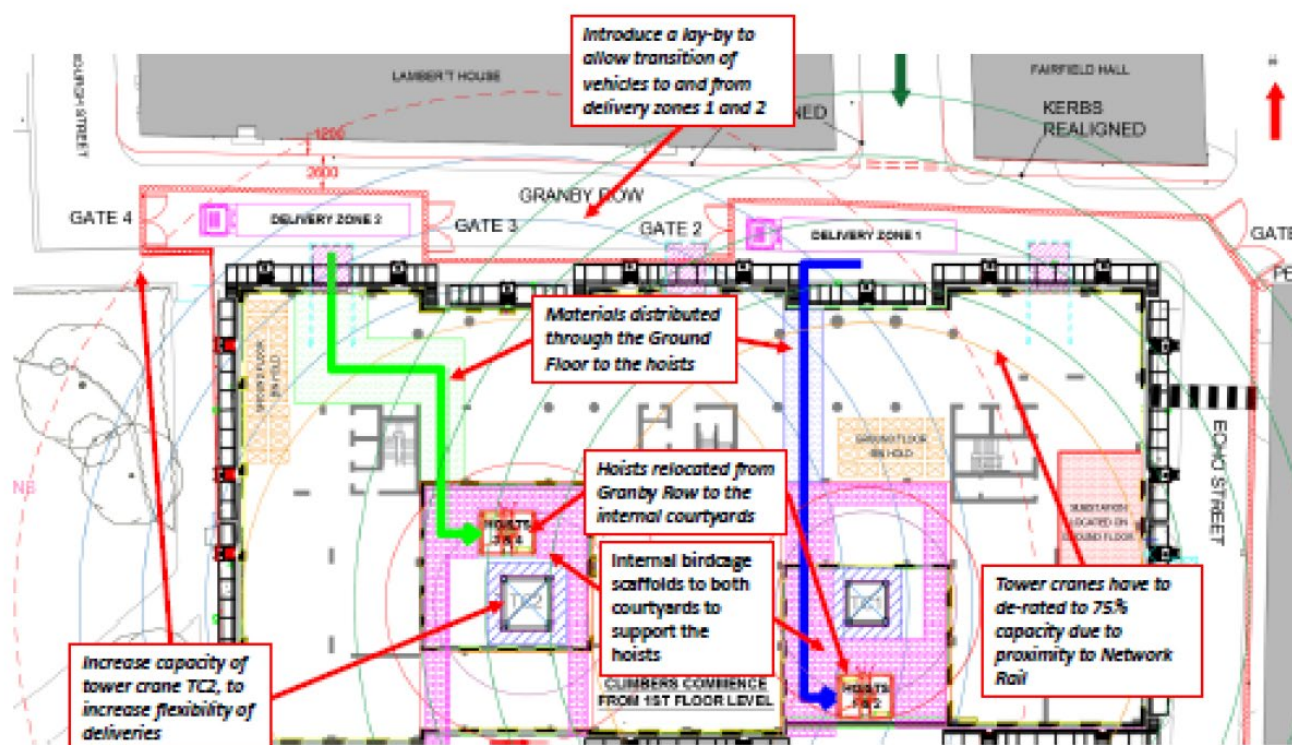
In order to maintain through traffic in Granby Row and meet with MCC Highways requirements the above the following amendments to the logistics approach have been undertaken:

- Tower cranes have been uprated to facilitate an increased lifting radius
- To generate space on Granby Row all hoists have had to be relocated into the courtyards
- Space constraints require that the hoists are tied to full height scaffolding in the courtyards (replacing the mast climbers within the courtyards)
- Due to limited space the hoists have had to be reduced in number from 5No. to 4No. hoists
- To generate space at ground floor level all mast climbers must be suspended from 1st floor level to accommodate FLT movements below
- Forklifts changed to smaller three wheeled 'moffet' style due to limited turning circles and the requirement to distribute materials through the building at ground floor to the hoists in the courtyard
- Three wheeled forklifts to be customised to permit off-loading of vehicles from one side only
- Additional forklifts are required to distribute materials to 1st floor
- Additional traffic marshalls and delivery managers are required to manage increased gate numbers and material distribution

- Enhanced traffic management scheme to facilitate delivery options
- Limited and just in time deliveries will be required
- Off-site storage of some elements will be required
- Ground floor will be utilised as a storage area so fit-out and overall programme impacted

Despite the above the positions of the off-loading areas have had to be re-considered as the locations (see below diagram) proved too close to the building to facilitate the required forklift movements.

Consideration of a single lane option



15.0 Interim Logistics Proposal

The following scheme has therefore been developed whereby the unloading bays are located at the building recesses to facilitate 'moffet' forklift turning circle.

The 'Moffet' style forklift is a three wheeled smaller and more compact forklift with tighter turning circles and swept paths. This style of forklift does however have restricted vertical lift capabilities and lifts to the 1st floor will have to be undertaken by a telescopic forklift.

As a consequence of the revised location of the unloading areas a bespoke retractable hoarding system has had to be developed to facilitate access and egress to the unloading zones. Vehicle manoeuvres in and out of the unloading areas will require additional management within the hoarded area to facilitate the swept path.

16.0 Lifting Zone & Safety Concerns

Notwithstanding the provision of the above logistics strategy which provides a solution to offloading deliveries by forklift, many deliveries will be off-loaded by the tower cranes due to the need to lift larger elements of the structure directly to the operational area/workface.

For health and safety reasons in proximity of the live highway the contractor will require a full closure of Granby Row periodically during the external envelope works and fit-out period.

This would allow the 'hoarding line' to be moved out on a temporary basis creating a safer wider zone in which to undertake tower crane lifts therefore increasing the 'lifting chimney' zone.

These periodic closures during the external envelope & fit-out periods would be during the standard working day and limited in time. Through traffic would be maintained outside of these hours and at weekends.

17.0 Proposed Logistics Proposal

The proposed logistics solution for the project is therefore a permanent single lane closure with temporary full closure during the envelope and fit-out periods would be as detailed below depending on the off-loading position.

18.0 Management of Lane Closures

This would be achieved by:

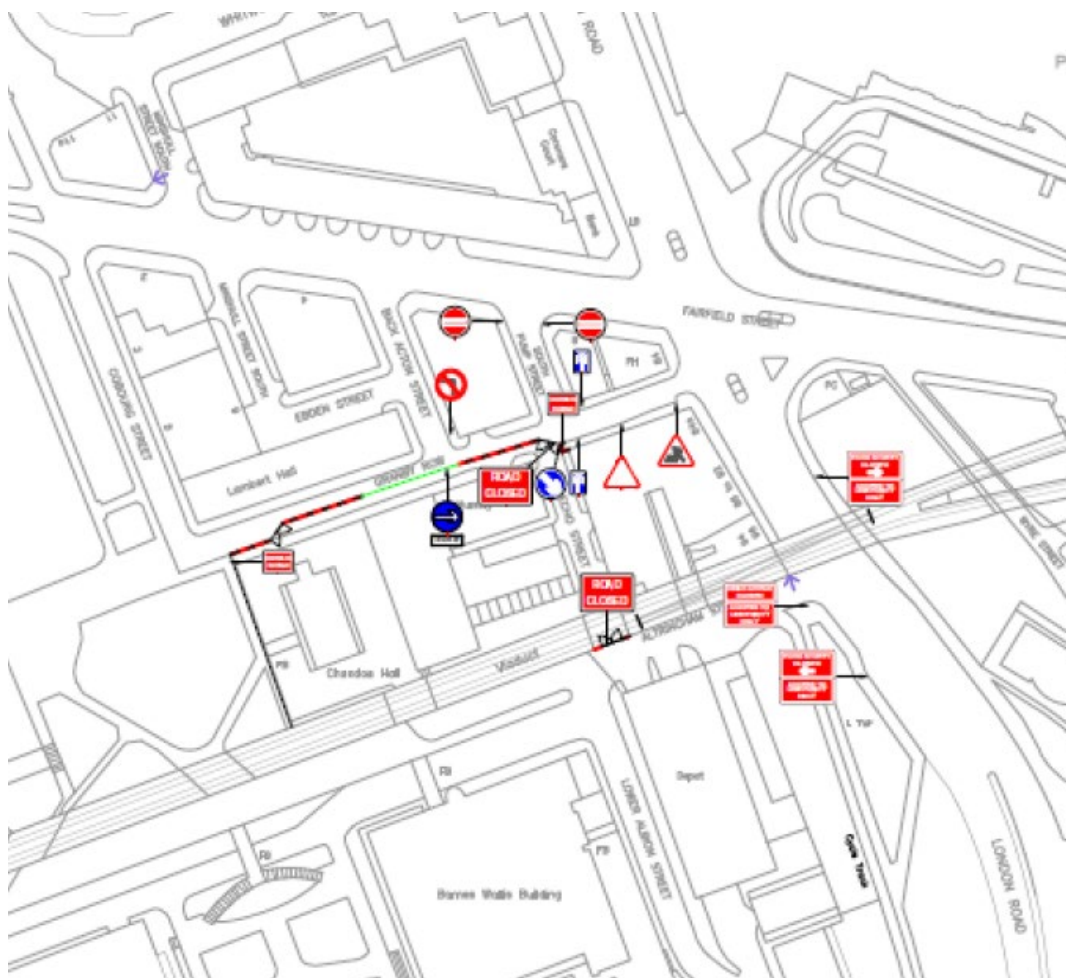
- Traffic management - utilising a Chapter 8 system designed to facilitate an expedient changeover from single lane closure to full closure and vice-versa.
- Local traffic marshal management to expedite closure of Granby Row with an accordion barrier system and pedestrian & traffic management.
- Permanent robust mesh fencing to the footpath north of Granby Row

In the event of an emergency the closure could be removed immediately and the traffic marshal team would assist the transition of emergency vehicles past the site.

19.0 Programme for Single Lane & Periodic Full Closures

During the external envelope and fit-out periods periodic full closures will be required during the working day. The periodic closures during the external envelope & fit-out periods would be during the standard working day and limited in time. Through traffic would be maintained outside of these hours and at weekends.

20.0 Redistribution of Traffic During Road Closures



During the periods when Echo Street / Granby Row are closed, there are several alternative routes for traffic to access the taxi / private hire pick up zone at the station and drivers would quickly adapt their routes to the station accordingly. It is likely that the displaced traffic would be distributed across several alternative routes and the overall number of vehicles re-routed will be low, as shown by the traffic survey results. It is therefore considered that the closures would not result in any adverse effect upon the efficient operation of the surrounding highway network.

21.0 Estimated Number of Deliveries

An estimated number of 15 – 80 LGV and HGV construction/delivery vehicles are projected to be arriving per week.

Hours of site operation

The site hours of operations agreed with the Manchester City Council are:

- 07:30 – 18:00 Monday to Friday

- 08:00 – 14:00 on Saturday
- No work on Sundays or Bank Holidays unless agreed in advance with MCC

Logistics operations that may occur outside these hours with the prior agreement of MCC, for example, deliveries of large items of construction plant.

22.0 Numbers and types of construction vehicles

The contractor will ensure appropriate road safety measures, will deliver preventative measures throughout the construction and operation of the project and will request contractors and suppliers to be registered on the Fleet Operator Recognition Scheme (FORS).

Wherever possible, construction vehicles will include sidebars, blind spot mirrors and detection equipment to reduce the risk and impact of collisions with cyclists and other road users including pedestrians.

The types of construction vehicles accessing the site will include:

- Articulated four to six axle 40T HGV trucks and low loader trailer
- Articulated 25T to 40T four to six axle HGV trucks & trailers
- Articulated and rigid chassis 25T to 40T four to six axle waste removal trucks
- Rigid chassis 20T to 40T mobile cranes
- Rigid chassis 25T to 35T three and four axle tipper trucks
- Rigid chassis 25T to 35T three and four axle ready mix concrete trucks
- Rigid chassis 30T capacity three and four axle flatbed trucks
- Rigid chassis 5T to 20T two to four axle Road Sweepers trucks
- Rigid chassis 3T to 7.5T capacity 2 axle panel and box vans

23.0 Communication to Immediate 3rd Parties

The contractor will maintain liaison with all appropriate 3rd parties to communicate any changes to the road network around the site via a project electronic communication board which will be made available to all appropriate 3rd parties.

In the event a 3rd party requiring to enter Cobourg Street during a full closure marshals will be available to escort vehicles to the intended location.

The contractor considers that the following amendment could be made to Cobourg Street to provide a temporary solution during full closure of Granby Row.

24.0 General Logistics

Parking, loading and unloading arrangements

All loading and unloading will take place within the construction area hoardings for each work area.

The construction areas will have gated manned entrances and exits and will contain vehicle loading and unloading areas.

Construction Vehicle Wheel Washing Facilities

All the construction areas for the new build are accessed from public highways.

The contractor will organise road sweeping of the roads adjacent to the site used by construction traffic daily or as required by the works. The contractor will also undertake road sweeping of any local surrounding roads as required should they deposit any mud and debris beyond the project demise.

A jet wash will be utilised at the site entrance as necessary to mitigate the spread of site materials outside the footprint of the site. The delivery area will also receive a temporary tarmac layer to mitigate deposits outside the footprint of the site.

These wheel-washing facilities together with the gatemen and traffic marshalls will prevent the spread of any mud and debris onto market roads and the public roads.

Details of how traffic will be managed at each phase of development

The contractor will employ logistics management and manage a delivery management system on the project. It will be a requirement that all construction delivery vehicles book their arrival time in advance to prevent any backlog of vehicles causing disruption to the surrounding area. Delivery booking will be an electronic Delivery Booking & Management System.

Signage will clearly identify the vehicle routes to the construction project.

Clearly identifiable appointed trained traffic marshalls/gatemen located at the construction area gates will ensure the management of the delivery process.

Plant deliveries will be requested whenever practical for delivery out of peak traffic times.

Site Liaison

The contractor will appoint a Site Liaison Manager to manage liaison with 3rd parties.

Materials storage and unloading arrangements on site

Materials storage will be limited on site and therefore most deliveries will be unloaded within the hoarded construction areas and either taken directly to their area of work or temporary storage location.

Materials distribution around the site will generally be by means of a mobile telehandler.

All loading and unloading will be undertaken within the site curtilage and controlled by trained banksmen.

Parking for construction operatives' vehicles

There will be no car parking provided for construction operatives or sub-contractors vehicles on the site. Both site operatives and visitors will primarily be encouraged to use public transport (bus, rail etc) to reach the site or directed to local parking facilities.

Minimisation of noise, dust and particulate emissions

All construction vehicles on the site will be maintained in good and efficient working order and operated in such a manner as to minimise noise, vibration emissions and particulate emissions.

The contractor will not permit vehicles and construction plant that are not in good working order or producing excessive noise or emissions to operate on the site.

CLP Management

The contractor will appoint a CLP co-ordinator who will have responsibility for the day-to-day management of the CLP.

The CLP co-ordinator will prepare any updates required of the CLP.

The contractor will name the CLP Co-ordinator in the CLP and will advise MCC if there is a change.

The contractor will publicise the CLP to their supply chain as a policy document applicable equally to all suppliers and sub-contractors.

Contractor's Handbook

The contractor will produce and issue a 'Delivery Management Plan' to ensure that all their sub-contractors and suppliers are aware of their obligations under this CLP.

Drivers Handbook

The contractor will produce and issue a 'Summary Delivery Management Plan' to ensure that delivery drivers are aware of their obligations under this CLP.

25.0 Construction Environmental Management Commitments

In line with the Environmental Statement there are several mitigation measures as shown below to ameliorate effects. The below table illustrates how these will be undertaken.

- 4.1 A summary of the CEMP measures which are integral to the description of the Proposed Scheme are provided in **Table 4.2**.

Table 4.1: Construction Environmental Management Commitments

Construction Environmental Management Commitments	
General	
(a)	The proposed construction works will be carried out by a competent contractor that will comply with current legislation ¹ .
(b)	The site security arrangements for the Proposed Scheme during the construction stage will be in line with the requirements set out in the Construction (Design and Management) Regulations 2015 and appropriate levels of security (personnel / CCTV) will be provided.
(c)	Construction working hours ² (noisy work) will be 07:30 to 18:00 Monday to Friday; 08:30 to 14:00 on Saturday; and no noisy work on Sundays and Bank Holidays. Operations outside of these hours will be agreed with MCC.
(d)	Climate change adaptation measures will be set out to reduce risks to human health from overheating such as provision of shaded refuges to reduce overheating risks, and potable water supplies to avoid dehydration.
(e)	3m high Site hoarding lines.
Dust Management / Air Quality	
(f)	The CEMP will be informed by Institute of Air Quality Management (IAQM) guidance ³ and would include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting and dampening exposed soils as appropriate and set out requirements for ongoing monitoring and liaison with the local community, and MCC.
(g)	Measures to control emissions from non-road mobile machinery, such as the use of emission standards for NRMM based on engine size.
Greenhouse Gas Emissions	

¹ This includes the Health and Safety at Work etc. Act 1974; the Control of Pollution Act 1974; and Construction (Design and Management) Regulations 2015.

² Manchester City Council. Tackle a noise problem – Noise from building sites. Available at: [Noise from building sites | Tackle a noise problem | Manchester City Council](#) [Accessed: 14/12/2022].

³ IAQM (2014). Assessment of dust from demolition and construction v1.1 Available at [construction-dust-2014.pdf \(iaqm.co.uk\)](#) [Accessed 17/1/2023].

Construction Environmental Management Commitments

- (h) A range of measures will be implemented which will reduce construction and embodied carbon. These measures are set out in the BREEAM Life Cycle Assessment (LCA) report and include:
- (i) 25% GGBS within concrete for the ground floor slab, ground beams, pilecaps and core bases;
- (j) 98% recycled steel for the rebar.

Ground

- (k) All earthworks and foundation design will be in accordance with relevant industry guidance, including but not limited to CIRIA Report C572: Treated ground engineering properties and performance⁴, British Research Establishment document FB75: Building on Fill - Geotechnical Aspects⁵ and British Standard 6031:2009: Code of Practice for Earthworks⁶.
- (l) Measures to protect construction workers, neighbours and general public passing by from exposure to any contaminated material which is encountered including (but not be limited to); dust suppression methods, ensuring covered wagons transport material and ensuring suitable PPE is provided and worn on site.
- (m) Fuels, oils and hazardous substances used in construction will need to be suitably stored and banded containers with spill kits easily accessible.
- (n) A Piling Risk Assessment will be undertaken for any further piling works that are required.
- (o) Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works.
- (p) In medium risk area of UXO the following will be undertaken:
 - Open Intrusive Works (trial pits, service pits, open excavations, shallow foundations etc.);
 - UXO Specialist On-site Support and Site Specific Unexploded Ordnance Awareness Briefings to all personnel conducting intrusive works; and
 - Boreholes – Intrusive Magnetometer Survey of all borehole and pile locations/clusters down to maximum bomb penetration depth

Lighting

⁴ CIRIA (2002). Report C572: Treated ground engineering properties and performance.

⁵ British Research Establishment (2015). FB75: Building on Fill - Geotechnical Aspects. 3rd Edition.

⁶ British Standard (2009). 6031:2009: Code of Practice for Earthworks.

Construction Environmental Management Commitments

- (q) Lighting will be controlled through a series of best practice measures, in line with lighting industry standards and guidance including the CIE publication 'Technical Report Document 129'⁷ and BS EN 12464-2:2014⁸.
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- (r) The following measures are proposed in order to control Light Spill, Glare and Sky Glow effects and thus manage light pollution:
- Where practicable, construction lighting in the Site would be designed to comply with Environmental Zone E4 in accordance with the ILP Guidance Note GN01⁹;
 - Illuminance levels arising from temporary lighting to be designed in accordance with BS EN 12464-2: 2014 and CIE 129;
 - Placement of temporary lighting required to ensure safe working conditions and to maintain security, to have due regard of sensitive receptors (i.e. occupied residential premises);
 - Lighting to be directed so as avoid unnecessary Light Spill outside of construction areas and to ensure that the light distribution is toward the task area;
 - Lighting to be switched off when not required for safe working conditions and Site security;
 - Use of light shields/baffles to control upward light to within the maximum 15% set out in the ILP Guidance Note GN01, where possible;
 - Lighting to be kept at 0° tilt to avoid Sky Glow, where practicable; and
 - Light dimming and automatic switch off would be used (where appropriate).

Noise and Vibration

- (s) Controls implemented in accordance with BS5288-1:2014¹⁰, including site hoardings, hours of operation, and the use of practicable measures to control noise at source.
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⁷ CIE - Technical Report Document 129 (1998) Guide for Lighting Exterior Work Areas.

⁸ British Standards (2014) BS EN 12464-2 – Lighting of Work Places – Part 2: Outdoor Work Places.

⁹ Institute of Lighting Professionals (ILP) (2021) Guidance Notes for the Reduction of Obtrusive Light (GN01).

¹⁰ BSI Standards Publications (2014). BS5228-1:A1:2014: available at

<https://knowledge.bsigroup.com/products/code-of-practice-for-noise-and-vibration-control-on-construction-and-open-sites-vibration/standard> [Accessed 13/1/2023].

Construction Environmental Management Commitments

- (t) Controls implemented in accordance with BS5288-2:2014¹¹, including the use of low-vibration working methods, such as continuous flight auger (CFA) and reasonable hours of working (see hours above, under General Measures).

- (u) Maintain good road surfaces.

Traffic Management

- (v) The CEMP will manage construction traffic in the area, seeking to minimise the potential for disruption to other road users through measures such as vehicle booking systems.

- (w) Safe pedestrian routes maintained along Granby Row.

- (x) Site exit managed to keep clear of debris, mud and materials.

- (y) Reuse of materials on site to avoid traffic movements.

- (z) Most traffic and deliveries to the Site will arrive from the A6 and Fairfield Street, with access via the main entrance at Back Acton Street and egress via the main exit at Cobourg Street ie there will be a one-way system in place close to the Site.

Water

- (aa) The monitoring and setting of targets to reduce water use.

- (bb) A Surface Water Management Plan (in accordance with best practice guidance such as The SuDS Manual (C753)¹² and BS8582:2013 Code of practice for surface water management for development sites¹³) will be established. This will include the installation of a temporary drainage system to collect and contain run-off including any discharge agreements with the local sewer authority and measures to protect the Site from increased risk of flooding during construction, for example compounds storage compounds with raised levels and temporary drainage; and drainage and pollution prevention systems.

- (cc) Introduction of perimeter cut off drains to prevent overland run-off and additional interceptors for pollution and debris collection if required.

- (dd) Bowsers to be in place for potable water requirements until a permeant solution is in place.

¹¹ BSI Standards Publications (2014) BS5228-2:A1:2014: available at <https://knowledge.bsigroup.com/product/code-of-practice-for-noise-and-vibration-control-on-construction-and-open-sites-vibration/standard> [Accessed on 13/1/2023].

¹² CIRIA (2015). The SuDS Manual (C753).

¹³ BSI (2013). BS8582:2013 Code of practice for surface water management for development sites. Available at: [BS 8582:2013 | 30 Nov 2013 | BSI Knowledge \(bsigroup.com\)](https://knowledge.bsigroup.com/products/bs-8582-2013)

Construction Environmental Management Commitments

- (ee) Measures to limit the amount of silt and other pollutants that are able to reach the existing sewer infrastructure. Silt will be controlled using traps and measures implemented to reduce the amount of material that could be washed into the Watercourse via overland flows. The use of cut off trenches to intercept the overland flow routes will also prevent pollution.
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- (ff) Designation of specific areas where refuelling and maintenance occurs.
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- (gg) Storage of materials will be located an appropriate distance away from the watercourse to ensure there is limited flow routes for contamination to use to get the existing sewer infrastructure.
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Waste Management

- (hh) The CEMP will be informed by the waste provisions of the Environmental Protection Act 1990¹⁴ and the Environmental Protection (Duty of Care) Regulations 1991¹⁵ and will set out the principles and legal requirements relating to waste, including any hazardous waste that is encountered and required to be exported off-site for disposal.
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- (ii) Hazardous waste will be handled, processed and removed from Site by suitability qualified contractors, all being undertaken in line with The Hazardous Waste (England and Wales) Regulations 2005.
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¹⁴ Environmental Protection Act 1990 No. 43 Available at:

<https://www.legislation.gov.uk/ukpga/1990/43/contents> [Accessed: 18/01/2023].

¹⁵ Environmental Protection (Duty of Care) Regulations 1991 No. 2839. Available at:

<https://www.legislation.gov.uk/uksi/1991/2839/made#:~:text=The%20duty%20requires%20such%20persons, person%20or%20to%20a%20person> [Accessed: 18/01/2023].