



Framework Construction Environmental Management Plan 325 – 327 Deansgate Manchester

THIS DOCUMENT IS TO BE READ IN CONJUNCTION WITH THE
CONSTRUCTION PHASE PLAN

Chris Metcalfe FIIRSM MAPM

Table of Contents

PROGRAMME.....	4
CONSTRUCTION METHODOLOGY.....	4
SITE SET UP.....	7
SITE SET UP STORAGE AND DISTRIBUTION	8
TRAFFIC MANAGEMENT.....	8
ROUTE COMPLIANCE.....	9
LOADING LOCATION.....	10
CONSTRUCTION VEHICLES	11
HEALTH & SAFETY	11
ENVIRONMENTAL MANAGEMENT	11
WASTE MANAGEMENT STRATEGY.....	12
OIL AND FUEL SPILLAGES.....	13
 APPENDIX 1 CODE OF CONSTRUCTION PRACTICE	 13
 NOISE AND HOURS OF WORKING.....	 15
AIR POLLUTION	16
PROTECTION OF SURFACE AND GROUNDWATER RESOURCES.....	17
HANDLING AND DISPOSAL OF CONTAMINATED MATERIALS AND OTHER WASTES	18
TREES AND VEGETATION	19
SITE BOUNDARIES/HOARDINGS/TEMPORARY STRUCTURES ON THE PUBLIC HIGHWAY	20
SITE ACTIVITIES.....	20
LIAISON AND AWARENESS	21
RELEVANT BS STANDARDS AND GUIDELINES	22
 APPENDIX 1 CODE OF CONSTRUCTION PRACTICE	 23

APPROVAL			
Version	Name	Date	Modifications
1	Chris Metcalfe FIIRSM MAPM	24/11/2022	Draft for review
2	Chris Metcalfe FIIRSM MAPM	08/12/2022	Additional detail added for traffic management Reference final DEMP when issued Nesting Birds habitats covered in Appendix 1 Code of Construction

			Ecology Section trees and vegetation
3	Chris Metcalfe FIIRSM MAPM	18/01/2023	Reference added to 24hr access to Metrolink hazard zone and trackside equipment. Confirmation crane will Luffing type jib and will not oversale tramway Sentence added including protection of Rochdale canal from potential construction pollution and use of PPG6 and Netregs Code of practice Inclusion of emergency contact number
4	Chris Metcalfe FIIRSM MAPM	20/03/2023	Off-site carparking facilities added Note on site access gates for deliveries added
5	Chris Metcalfe FIIRSM MAPM	25/04/2023	Working hours updated on page 9 and 13
6	Chris Metcalfe FIIRSM MAPM	18/06/2023	Construction phase information added. Reference made to approved monitoring documents and scope. Demolition phase now completed. Contact information added for TFGM and KAM Traffic management plan added.

			Revised programme added.
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Programme

The overall programme is likely to be in the region of 116 weeks with a high-level breakdown as below:

Piling – week 1 to 5

Groundwork – week 5 to 14

Frame – week 17-61

Envelope – week 29-85

Fit out – week 31-116

A full programme can be found in Appendix 2

Construction Methodology

Demolition

Has been agreed and approved, a DEMP has issued by D&R Demolition the existing buildings have been demolished in line with the approved DEMP and consents from TFGM. Highways and the footpath can be closed under the control of banksmen to ensure safety, the final section of demolition will be a short duration activity. Demolitions at interfaces with adjacent structures can be undertaken by hand where required. As noted previously when required misters will be utilised to reduce airborne dust.

Access and Egress for TFGM

At all times during the project 24hr access will be retained for the Metrolink Hazard Zone. Including unhindered access to trackside equipment cabinets, cambers for low voltage power, signal, and communication cable for the Metrolink. Assured-CMS are in constant contact with TTFGM via the following contacts.

- Lynda Griffin. Approvals and Consents Manager,
- Peter Hemingway. Track and Civil Engineer
- Jawad Yousafzai. Civil Engineer
- David Tootell Capital Project Kelios Amey Metrolink

Monitoring

Additional vibration monitoring, settlement monitoring and track monitoring have been introduced post demolition by Maybe Hire Ltd, following consultation with TFGM the methods of monitoring have been agreed as follows.

- Vibration Monitoring ref: CT/SH/902683/SSOW Rev B
- Dust and Noise Environmental Monitoring ref: CT/AM/902683/27782
- Structural and Track Monitoring ref: CT/SH/902683/27807Rev A

All the above are monitored in real time and trigger levels have been set in accordance with BS 5228-2:2009+A1:2014 and NR guidance. NR/L3/CIV/177 Issue 03 as issued by KAM. Monthly reports are being shared with all parties.

Bulk earthworks – Reduced level dig and site preparation, will be completed with 360 machines loading tipper wagons.

Foundations – likely to be CFA piles with RC pile caps and ground beams. Will be completed with CFA piling rig with 360 machines in attendance. Pile caps will be excavated by machines and concreted via direct discharge from the concrete delivery vehicle where possible.

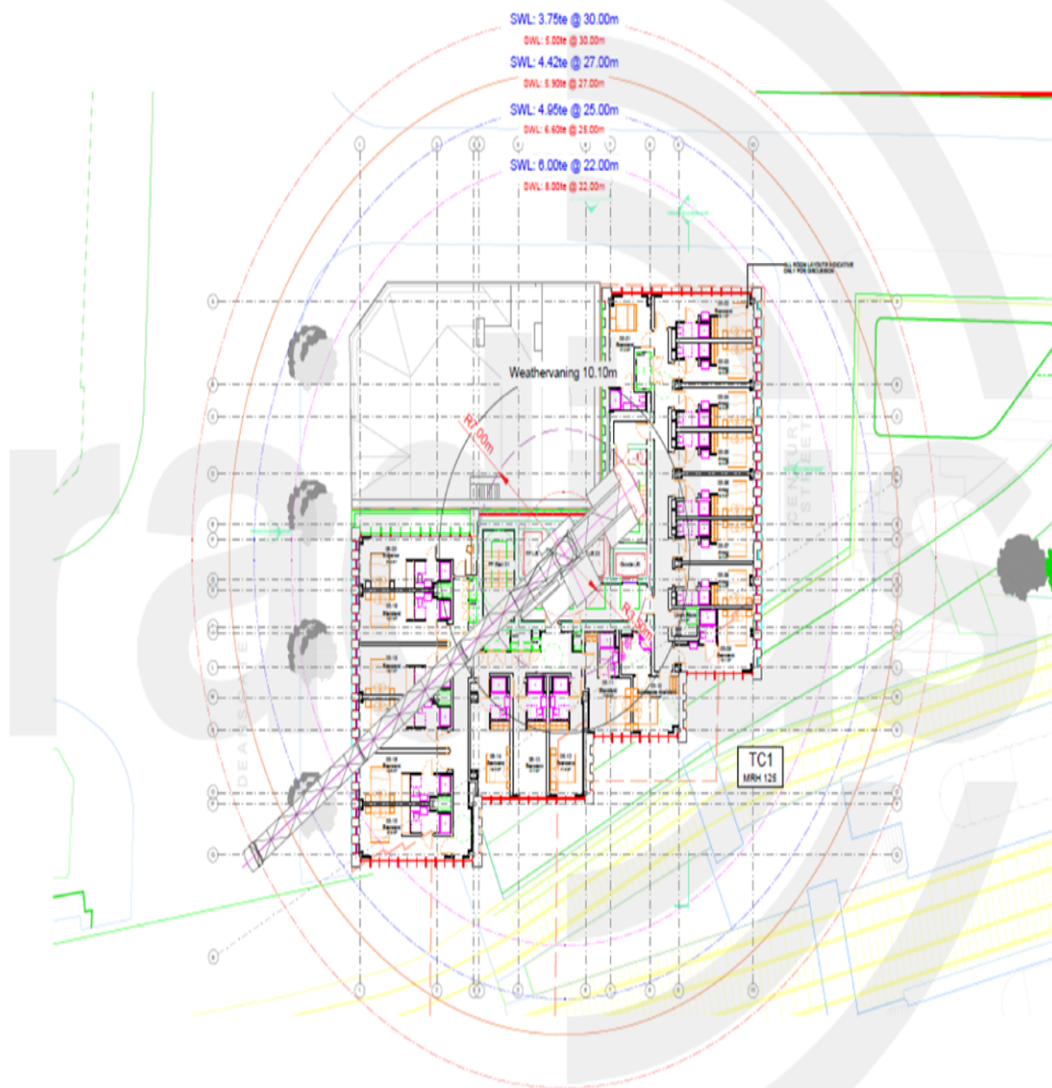
Frame – RC frame. Will be constructed with the tower crane, utilising visiting concrete pump. Negotiations and discussions will take place with Metrolink in relation to proximity working of Metrolink infrastructure. It is likely that the concrete cores will be slip-formed, with the floor slabs and columns being concreted with more traditional formwork. The crane will be used to lift formwork between the floors.

Envelope – a blend of pre-cast, steel frame and glazing. Pre-cast will be installed with spider type crane from upper floors. Curtain wall type glazing will be installed from scaffold. Metrolink will be consulted as above to agree the detailed installation methodology.

Bathrooms and kitchenettes – modular, constructed off-site. Will be loaded into the building as the RC frame progresses utilising the tower crane

Internal fit-out – traditional dry lining, soft and hard flooring, joinery, and finishes

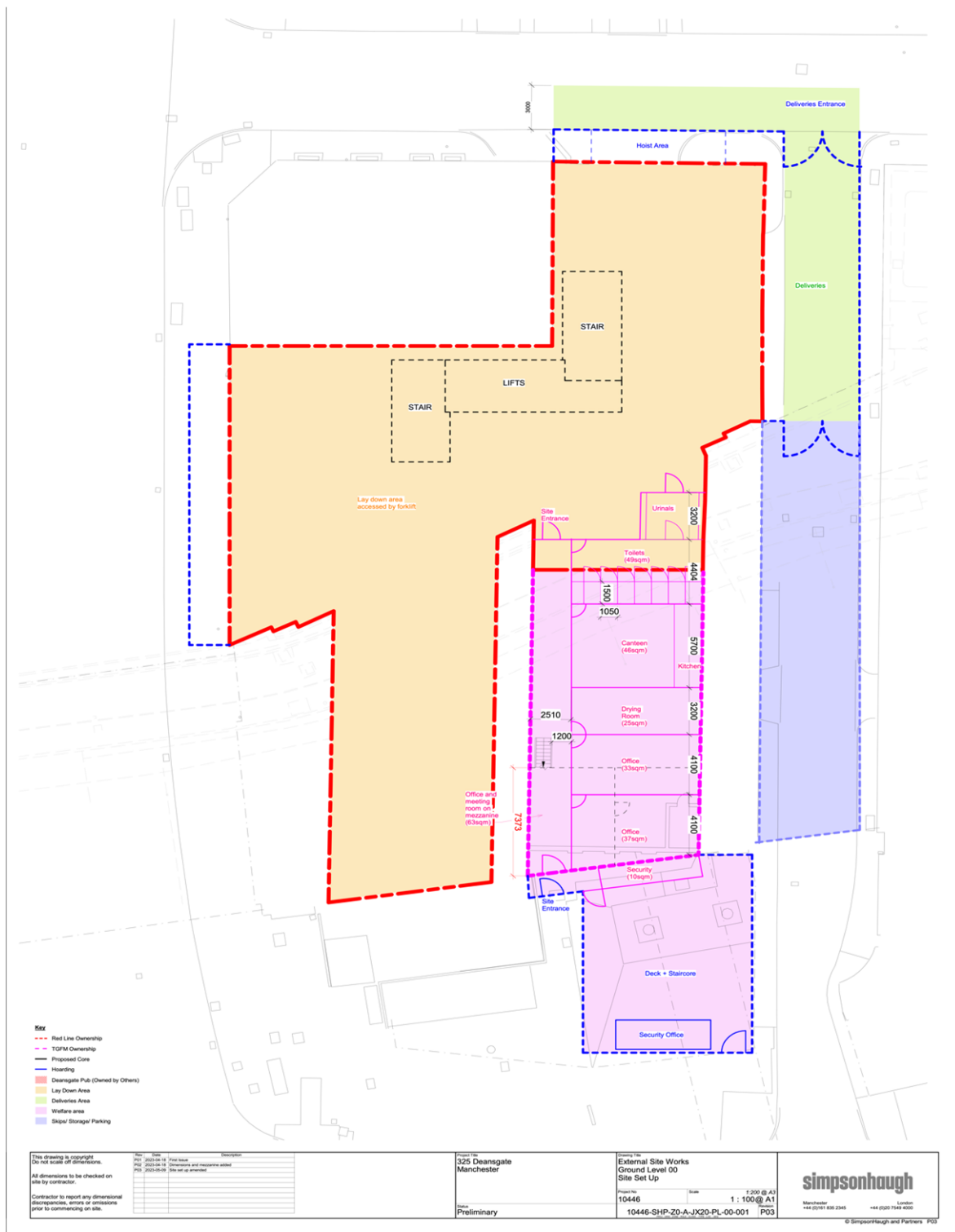
The site will have 2 large passenger goods hoists to service upper floors with materials and operatives. Local protection will be provided to the adjacent pub, “The Deansgate”



Tower crane will be located in the center of the site and fitted with Luffing type jib to avoid and oversailing of TFGM /Metrolink assets. Please refer to Radius Crane document RSN020933-Rev A

Site Set Up

The site set up will be located within the arches that form part of the overall site. The intention is to have toilet facilities, canteen, drying rooms and safety induction area. Management offices and meeting rooms are likely to be also within this area. The location of the arches will allow excellent facilities to be setup very early in the project.



Site Set up Storage and Distribution

The drawing above indicates the site is located within a restricted location. The footprint of the building will be used for storage of materials; this will be on a Just in Time basis. Materials will be delivered for immediate incorporation into the works.

Vehicles will be unloaded in Century Street via crane or forklift, materials will either be hoisted or craned to the relevant floor / location.

The site access gates will be closed at all times until delivery is on site, these gates will only be operated by an appointed suitable qualified person.

A prebooked delivery system will be utilised to ensure smooth operation of the unloading zone.

Traffic Management

Construction Vehicle Routing & Parking

In terms of Parking, we acknowledge that the site is constrained in providing the required number of car parking spaces required for the site work force. Off-site parking for constructions teams will be utilised. We have noted a number in the general vicinity of the site that staff, Visitors, and sub-contractors will be directed to, such as Euro Carparks on Bridgewater Street. Details will be communicated to all construction operatives and Visitors before arriving to site and reinforced again during their site inductions. The use of public transport will also be strongly encouraged as the site is located near to Manchester Piccadilly Station a major transportation hub

The proposed vehicle routing strategy to be employed for the duration of the construction programme. The routing strategy will be developed taking into consideration highway routes in the vicinity of the Site, sensitive receptors, community considerations and key pedestrian and cycle routes.

It is proposed that construction vehicles will travel to the Site via the A56 and local the strategic highway network.

Deliveries will approach the site from Deansgate, turn into Trafford Street and finally into Century Street. Vehicles will exit the site via the same route.

Assured-CMS have now arranged to make the following Temporarily Traffic Regulation Order (TTRO): The City of Manchester (Century Street, Deansgate Ward Temporary [Prohibition of Vehicular Traffic] Order 2023. The effect of the Order is to restrict or prohibit pedestrian and/or vehicular traffic on Century Street from Junction of Trafford Street to Whitworth Street West Ref: MCC000134211073.

Cobra Traffic Management have been appointed to oversee all TTRO applications and compliances

Contact Details **Rumer Daniels** Project Coordinator

Cobra Traffic Management Ltd

[12 Trevor Foster Way | Bradford | West Yorkshire | BD5 8HB](#)

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SITE LOCATION

SITE PHOTO

Signage

- ROAD CLOSED
- ROAD AHEAD CLOSED
- ONE WAY
- TRAFFIC SIGNAL
- TRAFFIC CONES

A full traffic management plan will be developed with a National Highways Sector Scheme 12D approved contractor and issued to all parties when applicable

During the construction programme, all traffic associated with the Site will be advised of the appropriate transport routes that should be used, with all regular visitors provided with written notification of the agreed access and routing strategy.

325 Deansgate Construction Management and Phasing

delivery slot information. Any repeated non-compliance with the construction routing strategy could result in disciplinary procedures or the termination of the contract of workers and/or suppliers.

All construction workers and suppliers will be advised to use the www.routeplanner.co.uk website, which is designed to help freight operators plan a route for a specified size of vehicle, and identify where it is possible to stop or wait legally.

An appointed Site Manager will keep up-to-date with regards to scheduled roadworks, events and incidents in the area. Where feasible, any required changes to the routing strategy due to significant roadworks or events taking place on the proposed construction vehicle route will be agreed with MCC in advance.

Loading Location

All loading and unloading activity associated with construction will take place within the boundary of the Site, with vehicles entering and exiting the Site via a gated vehicular access point on the alignment of Trafford St. All vehicles will enter and exit from the site via the same route, loading locations are identified in the logistics plan when fully developed.

The logistics and access strategy has been developed with consideration given to access, egress and material unloading points. Specific pull-in zones for off-loading will be provided within on-site throughout the construction programme.

During working hours, the vehicular access and egress gates will be manned by trained traffic marshals who will be responsible for ensuring that only authorised vehicles and construction personnel are provided with access to the Site. All vehicles will be checked by the traffic marshal at the main vehicular access point prior to being allowed to proceed to the designated on-site unloading area. On exiting, the traffic marshal will guide vehicles onto the highway safely and will record their departure.

Additional banksmen will be present throughout construction hours to ensure pedestrian safety and the safe arrival and departure of vehicles, and to minimise conflict with pedestrians, cyclists, and other road users.

It is noted that some construction activities may require continuous access for a number of delivery and construction vehicles, for example concrete pours. This may impact upon working times and incorporate a requirement for vehicles to wait in the vicinity of the Site. This requirement for and extent of such activities will be confirmed.

All materials and plant associated with the construction process will be stored within the footprint of the building.

The Principal Contractor and/or Site Manager(s) will apply for any suspension in advance, giving the required notice period to MCC, and will pay any associated fees. The Site Manager(s) will consult with MCC officers regarding the timescales for suspension. The Site Manager(s) will also inform neighboring properties and businesses of the proposed loading arrangements and suspensions prior to commencement.

Construction Vehicles

It is noted that construction vehicle frequencies are likely to vary between different periods of construction, with a range of vehicles anticipated to require access to the Site during the construction programme. Vehicles requiring access to the Site are anticipated to include excavators, crushers, forklift trucks, tipper lorries, flatbed articulated lorries, rigid lorries (various sizes), concrete lorries, tower cranes, and passenger hoists. It is anticipated that a large proportion of construction vehicles accessing the Site will be less than 10m in length.

The location and type of cranes required will be detailed in a site specific crane lift plan, as Manchester airport boundary is more than 6KM from the site it's not envisaged any height restrictions will be applicable however this will be confirmed by the crane operators. The crane will be of a Luffing type jib to ensure no oversailing of the tramway.

A breakdown of forecast weekly construction vehicle movements, split by construction stage, will be developed by Assured – CMS Ltd.

Across the whole construction programme, an average of 65 construction vehicle movements per week are anticipated; this equates to 13 per day. At peak periods, this rises to approximately 36 vehicles per day.

Health & Safety

Health and Safety is of paramount importance. The Principal Designer has already been appointed for the scheme, their responsibilities include to Plan, manage, monitor, and coordinate health and safety in the pre-construction phase of the project. This includes Identifying, eliminating or controlling foreseeable risks; ensuring designers carry out their duties. To prepare and provide relevant information to other duty holders. Provide relevant information to the principal contractor to help them plan, manage, monitor, and coordinate health and safety in the construction phase.

During the construction phase the site will be always kept secure. A secure hoarding will form the perimeter, site gates will only be opened when a delivery is being received or leaving site. Access into the work area will be controlled by a biometric turnstile, this system will ensure only suitably trained and safety inducted personnel are given access to the site.

All subcontractors and their employee's health and safety competence will be checked prior to being given access to site.

All Risk Assessments and Method Statements will be scrutinised prior to works being carried out on site.

Environmental Management

A full environmental management plan will be produced prior to works commencing on site.

Noise will be controlled as far as reasonably practicable, plant and equipment utilised on site will be modern that conform to all current legislation. Where possible materials will be "cut-to-length" off

site, where this is not possible cutting areas will be setup on site that screen and acoustically insulate the transmission of sound.

Dust will be controlled using suppression systems, in the event that the ground may generate dust, the area will be damped down. If dust could be produced during cutting water suppression or extraction will be utilised. During general clean up operations brooms will be avoided where possible, with the preference being to use vacuum's.

The Highway will be kept clean by minimising access for road going vehicles into the footprint of the building. When this cannot be avoided vehicle wheels will be cleaned prior to re-accessing the highway.

Vibration monitoring is likely to be required, this will be confirmed in greater detail as the Party Wall issues are clarified. We will work within the parameters set out in the Party Wall Agreement.

A detailed Management Plan to control dust and airborne pollutants will be produced prior to works commencing on site.

All necessary and practicable measures to control dust emission through good housekeeping, and site operational practices shall be carried out, including the sheeting of vehicles carrying loose material. Dusty floors will be vacuumed rather than swept, and where required will be damped down.

During any demolition works the use of misters / hoses may be implemented, this will reduce the quantity of airborne dust emission to a practicable level.

The cutting of material that may cause airborne particles will be undertaken in designated areas on site and suppression will be used.

Fires will not be permitted on site.

Construction activity will take place as follows:

Monday to Friday 07.30 – 17.30 - Saturday 08.30 – 14.00

Site will produce regular newsletters to keep surrounding businesses and properties aware of site activities

Waste Management Strategy

The detailed Site Waste Management Plan will be developed as the design matures. It is vital on a restricted site that cognisance is paid to waste during the design process. Dimensions will be scrutinised to reduce the need for materials to be cut on site, thus reducing waste and vehicle movements.

Materials will be delivered to site on a "just in time basis", due to the site constraints, this will also reduce the risk of damage to materials that can lead to waste.

Waste will be segregated on site as far as possible given the site constraints [a small area will be provided for skips within our compound on Century Street]; where further segregation or separation is required to avoid waste to Landfill this will be undertaken off-site at the Licensed Waste Transfer Station.

Off-site methods will be adopted, the use of pre-cast façade materials, pod bathrooms and kitchenettes will further reduce waste.

Oil and Fuel Spillages

In the extremely unlikely event that oil or fuel is leaked on site, this will be within designated fueling areas that are populated with spill kits. A spill kit will be utilised to contain the spill and absorb the material allowing a full cleanup of the area to be undertaken.

Appendix 1 Code of Construction Practice

The ASSURED-CMS Code of Construction Practice has been developed in liaison with the relevant local authorities and covers specific legislative requirements as well as general requirements and compliance with British Standards referred to in Parts C and D of this Code.

The purpose of the Code of Construction Practice is to cover environmental and safety aspects affecting the interests of local residents, businesses, and the general public in the vicinity of the construction works, and it will apply throughout the whole period of the construction works.

The Code will be included in the Contract for the construction of the new development Sub-Contractors, agents and their employees will have an obligation imposed upon them to comply in full with the terms of the Code of Construction Practice. Otherwise the Contract may be liable to determination. The Code may also form part of the Planning Conditions for the scheme. All sub-Contractors will be given a reasonable period of time to rectify any breaches of the Code of Construction Practice, but should these not be rectified within that time the promoter of the scheme, as the Employer under the Contract, may make arrangements for a third party to carry out the necessary works to rectify the breaches.

Applicable Acts of Parliament/Regulations

There are currently in existence numerous Acts of Parliament and statutory regulations covering environmental and safety matters and rather than list all of these separately all Contractors involved in constructing the scheme will be required to comply in full with all relevant legislation applicable at the time of construction.

Current examples of relevant legislation are the Health and Safety at Work Etc. Act 1974, Environmental Protection Act 1990, Control of Pollution Act 1974, New Roads and Street Works Act 1991, Construction (Design and Management) Regulations 2015 and Schedule 1 of the Wildlife and Countryside Act 1981

General Requirements

Public/Private Highways

For the purposes of this Section of the Code references to work sites is to the designated worksites in the draft Order including site compounds.

Traffic management proposals shall be agreed with the Highway Authority in advance and shall comply with current legislation and codes of practice. The following requirements will at all times apply to the construction works:

Any temporary footways and ramps on the highway must be surfaced in materials to the satisfaction of the Local Planning Authority and must be accessible by wheelchair users and sight impaired people unless otherwise agreed with the Local Planning Authority.

All openings or obstructions on the carriageway or footway will be barricaded with a continuous rail (lit at night) strong enough to offer necessary resistance should a blind person walk into it; a tapping rail will be provided.

All pedestrian routes diverted onto the carriageway will be clearly defined by continuous barriers, constructed to the requirements of the Local

Planning Authority. The minimum standard is the Chapter 8 requirements appropriate for the situation but enhanced facilities may be required in respect of the following:

Existing access for the emergency services shall be maintained through or past the site and to all properties and public areas affected by the works.

There shall be always at least one accredited supervisor contactable by phone on site when works are in progress. Accreditation shall be a certificate from an approved assessment centre demonstrating that the person is competent to sign and guard road works.

Existing pedestrian routes shall be maintained at all times or diverted to a reasonable alternative route.

Existing bus routes and stops shall be maintained so far as reasonably practicable.

So far as reasonably practicable, all parts of the public highway including drainage systems will at all times be kept free from mud and other loose materials arising from the works. To comply with this the Contractor shall obtain the prior written approval of the Local Planning Authority in respect of the following:

Provision of vehicle wheel cleaning facilities, adequate provision for drainage via settlement tanks and regular maintenance of settlement tanks, during the working hours specified in Section 2.3 of this Code.

Provision of a mechanical road sweeper to clean the work sites hoardings and any mud or debris deposited by site vehicles on roads or near work sites, during the working hours specified in this Code.

Provision of facilities and working arrangements to ensure the adequate sheeting and boarding of all materials including spoil either brought onto or taken off the site to prevent material falling off during its journey.

Vehicles entering and leaving each work site will only be allowed to cross footways via a properly constructed crossing, if required the design of which shall be submitted to and approved in writing by the Local Planning Authority prior to construction. Footways must be kept free of mud.

Access, which is deemed to include both the route and entrance to any work sites by vehicles, shall be as agreed in writing by the Local Planning Authority.

All street furniture, trees (unless they are to be removed/lopped) and other features near the construction works shall be carefully protected in accordance with the requirements of the Local Planning Authority. Any damage caused by the Contractor shall be made good within an agreed timetable to the complete satisfaction of the Local Planning Authority.

Any street furniture, trees or other obstructions outside the area to be occupied by the Contractor, which the Contractor requires to remove in order to gain access or for temporary works shall, subject to the prior consent of the owner, be removed by the Contractor and put back if appropriate on completion of the works. This provision also applies to temporary works.

The Contractor shall ascertain and comply with any restrictions in respect of abnormal load routes as they may affect access to work sites.

The Contractor will work in such a way as to minimise, so far as reasonably practicable, disruption of existing road traffic.

Where any Public Rights of Way to be kept open during construction of the works cross any site where work is being carried out, safe crossing points including appropriate signs and signals shall be approved in writing by the Local Planning Authority.

Works shall be carried out so far as reasonably practicable in accordance with the Highway Authority's specification of the number of lanes to be maintained on- and off-peak on each road affected by the works. All works in the carriageway shall, so far as reasonably practicable, be carried out during off-peak hours, namely 09.30-15.30 Monday to Friday.

Traffic management shall, if required by the Highway Authority, be provided by a specialist subcontractor approved by the Highway Authority. The Contractor shall nominate a Traffic Safety and Control Officer who must be on site and available whenever works are taking place.

The Contractor shall liaise with the public utility companies.

The Contractor shall comply with the Local Planning Authority's environmental policies relating to road works and waste management.

The works are subject to the Construction (Design & Management) Regulations.

The Contractor shall agree with the Local Planning Authority arrangements for notifying near neighbours prior to works.

The Contractor shall carry out road safety audits of works affecting the highway in accordance with a timetable agreed with the Highway Authority prior to the commencement of the relevant area of works on the highway.

Noise and Hours of Working

The Employer will, where appropriate, prepare predictions of construction noise prior to tenders being invited for the construction works in order to establish achievable noise levels at each specific work site. These predictions will be carried out in accordance with BS 5228 and shall be submitted to the Local Planning Authority together with proposals for the mitigation of impacts for the written approval of the Local Planning Authority prior to the commencement of construction.

Where appropriate, there will be included within the proposed tender documents clearly defined noise criteria which must be complied with by the Contractor. Before construction works start, the Contractor will be required to demonstrate to the Local Planning Authority through appropriate method statements that he will comply with these criteria. If the Contractor fails during the period of the construction works to comply with these criteria the Contractor may face enforcement action from the Local Planning Authority.

To ensure noise mitigation criteria are met, a programme of on-site monitoring by a suitably qualified person will be agreed between the Contractor and the Local Planning Authority. This will include location and frequency of readings and timescales for the submission of results together with any additional mitigation measures proposed to the Local Planning Authority. Any additional measures agreed by the Local Planning Authority shall be implemented by the Contractor. If the Contractor wishes to change his proposed method of working once the construction works have started, then this must be agreed in writing by the Local Planning Authority. Unless otherwise agreed in writing by the Local Planning Authority the hours of working for the construction works shall be limited to between 08.00 and 18.00 Monday to Friday and 08.30 to 14.00 on Saturday. In exceptional cases limited work on Sundays and Bank Holidays may be undertaken by prior written agreement with the Local Planning Authority. The Contractor may propose additional or alternative working hours for construction reasons or the Employer may require the Contractor to undertake certain construction works outside these hours. Any change to these working hours requires the prior agreement of the Local Planning Authority.

Best practical methods of reducing noise from machinery shall be employed at all times. Silencers and mufflers shall be used where applicable, machinery shall be noise reduced models, pumps used at night shall be electric served off the mains, and hydraulic rather than pneumatic equipment shall be used where possible.

Air Pollution

The Contractor will take all reasonable measures to avoid creating a dust nuisance and will, prior to commencement of any construction work, submit to the Local Planning Authority a method statement for approval setting out the proposed measures to be taken to prevent dust nuisance, and which shall be approved by the Local Planning Authority prior to the commencement of any construction work. Upon commencement of the construction work the contents of the approved statement shall be implemented and complied with throughout the period of the construction work.

Examples of measures to prevent dust nuisance to be included in the Contractor's statement are:

Damping down of dusty material using water sprays during dry weather.

The hard surfacing of heavily used areas, which will be kept clean by brushing and water spraying regularly.

All cutting and grinding operations shall be carried out using water-based dust suppression.

The complete sheeting of the bodies of all vehicles carrying spoil and other dusty materials.

During demolition operations, watering at rubble chutes, covering skips and screening of buildings with debris screens/sheets.

No materials shall be burned on site.

The effectiveness of the measures taken will be reviewed at regular intervals by the Employer and Contractor. Any additional measures to be taken shall be approved in writing by the Local Planning Authority prior to implementation.

The Contractor will take all necessary precautions to prevent the occurrence of smoke emissions or fumes from site plant or stored fuel oils for safety reasons and to prevent such emissions or fumes drifting into residential areas, nearby workplaces or areas of public realm. In particular, plant shall be

well maintained and measures taken to ensure that it is not left running for long periods when not directly in use.

The Employer will at the request of the Local Planning Authority seek agreements with the Local Planning Authority under the Control of Pollution Act 1974 section 61 on noise limits for work sites and any other relevant issues.

Protection of Surface and Groundwater Resources

The Contractor will obtain the appropriate licenses from the Environment Agency (EA) for discharges to watercourses or sewers or groundwater in accordance with relevant statutory provisions.

In planning and carrying out any construction works, precautions must be taken to secure the complete protection of watercourses and water in underground strata against pollution. These should include an investigation of past use of the site to ensure that operations will not disturb contaminated land.

If any pollution occurs, then the Contractor shall advise the EA and the Local Planning Authority immediately and take prompt action to minimise the impact and prevent reoccurrence.

A common cause of pollution from sites is through vandalism. Therefore, the Contractor shall ensure that sites are adequately protected by the provision of secure fences and locked accesses where possible and monitoring by personnel where appropriate.

In order to limit pollution from silt, cement and other potentially polluting materials, the Contractor shall ensure the following measures are followed:

To protect the Rochdale canal from any possible construction related pollution The relevant Guidance for Pollution Prevention (GPP) that are available on the NetRegs website (Northern Ireland Environment Agency and Scottish Environment Protection Agency, 2020; NetRegs, 2020) will be applied. While these are not regulatory guidance in England, they remain a useful resource for best practice. A copy of the completed PPG6 pollution guidelines will be completed and kept on site for reference all operatives will be given the Toolbox on Spill Control The canal will be monitored on a regular basis by the site manager

The Site is located within Flood Zone 1 in accordance with Environment Agency Flood Map and therefore has a low probability of flooding

Methods to deal with pollutant risk will be reviewed and adapted as construction works progress in response to different activities, weather conditions, and work locations

The washout from concrete mixing plant, or the cleaning of ready mixed concrete Lorries must not be allowed to flow into any drain or watercourse. Any residue shall be removed from the site any either recycled or disposed of at a suitably licensed waste management facility.

Site roads must be regularly maintained and kept free from deposits in order to prevent silt, oil or other materials entering any drain or watercourse.

Any lorry wheel cleaning facilities shall be securely constructed with no overflow and effluent shall be contained for proper treatment and disposal.

Before any discharge of water is made from the site, adequate provisions, such as settlement lagoons, must be made to ensure that pollution will not occur. The local EA office shall be consulted in order to obtain approval.

In order to prevent pollution from oil and chemicals:

All fuel and chemical storage must be either in double skinned storage tanks or sited on an impervious base within a bund and secured. The base and bund walls must be impermeable to the material stored and of sufficient capacity to contain 110% of the volume of the largest tank, or 25% of the total capacity of all tanks, whichever is the greater. Filling and refuelling must be strictly controlled and together with any oil storage tanks, should be confined to a location remote from any watercourse or drain. Leaking or empty drums must be removed from the site immediately and taken to an appropriate facility for treatment/disposal.

All valves and trigger guns shall be as resistant to unauthorized interference and vandalism as possible and should be turned off and securely locked when not in use.

The capacity and contents of any tank shall be clearly marked on the tank and a notice displayed requiring that valves and trigger guns be locked when not in use.

Any tanks or drums shall be stored in secure containers or compounds. These must be kept locked when not in use.

Before any tank is removed or perforated, particularly during demolition works, all contents and residues must be emptied by a competent operator for safe disposal. Pipes may contain significant quantities of oil or chemicals, and shall be capped, or valves closed to prevent spillage.

Prior to the commencement of construction the Contractor shall submit for written approval by the Employer and the Local Planning Authority his proposed procedures for minimising the effects of accidental spillage of pollutants and shall maintain the necessary remedial equipment on site throughout the construction period.

Handling and Disposal of Contaminated Materials and Other Wastes

The Contractor shall take all necessary measures to deal with noxious and toxic materials encountered. All contaminated sites and the hazards that they present shall be identified, as far as reasonably practicable, before work starts. If hazardous materials are found during site clearance, the contractor shall stop all work and secure the site from access by any person until methods of safe removal and disposal have been agreed with the client.

The Contractor shall refer to the HSE publication, HSG 66 'Protection of Workers and the General Public during the Development of Contaminated Land', HMSO 1991, for guidance on precautions required during construction on potentially contaminated sites. In particular, the Contractor shall ensure that all necessary precautions are taken to protect workers exposed to any noxious and toxic chemicals such that:

Protective clothing, including protective overalls, hand protection and safety wellingtons to be worn.

Contact with fill materials to be avoided.

If skin contact occurs, the affected area shall immediately be washed.

Smoking and eating on site shall be prohibited.

Shoes and boots shall be cleaned off prior to leaving the site.

Entry into confined spaces and trenches shall be minimised where possible. If entry is necessary, then clear procedures shall be developed for entry into trenches, manholes, etc, where there is a possibility of oxygen deficiency or asphyxiation or toxic gases. This shall include monitoring for a range of gases, etc.

If it is necessary to remove contaminated materials and other wastes from site, then open Lorries or skips used for removal shall be securely sheeted before vehicles leave the site. Only authorised carriers of waste shall be used. The written approval of the Local Planning Authority must be obtained of the waste management facilities to be used together with the related volumes and routing of waste delivery vehicles. Detailed records of disposal will be necessary and the Contractor shall agree this with the Environment Agency.

The Contractor shall obtain the prior written approval of the Local Planning Authority before any imported material is brought onto any part of the construction site.

The Contractor shall endeavour to limit the amount of waste created during construction by seeking to minimize the initial use of materials and then recycling materials where appropriate.

If the Contractor wishes to arrange for any recycling of contaminated materials encountered during the construction works, then before undertaking any recycling measures he shall consult with and obtain the prior written approval of the Local Planning Authority to the recycling of the materials.

The Contractor shall maintain written records (including waste transfer documentation) for inspection by the Employer and the Local Planning Authority detailing the disposal off site of all waste materials.

All proposals for the temporary storage of soil and spoil shall receive the prior approval of the Local Planning Authority and include the proposals for the reinstatement of any land used for this purpose.

Trees and Vegetation

Before any works take place on site, the Employer shall establish, with the Local Planning Authority, a Tree and Vegetation Protection Policy.

The Policy will specify measures for dealing with trees that may be directly or indirectly affected by the works. The policy must be consistent with BS 5837 'Guide for Trees in relation to Construction'. In particular:

The Contractor shall ensure that any trees or hedges or ecologically sensitive areas which are not to be removed under the Contract shall be protected by fencing and visible barriers prior to works commencing and these shall be maintained throughout the works. Such fencing shall include protection of the area occupied by the tree roots. The timing of the fencing erection and its removal, and any access into ecologically sensitive areas shall be agreed in advance with the Local Planning Authority.

Where any existing trees or hedges are to be removed, the Contractor shall before commencing, any clearing in the areas concerned, agree with the Local Planning Authority those areas to be protected, those to be removed and any measures/working methods necessary to safeguard retained trees.

If the Contractor considers it essential to trim branches or to carry out work adjacent to roots, he shall first obtain the permission of the Local Planning Authority. Such permission, if given, may include a

requirement to hand dig and may specify the size of roots to be retained and remedial/reinstatement procedures.

Site Boundaries/Hoardings/Temporary Structures on the Public Highway

The Contractor shall ensure all designated work sites are completely and adequately fenced off from members of the public to prevent any livestock and people entering. Fencing shall be constructed to the reasonable satisfaction of the Local Planning Authority, with solid boarding used near houses to reduce noise. If hoardings are provided bulkhead lights shall be fitted where appropriate.

The provision of gates in the fencing or hoarding shall, as far as practicable, be positioned, constructed and kept shut to minimise noise to nearby properties from the work sites direct or from plant entering or leaving the site.

The Contractor shall ensure that if hoardings are provided. They are painted on the external face in a plain uniform manner and include a project logo agreed with the Local Planning Authority.

The Contractor is expressly prohibited from displaying or allowing to be displayed any advertisement, notice etc (including illicit bill or fly posting) on the hoardings without the prior permission of both the Employer and the relevant local authority. The Contractor shall also ensure that all graffiti or defacements to the hoardings are removed and made good as soon as reasonably possible.

There shall be provided at each operating work site an information board detailing information on the site program, together with telephone contacts (including an emergency telephone number) for use by members of the public who wish to lodge complaints. (Emergency Contact details Richard Buffery Construction Director +44 7944931324)

The Contractor in accordance with any appropriate licence granted by the Highway Authority shall maintain any fenced storage areas, scaffolding gantries, loading/unloading bays, skips or other temporary structures on the public highway provided by the Contractor.

The Contractor shall ensure that construction buildings and equipment are sited so as to minimise visual intrusion, consistent with the efficient operation of each work site. The layout of any Contractor's compounds shall be submitted to and approved in writing by the Local Planning Authority prior to commencement of construction.

Site Activities

The Contractor shall ensure the following general requirements are met in relation to the construction works:

Smoking areas will be provided, at suitable locations at ground level. Smoking must not be allowed at any location below ground level.

Rubbish will be removed at least weekly and each work site kept clean and tidy.

Toilet facilities will be kept clean at all times.

Food waste will be kept contained and removed at least weekly.

Wheel washing facilities will be brushed clean at monthly intervals.

Detailed daily records will be kept of climatic conditions including rainfall, minimum and maximum temperatures and humidity.

Records of construction plant used on the site shall be maintained at weekly intervals.

The Contractor shall comply with the requirements of the local fire authority and take all necessary measures to minimize fire risks.

A nominated representative(s) from the Employer and the Local Planning Authority and their agents (e.g. a local authority Environmental Health Officer) will inspect each work site at regular intervals. Should the Contractor not be complying in any respect with the Code of Construction Practice he shall have a period of three days or such shorter period as may be deemed necessary by the Employer to rectify the situation. Otherwise the Local Planning Authority may commence enforcement proceedings.

The Contractor will not allow any residential accommodation on site except with the prior consent of the Local Planning Authority. Mess rooms, locker rooms, toilets and showers will be permitted.

Where practicable and suitable the Contractor will arrange for a viewing platform at certain sites, these to be agreed with the Local Planning Authority.

At each work site all vehicles shall enter and exit in a forward direction except where space restriction does not permit this. In that event movement shall be properly controlled by a responsible person(s) observing the rear of the vehicle.

All loading and unloading of vehicles will take place off the public highway unless a temporary Traffic Regulation Order has been deemed necessary to revoke a loading ban or it is absolutely unavoidable in which case the Contractor should seek the approval of the Highway Authority.

The Contractor shall provide suitable lighting to the site boundaries with illumination sufficient for the safety of the passing public including mobility-impaired people. Site lighting must be designed, positioned and directed so as not to unnecessarily intrude on passing drivers on public highways, and having due regard to residential premises neighbouring the site.

If the Contractor provides site security cameras, these must be located in positions that will not cause offence to local residents or businesses.

On completion of the construction works the Contractor will clear away and remove from each work site all plant, surplus materials, rubbish and temporary works of every kind and leave the whole of each work site and works in a clean and tidy condition to the satisfaction of the Employer and the Local Planning Authority.

The Contractor shall agree with the Employer and the Local Planning Authority proposals for the reinstatement of all work sites prior to the commencement of the construction works.

Liaison and Awareness

The contractor will use the Considerate Contractor or similar approved scheme and set out its proposals, to be agreed with the Local Planning Authority for informing local residents, local businesses and users of any public realm affected by the works of the likely duration and impacts of the works.

The Employer will put into place a procedure whereby members of the public can if necessary make contact by telephone direct with a 'hot line' facility, or alternatively provide details of the named contacts for written complaints. The Employer will give consideration to the establishment of a

number of local liaison fora during the construction of the works involving representatives from the Employer, Contractor, local councils and the public.

The Contractor will ensure that details of the relevant contacts within the Employer and Local Planning Authority are readily available, and shall ensure all site construction staff are easily identifiable to the public by use of identity cards or an equally effective system.

The Contractor will ensure that all site construction staff have received an induction that includes all the issues contained in this Code of Construction Practice.

The Contractor will introduce a system for the recording and dealing with of all complaints, which shall be collated by them and a copy given to the Local Planning Authority and the Employer on a regular basis

Relevant BS Standards and Guidelines

In addition to compliance with all relevant legislation applicable at the time of the construction works and compliance with certain BS standards referred to in Section C of this Code of Practice the following additional BS standards and guidelines (including any updates) issued by various statutory bodies must be complied with:—

BS 4142: 1997 Method of rating industrial noise affecting mixed residential and industrial areas

BS 5228:2009 Code of practice for noise and vibration control on construction and open sites- parts 1 and 2

BS 6164:1990 Safety in tunnelling in the construction industry

BS 8005: Part 3 - 1989 Sewerage Part 3 Guide to planning and construction of sewers in tunnels

BS 6031: 1981 Code of Practice for earthworks

BS EN 60651 (1994) Specification for sound level meters

HSE Guidance Notes GS 29/1 to 29/4- Health and safety in demolition work.

HSE Guidance Note EH 40/96 - Occupational Exposure Limits 1996

Relevant EA Guidelines and Regulations

Chapter 8 of the Traffic Signs Manual 1991

Highways Act 1980 and Amendment Act 1986

HSE Guidance Note HS(G)66 - Protection of Workers and the General Public during Development of Contaminated Land 1991

Safety At Street Works And Road Works Code Of Practice 2002

New Roads and Streetworks Act 1991

Traffic Signs Regulations and General Directions 1994

NJUG recommendations

Road Traffic Act 1988 and 1991

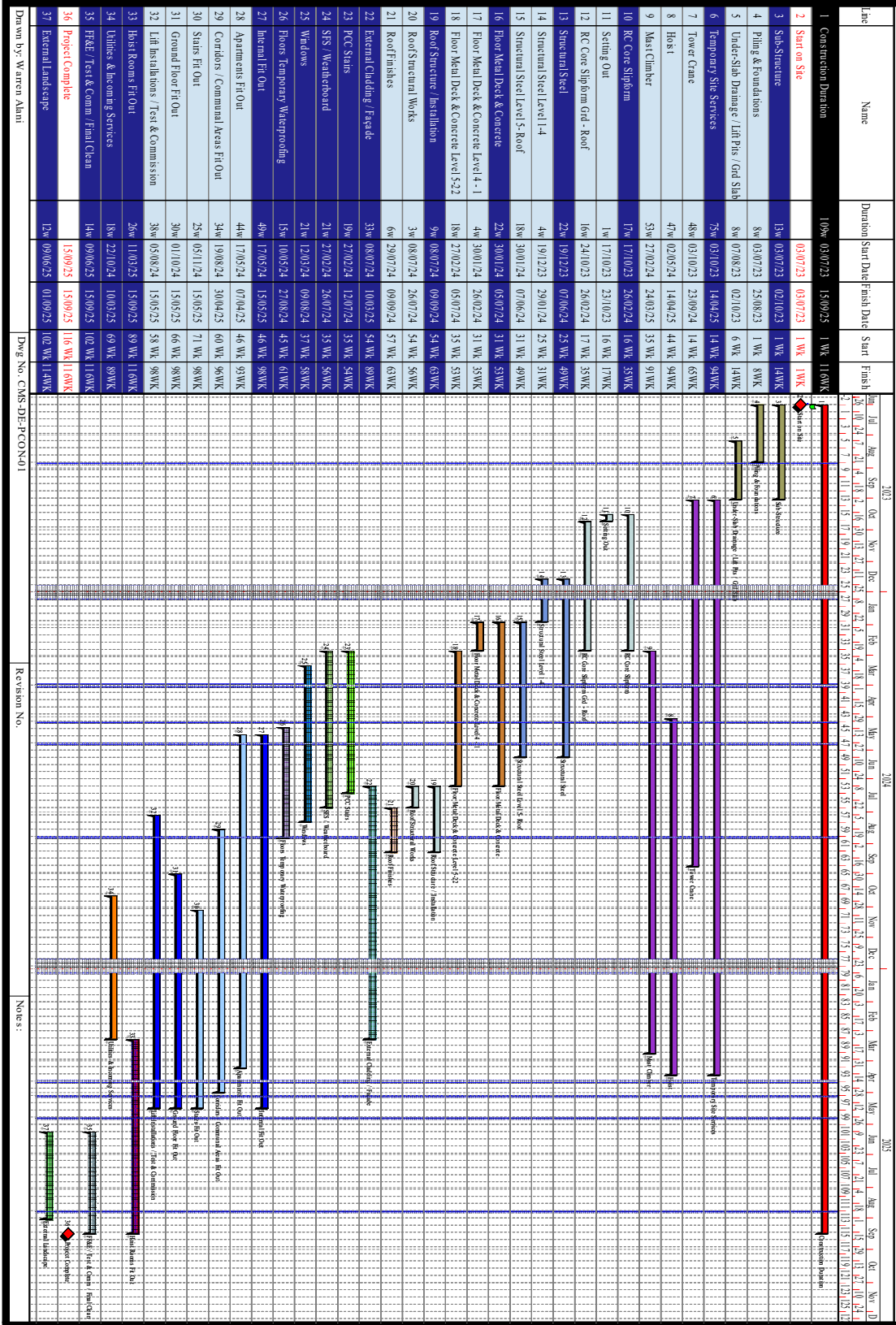
Road Traffic Regulation Act 1987

Construction (Design & Management) Regulations 2015

Appendix 2 High Level Construction Programme

325-327 Deansgate Hotel, Manchester

Draft Construction Programme - High Level Summary



Appendix 3 – Technical Note for Brickwork Repairs



19 June 2023

325-327 Deansgate. Technical Note to support discharge of conditions attached to Listed Building Consent (125805/LO/2019) – Heritage Architecture Ltd.

The following Technical Note has been prepared by Heritage Architecture Ltd (HA) to support the discharge of a condition attached to the Listed Building Consent (LBC) application for 325-327 Deansgate, Manchester, M3 4LQ. The focus of this note relates to brickwork repair.

Planning permission for the demolition of an existing building and erection of a 22-storey apart-hotel was approved by the Local Planning Authority (LPA, Manchester City Council) on 26 June 2020 (Application Reference: 125804/FO/2019). The existing building at 325-327 is not of any heritage interest, although is partially located within a section of the Grade II listed Castlefield Viaduct. This consequently triggered the need for Listed Building Consent (approved, ref: 125805/LO/2019).

Heritage Architecture Ltd provided Heritage Statement to support the application (Heritage Statement, issued 10th December 2019, SLHA). The Heritage Statement concluded the Proposed works to the parts of the Grade II Castlefield Viaduct structure would result in principally minor beneficial impact, with the removal of the 1960s infill to the arches being considered positive. The subsequent alterations to alter the arches to accommodate a new unit were considered to incur some negligible impact and would be supported by subsequent method statement reports.

Within the Decision Notice issued by the LPA, Condition 3 stipulates that:

3) Prior to the removal of infill to the arches, as shown on drawings 10185-SHP-Z0-ENXE-A-B5D8-G100-0003, 10185-SHP-Z0-ES-XE-A-B5D8-G100-0003 and 10185-SHP-Z0-EE-XE-A-B5D8-G100-0003 stamped as received by the City Council, as Local Planning Authority, on the 8 January 2020, a detailed method statement and specification for the demolition/removal, alteration and repair of the exterior/interior of the listed structure shall be submitted for approval in writing by the City Council, as Local Planning Authority. This shall include methods for dismantling the infill areas of the arches to avoid damaged to the historic fabric and details, including materials, how the arches will be repaired (including masonry repairs internal/external). The demolition/removal and repairs must be carried out in accordance with this method statement and specification.

Brickwork.

- Exposed brickwork is to be cleaned and re-pointed where required. Figure 1 below illustrates one of the many areas which would benefit from suitable mortar infill and repair.
- Care is to be taken in removing modern cementitious mortar repairs, as use of mechanical tools can damage the brick arises. New mortar is to be tested to ensure a like-for-like match, with the structure requiring a breathable lime mortar without waterproofing agents, so that over time the brickwork will be able to dry out.
- It is likely that white salts will appear on the surface as this occurs, which will be unsightly, but can be brushed off. Cleaning the brickwork to remove paint must be undertaken carefully to avoid abrasion or damage to the adjoining stone banding.
- Replacement facing bricks should closely resemble the retained existing bricks in colour, texture and overall form, and be of exactly the same dimensions (SLHA have recommended contacting Northcot for a suitable replacement). A sample should be agreed on site by the architect and conservation advisor.
- All new bricks are to be dated on one of their faces that is to be bedded into the wall.

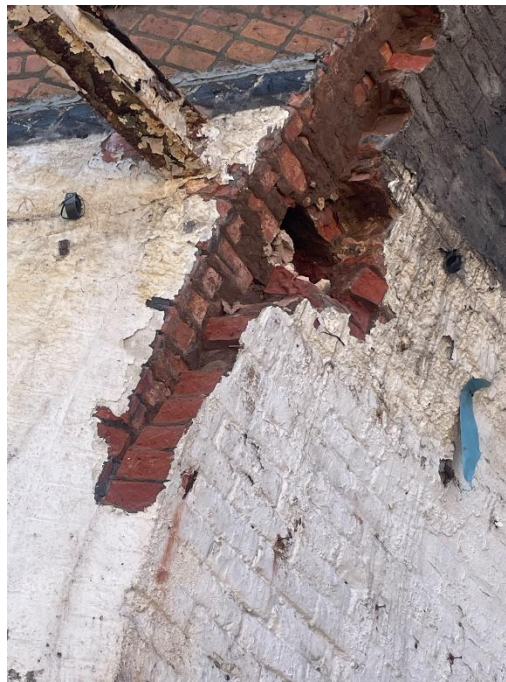


Figure 1: Example of damaged brickwork where lime mortar infill would be required, and brickwork replaced like-for-like.

- Where movement has occurred, it should be established whether this movement is at risk of continuing, or it has ceased before any intervention is designed. Cracks and / or larger than normal mortar joints may simply require re-pointing.

- All repair works should be preceded by monitoring and investigation as cracks may be historic and the brickwork stable, therefore not requiring any intervention.
- Primarily, cracks should be re-pointed and monitored to see if movement is ongoing or stable.
- The use of helical bar may be appropriate to prevent further movement but consultation with the project structural engineer shall be required to establish the need for stitching cracks.

Mortar

Raking out and Mortars generally

- Raking out shall be undertaken with hand tools only, the use of mechanical means to remove mortar (air chisels, angle grinders etc.) is not appropriate as they risk irreversible damage to masonry and brick.
- Chisels should be no more than 50% of the width of the mortar joint in thickness to prevent accidental damage to the arisses of the brick and stone.
- Generally, where cement mortars have been used, an attempt to remove them should only be made if they have de-bonded from the stone or brick. Attempting to remove well adhered cement mortar can result in damage to the arisses of the surrounding masonry and brick. Only in the circumstance that the cement mortar is causing an increased rate of erosion shall its removal be permitted when well adhered.
- Pointing mortar is intended to be a sacrificial element of the building that acts to preserve the masonry and brickwork from premature decay.
- Where possible, all new mortars should be lime based and replicate the ingredients of the original materials. Where this is not possible, an authentic replication of the original mortar shall be acceptable where it can be demonstrated that the new material is functionally appropriate.
- Mortar analysis should be undertaken across the building to include pointing mortars for both sandstone and brickwork. The number of samples required should be agreed with the conservation consultant and the information required to accurately understand the mortars used.
- Mortar analysis should be undertaken in a laboratory that is UKAS accredited and meets the internationally recognized standard of ISO/IEC 17025 to the approval of the project architect / conservation consultant.
- Each mortar sample analysed should provide the following details:
 - a) Visual observations of the mortar received (Macroscopic and Microscopic)
 - b) Carbonation of received sample
 - c) Breaking Strength
 - d) Friability
 - e) Colour (Using Munsell Soil Colour Chart or similar)
 - f) Water droplet test for indication of permeability / absorption rate

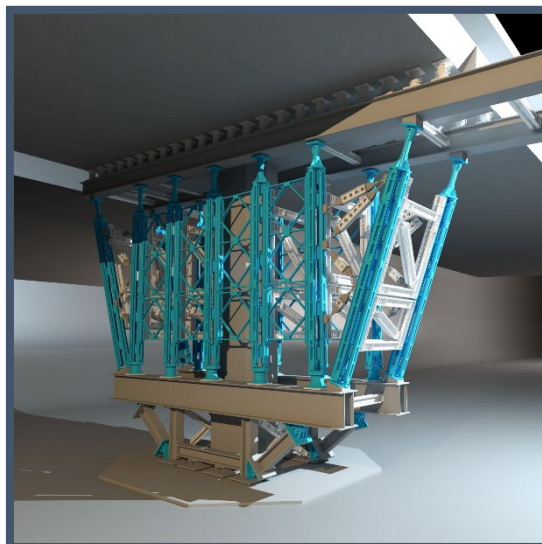
- g) Weight ratios of binder to aggregate
 - h) Observations during acid digestion
 - i) Aggregate size distribution by weight
 - j) Hydraulicity and inclusions (tested by X-ray Diffraction (XRD))
 - k) Indication of source of a matching aggregate
 - l) Mix proportions in weight and volume
- In some circumstances thin section analysis may be required to assess the mortar for the original mixing method and actual porosity.
 - The adopted specifications for new mortars should demonstrate appropriate compatibility with the existing mortar, including the appropriateness of the original mortar and its apparent success. It should also meet the new function of the façades as imposed by the requirements of the surrounding masonry / brickwork, the requirements of the building component, any change in the function / behaviour of the mortar, any change in environmental conditions and any requirements of the project which may impact on the function of the mortars such as the time of year the mortar is being placed.
 - Where necessary, the contractor and operatives should be adequately trained in mixing, using and protecting the type of mortar to be used. Details of previously undertaken works should be provided and / or adequate training undertaken.
 - Quicklime and other lime binders are volatile, reactive materials that can have serious health and safety implications if not handled and used with due care. The contractor will present method statements for: the handling, storage, mixing, and application of these mortars to protect all operatives against avoidable harm to the project architect / conservation consultant prior to commencing on site.
 - Aggregates should be as close a match to the original mortar as possible and sourced from a local sustainable source. The contractor shall ensure that the aggregate is suitable for purpose and is not contaminated with anything that would adversely impact the mortar's performance or durability. The aggregate should be well-graded and generally the largest aggregate should be no larger than 2/3 the width of the mortar joint.
 - Cement for mortar is not acceptable for use on the brickwork and limestone cladding unless otherwise specified.
 - Admixtures / Pozzolans: Do not use in mortar unless specified or approved. Pozzolans should be based on any inclusions identified in the mortar analysis or justified to the needs of the new mortar being placed. Pozzolans should be used sparingly and not impede the function of the mortar as a sacrificial element. Do not use calcium chloride or any admixtures containing calcium chloride. Admixtures, if specified, to be to BSEN 934-3:2003.

Mortar (general)

- Bedding mortars require different characteristics to the mortar outlined below due to the requirement of compressive strength. Where bedding mortar is being replaced the contractor is to consult the conservation consultant and structural engineer.
- Pointing mortars are a sacrificial element of the structure and enable the masonry and brick to survive for future generations by drawing moisture and salt from the wall. The profile of any re-pointing should therefore be agreed on site to match that of the surviving mortar. Pointing should generally be in a non-hydraulic lime mortar in a precise mix to be agreed in response to mortar analysis of the existing mortar and to match the existing mortar in respect of colour.
- The mortar needs to be robust enough to be able to carbonate through exposure to the weather, whilst not impeding its functionality.
- All mortars should follow the standards outlined above.

Mortar to the brickwork needs to be a good colour and texture to match to the original surviving mortar.

Appendix 4 – Structural Monitoring Variation



325 Deansgate Structural Monitoring Variation

FAO: Chris Metcalfe
Client: Telsafe Risk Management
Ref: CT/SH/902683/27825Rev A
Date: 26/06/2023

Project: 325 Deansgate Structural
Ref: CT/SH/902683/27825
Date: 26/06/2023

Introduction

Re : 325 Deansgate

Further to recent project correspondence we have pleasure in submitting our updated proposal and quotation for the monitoring at the aforementioned works.

The updated package consists of the following additional items:

- 1 No. WorldSensing logging gateway
- 24 No. Wireless bi-axial tilt sensors w/ angled tilt beams
- Manual 3D movement surveys (*As needed*)

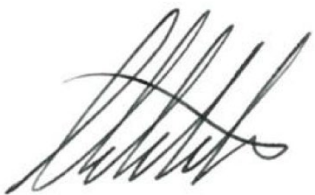
We assume that the works will be carried out under our existing contract order and agreed terms and conditions and look forward to receiving your formal instruction to proceed. We would draw your attention to any assumptions, limitations or attendances that may be attached to this quotation.

Standard Terms & Conditions - <https://www.mabeyhire.co.uk/footer-pages/terms-and-conditions>

Should you require any further information or assistance please do not hesitate to contact the undersigned.

Yours faithfully

Mabey Hire Ltd



PP - D BRADSHAW

MONITORING MANAGER

Solution Overview



Following on from the client suggestion of manual cant stick surveys, Mabey Hire proposes the following solution to monitor for movement & settlement on the Metrolink viaduct at 325 Deansgate. This system is dependent on access to the sensor locations.

24 No. wireless bi-axial tilt sensors on angled tilt beams (marked in red), 12 No. within each arch of the viaduct. Within each arch these would be installed as 6 No. at chest height and a further 6 No. installed higher on the arch to monitor for any deflection the structure may see. These will be fixed using drill & fix M6 masonry bolts. These tilt sensors will all be connected to a locally installed logger, which will upload the data onto the LIVEsite portal.

An additional 3 No. tilt sensors to be installed on the south face of the viaduct, as well as 2 No. tilt sensors on the 3rd party wall across Century St (both pictured overleaf).



Next to each tilt sensor will be a monitoring target (marked in green - ideally a drill & fix prism, however adhesive reflective alternatives are also possible). A series of targets will also be installed on the external face of the viaduct (access and line of sight permitting) Once installation of the structural monitoring system is complete, an initial 3D movement survey will be undertaken of these targets to establish a baseline reading. Should significant enough movement be detected within the tilt sensors, MHL can attend site to complete a follow up survey and provide a report of the findings to help quantify any movement in tilt data.

MHL assumes that access to all sensor locations (including provision of MEWP or similar) will be provided by the client.

MHL feels that this automated solution would provide data at a much greater frequency as opposed to a manual visit once per week and removes the need for acquiring possessions from the track operator.

There is also an optional proposal attached for manual track surveys on a client requested basis. This would pair well with the automated system should the client be concerned for the effects of movement within the structure on the track above. These surveys would assume



necessary possessions or track engineering hours are acquired by the client, and that surveys would only be completed on the affected track not in interference with the existing sedum tray installation.

