

Castlefield Viaduct Phase 2

Construction Management Plan

Manchester & Cheshire Construction

Draft 1

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01. Introduction

The purpose of this Construction management plan is to outline and acknowledge potential impacts of the proposed work on the environment and wider community, and thus propose actions and solutions for how those effects can be mitigated.

This document is structured to include:

- Individual requirements of principle contractor and sub-contractors.
- Action to achieve procedural compliance.
- Action to minimise the risk of any contamination of the local environment.
- Actions and procedures in place to ensure a harmonious relationship with the local community during the period of works.

Manchester & Cheshire Construction will be acting as principal contractor throughout the entirety of the project. Manchester & Cheshire will always prioritise the safety of operatives and the wider community and promote best construction practices.

This construction management plan will be made available on site and will be referred to throughout the duration of the project to ensure best practices are being followed and socio - environment disruption is kept to a minimum.

02. Scope of Work

Following construction and operation of the temporary elevated urban park at Castlefield Viaduct that explored what may be possible by utilising an unused historic structure. The pilot provided a platform to facilitate consultation with local communities, enabling the project to deliver something of, for and by Manchester in the long-term. The pilot sought input from local audiences and partners and test interventions enabling a decision to be made together how the main scheme shall ultimately look, feel and work most successfully to improve the cities green and blue infrastructure and offer a new heritage attraction supporting the local economy.

Phase One successfully delivered the desired outcomes set out below

- To temporarily reutilise an unused and currently inaccessible grey space for an elevated urban park to test and codevelop a long-term scheme that maximises benefits for both communities and biodiversity.
- To test design elements and make sure the urban park becomes a high-quality nature and heritage space in the long term.

Following a successful pilot scheme the aim of the phase 2 project is;

- To create a new, high quality green and open space for the people of Manchester that is appropriate to its location.
- To create a destination park for onward and active travel.
- To create sense of Mancunian ownership and sense of place for the viaduct.

03. Site Plan

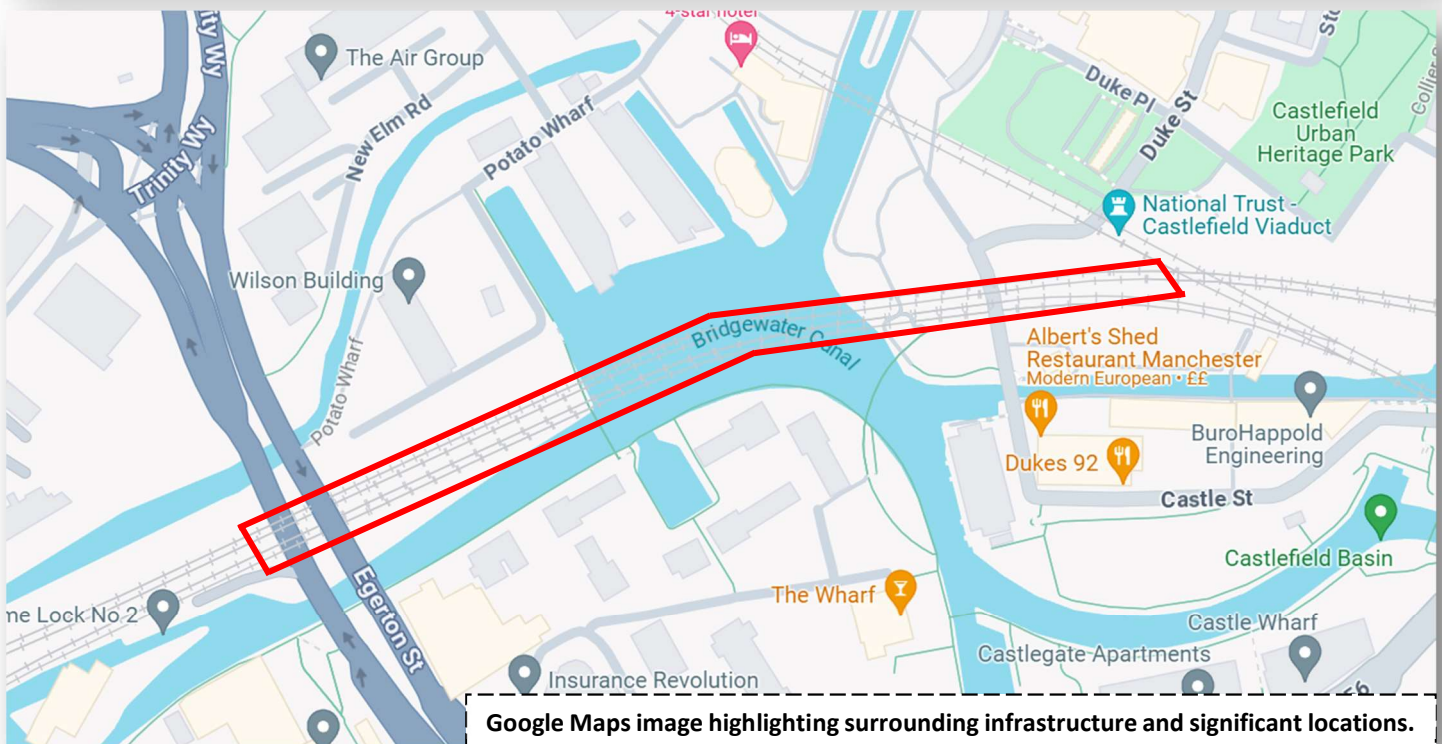
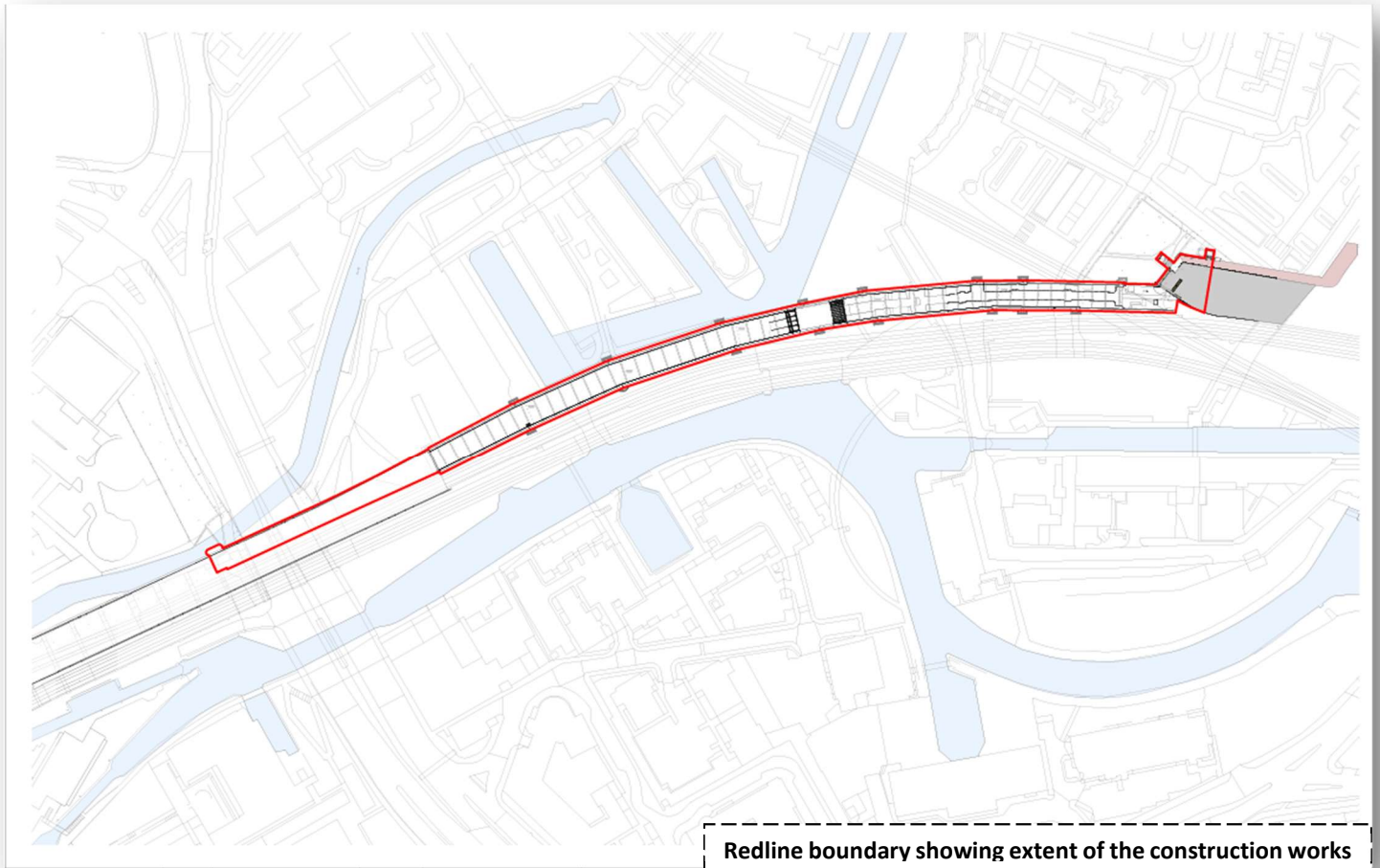




Figure 10 City Centre, pg. 30, Manchester's Great Outdoors – A Green and Blue Infrastructure Strategy for Manchester 2015 – 2025 (G&BIS)

The Bridgewater canal, running underneath and adjacent to the south of the site. Works in this location will require added planning and co-ordination to ensure towpath access is maintained as much as possible throughout the scheme. Diversions/restrictions will only be requested during phases of work where a significant risk to the public is posed due to the nature of the construction works such as crane lifts from Castlefield Bowl area. The canal and river trust will be consulted throughout the planning and development of the scheme.

Environmental control measures will be implemented to ensure no construction waste or run off enters the water course. Existing drains will be sealed where possible on the viaduct, spill kits will be present at all times, drip trays will be provided for all plant and machinery onsite and an environmental specialist will be consulted for expert advice along with delivering a toolbox talk to all operatives on site.

The site is in the vicinity of the Metrolink line; therefore collaboration will be required with TfGM in the planning and construction of the works. Manchester & Cheshire Construction are familiar with working adjacent to Metrolink lines, have access to 'Working safely near Metrolink document' and have applied for and adhered to the blue permit control measures previously.

Manchester & Cheshire Construction have access to and are familiar with the constraints listed in the document titled 'B2.Asset protection Guidance Document v9' from Network rail.

04. Site Personnel & Visitors

Prior to arrival on site, all site personnel and visitors will need to have completed an online site specific Manchester & Cheshire Construction induction. This will inform the individual of all the relevant information related to the site e.g., first aiders, welfare locations, site expectations, site hours, etc. Site personnel will be required to fill out an additional induction form to gather personal information such as emergency contacts, proof of competency, etc. A compulsory induction quiz is also added at the end to ensure that it has been properly read and understood. Refusal to complete said induction/quiz will result in individuals being refused entry onto site.

All visitors onto site will be required to adhere to standard PPE requirements (hard-hat, high-vis, safety boots), and additional PPE may be required where necessary (ear-defenders, safety glasses, etc).

A display board will remain prominently displayed within the site cabin for all site personnel and visitors, highlighting the nature of the works, contact names, telephone numbers/postal address and all relevant health & safety and legal documentation.

05. Surveys & Investigations

The following information has been received during phase 1, any surveys and investigations that need updating will be performed during the site mobilization period.

- Various Royal Haskoning Reports:
 - Acoustic Assessment Phase 1
 - Services and Utilities Information
 - Phase 1 Contamination Assessment
 - Phase 2 Contamination Assessment
 - Drainage Assessment
 - Flood Risk Appraisal
- Working near Metrolink information document – issued by Transport for Greater Manchester
- Blue Permit request form
- National Trust “Guidance. General requirements for Building (Construction) work” document

Geology

No Superficial deposits recorded. Bedrock – Chester Pebble Bed Formation (Principal Aquifer). The only works that will effect the ground are to the west of the site adjacent to the A57 where the new staircase and lift are proposed.

Ground Stability

Site is not located within an area affected by historical coal mining. There are 19 records of surface ground workings on the land below the viaduct; these include 12 records of canals, four records of unspecified wharves, one quay, one unspecified and one timber wharf. An additional 24 records of surface ground working are located within 250m of the site.

Flood Risk

Ground Water vulnerability is high in the eastern half of the site and low in the western half of the site. Bridgewater canal and Basin are the nearest Surface water bodies extending to the North and South of the site. The land directly below the viaduct has a high risk of river flooding and is categorised as flood zone 2. This area has a moderate to high risk of surface water flooding.

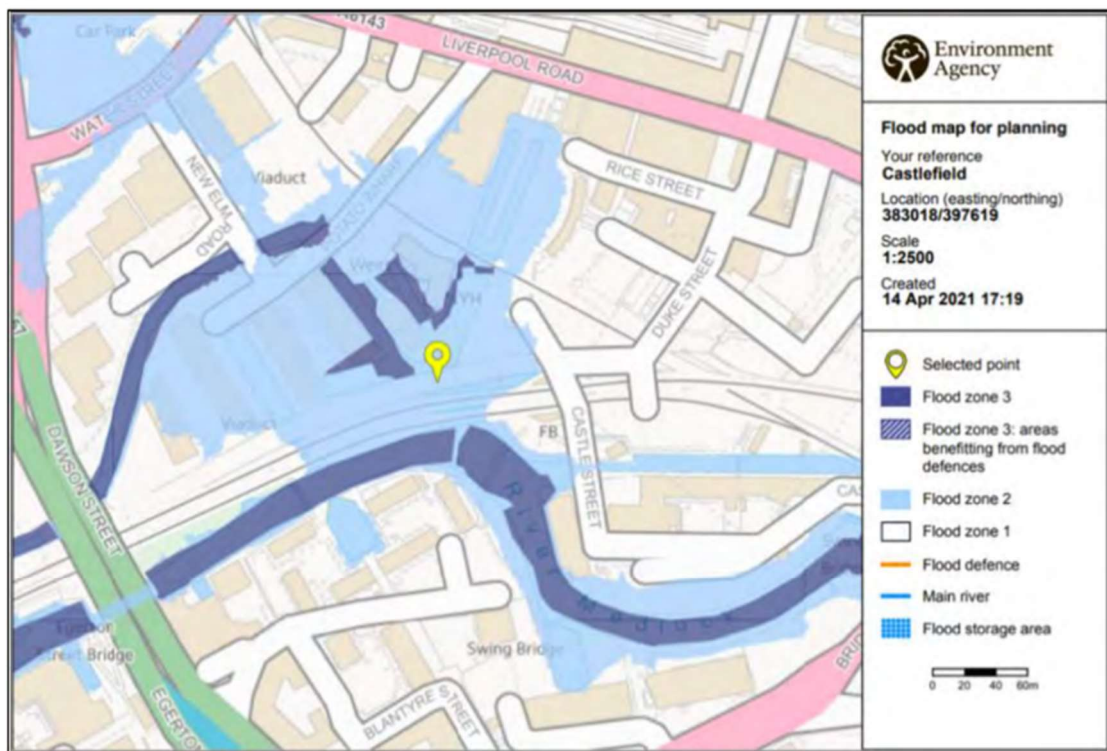


Figure 3-1: Flood Map for Planning (Source: Environment Agency)

The proposed re-development of Castlefield Viaduct relates to the structure that spans across the watercourses beneath and is situated at an elevation that is a minimum of 15m above the watercourses.

Subsequently, the existing viaduct is at low risk of fluvial flooding and would be considered to pass the Sequential Test should this be submitted to the Local Planning Authority.

The detailed flood model data from the Environment Agency includes results extracted from the Medlock SFRA 2011, which have been assessed at the access location onto the proposed elevated walkway.

As previously indicated, "Node 2" and "Node 3" are considered to be the most representative indicator of flood risk to the site. These are summarised below in Table 4-3.

Table 4-3: Maximum Undefended Modelled Flood Levels (Source: Environment Agency)

Model Node	Maximum Undefended Modelled Flood Levels (mAOD)				
	4% AEP	1% AEP	1% AEP +35%CC	1% AEP +70%CC	0.1% AEP
Node 2	25.53	25.70	25.92	26.16	26.35
Node 3	25.52	25.69	25.91	26.15	26.34

The proposed elevated walkway is to be accessed from the canal tow path beneath the viaduct. Following an assessment of the 25cm resolution topographic LiDAR data, the ground levels within this area range from approximately 25.50mAOD to 26.50mAOD (see Section 2.4 and Figure 2-4).

Furthermore, ground levels have been assessed at the specific proposed access point onto the elevated walkway. Here, the ground levels are approximately 25.70mAOD (Figure 2-5).

Potential flood depths have been calculated at the access location on to the proposed elevated walkway.

These have been determined by subtracting the average topographic level from the maximum modelled 1D flood level for each design event provided.

Table 4-4: Maximum Undefended Flood Depths (Calculation: Depths = Modelled Flood Levels – Average Topographic Level)

Ground Level	Maximum Undefended Depths (m)				
	4% AEP	1% AEP	1% AEP +35% climate change allowance	1% AEP +70% climate change allowance	0.1% AEP
25.70mAOD	0	0	0.22	0.46	0.65

Access onto the walkway is unlikely be affected during the 1 in 25 year return period (4% AEP) and 1 in 100 year return period (1% AEP) storm event. However, depths of up to 0.65m could occur at this location during the 1 in 1,000 year return period (0.1% AEP).

The Environment Agency provided a historic flood extent showing the canal tow path historically flooded in December 1991 (Figure 4-5). As such, there is a risk of flooding from fluvial sources at the foot of the elevated walkway during the present day 1 in 1,000 year flood event or in the future when taking climate change into account.

Drainage strategy

The existing drainage strategy on the viaduct consists of a series of drainage grids covered with ballast, these are approx. 400mm in diameter, in a row with equal spacing in a north-south direction as below image.



These grids penetrate the viaduct deck and the water is discharged via pipework into the adjacent water courses as below image.



Network Rail's historic engineering drawings of the viaduct confirm that the systems observed at the site are the main means of drainage for the viaduct. These are shown in Figure 3-3, Figure 3-4 and Figure 3-5, in which the drainage elements were highlighted in blue for clarity.

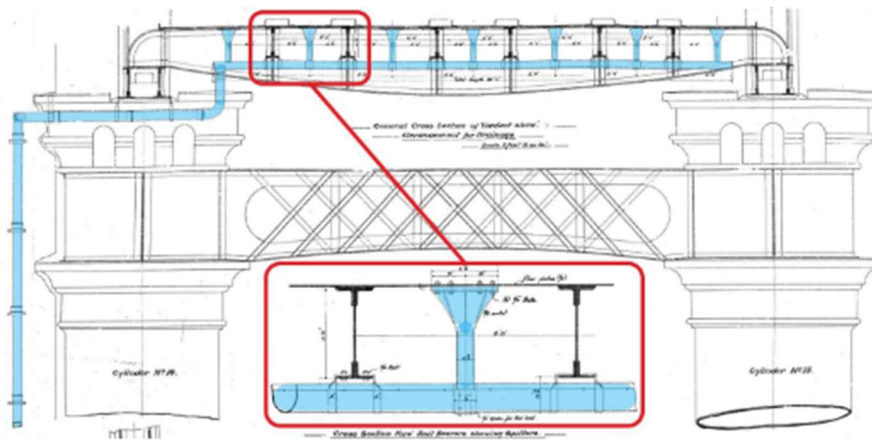


Figure 3-3: Section Through Viaduct with Drainage Inlet Detail

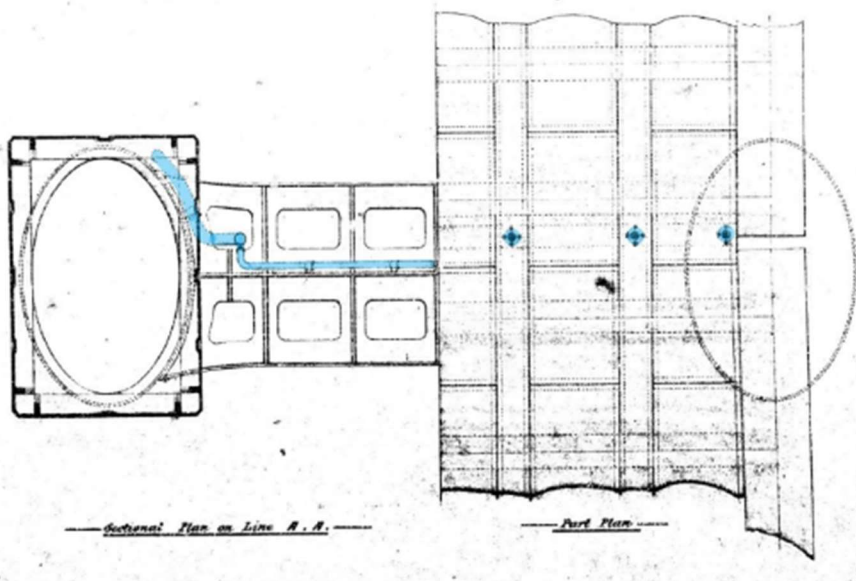


Figure 3-4: Plan View of Drainage Inlets at Deck Level and at the Underside of Deck Structure

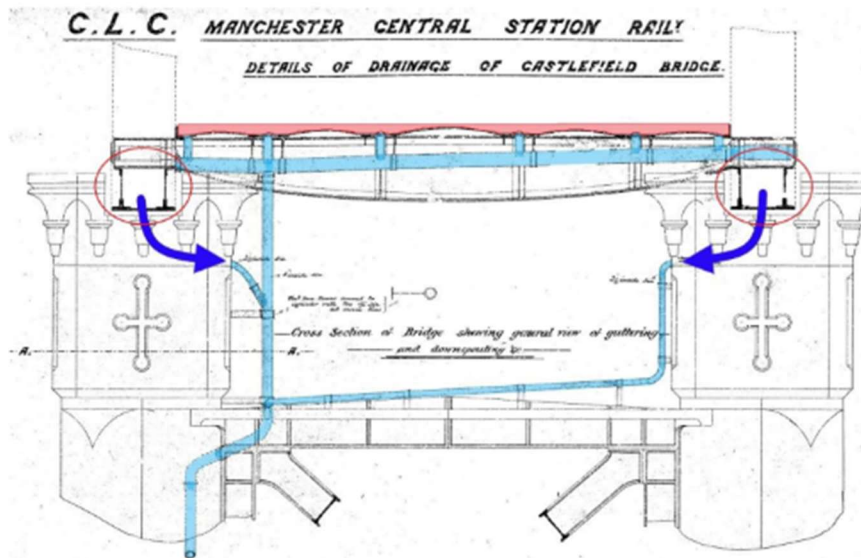


Figure 3-5: Section Through Viaduct with Additional Drainage Collectors Under Deck

The drainage strategy for the scheme will require allowance for attenuation of runoff at deck level. The strategy will be like the ones developed for green and blue roof solutions in buildings. These systems act as a runoff holding structure at high level that delay discharge into the receiving networks below. This will require creating an impermeable base in which to hold the water.

Noise

The measured data and subjective impression indicate that noise associated with Metrolink and rail movements are the dominant noise sources at the site. Noise associated with nearby road traffic and leisure and entertainment facilities are not highly influential on the noise level incident on the site, over the noise associated with Metrolink and rail movements. The measured noise levels at the site are below the WHO recommended levels for leisure and commercial facilities, 70 dB LAeq,24hr and 110 dB LAFmax,24hr, and below the daily lower exposure action value, 80 dB LAeq, set out in the Control of Noise at Work Regulations 2005. It is considered that the WHO guidelines are relevant benchmarks for the assessment of noise associated with the proposed use of the Castlefield Viaduct, and that therefore the proposed use of the site as an urban park and transport hub will not present any significant noise effects to future visitors or employees at the site.

Ground Contamination

An intrusive ground investigation comprising the excavation of 10 hand dug pits and 10 paint scrapes was undertaken on the 8th July 2021. The hand dug pits and paint scrapes were undertaken by Royal HaskoningDHV environmental engineers.

Summary of Field and Laboratory Work

Service Clearance

Intrusive investigation locations were positioned to avoid features identified on the service drawings.

Hand Dug Pits

Hand dug pits were excavated at 10 locations across the viaduct to a maximum depth of 0.3m below ground level (bgl). Each hand dug pit was backfilled with arisings to pre-excavation levels. The hand dug pits showed hydrocarbon staining as below table.

Exploratory Hole Location	Visual/olfactory evidence of contamination	Strata
HP101	Oily/greasy feel on soil. Some hydrocarbon staining on track ballast.	Made Ground
HP102		
HP103		
HP104		
HP105		
HP106		
HP107		
HP108		
HP109		
HP110		

Paint Scrape Samples

Paint scrape samples were collected from ten locations across the viaduct. Paint samples were collected from each paint scrape location. Paint samples for laboratory analysis were obtained by scraping the paint flakes off the viaduct using a stainless-steel paint scraper. The stainless steel paint scraper was cleaned after each sample was collected to avoid cross contamination. Paint samples were placed into appropriate sample jars as provided by the laboratory. Sample jars were filled with a minimum of 5 g of paint as specified by the laboratory. The sample jars were labelled and dated upon completion of each sample collection, and the containers were placed in a cool box to maintain their temperature for transportation to the laboratory.

The lead and zinc content in the paint could be a health risk during the works and for any follow on maintenance, all personnel working with the existing paint are to be skilled, competent workers who have been provided the correct PPE for the task.

Determinands	Total Number of samples	aGAC (mg/kg)	Data range (min-max) mg/kg
Cadmium	10	12,000	<0.20 – 10
Chromium	10	N/A	110 – 310
Lead	10	N/A	55,000 – 66,000
Nickel	10	N/A	12 – 30
Zinc	10	N/A	1,200 – 6,500

Soil Logging

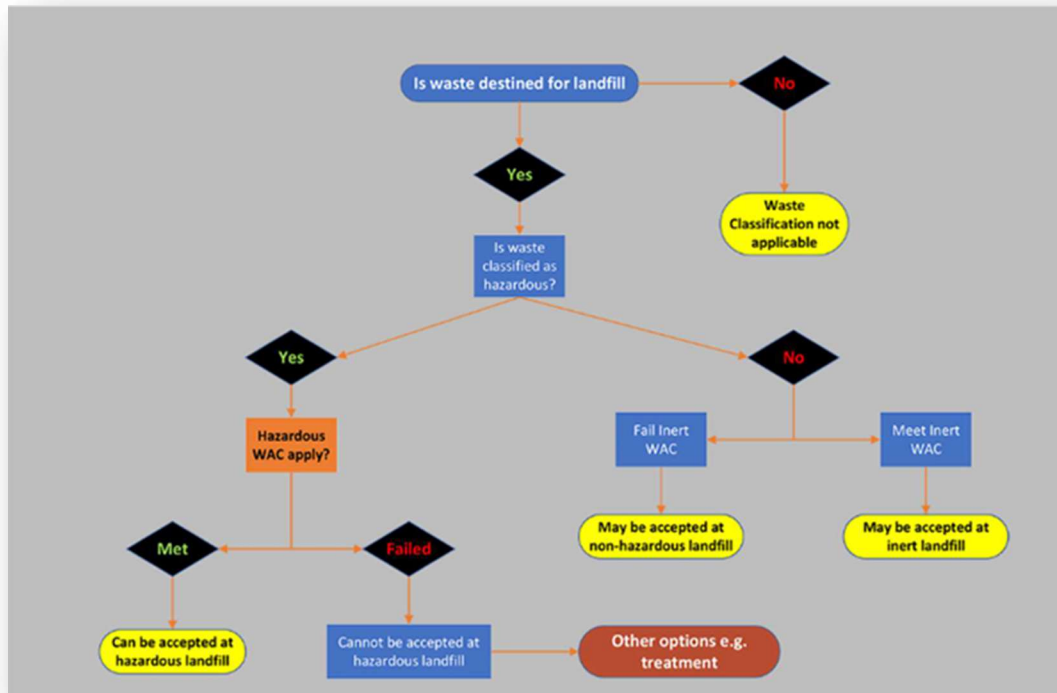
At each hand dug pit location a description of the soils, total depth of the location and differences in soil type or strata was recorded. Soil logging was undertaken in general accordance with BS 5930:2015 + A1:2020 and Eurocode 7.

Soil and Soil Leachate Sampling

Soil samples were collected from each exploratory hole location in accordance with BS 10175:2011 + A2:2017 'Investigation of Potentially Contaminated Sites'. Sampling was informed by visual and olfactory indicators of contamination. Soil samples for laboratory analysis were obtained from the arisings of each exploratory location by hand. Disposable nitrile gloves were worn during sampling, with a clean pair of gloves used for each sample to avoid cross contamination. The soils were separated from the track ballast and placed into appropriate sample tubs and jars as provided by the laboratory. Sample jars intended for volatile organic compounds (VOC) testing were filled with as much material as possible to reduce void space / trapped air. The sample jars were labelled and dated upon completion of each sample collection, and the containers were placed in a cool box to maintain their temperature for transportation to the laboratory. From the lab findings it is evident the soils contain levels of lead and Zinc, any soils that are to be taken from site are to be suitable cleaned to enable re-use.

Waste Disposal

The vast majority of waste generated from the construction works would be suitable for disposal in a non-hazardous waste landfill. The existing ballast and soil on the viaduct that is to be removed containing Lead and Zinc however will likely require disposal to a stable non-reactive hazardous waste landfill, where it can be treated and reused. All material sent to landfills will be accompanied by the appropriate duty of care documentation and the relevant chemical data will be forwarded onto the respective landfill prior to the arrival of the waste.



Protected Species

Great Crested Newt – No ponds exist on site, nor within a 250m vicinity. The adjacent canal is not considered suitable breeding habitat for the newts and is a considerable distance from the viaduct on a vertical axis meaning Newts would not have direct access to the construction zone. The assessment concludes that no suitable Great Crested Newt habitat exists on the site or on the adjacent canal.

Bats – There are no buildings within the proposed site boundary that are suitable habitats for bats. No evidence of bats was found within the site on the phase 1 project. Further assessments will be carried out prior to construction activities commencing.

Badgers – No badger setts were located within the site boundary or the adjacent canal. No evidence of badger activity.

Water vole & otters – No suitable habitat for water vole or otters were found to exist on site. Similarly, no evidence of water vole or otters were found along the canal adjacent to the site and 30m either side of the site.

Nesting birds – No bird nesting habitats exist on site other than the man made habitats placed on Phase 1 of the viaduct project, at the time of writing these habitats are empty of nesting activity and they will be temporarily relocated during traditional nesting season whilst construction activities are ongoing. Likewise, the adjacent shrubbery does not offer a suitable habitat.

Invasive Species

No invasive or non-native species were found to be dwelling within the site boundary or immediately adjacent to the site boundary.

06. Protection of Environmental Features

We are committed to minimising our impact on the environment through continually improving our environmental performance. Effective environmental management is critical to the overall success of the project as well as the overall improvement of the business.

We will:

- a. Meet the requirement of ISO 14001 through operating an effective environmental management system that covers our activities, products, and services.
- b. Act in a socially responsible manner.
- c. Comply with relevant legislation, guidance and industry codes of practice and be aware of future requirements.
- d. Establish standards of our own where regulations or codes do not exist.
- e. Ensure that our staff have a good understanding of the environmental impact of our business and what they are expected to do to minimise these impacts and help adapt and mitigate climate change, prevent pollution, protect biodiversity and ecosystems.
- f. Eliminate, reduce, and minimise waste.
- g. Identify and apply environmental best practise.
- h. Conserve natural resources, energy, and water.
- i. Minimise environmental impact of business transport and travel.
- j. Responsibly select, procure, and manage sub-contractors and materials.

This policy is regularly reviewed to ensure our objective and performance remains appropriate and more often if performance or operating context demands.

This policy will be displayed on site, made available at request to any party and will be issued to staff, subcontractors, and suppliers.

07. Waterways & Drainage Systems

All existing drains within the proposed site area will be stopped up and sealed where appropriate using drain bungs to ensure that no silt-laden runoff or other harmful substances leak into the surrounding drainage systems. A drainage system plan will be made available on site, outlining a detailed map of the drainage system of the site and the surrounding area.

To minimise the risk of any hazardous material run-off, activities that have the potential to cause spillages or leakages, such as plant refuelling or chemical storage, will be conducted as far away as feasible from any drainage systems, as well as the adjacent public highways and canal, ensuring both public safety and limiting the possibility of discharge into the canal/drainage systems. Any plant refuelling will be conducted by a competent individual who has been briefed on the appropriate techniques and precautions.

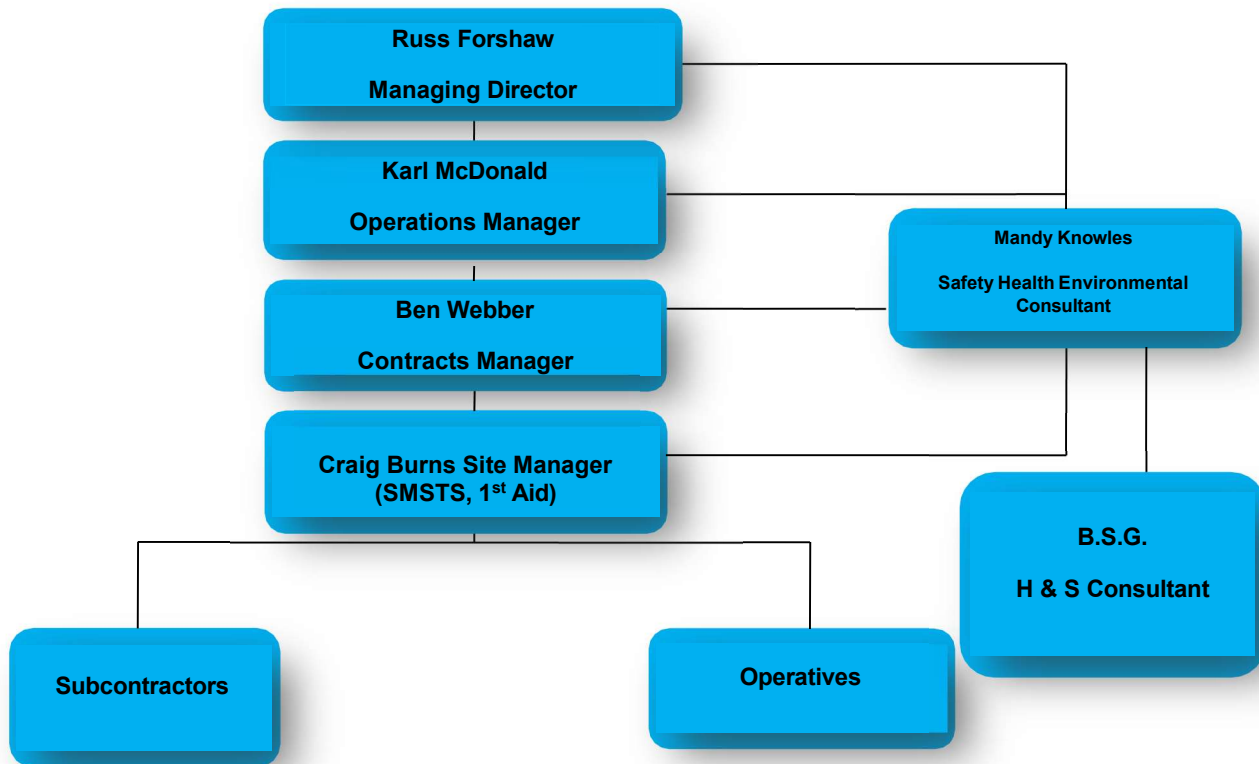
Spill kits and drip trays will be made readily available, and all MCC operatives and sub-contractors will be briefed on best practices around the issue prior to the commencement of work on site. All site drainage plans will be made available on site and kept up-to-date. A competent spill response contractor will also be engaged with prior to works starting so that, in the event of a severe spill, action can be taken quickly.

Chapter 8 Barriers and heras fencing will be erected around the site to ensure that, in the unlikely event of any falling material, the likelihood of said material falling out of the site boundary lines and into the canal or surrounding area is diminished.

08. Roles & Responsibilities

In the event that an operative or member of the public needs to get in touch with site management, contact details for all Manchester & Cheshire staff appointed to the project will be made available around the site and at the site entrance.

Notable staff:



Russ Forshaw (Managing Director): 07803 411998

Karl McDonald (Operations Manager): 07793 244734

Ben Webber (Contracts Manager): 07712 325430

Mandy Knowles (Safety, Health, and Environment Consultant): 07702 156773

Craig Burns (Site Manager): 07860 847003

Sam Dexter (Assistant Site Manager): 07469671328

Contracts Manager: Responsible for overall oversight of the project and liaison with client and other relevant bodies. Ensures both legal and environmental compliance with relevant legislation and statutes. Deals directly with any contract variations and similar contractual matters.

Site Manager Responsibilities: Typical responsibilities include day to day management of works on site, reviewing RAMS, quality, progress and safety checks of works, daily progress reports, coordination and management of trades on site, proactively programme and manage safety on site, toolbox talks, order materials, make sure all

relevant permits are in place, etc.

Assistant Site Manager: Provides general assistance to site manager and senior site manager on day-to-day site activities. Notable responsibilities will likely include dealing with sub-contractors to ensure work is complete, ensuring sub-contractors are inducted and RAMS have been read and acknowledged.

Specialist Contractor Supervisors: Specialist sub-contractors will likely deploy supervisors to site to ensure specialists works are being done to the expected standard and compliant with relevant legislation and regulations.

Emergency Contacts

- Emergency 999
- Police non-emergency 101
- Local Fire Station – 0161 908 9703
- Ambulance service 111
- HSE (for fatal & major injuries only – Mon to Fri 8.30am to 5pm) 0161 952 8200
- Electricity Northwest (Electricity Emergency)- 0800 195 4141
- Local Water Company (United Utilities)- 0345 672 3723
- Gas (National Gas Emergency Service) 0800 111 999
- Environment agency – 0161 973 2237
- BT (Openreach) – Virtual assistant online

09. Communication & Complaints Procedure

During the course of the entirety of the project, there will be regular progress meetings with all parties concerned to ensure not only that the project is running as programmed and is compliant with legislation and regulations, but also so that operatives can be given the opportunity to express any feedback or points of concern that may be affecting the works.

To ensure compliance with relevant Freedom of Information legislation and promote transparency around the proposed works, the Construction Management Plan will be available for any person to view via the Manchester City Council website.

Manchester & Cheshire Construction staff contact details will be made readily available so that any operative or member of the public can reach out to express any concerns or make an enquiry.

Manchester & Cheshire Construction and all relevant contractors wish to operate in an undistruptive manner, and as such, any complaints from members of the public or nearby businesses will be dealt with considerately and acted upon where appropriate. All complaints will be investigated, and appropriate actions will be taken to remediate the issue.

10. Construction Sequence

The construction sequence of the project will follow the issued construction programme. General sequence of works for the project are as follows:

- Site set up and establishment
- Excavate existing ground to make way for formation
- Install formation for walkways, pergola, planters, etc
- Construction works to events building including alterations
- Hard landscaping finishes to viaduct
- Hard landscaping finishes to viaduct
- Internal finishes to events building
- Piling for new stair core and lift
- Installation of lift and stair core
- Clean site and test commission

11. Construction Activities – Risk Assessment

Manchester & Cheshire will conduct and provide risk assessment on forms of work that have a heightened risk. Types of work likely to possess increased risk are:

- Piling
- Scaffolding
- Steelwork erection
- Lift installation
- Use of power tools
- Use of hazardous materials or substances
- Operation of heavy plant
- Storage of hazardous materials or substances
- Lifting activities
- Excavation

All battery-operated power tools will possess up to date PAT tests. Likewise, all mains operated power tools will possess up to date safety certificates to ensure the safety of all operatives and compliance with the Provision and Use of Work Equipment Regulations (PUWER). Battery powered tools will be preferred and used where possible to reduce noise emissions and prioritise the safety of operatives.

No hazardous materials or substances will be used on site without prior approval from the site management team. All operatives handling said materials and substances will be equipped with the correct PPE and fully trained in the correct process for handling the material and substances.

All heavy plant and machinery brought onto site will possess valid Thorough Examination Certificates and weekly inspections and tests will be conducted to comply with PUWER. Operation of heavy plant or machinery will be conducted exclusively by a trained professional with the appropriate accreditations.

During operation of heavy plant or machinery, a member of site management will be present to monitor and supervise activities to ensure operative safety and health and safety regulation compliance. The use of hydraulic rather than pneumatic machinery will be prioritised to limit vibration disturbance to the surrounding area and protect operatives from harmful vibration related conditions. Where possible, efficient, low emission plant and machinery will be sourced to limit the project's carbon emissions. Outside of site hours, heavy plant and machinery will be securely stored on site, on stable ground.

Hazardous materials and substances will be stored together inside of secure drums in lockable porta cabins. Hazardous materials and substances will be stored away from any electrical equipment or heavy machinery and spill kits will be readily available to ensure that in the event of a leak or spill, the substances can be safely contained.

To prioritise safety and promote best practices, all plant used to transport large amounts of material or rubble will be fitted with an automated sheeting system. This provides the safest and most efficient option for transporting material/rubble in and out of the site.

12. Health & Safety

We are committed to the health, safety and wellbeing of all employees and others who may be affected by our building or activities. We recognise success is underpinned by a positive health and safety culture, supported by top management, and promoted by effective communication and training, employee involvement and consultation.

We strive for continual improvement, basing how we manage health and safety on the principles of ISO 45001.

We will ensure:

- The commitment of senior staff members through proactive and positive leadership.
- The promotion of a positive health and safety culture, where all employees lead by example, recognising the need for appropriate preventative and protective measures, that there are both workable and effective, encouraging safe and healthy behaviours.
- Employees are encouraged and empowered to take reasonable care for their own health and safety and that of others who may be affected by their work, and by co-operating with the company in any health and safety measures it adopts.
- Employees take ownership in identifying and managing risks and communicate any problems with health and safety, including reporting incidents, unsafe conditions and acts as soon as they become apparent. An open-door policy is encouraged, and employees should feel they can report any problems to any member of staff, including higher management. In support of achieving these goals the company will.
- Utilise expertise in health and safety to learn and improve our processes.
- Promote a positive health and safety culture throughout the company and responsibilities of all concerned.
- Provide resources for health and safety to ensure that this policy can be implemented effectively.
- Implement appropriate risk management systems to assess levels of risk to help fulfil our legal obligation under the Management of Health and Safety at Work Regulations.
- Provide staff with the necessary information, instruction, and training to carry out their duties in a safe and responsible manner.
- Provide property and safe work equipment, plant, and materials and where necessary adequate and suitable protective clothing.
- Observe and act upon advice and recommendations made by our health and safety support.
- Make provision for appropriate engagement and consultation between management and operatives, and where recognised trade union Safety Representatives / Committee are in operation, the management shall consult and provide the means for consultation with the above and staff forums.
- Make all arrangement necessary to meet the requirements of this policy and review the effectiveness of this policy through periodic consultation and revise as/when required.
- Provide each employee with a copy of this policy and ensure their

understanding of their roles and responsibilities within it.

- Regularly review and update this policy to ensure its accuracy and relevance.

Safety is paramount for us, and as such, we will ensure that the requirements under the Health and Safety at Work Act 1974 and current Construction regulations are upheld throughout the entirety of the project.

A detailed fire safety plan will be developed, identifying any potential fire related risk and hazards, and outlining the most effective safety procedure to follow in the event of any fires on site.

Utilising details from the pro-construction information pack and the number of report and surveys on the site, a detailed construction phase plan will be produced to identify all hazards associated with the works allowing us to effectively plan works throughout the length of the project.

A site-specific risk assessment and method statement (RAMS) document will be produced and distributed to all subcontractors outlining all potential risks and the measure being taken to mitigate against such risks.

All subcontractors will also produce their own risk assessment and method statement document which will be reviewed and approved by the site management team prior to work starting. Subcontractor proof of competency certification will also be reviewed and photocopied by the site management team to ensure all operatives working on site have the relevant accreditation for their respective role. Copies of plant and machinery inspections and examinations will be taken and reviewed to ensure all plant and machinery operating on site has been deemed in good, safe working condition by a professional. We will conduct weekly site meeting to discuss progress and safety. Subcontractor attendance will be mandatory.

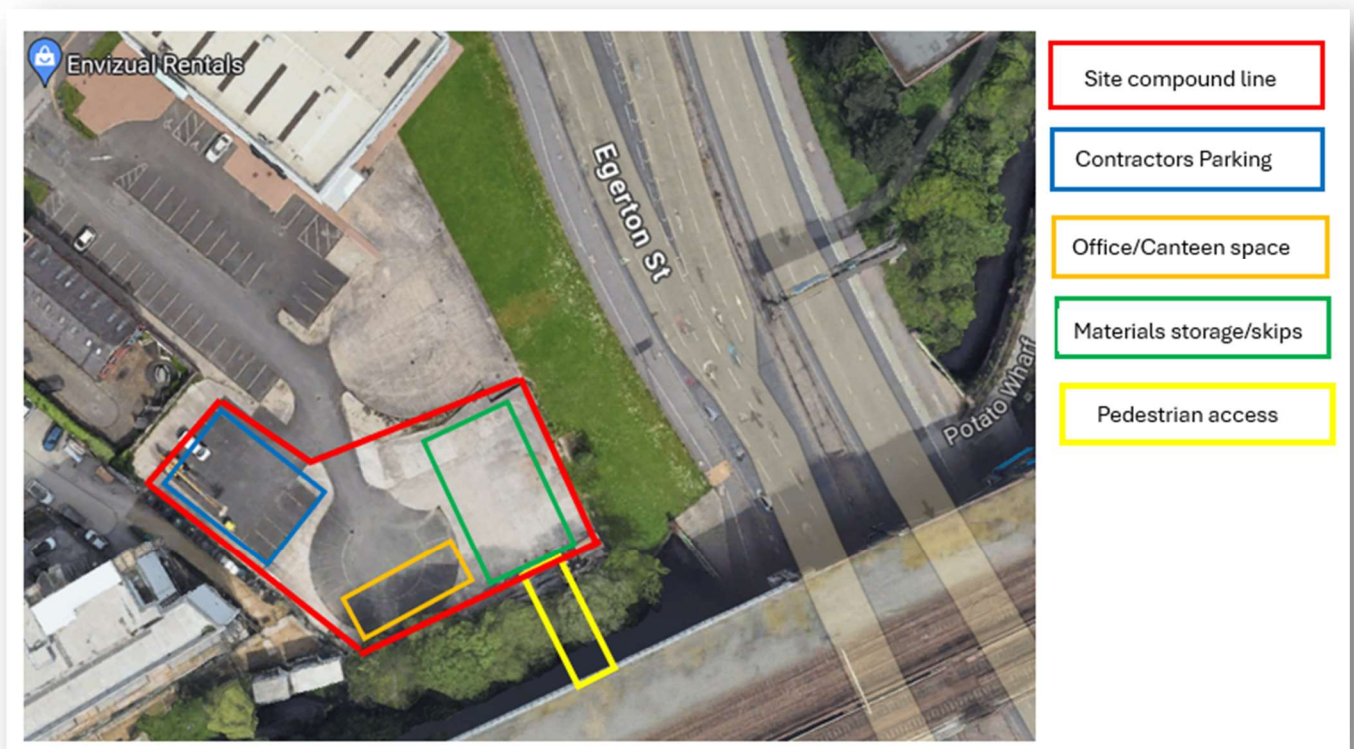
All site activities and works will be regularly inspected by site management team and an external health and safety advisor will visit site on a monthly basis to ensure all works are compliant with HSE regulation and relevant legislation.

In the event that the measures within this Construction Management Plan are not being implemented, the offending party will be told to stop works, and the issue will be to their management. Once the issue has been acknowledged and correct procedure has been agreed, works can then resume. In the event that implementation is continually disregarded, the issue will be escalated further and alternatives will be discussed.

13. Site Establishment, Traffic Management, Parking & Security

The site boundary line to the viaduct is approximately 15m from street level, the viaduct will have a scaffold edge protection and heras fence panels installed along the perimeter lattice steel work. A mobile welfare unit will be hired out throughout the duration of the project for the use of site management staff, and all operatives and visitors, this will be sited in the carpark at Porcelanosa where the viaduct will be accessed via a Haki stair tower. The welfare and storage unit will be secured with Heras fencing and the Haki tower will have a fully boarded enclosure with scaffolding alarm present to prevent unauthorized access.

Compound Plan



During the construction works we will have temporary site compounds in 3 different locations to facilitate crane lifts and material storage. Further planning and considerations are needed around the timescales of these works although the below plans indicate proposed birthing plans.

[illegible][illegible]

[illegible]

Construction Stage	Period of Stage (months)	No. of trips (Weekly)	Peak no. of trips (daily)
Site setup	0-1	10	2
Excavations and Piling	1-2	20	5
Sub-Structures	2-4	15	3
Landscaping	3-5	15	3
Fit-out, testing, commissioning	5-6	10	2

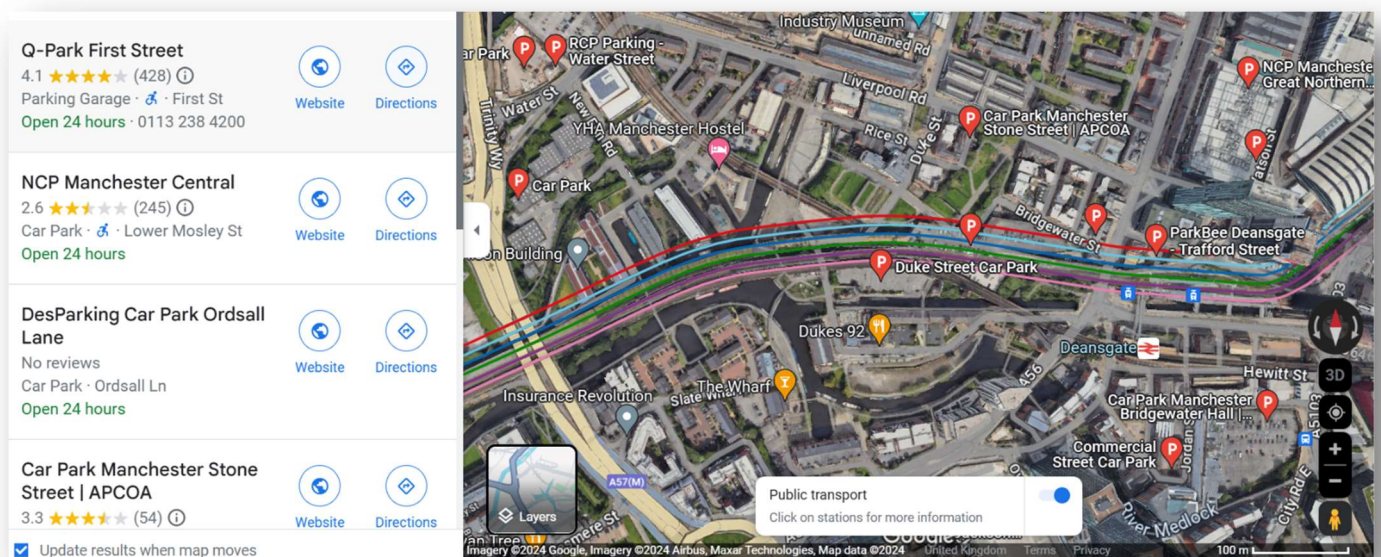
29

The medium impact site checklist below will be followed for all deliveries and vehicle movements on this site.

Medium impact site planned measures checklist	Committed	Proposed	Considered
Measures influencing construction vehicles and deliveries			
Safety and environmental standards and programmes	X		
Adherence to designated routes	X		
Delivery scheduling	X		
Re-timing for out of peak deliveries		X	
Re-timing for out of hours deliveries		X	
Use of holding areas and vehicle call off areas			X
Use of logistics and consolidation centres			X
Material procurement measures			
Offsite manufacturing			X
Re-use of materials on site		X	
Smart procurement	X		
Other measures			
Collaboration amongst other sites in the area			X
Implement a staff travel plan	X		

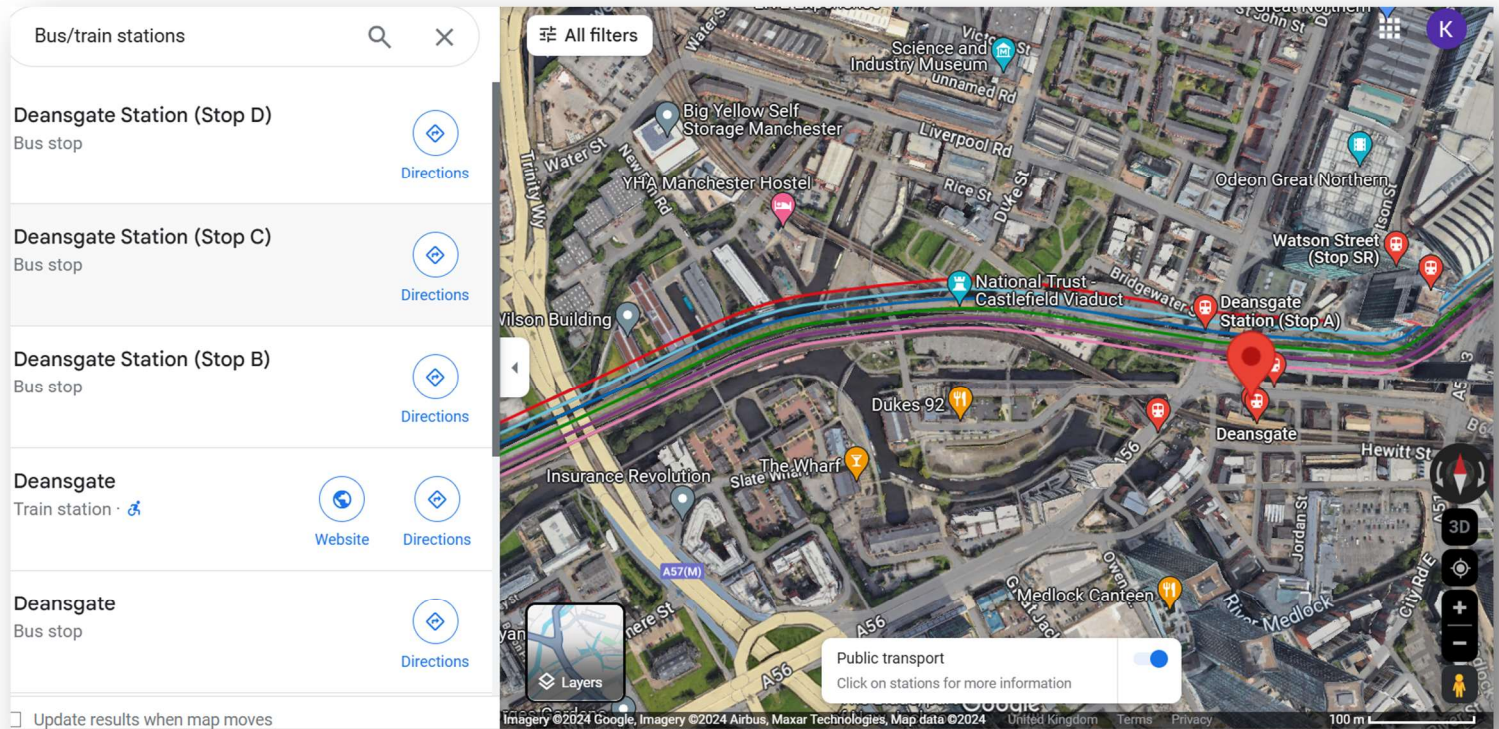
Car Parking

Car parking for up to eight vehicles will be made available on site for those who wish to commute by car. These spaces are shown in the compound plan. Where onsite car parking is at full capacity, sub-contractors, visitors, and other relevant persons are to utilise the nearby car parking outlined in the logistics plan. Many subcontractors opt to commute in groups of two or three, so it can be expected that during peak times of the project (15–25 operatives per day), the total number of cars will be between eight and twelve. A map of local parking destinations can be viewed below.



Public transport Links

As the site is in a prominent City Centre position various modes of public transport are available for use, this consists of trains, Metrolink, buses and e-bike hire. The various stops have been highlighted below although further information can be found here [Maps | Bee Network | Powered by TfGM](#)



14. Material Storage & Distribution

Construction plant, materials, fuel, and chemicals will be stored on site in an appropriate location to limit the risk of damage, theft, and disruption to the surrounding area and residents. Chemicals and fuel will be kept away from the adjacent canal and all drainage system to ensure no contamination of the respective canal. Smaller materials, fuels, and chemicals will be stored in secure, lockable porter cabins within a designated COSHH cabinet or purpose-built container. Hazardous liquids will be stored in secure drums that are sealable and in good overall condition with no leaks. All COSHH equipment will be stored in a metal container which will be located underneath the site cabins on the below plan (pink box).

COSHH assessments will be submitted by sub-contractors and approved by MCC, outlining the types of hazardous materials being used and the measures and precautions being implemented to ensure the substances are used and stored in a safe and correct manner. No hazardous materials or liquids are to be used without prior notification to site management.

Smaller building materials will be stored in secure porter cabins to ensure the security of the items and protect them from any adverse weather.

Larger items will be ordered on a just in time basis to limit the need for large semi-permanent storage units. In the event that large items of material, e.g. Steelwork, planters, need to be stored overnight, a lay-down area will be established within the site. The materials will be securely covered by waterproof tarpaulin. It is important to limit the need for prolonged storage of larger materials so that cranes, excavators, etc, are not restricted in their operation within the site.

Large plant machinery, such as excavators, will be kept on site overnight. They're to be parked on the viaduct and protective sheeting will be applied. Entry and exit of the site is only possible via the Haki staircase and the plant / Machinery will need to be lifted onto/off the viaduct by crane. Likelihood of theft and/or vandalism is generally considered low, therefore, further additional security measures to mitigate against the threat of theft or vandalism are not required at this stage.

15. Working Hours

Monday – Friday (07:30 – 18:00)

Saturday – Sunday (No works programmed)

Bank holidays (No works permitted)

Site operating hours will be kept between 7:30 and 18.00 during the week with noisy operations taking place between 8am – 5pm. Weekend works are not currently programmed. If weekend work is required, prior approval will be needed.

16. Sensitive Work

Sensitive works will be kept to the hours of 8:00 – 16:30. Prior to especially sensitive or disruptive works, residents and businesses will be consulted, to limit the disruptive affects. As mentioned, the use of battery- operated tools will be preferred. Continuous flight auger (CFA) piling will be the adopted approach as this process is the least disruptive.

The idling of machinery when not in use will be restricted to reduce noise pollution and carbon emissions. Operatives will be instructed to utilise battery-operated tools where possible to further reduce disruption. All vehicles, plant and machinery will also be fitted with silencers to further reduce noise emissions.

Due to the location of the works, the majority of the works taking place are not considered to cause additional noise pollution than the existing city centre environment does.

17. Waste

Given the location of the site, with adjacent transport infrastructure and waterways it is imperative that the site always remains clean and tidy and waste is disposed of regularly. We will always ensure that any waste or rubbish on site will be stored in a tidy manner, limiting any slip, trip or Environmental risk. General waste skips will be provided and located at various points on the viaduct and in the main compound. These are to be used by operatives for general construction waste. Waste that had been deemed to be contaminated will require disposal in a separate skip/wagon that will be collected and taken to a stable non-reactive hazardous waste landfill.

All subcontractors will be responsible for disposing of their own waste and will be encouraged to ensure that their work areas remain clean and tidy at all times. Subcontractor toolbox talks will be conducted where needed, to highlight the importance of a clean and tidy site.

18. Waterways & Drainage Contamination

Prior to work starting on site, a detailed pollution incident control plan will be developed to identify environmental risks and hazards associated with the works and the material being used. Having such a plan highlights the associated risks, allowing for effective

planning, and thus effective actions of remediation in the event of an incident.

Procedures to manage the risk of pollution incidents:

- Details account of the incident itself
- Notification to relevant authorities e.g., Environmental agencies
- Notification to emergency services if required
- Easy access to contact details of relevant emergency service providers
- Easy access to spill kits and other pollution response kits

In the event of hazardous run-off and subsequent potential contamination, the site management team will be made aware of the incident, and measures would begin to isolate the spill. Onsite spill kits will be used to contain the spill. Following containment, an incident report would be made, and an assessment would be conducted on the severity of the spill and the subsequent consequences.

19. Pollution Control

Manchester and Cheshire construction identify the areas of potential pollution or contaminants on the project are likely to be:

- Concrete and cement
- Fuel
- Hazardous materials and substances
- Dust

Manchester and Cheshire Construction are committed to preventing pollution and contamination as much as feasibly possible and take all necessary steps to mitigate the likelihood of any event occurring. These steps are outlined below.

All cement mixing during the project will be conducted away from all drainage/water systems to ensure that in the event of an overspill, the hazardous cement does not enter any waterways or drainage systems. Spill kits and drip trays will also be made closely available to the mixing area to minimise damage in the event of a spill.

In compliance with Control of Pollutions Regulations, all drums containing fuel or oil will be stored in bunded areas, at least 10m away from any drainage or waterway systems. Said drums will be in good condition with the contents clearly labelled. Refuelling of plant and equipment will only be conducted by trained professional who has been briefed and understand the correct process.

Due to the adverse health risks of dust inhalation, any works on site that produce harmful amounts of dust will be conducted using a dust extractor and the necessary respiratory equipment for not only the operative operating the equipment but any operatives within the vicinity that may be at risk. Dust extractors and water suppression tools will limit the amount of dust escaping from the site into the canal and surrounding areas.

In the event that previously unidentified suspected contaminated areas were discovered during works, works would stop, the area could be cornered off, samples would be taken and only when sample results were received could work potentially resume again. If the sample results confirm contamination, the contaminated area will be removed by a

specialist contract and disposed of to a contaminated waste landfill.

MCC have Environmental operating Procedures in place to cope with such events - EOP 002 Spillage management, a copy of which is displayed below. In addition EOP's 005 Waste disposal, EOP 006 Control of Noise & EOP 007 Water usage in construction which will all apply to this project.

20. Purpose

To ensure employees are prepared for emergency environmental spill situations so that a quick response is given to minimise the impact on the environment plus damage to equipment and surrounding utility infrastructure.

This process deals with the effective management of an environmental spill situation, outlining actions to be taken in responding to and reporting of such incidents. Spill incidents include accidental release from a vessel; item of plant; item of equipment; operational activity or runoff; runoff from water used in fighting fires.

21. Roles and Responsibilities

Director/Site Management	Ensure spillage incidents are responded to effectively and lessons learned are implemented to reduce the likelihood of recurrence.
Employees and subcontractors	Follow systems and risk assessments to ensure safe working procedures are always adhered to.

22. Applicability to management systems / legislation / best practice guidance

Environmental Act 2021; Water Resources Act 1991; Water Industry Act 1991; Groundwater (England and Wales) Regulations 2009; Contaminated Land (England) Regulations 2006; Environmental Protection (Duty of Care) Regulations 1991; ISO 14001:2015 Clause 8.2; 9.1

23. Process

Process	Responsibility
Immediate stop works and prevent any more material spilling e.g., turn off machine, put upright, turn off taps, put suitable container under the flow	FR
Begin containing the spill using e.g., bunds of sand, earth, absorbent granules. Check and isolate drains using spill kits or contain the spillage if on a hard surface.	FR
Notify site supervisor/manager immediately including details of any risk of spillage entered or risk of entering drainage systems, watercourses, or any other risk to the environment; where the spillage is; the material involved; reason for the spillage; quantity of spillage	FR

Notify relevant authorities and company SHE Manager giving company, location of spillage, material spilled, quantity involved and reason for the spillage and if it has the possibility of causing damage to water causes, the natural environment or pollution. Authorities could include: Environment Agency, Emergency Services, Local Water Supplier, Health and Safety Executive, Specialist Clean-Up contractors. If spillage has entered fowl sewer contact the local sewerage undertaker.	SM / EXT
Remove the hazardous waste once the spillage has been absorbed and reported. Deposit into appropriate container and arrange disposal by licensed waste carrier. If contaminated land is being remediated by removal of land, permit to dig system must be used.	SM / CM
Check the effectiveness of the clean up once areas has been cleaned via visual inspection and any further instructions issued from enforcement agencies.	SM / CM / EXT
Complete incident and investigation report and share lessons learned with the organisation. Rearrange for top up of spill kit stock on site.	CM / EXT / SM

24. Records

COSHH Assessments

Incident Report and Investigation

25. Key

SM – Site Manager	EXT – External HSEQ Consultant
P – Procurement	CM – Contracts Manager
BS – Business Services	F – Finance Department
MD – Managing Director	FR – First Responder

Manchester & Cheshire Construction Site Rules

A. YOUR RESPONSIBILITIES

YOU have health and safety duties. THIS IS THE LAW

- Follow instructions given to you by your supervisors.
- Co-operate with the employer on health and safety matters.
- Follow the health and safety rules, which apply to your job and to the site in general.
- Use the health and safety equipment provided.
- Report defects, near misses to your site manager.
- Learn from any near misses, don't just ignore them it may save your or someone else's life!
- Take care of your own health and safety as well as that of your work-mates and others who might be affected by their work.
- You are under no circumstances permitted on site under the influence of alcohol or drugs.
- Should a problem arise with any member of the public or tenant then this must be reported to your site manager. Taking the matter into your own hands may result in disciplinary procedures/ removal from site.
- You must sign in and out of the site as required each day

B. ACCESS

- Access to the site will be shown in your site induction (see site set up/ location plan) follow instructions given by your site manager.
- No access, other than the works area, is permitted unless permission has been granted by the site manager.
- Please ensure that the site manager is notified in advance of any major deliveries.
- No vehicles are to obstruct the access or Fire escapes at any time.
- DO NOT alter / amend any fencing / barriers without permission from the site manager. They are there to protect the public and provide a safe working area.

C. PERMIT TO WORK

For All Sites, permits to works must be obtained from the Principal Contractor for the following operations:

- Asbestos
- Hot works
- Confined space work
- High voltage electricity
- Working at height
- Working adjacent to services
- Crane lifts
- Excavations
- Structural alterations
- Temporary Works

In addition, there may be further Permits to Works required by the Client and or others that you will need to abide by. Any such systems will be advised prior to commencement on site AND at the site induction.

D. SECURITY

- All operatives on the site must sign in AND out at the site office before commencing works.
- No operatives must enter ANY part of the site without permission of the site manager.

E. PARKING

- The sites parking policy will be explained in the site induction.
- No contractor shall leave vehicles blocking any, footways and emergency access routes.

F. BEHAVIOUR

- The behaviour of all contractors will be under scrutiny.
- Any contractor wolf whistling, using foul and abusive language and acting inappropriately will be removed from site.
- Should you encounter any issues with members of the public, staff or other contractors report them immediately to the site manager. **DO NOT ATTEMPT TO DEAL WITH THE SITUATION.**
- Operatives will dress appropriately, no bare chests, vests or shorts.
- No operatives will be allowed on the site under the influence of alcohol and or drugs
- The use of portable radios, wireless speakers, ear buds and the like is prohibited.
- Mobile phone usage must be kept to a minimum on site.
- Do not create dust. Use all extract equipment, wet machines and continue to wet down throughout the works.

G. MESSING & WELFARE

- All contractors must use the messing and welfare facilities and leave it clean and tidy after use.
- No food or drink is to be consumed on the site areas, use welfare facilities.

H. SITE TIDINESS

- The site shall be maintained in clean, tidy conditions.
- All contractors must clear away all rubbish, debris created by their work. Contra charge notices will be issued and applied if warnings are unheeded.
- Any skip must be left secure and removed from site on a regular basis
- Waste shall only be removed from site by waste carriers who have been registered with their local waste authority.
- No burning of waste or rubbish will be permitted on site.

I. METHOD STATEMENTS / RISK ASSESSMENTS

- All contractors must read and have signed the relevant and task specific method statement/risk assessment prior to commencing work.
- Failure to produce an appropriate task specific risk assessment/method statement will result in contractors being refused admission onto the site.

J. P.P.E.

- The site is a 'Hard Hat' site.
- The wearing of steel toecap boots/shoes is mandatory.
- The wearing of Hi visibility vests, is mandatory.
- All other P.P.E. appropriate to your task is to be worn as required and must comply with all current health and safety legislation.

K. PORTABLE TOOLS

- All power tools must be 110v, in good condition and have relevant test certificates.
- Only trained operatives must use plant / tools
- H A V S record sheets are to be filled in each week

L. SMOKING

- Smoking is permitted only in designated areas as per your site induction.

M. ACCIDENTS / NEAR MISSES

- All accidents and/or near misses must be reported to the site manager for inclusion in the site accident book.

N. FIRE

- All operatives are to read the evacuation procedure prior to commencing work.
- Hot works is only to be carried out under a Hot Works Permit and the control measures strictly adhered to.
- Contractors must provide appropriate fire extinguishers whilst carrying out hot works.
- The assembly point is shown on the location plan.
- Always cease any hot works at least 2 hrs before end of the working day. Check back on work area before leaving site.
- Where applicable all Operatives and Subcontractors must comply with the Joint Code of Practice on the Protection from Fire on Construction Sites and Buildings undergoing Renovation.

O. FIRST AID

- The first aid kit is in the site office and mess area.
- The first aider is the site manager.
- Further first aid guidance will be given in induction.

P. ASBESTOS

- Check all asbestos surveys before commencing works in any existing building.
- All operatives are to report any suspicious looking materials that they consider to be of asbestos to the site supervisor, who has been trained, in asbestos awareness.
- They must cease work and take advice from the site manager.
- All operatives and subcontractors must hold a current Asbestos Awareness Training certificate.

Q. DUST

- If you are working in a dust environment, you must have face fit certification and the correct mask on.
- Do not create dust use all extract equipment, wet machines and continue to wet down throughout the works.
- All operatives and subcontractors must provide a valid Face Fit Test certificate.

R. GENERAL SAFETY

- All working platforms must be fully boarded out.
- All platforms and walkways must have double guardrails and toe-boards.
- Never use bricks, breezeblocks or drums for packing or support of any platform or scaffold.
- Never alter or remove any part of a scaffold unless you are a scaffolder.
- Step ladders are only allowed under a permit to work, and only for short durations.
- All excavations must be adequately supported or battered to a safe slope and fenced and fenced off.
- Keep all working areas free from obstruction; clear away all rubbish and surplus

materials in a timely manner otherwise clearance notices will be issued, and potential contra charges levied.

- Only use equipment/plant that you have been trained to use.
- All electrical equipment must be installed and maintained only by qualified electricians.
- All faulty tools must be returned to the stores. All hand tools and equipment should be 110 volts.
- All rules attaining to plant will be covered in site induction/method statements/risk assessments.
- All clothing worn on site is to be suitable for the working environment. Shorts are not to worn at any time on site.

S. ENVIRONMENT

- All work must be completed mindfully towards the environment.
- Do not flush substances down the drains and watercourses.
- Report all spillages immediately.
- Use plant and equipment provided to minimise dust, noise and vibration emissions.
- Bring forward suggestions on how we can continuously improve.
- Keep vehicle emissions to a minimum – no idling of vehicles etc.
- Put all waste in the correct skips where provided.