

Withington CDC



Construction Environmental Management Plan

Prepared By:	Paul Virdi
Project Name:	CDC Withington Hub
Tender Number:	HNW.0350
Site location:	Withington Hospital
Revision Number:	6
Revision Date:	14/06/2024

Uncontrolled when printed.

Revision Record

Revision	Date	Revision details	Revised by
1	11/01/2024		Paul Viridi
2	07/02/2024	Update to comments	Paul Viridi
3	19/03/2024	Site hours and noise/ dust control update	Paul Viridi
4	29/05/2024	Update for planning issue	Paul Viridi
5	10/06/2024	Updated note on vehicle access and contractor parking	Lee Parker
6	14/06/2024	Note added for contractor parking	Paul Viridi

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Prepared by:	Paul Virdi
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1 Environmental Records

1.1 Environmental Records

Details of the documents that need to be held on site are listed below.

All Key Performance Indicator Information will need to be recorded on BAM SMaRT.

Construction Environmental Management Plan (CEMP)

Action by

File Ref:

PV

15

Resource Management Plan (RMP)

Action by

File Ref:

PV

50-05, BAM SMaRT

Environmental Permit / Waste Management Licence / Exemptions, Carrier Registrations [off-site]

Action by

File Ref:

PV

BAM SMaRT

Environmental Permit / Exemption Certificate [on-site]

Action by

File Ref:

RB

50-05

Waste Transfer Notes

Action by

File Ref:

PV

BAM SMaRT

Street cleaning & septic tank duty of care information

Action by

File Ref:

PV

50-05

Energy supply arrangements (type of supply, supplier, MPAN, MPRN, account number(s))

Action by

File Ref:

PV

BAM SMaRT

Key Performance Indicator information (pollution incidents, energy use, mains water use, waste production, timber sustainability, environmental toolbox talks)

Action by

File Ref:

50-05, BAM SMaRT

Method Statements and Risk Assessments

Action by

File Ref:

Site Manager

50-10

COSHH Assessments

Action by

File Ref:

Site Manager

50-10

Site Incident Response Plans

Action by

File Ref:

Site Manager

50-05

Regional Sustainability Advisor Visit Reports	
Action by	File Ref:
RB	BAM SMaRT/BIM360 Field

Section 60 / 80 Notices	
Action by	File Ref:
PV	50-05

Section 61 Consents	
Action by	File Ref:
PV	50-05

Part B Authorisations	
Action by	File Ref:
PV	50-05

Trade Effluent Consent	
Action by	File Ref:
N/A	50-05

Controlled Water Discharge Permit	
Action by	File Ref:
N/A	50-05

Other Consents (Archaeological, Hedge Removal, Tree Removal, etc.)	
Action by	File Ref:
PV	50-05

BREEAM	
Action by	File Ref:
PV	60

2 Contractual Obligations

2.1 Contractual Obligation

3 Project Specific Environmental Aspects

3.1 Project Specific Environmental Aspects

List all environmental Aspects (areas that will impact on the environment) identified from the [Environmental Pre-commencement checklist](#)

- Client requirements
- Planning restrictions / requirements
- Sustainable material procurement (including timber)
- Waste management (Refer to Resource Management Plan)
- Resource use
- Nuisance
- Contaminated land - TBC upon completion of surveys if applicable
- Earthworks
- Emergency procedures
- Hazardous chemicals (including fuel)
- Recycling waste on site (aggregates)
- Transport
- Local watercourses (including groundwater) - TBC upon completion of surveys if applicable
- Ecological issues / tree protection
- Water discharge / abstraction
- Concrete
- Maintaining clean roads
- Training & Awareness

4.3 Ecology, Archaeology, and Rights of Way

The following measures will be employed to protect the ecology on the site:

- All mature trees that are to be retained are to be protected in accordance with BS 5837. No work may be carried out within the fenced areas without prior approval of a method statement. No mechanical excavation will be allowed within the fenced areas. No materials to be stored in protection zones.
- If any Japanese knotweed is encountered, work within 7m of the plant will be stopped, the area cordoned off and the local environmental regulator will be contacted to confirm the presence of Japanese Knotweed. Further project specific controls will be implemented if required.
- If protected species are identified after work begins, or it is suspected that a protected species may be present, work will be stopped when it is safe to do so and access restricted to the affected area. The Species Protection Officer of the relevant authority ([Natural England](#), [Natural Resources Wales](#) or [Scottish Natural Heritage](#)) will be contacted to carry out a site survey to confirm presence of a protected species. Any advice on the preservation or relocation of the species will be followed as required.
- If any finds suspected of being of archaeological or historic interest are uncovered the following action will be taken:
 - Cease all work within the area immediately
 - Protect the area by fencing or other means
 - Contact the LPA and local authority archaeologist. Contact details for the local authority archaeologist can be found at: www.algao.org.uk
 - Depending on the find it may be necessary to obtain Scheduled Ancient Monument consent before continuing with the work
- If human skeletal remains or evidence of a burial ground are uncovered, the Police and the Coroner will be contacted in addition to the local authority archaeologist.
- Finds regarded as treasure (rare coins and artefacts) will not be removed from site without consent.
- (BREEAM statement for Land Use and Ecology Credits). The nominated Biodiversity Champion is **Paul Virdi** Who has the authority to influence site activities and ensure that detrimental impacts on site biodiversity are minimised in line with the recommendations of a Suitably Qualified Ecologist (SQA). A formal letter of appointment is to be saved as BREEAM Evidence.
- If the trees are required to be removed during the nesting season, an Ecologist is to be appointed to undertake a survey prior to removal.

4.4 Materials Management and Responsible Sourcing

The following materials management measures will be employed:

- All hazardous materials will be kept within a locked storage area and access to these materials will be restricted to those who have viewed the COSHH assessment for the particular material.
- Other materials are to be stored in designated storage areas as agreed with the Site Management.

This project is committed to BAM's responsible sourcing policy, and is committed to:

- Considering the impact on natural resources when choosing goods and materials.
- Promoting the application of 'Life Cycle Thinking' when considering specifications during the design, specification and construction process to reduce the impact of buildings over their whole life.
- Minimising the use of materials with a hazardous content and promoting the use of materials which can improve the health of building users.
- Procuring all new timber and wood based products (for temporary and permanent use) from certified legal and sustainable sources. This includes Grown in Britain (GiB), Forest Stewardship Council (FSC), and Programme for the Endorsement of Forest Certification (PEFC). Chain of Custody evidence is required to confirm compliance.
- Insisting that our subcontractors have an Environmental Policy and work to BAM's environmental procedures to ensure compliance with relevant environmental protection laws and regulations.
- Encouraging our supply chain to implement or to be working towards a UKAS accredited third-party certified Environmental Management System.
- Encouraging our supply chain to become active members of the Supply Chain Sustainability School.
- Supporting and giving preference to procuring products which are able to demonstrate compliance with a recognised responsible sourcing scheme, certified by a third party, such as BES 6001 or Cradle to Cradle.
- Supporting and giving preference to waste management contractors that hold PAS402 certification.
- Eliminating excessive packaging, with a particular focus on single-use plastics, without having a negative impact on the delivered goods.

4.5 Oil, Fuel and Liquid Chemical Storage

The storage of all BAM and Subcontractor oil containers with a capacity of 200ltrs or more will comply with the requirements of the Control of Pollution (Oil Storage) regulations. A Site Incident Response Plan will be produced where quantities exceed 200ltrs. Only authorised personnel will be issued with a key to the bulk storage tanks for refuelling plant. When refuelling, the operator is to remain in attendance at all times.

The filling of BAM bulk storage tanks will be supervised by **BAM Logistics Manager**

- All personnel are to make themselves aware of the Site Incidence Response Plan (SIRP) (405-406) which will be displayed in a prominent position. The Project Sustainability Manager is to be notified of all spillages, however minor.
- At least one BAM specification spill kit will be available on site, at the location detailed on the SIRP.
- Although equipment (like a funnel) will be used to prevent drips, a plant nappy (or drip tray) will be available when refuelling plant and equipment on site to prevent contamination as a result of minor spills and drips.
- Subcontractor method statements will include the provision of spill kits for activities that could result in a spill, leak or hose burst.
- Oils and other chemicals, in containers with a capacity of less than 200ltrs, will be stored within a locked store on a secondary containment system. Only authorised personnel will be issued with a key to this store.
- Place containers of fuel smaller than 200 litres on plant nappies when in use on site. Return the containers to their secondary containment system when they are no longer needed, at least at the end of every day.
- Oil storage will be set up so that rainwater does not accumulate in impermeable drip trays / bunds
- If oil is stored outdoors and rainwater collects in drip trays or bunds, any oil from the water will be removed with an oil only absorbent pad. Used pads will be disposed of as hazardous waste. (There are also proprietary cleaning systems available for example the PIG® Outdoor Oily Water Filter Bucket).
- The location of Subcontractors' oil storage areas and procedures must be agreed with BAM Site Management prior to any deliveries. No storage will be permitted within an area designated as a Source Protection Zone, within 10m of a watercourse or within 50m of a well or borehole.
- All hazardous materials will be kept within a locked storage area.

4.6 Nuisance Prevention

The following measures are to be implemented to reduce the nuisance to neighbours, and to ensure they have an appropriate amount of involvement with the project:

- Site working hours will be 07:30 to 18:00hrs Monday to Friday, and 08.30hrs to 14:00hrs on Saturday. No work to be carried out on Sundays or Bank Holidays. (Times to be agreed at Contract)
- Send out a client approved newsletter before the start of the project, introducing the project team and giving a brief outline of the project, and thereafter at intervals of four months. The newsletter will include the name and telephone number of the Project Sustainability Manager. (Site Newsletter Template)
- The Local Authority's Environmental Health Officer will be kept informed of all upcoming activities that may impact on the local residents.
- All compliments, comments and complaints will be recorded. The Project Sustainability Manager will take immediate action on receiving a complaint, and respond to any complaint by the end of the next working day. A senior member of the project team will verify that the corrective action has been effective.
- All plant and machinery will be switched off when not in use.
- A road sweeper will be employed to keep all roadways on and adjacent to the site clear of mud and debris.
- Banksmen with jet wash to be stationed at vehicle exit gate (as shown on BAM Logistics drawing). Jet wash will be used to hose off tyres before they leave the project hoarding confines, with trucks only allowed to leave once wheels and arches are clear of mud and debris. Road sweepers will be employed around site perimeter in regular visits to ensure high standards are kept. The wash down area will be cleared by BAM operatives and any mud and debris will be dealt with and removed- NOTE, this is for bulk dig, pile install and grade slab install phase of works.

Considerations for Noise

- In considering the potential for Nuisance due to Noise, consideration has been made against BS 5228-1:2009 + A1:2014 Code of Practice for Noise and Vibration Control on Construction and Open Sites. BS 5228 has been considered as guidance in establishing mitigation to generated noise levels.
- For specific areas of the works, all Contractors will establish and review their anticipated Noise Production Levels and fully demonstrate, that their Task / Trade specific Risk Assessments and associated Method Statements deal with and mitigate any excessive noise.
- The following general measures are to be implemented to reduce the nuisance to neighbours, from the project. In addition, a more detailed assessment considering BS 5228 is given in table form below these general notes.

Dust and smoke generation will be mitigated by the following measures -

- Any waste stockpiles will be damped down by water sprays and sheeted if required.
- All rubbish skips will be exchanged on a regular basis and sheeted when required.
- Vehicles shall be sheeted to prevent loss of materials off site.
- Storage locations should be aggregated where practical to avoid the creation of many stockpiles, adequately screened to prevent wind loss and damped down where practical when being handled.
- Waste materials shall not be burnt on-site.
- Wastes must be placed in suitable containers prior to appropriate disposal.
- Prolonged storage of materials on site prior to use and/or disposal is to be avoided.
- A road sweeper will be employed as required to keep all roadways on and adjacent to the site clear of mud and debris through the Bulk Dig, Piling Install and Ground Slab installation phase.

Specific Noise Control Considerations

Risk Area	Guidance Considered	Control Measure / Mitigation
Nuisance being caused by Noise affecting nearby Residents / Neighbours	BS 5228 – Section 4 – Community Relations	<ul style="list-style-type: none"> Establish good relations with neighbours newsletter to surrounding areas Contact Details for Project Manager displayed at entrance PM to be Public Liaison All complaints to be recorded and answered within 48 hours.
Contractors / Operatives – Production of Noise	BS 5228 – Section 5.1 – Training	<ul style="list-style-type: none"> Operatives to be sufficiently trained to undertake tasks safely and understand and consider Noise as a hazard. Subcontractor RAMS to fully consider and demonstrate – <ul style="list-style-type: none"> 1 – proper use & maintenance of tools – reporting 2 – positioning of machinery on site where possible to minimise noise nuisance to operatives and neighbours 3 – avoiding unnecessary noise when carrying out manual tasks or operating plant and equipment. 4 – protection of all persons against noise 5 – correct use of Sound Monitoring Equipment (designated personnel)
Neighbourhood Nuisance – Site Noise Levels impacting neighbours / nearby residents	BS 5228 – Section 6 – Disturbance to Neighbours	<ul style="list-style-type: none"> Site to be set up by BAM to have clear and consistent site rules / procedures / controls in respect of noise (as noted within this wider section), however specifics to be considered <ul style="list-style-type: none"> 1 – Compliance with approved RAMS 2 – Competent Trained Operatives 3 – Deal with complaints objectively 4 – Site working hours to be followed for any noise generating works – do not deviate unless with prior MCC / EHO notification, or in Emergency Situation 5 – Ensure the project demonstrates that it is doing all it reasonably can to minimise noise in carrying out the works Baseline Noise levels will have been established prior to works starting.
Fully Considered Project Supervision / Management / Planning the works	BS 5228 – Section 7 – General Aspects	<ul style="list-style-type: none"> All works to be planned and considered across the whole project programme giving due regard to reasonable mitigation means in carrying out noisy activities. 1 – Programme to allow sufficient time for activities to ensure they do not over run site hours, or produce a constrained environment meaning more persons are in direct vicinity than required. 2 – Early identification of Noisy Activities to be made, and where reasonably practicable, change these activities to more appropriate methods

		<ul style="list-style-type: none"> • 3 – Identify High Level Noise Activities on Programme and ensure appropriate measures will be taken prior to RAMS approval and works commencing. • 4 – Noise to be controlled at source where possible. • 5 – Regular Noise monitoring to be undertaken, and records kept. Action to be taken if trigger levels are exceeded, with appropriate corrective measures / review of RAMS before works re-commence if required. Baseline Noise levels will have been established prior to works starting. • 6 – Appropriate signage to be in place at site entrance, work areas, and all relevant locations clearly stating noise control / protection measures required.
Control and Management of Noise Generation and Reduction at Source	BS 5228 – Section 8.2.1 – Control of Noise at Source Generally -	<ul style="list-style-type: none"> • The following considerations need to be made by all contractors on the project. Demonstration through RAMS as required, and compliance achieved at all times – • 1 – Avoid revving of engines / machinery. Start up plant sequentially. • 2 – Ensure haul roads / gates are maintained to ensure reduction in repetitive impact noise from transit of loads • 3 – Ensure all plant has appropriate sound reduction measures in place as applicable. • 4 – Enclosures to be utilised as deemed required in RAMS. • 5 – Machinery and Plant to be located as far as possible from sensitive noise receptors if practicable. • 6 – Maintenance to tools, equipment and plant to be undertaken regularly. <p>Ensure all acoustic covers are in good order and in place at all times.</p>

4.7 Water Pollution Prevention Measures

The following measures are to be put in place to ensure there are no pollution incidents:

- Oil and liquid chemicals are to be stored and handled as described in the Oil, Fuel and Chemical Storage section of this plan.
- A Site Incident Response Plan will be produced where quantities exceed 200ltrs.
- Plant nappies and drip trays will be used to prevent leaks from plant and vehicles from contaminating land.
- For larger pieces of equipment an impermeable area with controlled drainage will be used to prevent environmental incidents. This area will be located well away from controlled waters and surface water drains.
- Machinery should be inspected and evidence recorded on the Work Equipment Inspection Form. Additionally all leaks are to be reported for immediate action.
- Generators with external fuel tanks shall be operated in such a way so a hose burst will not result in an incident
- No waste water is to be pumped to any Controlled Waters or to any Foul or Surface Water Drains.

- An impervious concrete wash out area, consisting of polythene lined skip is to be constructed at a convenient location. This is the only area where concrete wagons are permitted to wash out. The resulting waste water will be allowed to evaporate wherever possible. Where the water needs to be disposed of, it will be tankered off site.

4.8 Contaminated Land

- Describe how the spread of contaminants will be eliminated (or delete)
 - Wheel wash
 - Damping down
 - Provide bunds, cut off ditches, or other means to control surface water
 - Install specific arrangements to control ground water movement and flow
 - Separate out contaminated materials and store safely.
 - Store the contaminated materials in a particular way, for example to prevent contaminants leaching into the ground or into a controlled water.
 - Monitor the atmosphere at the workplace and site boundaries for both dust levels and contaminants in the dust.
- Describe how ground and surface water will be disposed of if it is contaminated or is likely to become contaminated.
 - Formal discharge consent from local water authority or environment agency
- If any suspected contaminated ground is encountered during the works, this is to be reported to the site management.

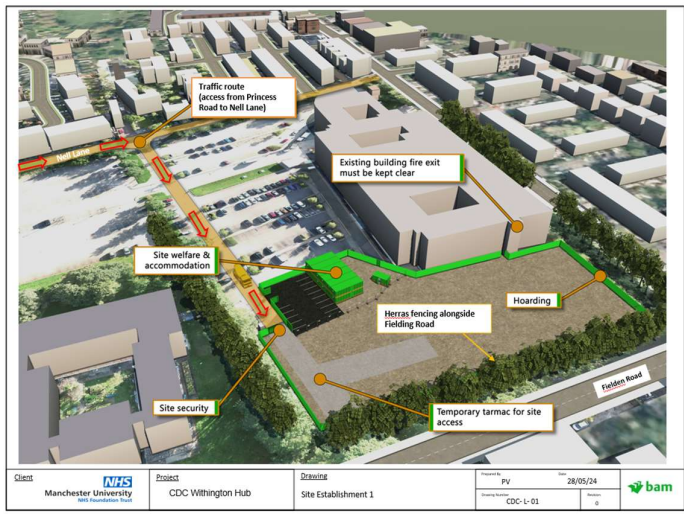
4.9 Other Control Measures

Phasing and quantification / classification of vehicular activity associated with planned construction

The following phasing and logistic drawings give an overview of the various phases. Note images are indicative only.

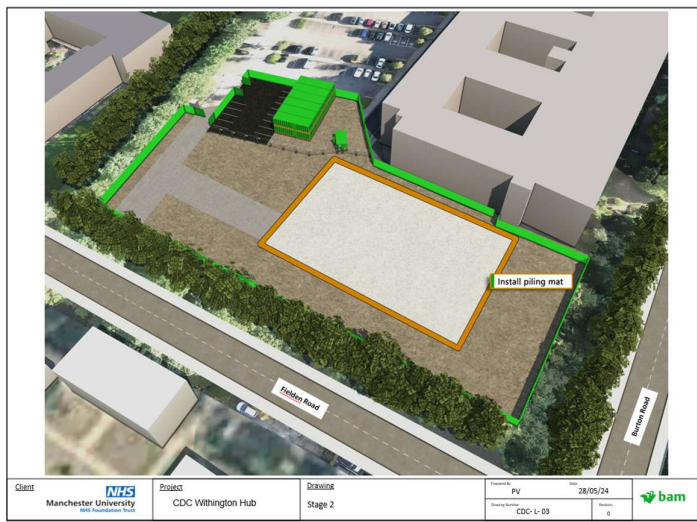
Site Establishment- August/ September 2024

During this phase the site is setup, the main deliveries will be hoarding and cabins on articulated type vehicles. Access will be from Princess Road onto Nell Lane, there should be no issues with accessing site as the entrance from Nell Lane is sufficiently wide enough for articulated vehicles and wagons. The site location is then straight ahead.



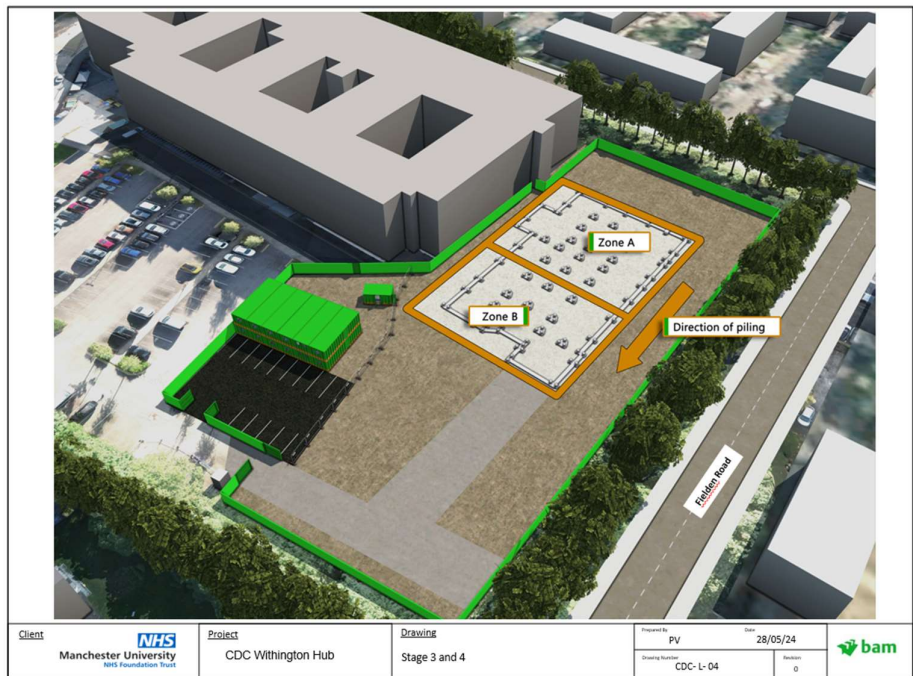
Stage 2- Groundworks (reduce level dig) and piling mat- September/ October 2024

During this phase the majority of the works will involve the reduce level dig and removal of excavated material off site in large 8 wheeler type wagons. Imported material to make up ground levels will be transported to site in wagons. We anticipate an average of 35 wagon movements per day.



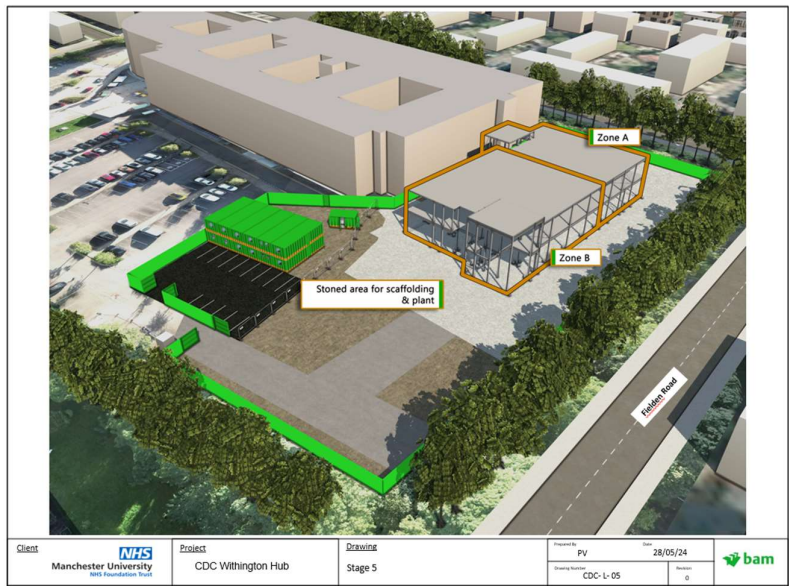
Stage 3 and 4- Piling and foundations- October/ November 2024

During this stage the majority of vehicle movements will be concrete type wagons for the piling works and then the foundations and ground floor slab.
Anticipated average per day 15 vehicle movements.



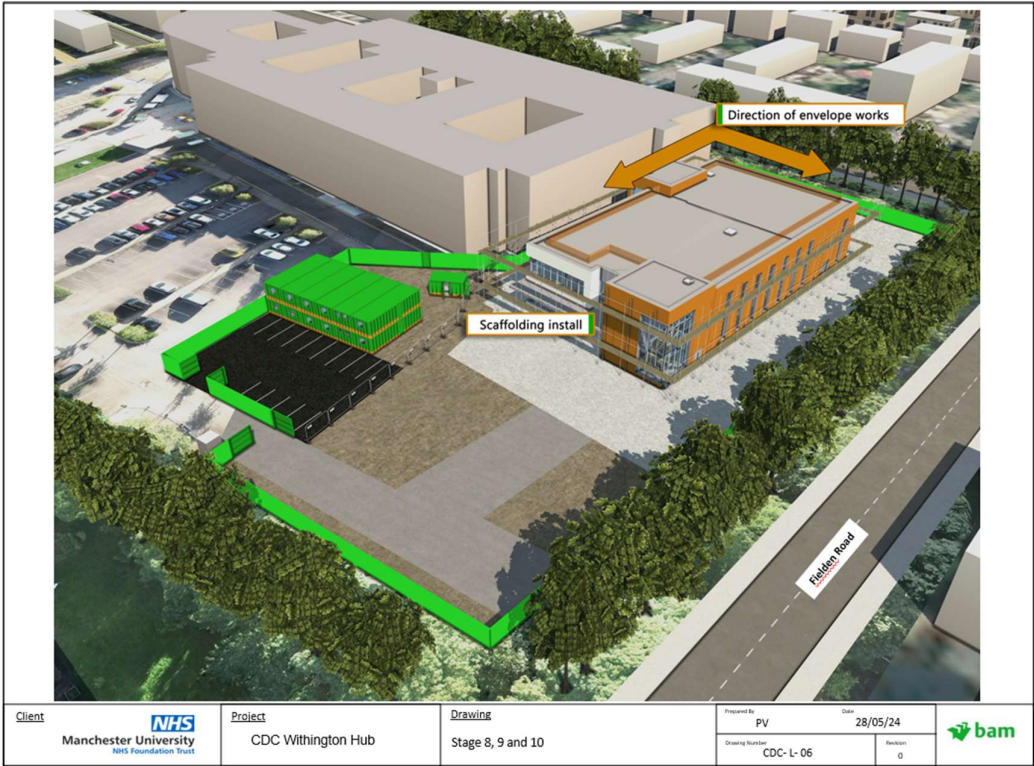
Stage 5- Superstructure- Steelwork, floor slabs- November to February 2025

During this stage of works deliveries will be steelwork which will be transported on flatbed type vehicle. Also concrete deliveries for when the floor slabs will be poured, anticipated peak would be a maximum per day of 12 vehicle movements.



Stage 8,9 ,10- Envelope, roof and internal works- February to October 2025

During this stage we anticipate an average of 10 vehicle movements per day. The type of vehicle being both articulated or rigid vehicle.



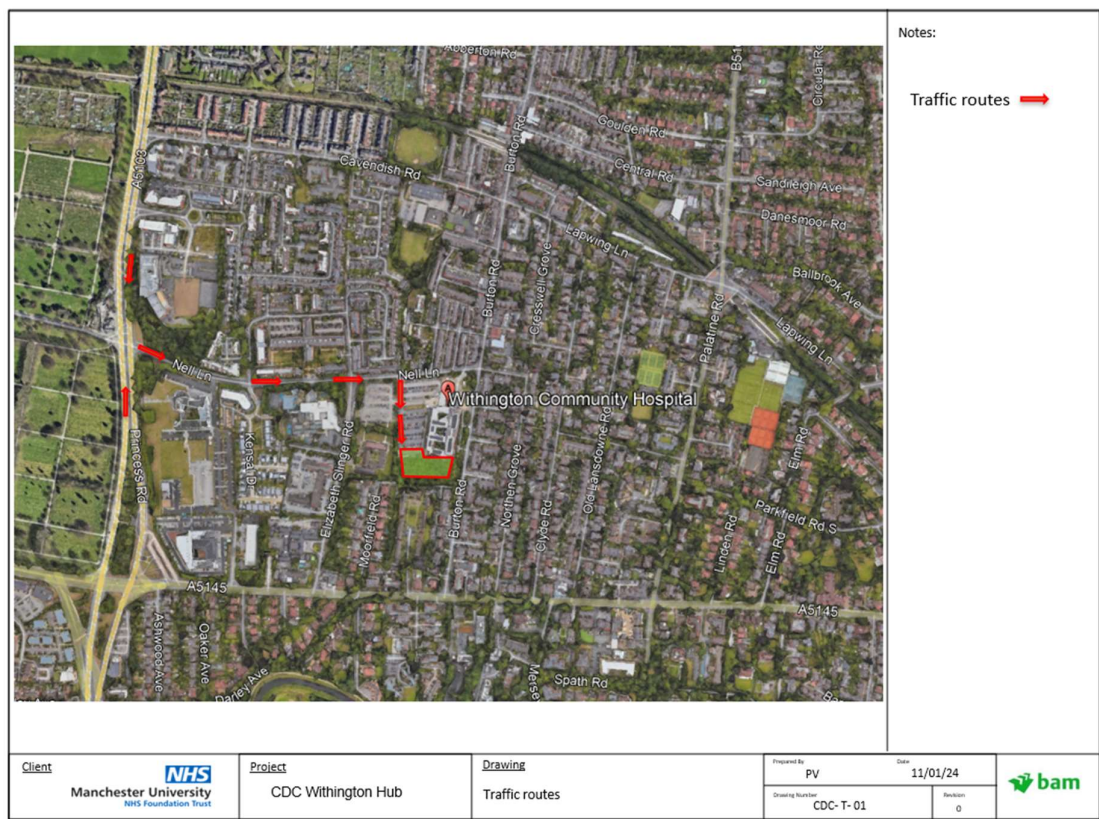
Commentary on types and frequency of vehicular demands together with evidence (including appropriate swept-path assessment) of satisfactory routing both within the site and on the adjacent highway together with associated traffic management;

The types of vehicle accessing the site will vary depending on the phase of works and activities being undertaken. They will range from 8 wheeled wagons, concrete wagons, flat bed and articulated type as detailed earlier.

The travel routing plan is detailed below:

Traffic vehicular movements will be from Princess Road and via Nell Lane, this route will then avoid as far as possible the local residential areas.

Once entering the hospital site off Nell Lane site location is straight ahead which simplifies the access/egress for the large construction vehicles.



The below images show the access to Withington Hospital off Nell Lane. As can be seen the access arrangements are good and road width at entry is sufficient width to accommodate all the vehicle types. This is currently being used for deliveries to the main hospital and mobile medical units. So a specific tracking check is not required. The construction vehicles will continue into the construction compound where they can be turned.



Entrance to Withington Hospital

road width sufficient to allow access for larger vehicles

Notes:

Traffic routes 

Client		Project	CDC Withington Hub	Drawing	Entrance to hospital	Prepared By	PV	Date	11/01/24	
						Drawing Number	CDC- T- 02	Revision	0	



View of entrance to Withington Hospital

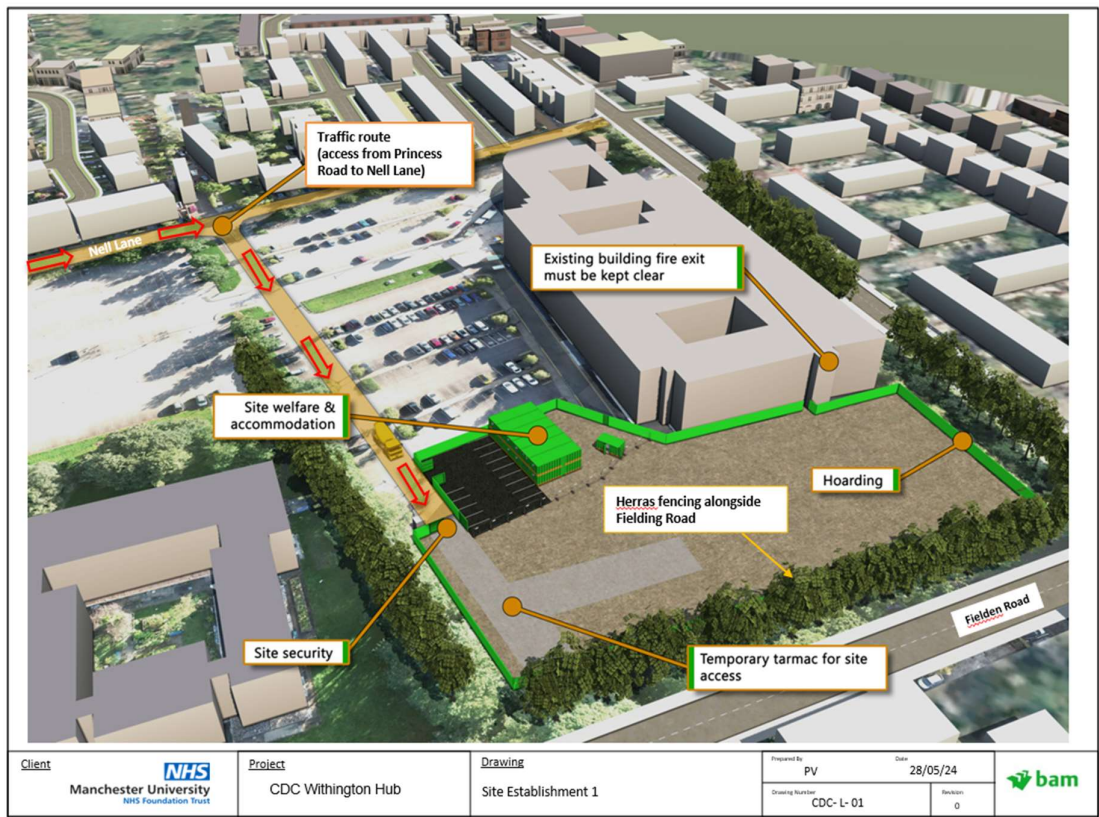
Notes:

Traffic routes 

Client		Project	CDC Withington Hub	Drawing	Entrance view	Prepared By	PV	Date	11/01/24	
						Drawing Number	CDC- E- 02	Revision	0	

Appropriate measures to manage construction works which are likely to take place alongside usual hospital operations;

As can be seen in the image below, the site will have a solid hoarding to the perimeter providing the necessary security and segregation. The site is also located away from the main hospital. All vehicular movements will be from Nell Lane and will access the site straight ahead. A vehicle banksmen will then open the site entrance gates to enter the site and offloading will be within the site. All contractors will be aware of the traffic management arrangements prior to commencing on site. Site deliveries will not take place at peak traffic times between 8.00-9.00am. BAM will also be enrolled on the Considerate Constructors scheme.



Details of the parking for construction vehicles and associated contractor parking

The majority of contractor parking will be accommodated within the BAM site compound area during the preliminary months and during the peak months of the project we anticipate to be May to July 2025. If there are any issues which arise the CEMP can be reviewed and re-issued accordingly.

Also BAM will actively encourage car sharing and the use of public transport to get to Withington hospital. There are local bus stops, metrolink and train stations to make it well accessible.

All contractors will be provided with a green travel plan which will detail the above prior to commencement on site. Parking outside the site in the residential areas will also be discouraged and will be advised prior to commencement on site and at induction stage.

4.10 Training

The following measures will be employed to ensure the Environmental Aspects and Controls are communicated to the relevant site personnel.

- Control measures noted above, along with details of the Resource Management Plan will be communicated to all Site Operatives at their initial Site Induction.
- An Environmental Notice Board in the site canteen will contain the following information:
 - BAM Environmental Policy Statement.
 - Relevant Environment Posters.
 - The latest relevant BAM Environmental Bulletin.
 - Site Incident Response Plan (SIRP) for oil.
 - Toolbox talks and/or other information relevant to the project.
 - Performance against, energy, water and waste targets
- Environmental Toolbox Talks relevant to site activities will be conducted once per month. Ecology toolbox talks will be undertaken based on the findings and recommendations for protection of ecological features highlighted within the Suitably Qualified Ecologist's report.

Site specific controls:

4.11 Emergency Procedures

A Site Incident Response Plan is to be displayed at all storage locations where 200 litres or more of a possibly polluting substance is to be stored.

Complete the plan to include the additional emergency procedures that may be required due to project specific hazards and display at all storage locations.

[Site Incident Response Plan](#)

4.12 Resource Management Plan

A Resource Management Plan (RMP), which complies with the requirements of the Site Waste Management Plan Regulations where they apply, has been drawn up.

The RMP has been produced to ensure that resource efficiency measures have been taken and that all waste from this site is to be managed appropriately and dealt with in accordance with Section 34 of the Environmental Protection Act 1990 (Waste Duty of Care) and the Environmental Protection (Duty of Care) Regulations.