

Hangar 4, Manchester Airport

MCLAREN

Hangar 4, Manchester Airport



Construction Method Statement

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1. Introduction

Within this Pre-construction Method Statement, we outline our approach to the delivery and construction of the new warehouse unit, associated hardstanding's and external features for Hangar 4.

We highlight the key elements of works and the considerations we have made with respect to the Planning Conditions, and the construction works in relation to the site and environment we are working in.

We seek to demonstrate our understanding of the intent of the planning conditions and the and the sequence of the build. In our response we have recognised the conditions and have outlined our approach which we believe is compliant with the intent, however, allows the scheme to developed in a meaningful and safe manner and in sympathy with the local environment.

Prestart conditions covered by this statement include:

- Conditions 18A Local employment plan
- Condition 24 construction management plan

2. Site Logistics & Environmental Procedures

2.1 – Existing Service Location

We have undertaken due diligence with respect to the location of existing services across the site which have included reviewing the recently issued utility survey carried out by Tetra Tech in February 2023

This has highlighted several issues:

- Gas Mains – existing supply to former Hangar 4 is to be isolated during the demolition phase of works. Redundant pipework may still be present within the site boundary. Retained gas main runs to the southern boundary of the site outside of the red line boundary within the MAG retained road.
- Water – existing combined potable / hydrant main runs through internal site road adjacent to Hangar. This is to be diverted to the perimeter of the site during the demolition works with fire hydrants reprovisioned to the boundary. Redundant pipework may still be present within site.
- HV feeder cable from airport RY to O-substation runs to the north of the site adjacent to Pinfold Lane. Feeder cables from airport O to I and I to F1 sub-stations run through the centre of the site along the existing road. All feeder cables are to be diverted during the demolition works to the perimeter site roads.
- Street lighting within the former Hangar 5 car park will remain. This is powered from the feeder pillar adjacent to I-substation and will need to be isolated prior to the works.
- No CCTV cameras present within site.
- LV cables are present in the road between the site and DNATA and around the airport I-substation. LV cable s within the site boundary will be diverted or isolated during the demolition works. Redundant and unknown LV/Comms cables may still be present on site.
- Pump station – the existing pump station will need to be diverted, there will be the need to construct a new pump station and have this up and running to allow disconnection of the existing pump station.

All known major services are to be diverted or abandoned during the demolition works. Small power and comms will mostly be disconnected following the isolation of Hangar 4. Redundant and unknown services may be present following the demolition works. A GPR Survey will be undertaken prior to the main works contract to verify the location of any remaining services

Prior to the start of any construction works, a dilapidation survey of all areas around the boundary of the site including footpaths, kerbs roads, and existing buildings will be carried out jointly with all relevant stakeholders, including the Highways Engineer and Manchester Airport. A concise portfolio will be developed with written and photographic records detailing any conditions relevant to the site boundaries and access roads. A copy will be made available to the Employer/Employers Agent for future consultation. Of particular importance will be the condition of the road servicing the site, the perimeter road around the site including Pinfold Lane between the site and Fuel Fram, the road between site and Thomas Cook, the road between the site and DNATA and the internal road adjacent to Wilmslow Old Road.

A SHEQ plan will be produced from the pre-construction information available and will be issued for review. This will be a live document that will change as the project progresses. We will follow our established safety, environmental and quality procedures which are accredited to ISO45001 and ISO 9001 respectively. A pre-start SHEQ workshop will also be arranged and attended by all key contractors and all other appropriate parties.

2.2 – Securing the Site & Access Arrangements

Establishment and security of the boundary of the site will be a priority activity and will be carried out prior to the commencement of any enabling works / construction works being carried out.

Entrance gates will be erected within the temporary fencing and will be manned when in use to ensure the security of the site.

Provision and installation of Biosite access control.

Access

The site access for the enabling works shall be along Avro Way up to Little West gate.

The site access during the construction works – As part of the enabling works the main entrance will be formed on the northwest of the site and the construction traffic will access through Little West gate.

It is our intent to maintain the existing public access routes using localised fencing and marshalling our entrances to the site on each phase.

We have recognised that the development is near private properties to the south, therefore, we propose regular liaison with the tenants to ensure they are advised in advance of activities on site. Liaison will be in the form of letter drops and the posting of contact numbers for site.

During the enabling works period, visibility splays will be checked and maintained by the removal of any vegetation impacting on the required 2.4m x 47m critical dimensions.

The new entrance has been formed to minimise the impact on the existing road allowing vehicles to pull in off the roadside.

2.3 Construction Phase Facilities – Temporary Accommodation

It is our intention to secure office Building 308 on Avro Way for the duration of the main construction works. This will allow the main site office facilities to be located at this point. This would also enable us to install a smaller toilet /welfare unit on site, maximising the construction space available at the entrance to the site.

Enabling Phase Facilities

During the enabling works, it is our intention to access the site via a small gate to manage the site entrance.

Main Construction Phase Facilities - Staff facilities will comprise of and office accommodation off site as follows. Reception.

- Office units.
- Kitchen.
- Male and female toilets.
- Meeting room.
- Induction room.

On site

The facilities will comprise of cabin accommodation as follows:

- Canteen facilities.
- Drying rooms.
- Toilet/washing facilities.



The permanent site compound will be established on the newly formed concrete/tarmac hardstanding located on the stone hardstanding.

Power to the welfare facilities and construction areas will be provided using generators strategically located around the site in the first instance. Generators will be selected that are acoustically insulated so as not to disturb neighbours. Following this we will look to connect to the MAG infrastructure.

Water will be provided for the existing MAG fire hydrants, and we will apply for the permits from MAG.

Drainage will be initially be tanked connecting to the existing foul network when practicle.

Temporary Services - As part of the initial site welfare arrangements on the enabling works, wastewater will be discharged into a collection tank which will be pumped out as required. The permanent welfare facilities will be piped to the existing foul sewer that services the site.

2.4 Materials Storage

All materials will be stored on site. This will remain in place until it is required to be freed up for construction, at which point materials storage will be spilt to allow works to proceed.

2.5 Car Parking

Enabling works – a small area of car parking will be allowed on site during the enabling works

Main construction works- we will not be allowing parking on site during the main works, we will allow deliveries and work vehicles on site. However, by securing the office space on Avro Way we hope to secure several car parking spaces to assist with parking.

2.6 Lighting

Construction works will mainly be carried out during the lighter period of the calendar; however, we have made allowance for flood lighting to be installed to provide safe pedestrian access and to allow construction works to continue during the darker months as required. Lighting will be selected and used with light pollution and nuisance issues in mind. The height of lighting will be restricted to below the existing building heights and focused into the site.

Lighting will be provided within the compound as necessary and will be shaded to prevent light pollution to neighbouring properties/Airport.

On completion of the roofing and cladding of the new building, floodlighting will be installed, together with “powerline” and safety / emergency lighting.

2.7 Signage

Prominent signage will be provided at strategic locations. This will provide relevant Health, Safety and Environmental information to all parties with respect to site hazards, current access routes and protocols, crossing points, and delivery routes etc. Clear wayfinding signage will also be provided at strategic locations to provide clear instruction to all in respect of access routes and current segregation.

2.8 Pedestrian Management

Pedestrian and vehicle segregation within the site compound will be achieved using a combination of Heras fencing and crowd control barrier. Pedestrian footpaths will also be established in a similar fashion.

Pedestrian access to the construction zones will be via walkthrough barrier, spring loaded gates. This will provide a definitive access/ egress point to the work front.

As detailed in the Signage section above, comprehensive information will be provided to ensure all are aware of the site hazards and are clear on the current access routes across the site.

Access route maps will be displayed at the construction zone access gates and will be regularly updated in line with the progress of the works.

2.9 Fire Management

Prior to starting on site, the local fire brigade will be notified of the project and provided with appropriate contact details. A Construction Phase Site Fire Safety Plan will be developed. This plan will be reviewed as part of the regular project meetings. The plan will be integral to the overarching site SHEQ plan (Construction Phase Health & Safety Plan) and will be updated in line with the outcomes of the regular project meetings and in accordance with the progress of the works.

Specific and pertinent details, systems, processes, and arrangements from the plan will be included within the induction process and will be discussed with all subcontractors due on site.

The site will be provided with a wireless alarm system, the main head detector and control panel will be in the site offices, with remote call points located within the site welfare and to the new building. Firefighting equipment will be located within the welfare facilities and at each access and egress point within the new warehouse.

2.10 Considerate Contractors Scheme

We recognise that the site is located adjacent to the live industrial and distribution facilities, and the Airport and that we need to work collaboratively to prevent a negative impact on their operations. Similarly, tenants need to understand our weekly activities and major delivery activities to ensure these are timed appropriately and unobstructed to allow regular progression of the works. We will therefore seek weekly reviews with named parties from each organisation, with the aim of promoting constructive working relations.

We also recognise the potential impact of our works on neighbouring business areas to the south of the site and will plan operations in line with best practice. Communication will be critical to establishing and maintaining relationships, in addition to contact numbers being posted on site signboards, appropriate information in respect of the project will be provided to interested parties by way of letter drop.

The Considerate Contractors Scheme will be adopted on this site.

McLaren Group are supporters of this industry driven scheme and the code of good practice criteria, which includes:

Cleanliness
Good Neighbours
Respectful
Safe
Responsible
Accountable

2.11 Environmental Procedures

Mitigating the environmental impact of the construction works is of primary importance to McLaren. There are many sources of environmental nuisance and disturbance including the following:

- Dust and airborne particles, bird nesting is a hot topic given the proximity to Airport Runway
- Noise
- Vibration
- Fuel
- Chemicals
- Waste
- Mud
- Water run off

In terms of environmental impact, the nearest receptors are:

- Neighbouring premises to the South and West of the site.
- Dnata to the west of the site
- The Airport
- Jet2 Hangar

We will employ the following measures to mitigate the environmental impact of the works as follows:

- Mud on the road- we will create a hard standing into the site to form the entrance roads. The surrounding roads will be service by a road sweeper, should the weather site become really wet /muddy we will look to jet wash the wheels before vehicles leave site.
- Water run off- the natural slop of the site falls into the centre of the site; the natural flow of water will be towards the centre of the site. All previous drains will be cut and capped off during the Demolition work/Enabling works to control water escaping the site. We will then look to apply a discharge permit with MAG and filter any water that is discharge from the site.
- All dust generating materials and waste transported to and from the site will be in covered transport.
- All dust generating activities (i.e., Earthworks) will be damped down regularly when required as identified by ongoing monitoring.
- All fuels and chemicals will be stored in line with the appropriate standards and guidance.
- Instigation of a delivery management system (Biosite).

- Appropriate and regular maintenance of vehicles and plant.
- Active protection of the existing drainage system.
- Deployment of fuel kits.
- Approval for sewer or watercourse discharge.

The logistics plans and measures outlined above will be under continuous review by the site management and will be amended where necessary.

3 Enabling Works Methodology & Sequencing

3.1 Site Boundary

Within this section we identify and describe the works that are required in response to the pre-start planning conditions and to allow finalisation of the design, methodology and programme of works.

The demolition contractor will establish and set up a security fence including two entrances around site.

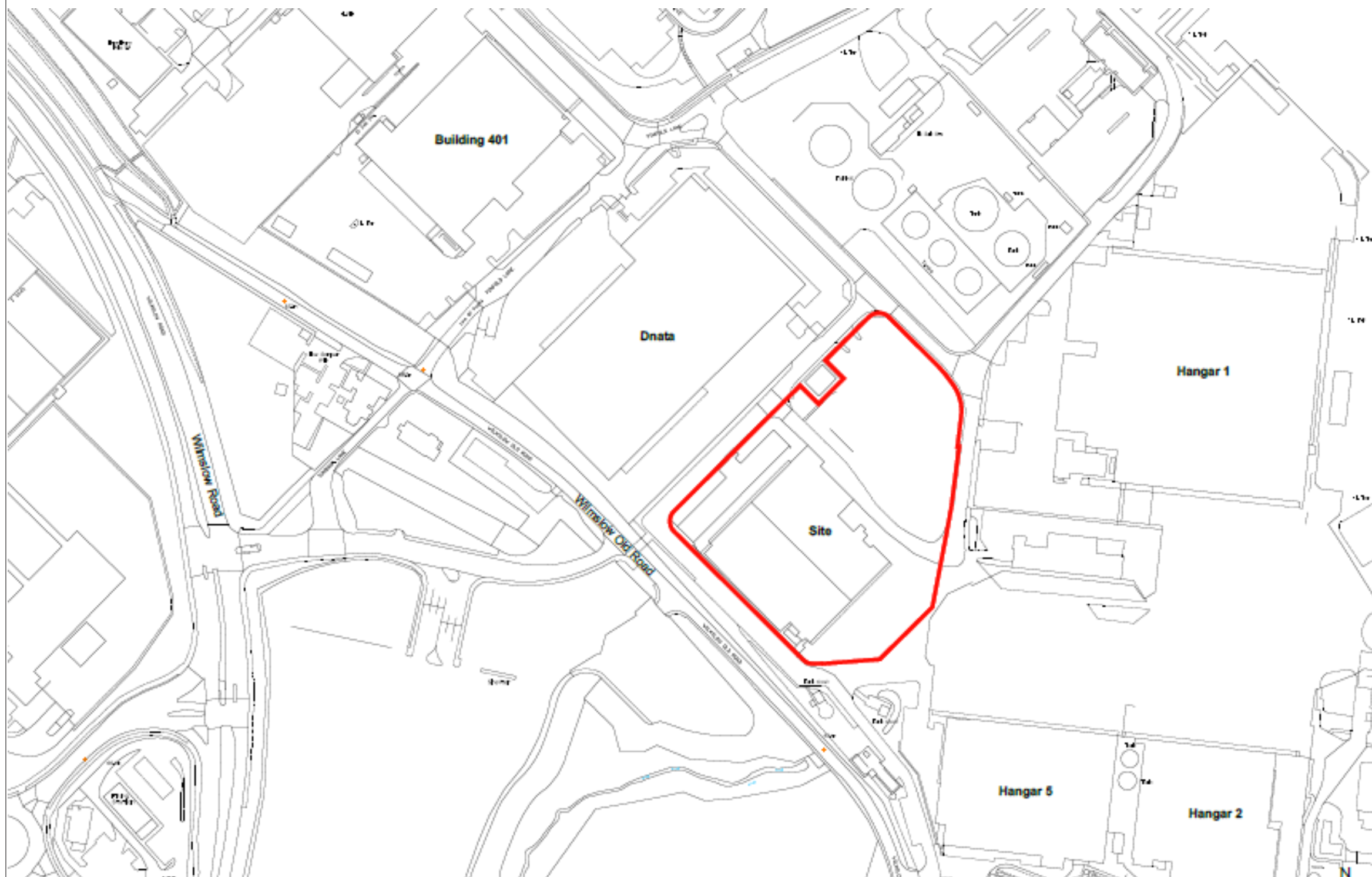
3.1 Isolation

We will review the information provided by Tetra Tech and the utility companies to locate and isolate the services.

Prior to any break out works all existing drainage will be located on site grubbed up or cut/capped.

3.2 Scope of works

See plan below.



Key:

Site Boundary

Notes:

Project Title:
Hanger 4 Manchester Airport

Drawing Title:
Site Location Plan

Client:
Columbia Threadneedle

Scale:
Do Not Scale

Date:
April 2023

Org No:
T1794/OPA/01

MCLAREN

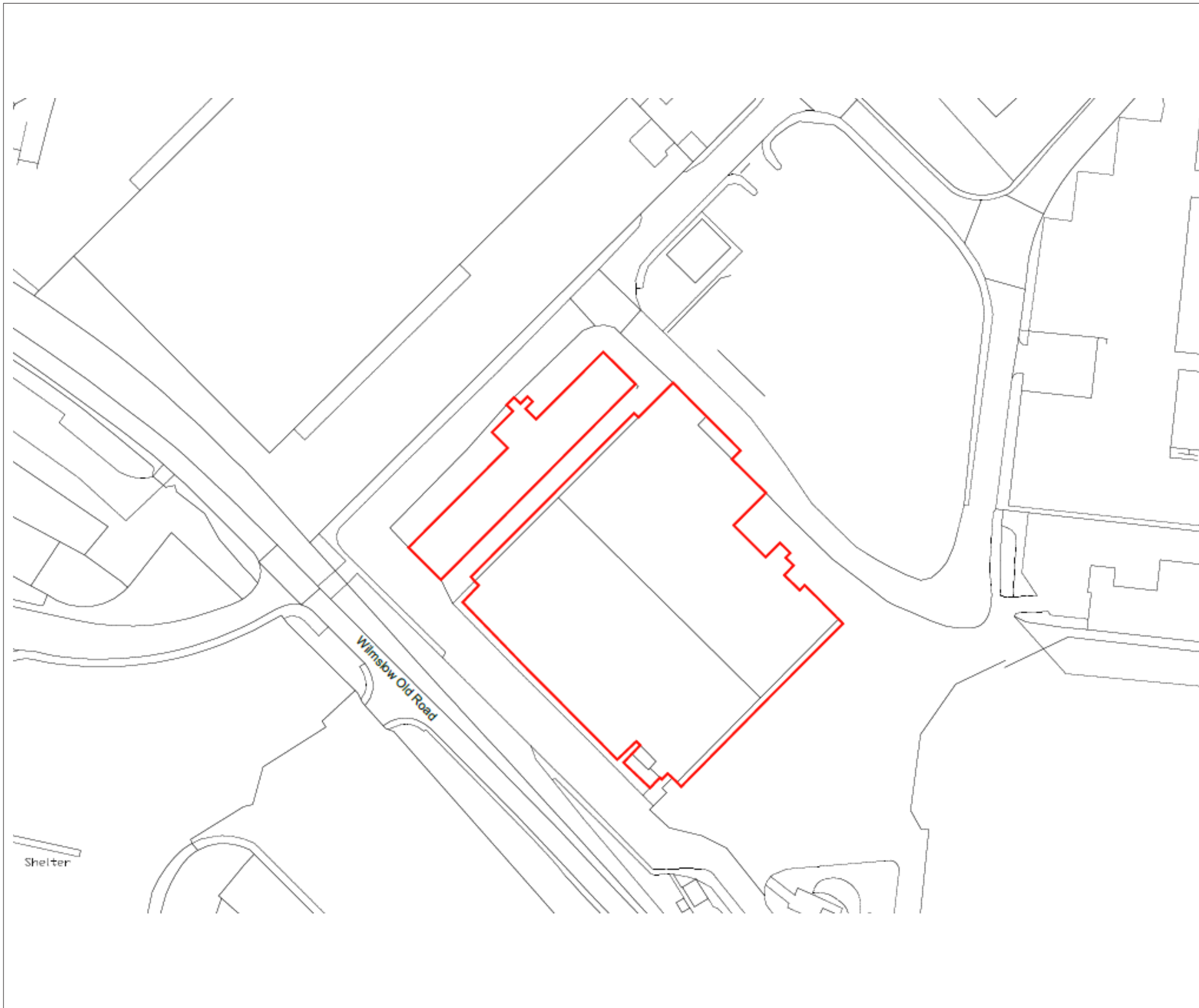
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Key:

Above Ground Structures for Demolition



Notes:

Project Title:
Hanger 4 Manchester Airport

Drawing Title:
Demolition Plan

Client:
Columbia Threadneedle

Scale:
Do Not Scale

Date:
April 2023

Org No:
T1794/OPA/02

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Elevation A



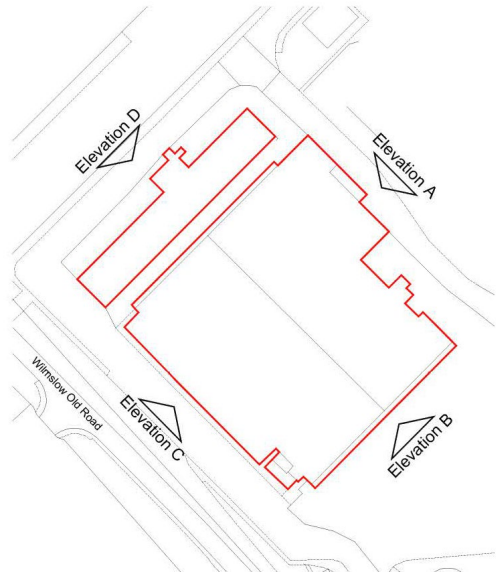
Elevation B



Elevation C



Elevation D



Key:

Notes:

1. All structures will be checked and clean air certificates issued.
2. Appropriate fencing and road barriers erected for safe demolition, segregation of pedestrians and traffic. Air quality/ dust monitoring stations will be affixed to the fencing and damping down to control airborne dust will be undertaken.
3. Appropriate control measures will be agreed and implemented to control FOD with MAG.
4. All services to existing buildings will be isolated and certified dead prior to the commencement of soft strip works.
5. Internal soft strip of structures will be undertaken to reduce stockpiled material on site, increase recyclability and control site vehicle movements. Where appropriate segregated covered skips will be used.
6. All loose materials & cabins will be removed from service yards & car parks.
7. Vegetation removal will be removed under watching brief of an ecologist.
8. External doors & windows will be removed to facilitate clean hardcore recovery from crushing.
9. Metal roof & wall cladding will be removed for recycling
10. Masonry will be stripped back and crushed on site prior to frame removal.

Project Title:
Hanger 4 Manchester Airport
Drawing Title:
Demolition Sequence
Client:
Columbia Threadneedle
Scale:
Do Not Scale
Date:
April 2023
Org No:
T1794/ OPA/ 03



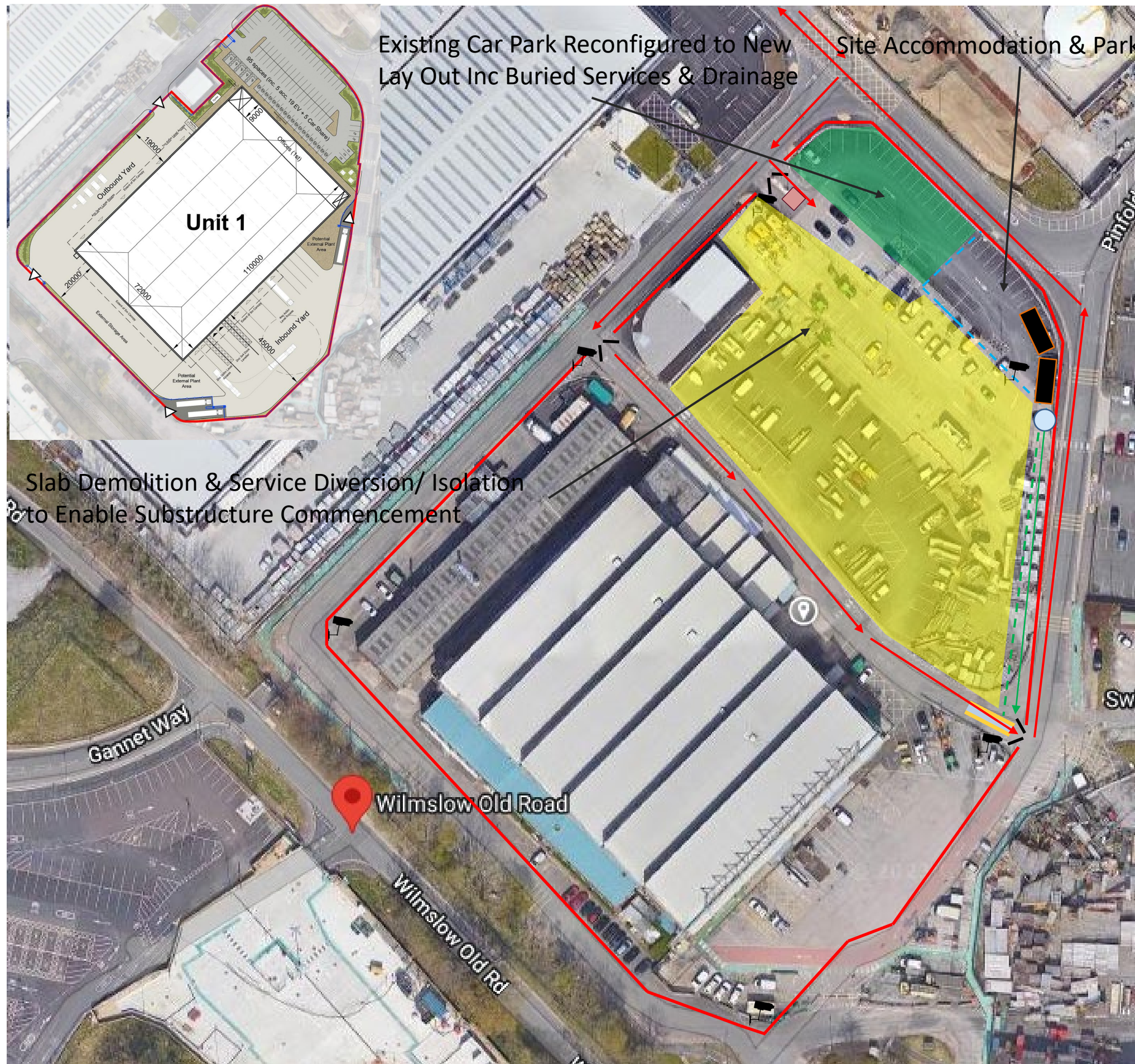
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3.3 Permits

Given the site is located at Manchester Airport and form part of the MAG infrastructure, we will then need to apply for several permits before works commence on site

- Project authorisation permit
- Permits to dig
- Isolation /Disconnection permits
- Discharge permits

See Phasing Plans Example below.



Key:	
	Hoarding
	Welfare
	Site traffic
	Pedestrian Route
	Protective Walkway
	Biometric Entry
	Gate
	Gatehouse
	Banksman
	CCTV
	Wheelwash
	Crane Base
	Crane Radius
	Hoist
	Material Storage
	Waste Segregation
	Laydown Area
	Heras Fencing
	Scaffolding

Project Title:
Hanger 4 Manchester Airport
Drawing Title:
Below Ground Demolition
Client:
Columbia Threadneedle
Scale:
Do Not Scale
Date:
April 2023
Org No:
T1794/ OPA/ 05

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Key:	
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Drawing Title:
Below Ground Demolition

Client:
Columbia Threadneedle

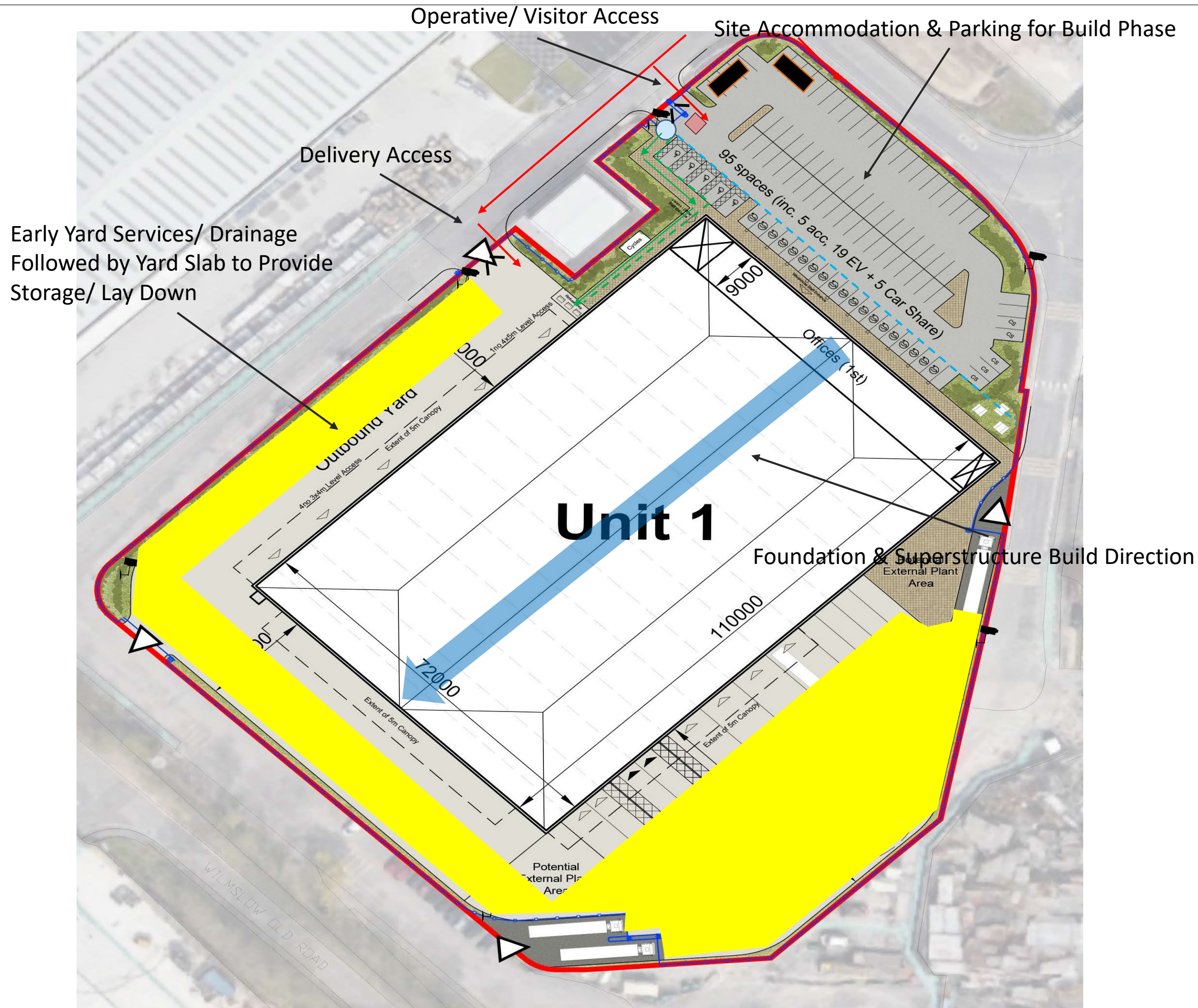
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Key:

- Hoarding
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- Site traffic
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- CCTV
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Project Title:
Hanger 4 Manchester Airport

Drawing Title:
Below Ground Demolition

Client:
Columbia Threadneedle

Scale:
Do Not Scale

Date:
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4. Construction Methodology & Sequencing

4.1 Compound and Welfare Establishment

The site office will set up off site along Avro Way in an existing office building.

Adjacent to the newly formed site entrance (which was formed in the enabling works) we will look to install a small set up comprising of a site toilet and welfare facility. This will be placed by Hi-Hiab and placed on a concrete pad on the newly formed hard standing.

A site gate house and security fence will be established to the entire area

4.2 Site Strip

The first operation of the construction phase will be the removal of any remaining hardstandings left by the demolition contractors.

4.3 Earthworks

Once completion of the tarmac strip and proof digging, the earth works contractor will use the material left behind by the demolition contractor and form the piling mat to sub formation level of the slab and in accordance with the designed piling mat.

During preparation of the piling matt, a stone haul road will be constructed along the west boundary. This haul road provides clean access to the site for piling materials and delivery. This ensures that vehicles do not track material from site onto the road.

Vibro Piling installation will commence from the southwest corner of the site, moving north across the site.

4.4 Substructure and Drainage

Foundation -Once the Vibro Piling is nearing completion the Groundworks contractor will commence the foundation installation, working in the same direction from the southeast corner of the site.

Drainage -During this period, work will commence on the drainage to the west of the site in the services yard and on the foul drainage to the south of the site. This will be coordinated to allow safe access around the site with all open excavation protected.

4.5 Superstructure

Steel Frame Installation - The superstructure sequence will generally follow the substructure, and steel erection will commence once sufficient foundations have been completed to provide continuity of work.

This requirement results in the steel erection commencing from the south elevation of the building working north across the site

We will arrange a prestart meeting with the appointed steel erection subcontractor ensuring that all access/egress requirements and timing of deliveries are understood. And that all required lift plans, sequencing, and method statements are in place prior to starting on site.

The clear span of the roof beams requires a tandem lift by two mobile cranes located within the building footprint. MEWPs and a forklift will be used for the erection of the structure and precast staircases, the specialist subcontractor's RAMS will be checked and signed off 2 weeks before works commence on site. All the necessary testing certification for plant and equipment with operative training records will form part of their documentation as well as the required lifting plan.

Scaffold edge protection or guard rails will be required to all leading edges, internal floors and building roof edge perimeters. Safety netting will be installed to the roof level and to the mezzanine floor prior to any works being carried out on the roof or installation of mezzanine floor slabs.

4.6 Roofing and Cladding

Netting will be hung on the first bays and appropriate edge protection fixed at roof level; a 1 bay exclusion zone between the structural steel operations will be maintained throughout. Integrated roof access will be provided by Haki stair towers which will be installed external to the building footprint.

The wall cladding operation will commence on the south elevation of the building access will be via Mobile Elevated Working Platform (scissor lift type). Proceeding north across the site, the cladding will precede roof cladding.

Roofing materials will be lifted onto the roof via mobile crane and roof cladding sheets will be installed progressively across the roof in a south to north direction.

The roofing and cladding operations will follow the progress of the structural steel frame ensuring that the appropriate exclusion zones are always maintained.

4.7 Warehouse Ground Floor Slab & office Slabs

First Floor office slabs -will be cast as the frame complete the roof cladding in the relevant area. This constitutes a metal deck, mesh, and concrete. A specialist contractor will be selected, and the RAM's reviewed. All leading edges will be protected, and any back propping fully designed.

The Ground floor slabs- will be cast once the roofing and cladding works have been substantially completed and the perimeter cladding. After the formation has been prepared, the membrane will be placed, lapped, and taped (all as per manufacturer's recommendations) and then verified in accordance with the ER's and Tetratex specification. A specialist contractor will be selected, and all RAM's reviewed, and plant inspection/certification carried out.

4.8 Internal Fitout Works

Dividing walls -The internal office walls will be lifted in to form the office segregation to each unit. These will be built out of the existing slab/steel work at first floor. The edge protection installed for the construction of the first-floor slabs will remain in place and be moved back out of the wall zone to allow the panel to be installed. This then can be removed once the panels are fitted.

Panels will be lifted into place from below via tele handler and attachments. Access for the operatives will be via a MEWP specification. A specialist contractor will be selected, and all RAM's reviewed, and plant inspection/certification carried out.

The office units dividing walls will be installed from the warehouse slab using machine. storage working will be provided within the footprint of the building

High level M&E- Internal works will commence once the warehouse slabs have sufficiently cured, and capable of withstanding the use of MEWPS. Operations commence with the installation of high-level containment, cabling, and final fix items (lighting and fire protection systems). Works will complete with a period of check commissioning within the now temperature-controlled space.

4.9 External Works

The external works packages are undertaken at various stages throughout the construction programme. The overarching strategy has been developed to ensure that installation of utilities (or ducts where required) occurs in sufficient time to allow construction of the concrete yard slab (including associated works).

The external concrete yard slab works will be undertaken as early as possible to mitigate the impact of weather, whilst helping to maintain a cleaner site and reducing the risk of potential damage to the permanent works (i.e., the envelope).

Planting will be completed during the earliest available planting season.

4.10 Permits

Given the site is located at Manchester Airport and form part of the Mag infrastructure then we will need to apply for several permit before works commence on site

- Project authorisation permit
- Permits to dig
- Isolation /Disconnection permits
- Discharge permits
- Lift permits /Work at height approval

5 Phasing plan and logistic appended to the document