ARUP

## Colt Data Centre Services

# HDP Masterplan

## Outline Construction Management Plan

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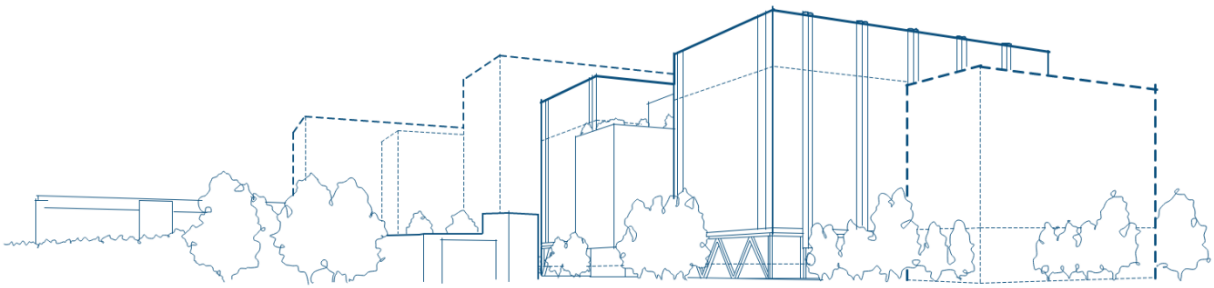



Job number 298734-00

**Ove Arup & Partners Limited**
Central Square
Forth Street
Newcastle upon Tyne
NE1 3PL
United Kingdom
arup.com

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

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# Document Verification

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| | | **Name** | Ben Stobie | Steven McCloy | Gordon Mungall |
| | | **Signature** | | | |
| | | **Filename** | | | |
| | | **Description** | | | |
| | | | **Prepared by** | **Checked by** | **Approved by** |
| | | **Name** | | | |

**Signature**

Issue Document Verification with Document ✓

# Contents

## Appendices

# 1. Introduction

## 1.1 Outline

This report has been prepared by Ove Arup and Partners Ltd. ('Arup'), on behalf of Colt Data Centre Services ('the applicant') in support of the hybrid planning application to London Borough of Hillingdon Council ('the Council'), that envisages the construction of the Hayes Data Park (HDP) at Heathrow Interchange and Hayes Bridge Retail Park.

The hybrid permission consists of full planning permission for a data centre building (to be known as LON6) and outline planning permission for two further data centre buildings (to be known as LON7 and LON8) and the Innovation Hub. LON6, LON7, and the Innovation Hub are to be located on the site of Hayes Bridge Retail Park with LON8 (and the substation for which there is a separate application for full planning permission for) to be located on the site of Heathrow Interchange.

The Metro Bank building and use in the northeast corner of the site will be retained.

## 1.2 Hybrid application

This report supports a planning application for the following:

> *The Hybrid planning application for a four-phased redevelopment to deliver a data centre campus comprising of:*
>
> *Phase 1 – Full planning permission for (a) a data centre building (b) energy, power, and water infrastructure (c) site access and internal roads including a vehicular and pedestrian link between Uxbridge Road and Bullsbrook Road (d) site security arrangements and security fencing (e) hard and soft, green and blue, infrastructure and (f) other ancillary and auxiliary forms of development;*
>
> *Phase 2 – Outline planning permission for (a) an Innovation Hub (b) hard and soft, green and blue, infrastructure and (c) other ancillary and auxiliary forms of development;*
>
> *Phase 3 - Outline planning permission for (a) a data centre building (b) energy, power, and water infrastructure (c) internal roads (d) site security arrangements and security fencing (e) hard and soft, green and blue, infrastructure and (f) other ancillary and auxiliary forms of development; and*
>
> *Phase 4 - Outline planning permission for (a) a data centre building (b) energy, power, and water infrastructure (c) internal roads (d) site security arrangements and security fencing (e) hard and soft, green and blue, infrastructure and (f) other ancillary and auxiliary forms of development*

The proposed development has evolved through an extensive pre-application and wider stakeholder consultation process, which has included collaborative discussions with the Council, and several other key stakeholders.

## 1.3 Objectives of this document

This Outline Construction Management Plan (OCMP) provides a framework and principles relating to management of proposed construction works at the site.

This plan will become the basis of the construction contractor's Construction Management Plan (CMP) which will be agreed with the Council and implemented prior to any construction works taking place. The CMP is a living document and will be continually updated throughout the duration of the Project Works.

This will ensure the safe execution of the works, adherence to the Council's policies and guidance and the effective management of environmental and safety issues relating to the project. This document has also incorporated the feedback from the Council on the permitted enabling works for the development.

This OCMP describes in high-level how the applicant and contractor will manage the construction works, including engaging with existing surrounding communities, residents and businesses through a Community Liaison Group.

This will help to assist and enable third parties to clearly understand the nature of the works related to the site, specifically the construction and the management of the interface between the site, the surroundings and the public.

## 1.4 Staged approach to delivery of development

The overall scheme to deliver the masterplan is anticipated to be delivered over a period of up to 10 years, broken down into the following stages:

Stage 1: Vehicle Access- Delivery of the vehicle access supporting the initial development/ construction stages;

Stage 2: Demolition of existing buildings (addressed in separate Demolition Management Plan, COLT LON6 Demolition and Enabling Plan – Ridge Jan 2025)

Stage 3: Initial Electrical Substation- Delivery of the electrical plant to receive grid power, to support the first stage of the development (subject to sperate planning application ref. 71554/APP/2025/47);

Stage 4: Delivery of LON6 Data Centre - Delivery of the first data centre with its access points, and landscaping areas along, the Technology Boulevard and the southern boundaries; and

Stage 5: Further Data Centre Development - Delivery of the LON7 and LON8 data centres and the Innovation Centre, the main electrical substation to receive grid power to support later stages of the development, and landscaping areas (subject to available utilities connection/ supply and market demand).

For each stage of the development a detailed CMP will be prepared by the appointed contractor and submitted to the Council for approval as part of reserved matters applications or by way of condition.

This approach will enable and support consultation and feedback from local and strategic highway authorities.

The construction management process and its continual development will seek to enable creating a positive working relationship with the Council, statutory consultees, local communities, visitors and occupants of nearby residential and commercial properties to make sure they are kept fully informed of current progress and of contractor key activities. It will also allow third party feedback to allow activity dates or nature be honed to minimise the risks, impacts and disturbances to the locality as far as is safe, reasonable, and practicable.

The references to the masterplan and parameter plans submitted with the planning application are included in Appendix A.

## 1.5 Report structure

The main body of this report includes key information directly relevant to the site including:

- site information and development context, proposed construction strategy, traffic considerations, construction logistics and potential impacts and mitigation during works.

A series of appendices containing information outlining principles of working for the contractor including:

- Parameter plans
- Temporary works design management
- Hoarding
- On site best practice including:
  - The considerate contractors scheme
  - Health and Safety
  - Site security and emergency planning

  - Working hours
  - Site accommodation and lighting
  - Waste & site cleanliness and good housekeeping.
  - Third party liaison
- Mitigation measures including:
  - Noise mitigations
  - Dust
  - Archaeology
  - Protected species

## 1.6 Planning policy context

The following section presents a summary of the main policies that are directly related to defining development in this location and highlight the key objectives that need to be met.

This OCMP has been prepared in response to the planning requirements and guidelines outlined in the following documents:

- National Planning Policy Framework (2024)
- Environment Act (2021)
- Sustainability Appraisal of Core Strategy
- Hillingdon Strategic Climate Action Plan
- Hillingdon Local Plan (2011-2026)

## 1.7 Construction Logistics and Community Safety Scheme (CLOCS)

This OCMP report and subsequent detailed contractor CMP's will be aligned with CLOCS.

CLOCS is a national Standard that requires all stakeholders in construction to take responsibility for health and safety beyond the hoardings. CLOCS is a construction impact mitigation measure aimed at safeguarding vulnerable road users and pedestrians from the increased threat posed by construction traffic. It demands collaborative action to prevent fatal or serious collisions between vehicles servicing construction projects and vulnerable road users: pedestrians, cyclists, and motorcyclists.

As part of the applicant's wider corporate responsibility, they have a moral obligation to ensure that the traffic servicing the site is correctly managed. This means that drivers have received current, best-practice training, hold the correct licences for their vehicles, and are driving a vehicle that is both road-legal and safe for use on the public highway. The routes which drivers use to service the site will come under the responsibility of the applicant.

# 2. Site overview

## 2.1 Site location

## 2.2 Site context and planning history

The proposed development site is located to the east of the Brook Industrial Estate in the London borough of Hillingdon. The site itself comprises of Hayes Bridge Retail Park and other industrial buildings with various uses. A Metro Bank is located on the northeastern edge and will be unaffected by the development proposals.

The site location is shown in Figure 1. This shows the proximity of the site to Great Western Mainline, the M4 motorway and Heathrow airport.

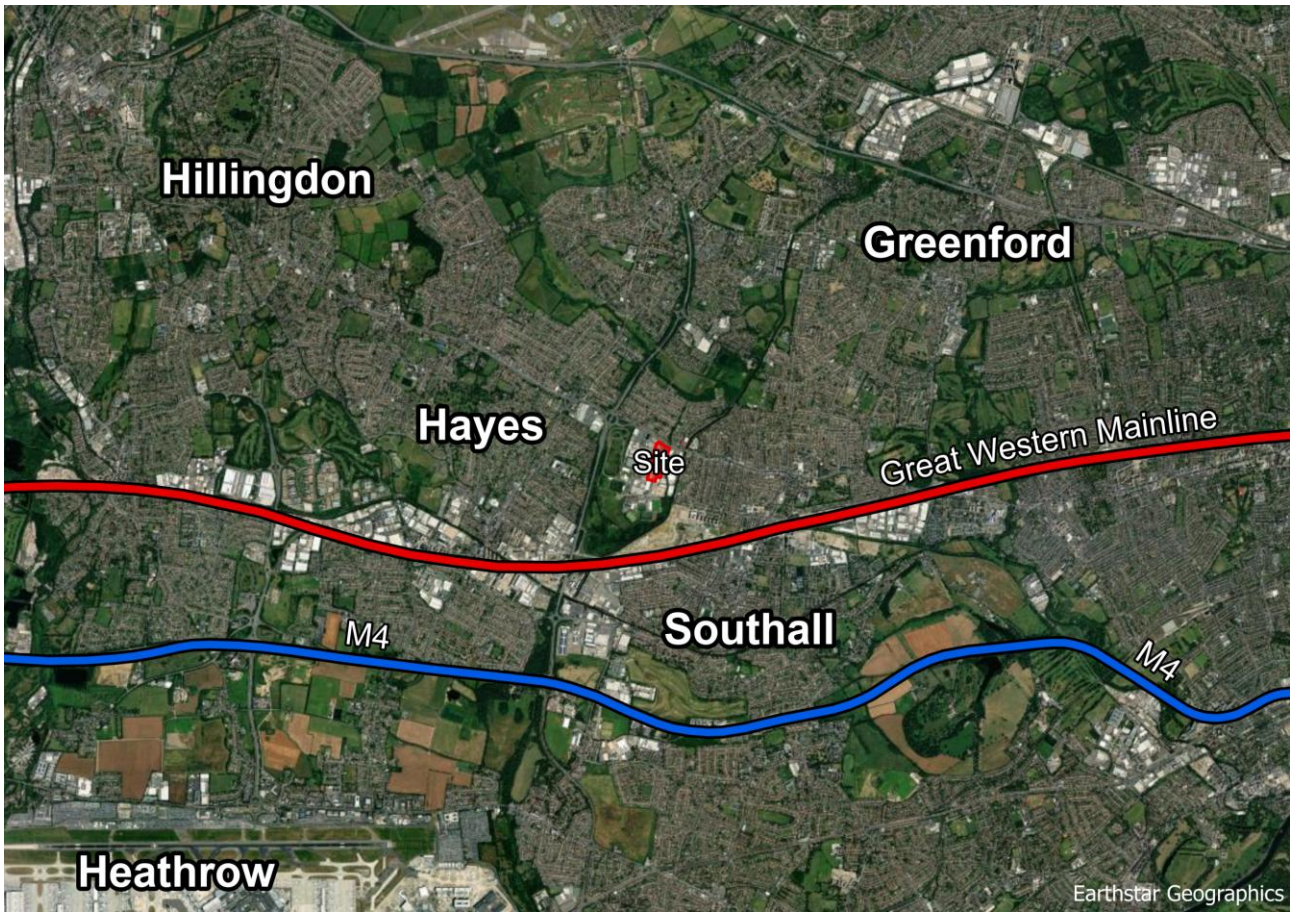



**Figure 1: Site location**

Locally the site is bounded by Uxbridge Road to the north and Beaconsfield Road to the south. Bullsbrook Road passes through the site. The east of the site is bounded by Yeading Brook and the west is bounded by various other Brook Industrial Estate buildings.

An overview of the proposed site layout is shown in Figure 2.


**Figure 2: High level overview of the proposed development**

Colt secured planning permission from the London Borough of Hillingdon (LBH) in 2022 for the redevelopment of the former Trinity Data Centre, Veetec Building, and Tudor Works sites at Beaconsfield Road in Hayes to deliver two data centre buildings (alongside substation and tank rooms) which together provide more than 37,000sqm of floorspace (ref. 38421/APP/2021/4045).

Since the granting of planning permissions for Buildings 1 and 2 (ref. 38421/APP/2021/4045), Colt has acquired Heathrow Interchange and Hayes Bridge Retail Park. The southern boundary of Heathrow Interchange immediately abuts the northern boundary of the site that Colt is presently redeveloping.

The proposed site sits as part of a wider commercial area which is broadly bound to the north by Uxbridge Road, the west by Springfield Road (and Minet Country Park), to the east by the Yeading Brook, and to the south by Beaconsfield Road. The broader area comprises of a mix of commercial operations with retail uses located predominantly in the northern part and industrial, storage, and manufacturing operations across much of the central and southern areas.

The site consists of two distinct parts which together have a site area of approximately 4.4ha but are separated from each other by Bullsbrook Road, an adopted highways which serves other premises within the wider commercial area.

On the northern side of Bullsbrook Road is Hayes Bridge Retail Park. The Hayes Bridge Retail Park consists of a terrace of seven retail units and a standalone commercial bank (Metro Bank) set around a central surface car park which is accessed from the Uxbridge Road. The majority of these units are vacant. It is anticipated that demolition of units within the retail park (save for Metro Bank) will take place whilst this application is being considered in accordance with an application for prior notification of demolition.

To the south of Bullsbrook Road and Hayes Bridge Retail Park is Heathrow Interchange. Heathrow Interchange consists of a series of industrial units arranged into two parallel terraces which are orientated north-south and separated from each other by an open yard with parking and vehicle turning which is served by Bullsbrook Road. Each terrace is split into two units so that there are four units within Heathrow Interchange. Prior notification of demolition of Unit 1 (ref. 71554/APP/2024/2490) and it is envisaged that the unit will be demolished whilst this application is being considered. There is a live application for planning permission for a substation in this location (ref. 71554/APP/2025/47). Unit 2, the southern unit on the eastern terrace, is outside of Colt's ownership and is excluded from this application.

The proposed masterplan for the site in is shown in Figure 3

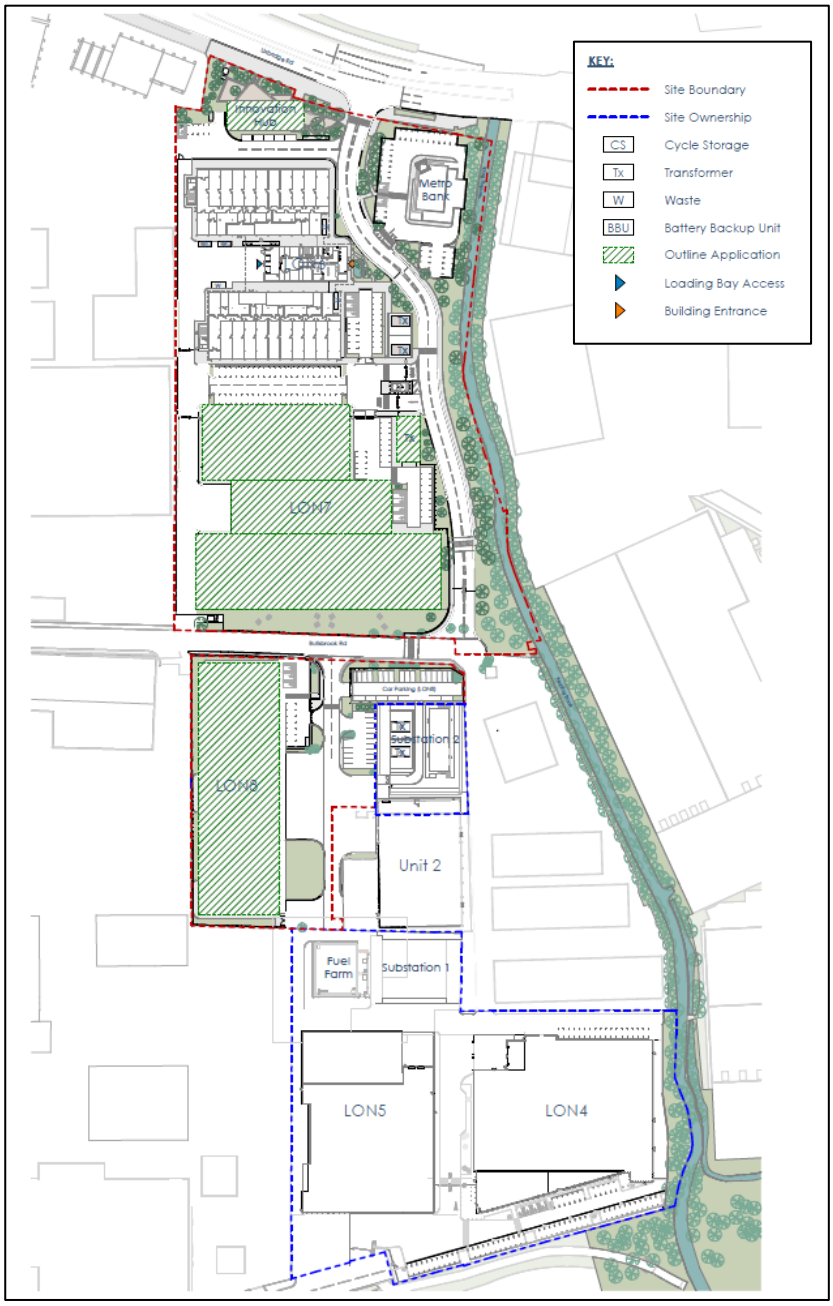



**Figure 3: Hybrid application drawing, LON6 detailed, LON7 and LON8 outline**

## 2.3 Demolition/enabling works

The site will be remediated through the accompanying Demlotion Management Plan (DMP). This report articulates how the current land uses will be deconstructed prior to Data Centre land uses come forward.

# 3. Key project members

The key contacts are those known at the issue date of this OCMP.

On contracting of a suitably qualified construction partners, a CMP will be provided to reflect the build stage and be maintained live until such time that all of the related construction partners have been procured and finalisation of the CMP can be achieved and shared with the Council.

| Role | Company |
|---|---|
| Applicant/Developer | Colt Data Centre Services |
| Principal Designer | Atkins Realis |
| Local Authority (LA) | Hillingdon Council |
| Principal Contractor (CONTRACTOR) | Atkins Realis |

**Table 1: Key contacts**

As applicant and developer Colt will also lead on the establishment of the Community Liaison Group, discussed in Section 4.

# 4. Neighbourhood engagement

Prior to the commencement of each stage of works, the applicant will inform local neighbours of forthcoming activity and raise the awareness of the Community Liaison Group (CLG) – the forum for undertaking and providing feedback in relation to works activities. The applicant aims to ensure that they are a good neighbour throughout the development process and take the potential impacts that development and construction activity can have on our neighbours seriously.

In addition to immediate neighbours in the adjoining commercial estate, the applicant recognises the importance of other local sensitive occupiers, shown in Figure 4, including but not limited to:

1. Residential areas accessed from Delamere Road;
2. Residential areas accessed from Bankside;
3. Blair Peach Primary School;
4. Guru Nanak Sikh Academy/Nanaksar Primary School;
5. Hayes & Yeading United Football Club;
6. Commercial and residential properties along The Broadway.


**Figure 4: Local sensitive receptors/communities**

The applicant's approach is to seek to work with affected parties to understand, minimise and manage potential impacts where possible; and as such has incorporated the requirement for the contractor to be part of the Considerate Constructors Scheme and to comply with BREEAM requirements for "Man 02 The Considerate Constructors Scheme".

The applicant will ensure environmental monitoring, as detailed later in the document, to ensure that the contractor's methodology for all works aligns with limits for noise, dust and vibration agreed with the

Council, and adopting best practice to mitigate impacts on neighbours for relevant work (e.g. ‘watering down’ during any dust-creating activities to reduce airborne dust).

Details of all construction activities will be shared with the Council as part of the evolving detailed CMP. Any cumulative activities and/or adjustments to the build programme to minimise adverse impacts will be communicated through the CLG process.

# 5. Pre-start works

Prior to commencement of each reserved matters stage on site the applicant will ensure that the F10 Notification for the project is submitted to the Council and received by the contractor who will post the F10 form on the site notice board.

Prior to commencement of any works on site the Contractor will undertake the development and issue and receive acceptance as necessary for all documentation required for the commencement of the works. These will include:

- Provide information to the applicant to discharge the applicable pre-commencement planning conditions,
- Approaches to deal with tree protection or protected species, such as bats.
- Preparation of all Safety and Environmental documentation including the CMP and all work package method statements and risk assessments;
- Convene the Contractor Liaison Group (and potentially community days) to agree works charter and practicalities such as lighting, security, provision of pathways and protected routes and nuisance issues. Then follow up on next meetings, consultations and newsletters as required;
- Organisation of sub-contract and consultant work packages, including hoarding, scaffolding, and service;
- Installation/isolation contractors. Drafting of RAMS for approval once scope is agreed;
- Waste Management Control Plan;
- Dust Management Plan (DuMP);
- Development of the site traffic and pedestrian management plan;
- Detailed Temporary Works designs for hoarding, scaffolding, canal side safety works and Council and third-party approvals;
- Production of drawings, survey reports, licences, agreements etc;
- R&D Surveys, Haz Mat Surveys, and utility services surveys;
- Notify the Council should any unexpected finds of possible ground contamination is found during the enabling works, as per Enabling works requirement planning permission;
- Establishment of all emergency procedures and the requirements of the Fire / Emergency Plan on site;
- Commissioning of all environmental monitoring equipment in line with the approved Environmental Management Plan (EMP);
- Application for Fire Hydrant License if required;
- Council's and third-party approvals and licences to facilitate the works; and
- Review and agree Network Rail Basic Asset Protection Agreement (BAPA).

Any temporary works will be developed in line with the principles included within Appendix C – Temporary works and design management and Appendix D Site management principles.

# 6. Information, surveys, and reports

A range of surveys and ground investigations has been undertaken as part of the formulation of the design and compilation of information to inform the hybrid planning application. These surveys will be provided to the Contractor at each tender stage for information.

The Contractor for each reserved matters stage will need to satisfy themselves of the information supplied and where necessary carry out further survey work in advance of commencing works. If there are gaps additional surveys will be commissioned at the appropriate time.

Additional surveys will be undertaken as deemed required as the design progresses. The following surveys, shown in Table 2 will be required prior to the commencement of each stage of works on site:

| Survey | Description/Purpose | Survey Owner | Notes |
|---|---|---|---|
| Below Ground Services Survey | Radar surveys/ slit trenches of existing below ground services. | Applicant (Design Team) | Where required, subject to survey assessment outcomes under the application. |
| Above Ground Services Survey | Trace existing services within the building back to the meters/ heads. | Contractor | Where required, subject to survey assessment outcomes under the application. |
| Geo Technical Surveys | Ascertain Ground Build up for consideration of foundation strategy. | Contractor | Where required, subject to survey assessment outcomes under the application. |
| Site Structural Investigations to inform foundation strategy and methodology | Structural investigations into the form and condition of the existing structure. | Applicant | Where required, subject to survey assessment outcomes under the application. |
| Topographic Survey | Identification of all structures above and below ground that may affect the working area or construction methodology | Contractor | To be undertaken as part of enabling works |
| Condition Survey | Pre-start condition photographic survey of the site, adjacent buildings, roads, pavements, and street furniture | Contractor | Where required, subject to survey assessment outcomes under the application. |
| Ecological Reports (e.g. nesting birds, bats) | Reports and recommendations of environmental constraints and required mitigation / protection measures required | Applicant | Where required, subject to survey assessment outcomes under the application. |
| Utilities Survey (GPR and CAT Scans) | Ground-penetrating radar (GPR) to image subsurface. Cable avoidance tool (CAT) for detecting the presence and location of utilities. | Applicant | Where required, subject to survey assessment outcomes under the application. |
| Archaeological Assessment | To determine potential archaeological artefacts that may be disturbed through work on the site. | Applicant | Where required, subject to survey assessment outcomes under the application. |
| Unexploded Ordnance (UXO) | Scanning to assess any unexploded material | Applicant | Where required, subject to survey assessment |

| | | | |
|---|---|---|---|
| | embedded in the ground of the site. | | outcomes under the application. |
| Arboriculture Survey | Survey to establish impact of development on any existing trees on site | Applicant | Where required, subject to survey assessment outcomes under the application. |
| Hazardous Materials Survey | Survey to establish presence of hazardous materials prior to undertaking demolition. | Applicant | The Contractor needs to receive a report summarising the known ground conditions at the end of the remediation works. |
| Earth Resistivity Survey | Survey to locate and map underground features. | Applicant | Where required, subject to survey assessment outcomes under the application |

**Table 2: Required surveys required to inform works contract**

# 7. Proposed development construction strategy

The following section sets out the anticipated development delivery strategy. Further detail around on site practice is provided in Appendix D. More detailed construction design will be developed throughout the pre-construction stages and submitted with reserved matters applications.

## 7.1 Staging

The scheme is anticipated to be constructed in stages over a period of up to 10 years, broken down into the following stages:

Stage 1: Vehicle Access- Delivery of the vehicle access supporting the initial development/ construction stages;

Stage 2: Demolition of existing buildings (addressed in Ridge - Demolition and Enabling Works Plan January 2025)

Stage 3: Initial Electrical Substation- Delivery of the electrical plant to receive grid power, to support the first stage of the development (subject to sperate planning application ref. 71554/APP/2025/47);

Stage 4: Delivery of LON6 Data Centre - Delivery of the first data centre with its access points, and landscaping areas along, the Technology Boulevard and the southern boundaries; and

Stage 5:  Further Data Centre Development - Delivery of the LON7 and LON8 data centres and the Innovation Centre, the main electrical substation to receive grid power to support later stages of the development, and landscaping areas (subject to available utilities connection/ supply and market demand).

For each stage of the development a detailed CMP will be prepared by the appointed contractor and submitted to the Council for approval as part of reserved matters applications or by way of condition.

At this stage is not anticipated that any of the stages will significantly overlap or progress cumulatively, this this will be dictated by power availability and market conditions.

## 7.2 Number of staff

The number of construction workers and fit out contractors on-site at any one time will vary and correlate to the different stages of the development. The maximum number of staff on site is likely to be through the fit-out construction period of the data centre but the number will fluctuate depending on phasing, operations, and the nature of construction activities.

Based on previous Colt schemes, up to 300 construction staff and fit out contractors could be on site during peak periods of the programme.

## 7.3 Provisional construction methodology for LON 6 (and subsequently LON7 and LON8)

The following outline construction method statement reflects the construction of the LON6 data centre, a similar approach is anticipated for the construction of LON7 and LON8 data centres.

### 7.3.1 Vehicle Access

At the outset of the construction phase, the contractor will engage with the Council for any relevant Temporary Traffic Regulation Orders or pavement closure notice to enable appropriate access to the site.

It is assumed that adjacent public highway routes will remain in operation during the works. Upon possession of the site, the contractor will protect and separate the site and the public networks by the installation of a proprietary hoarding/screening system to the entire site boundary.

Any groundworks will be undertaken following the completion of enabling works to enable safe and level access throughout the build process and to minimise vibration and disruption.

The below ground service installation will be undertaken in parallel with subsurface activities to the substation in a co-ordinated and phased approach, either to precede the other works or to chase the works around the site to gain maximum efficiency through construction.

The key method for the movement of materials will be by crane for solid state materials and plant, with all materials being lifted to location.

For wet materials such as concrete or structural screed it is envisaged that a tower or long arm mobile pump will be utilised to minimise footprint and allow better management of the site.

Where there is a need to take screeds or concretes to logistically awkward locations, bucket lifts will be considered to maintain production. Once the framework is complete large pieces of equipment will be delivered on low loaders and lifted into place by crane.

It is expected that substation fitout and commissioning will be completed by construction workers with materials delivered on 10m rigid or 16.5m articulated vehicles.

### 7.3.2 Excavation

Any excavation to the grade the site for resurfacing and to account for foundation works will be undertaken by an excavator. Any muck will be lifted into muck away wagons and removed progressively from site utilising three and four axle muck away lorries.

### 7.3.3 Ground Stabilisation

If soft areas or areas of “risk” are found through the discovery stages of the works the contractor will consider several options for stabilisation, which will be agreed with both the applicant and the Council in advance of commencing and structural alterations.

The main options to ensure ground stabilisation are:

- Compensation grouting;
- Jet grouting;
- Permeation grouting and;
- Infill grouting.

### 7.3.4 Foundation works and levelling

A safe site will be created for both foundation works activities and general day to day vehicle manoeuvring and site operative travel across site. It is generally considered that levelling material could be from the crush spoil from the remainder of the site demolition. Other material needed will be imported from a third party holding or quarry area.

The foundation works will be undertaken using suitably sized for the construction activities and minimised as far as is reasonable (including safe tolerances) to limit the number of vehicular journeys to site for imported fill.

### 7.3.5 Superstructure

For the construction of the superstructure it is anticipated that cranes will be required. These may be luffing jib cranes to minimise the oversailing of adjacent buildings and or third-party land.

The superstructure is likely to be constructed in sections using mobile cranes to position structural elements. The frame for each section would be installed along with supports and any secondary work required.

Once the section of frame is raised to height, the slabs floor will be installed as well as any risers required.

The key method for the movement of materials will be by crane for solid state materials and plant, with all materials being lifted to location. For wet materials such as concrete or structural screed it is envisaged that a tower or long arm mobile pump will be utilised to minimise footprint and allow better management of the site.

Where there is a need to take screeds or concretes to logistically awkward locations, bucket lifts will be considered to maintain production.

In line with the want to minimise wet trades (including concrete) it is envisaged that the core walling may be installed in a prefabricated manner to maintain speed and efficiency in installation. All stairs and core landings will be considered at this point to be prefabricated and delivered to site on 10m rigid or 16.5m articulated vehicles.

### 7.3.6 Building Envelope / Cladding

The cladding for each building will be installed externally and lifted on to prefixed plates located on the structural frame by independent lifting plant, which may include mobile crane and Mobile Elevating Work Platform (MEWP) in accordance with manufacturer's instructions.

The cladding installation will commence on completion of the structural frame. Early starts will be explored to reduce the build area and speed up the water tightening of the building.

### 7.3.7 MEP Infrastructure

The Mechanical, Electrical and Plumbing kit for each building's services and plant is assumed to be brought to site on a just in time basis. A section of the site will be dedicated to stockpiling if any kit is delivered early. The MEP kit will be drawn to its location of use or lifted into place from delivery to minimise double handling.

The risers and associated fixings will commence once the building has achieved suitable (phased) watertightness.

### 7.3.8 Fitout

The building is to be fully fitted out for use as a data centre and will include:

- Internal partitioning;
- Plant plinths;
- Flooring;
- Ceilings,
- Data kit;
- Mechanical Services (such as air handling, and water management plant and valves);
- Fuel tanks;
- Electrical services; and
- Plumbing services, including water treatment, fire detection and prevention services.

The above list is not exhaustive.

This development build out will include the full installation of external supporting plant and kit and service interfaces between the building and external kit.

The fitout stage is likely to commence with the first fix services across the floors, staircase lobbies and landing and involve the installation of inert systems where there is no risk of weather damage. This potentially includes the installation of brackets, containment, ducting, pipework etc.

The second fix services will be undertaken from completion of a suitable quantity of first fix brackets, voids, and associated ducting, aligned with the building being made wind and watertight to an agreed level. It is probable that this will take place on a floor-by-floor basis and early start opportunities will be considered on an ongoing basis to maintain the speed of construction.

It should be noted that the contractor may wish to use temporary measures to form wind and watertight areas to increase the buildings readiness to accept the MEP first and second fix, and that will be notified to the Council as appropriate along with associated changes that may affect the site.

The MEP final fixes and architectural finishes to the building will be undertaken once the building is fully watertight and through to the end of the testing and the commissioning period.

### 7.3.9 Testing and commissioning

Testing and commissioning will occur at the appropriate time. This is likely to include:

- Factory Acceptance Testing: Commencing from day 1 manufacture and off-site prefabrication;
- Installation testing: Will commence with the installation of kit and connection to localised loops / mains or circuits;
- Testing of CCTV and security equipment;
- Testing of building and site drainage;
- Testing and commissioning of backup generators;
- Integration testing: Building integration testing with all services and management systems in place to allow all systems to be commissioned with all associated services and loads in place and under load'.
- Contractor commissioning and a Client commissioning team to witness and manage commissioning against a detailed commissioning plan; and
- All relevant tests for third parties such as related to fire and building operation will be programmed and two months' notice provided to third parties to allow organisation of resources, such as the attendance of the local fire service.
- Hand over and post construction checks to include final inspections, snagging, handover of as built documentation, training / commence defect liability period.

## 7.4 Provisional construction methodology for Innovation Centre

The following outline construction method statement reflects the construction of the Innovation Centre. At this stage is expected this will come forward in parallel with LON6. Any overlap with data centre construction will be addressed at reserved matter stage or through discharge of planning conditions.

### 7.4.1 Structure

For the construction of the structure it is anticipated that mobile cranes will be required.

The superstructure is likely to be constructed in sections using mobile cranes to position structural elements. The frame for each section would be installed along with supports and any secondary work required.

### 7.4.2 Building Envelope / Cladding

The cladding for the Innovation Centre will be installed externally and lifted on to prefixed plates located on the structural frame by independent lifting plant, this may involve a mobile crane and Mobile Elevating Work Platform (MEWP) in accordance with manufacturer's instructions.

The cladding installation will commence on completion of the structural frame.

### 7.4.3 MEP Infrastructure

The Mechanical, Electrical and Plumbing kit for the Innovation Centre services and plant is assumed to be brought to site on a just in time basis. A section of the site will be dedicated to stockpiling if any kit is delivered early. The MEP kit will be taken to its location of use or pit into place from delivery to minimise double handling.

### 7.4.4 Fit out

The building is to be fully fitted out for use as an Innovation Centre and will include:

- Internal partitioning;
- Flooring;
- Ceilings;
- Mechanical Services (such as air conditioning);
- IT and Electrical services; and
- Plumbing.

The above list is not exhaustive.

The MEP final fixes and architectural finishes to the building will be undertaken once the building is fully watertight and through to the end of the testing and commissioning.

# 8. Transport and vehicle access strategy

The applicant will ensure that the works are sequenced and carried out in such a way as to minimise disruptions to traffic flows causing inconvenience to the public or undermining the safety of road users. Details of the movement of all on and off-site construction traffic will form part of any planning conditioned or reserved matter submission.

It is expected all existing public access routes and rights-of-way during construction will be maintained or protected in agreement with the Council and other associated bodies. Where this cannot be achieved the applicant will agree mitigations, including alternative routes and signage solutions for both pedestrian and vehicular traffic.

Through the creation of a “Community Liaison Group” (CLG), Where construction activities are planned on a number of sites in proximity to one another, contractors will where possible coordinate their requests for road / lane closures, access routes, lorry movements, etc. in order to reduce the impacts on the surrounding area for residents, businesses and other development projects and contractors. It is the intent of the applicant that the project aligns itself with other construction sites, and either forms a CLG or joins an existing one to ensure local construction co-ordination is undertaken.

Access arrangements will seek to protect landscaped areas across the site and on approaches as to not compromise the biodiversity gain strategy for the scheme.

## 8.1 Site access

The site is bounded by Uxbridge Road to the north and Beaconsfield Road to the south. Bullsbrook Road passes through the site. The east of the site is bounded by Yeading Brook and the west is bounded by various other Brook Industrial Estate buildings.

It is envisaged that the main access (entrance/exit) gate for all vehicular traffic including sign in, and visitors will be via the north of the site, on Uxbridge Road. Site access gates will be clearly labelled to allow deliveries to be drawn to site at the correct point to allow access. At peak times deliveries can be allocated a pre-determined arrival time to ensure that vehicle do not queue back onto the public highway.

Access to/from the site will be from Uxbridge Road. Construction access and circulation will be detailed at each planning conditions and/or reserved matter stage. It is expected that site accommodation and an area for stock piling will be provided in a location so that they are able to remain in the same location throughout construction.

## 8.2 Ingress and egress from site

At all stages of the construction phase, the site will have vehicle segregation to maintain a safe distance between people and vehicles on site.

All vehicles will be met by traffic marshals. All manoeuvring both on to and away from site will be directed by the marshals. Reversing on and off site will be prohibited except on exceptional circumstances to enhance safety.

Concertina barriers will be deployed for the temporary stopping up of foot paths with appropriate forward warning signage to alert pedestrians and vehicles of the possible stoppages.

## 8.3 Management of the site gate(s)

The site access point will be managed by both traffic marshals and site security. The development site gates will only be opened just prior to deliveries through usage of the electronic delivery system and “call off” system minimising holding of vehicles on the roads or in “part manoeuvre”.

Deliveries will take place on site and prior to commencement of unloading or loading the site gates will be closed to create a safe working environment.

The site gate will only be opened when the vehicle is clean, netted, covered, and inspected (as appropriate) in line with CLOCS and FORS policies. The standard position of the site vehicular access gate is closed.

## 8.4 Management of deliveries / pick ups

To minimise disruption to the local road network and neighbours, all deliveries will be managed via vehicle call off and carried out in working hours as far as possible. All deliveries to site will be physically managed on and off site by suitably qualified traffic staff utilising suitable safety equipment.

The Contractor will be required to implement a managed system of material movements to and from the site to ensure that there is no congestion of vehicles on the highways.

It is considered that generally loading and offloading will be conducted on site and within the confines of the hoarding line.

The Contractor is to maintain a suitable delivery system in accordance with best practice.

## 8.5 Electronic booking system

All deliveries to site will be organised through an electronic “booking-in” system, managed by the Contractor. Each delivery will be allocated a specific time slot. Typically, failure to adhere to their time slot may result in a sub-contractor’s delivery being denied access to the site. Waiting on street for access to the site will not be permitted.

## 8.6 Traffic marshals

All deliveries will be met by a suitably sized team of traffic marshals to ensure safe passage into site, and safe manoeuvring on site.

The marshals are specifically trained in vehicular safety management. The marshals will also be trained in the use of safety equipment that can be used from time to time, such as concertina crown barrier etc. to stop any interaction between manoeuvring vehicles and pedestrians. All traffic marshals will be qualified for their role and their qualifications registered for periodic inspection by the Council.

All traffic marshals will wear full PPE including:

- Helmet;
- Safety Glasses;
- Hi-Visibility coats or vests;
- Hi-Visibility trousers;
- Gloves; and
- Protective footwear.

## 8.7 Traffic flow

Within the site the traffic routes will vary throughout the works; traffic flow principles will be agreed and will include:

- All routes will be demarked by crowd barrier styled metal fencing;
- All single lane routes will include over taking areas and dedicated pull-in locations to gain access to the relevant buildings.
- All crossing points will be managed by suitably qualified traffic marshals.
- Where there is a requirement for two lane traffic (such as at the entrance), a separation barrier will be placed between the lanes. Red and white jersey barrier may be used in this instance to ensure proper separation of vehicles.

- All buildings will have pre agreed signage to allow the drivers to gain access to the correct area of the site without confusion. Suppliers will be advised on site signage at tender stage and also at the site entrance (by security).
- No vehicle will be allowed on site unless pre-booked on the electronic system or called in through the vehicle manager.

## 8.8 Vehicles manoeuvring on site

The Contractor will endeavour to:

- Maintain safe manoeuvring on site all vehicle paths will be detailed out to provide best practice segregation from the site operatives (and agreed with the delivery supplier in advance);
- Reversing operations (may be required due to the linear nature of the site) but will be minimised as far as is practicable and fully managed;
- Traffic marshals will be used on site to assist manoeuvring;
- All vehicles will be maintained correctly within the cab to ensure that no objects or personal effects can obscure the driver's vision;
- All vehicular windows and mirrors will be maintained correctly and in a clean state and window wash will be made available on site to ensure compliance;
- Where vehicle manoeuvring cameras are used, these will be inspected for cleanliness and drivers will be trained in their usage so as to ensure that changes in lighting areas etc do not confuse the driver.
- Impose and signpost a maximum-speed-limit of 10 mph on surfaced haul roads and work areas;
- Install hard surfaced haul routes, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.

## 8.9 Schedule of deliveries

A schedule of predicted size and frequency of vehicles will be finalised by the contractors. Vehicle movements/deliveries during local peak times of activity will be minimised, namely:

- Highway network peak hours;
- Local school start and finish times;
- Times of local worship;
- Sundays; and
- Any other hours/events that may be requested by the Council.

Any vehicular movement for site deliveries outside of the normal working hours will need to be agreed with the Council in advance.

## 8.10 Construction vehicle numbers

As stated in Section 8 of this report, the delivery for the project will be sequenced. At this point in time no contractors have been appointed to deliver any of the on-site utility infrastructure or the data centres to which this outline planning application relates. Consequently, it is proposed that the details of the impact of future construction traffic will come forward with each reserve matter submission in the form of a Construction Management Plan to include the proposed construction logistics.

## 8.11 Staff journeys to site

The applicant will request contractors to implement a Travel Plan that supports and encourages sustainable travel (public transport, cycling, walking, and car-sharing) for construction workers.

Site employees and visitors will be encouraged to use active and sustainable modes of transport.

The site is located within walking distance, (approximately 25-30 mins) of Southall Railway Station. Workers have access to use the local public transport infrastructure including:

Train:

- Elizabeth Line: including Southall Station; and
- Great Western Railway (GWR): including Southall Station.

Bus:

- Routes 207, 427, N207 etc.

## 8.12 Car parking

Car parking on site will generally be restricted. The contractor will be expected to prioritise and implement active and sustainable travel solutions before providing any contractor car parking, to minimise the impact on the local road network. Details of measures to mitigate any off site parking will be provided at each reserved matters stage together with the layout of construction compounds and access strategy.

## 8.13 Access by neighbours to their buildings

In line with good neighbour relations, the contractor will discuss access etc. with adjacent landlords and operators to ensure that there is a shared philosophy to deliveries, pickups, and access.

An agreed protocol for timely and effective communication with all parties will be agreed and be responsive, where necessary, for requirements.

# 9. Construction logistics and cyclist safety

The contractor is generally expected to operate the:

- Fleet Operator Recognition Scheme (FORS); and
- Construction Logistics and Cyclist Safety (CLOCS) safety, Figure 5.


**Figure 5: CLOCS safety equipment**

## 9.1 Macro and micro traffic routes

### 9.1.1 Macro traffic routes

Figure 6 shows anecdotal routes to the key roads and motorways that should be considered for large vehicle movements, as well as local routes through the project area and surrounds. This is not an exhaustive list. These roads include:

- A312;
- A4;
- A40;
- M4;
- M25.

The primary route assumed for traffic heading into London to the site begins at Junction 15 of the M25, heading east on the M4 until Junction 3. The route continues north onto the A312 until a right turn is made at Ossie Garvin Roundabout. The route follows the A4020 Uxbridge Rd briefly before a right turn is made onto the site.

For egress, following vehicle checks and preparations for off-site travel such as jet wash wheel washing, netting and FORs checks, the vehicle, it is assumed vehicles will travel back along the same route, turning left from the site towards the A312 where onwards connections onto the wider road network can be made.

The primary macro routes are shown in Figure 7.

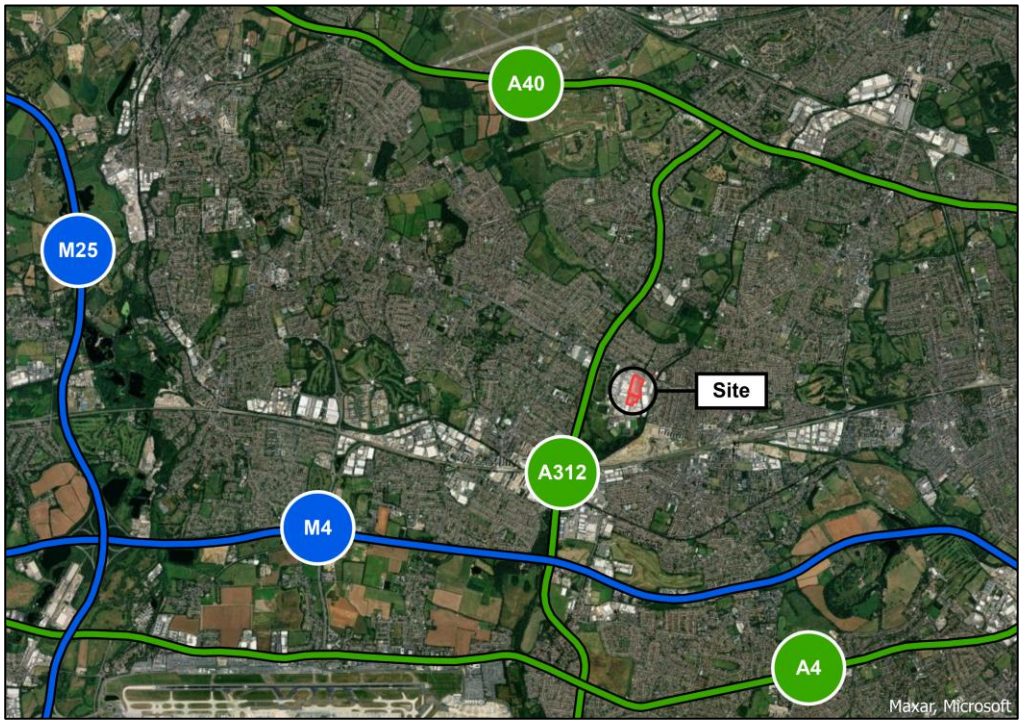



**Figure 6: Macro Traffic Routes**

### 9.1.2 Micro traffic routes

Access from the macro routes (M4/A40) will potentially be undertaken via the A312 with the A4020 (Uxbridge Rd) being used to gain access to the site. An additional route to the east runs along The Broadway, offering site access from Southall. The provided routes are indicative at present and may change on procurement of the contractor and their supply bases.


**Figure 7: Micro traffic route – proposed route**

This proposed route represents journeys to site with consideration to the surrounding areas and overall journey times. These routes have minimum exposure and cause minimum disruption to the residential/local areas. They also generally include main roads with the appropriate widths, providing safe and efficient access to site.

For the construction of LON7 and LON8, vehicles may need to use Bullsbrook Road, to access the site depend on the direction of build out and phasing. The approach to the use of this route will be agreed with the Council and the reserved matter stage.

## 9.2 Highway works

### 9.2.1 Road and lane closures

Full road closures are to be avoided throughout the works, with the primary proposals to only include lane closures on a temporary basis to allow the connection of utility cables (power) up to the site boundary. All considerations relating to potential road or lane closures will be considered well in advance to enable full and meaningful discussions with the Council.

### 9.2.2 Temporary structures on the highway

It is not envisaged that there will be a need for temporary structures on the highway. However, in accordance with best practice and if the need arises, the applicant will agree the extent with the Council in advance. If fenced areas, or other temporary works were required on the highway, established, or maintained, this would be in accordance with all appropriate licences and conditions there of issued by the Council by the applicant. Due to the nature of temporary works and associated risks, the applicant will ensure that the designers are suitably qualified and aware of temporary works as defined in BS5975:2008.

### 9.2.3 Clearance of off-site temporary works

On completion of each stage of works in or on third party areas the Contractor will clear away and remove all the plant, surplus materials, rubbish and temporary works and structures from the site.

The site will be left clean and in a condition to the satisfaction of the developer, the Council and other third parties with an implicit interest to the area.

Any potentially hazardous defects to the highway will be made good, prior to permanent reinstatement by the Council.

# 10. Construction constraints

The following section outlines key considerations for to inform the detailed CMP for each reserved matters stage.

The buildings are to be located within a sensitive location of the city. Foot traffic may be generated periodically by:

- The local schools including Guru Nanak Sikh Academy, Nanaksar Primary School, and Blair Peach Primary School.
- Metro Bank located within the site boundary which may generate pedestrian activity in the area.

A key risk to be noted that is related to the above is ensuring that any oversailing of the footways is avoided. The principal solution to assist with this may be the addition of pavement railings around the site on the corners of the pavement to hard mitigate this risk. Where there are holding/lifting areas the contractor will seek to agree pedestrian diversions and temporary crossing points where applicable.

# 11. Programme

The construction programme has not been set at this stage for the works and is both dependant on the considerations of procurement and permissable development.

The detailed programme will seek to minimise disruption to local residents, businesses and market operations. The duration of the works is still being considered and will be dependent on the linkages to the adjacent works and will be developed for the next stage of the CMP.

# 12. Potential impacts during sequenced works

A review has been undertaken of the potential source of adverse impacts, which can be associated with the proposed works. The results of this are presented in the table below.

Industry accepted practical means of preventing, reducing and minimising noise generation will be adopted in agreement with Transport for London and the Council. Appendix E provides additional detail to the table and will be reviewed and updated throughout design development, and with the contractor to ensure that the best mitigations can be in place prior to commencement on site to look to exceed the standards set by the Council.

| Issue | Potential Impacts | Mitigation |
|---|---|---|
| **Noise** | Increased road noise levels from vehicles. Increased noise levels from plant during foundation works, and general works (e.g. from the use of air compressors and diamond cutters). | Defined working hours, baffles to certain plant, local acoustic screening.<br><br>Vehicle routing.<br><br>Beepers, radios etc. to be silenced. Engines turned off and all measures outlined in the considerate constructor's scheme. |
| **Vibration** | Increased vibration levels from vehicles.<br><br>Increased vibration levels from plant. | Defined working hours. Selection of appropriate plant and work procedures.<br><br>Phased deliveries to minimize numbers of vehicles attending site,<br><br>Clearly defined vehicle routing.<br><br>Engines to be switched off when vehicles are idle or on site<br><br>Works to be delivered in line with LUL tunnel protection requirements |
| **Dust / Air Quality** | Windblown dust from ground surfaces, stockpiles, vehicles, work faces and cutting of materials.<br><br>Exhaust emissions from lorries, plant delivery and removal of materials. | Cover all open backed vehicles;<br><br>Switch off vehicle engines when parked;<br><br>Regular and controlled monitoring of air quality, including agreement; Implementation of trigger and action levels. |
| **Waste** | Waste generation and its disposal. | Instigate Site Waste Management Plan and re-cycling program.<br><br>Ensure deliveries and transport of material from site is timed to minimise storage durations. |
| **Water** | Increased sediment loadings to storm water system.<br><br>Potentially contaminated storm-water runoff.<br><br>Water runoff to brook. | Do not allow direct discharge of water into sewerage collection system.<br><br>Ensure site water is pumped into vessels for removal from site in a safe manner |
| **Traffic** | Traffic congestion caused by site traffic.<br><br>Temporary traffic restrictions/diversions may be | Phased deliveries to minimise numbers of vehicles attending site, switch off vehicle engines when parked, minimise abnormal loads. |

| | | |
|---|---|---|
| | required for abnormal loads/delivery of large plant.<br>Increased vehicle movements mainly consisting of Heavy Goods Vehicles (HGVs).<br><br>Nominal levels of transfer of mud and material from vehicles onto the public highway.<br><br>Disruption from abnormal or hazardous loads.<br><br>Exhaust emissions. | Close liaison/consultation with Transport for London and the Council.<br><br>Clearly defined vehicle routing. |
| **Storage of fuels and demolition materials** | Accidental spills, discharges to drains/storm-water systems.<br><br>Contamination to ground. | All fuel tanks etc. to be bunded, no discharge allowed into the sewerage collection system. |
| **Pedestrian access** | Restrictions on pedestrian access to footpaths and roads created by site hoardings. | Potentially provide alternative pedestrian routes. To be agreed with the highway authority. |
| **Hazardous and contaminated materials** | Exposure of the workforce to deleterious / hazardous materials and contaminated land, mobilization of any source contaminants and creation of pathway from source to groundwater receptor. | Site investigation reports to indicate if any contaminated fill is present.<br><br>COSHH assessments and careful implementation of associated working method statements to ensure that no hazardous materials find a path to groundwater source. |
| **Ecology** | Water / mud run off into the drains. | Do not allow direct discharge of water into sewerage collection system, utilise interceptors where necessary. |
| **Energy usage** | Indirect impacts associated with energy consumption such as CO2 emissions, depletion of natural resources, air pollution etc. | Site environmental plan to implemented. |
| **Views** | Views impacted and/ or impeded from demolition equipment, particularly mobile cranes/excavators. | Tall equipment to be positioned to have minimal impact upon adjacent views |

# A.1 Parameter plans

# Appendix B

# B.1 Design requirements

The design and detailing for all temporary works and other required designs to facilitate the works will be carried out by qualified and experienced temporary works engineers.

All design management will be undertaken in accordance with BS5975 and established company procedures using QA systems SMS020 for Temporary Works.

To deliver the construction works successfully with the highest level of safety considered, early site investigations are critical to verify the existing site conditions under the guidance of our in-house structural engineering department. Proceeding onsite findings, calculations, calculation checks and drawings will be prepared to substantiate the conclusions provided ahead of works commencing.

The designers will give due consideration to:

- The proximity of third-party assets, public footways and bridges, and roads;
- The protection of adjacent third-party assets and structures;
- Oversailing agreements for any oversailing scaffold;
- Management of traffic on external and internal roads;
- Services and utilities that are to remain in place.

The temporary works requirements for the site may include designs for:

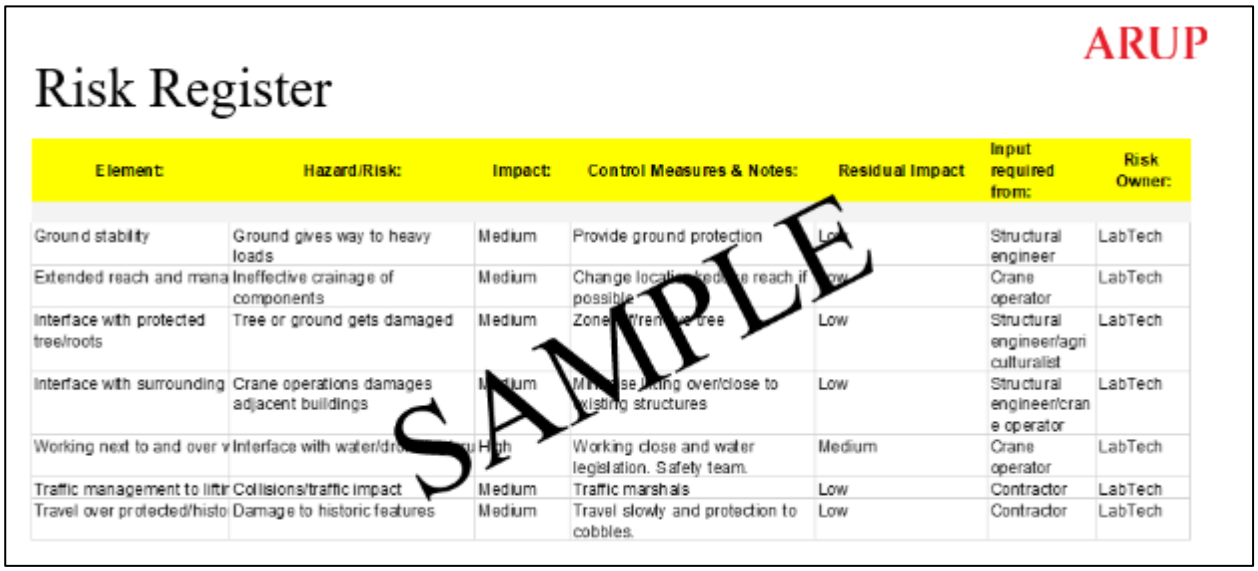
- Construction of hoardings;
- Construction of protective decks / screens & debris fans etc.
- Pedestrian walkway scaffold if required both on and off site;
- Back-propping and or strengthening of the floors and walls facilitate the machinery required;
- Mobile crane out-rigger pads to facilitate lifting demolition and other materials and equipment and or potentially piled bases for fixed cranes;
- Suitable temporary welfare structure for the project;
- Manhole and access chamber’s steel plate covers to enable the movement of heavier vehicles for the project; and

The list is not exhaustive, but representative of the typical temporary works required for the site.

# B.2 Design risk management

All designers' risks will be rated and recorded on a standard risk matrix proforma using a scale of impact and severity.

Remaining risks that are not able to be eliminated through design shall be clearly marked on drawings. Method statements with risk assessments and designs for the installation of the temporary works will be produced prior to the works commencing for comment and approval by the applicant design team. To ensure only up to date design information is in use all issued design information will be controlled by that information being recorded in the site drawing register.



ARUP

Risk Register

| Element: | Hazard/Risk: | Impact: | Control Measures & Notes: | Residual Impact | Input required from: | Risk Owner: |
|---|---|---|---|---|---|---|
| Ground stability | Ground gives way to heavy loads | Medium | Provide ground protection | Low | Structural engineer | LabTech |
| Extended reach and mana | Ineffective crainage of components | Medium | Change location/method to reach if possible | Low | Crane operator | LabTech |
| Interface with protected tree/roots | Tree or ground gets damaged | Medium | Zone/fence off tree | Low | Structural engineer/agri culturalist | LabTech |
| Interface with surrounding | Crane operations damages adjacent buildings | Medium | Minimise lifting over/close to existing structures | Low | Structural engineer/crane operator | LabTech |
| Working next to and over v | Interface with water/dr | High | Working close and water legislation. Safety team. | Medium | Crane operator | LabTech |
| Traffic management to liftir | Collisions/traffic impact | Medium | Traffic marshals | Low | Contractor | LabTech |
| Travel over protected/histo | Damage to historic features | Medium | Travel slowly and protection to cobbles. | Low | Contractor | LabTech |

SAMPLE

**Figure 8: Sample of Risk Register**

# B.3 Design installation management

All design management will be undertaken in accordance with the contractors Safety Management System procedures and best practice for Temporary Works and all associated design documentation.

An appointed Temporary Works Coordinator (TWC) will have overall responsibility for managing the installation of temporary works and this will be managed on site by an appointed Temporary Works Supervisor (TWS). The role of the TWC and the TWS may be combined depending on works.

Works progress will be checked regularly by the structural engineer against the Temporary Works Register.

# B.4 Exchange of design information

The names and contact details of all participants in the design process will be placed on a Temporary Works (TW) Directory so that all of the relevant parties are invited and included in all TW communications or at least receive the minutes of each meeting.

The exchange of design information will be accomplished by holding regular design information exchange and approval meetings at predetermined times with the Applicant's design team and other interested parties such as the Temporary Works Coordinator and Temporary Works Supervisor and the Temporary Works Designer. The outcome of the meetings will be emailed to all relevant parties, through email or other electronic data transfer systems as agreed (such as "Drop Box", "One Note" etc.).

# Appendix C

# C.1 Standard hoarding

All work sites will be completely fenced to prevent public access with lockable gates, using LFB accepted locking systems.

All hoarding will comply or better BS476 part 6 and 7 with class 0 certification for fire rating. Due to the location of the site within the busy borough of Hillingdon, and adjacencies to the main Uxbridge Road, it will be considered that a full height solid state hoarding will be utilised around the perimeter of the site.

The hoarding line will have internally opening site gates for safe access and designed in line with secure design principles.

- The Employer is to maintain a suitable standard of hoarding in accordance with best practice.
- The Colt hoarding is anticipated to be 3.0m height, plywood faced, timber framed boundary hoarding, of a surface density of not less than 7kg/m² for normal security and noise limitation requirements.
- Non-standard height hoarding may be required for the surrounding of stockpiles and or high-level construction works that are not easily scaffolded and or dust is a high risk. Where hoarding is to raise above the 3m height prior agreement will be sought with the Council to ensure compliance with guidance on over height hoarding is maintained.

All hoarding will be designed to minimise opportunities for anti-social behaviour and rough sleeping. The Principal Contractor will ensure that all hoardings are painted in a plain uniform manner but will have contrasting markings at projecting angles (to assist the visually impaired) to the satisfaction of the Council.

Where the Contractor / applicant requires specially designed exterior decorations they will request the council's approval and, where necessary seek consent under the Control of Advertisements Regulations.

Signage will be displayed on the hoarding for health and safety purposes, Considerate Contractors, and general site signage. All signage will be agreed with the Council in advance of installation.


**Figure 9: Typical example of branded hoarding (sample google images)**

All solid-state hoarding and site fencing and barriers will be maintained using controlled wet methods for cleansing and avoiding water runoff from the activity.

## C.2 Acoustic hoarding

There may be times when they may be noisy works. If appropriate, the use of acoustic hoarding to the boundaries that are most affected through the transmission of noise will be agreed with the Council.

## C.3 Hoarding gates

Gates in the fencing or hoarding will be, as far as is practicable, positioned and constructed to minimise the noise transmitted to nearby noise-sensitive buildings. This will take account of noise emerging directly from the construction site direct entering or leaving the site.

Any gates will be designed such that they open inwards onto the site or slide within the site lines.

Access gates are to be located at least 10 m from receptors where possible.

All gates will be of a suitable standard and size for vehicles accessing and egressing the site.

## C.4 Hoarding lighting

All hoarding will be reviewed for lighting requirements at onset and throughout the seasons with the Council and where and when it is reasonably deemed that additional lighting is required, this will be provided by the contractor.


**Figure 10: Typical hoarding lighting**

Generally lighting to site boundaries will be provided as standard.

Illumination will be designed to meet the minimum sufficient to ensure the safety of the passing public, including disabled people, and security, when on surrounding footpaths, roads, and amenity areas.

## C.5 Scaffolding

Scaffolding on site will not be wholesale and localised to support construction activities as “raised platforms” of work. As such the CMP sees the scaffold as temporary works considerations only and will not be discussed at this point.

# C.6 Hoists / lifts

Through the development of the design and construction methodology it is probable that smaller demountable hoists (mechanical block and pully type) may be required, however these will be maintained away from the general public, formed as required within demarcated exclusion zones and considered as temporary works.

# Appendix D

# D.1 The Considerate Constructors Scheme

The contractor will be chosen based on their ability to undertake the works in a collaborative manner, both with the applicant and their design team, and the Council.

The contractor will uphold all best practices and demonstrate this by enrolment within the Considerate Constructors Scheme. This will ensure that they are up held to a third party standards supervision to meet the goals set by the CCS:

Care about ***Appearance***

Respect the ***Community***

Protect the ***Environment***

Secure Everyone's ***Safety***

Value the ***Workforce***

# D.2 Health and safety

The following table contains the address of the pertinent Health and Safety bodies including the local hospital.

| Body | Address | Postcode | Telephone No. |
|---|---|---|---|
| HSE | 151 Buckingham Palace Road, London | SW1W 9SZ | 03000031747 |
| Local hospital | Ealing Hospital, Uxbridge Road, Southall | UB1 3HW | 02089675000 |

**Table 3: Health and safety bodies**

## D.2.1 Site induction

All persons employed on or visiting site will be subject to a health and safety induction so that they are aware of the hazards present on the site and the restrictions imposed under the Principal Contractor's health and safety management procedures for that area of works.

All visitors will be accompanied around the site by a representative of the employer (generally the appointed contractor) unless previously agreed otherwise. All health and safety inductions will be recorded on a site specific register that will be available for the Council to review by appointment.

## D.2.2 Health and safety: general

All site work must be carried out in accordance with the provisions of the Health and Safety at Work Act 1974 to the satisfaction of the HSE or its local officer.

The Principal Contractor, for each area of site, will ensure that mechanisms are in place to ensure that the employers, employees and the self-employed, are not exposed to risks to their health and safety. And that every employee while at work will take reasonable care of the health and safety of themselves and of other persons, and to cooperate with their employer or any other person about any duty or other statutory requirement.

The Principal Contractor will ensure that all statutory regulations made under the 1974 Act e.g., provision of personal protective equipment, ladders, lighting, signs, electrical equipment, manual handling are complied with during all construction works.

The applicant's nominated representative will ensure that appropriate industry standards for health and safety are applied, and that continuous improvement in safety performance is sought, in accordance with the principles of HSG65 "Successful health and safety management", published by the Health & Safety Executive.

The Principal Contractor will abide with the below Summary of Duties Under Construction (Design

Management Regulations 2015 (CDM 2015), i.e.:

**Principal contractor** – A contractor appointed by the applicant to coordinate the construction phase of a project where it involves one or, more than one contractor.

Plan, manage, monitor, and coordinate health and safety in the construction phase of a project. This includes:

- liaising with the applicant and principal designer;
- preparing the construction phase plan; and
- organising cooperation between contractors and coordinating their work.

Make sure:

- suitable site inductions are provided;
- reasonable steps are taken to prevent unauthorised access;
- workers are consulted and engaged in securing their health and safety; and
- welfare facilities are provided.

**Contractors** – Those who carry out Plan, manage and monitor construction work under their control, so it is carried out without risks to health and safety.

For projects involving more than one contractor, coordinate their activities with others in the project team – in particular, comply with directions given to them by the principal designer or principal contractor. For single contractor projects, prepare a construction phase plan. Workers – Those working for or under the control of contractors on a construction site.

Workers must:

- be consulted about matters which affect their health, safety and welfare
- take care of their own health and safety, and of others who might be affected by their actions
- report anything, they see which is likely to endanger either their own or others' health and safety
- cooperate with their employer, fellow workers, contractors, and other duty-holders

Note this section is directly related to the HSE web site, source:
http://www.hse.gov.uk/cdm/2015/summary.htm

### D.2.3 Health and safety management system

The applicant's health and safety advisor will set out a structure for the site contractors to follow and abide with. The structure will outline the minimum requirements required for site by the employer, to ensure that all contracting parties working within the estate meet a good, standardised level of reporting and management. The system will be based on the principles of the Occupational Health and Safety Advisory Service's 45001 "Reduce workplace hazards and boost employee morale".

The contractors will then produce a health and safety management system in accordance with the principles of 45001. This system will include documentation defining the nominated undertaker's internal arrangements for managing health and safety on the project and the specific requirements for health and safety applying to all designers, contractors and sub - contractors appointed to work on the project.

The arrangements will include a system for management of risks. This will include all hazards being identified, and suitable and sufficient assessments made of the risk, followed by adoption of appropriate measures to eliminate the risk or to control the risk, so far as is reasonably practicable. In parallel measures will also be considered to ensure employee morale is kept positive during the build.

Where risks to the public are involved, these will be reduced to as low as reasonably practicable and will be managed in accordance with the guidance in HSG151 "Protecting the Public" published by the Health and Safety Executive.

### D.2.4 Safety objectives for the project

This project involves construction works adjacent to a number of public interfaces and third party assets.

It is the aim of the project team to eliminate or minimise risk and to prevent ill health and injury to all the site employees, subcontractors, site visitors, site neighbours and the general public.

To meet these objectives the contractors will work diligently towards:

- Maintain zero notifiable accidents and incidents.

- Maintain and improve lost time accident record.
- Move away from safety legislation governance to a safety behavioural culture promoted via communication, coordination, and training.
- To comply with the procedures detailed within this document to achieve and maintain a safe working environment for everyone on site.
- Evaluate & measure performance against this plan through regular safety and environmental inspections and audits.
- To eliminate or minimise risk and control the residual risks.
- Prevent ill health to all those on site through health surveillance.
- Promote proactive safety management and reduce reliance on reactive safety management.

The Principal Contractor will regard the above as principal objectives and these objectives can only be achieved by the cooperation of the company employees, subcontractors, the applicant, and his representatives. Cooperation shall be at all levels within these organisations through the structures established under the Construction (Design and Management) Regulations. The Principal Contractor will collaborate with all parties to provide the organisation advice and resources to meet this commitment so far as is reasonably practicable.

### D.2.5 Principles of prevention

The general principles of prevention as per the Management of Health and Safety at Work Regulations 1999 shall be adopted in addition to the above that will be to:

- avoid risks;
- evaluate the risks which cannot be avoided;
- combat the risks at source;
- adapt the work to the individual especially regarding the design of workplaces, the choice of work, equipment and the choice;
- of working and production methods, with a view, in particular, to alleviating monotonous work, work at a predetermined work rate and to reducing their effect on health;
- adapt to technical progress;
- develop a coherent overall prevention policy which covers technology, organisation of work, working conditions, social;
- relationships and the influence of factors relating to the working environment;
- give collective protective measures priority over individual protective measures; and
- give appropriate instructions to employees.

### D.2.6 Management procedures

To ensure that the site is safe, management procedures will be developed to ensure best practice in working but understanding good audit & documentation and project staff attitudes and behaviours to better instigate best practice and inspire innovation in safety.

The appointed Safety Advisor will visit site on a weekly basis, or more frequently if deemed necessary, to carry out site inspections and produce the safety audit as well as interview site staff for comment.

In addition to the safety audits, the following techniques will be used for monitoring compliance with:

- Legal requirements – Inspection and reporting arrangements as laid down in Principal Contractors Site Management Systems (SMS);
- The health and safety requirements contained within this plan;
- The health and safety site rules;
- Regular safety advisors' inspection / directors' safety tours / quarterly safety reviews / sub-contractors meeting;
- The health and safety site rules;
- Regular safety advisors' inspection / directors' safety tours / quarterly safety reviews / sub-contractors meeting;
- Special requirements for public interfaces; and
- Principal Contractor's Engineering Safety Management System.

### D.2.7 Workplace inspections

Workplace inspections will be carried out by the Principal Contractor's appointed site supervisor in control of the specific workplace, or a subcontractor supervisor, where considered appropriate.

All appointed site supervisors conducting inspections will be suitably qualified to undertake the review of the works that they are assessing.

Inspections will be recorded on the standard SMS (Safety Management System) Inspection Form provided within the Safety Management System and filed in the site office.

Where subcontractors are required to carry out such inspections, the responsible Principal Contractor's manager will have a system in place to ensure the adequacy of the inspection process involving random inspection checks.

Inspections of temporary works will be carried out and recorded within a temporary works register that will be provided for review by the Council at their behest in a timely manner:

- Welfare facilities;
- Site Perimeter/Public interface areas for trip hazards, rubbish, and clear routes;
- Site hoardings and lighting;
- Site access gates;
- Scaffolding and alarm systems;
- Substation protection;
- Exclusion and restriction zones;
- Site temporary services i.e., water and electricity and any relevant meter readings;
- Temporary works structural retention systems;

**This list is not exhaustive.**

The Temporary Works Co-ordinator (TWC) will maintain a list of personnel involved in the Temporary Works Process within the Temporary Works Register.

The Principal Contractor's supervisor will record, and file inspections carried out by the Temporary Works Team.

### D.2.8 Compliance monitoring

Compliance monitoring will be carried out to verify that agreed procedures and methods are being implemented and are producing the required results.

Compliance monitoring will be carried out by:

- The Principal Contractor's Project Manager
- The Principal Contractor's manager/supervisor controlling the area in which work takes place.
- Visiting personnel, including the allocated Safety Manager, Operations Manager and Directors.

Observations and actions arising from monitoring will be tabled at the weekly planning meetings, minutes written and filed, and actions allocated to the responsible persons.

### D.2.9 Ensuring safe places and systems of work (demolition)

The CMP will cover both the minimal demolition and the construction work. The CMP will include aspects of the DEMP (Demolition Environmental Management Plan) and ensure that the project achieves and maintains Safe Places of Work and Safe Systems of Work through following the below guidance and aligned with the Construction Measures below:

- 45001: 2018 Occupational Health & Safety Management Standard
- Health and Safety at Work Act (HSWA) 1974 section 2
- ISO 14001:2015 Environmental Management Standard
- ISO 9001:20015 Quality Assurance Management Standard.
- The perceived safety risks and relevant control measures particular to this project and is also intended to meet or exceed the requirements of the CDM Regulations 2015, Council standards and applicant's expectations.
- The project will adhere to the following published guidance and British Standards: BS 6187:2011 Code of practice for full and partial demolition
- Mayor of London's 'The Control of Dust and Emissions during Construction and Demolition SPG July 2014
- The GLA's 'The Control of Dust and Emissions from Construction and Demolition: Best Practice Guidance
- In accordance with Policies 5.18, 6.3 and 7.14 of the London Plan 2011 and Policies DM J1, J6, H5, H8, H9, H10 and H11 of the Development Management Local Plan 2013.

### D.2.10 Ensuring safe places and systems of work (construction)

The CMP will ensure that the project achieves and maintains Safe Places of Work and Safe Systems of Work through following the below guidance.

- 45001: 2018 Occupational Health & Safety Management Standard;
- Health and Safety at Work Act (HSWA) 1974 section 2;
- ISO 14001:2015 Environmental Management Standard;
- ISO 9001:20015 Quality Assurance Management Standard;
- The Construction (Design and Management) Regulations 2015;
- Personal protective equipment (PPE) at work regulations from 6 April 2022;
- Manual Handling Operations Regulations 1992 (MHOR) (as amended 2002);
- The Management of Health and Safety at Work Regulations 1999;

- RIDDOR - Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013;
- The Electricity at Work Regulations 1989;
- Gas Safety (Installation and Use) Regulations 1998 (GSIUR) as amended. Approved Code of Practice and guidance;
- The Control of Vibration at Work Regulations 2005 (the Vibration Regulations);
- The Confined Spaces Regulations 1997;
- Provision and Use of Work Equipment Regulations 1998 (PUWER)
- The Supply of Machinery (Safety) Regulations 2008 (amended 2019)
- The Control of Noise at Work Regulations 2005; and
- The Work at Height Regulations 2005.

The above noted list is not exhaustive but relevant to the considerations for the project and insurance that the project team are protected and provided a safe working environment.

### D.2.11 Site rules

The site rules may vary from contractor to contractor on site, which is reasonable, however a base line set of rules will be agreed as below;

- All personnel shall undergo safety induction training;
- Appropriate Personal Protection Equipment shall be worn at all times;
- Every accident and near miss event must be reported to the Site Manager immediately;
- Any person found to be interfering with or misusing fixtures, fittings or equipment provided in the interest of health, safety and welfare shall be excluded from site;
- Smoking will only be permitted in designated areas;
- Visitors must report to Security and will be allowed entry at Site Manager's entrance. Whilst on site visitors must wear the appropriate PPE;
- Vehicle drivers must wear the appropriate PPE (when outside vehicle). Vehicles are not to be reversed onsite unless under the control of an authorized banksman;
- Vehicle drivers must remain with their vehicle during loading / unloading;
- Safety signs and notices must be followed;
- The public must be protected from hazards associated with this work;
- No alcohol or illegal drugs are to be brought onto the site;
- No person who is under the influence of alcohol or drugs is allowed on site;
- Offensive or inappropriate language and provocative gestures are not allowed;
- No gambling, threatening or violent behaviour;
- No personnel shall indulge in fighting, horseplay or practical jokes within the site or its perimeter;
- Toilets and washrooms must be kept in a clean and hygienic state after use;
- Refuse must not be allowed to accumulate; work areas are to be kept tidy;
- Combustible materials are to be removed on a regular basis and disposed of in an appropriate manner;

- Transistor radios or personal audio devices are not to be used;
- Permission must be obtained from the Site Manager prior to any work on site on site;
- All site personnel, for their own safety and for the safety of others, are required to fully comply with their employer's statement of safe working method;
- Site fire and emergency alarms, equipment and instructions are designed to protect life.

### D.2.12 Key risks to life and health when working for construction

Some of the risks are denoted following but a full risk register will be included within the CDM documentation held for the project and this will be available on request:

- Sharps from drug usage;
- Insect stings;
- Sun burn;
- Asbestos; and
- Airborne fibres & materials.
- Construction
- Slips, trips, and falls;
- Working at height;
- Working in confined spaces;
- Vehicle strike;
- Falling objects;
- Electrocution;
- Building and or ground collapse or destabilisation;
- Hand Arm Vibration Syndrome;
- Manual handling;
- Noise;
- Unexploded Ordnance; and
- Dust.

### D.2.13 The Applicant/Employer's responsibility

To ensure health and safety is held up at the highest levels the employer ensure that the Principal Contractor follows and will act in alignment with their responsibilities under the Health and Safety at Work Act 1974. "Employers have a legal and moral responsibility to ensure the welfare of employees at work and provide a safe working environment & (SSOW) along with appropriate training, instruction, and supervision".

The Principal Contractor will be responsible ensure all required on the job type training is provided for both the activity and usage and provision of the correct proper personal protective equipment (PPE) to maximize employee safety.

Before starting and mobilization of the work at the worksite (work near or in the water), the Principal Contractor will conduct a risk assessment and hazard identification exercise. This will identify any potential hazards and assess the severity and range of risks designing a safe system of working (SSOW).

All employees working on or near the water will also require to be aware of the risks and appropriately and well trained in working safely around water.

An essential part of the risk assessment and hazard identification undertaken by the Principal Contractor will be to evaluate the level, severity, and possibility of risk. The PC will consider who is at risk.

The following method of controls is typical of the requirements to be placed on the contractors to manage the risks. This will be developed as the general risks of the location are tied into the construction activities and methods of work:

- Lone working is prohibited on site;
- Waterproofed communication devices must be available;
- An emergency plan must be in place to tackle and handle emergencies;
- Appropriate provision must be available for first aid;
- Specialist training and equipment may be required for the proper first aid including flotation stretchers and lifting equipment;
- Availability and provision of Lifebuoys, meeting an approved standard with an appropriate buoyant lifeline of adequate length attached, should be available within around 50m of any working position where a person could fall into the water;
- Reasonable personal buoyancy equipment, such as life jackets, should be provided by employers where appropriate.
- Other PPE should be provided as mandatory to protect against other hazards, such as chemical exposure.
- Operators also required to cover broken skin and wash hands thoroughly after coming into contact with water from rat-contaminated areas;
- All electrical installations and equipment, tools, machinery should be constructed, installed, operated, protected, and maintained to prevent the risk of danger from electric shock or burns;
- As mandatory, guard rails to prevent and safeguard falling into water are required, e.g., on walkways and platforms. Appropriate safety footwear may be needed to minimize the risk of slipping;
- Proper training, induction/orientations and supervision are mandatory and part of appropriate control measures.

This list is not exhaustive but reflective of the procedures considered at this point of the design development.

### D.2.14 Mobile phone usage

Mobile phone usage is generally banned on site, except for designated areas that will be protected to allow safe usage.

### D.2.15 Smoking and vaping

Smoking and vaping are generally banned on site, except for designated areas that will be separate and protected to allow the relevant activities. The smoking area will have a fire point located adjacent to the area, and suitable cigarette bins for stubs and discarded cigarettes.

### D.2.16 On site fuel management

All fuel will be stored in bunded tanks away from any surface water drains or gullies. Emergency spill kits will also be available on site. The council will be notified of any dangerous materials that may be necessary on site to complete the works, and correct signage will be employed on all storage areas.

### D.2.17 Flammable or explosive materials

Flammable and explosive materials will be managed off site generally and only brought to site on a required basis. Where storage is necessary all materials will be held in suitable containers and stored in designated areas with the correct identifying markings to ensure the safety of all.

# D.3 Security and emergency planning

## D.3.1 Security general

The sites security for the project will be in operation from the outset. Initially they will be manned during the working hours and extend either side of the working-day by approximately 1 hour (aligned with the fire inspection policy and to ensure timely access in the morning).

It is anticipated that during the development works the sites will need to be provided with 24-hour 7 day a week security by either a mix of static or mobile security personnel with CCTV backup covering all aspects of the site hoarding as a minimum.

Site security cameras, where used, will be sited in locations which will not cause nuisance or offence to local residents.

Hoardings and temporary structures will be designed to minimise opportunities for rough sleeping and the behaviours associated with this, as well as anti-social behaviour. Where such issues do arise, the PC aligned with the Council guidance will review and revise the hoarding alignment in a timely manner.

## D.3.2 Rough sleepers

Where rough sleepers are encountered, the developer's nominated representative will refer the rough sleeper (s) to Hillingdon Council (https://www.hillingdon.gov.uk/help-a-rough-sleeper).

The Contractor will ensure that the nominated representative is suitably trained (in line with guidance) to work with the council and charities to enhance reaction to, what is, the issues faced both locally by the rough sleepers, but also by the individuals who are often in a poor physical and mental health.

## D.3.3 Emergency planning and response

The contractors nominated representative will ensure that emergency procedures are developed, implemented, and updated where necessary. The emergency procedure will include emergency pollution control measures that will consider current relevant Environment Agency and government guidance relating to pollution. The emergency procedures will be produced in consultation with the emergency services.

The emergency procedure will contain emergency phone numbers and the method of notifying the Council and other statutory authorities. Copies of the procedures will be issued to the Council, London Fire Brigade, the Police, the Ambulance Service, and other relevant authorities etc. Emergency telephone numbers for applicant's/contractor's key personnel will also be included.

## D.3.4 Emergency access

The PC will ensure that the requirements of the London Fire Brigade will be followed for the provision of site access. Where appropriate, the accesses to the site will be designed to the requirements of the London Fire Brigade Note 'Access for Fire Appliances' which addresses the road widths required for fire apparatus. The access may vary over time and will also be suitable for other emergency providers.

## D.3.5 Fire prevention and control

The contractor will ensure that all construction sites and associated accommodation or welfare facilities will have in place appropriate plans and management controls to prevent fires. The site fire plans will be prepared and will have due regard to the following documents:

- Fire Safety in Construction (HSG 168);
- Fire Prevention on Construction Sites (CFPA Europe).

## D.3.6 Fire precautions

All fire precautions will be taken, and fire checks made at the end of each working day before personnel leave the site. Fire points will be set up within easy reach of the work areas, storage points and hot works locations. Throughout the works, “hot works permits” will be required as standard for all hot works. The process will be managed by the main contractor.

# D.4 General site working hours

## D.4.1 General site working hours

The General site working hours will be in line with the requirements of the Control of Pollution Act 1974, Section 61.

Noisy works associated with a development (e.g. demolition, piling and earthworks) will generally be limited to weekdays from 0800 to 1800 hours, unless otherwise agreed.

The applicant will ensure that the contractor adheres to these working hours unless otherwise agreed with the Council. As far as reasonably practicable and where feasible, operations anticipated to cause disturbance would be limited to these hours, except in the case of an emergency.

The applicant or contractor will apply for consents from the Council under the Control of Pollution Act 1974, Section 61, and will obtain a consent (which will include noise limits and vibration limits where relevant) and noisy out of hours work. The applications for consent will include details of the work to be undertaken, including proposed hours of work.

All construction related traffic will abide by the agreed hours of working for each site unless otherwise agreed with the Council.

## D.4.2 Hours of work

Standard daytime working hours will be implemented as per to BS 5228 (Code of practice for noise and vibration control on construction sites).

- Monday to Friday: 08:00 to 18:00
- Saturday: 08:00 to 13:00
- Sunday and Bank Holidays: No working

For any work outside these hours' permission will be sought from the Council. This may include delivery by abnormal vehicles or other specialist activities.

## D.4.3 Out of hours works

Out of hours work applications will include details of the work to be undertaken, including proposed hours of work.

Where working is required outside of the above hours due to unforeseen circumstances or planned work that can only occur outside of the core hours e.g. road closure requirements, mobile crane lifts, then these will be undertaken following communication with the Council and residents / businesses advising the reasons for the work, likely impact, if any, and estimated time to start and complete the work.

# D.5 Site accommodations

Due to the nature and logistical advantages of the site, all accommodation will be maintained within the curtilage of the site.

Single stacked cabins or oasis units will be utilised for site accommodation. It is presumed that the accommodation will be situated adjacent to the site access to minimise visitor ingress to a safe area.

The applicant will consult fully with the Council and the Council to ensure that suitable solutions are formulated and acceptable to all parties.

The applicant will ensure that all appropriate licences are in place prior to installation of the accommodation.

The contractor will ensure that full topographic survey is undertaken and skips, or heavy equipment will be situated away from soft ground and or underground service trenching or tunnels. Where soft ground or unsuitable areas of ground are found, suitable supportive works will be undertaken to accept the proposed loads.

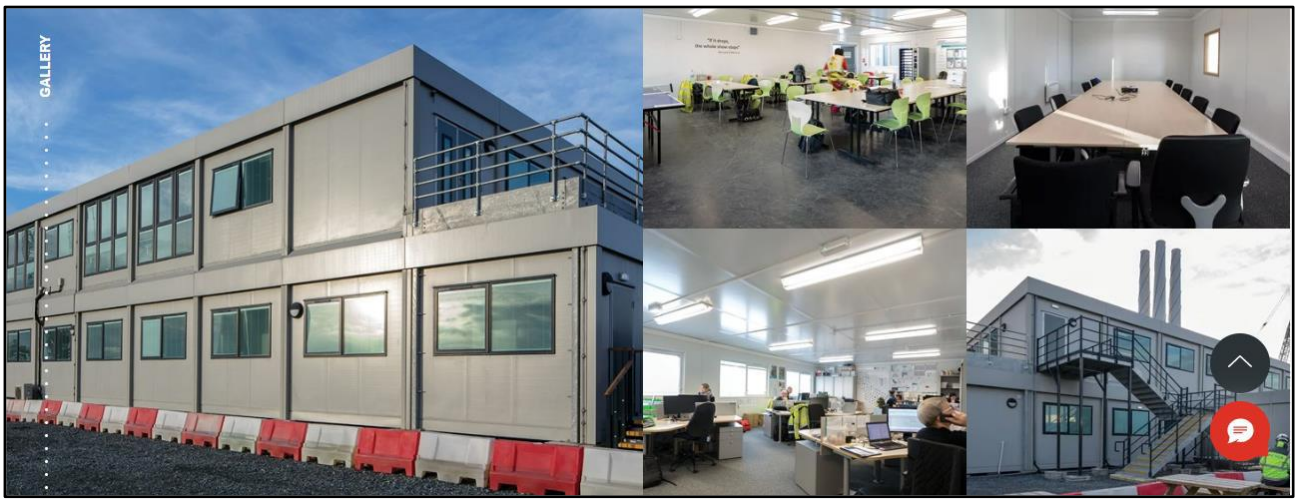



**Figure 11: Typical 2 storey staked Cabins (Courtesy of Port-a-cabin)**

This will provide, in line with the general guidelines and best practice:

- Contractor management offices;
- Meeting rooms;
- Employer and design team office space, if required;
- Welfare facilities including canteen and kitchen, changing and drying rooms, toilets, and showers;
- Induction room;
- Security office; and
- Sub-contractor offices (these may be located elsewhere within the building during construction).

# D.6 Site lighting

Site lighting will be positioned and directed so as not to unnecessarily intrude on adjacent buildings, and other land uses.

The design will ensure that any artificial light emitted from premises will not be prejudicial to health or be a nuisance as required by the Environmental Protection Act 1990.

The lighting will be designed to comply with the provisions of BS5489, Code of Practice for the Design of Road Lighting, and Guidance Notes for the Reduction of Light Pollution, GN01, 2005, or later revisions published by the Institute of Lighting Engineers.

The Principal Contractor will discuss any lighting issues or concerns with the Council's Lighting Compliance Officer, including where a hoarding, scaffold or temporary structure is to be installed upon the highway in close proximity to a lighting column or illuminated street signage (less than 2m).

# D.7 Good housekeeping

The Contractor will ensure that all those working on site follow a `good housekeeping' policy at all times. This will include, but not necessarily be limited to the following:

- Ensuring considerate site behaviour of all those working on a site;
- Ensuring that all operatives are in a medically fit state to conduct their works, and maintain an auditable alcohol and drugs policy;
- Prohibiting open fires;
- Ensuring that appropriate provisions for dust control and road cleanliness are implemented;
- Removal of rubbish at frequent intervals;
- Maintaining a clean and tidy site;
- Frequent inspection, repair, and maintenance of site hoardings;
- Removal of illegal all flyposting;
- Removal of graffiti to the site;
- Maintenance of site facilities and cabin areas;
- Removal of food waste from site;
- Frequent cleansing of wheel washing facilities; and
- Prevention of vermin and other infestations (and prompt and effective action to deal with any that do arise);
- Undertaking all loading and unloading of vehicles off the highway wherever this is practicable and;
- Ensuring that tunnels beneath gantries are always well lit.

# D.8 Waste and site cleanliness

The following points on waste strategy will become the basis for the site waste management plan and are included prior to the formation of the plan that to ensure intent is understood.

## D.8.1 Waste general principles

The contractor will be encouraged to propose solutions that reduce waste e.g., to have materials delivered with reduced packaging and/or delivery companies take their packaging away with them.

Due to the risk of dust and debris being drawn on to the public highway, wheel wash facilities will be included at all exits from the site. As there is currently one proposed access point serving as an entrance/ exit, all construction vehicles will exit through the wheel wash.

All wagons will be netted and screened to avoid building detritus falling from the wagon on to the highway. The contractor will be required to provide a Waste Management Control Plan for the works and submit to all relevant parties for comment and information.

The efficient clearance of site waste will be key to a successful construction project and to portray the image to the surrounding neighbours and passing public of a well-controlled site especially in this high-profile location.

The use of skips will be the primary way of removing waste from the site.

Regularly rotating skips to ensure no overspill will be important. The site has limited areas to consistently provide a consistent skip location, however the creation of a planned skip strategy is yet to be formulated and will be covered in the temporary works strategy.

## D.8.2 Food waste

All site food waste and consumables will be deposited in closed bins and removed from site at regular intervals of no more than a week to minimise rodent and insect infestation on site (especially as the area is by a canal).

Generally, food is prohibited on site except within designated areas.

## D.8.3 Battery waste

All batteries will be gathered to a central area and removed from site for disposal / recycling at a suitable facility. Batteries will not be mixed with general waste. In accordance with UK Government guidance all batteries will be separated into appropriate type and disposed of in accordance with the suitable Approved Battery Treatment Operator (ABTO):

- Automotive (ignition battery)
- Industrial (specifically designed power bank over 4kg)
- Portable (Traditional sealed power pack under 4kg / Domestic)

## D.8.4 Contaminated waste

Waste is generally considered hazardous if it (or the material or substances it contains) are harmful to humans or the environment. Examples of hazardous waste include:

- Asbestos;
- Chemicals, such as brake fluid or print toner;
- Batteries;
- Solvents;

- Pesticides;
- Oils (except edible ones), such as car oil;
- Equipment containing ozone depleting substances, like fridges; and
- Hazardous waste containers.

Contaminated waste will be removed by specialist contractors and disposed of off-site by them to a licensed location in suitably designed and managed vehicles.

In accordance with UK Environment Agency Guidance note (4 April 2014), hazardous waste must be treated separately from all other waste including other contaminated materials.

### D.8.5 Construction waste

Construction arisings will be drawn to a central removal point and where possible sorted into material types.

Spoil will be either stockpiled for direct removal by 3 to 4 axle grab type muck away waggons or utilised as infill and levelling materials where appropriate.

Hard standing or existing roadway type materials will either be broken on site or crushed for reuse on site as in fill or piling mat as required or removal by 3 to 4 axle grab type muck away waggons. Equipment used will be designed and operated in accordance with the most recent version of Process Guidance Note 3/16 for Mobile Crushing and Screening (it should be noted this note is currently under review).

### D.8.6 Biological waste

Biological waste through demolition should be minimal and as such will be removed without stockpiling, however where biological waste is found through discovery, and if too great for instant removal, it will be damped down where appropriate and bagged for specialist or suitable removal as required.

Sharps will be removed by specialist contractors and removed in approved containers. A specialist Sharps policy will de agreed with the Council in advance of construction works.

### D.8.7 Prohibition of incineration

The applicant will prohibit the use of bonfires or other methods of incineration of waste on site.

### D.8.8 Stockpiles

- Stockpiles may be utilised to manage either waste or imported construction materials.
- The use of localised stockpiles within the site will be utilised either by use of skip or the clearance of an area on site to specifically facilitate the activity.
- Stockpiles will be maintained only as necessary and will not be encouraged for long durations due to the nature of the site.
- The stockpile areas will be moved around the site as the site dynamics dictate.
- All stock piles will be limited to a maximum 2m height.
- All stockpiles will be dust managed with either mist systems or manual hosing to minimise dust.

### D.8.9 Dust management

As presented in Section 13.2, the Contractor will develop and implement a Dust Management Plan (DuMP), which will include measures to control emissions for approval by the Council.

The level of detail will depend on the risk and should include all best practice guidance for that risk and be appropriate for the site.

### D.8.10 Site monitoring (in relation to dust)

The site monitoring will be undertaken on a daily on-site and off-site inspection basis, where receptors (including roads) are nearby, to monitor dust, record inspection results, and make the log available to the local authority when asked. This should include regular dust soiling checks or surfaces such as street furniture, cars, and windowsills within 100m of the site boundary, with cleaning to be provided if necessary.

Carry out regular site inspections to monitor compliance with the DMP, record inspection results, and make an 'inspection log' available to the local authority when asked.

Increase the frequency of site inspections by the person accountable for air quality and dust issues on site when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions.

Agree dust deposition, dust flux, or real-time $PM_{10}$ continuous monitoring locations with the Local Authority. Where possible commence baseline monitoring at least three months before work commences on site or, if it a large site, before work on a phase commences.

### D.8.11 General basics of site and surrounding area dust and air management

The contractor will record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken in an agreed format within a formal complaints and issues log for provision to the Local Authority in a timely basis, and on demand within 48 hours of instigation of request. Any exceptional incidents that cause dust and/or air emissions, either on or off-site, and the action taken to resolve the situation will be recorded in the logbook.

Hold regular liaison meetings with other high-risk demolition sites within local area if relevant to the site boundary or access points, to ensure plans are co-ordinated and dust and particulate matter emissions are minimised. It is important to understand the interactions of the off-site transport / deliveries which might be using the same strategic road network routes.

### D.8.12 Rodents and vermin

The contractor will ensure that the risk of infestation by pests or vermin is minimised. Adequate arrangements for disposing of food waste or other material attractive to pests will be implemented.

If infestation occurs the contractor will ensure that such action to deal with it as required by the Council's Environmental Health Officer is taken.

To minimise the potential of infestation, the site post demolition will be assessed for the presence of rodents and vermin prior to demolition. Should any rodent or vermin issues be present, an external contractor will be appointed to eradicate these.

The contractor will ensure that periodic reviews of the site are undertaken by a specialist contractor to ensure that rodent infestations are minimised and can be removed quickly to avoid the associated health issues affection the workforce and the neighbouring properties and occupants.

To minimise the adverse impacts from pests and rodents the following control measures will be implemented on site in the following order:

- All drainage systems and access points will be kept secure to prevent rodent access;
- All generated rubbish, particularly food waste, will be cleared as it is generated and placed into secure containers and removed off site for disposal on a continuous basis;
- A high level of good housekeeping will be maintained on site and in all facilities;
- Site rules will be implemented to prevent the feeding of such pests as pigeons and seagulls;
- All food brought on site will be within storage containers; and
- Where all other control measures have been actioned then pest control management will be implemented on site by a reputable pest control company.

### D.8.13 Pigeon waste

As the site will be levelled, pigeon waste within enclosed environments will not be considered until the buildings are erected, and where a delay to the completion of a section is required. In this instance a mitigation plan to stop avian ingress into the new buildings will be implemented with netting or formal barrier.

### D.8.14 Road cleansing

A water assisted road-sweeping machine will be periodically employed as required to either brush clean the roads around the site or in periods of dry weather wet down the highway to control the dust. The frequency and nature will be agreed in advance with the LA and if necessary, 3rd party stakeholders. The timing of the cleansing will be managed to avoid peak times except by exception, such as a spill or on request of the Council.

Dry sweeping will be avoided in sensitive and or large areas where dust and particulate pollution could cause an issue both on and off site.

Road cleansing may also require water-assisted cleansing plant on the access and local roads, to remove, as necessary, any material tracked out of the site. Where this is required, the applicant will ensure that surplus water is collected and contained for removal from site by appropriate measures.

### D.8.15 Wheel wash management

The site will have designated hard standing loading areas. These areas will also serve as wheel wash areas for vehicles leaving the site.

All access and egress points will be monitored and cleaned as required to prevent site materials tracking on to the road.

All vehicles will be inspected before leaving the site for cleanliness.

Where possible the contractor will ensure there is an adequate area of hard surfaced road between the wheel wash facility and the site exit.

The contractor may implement a wheel washing system with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable.

Prior to instigation of the cleansing policy, the contractor will agree the standards and methodologies with the Council prior to commencement of vehicle movements.

All ground or surface water run-off will be strictly controlled in line with environmental legislation and best practice to prevent pollution of drains and watercourses.

# D.9 Third party liaison

## D.9.1 Public information

The site hoarding will display up to date information on the construction schedule (as a minimum these will include start and estimated time periods such as “summer and year”). The signage will also display telephone contacts for within and out of hours usage for the applicant’s nominated representative (s) and other key personnel for reporting of issues and incidents.

The contractor will also affix a sign board to hold all necessary certification, statutory notices, safety information and HSE details.

## D.9.2 Community liaison group (CLG)

To assist in communication, and a more formal approach, the contractor’s liaison officer (this is appointed on site and may be the Site Manager) with a set agenda is expected to set up a Community Liaison Group (CLG) with a set agenda to work with the local community and developers.

## D.9.3 Construction forum

To assist in communication, and a more formal approach, the contractor’s liaison officer will set up a Construction Forum to work with the adjacent and significant construction sites that are affected or affect the Project works as required.

Key Items on the agenda may include:

Environmental issues:

- Dust;
- Noise; and
- Vibration.

Transport logistics:

- Outsized deliveries;
- Crane deliveries;
- Cycle safety initiatives;
- Vehicle educational measures (including school visits);
- Plant delivery no’s actual and envisaged; and
- Site worker transport preferences.

Security:

- Fire management / site evacuation policy;
- Fire escape areas;
- High-Cost items / security risks as appropriate; and
- Access by neighbours to site

# Appendix E

# E.1 Mitigation measures

Industry accepted means of preventing, reducing and minimising noise generation will be adopted in agreement with the Council.

Appropriate procedures need to be followed in order to mitigate noise, vibration and air pollution (e.g. through dust and fume generation) impacts.

## E.1.1 General mitigations

No works will be undertaken outside the specified working hours; except in any cases of emergency, where safety is an issue, or where conditions of dispensation apply.

## E.1.2 Plant mitigations

The contractor will comply with the requirements of the COPA 1974, with reference to Part III of the Environmental Protection Act 1990, The Control of Noise at Work Regulations 2005 and the Health and Safety at Work Act 1974;

Ensure all vehicles switch off engines when stationary – no idling vehicles.

Avoid the use of diesel or petrol-powered generators and use mains electricity or battery powered equipment where practicable.

Ensure all on-road vehicles comply with the requirements of the London Low Emission Zone and Local Authority NRMM standards, where applicable;

All plant and equipment to be used for the works will be properly maintained, silenced where appropriate to prevent excessive noise and switched off when not in use and where practical;

Hydraulic machinery and plant will be used in preference to percussive techniques where practical;

Plant will be certified to meet relevant current legislation and Noise and Vibration Control on Construction and open sites (BS 5228). All subcontractors will be made familiar with current noise legislation and the guidance in BS 5228 (Parts 1 and 2), and this CEMP which will form a pre-requisite of their appointment.

## E.1.3 Noise mitigations

- Noise levels will need to be controlled by the constant monitoring in line with Council guidelines and best practice;
- Agreed trigger action levels for noise will be agreed with the Council;
- Noisy planet will be maintained away from the site perimeter as far as is practical;
- Noise complaints, or exceeding of agreed levels will be reported to the contractor and immediately investigated;
- To avoid site contamination of surrounding areas, site runoff of water or mud should be avoided by use of both physical and mechanical measures including bunds and bumps;
- Loading and unloading of vehicles, dismantling of equipment such as scaffolding or moving equipment or materials around the site will be conducted in such a manner as to minimise noise generation.

## E.1.4 Dust (and other particulate) mitigations

Specific dust measures should be considered as:

- Dust levels be controlled by the constant monitoring of air quality levels;
- Positioning of monitoring equipment will be agreed with the Local Authority prior to installation;

- All vehicles entering and leaving sites will be covered to prevent escape of materials during transport;
- Agreed trigger levels for dust and other particulates will be agreed with the Council in advance of demolition;
- Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible;
- The contractor will erect and maintain throughout the demolition period temporary hoarding around all working areas to assist in the screening of noise and dust generation from low-level sources;
- Vehicles transporting materials capable of generating dust to and from site will be suitably sheeted on each journey to prevent the release of materials and particulate matter;
- All solid-state hoarding and site fencing and barriers will be maintained using controlled wet methods for cleansing and avoiding water runoff from the activity;
- Fully enclose site or specific operations where there is a high potential for dust production and the site is active for an extensive period.
- Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used on site;
- Where materials are being re-used on site, they should be covered and protected according to best practice in a manner agreed previously with the council.
- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.
- The contractor will avoid scabbling (roughening of concrete surfaces) if possible, to minimise dust
- Ensure an adequate water supply on the site for effective dust/particulate matter suppression/mitigation, using non-potable water where possible and appropriate.
- Use enclosed chutes and conveyors and covered skips.
- Minimise drop heights from conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate.
- Install hard surfaced haul roads, which are regularly damped down with fixed or mobile sprinkler systems, or mobile water bowsers and regularly cleaned.
- Ensure equipment is readily available on site to clean any dry spillages and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.