Construction Management and Logistics Plan

Block 4, North Hyde Gardens
Hayes
UB34QQ

16-02-25

Rev	Description	Author	Date
1	First Draft	DCB	16-02-25
2	Second Draft	DCB	20-02-25

Contents

1.0 INTRODUCTION

Please note that it as an outline document and a concise document will be submitted following the grant of planning permission to discharge a planning condition.

Union Park has been commissioned by ARK to construct Block 4 data center supported by an energy center, These standards and procedures propose that the interests of local residents, businesses and the general public are given special attention by the Contractors during the works duration.

This report identifies how the critical construction activities will be undertaken, and specifically covers the environmental, public health and safety aspects of the proposed development. The baseline for our analysis is the London Borough of Hillingdon (LBH) Draft Code of Construction Practice v.37.1 (CoCP), but we envisage these requirements as the minimum standards to be achieved and have identified improvements in most areas under consideration. In due course, when the Contractors for the demolition and construction works have been chosen and appointed, they will produce detailed management plans to demonstrate how they will comply with the requirements of the Draft CoCP and how they will address the measures contained within this report.

Key outputs from this report are:

- Noise during demolition.

We have recognised the sensitive nature of this site and will be requesting that the tendering Contractors identify the smallest and quietest machinery to properly undertake the demolition works and specifically the breaking up and disposal of the ground slab.

- Noise during construction.

The objective is to control noise within recognised limits. The on-going quiet enjoyment of the existing neighbours is of paramount importance. This Construction Management Plan identifies the specific measures to be taken in protecting the neighbours from the adverse effects as a result of the construction activities.

- Communications Strategy & Neighbour Liaison.

Proper consultation with neighbors and the local community is of paramount importance. This Construction Management Plan identifies the need for a pro-active approach to the construction activities and is explained in the Authorities and Public Liaison section.

- Working hours.

Working hours 8:00am – 6:00pm

- Deliveries.

Deliveries to the site will be via the existing retail access from Hyde Gardens Road. Operating hours are 8.00am to 6.00pm and to limit potential danger and disruption to pedestrians Sweet Projects will have a logistic team present at the site entrance.

- Waste removal.

Demolition & construction waste and excavated material will be loaded into skips or lorries which will park within the site boundary before being released to Hyde Gardens Road.

- Programme.

The overall duration for the site works from commencement of demolition to completion of the fit TBC

Guidance

The LBH set outs the standards and procedures for managing the environmental impact of constructing major projects where construction of these projects has the potential to affect the environment, amenity and safety of local residents, businesses and the general public including the surroundings in the vicinity of the proposed works.

The Draft CoCP covers all aspects of construction work that could reasonably be anticipated to impact on the local community and the environment throughout the construction of the proposed works. This report sets out:

- The general principles to be applied during construction and the context within which mitigation measures will operate and be developed;
- The specific provisions for construction site operations; and
- The specific environmental issues that need to be considered throughout the period of construction works.

There is a large body of environmental and safety requirements relevant to construction projects, in the form of primary legislation (Acts of Parliament), secondary legislation (Statutory Instruments, including Regulations and Orders) and statutory guidance. The Contractors will be responsible for identifying new legislation and regulation and complying with all prevailing legislation at the time of construction including any requirements under Health and Safety.

Licences

In addition to the environmental requirements highlighted above, the Contractors will be responsible for obtaining licenses from LBH before:

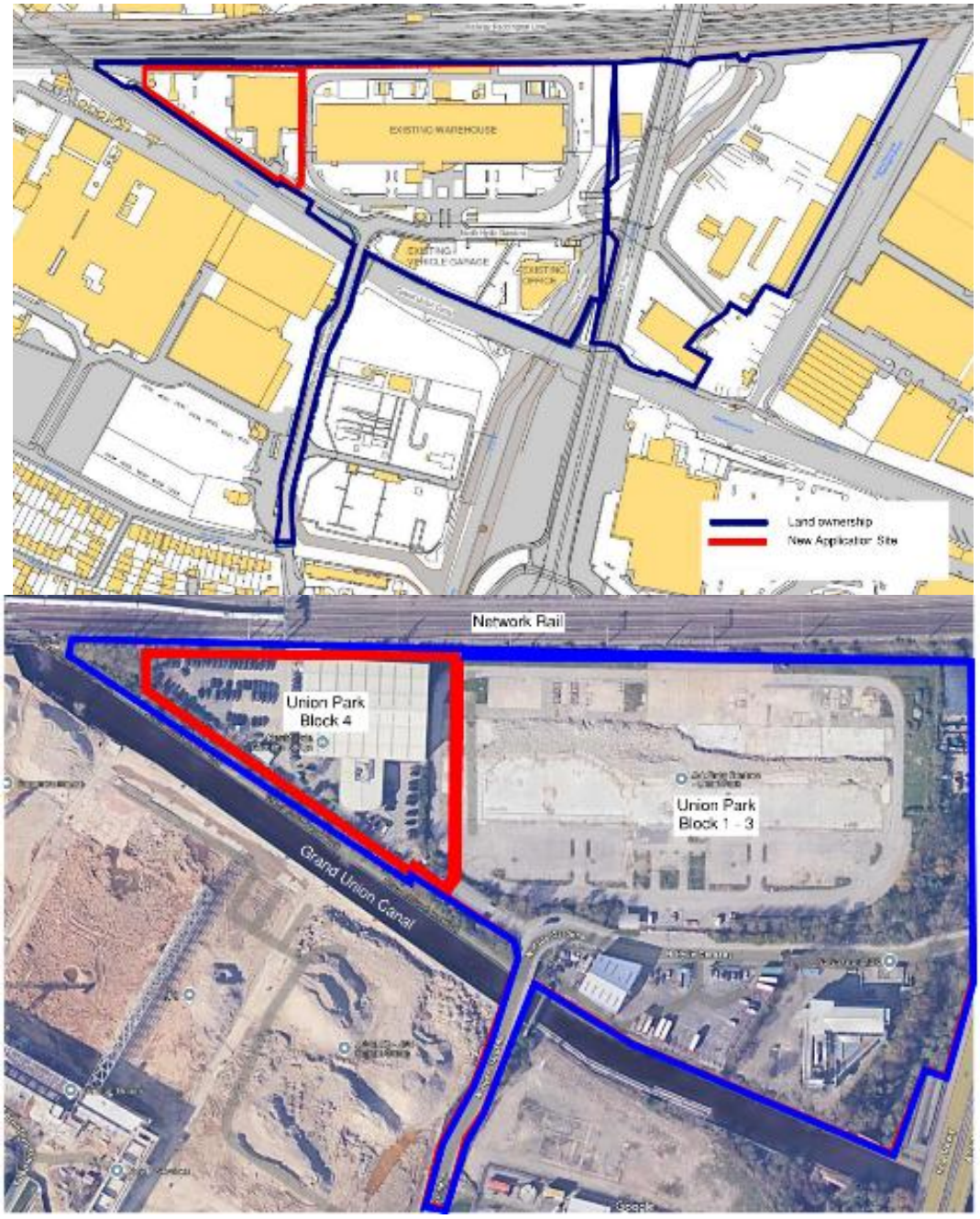
- Erecting any scaffolding, hoardings, temporary crossings or fences on the highway;
- Operating a mobile crane, aerial platform, concrete pump lorry or any such equipment,
- Lifting the footway and making any temporary excavation.

2.0 NATURE OF THE PROJECT/SCOPE OFWORKS

Project location

The development is located within the London Borough of Hillingdon as per the location map below:

SP-173 Block 4 Union Park



Scope of works

- Formation of One data center and One energy center
- A new landscaping scheme is to be created around the entire site and to River Crane.

3.0 METHODOLOGY FOR, NEW CONSTRUCTION, SEQUENCE AND PROGRAMME

This section of the document will identify the specific methodology which we have identified for the project.

- Production of a Site Environmental Management Plan and Construction Traffic Management Plan.
- Mobilisation of selected plant and operators.
- Formulation of project Health and Safety Plan and risk assessments.
- Formulation of Site Waste Management Plans and environmental plans as per the current DEFRA guidelines.
- Development of project specific demolition method statements.
- Production of detailed works programmes and sequencing.
- Surveys of existing services and structures to confirm demolition methodology.
- Highways condition surveys to be carried out prior to commencement on site.
- Services investigations/surveys for decommissioning purposes.
- CCTV surveys of existing drainage if desired.
- Hazmat and asbestos investigations, testing and ASB5 notifications to the HSE if needed.
- LBH licence applications and approvals for notices, hoardings, scaffolding and vehicle arrangements, (should any encroach outside the private demise)
- Baseline movement & environmental monitoring establishment
- Neighbour liaison before the commencement on site to explain the nature of works.
- Register the project under the Considerate Constructors Scheme.

Construction & Project Methodology

The site is located on the north- west side of North Hyde Gardens within Hayes which sits within the London Borough of Hillingdon. The known site address is Bulls Bridge Industrial Estate, Hayes, UB3 4QQ. The site is bound to the north by the main Paddington railway line, to the east by The Parkway (A312) flyover and the River Crane, to the south by the Grand Union Canal.

The Data Centre campus includes various buildings, the most prominent being the Data Centre. The DC is formed by three five-storey blocks with a maximum height of 34m A.O.D. (32m at parapet level) to house the data storage function, which are linked by ancillary blocks in between, which host loading bays and vertical circulation. The ancillary blocks reach 34m at circulation cores.

Three stand-alone four-storey Medium Voltage (MV) Energy Centres sit south of the Data Centre building and house the standby generators. Each Energy Centre is dedicated to a DC block. Two Visitor Reception Centres constitute the security points prior to entering the premises. They are provided with temporary off-street car and cycle parking. A High Voltage (HV) electricity Substation to handle the voltage conversion from the national grid for distribution and use onsite sits further south and its output is shared by all.

The sequencing for the demolition & construction of the development is divided into the sections listed below.

1. Site Establishment
2. Earthworks
3. Substructure
4. Superstructure
5. Envelope
6. Fit Out

1. Site Establishment

At commencement the existing building and surrounds should be made safe and secure. Services will be terminated and arrangements for site temporary supplies put in place. Hoardings will be erected as indicated on the Logistics Layouts included herein. Network Rail and the associated areas will be checked prior to work commencing within 5 m of their land.

2. Substructure

Removal of existing concrete slab, Pile probing and diversions of obstructing below ground services is to be undertaken where required with services diverted (or temporary provision in place if necessary) a piling mat of crushed material (re-used from demolition stages) will be placed prior to arrival of the piling rig.

Below ground works will commence with the construction of piling to all proposed buildings, with a production rate of nine or more piles per day.

3. Superstructure

Key elements of the build sequence for block 4 is a modular system and then AB's are to be built using a traditional sequence.

The core of the building will be constructed with a steel frame with ground floor slabs, situated above a piled foundation solution (CFA). Temporary propping will then be erected to support the required steel elements.

Modular Units are expected to be delivered on full sized articulated lorry, which would be maneuvered into site in the morning delivery slot and leave once unloaded.

Once all units are in place the roof slab will be positioned. Very particular care and protection will be needed to safeguard the brown/green roof finish. When the slab is in place and sufficiently hardened the formwork and supports will be struck and internal core walls completed in concrete or blockwork.

Staircases will be constructed in in-situ or precast concrete as appropriate

4. Envelope

Roofing will progress in parallel to the delivery and installation of the sliding mechanism for the cladding units which are to be installed within the space.

Materials for roofing and glazing are likely to be delivered and offloaded by crane and placed using a Strongboy (TM). Traditional scaffolds will be erected for access and edge protection.

5. Fitting Out works

Where suitable services would proceed ahead of watertight date but key elements such as lift installation, ancillary fit-out would commence only when the central core and roof achieves watertight condition.

As the project nears completion and enters testing and commissioning the external landscaping concluded.

4.0 THE CONSTRUCTION SITE

This section outlines the requirements relating to site management practices, ranging from the location of accommodation and equipment to the operation of equipment on site. It outlines a number of procedures that should be implemented during site operation.

These relate to working hours, site layout and appearance and good housekeeping.

Working hours

To ensure that the impact of the construction is kept to a minimum on this project we propose to circulate a news letter and keep within the above time slots.

Good housekeeping

The Contractor will follow a 'good housekeeping' policy at all times. This will include, but not necessarily be limited to the following. The Contractor will:

- Ensure considerate site behaviour of the Contractor's staff;
- Ensure the noise from lorry reversing alarms and the like are kept to minimum levels;
- Prohibit open fires;
- Ensure that appropriate provisions for dust control and road cleanliness are implemented to ensure that the areas adjacent to the site are in no worse condition than they are at commencement.
- Remove rubbish at frequent intervals, leaving the site clean and tidy;
- Maintain toilet facilities and other welfare facilities for its staff;
- Remove food waste;
- Frequently cleanse wheel washing facilities, if used;
- Carry out spot checks on Hyde Garden Road, including the bridge to ensure there is no dirt or debris on the road from the lorries;
- Prevent vermin and other infestations;
- Undertake all loading and unloading of vehicles from the designated area, as identified on the logistics drawings;
- High vis to be worn at all times on site clearly showing the name of the contractor;
- Be courteous to the general public; and
- Ensure boots are free of dirt and debris when leaving site.

Public information

The site hoarding will display the Contractor's signboard together with publicity material including up-to-date information on the site programme and telephone contacts details for the Contractor's site representative.

Security

The Contractor will ensure that the site is secure by 24 hour security and prevent unauthorised entry to or exit from the site. Site gates will be closed and locked when there is no one on site. Access and egress will be via manned security gates.

The Contractor is to provide out of hours emergency phone numbers in case there is any issue that needs their immediate attention.

Hoardings, Site Layout and Facilities

The site will be completely secure to deter public access. The proposed hoarding line and gates, all of which will be in accordance with the LBH license (if required), are shown on the enclosed plans. It is intended to provide protection from noise and dust at all times.

The final location of site offices, toilets and welfare facilities will be identified on the site as shown on the logistics plans.

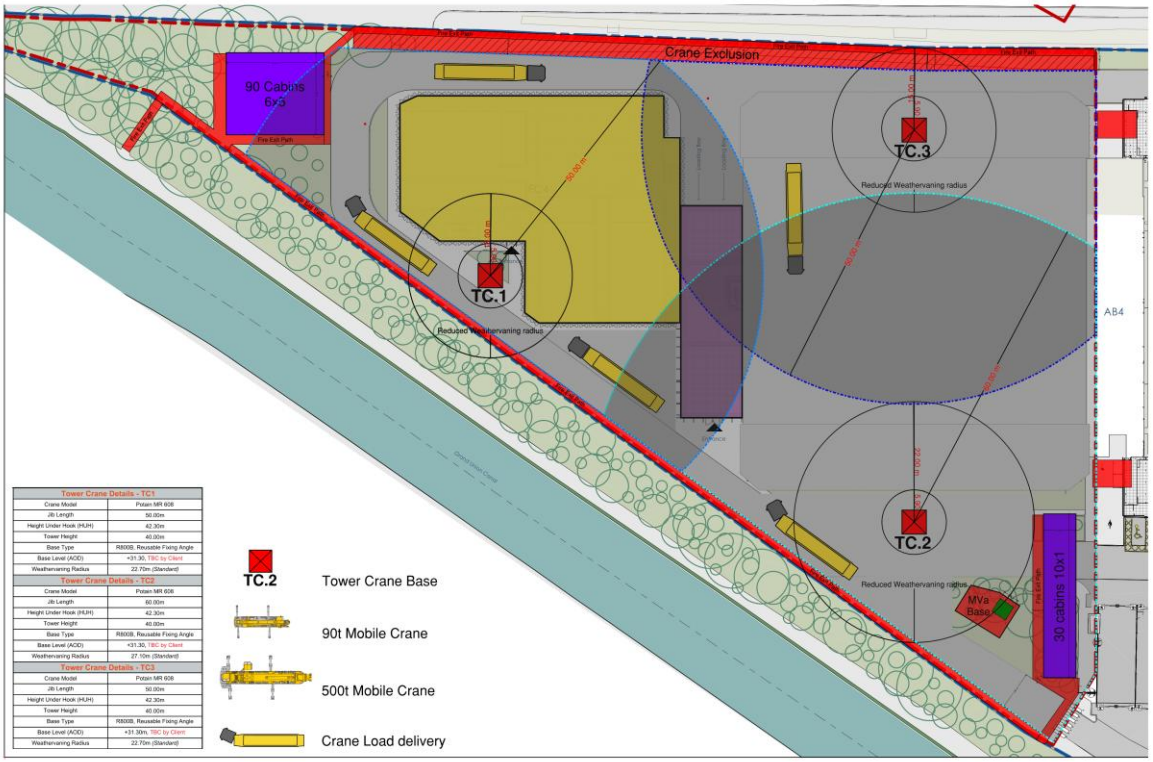
Emergency planning and response

The Contractor will develop a plan for emergencies to incorporate:

- Emergency procedures including emergency pollution control to enable a quick response.
- Emergency phone numbers and the method of notifying the Client's representative, and statutory authorities. Contact numbers for the key staff of the Contractor will also be included. The Contractor will display a 'contact board' on the hoarding identifying key personnel with contact addresses and telephone numbers, so that members of the public know who to contact in the event of a report or query.
- London Fire and Emergency Planning Authority (LFEPA) requirements for the provision of site access points.
- Site Fire plan and management controls to prevent fires.
- A plan to reduce fire risk and potential fire load during construction, operation and subsequently during maintenance or repair. The project will comply with any third party requirements as may be appropriate at specific sites.

Cranes

The Alliance contractors will require cranes to install their modular sections, steel frame and movement of materials safely around and also to create the data halls. The location of the cranes is highlighted on the plan below, where Tower Cranes TC1, TC2 & TC3 are located to cover the necessary areas of the build sequence.



Considerate Contractors Scheme

The site will be registered with the 'Considerate Constructors Scheme'. This scheme ensures that contractors carry out their operations in a safe and considerate manner with due regard to pass pedestrians and road users.

5.0 SITE LOGISTICS

The efficient management of the site logistics will be vital to the success of the project. A key strategy of logistics for a construction project is to ensure that the products and materials arrive on site at the time and in the quantities that are required.

The Contractor will ensure that the necessary pre-planning is undertaken and that the quality of the communication between those planning the project and those supplying the products and materials is maintained throughout the duration of the project.

The Contractor will also need to make themselves aware of any construction projects near the data centres and ensure the logistics are planned taking these into account.

As mentioned in section 4.0 it is proposed that construction deliveries are managed within the existing time slots

- Piling – where concrete deliveries will be required during the day
- Plant deliveries – where managed time slots will be agreed to suit programme needs.

When these events occur additional traffic marshalling and temporary barriers will be employed to ensure public safety.

Concrete pumps will be positioned inside the site hoarding.

6.0 TRAFFIC MANAGEMENT

This section highlights the measures by which Sweet Projects can avoid disturbance to the public that may arise from increases in traffic flows and temporary rearrangements of the road network associated with the construction works. Measures have been considered in relation to access routes, site access, marking of lorries, timing of movements, environmental standards, vehicle registration and parking.

The specific measures to be implemented by the Sweet Projects (SP) these will include:

SP will maintain, as far as reasonably practicable, existing public access routes and rights-of-way during construction. The intention will be to service construction by loading and unloading vehicles inside the site boundary utilising the established delivery times for this scheme, Union Park:

- 8:00 to 18.00
- (Monday to Friday)

From summer 2015 the SLS (TfL & London Councils Safe Lorry Scheme) required almost all HGVs, irrespective of current exemptions, over 3.5 tonnes that drive in Greater London to be fitted or retrofitted with:

- Side guards (also known as “lateral protection devices”) irrespective of vehicle type; and
- Both Class V and VI mirrors, irrespective of vehicle age or registration date.

The contractor will ensure that all sub- contractors and suppliers delivery vehicles comply with the scheme and any non- complying vehicles are turned away from site.

Access routes

The Contractor will use designated construction traffic routes for deliveries to the site and removal of waste etc. in accordance with the logistics drawing.

Access routes to and from the site to be used by heavy goods vehicles (HGVs) will be agreed with Sweet Projects prior to initiation of the construction programme, to minimise disruption to the road and pedestrian network. It is anticipated that the strategic road network will be used as far as possible for this purpose, with the majority of construction traffic assumed to be approaching the site from the west of London, unless from other areas of the country.

Given the existing traffic systems and traffic volumes within this area of London, the main routes for construction traffic on the strategic road network are as follows:

Deliveries to the site will be directed to the Hyde Garden Road entrance and will be managed for their suitability and offloading arrangements. Small vehicles will be used wherever possible and Hiab offloading employed for speed of turnaround and practicality.

Larger operations such as precast concrete deliveries will require articulated lorries to deliver and mobile cranes to offload. It is intended that for this operation a single delivery would be made within the morning delivery period and the vehicle would remain on site until 19.00. The mobile crane would remain on site for the days required to offload.

Vehicles will be required to adhere to a strict delivery schedule whereby single vehicles will be called forward to deliver at any one time. When contracts are awarded and suppliers known the Contractor will propose vehicle holding areas away from site to ensure that vehicles are only called forward when the delivery bay is available and they do not queue in the site vicinity or on the SRN routes.

Logistics Plans are included in the previous section of this Construction Management and Logistics Plan.

Construction Vehicle Routing

The map below indicates the preferred routes from the Strategic Road Network. Tippers or skip lorries will approach from the West, ready mixed concrete wagons will also approach from the M4, and longer vehicles carrying precast units for crane offloading approaching from the A312.

SP-173 Block 4 Union Park

Proposed Construction Vehicle Routing to Site

Construction Traffic vehicle forecast:

- The number of larger size lorry movements, hours of operation and any lorry holding areas will be agreed in advance and the LBH through completion of a detailed Construction Traffic Management Plan in accordance with LBH's guidance. The Contractor will maintain an up-to-date log of all drivers that will include a written undertaking from them to adhere to LBH's approved routes for construction traffic.

- There will be no overnight parking of lorries within the vicinity of the construction site.

- Estimated numbers of construction related vehicle journeys for the demolition and construction period have been calculated based on volumes of demolition material/excavated waste material, together with imported concrete, piling, and cladding. An assessment has also been made for the fit-out period.

The table overleaf summarises typical and peak traffic for key programme stages.

Programme Stage	Typical Daily Movements	Peak Daily Movements
Site Establishment	2-3 Vehicles delivering hoarding materials, removing paving etc. 12m rigid vehicles.	4-5 vehicles (guide only)
Piling and Substructure	4-6 Vehicles. Concrete deliveries, muck away tippers, re-bar and general deliveries.	10-12 vehicles during piling. Low loader for piling rig delivery and removal (guide only)

Superstructure	2-3 Vehicles. 1 full artic daily during precast erection. Large multi axle mobile crane daily	6+ Concrete wagons for roof or core pours (guide only)
Envelope	2-3 Vehicles. Glazing components by full artic. Small mobile crane to offload	5-6 vehicles various construction components, (guide only)
Fit Out of Ancillary Buildings	4-5 vehicles. Box vans delivering components and finishing materials	8-10 vehicles possible at peak – delivering components for fit out. (guide only)

7.0 SITE WASTE MANAGEMENT

Sweet Projects working methods minimise waste. Any waste arising from the site must be properly categorised and dealt with in accordance with appropriate legislation. Opportunities for re-using or recycling construction or demolition waste should be explored and implemented.

The Contractor will carry out the works in such a way that as far as is reasonably practicable the amount of spoil and waste (including groundwater, production water and run-off) to be disposed of is minimised, and that any waste arising from the site is properly categorised and dealt with in accordance with the appropriate legislation and guidance, but only if necessary.

A formal and detailed Site Waste Management Plan will be produced by the successful Contractor. The disposal of all waste or other materials removed from the site will be in accordance with the requirements of the Environment Agency, Control of Pollution Act (COPA), 1974, Environment Act 1995, Special Waste Regulations 1996, Duty of Care Regulations 1991 and the Waste Management Regulations 2006.

In general and in accordance with the principles of the UK Government's 'Waste Strategy 2010', a principal aim during construction will be to reduce the amount of waste generated and exported from the Development site.

This approach complies with the waste hierarchy whereby the intention is first to minimise, then to treat at source or compact and, finally, to dispose of off-site as necessary. All relevant Contractors will be required to investigate opportunities to minimise and reduce waste generation, such as:

- Agreements with material suppliers to reduce the amount of packaging or to participate in a packaging take-back scheme.
- Implementation of a 'just-in-time' material delivery system to avoid materials being stockpiled, which increases the risk of their damage and disposal as waste.
- Attention to material quantity requirements to avoid over-ordering and generation of waste materials.
- Re-use of materials wherever feasible e.g. re-use of crushed concrete from ground slab; re-use of excavated material for landscaping on other projects; re-use of steel and timber framing members from the existing building when demolished.
- The Government has set broad targets of the use of reclaimed aggregate, and in keeping with best practice the Contractor will be required to maximise the proportion of materials recycled.
- Segregation of waste at source where practical.
- Re-use and recycling of materials off-site where re-use on-site is not practical (e.g. through use of an off-site waste segregation facility and re-sale for direct re- use or re-processing). Our expectations in this regard are shown in the table overleaf.

Material	Target	Probable Location
Architectural salvage	100% re-used	Several architectural salvage companies in London.
Structural steel for re- use	100% re-used	Any complete sections salvaged during the demolition works will be retained by the Contractors for re use in temporary works.
Metals	100% recycled	Every effort will be made to recycle these materials on site with any surplus being taken to waste transfer station.
Hardcore (crushed concrete etc.)	100% recycled	Taken off-site to be crushed and reused.
Excavated material/ clay etc.	100% recycled	Clay – 100% processed for re-use (subject to analysis).
Timber	Up to 80% re-used The amount re-used will depend on the material	We will attempt to salvage any re-useable timber for hoardings, battening, shuttering etc. for possible use on site with the balance being retained by the Contractors.
Glass (non-tempered, non-laminated and non-bomb proofing film etc.)	100% recycled	Processing facility in Greenwich.
Mixed waste	The amount recycled will depend on the material	An absolute minimum will remain for transport to landfill.
Asbestos (if found)	100% landfill	Taken to a licensed site.

Overall, the waste management for the site is likely to comprise of the following:

- Earthworks/Civils. The building will be cleared using hand tools and loaded into lorries or skips for processing off site.
- Excavation. Arisings will be loaded directly into a waiting eight-wheeled tippers or skips for processing off-site.
- Re-Use of Arisings. Where practical, ground slab arisings will be crushed off site and returned to create a piling platform for the sub-structure works.

8.0 Dust Control

General Description of Works to be carried out

- Enabling works
- Gas Diversion Scheme
- Piling
- Groundworks

- River Landscaping Scheme
- Concrete frame
- External Cladding
- Internal and External Finishing Works

Nominated Representative

A member of the principal contractor's construction team will be nominated as the representative responsible for the implementation of the dust mitigation and management strategy and will fulfil this duty on a day to day basis.

It will be the person's responsibility to ensure:

- Dust mitigation measures are implemented on site
- Dust monitoring is carried out as set out in the protocol
- Remedial action in the event that the trigger levels are exceeded

Site Activities

Dust generating activities may occur during the construction phase of the development and all efforts will be made to eliminate and mitigate this.
All construction works will be carried out during the hours of 0800 to 1800hrs Monday to Friday however there may also be a requirement to work on Saturdays and Sundays as and when the project programme dictates.
Due regard will be given to activities that have potential to generate dust and will be carried out at times which are less likely to cause nuisance to all.

Potential Receptors to Dust

- General public
- Operatives

Dust Assessment of Potential Risk – Construction Phase

The initial excavation of trial holes for ground investigations could result in air borne dust.
Movement of plant and equipment and disturbance of running surfaces has the potential to generate air borne dust.
The general construction activities have also the potential to generate dust through day to day activities in three different categories:

- Silica Dust – Concrete /Masonry etc
- Non-Silica Dust – Plasterboard
- Wood Dust

Element	Dust Mitigation and Control Methods
Communications	• Develop a stakeholder communication Plan • Display name and contact details of responsible person for dust issues on site boundary. • Display Office contact information
Dust Management	• Implement a dust management plan to be Approved by the local authority.
Site Management	• Record all complaints and incidents and Resulting actions in a logbook.

	• Record any exceptional events • Liaise with other high-risk construction sites within 500meters to ensure plans are coordinated
Monitoring	• Undertake daily on and off-site visual inspections. • Increase frequency of inspections during periods of high-risk activities or in dry periods • Agree monitoring protocol with Local Authority if required.
Preparing and Maintaining the Site	• Use site layout to locate activities away from sensitive receptors • Erect solid screens and barriers around site. • Avoid site run off of water and mud • Keep site fencing barriers and scaffold clean. • Reduce storage of dusty materials to a minimum. • Minimise emissions from stockpiles by covering or damping down.
Construction Traffic	• Sheeting and containment of delivery Vehicles • Produce a Construction Logistics Plan to manage delivery of goods. • Record inspections of haul routes in the site logbook. • Implement a sustainable Travel Plan for site workers. • Access to the site via paved areas • Regularly sweeping of access roads using water assisted dust sweepers. • Damping Down during dry periods • Limiting Vehicle speeds • Switching off all engines when not in use • Provision of Debris Netting barrier to the Rail track frontage • All vehicles will be washed down before leaving site.
Measures specific to Excavations	• Minimize drop heights when loading and off loading • In dry periods damp down general area • Sheeting and containment of the loads immediately
Measures specific to Concrete Frame	• The use of a slip form system is proposed which will be screened off over three levels at the work face-This will serve to contain dust • As the general floor levels progress at CPP system is proposed to encapsulate three floors at the work face-thus containing any potential dust risk and prevent noise break out
Measures specific to Cladding---PC Panels and integrated windows	• Due to being manufactured off site-This greatly reduces the risk of dust-to both operative's and third parties
Distribution of Materials via Hoist and Scaffold Tower	• The scaffold Tower (Subject to a Temporary Works design) will be fully screened off. • Water will be available on the common Hoist Tower-to allow for dust suppression as required.
Cutting---Masonry/Concrete.	• Cutting equipment will use water as a dust suppressant. • Dust extraction units will be fitted to equipment wherever possible and site personnel will ensure equipment is in good working order.

	• Note General Cladding Panels are manufactured off site-thus minimising the risk of dust generation due to reduced workload on site. • Face Fit dust masks will be provided to Operatives.
Cutting---Wood---Carpentry/Kitchens	• Dust extract equipment will be fitted to all saws • Face Fit Dust Masks will be provided in accordance with the agreed Risk Assessments and method statements.
General Construction Activities.	• Effective barriers around dusty activities and site boundary will be introduced and the area cordoned off with a permit to enter system in operation. • Site will not allow runoff of water or mud onto the public highway. • The need for dust masks will be risk assessed and implemented in accordance with the agreed method statements. • Ensure suitable cleaning materials are available at all times to clean up spills.
Waste Management	Only use registered waste carriers to remove waste off site. •No bonfires on site. • All floor plates will be cleaned regularly-damping down as required during the brushing process. • Waste Bins will be made available at all levels • A central waste management area will be located at ground level-Material will be sorted and segregated off site

Monitoring

We propose to undertake dust monitoring using handheld optical analyser dust monitors to determine dust levels at specified locations at known times during the working day. All equipment will be fully calibrated, and in good working order at all times. Monitoring will always be carried out by a competent member of the Sweet Projects site staff, with daily logs being maintained throughout the construction period.

We propose to establish three monitoring locations, which will be adjacent to the main existing residential areas in closest proximity to our site boundary. The monitoring equipment will be situated in a location approximately 1.2 to 1.5 metres above the local site level, taking the possible effects of any local screening or reflection into account. The calibration and battery levels of both meters will be recorded at the beginning, and end of each monitoring session. We will obtain background noise and dust levels during periods of non-activity on site. If the recorded levels exceed the agreed target trigger levels, we will bring this to the Councils attention, with a view that alternative target levels may be set. Monitoring will be undertaken not less than twice daily, once in the morning, and once during the afternoon, at each specified monitoring location. Data will be gathered during normal site operation. We feel it will not be necessary to carry out dust monitoring during periods of significant precipitation. All such periods will be recorded in the site log sheets.

Prevailing weather conditions, including wind direction and speed, temperature, incidence of precipitation and degree of cloud cover, will be recorded and logged during each monitoring session. Wind speed and direction will be recorded using a portable anemometer and compass. Sweet Projects recognises the need to monitor the effect of dust on the workforce and record their findings accordingly and wherever possible ensure that exposure is eliminated, minimised or if unavoidable the right protective measures are adopted.

Monitoring Process

- Visual monitoring of downwind site boundaries on a regular basis.

- Monitoring using meters and acting on empirical data recorded
- Stop works as required and take mitigation measures.
- Review and update dust control measures as required.
- All personnel will be inducted and / or trained as required.

Complaints Procedures

Sweet Projects will clearly display contact details in prominent locations, at various points around the site boundary. Sweet Projects will keep accurate records of any complaints received. We would propose that we will advise the Local Authority Environmental Protection Team of any complaints received and how we have addressed them.

9.0 NOISE AND VIBRATION

Sweet Projects will monitor and control levels of noise and vibration from the site.

Measures for reducing such levels are set out of this section. This site will measure proceedings using the Control of Pollution Act 1974.

Noise control

The Contractor's environmental team will undertake a noise assessment using noise predicting software which projects noise levels at adjoining properties based on the emissions made by specific plant. This noise assessment will be carried out in accordance with BS5228- 1 2009 'Code of Practice for noise and vibration on construction and open sites.

This assessment allows the Contractor to select the most appropriate plant, methodology and controls to minimise disruptions of buildings at close proximity of the adjacent structures (sensitive receptors) and in particular live and occupied premises during the demolition and piling work phase.

Noise levels will be monitored by the Contractor during the course of the works.

The Contractor shall work towards achieving, where practicable, noise levels lower than the specified limits.

Given the sensitive location of this proposed demolition/ construction phase it is incumbent to ensure that they use the latest techniques and methods to minimise impact on the surrounding area as well as reduce impact on site-workers engaged in or alongside demolition activities.

Vehicles must not be left idling either on site or waiting for access to the site.

Noise control provisions – screens and scaffolds

Throughout the demolition and piling operations works will take place behind solid timber hoardings with the addition of local acoustic screening for specific activities.

The hoarding acts as a visual screen hiding the on-going works and additionally:

- Dust arising will be contained within the hoarding enclosure.

- Solid timber & acoustic blankets reduce noise.
- The hoarding is easily adapted to suit the progress of the works and allow vehicle entry to the Hyde Garden Road frontage.

The hoarding will be erected before any demolition works commence and will remain until the structure is complete.

Construction of the new structural frame

Fixed and mobile tower cranes are likely to be employed given the size of the project. In-situ concrete elements will be constructed using pumps located inside the site boundary.

Vibration control & Network Rail

Vibration is a particular risk during the demolition and piling phase. The measures taken to reduce the acoustic impact of these two operations will also assist in mitigating the effects of vibration on neighbours, their property and the existing building to be retained.

A digital seismograph measuring device (where required subject NWR) will be used to measure the amount of vibration produced during these works. Where elevated levels are recorded the source will be investigated and, where possible, alternative techniques employed to reduce the levels.

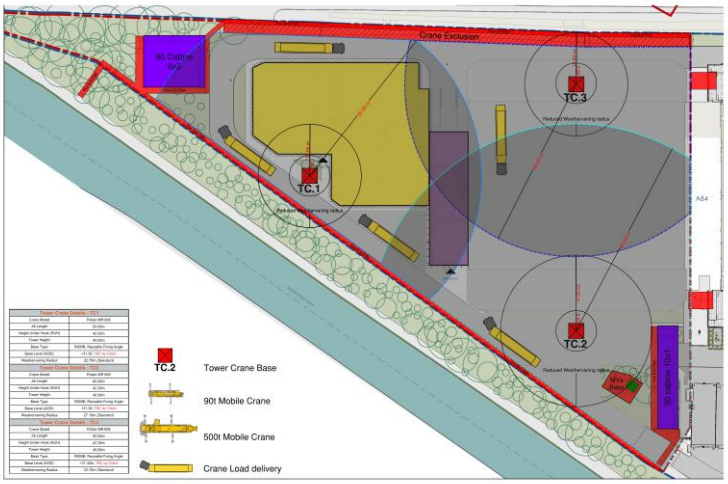
Sweet Projects will consult with Network Rail – HDR (SPHL Consultant Engineer) to seek their approval before any underground obstructions and piling activities commence on site. The methodology presented to Network Rail will provide solutions to mitigate vibration established whilst working within the North of the site. Consultation has already commenced with Ridge- (Client cost consultants) in readiness to submit a full proposal to Network Rail with regards to the above activities.

HSE Guidance Booklets & Leaflets

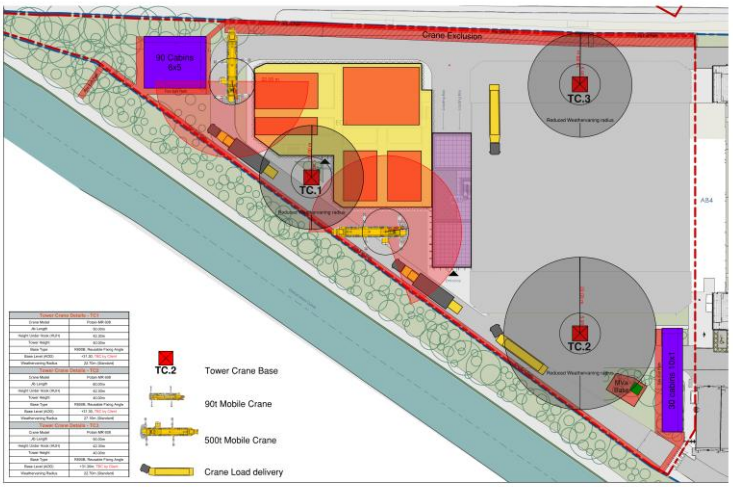
- HSG213 Introduction to asbestos essentials. Comprehensive guidance on working with asbestos for the building, maintenance and allied trades
- HSG227 A comprehensive guide to Managing Asbestos in Premises
- HSG247 Asbestos: The licensed contractor's guide
- HSG248 Asbestos: The analyst's guide for sampling, analysis and clearance procedures
- HSG264 Asbestos: The survey guide
- INDG188 Asbestos alert (pocket card) for building maintenance, repair and refurbishment workers
- INDG223 A short guide to managing asbestos in premises. (Rev 3)
- INDG255 Asbestos dust kills – keep your mask on (Rev 1)
- INDG289 Working with Asbestos in Buildings
- OC 282/28 Fit testing of respiratory protective equipment face pieces.

Appendix 1- Logistics plan- phasing

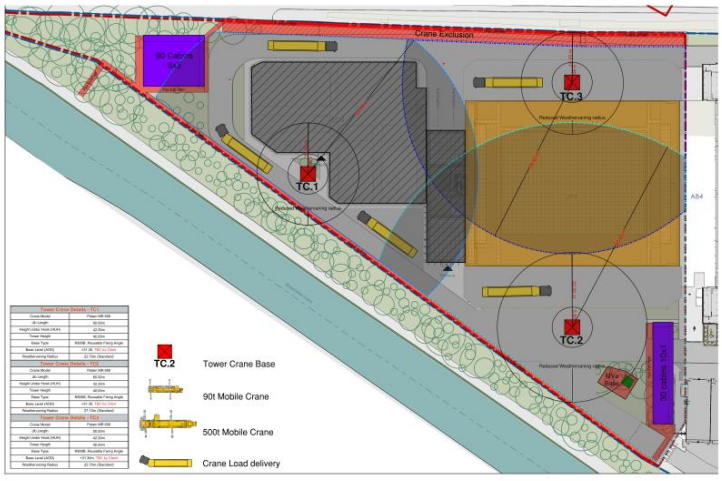
Block 4 - Phase 1



Block 4 - Phase 2



BLK 4 - Phase 3



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SP-173 Block 4 Union Park

BLK 4 - Phase 3