

3 Proposed Development

3.1 Introduction

- 3.1.1 Studio NWA are the lead appointed architects and have designed the Proposed Development, working alongside a multi-disciplinary team of consultants. This chapter provides the definitive description of the Proposed Development for the purposes of the EIA.
- 3.1.2 The chapter identifies the construction and operational design features of the Proposed Development that might affect the environment or contribute to the overall environmental effects of the scheme.
- 3.1.3 The ES has been undertaken on the basis of the parameter plans and detailed plans set out in Table 3.4.
- 3.1.4 The Proposed Development consists of the redevelopment of the Site to provide a new data centre campus with associated office space and innovation hub. The Current Metro Bank building in the north of the Site will be retained.

Enabling Works

- 3.1.5 A separate planning application for the enabling works will be submitted consisting of:
- Removal of drainage infrastructure;
 - Removal of slab / foundations;
 - Remediation; and
 - Installation of temporary substation.
- 3.1.6 The enabling works have been considered within the EIA as part of the wider construction works and will be undertaken in advance of the wider redevelopment of the Site.

Redevelopment Works

- 3.1.7 A hybrid planning application for the redevelopment works has been submitted which provides detailed designs for some elements of the proposals whilst outline permission is sought for other elements.
- 3.1.8 The description of development for the hybrid planning application is:

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.”

3.2 Development Description

- 3.2.1 As identified above, the EIA has assessed both the outline and detailed elements of the Proposed Development. The following section provides details of the Proposed Development.

Enabling works

- 3.2.2 Following the demolition of the existing structures to slab level, further enabling works including the removal of drainage infrastructure, slab / foundations and remediation work will be undertaken to provide a suitable development platform for the redevelopment of the Site.

Redevelopment Works

- 3.2.3 The Proposed Development comprises the comprehensive re-development of the Site. Full planning permission is sought for a data centre building (known as LON6) and outline planning permission for two further data centre buildings (known as LON7 and LON8) and the Innovation Hub.

LON6 (detailed proposals)

- 3.2.4 As part of the detailed submission, the following works are proposed:
- The erection of a data centre (Class B8) 'LON6' up to 41m high, with a Gross External Area (GEA) of approximately 24,072 sqm gross external area
 - Associated plant and infrastructure including 2 transformers
 - Hard and soft landscaping features as well as rooftop planting
- 3.2.5 LON6 is a five-storey data centre building, with a basement and plant roof equipped with cooling units. It comprises 25,235 sqm GEA and has a maximum height of 41.6m albeit the office / administration building would have a lower maximum height than the two data hall wings at 37m.
- 3.2.6 The data centre is designed as a butterfly configuration following pre-application discussion with LBH (see Chapter 4 for further details). This consists of the data halls split into two wings, either side of a central administration / office core with the office core extending eastwards beyond the eastern edge of the two data centre wings to add variety to the building line when viewed from Uxbridge Road. Where the office / administration core extends eastwards beyond the line of the two data wings, loading bays are created to the west and between the two data wings.
- 3.2.7 The associated fuel tanks are located at basement level, with access from two goods lifts and a staircase. Ground floor level is where the reception / security checkpoint is located, where visitors are granted access into the data centre building. Back of house areas, including a

loading bay, temporary storage for racks, asset management office, are all within close proximity to the circulation core where the goods lifts are located with access to all other levels.

- 3.2.8 The north and south wings at ground floor level are allocated to generators for backup power supply, as well as electrical switch rooms and incoming fibre rooms such as Points of Entry (POEs) and Meet Me Rooms (MMRs).
- 3.2.9 Level one and two comprise typical data halls at the north and south wings, integrated with cooling corridors. The centre block is dedicated to circulation cores, toilets and office accommodations. Level three is intended for the mechanical and electrical plant rooms required to support the data hall functions allocated to the floors above and below. Level four follows a similar layout as levels one and two, with data hall wings and office accommodations to the connecting building block.
- 3.2.10 Level five comprises the remaining mechanical and electrical rooms to support the data hall levels, and level six and roof level is where the chiller gantry is proposed, which will be accessed from two circulation cores located at opposite ends of each wing.
- 3.2.11 Plant is located at roof level above the data wings with a staff amenity garden and areas of brown roofing under PV located above the office / administration core.
- 3.2.12 LON6's façade treatment has been selected to align with the design ethos to provide high quality, durable and resilient materials to express the high-tech data centre function of the buildings. The material palette compliments that of the adjacent LON4 and LON5 data centre buildings, to ensure design continuity and high-quality materials.
- 3.2.13 As part of the detailed proposals a series of buildings that are ancillary and auxiliary to the functions of the data centres are proposed including gatehouse (see drawing LONUX-NWA-PL-00-DR-A-12231) and two transformer units (see drawing LONUX-NWA-PL-00-DR-A-12230) that will service LON6.

Table 3.1 – Maximum heights and floorspace for LON6

Building	Maximum Height	GEA	GIA
LON06	41.600 m	25,235 sqm	24,114 sqm

- 3.2.14 Detailed plans have been prepared and assessed for LON6 (see Table 3.4).

Innovation hub, LON7 and LON8 (outline proposals)

- 3.2.15 For the outline areas, the following works are proposed:
- A data centre (Class B8) 'LON7', with a maximum height of up to 56m
 - A data centre (Class B8) 'LON8', with a maximum height of up to 40m
 - A technology start-up centre (Sui Generis) fronting Uxbridge Road, up to 28m high (marked as innovation hub on Parameter Site Plan - Land use);
 - Access to the Site via Uxbridge Road and Bullsbrook Road with associated internal access arrangements and parking;
 - Landscaped areas, planting and the formation of a wildlife corridor

- Other associated works including the formation of a gated entrance, structural landscaping and public realm enhancements

3.2.16 The Metro Bank building in the northeast corner of the Site will be retained.

3.2.17 The Innovation Hub will consist of a mix of office, workshop, meeting, break-out, and Research and Development (R&D) spaces, as well as an ancillary café / coffee shop / restaurant. In terms of Use Class, the Innovation Hub would comprise a mix of Class B2, Class B8, Class E(g), Class F1, and Class F2(b) with a modest ancillary Class E(b) element.

3.2.18 For the outline elements the maximum quantum above have formed the basis of the assessments within the EIA. Parameter plans showing the broad spatial areas of development have been prepared.

Parameter Plans

3.2.19 The Proposed Development is defined by the parameter plans. These are provided in ES Volume 1b – Main Statement Figures and Drawings.

- **Figure 3.2 - Parameter Site Plan - Plots/Blocks** (Ref. LONUX-NWA-PL-ZZ-DR-A-12801)
- This plan shows the extent of the development plots associated with each area of the development as well as the gross external floor area associated with the buildings proposed.
- **Figure 3.3 - Parameter Site Plan - Heights (Site Plan)** (Ref. LONUX-NWA-PL-ZZ-DR-A-12802) - This plan shows the proposed maximum building heights. The design of the scheme aims to ensure the available space is used efficiently, meets the requirements of data centre operators and respects the character and amenity of the surrounding area.
- **Figure 3.4 - Parameter Site Plan - Heights (Longitudinal Section)** (Ref. LONUX-NWA-PL-ZZ-DR-A-12803) - This plan provides sectional drawings of the maximum proposed heights and their relationship to the existing built form in the wider area.
- **Figure 3.5 - Parameter Site Plan- Land Use** (Ref. LONUX-NWA-PL-ZZ-DR-A-12807)- This plan shows the location for the primary uses of each element of the scheme.
- **Figure 3.6 – Parameter Site Plan – Landscape** (Ref. LONUX-NWA-PL-ZZ-DR-A-12810)
- The scheme includes a variety of landscaping features, with the aim to create a well designed and attractive development. The landscaping parameters include planting, broad locations of soft and hard landscaping as well as public art and paving.
- **Figure 3.7 - Parameter Site Plan - Roof plan** (Ref. LONUX-NWA-PL-ZZ-DR-A-12808)- The Proposed Development includes rooftop planting and landscaping including planting and soft landscaping as well as areas of brown roofs and rooftop solar.
- **Figure 3.8 - Parameter Site Plan – Basement** (Ref. LONUX-NWA-PL-ZZ-DR-A-12806)- The Proposed Development also utilises basements in order to use space efficiently and to ensure the proposals meet the needs of data centre operators.

3.2.20 Alongside the parameter plans, a Design Code is submitted which sets out a series of principles that are to set expectations that the reserved matters submissions following the grant of outline planning permission would need to follow. The Design Code is structured to include illustrative images and principles that future reserved matters applications should follow. It is anticipated that compliance of reserved matters submissions with the Design Code would be controlled via planning conditions.

- 3.2.21 The maximum building height alongside the indicative GEA for the outline elements of the scheme is contained in Table 3.2.

Table 3.2 – Maximum heights and floorspace for Outline elements

Building	Maximum Height	GEA
LON07	56.000 m	53,415 sqm
LON08	40.200 m	29,656 sqm
Innovation Hub	28.000 m	2,000 sqm

Access and movement

- 3.2.22 The proposed access and highways arrangement aims to create a safe and secure site whilst also creating safe and accessible links to the surrounding area. The scheme provides safe and convenient access for servicing and refuse vehicles and the emergency services to ensure minimal disruption to the local highway network.

Vehicular Access

- 3.2.23 The main vehicular access to LON6, LON7 and the Innovation Hub is via the existing access to Hayes Bridge Retail Park off Uxbridge Road and internal access road. A new vehicular access is proposed, to be installed via Bullsbrook Road. The central access road will be gated to prevent through traffic other than by site occupants.
- 3.2.24 An internal road that runs north to south through the Site is proposed to facilitate vehicular movement between data centre buildings, where Bullsbrook Road acts as an egress point and secondary access, should the buildings be operated by different companies.
- 3.2.25 Vehicular access to LON8 of Bullsbrook Road will either be via the internal access road or by Bullsbrook Road via Springfield Road.

Pedestrian and Cycle Access

- 3.2.26 Pedestrian access to the Site is currently provided by a network of footpaths along main roads in the vicinity of the Site, including Beaconsfield Road, Bullsbrook Road, Springfield Road and Uxbridge Road. There are also a number of existing network of footpaths through Minet Country park which connects the Site to Hayes Town centre.
- 3.2.27 The Site is also connected to the wider area via cycleways, including advisory cycle lanes marked on both sides of Beaconsfield Road and on the eastern side (southbound) on Springfield Road between Beaconsfield Road and Bullsbrook Road and shared footway/cycleways are provided in sections of Springfield Road without in-carriageway advisory cycle lanes.
- 3.2.28 The Proposed Development will provide high quality and safe pedestrian and cycle routes and connections to the wider area, utilising these existing connections to encourage staff and Site users to use active travel modes.

Car and Cycle Parking

- 3.2.29 The redevelopment proposes to provide vehicular parking on Site inline with the London Plan Policy requirements. A total of 153 parking spaces are proposed, including 11 accessible bays

(7% of total provision) and 8 (5% of total provision) active EV charging spaces. It will also seek provide passive provision to all car parking spaces.

- 3.2.30 The proposals also include cycle parking at level recognised as suitable and sufficient for Data Centres, which due to the nature of data centre use is bespoke to the development type. The level of parking for each of the datacentres has been provided at levels higher than forecasted demand to help ensure flexibility and that there is adequate parking in the future.
- 3.2.31 For LON6, it is proposed that total of 20 cycle parking spaces (10 Sheffield stands) are provided. These spaces will be split evenly between internal and external stores to cater for short and long stay journeys. The facilities will accommodate cargo bike deliveries as well as potential visitors.
- 3.2.32 Whilst cycle parking provision for the outline elements of the proposal (LON7, LON8 and the Innovation Hub) will be subject to consideration through a subsequent reserved matters application, these will be provided in line with BREEAM requirements of 1 space per 10 occupants (10% of the total occupancy) as a minimum. This would equate to a minimum provision of 29 additional spaces, or 49 across the Site. It is also proposed that cycling provision is monitored with additional spaces to be installed if demand for this is identified.

Public Transport

- 3.2.33 The Site is located in an area with relatively poor public transport accessibility due to natural features including the Minet Country Park, Yeading Brook and Grand Union Canal, albeit it is located nearby existing by bus routes (<0.5-1 mile) and is located within a 30-min walk to two train stations. In order to improve this, the Framework Travel Plan (Appendix 3.1) has been prepared which seeks to inform and promote usage of non-car-based modes of travel to staff.

Deliveries, Servicing and Refuse Vehicles

- 3.2.34 The Proposed Development looks to utilise a similar arrangement to the existing access for delivery, servicing and refuse vehicles. These vehicles are currently able to access the Site via Uxbridge Road, Springfield Road and Beaconsfield Road, along the same routes other vehicles use.
- 3.2.35 The Proposed Development will ensure safe and efficient access for these vehicles is retained, ensuring they enter and leave the Site in a forward gear. Loading bays are located along the western boundary, where an emergency access lane is incorporated for fire brigade access.
- 3.2.36 It is proposed that when vehicles arrives at the Site, they will access via security gates and the driver will be directed to the service yard in the building they are visiting where goods will be unloaded by the driver and distribution to the customers. This will help minimise disruption.
- 3.2.37 Further details are contained within the Delivery, Servicing and Waste Management Plan (Appendix 3.2).

Landscaping, open space and public realm

- 3.2.38 The Proposed Development includes a detailed landscape scheme for the full element of the proposals as well as indicative proposals for those elements where outline permission is sought.

LON6 (detailed proposals)

- 3.2.39 Detailed landscaping proposals have been developed for LON6 As shown on drawing LON6-MWL-DC-ZZ-DR-LD-10200. Key features of the landscape design include:

- Proposed shrub and tree planting to Metro Bank boundary, softening the perimeter of the car park, whilst also offering views from Uxbridge Road towards the Metro Bank signage and building.
- Staff amenity garden with natural pond, landscaping and seating. Shrub and tree planting along the roadside to provide some visual screening along the security fencing and road, whilst following the security requirements of landscaping near the fencing.
- Proposed footpath link along Yeading Brook, outside of the Root Protection Zones. Proposed mixed native hedgerow planting and deadwood along the top of bank.
- Opportunity for brown roofs to enhance the biodiversity of the roofscape.
- The existing vegetation along Yeading Brook will be preserved and actively managed to improve its ecological function. Enhancements will include the introduction of deadwood along the top of the bank, native hedgerow planting, and wildflowers grassland along the perimeter of the exiting fence.

3.2.40 An Urban Greening Factor of 0.29 has been calculated for LON6, reflecting the landscape and ecological enhancements proposed as part of the detailed landscaping design.

Innovation hub, LON7 and LON8 (outline proposals)

3.2.41 A Site Wide Landscape Design Statement (Appendix 3.3) has been prepared by Murdoch Wickham which sets out illustrative landscaping measures. The proposed landscape design is shown on drawing LONUX-MWL-SW-DR-LD-10200 - Illustrative Site Wide Landscape Principles Plan.

3.2.42 The design integrates a series of landscaped spaces around the perimeter of buildings and parking areas, featuring shrub, and tree planting. Dedicated amenity staff gardens will provide workers and visitors with space to relax and enjoy, offering seating, vibrant planting and an ecological pond. Additionally, planting along the security fence will help screen the fencing and soften views of the data centre buildings.

3.2.43 To further enhance ecological value, the development incorporates areas of brown bio-diverse roofs, strategically designed alongside site services and utilities to maximise environmental benefits.

3.2.44 The Innovation Hub parcel of the Site is inherently the most publicly facing portion of the Site given its proximity to Uxbridge Road. Thus parcel provides an opportunity for strategic street tree planting along Uxbridge Road to filter views of the Innovation Hub as well as a location for the incorporation of public art.

3.2.45 The Urban Greening Factor (UGF) has been calculated for the Proposed Development. The UGF has been calculated to on a site wide basis to be 0.22, representing a significant increase compared too the current baseline.

3.2.46 The Outline Landscape Maintenance and Management Plan (Appendix 3.4) prepared by Murdoch Wickman and informed by the ecological management objectives and prescription for the Yeading Brook from Aspect Ecology, covers the outline elements of the scheme.

3.2.47 The proposed landscaping works include:

- Retained trees on the boundary with Uxbridge Road and including trees associated with the Yeading Brook along the eastern boundary of the site

- New public realm tree and shrub planting appropriate to location and function, using native trees species and pollinator friendly shrub species to provide the setting to the proposed access road and built form; roof terraces feature shrubs and perennials in raised beds
- New native hedgerow to provide boundary structure and soften security fencing following the western edge of the area of the Yeading Brook
- Amenity lawns to provide open space and areas of wildflower grassland with mown margins to enhance seasonal visual interest and biodiversity; reinforced grass surfacing to soften the appearance of car parking areas
- New pond with marginal planting within the amenity area
- Yeading Brook, including existing trees and understorey, channel and marginal vegetation will be positively managed and enhanced through additional planting for ecological and biodiversity benefits.
- Employees roof terraces with planting and soft landscaping.
- Brown roofs (and photovoltaic panels) in areas of the roofs of the proposed buildings.

Drainage strategy

3.2.48 A Drainage Strategy has been prepared for the Proposed Development by ARUP (Appendix 3.5).

3.2.49 The surface water drainage system has been designed in accordance with the recommendations set out in:

- BS EN 752:2017 - Drain and sewer systems outside buildings - Sewer system management, and
- The Building Regulations 2010, Approved Document H – Drainage and waste disposal.

3.2.50 Proposed drainage layouts for the Proposed Development are included in Appendix G of the Drainage Strategy (ES Appendix 3.5) .

Surface water

3.2.51 Sustainable drainage system (SuDS) features have been incorporated into the designs where possible. This includes the use of permeable surfaces in external areas where traffic loading and site operational requirements allows.

3.2.52 Rainwater recovery and re-use has been incorporated into the development for toilet flushing and landscape irrigation requirements. Green roofs have been incorporated where roof top plant allows.

3.2.53 Due to the operational demands of the Proposed Development, planting and green space is limited. In addition, below ground utility routes are extensive, limiting the potential to provide deep SuDS features requiring under drains.

3.2.54 There is insufficient width and space to provide large open water features such as detention basins and swales. A small pond has been incorporated into the development adjacent to LON6. Tree pits and small rain gardens receiving runoff from adjacent surfaces will be incorporated into the landscaping proposals where below ground utility constraints and operational demands permit.

- 3.2.55 Permeable surfaces have been provided to car parking areas. The surfaces will be concrete/grass or block paved, with a permeable sub-base. Permeable surfaces were considered for other trafficked areas but discounted due to anticipated heavy vehicle loading. Below ground storage has been provided in the form of geocellular storage tanks.
- 3.2.56 The existing drainage systems for both Hayes Bridge Retail Park and Heathrow Interchange benefit from light liquid separators prior to the outfalls to Yeading Brook. Details of the separators are unknown, and as such additional full retention separators sized for the contributing catchments have been provided for new drained areas.
- 3.2.57 Traditional drainage systems will be required in some locations due the operational requirements of the Site. Full retention separators have been provided at the downstream extent of the new drainage systems.

Foul Water

- 3.2.58 A new foul water drainage system has been provided to convey foul flows from proposed buildings to the exiting Thames Water public sewers in Uxbridge Road and Bullsbrook Road. Existing private connections to the public sewers will be retained and reused.

Energy and Sustainability

- 3.2.59 An Energy and Sustainability Statement (Appendix 3.6) has been prepared by Cundall. This provides an outline of the proposed sustainability measures for the Site, with the detailed and outline components addressed within the report.
- 3.2.60 From the inception of the project Colt and its design team have strived for the highest environmental performance possible for the proposed data centre use.
- 3.2.61 Similar design measures and strategies in the campus development were applied for each building block, and a proposed centralized waste heat energy system is outlined within the report to showcase its potential contribution to campus development.
- 3.2.62 The energy strategy for the Site follows the energy hierarchy set out in the GLA's guidance on Preparing Energy Assessments (June 2022) document and demonstrates the developments compliance with the Part L 2022 Framework.
- 3.2.63 Full details of the measures employed can be found in Appendix 3.6, with a brief summary of the energy hierarchy measures below:
- **Be Lean:** passive and energy efficiency measures contributing to the energy strategy including designing the building envelope to reduce thermal loads on HVAC systems, glazed areas for the data hall are minimal to reduce solar gain and reduce the pressure on cooling systems, energy efficiency measures to be employed in the development, high efficacy lighting coupled with occupancy sensors and electrical and mechanical systems to be monitored, metered and controlled through management systems.
 - **Be Clean:** Waste heat energy from data halls to be utilised to heat other areas of the Site or exported to the local area design to allow district heat connection in the future if this becomes viable.
 - **Be Green:** Solar PV to be utilised on site where possible and utilising effective cooling systems to reduce carbon emissions.

- **Be Seen:** Unregulated energy was estimated and reflected in the GLA calculation spreadsheet and the corresponding emission is reviewed in Whole Life Carbon Assessment.
- **EUI reporting and PUE reporting:** Energy Use Intensity (EUI), and the space heating demand of the development using the GLA's carbon emissions reporting spreadsheet. Since datacentre energy pattern is outranged, the effectiveness of design is reported in PUE to demonstrate the design efforts for efficient system design for cooling. It was reviewed that all blocks are providing system design with energy efficiency within the benchmark range.

Circular Economy

- 3.2.64 A Circular Economy Statement has been produced by Savills, which can be seen in full within Appendix 3.7 of the ES. This statement sets out the development's circular economy strategy and the project's circular economy aspirations and commitments.
- 3.2.65 The Proposed Development aims to achieve sustainability far in excess of minimum standards. To facilitate this and provide a metric against other buildings, BREEAM 'Excellent' certification will be targeted. A BREEAM Data Centres 2010 Pre-Assessment Summary Report has been prepared by Cundall which is submitted as part of the suite of planning documents accompanying the hybrid planning application.

Whole Life Carbon

- 3.2.66 A Whole Life Carbon Assessment (WLCA) for the Proposed Development has been prepared by Savills in accordance with BS EN 15978, the RICS Professional Statement: Whole Life Carbon assessment for the built environment, 1st edition 2017 and in accordance with GLA requirements.
- 3.2.67 The WLCA has been completed in order to recognise and encourage measures to optimise the construction product consumption efficiency, and to utilise products with a low environmental impact, including embodied carbon, over the life cycle of the building.
- 3.2.68 It has identified the following opportunities to reduce the whole life carbon of the development:
- Use of Concrete with GGBS in Substructure;
 - Use of Industry Average EPD for Concrete in Frame;
 - Use of Industry Average EPD for Reinforcement Steel
- 3.2.69 The following actions are also identified as further potential measures to be considered in the detailed design:
- Use of concrete within GGBS in Frame
 - Use of reinforcement steel and structural steel with higher recycled content.
- 3.2.70 Further details are contained within Whole Life Carbon Assessment which is submitted as part of the suite of planning documents accompanying the hybrid planning application.

Utilities

- 3.2.71 A utilities report has been produced by Cundall (Appendix 3.8).

3.2.72 The Site is previously developed so benefits from some existing utilities connections including a connection to the public sewer and a storm drain to the east of the Site.

3.2.73 The power requirements and other utilities necessary for the operation of the Site have been identified and assessed within the utilities report and enquiries have been made with the necessary statutory undertakers and utility service providers will be made.

3.2.74 As part of the Proposed Development, the following new services will be routed into and around the Site:

- High voltage (HV) Electricity
- Medium and Low Voltage (MV & LV)
- Communications Infrastructure
- Potable Water
- District Heating
- Foul Water Drainage

3.2.75 Substation 2, subject to a separate approval will help ensure a reliable power supply to suit the operation requirements of the operator.

3.2.76 In summary, the following works are proposed:

- The campus will be served by 2No (N+N) 150MW 66kV connections via Bullsbrook road at Substation 2.
- MV cables (11kV) will be routed from the new 66/11kV substation to incoming MV switch rooms within the building via
- dedicated belowground ducts. This will generally be beneath the roads and general landscaping.
- Low voltage ducts will be provided in dedicated duct around the site with associated draw pits around the site to serve the external lighting and to provide power to other remote equipment on the site e.g. cameras, EV chargers, Waste Heat recovery pumps, drainage pumps etc.
- An SSE 1000kVA supply will be located at the north of the site to provided 720kVA to Hayes Digital Park including the Innovation hub. All LV cabling shall be below ground and coordinated with existing services along the Uxbridge road.
- Telecommunications infrastructure including fibre connections will be routed to each plot
- An incoming water connection will be made at the site boundary (location TBC) either on Uxbridge Road or Bullsbrook Road. The below ground supply will serve LON6, LON7 and LON8, with a separate supply established for the innovation hub.
- A separate water supply will enter the site adjacent to the potable water supply for firefighting purposes
- A waste heat recovery system will extract waste heat from the data halls for LON6, LON7 and LON8. The waste heat will be used to provide heating to the admin blocks

within each data centre as well as the Innovation Hub being provided by LON6 alone, this will be achieved via water-to-water heat pumps.

Lighting Strategy

3.2.77 An external masterplan lighting strategy has been produced which for the Proposed Development (Appendix 3.9).

3.2.78 The strategy aims to deliver a high quality and sensitive lighting scheme which meets the operational requirements of data centres in consideration of best practice guidance and regulations for lighting design.

3.2.79 The following controls, principles and parameters have guided the lighting design:

- Exterior lighting during the hours of darkness will be an average of 10 lumens per square meter (LUX) in usable areas except where specifically noted
- Exterior walkways to be illuminated to 30 LUX
- Loading docks shall be illuminated to 50 LUX when in use and 30 LUX when not in use.
- Vehicular Entry and exit points shall be lit to 30 LUX
- Car parks to be illuminated to 20 LUX
- Equipment Yard entry and exit points to be illuminated to 30 LUX

Site Security

3.2.80 Key to the successful operation of a data centre campus is security and this is only emphasised following the inclusion of data centres as Critical National Infrastructure. A fencing plan (Drawing number - LONUX-NWA-PL-ZZ-DR-A-12840) has been also prepared.

3.2.81 Full planning permission is sought for the security fencing for LON6 with outline planning permission sought for the fencing for LON7, LON8, and the Innovation Hub. Fencing for the Site is to be 2.4m in height with black welded mesh panels. This fencing type, height, and colour matches that of LON4 and LON5. A series of gates are also incorporated.

3.3 Construction and implementation

3.3.1 This section describes the anticipated programme of demolition and construction works and the key activities that will be undertaken prior to completion and occupation of the Proposed Development.

Construction Duration

3.3.2 The Proposed Development is expected to be delivered in phases. The demolition and enabling works and substation development will occur in advance of the main redevelopment of the Site.

3.3.3 Indicative phasing for the redevelopment works is as follow:

- Phase 1 – LON06
- Phase 2 – Innovation Hub
- Phase 4 – LON07
- Phase 4 – LON08

3.3.4 The indicative construction phasing is considered to be in line with the below

- Demolition – Commence on Site May 2025
- Enabling Works Commence on Site – December 2025 to June 2026
- LON6 works – Start on Site – June 2026
- Completion – 2029

Construction Environmental Management Plan (CEMP) and Construction Logistics

3.3.5 Details of measures to protect the environment during the construction of the Proposed Development will be set out in a CEMP which will be prepared. Measures will address hours of working, noise, vibration, dust, light spill, wheel washing and control of runoff. It is anticipated that the implementation of the CEMP will be a condition of the planning permission and that it will be regularly monitored.

3.3.6 Once finalised and approved by the Local Planning Authority, the CEMP would be held on-site. All site personnel would be made aware of its existence and undertake to adhere to the guidance.

3.3.7 An Outline Construction Management Plan (OCMP) has been prepared which framework and principles relating to management of proposed construction works at the Site. It covers both the outline and detailed areas of the Site, describing 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 document is provided as Appendix 3.10 of the ES.

Plant and Equipment

3.3.8 An indication of the typical types of plant and equipment likely to be used during the Site clearance and construction works are provided in Table 3.3.

Table 3.3 - Indicative Plant and Equipment

Plant/Equipment	Demolition	Groundwork	Superstructure
Dozer	×	✓	×
Backhoe with breaker	✓	✓	×
Tracked excavator	✓	✓	×
Dump truck	✓	✓	×
Hydraulic vibratory compactor	×	✓	×
Generator	✓	✓	✓
Grinder	×	×	✓
Concrete mixer	×	×	✓
Tower crane	×	×	✓
Piling rig	×	×	✓

Methods of Working

- 3.3.9 It is anticipated that contractor's compound will be located as secure areas within the Site and will be relocated, where necessary, as each construction phase nears completion onto the subsequent phase. All materials and plant storage will occur on the Site and no off-site compounds are necessary.
- 3.3.10 The contractor will uphold all best practices and demonstrate this by enrolment within the Considerate Constructors Scheme.
- 3.3.11 The working hours are anticipated to be:
- 08:00 - 18:00 hours Monday to Friday inclusive
 - 08:00 - 13:00 hours on Saturday; and
 - No noisy work to be carried out on Sundays or Bank Holidays.
- 3.3.12 In order to maintain these working hours, the contractor(s) may require a period of up to half an hour before and up to one hour after normal working hours for start-up and close down of activities. This does not include operation of plant or machinery giving rise to noise with the potential to disturb nearby residents or the arrival of any HGV at site before 07:30 hours.

Construction Traffic

- 3.3.13 Construction traffic movements consider the following sources of traffic:
- Workforce movements to and from the Site;
 - Deliveries made to the Site;
 - Removal/ import of material from the Site; and
 - Trips made by associated trades.
- 3.3.14 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 conditions or reserved matter submission.
- 3.3.15 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.
- 3.3.16 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
- 3.3.17 stock piling will be provided in a location so that they are able to remain in the same location throughout construction.

Safe storage of fuel/oil

- 3.3.18 The safe storage and use of fuels for the plant will be a priority in site management. Drainage within the temporary, secure site compound where construction vehicles will park and where any diesel fuel will be stored, will be directed to an oil interceptor to prevent pollution should

any spillage occur. Diesel storage and refuelling will be within a designated area or a self-bunded tank in accordance with the Government's Oil Storage Regulations. All oil storage tanks are proprietary self-bunded to equal quantities of oil held. This is regarded as industry standard practice and also includes mandatory legal requirements which are considered as integral to the development. Spill kits and mandatory spillage reporting is standard procedure.

Health and Safety

- 3.3.19 All work will be undertaken to relevant Health and Safety legislation. The construction of the Proposed Development will be supervised in accordance with the CDM Regulations 2015. Risk assessment will be undertaken for each work package prior to activities taking place.

3.4 Waste

- 3.4.1 The development proposals are accompanied by a Delivery, Servicing and Waste Management Plan (Appendix 3.10). This plan addresses the following key elements of waste management:

- Details of the person responsible for this WMP;
- The segregation of waste streams and how to dispose of them;
- Expected waste generation and storage requirements;
- Collection points and frequency;
- The responsibilities of the Facilities Management team and future occupants;
- Programme of document monitoring and review; and
- Documentation of any amendments

Construction Waste

- 3.4.2 All construction waste will be separated on site with as much as possible being recycled. The mixed waste which is not suitable for onsite separation will be sent to a waste separation centre where it is further separated and any material that can be recycled is removed. A very small percentage of overall construction waste is then sent to landfill if it is not suitable for recycling.
- 3.4.3 In order to minimise the volume of waste generated, a Site Waste Management Plan (SWMP), forming part of the CEMP, has been prepared. The CEMP (which should be prepared in discussion with the appointed contractor) would be agreed with the Council prior to commencement of works at the Site and the appointed contractor(s) would be required to comply with the requirements of the CEMP. Such adherence would ensure that significant adverse effects from the management of waste would be unlikely.

Operational Waste

- 3.4.4 Upon completion, the development is unlikely to result in an increase in solid commercial waste when compared to the current use of the Site as a retail park. This waste would likely arise from a result of the associated office space or through the day to day operation and administration of the data centres. The data centres and offices would be unlikely to have as many staff on site and therefore produce less waste. The waste which is produced would be collected from the Site via private waste contractors.
- 3.4.5 The Waste Management Plan (within Appendix 3.10) contains the estimate two-day waste generation and storage requirements for each of the proposed Buildings.

- 3.4.6 The Waste Management Plan (WMP) identifies measures to prevent and reduce waste where possible inline with the waste hierarchy and industry best practices. This includes reducing packing where possible, engaging with and promoting recycling programmes and using 'green' packaging materials. The WMP also looks to reduce waste through encouraging behavioural changes which reduce waste and utilising supply chain management to encourage green logistics.
- 3.4.7 It is proposed to provide external waste stores for the Data Centres and Innovation hub, with the capacity in line with forecasted waste production. The buildings within the development will also include internal waste storage areas to aid segregation of waste and processing before it is emptied at the end of each day into the external waste stores.
- 3.4.8 Confidential waste must be collected in secure bins located around the buildings. To be fully compliant with the Data Protection Act, a written contract with a certified confidential waste company is required. This waste stream will be collected from the customers' demise in situ by a specialist contractor and shredded and disposed of off-site.
- 3.4.9 Waste streams such as florescent tubes, batteries, asbestos and chemicals will be required to be collected by a licensed specialist contractor as they are designated as hazardous waste. The FM team will be required to register the site for a Hazardous Waste Licence to permit this waste to be collected safely and reprocessed.
- 3.4.10 Sanitary waste from washrooms would be collected and disposed of by the cleaning contractor and be dealt with separately from the other waste generated through the operation of the building. Similarly to all other types of waste collected from the Site, a waste transfer note will be kept for audit purposes.
- 3.4.11 Once components involved in the day to day running of the centre reach the end of their life, they would need to be disposed of and replaced. This waste would largely comprise electronic components such as server racks and other IT equipment. This equipment is largely recyclable and many components can be salvaged for re-use through specialist disposal organisations. Any harmful or hazardous waste products would also be disposed of through specialist third party disposal contractors.
- 3.4.12 Finally, any waste arising from landscaping maintenance, is proposed to be disposed of by the landscape contractors and would not be stored on Site.

Assessment Drawings

- 3.4.13 As noted above, the EIA has been based upon the Parameters Plans for the Proposed Development, alongside the detailed access drawings. Table 3.5 sets out the list of assessment drawings.

Table 3.4 – Assessment Drawings

Drawing Number	Drawing Title
Outline Parameter Plans	
LONUX-NWA-PL-ZZ-DR-A-12801	Parameter Site Plan - Plots-Blocks
LONUX-NWA-PL-ZZ-DR-A-12802	Parameter Site Plan - Heights (Site Plan)

LONUX-NWA-PL-ZZ-DR-A-12803	Parameter Site Section - Heights (Longitudinal Section)
LONUX-NWA-PL-ZZ-DR-A-12806	Parameter Site Plan - Basement
LONUX-NWA-PL-ZZ-DR-A-12807	Parameter Site Plan - Land use
LONUX-NWA-PL-ZZ-DR-A-12809	Parameter Site Plan - Landscape
LONUX-NWA-PL-ZZ-DR-A-12810	Parameter Site Plan - Roof plan
Detailed plans for LON06	
LON6-MWL-DC-ZZ-DR-LD-10200	LON6 Landscape Masterplan
LON6-MWL-DC-ZZ-DR-LD-10201	LON6 Urban Greening Factor Plan
LON6-MWL-DC-ZZ-DR-LD-10202	LON6 Metro Bank Landscape Vignette
LON6-MWL-DC-ZZ-DR-LD-10203	LON6 Yeading Brook Landscape Vignette
LON6-MWL-DC-ZZ-DR-LD-10204	LON6 Staff Garden Landscape Vignette
LON6-NWA-PL-ZZ-DR-A-12220	LON6 - Site Plan
LON6-NWA-PL-ZZ-DR-A-12222	LON6 - Basement & Ground Floor Plans
LON6-NWA-PL-ZZ-DR-A-12223	LON6 - First & Second Floor Plans
LON6-NWA-PL-ZZ-DR-A-12224	LON6 - Third & Fourth Floor Plans
LON6-NWA-PL-ZZ-DR-A-12225	LON6 - Fifth & Sixth Floor Plans
LON6-NWA-PL-ZZ-DR-A-12421	LON6 - Elevations - South & West
LON6-NWA-PL-ZZ-DR-A-12422	LON6 - Elevations - North & East
LON6-NWA-PL-ZZ-DR-A-12423	LON6 - Detailed Elevation East
LON6-NWA-PL-ZZ-DR-A-12424	LON6 - Detailed Elevation North
LON6-NWA-PL-ZZ-DR-A-12425	LON6 - Detailed Elevation West
LON6-NWA-PL-ZZ-DR-A-12430	LON6 - Sections
LONUX-NWA-PL-00-DR-A-12230	LON6 Transformers
LONUX-NWA-PL-00-DR-A-12231	Gate House
LONUX-NWA-PL-ZZ-DR-A-12201	Site Plan - Roof Level
LONUX-NWA-PL-ZZ-DR-A-12400	Site Context Elevations
LONUX-NWA-PL-ZZ-DR-A-12840	Site Plan - Fencing Plan

3.5 Consented Development

- 3.5.1 Alongside the Proposed Development the demolition of the existing buildings on the Site and the delivery of the Substation (Substation 2) have been assessed, albeit these are consented developments. Given the timing, nature and relationship of the Proposed Development and the consented developments on the Site, for the purposes of this EIA this has formed part of the development assessed. Whilst these are consented, and therefore would constitute cumulative development, this approach has ensured a robust and comprehensive assessment has been undertaken. Further details of the consented developments assessed as part of the EIA is set out below.

Demolition

- 3.5.2 The existing buildings on Site will be demolished. Whilst this work has been consented via separate prior approval notifications (Ref: 1911/APP/2025/398 and 71554/APP/2025/466), to ensure robustness this has been included within the assessed development for the EIA.
- 3.5.3 With the exception of the existing Metro Bank Building in the north east of the Site, the remaining units within the Site will be demolished to enable the redevelopment of the Site. The scope of the works involves the structural demolition of all the existing buildings, features and services on the Site. Trees / shrubs will be removed from the Site boundaries in to facilitate works and any retained trees will be protected throughout the works.
- 3.5.4 Demolition works shall be managed in compliance with all UK legislation and best practice relevant to construction and demolition works. The demolition contractor will be the principal contractor for their scope of works and manage their works in accordance with the CDM Regulations. In addition to risk assessments and method statements, the appointed principal contractor will be expected to provide a construction phase plan prior to starting on site detailing their arrangements for undertaking the works with due consideration to the health, safety and welfare of their own employees and those affected by their works.

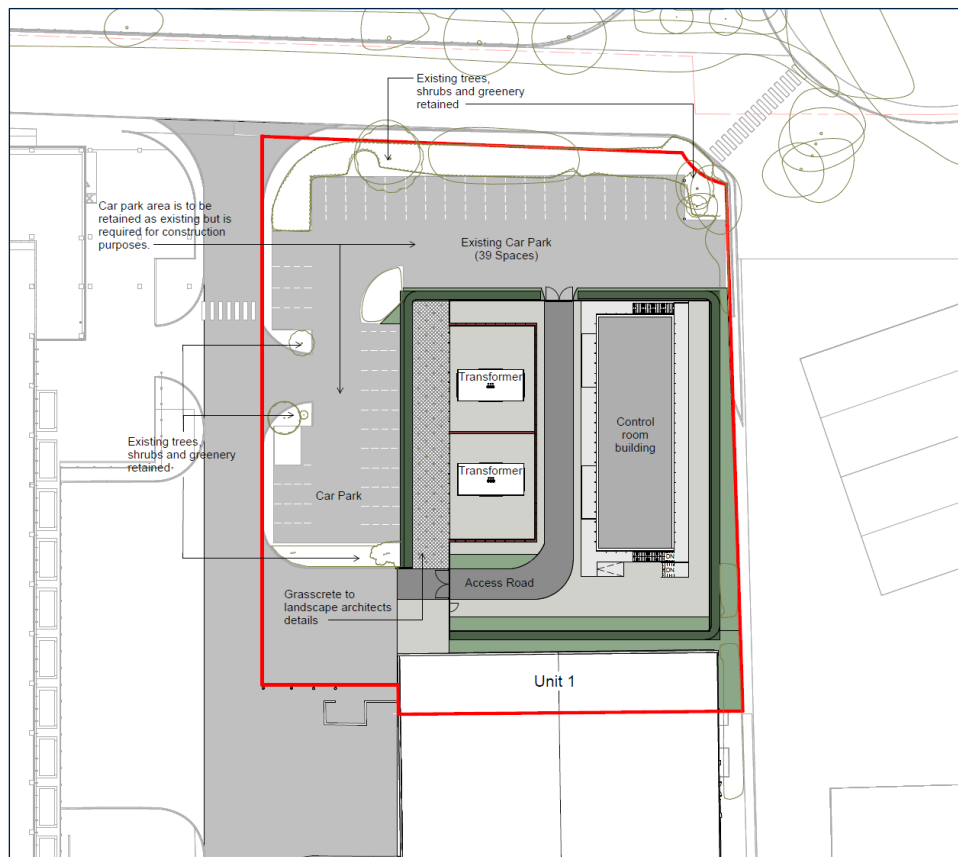
Substation 2

- 3.5.5 Consent has been granted for the redevelopment of part of the Site to deliver a substation in connection with the permitted data centre campus to the south of the Site (LPA ref: 71554/APP/2025/47) and the proposed data centre campus. Whilst this is being delivered under a separate application, for the purposes of the EIA this has been considered as part of the assessed development given it facilitates the wider redevelopment of the Site.
- 3.5.6 This substation is proposed in the south western part of the Site (currently the location of Unit 1 of the Heathrow Interchange Park) and will serve the permitted Data Centre Campus at former Trinity Data Centre, Veetec Building, and Tudor Works sites (planning ref. 38421/APP/2021/4045) immediately to the south of the Site, and the data centres proposed as part of the Proposed Development.
- 3.5.7 The substation comprises of two elements; a series of control rooms which run in the eastern part of the substation site and, running parallel to this to the west but separated by a servicing road, two transformers set in transformer housing. The tallest of these two elements is the control rooms which has a maximum height of 12.41 metres whilst the transformers are lower with a maximum height of 9.1 metres.
- 3.5.8 A 2.4 metre-high mesh fence, with gates on the western and northern boundaries, will be installed around the substation to secure the compound. The fencing will be softened by landscaping, which aims to screen it from view. The building will be elevated approximately 1

metre above ground level, with ramp and gantry access provided to reach both the ground and upper levels to mitigate any flood risk.

- 3.5.9 The building will be constructed using a lightweight steel frame clad with composite insulated panels capable of achieving the desired fire rating with the mesh installed over this, with a traditional blue back brickwork base. The weldmesh fencing on the western side will be streamlined to match the colour of the mesh cladding of the transformer building.
- 3.5.10 New planting is proposed to provide visual screening for the built structures and boundary fences, while promoting urban greening and enhancing biodiversity. A new mixed-species, native hedge is proposed along the north, east, and south sides of the substation compound security fence. To the east, a wildflower grassland area is planned between the hedge and the existing carriageway. To the south, low-growing shrub planting is proposed between the hedge and the retained section of Unit 1. Within the substation compound, areas of low-maintenance, low-growing shrubs and wildflower grassland are proposed to enhance site greening.
- 3.5.11 To the west of the substation compound, a new native hedge will be planted behind the existing parking area, with a section of grasscrete, seeded with a species-rich lawn mix, placed between the hedge and the transformer enclosures. This will enhance site greening while also permitting future maintenance access to the transformers from the west. The landscape proposals enhance greening and biodiversity, with key elements contributing to the Urban Greening Factor including the planting of native hedges, species-rich perennial shrubs, and wildflower grasslands.
- 3.5.12 The car parking to the north of the substation site will remain as existing. This car parking will be used for servicing of the substation itself and for car parking associated with the other elements of the Proposed Development. The area of car parking to the west of the transformers will be retained as existing, and is required for construction purposes.
- 3.5.13 The proposed drainage strategy intends to utilise the existing Thames Water storm water sewer which outfalls into the Yeading Brook to the east of the substation. Sustainable Drainage features have been incorporated into the development where possible. A permeable surface has been provided to the rear of the transformers. The surface will be concrete/grass, with a permeable sub-base. Permeable surfaces were considered for other trafficked areas but discounted due to anticipated heavy vehicle loading.
- 3.5.14 Figure 3.1 shows the layout of the consented substation.

Figure 3.1 –Site Plan for Consented Substation (Extract from Drawing Number: LONDPSS2-NWA-PL-LP-DR-A-12202)



3.5.15 Detailed plans for the consented substation are shown in Table 3.5.

Table 3.5 – Substation 2 Drawings

Drawing Number	Drawing Title
LONDPSS2-NWA-PL-LP-DR-A-12202	Proposed Site Plan
LONDPSS2-NWA-PL-ZZ-DR-A-12401	Existing and Proposed East Elevations
LONDPSS2-NWA-PL-ZZ-DR-A-12403	Existing and Proposed North Elevations
LONDPSS2-NWA-PL-ZZ-DR-A-12402	Existing and Proposed South Elevations
LONDPSS2-NWA-PL-ZZ-DR-A-12400	Existing and Proposed West Elevations
LONDPSS2-NWA-PL-S2-XX-DR-A-12901	Proposed Aerial View
LONDPSS2-NWA-PL-XX-DR-A-12203	Proposed Fence Plan
LONDPSS2-NWA-PL-00-DR-A-12205	Proposed Ground Floor Plan
LONDPSS2-NWA-PL-ZZ-DR-A-12404	Proposed Control Room Elevations
LONDPSS2-NWA-PL-ZZ-DR-A-12407	Proposed Transformer Elevations
LONDPSS2-NWA-PL-03-DR-A-12207	Proposed Roof Plan
LONDPSS2-MWL-SS-ZZ-DR-LD-10200	Substation 2 Landscape Masterplan
LONDPSS2-MWL-SS-ZZ-DR-LD-10400	Substation 2 Landscape Sections
LONDPSS2-ARUP-SS-SS-XX-DR-E-63200	Lighting Layout
LONDPSS2-MWL-SS-ZZ-DR-LD-10201	Urban Greening Factor
LONDPSS2-ARUP-SS-SS-XX-DR-C-52001	Drainage Strategy Plan