CORGAN

Design and Access Statement

Manor Farm

Slough Borough Council

December 2024
Manor Farm Propco Limited

Contents

Introduction

1.

1.1 Introduction

This Design and Access Statement (DAS) has been prepared by Corgan on behalf of the Applicant (Manor Farm Propco Limited) to accompany a Planning Application under the Town and Country planning Act 1990 for a data centre and battery energy storage system development at Manor Farm, Poyle Road, Slough ("the Site").

The planning application includes demolition of existing buildings and the redevelopment to comprise a Data Centre (Use Class B8) and Battery Energy Storage System (BESS) with ancillary substation, offices, associated plant, emergency backup generators and associated fuel storage, landscaping, sustainable drainage systems, car and cycle parking, and new and amended vehicular and emergency access from Poyle Road.

Site Address: Manor Farm, Poyle, Slough, SL3 0BL
Development Area: 20.16 Acres

This DAS has been prepared in accordance with Article 9 of The Town and Country Planning (Development Management Procedure) (England) Order 2015 (DMPO), which requires any application for major development to be accompanied by a design and access statement.

This DAS is required to address the following areas:

- The design principles and concepts that have been applied to the development;
- How issues relating to access to the development have been dealt with;

And must:

- explain the design principles and concepts that have been applied to the development;
- demonstrate the steps taken to appraise the context of the development and how the design of the development takes that context into account;
- explain the policy adopted as to access, and how policies relating to access in relevant local development documents have been taken into account;
- state what, if any, consultation has been undertaken on issues relating to access to the development and what account has been taken of the outcome of any such consultation; and
- explain how any specific issues which might affect access to the development have been addressed.

This DAS follows best practice guidance on the content and scope of Design and Access Statements published by CABE, Planning Practice Guidance (Reference ID: 14-030-20140306) and Communities and Local Government's Guidance on information requirements and validation (2010).

It has been submitted to the Slough Borough Council to describe the context and design rationale underpinning the proposed development.

The DAS is structured as follows:

1. Introduction
2. Site and Context Analysis
3. Design Process
4. Proposed Design
5. Sustainability
6. Appendix

And should be read in conjunction with the following additional accompanying information:

- Planning Statement
- Proposed Plans and Drawings
- Archaeological Impact Assessment
- Energy & Sustainability Statement
- Flood risk assessment and Drainage Strategy
- Landscape and Visual Impact Assessment
- Green Belt Assessment
- Noise Assessment
- Heritage Impact Assessment
- Utility Assessment
- Fire Strategy
- Security Statement
- Alternative Site Assessment
- Air Quality Assessment
- Arboricultural Impact Assessment
- Ecological Impact Assessment including biodiversity net gain
- Outline Construction Environmental Management Plan
- Phase 1 Preliminary Environmental Risk Assessment
- Generic Quantitative Risk Assessment
- Outline Remediation Strategy
- Transport Assessment and Travel Plan
- Statement of Community Involvement
- Aviation Safeguarding Assessment
- Shadow Habitat Regulations Assessment
- Economic Statement

1.2 Project Team

Applicant
Manor Farm Propco Limited
72 Broadwick Street, London, W1F 9QZ

Architect / Principal Designer
Corgan
185 Park St, North Tower, London, SE1 9SH

Project Manager / QS
McBains
The Lantern, Marlow Road, Maidenhead, Berkshire, SL6 7AA

Structural & Civil Engineer / Geo Technical Consultant
Price & Myers
Chester House, 21-27 George Street, Oxford, OX1 2AY

Building Services Engineer (MEP) / BREEAM Advisor
Hoare Lea
Western Transit Shed, 12 -13 Stable Street, London N1C 4AB

Battery Storage Stakeholders
EDF Renewables
Alexander House, 1 Mandarin Road, Rainton Bridge Business Park, Sunderland DH4 5RA

Planning Consultant
Quod
21 Soho Square, London, W1D 3QP

Alternative Site Assessment
Colliers
95 Wigmore Street, London, W1U 1FF

Contamination & Borehole Monitoring
Ramboll
240 Blackfriars Road, London, SE1 8NW

LVIA & GB Consultant
Bryant Landscape Planning
128 City Road, London EC1V 2NX

Landscape Architect
Pegasus
33 Sheep Street, Cirencester, GL7 1RQ

Transport Consultant
SLR Consulting
3rd Floor, Summit House, 12 Red Lion Square, London, WC1R 4HQ

Archaeological & Heritage Consultant
RPS
20 Farringdon Street, London EC4A 4AB

Acoustic Consultant
Sharps Redmore
The White House, London Road, Copdock, Ipswich, IP8 3JH

Air Quality Consultant
AQC
24 Greville Street, Farringdon, London EC1N 8SS

Ecology Consultant
Tyler Grange
97 Icknield Street, Hockley, Birmingham, B18 6RU

Arboricultural Consultant
Tyler Grange
New City Court, 20 St Thomas Street London, SE1 9RS

Community Involvement Consultant
The Communication Group
123 Victoria Street, London, SW1E 6RA

Aviation Consultant
K L Grant Consulting
Mountlands, Hardwick Square South, Buxton, Derbyshire, SK17 6QD

1.3 The Applicant

Manor Farm Propco Limited
Manor Farm Propco is a specialist investor, developer and manager of data centre & logistic assets. These assets align with the structural trends shaping the future economy such as digitalisation, automation, urbanisation and green energy. Robust ESG performance is central to its identity and values; it is embedded in every aspect of their approach. This commitment extends to investment processes and the construction and upgrading of buildings to the highest standards. Manor Farm Propco Ltd believes that through close collaboration, they can help create a cleaner, healthier, and more equitable society that delivers long-term value for all stakeholders.

ESG
The Applicant has identified four key priority areas within their ESG strategy:
Sustainable buildings: Ensuring and demonstrating that ESG strategy and performance criteria fundamentally underpin the Applicant's investment philosophy.
Climate and carbon: Ensuring the portfolio and assets achieve net zero carbon.
Nature and wellbeing: Ensuring the portfolio positively impacts the climate and the natural world.
Social value: Delivering meaningful improvements for people and communities across all geographies.

Social Impact Strategy
The Applicant will commit, to a Community Development and Skills Strategy which will set out:

- Work with the selected construction contractor and SBC to support local employment and procurement opportunities, and source goods and services locally during construction.
- Actively engage with future occupiers and encourage them to hire local employees where practical and engage with schools and colleges to support a pipeline of local talent
- Work with Slough Borough Council and its partners to advertise jobs locally through preferred channels.
- Commit to and fund (via the Community Benefit Fund) a programme of schools and college engagement and community outreach centred on skills related to the development proposals and the Government's Modern Industrial Strategy including clean energy innovation, digital technology and construction.

Please refer to planning statement for futher details.

1.4 The Architect

Corgan

Founded in 1938, Corgan is an employee-owned architecture and design firm with 18 locations and more than 1,000 team members globally. The firm, ranked as the No. 4 architecture firm by Building Design + Construction, works with clients in a variety of sectors including aviation & mobility, data centres, education, health, mixed-use, multifamily, office, and workplace.
Since 1979, Corgan has been leading the industry in high-performance data centres with breakthrough solutions. Our practice is designed around what we call "the speed of trust" — being responsive to our client's needs while providing a collaborative process of solution-finding. For more than 40 years, our data centre experts have completed projects worldwide of all scales and our principal leaders boast 25+ years of experience in data centre design.

With over 220 dedicated staff, our data centres team has designed more than 3,000 projects worldwide. Our clients find Corgan unique as an architect due to our in-depth understanding of the total facility needs, especially the engineered systems that impact the cost and performance of the data centre. Our knowledge of the critical infrastructure systems for power, cooling, security and telecommunication is Corgan's key asset in leading the design team and our client through the development of a data centre design.

Acknowledged as leaders in high-performance data centres and breakthrough solutions, Corgan has built our data centre expertise not just as program management experts and architects, but as design leaders. We are experienced in coordination, communication, and problem-solving. We routinely meet the evolving challenges of the most complex projects to ensure impactful design that benefits the client, user and wider community. Our approach to design is a cohesive and sensitive balance of environmental, economic, and social issues that also considers long-term operational success. We analyse the unique demands of every project and its locality to produce places that combine beauty and function — grounding design in enduring value for the people and organisations that it serves.

For us, sustainability stems from meticulous analysis of each project's individual goals, challenges, and resources. It weaves through our work and unifies every aspect of our design. We seek not only to use less, but to create buildings that do more — for our clients and users, and for the environment. Because when we ensure the viability of the whole system, we create positive outcomes that reverberate well into the future.

Site and Context Analysis

2.

2.1 Location

The Site is in the Borough of Slough and extends to approximately 20.16 acres in total, located approximately 6 km to the southeast of Slough Town Centre and approximately 2km west of Heathrow Airport Terminal 5 outside of the M25. Located off Poyle Road, immediately adjacent to Poyle Trading Estate, the Site is designated as Green Belt but the northern portion represents previously developed land which has secured numerous permissions for intensive commercial and industrial activities.

Surrounding this site are the Nature Reserve to the south west. Hilton Hotel, residential area and pastureland to the north, an industrial estate to the east of Poyle Road and Wraysbury Resevoir to the south. The Colne Brook forms a boundary on the west of the landownership site, Poyle road forming the eastern boundary and woodlands forming the southern boundary. The Site also lies on the flight path of London Heathrow Airport. The Site is located within the Green Belt, Strategic Gap, and Colne Valley Regional Park where planning policy requires proposals for inappropriate development to demonstrate that any harms are outweighed by very special circumstances.

Site Description

The Site is made up of two separate zones connected by an access road; this document will refer to the development areas as ‘Parcel A’ and ‘Parcel B.’An existing vehicular track between Parcel A and Parcel B provides a link between the two portions of the Site.

The Site was formerly used for landfill in the latter 20th century. Parcel A is Previously Developed Land, occupied by various storage, transport and light industrial uses and can be characterised as being derelict or urban land. The parcel contains built form, including a brick building at the entrance from Poyle Road, storage containers and extensive areas of hard standing. There is little vegetation within the parcel, generally limited to the boundaries. The areas of hard standing are used for open air storage of materials and as parking for coaches and commercial vehicles.

Parcel B, approximately 280m south, is smaller in comparison and is a rectangular parcel of land bounded by Poyle Road to the east, by a mature tree belt known as Poyle Poplars to the south, and to the west and north by arable land. There is a pumping station at the northeast corner, accessed from Poyle Road. The parcel is contained by mature field hedgerows to the west, north and east and by Poyle Poplars to the south. It is contiguous with the open land to the west - although not visually connected due to the height and maturity of the boundary hedgerows - and is in arable use.
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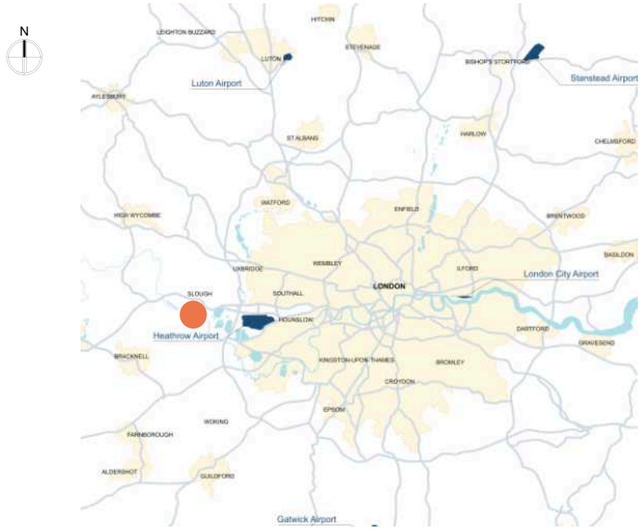
Slough location in the UK



Slough relationship with Greater london

Site relationship with Heathrow

Site relationship Poyle Rd

2.2 Site History

The Site lies within Poyle, which is a hamlet of Colnbrook in Slough.

- Pre Norman-Conquest Formed part of Stanwell
- 1930 Part of Staines Urban District
- 1965 Transferred to Surrey
- 1974 Formed part of Spelthorne
- 1995 became part of Slough, Berkshire in 1995 when it was integrated into the Colnbrook with Poyle Parish.

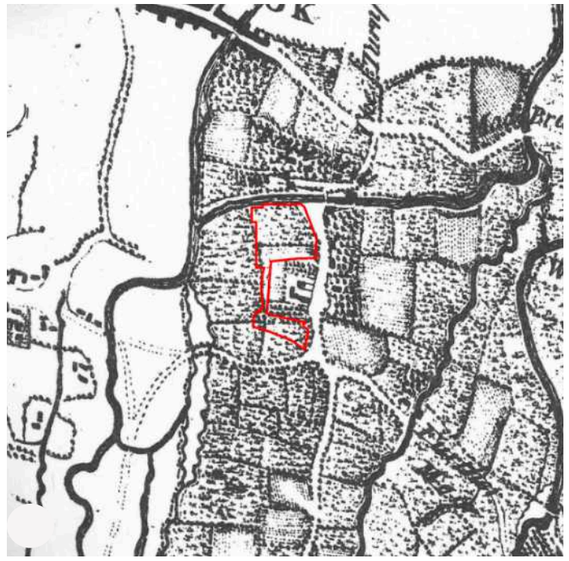
The following map regression exercise illustrates past and current development in relation to the Site area, shown by a red line on the following maps.

The first available maps, the 1754 and 1761 Rocque Maps of Middlesex,demonstrate that the Site is in agricultural usage, with the land being divided into numerous parcels; the respective eastern boundaries of the parcels sit adjacent to Poyle Road. The surrounding landscape comprises agricultural fields with scattered farmsteads. Colnbrook is identified to the north-west.

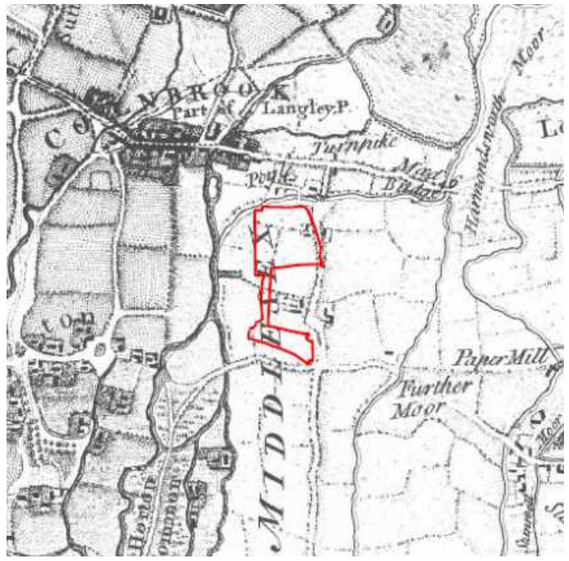
The 1811 Ordnance Survey Drawing, illustrates that the Site parcels remain undeveloped. Within the surrounding area there are some small settlements, such as Poyle to east, Horton to south-west and several mill industries have been established.

The listed building known today as Poyle Farmhouse has been constructed to mid-point between the two main Site land parcels and maintains a boundary hedge/wall separating this development from the surrounding land. Development has taken place in Poyle, Colnbrook and Horton.

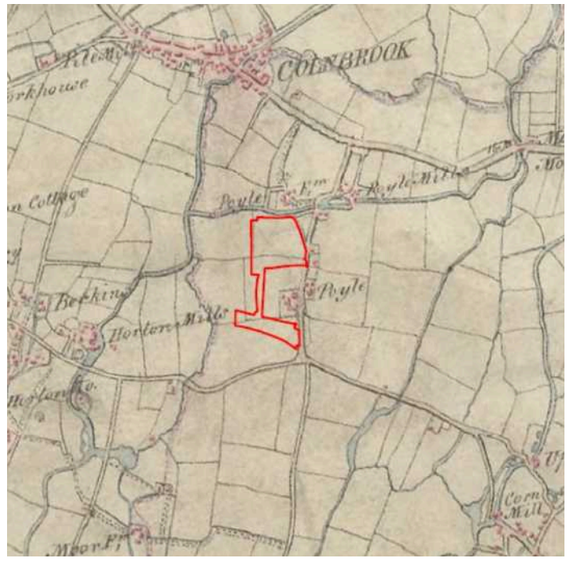
The1841 Tithe Map and the accompanying Tithe Apportionment, evidences that the northern part of the Site is owned by George Patterson and farmed by Joseph Saunders as a hay field. The southern part of the Site was owned by Edward Abbey, farmed by John Cane and was in various usages as farm buildings, a rickyard and meadows with a flower garden. The strip of land connecting the two larger parcels formed part of several plots, belonging to either Edward Abbey or George Stone, farmed by John Cane and comprised parts of ‘Five Acres/Granary Meadow.’



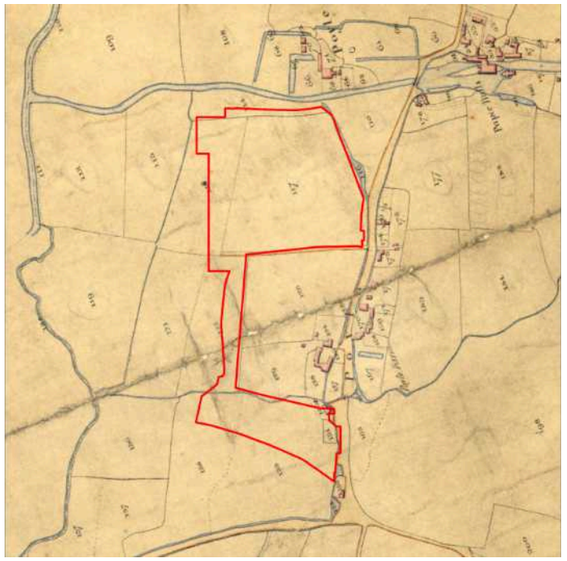
1754 Rocque Map of Middlesex



1761 Rocque Map



1811 Ordnance Survey Drawing



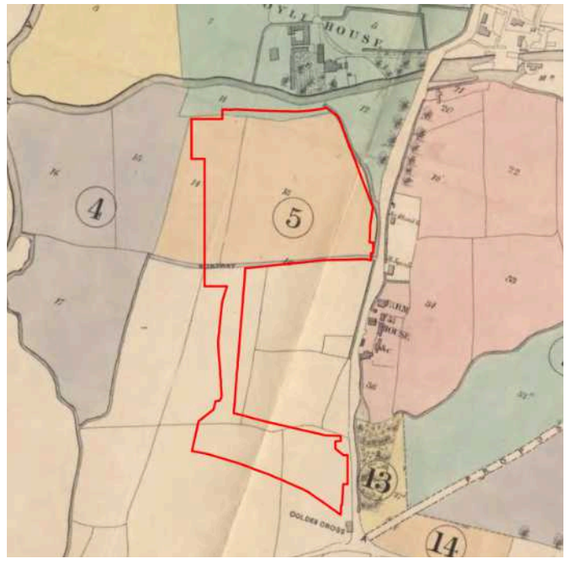
1841 Stanwell Parish Tithe Map

The 1869 Poyle Park Estate Map, shows that the Site remains undeveloped. Within the proximate area the Poyle House Estate is visible to north and farmhouses and other property are located to the east of Poyle Road.

The 1935 Aerial photograph, demonstrates that the Site remains undeveloped; however, development has continued within the surrounding area. This situation has, however, completely altered by the 21st century, as is visible from the 2004, 2017 and 2021 Aerial Photographs.

It is understood that the main areas of the Site (to north and south) may have been subject to extensive gravel extraction and landfill. Poyle House Estate can be seen to have been demolished to the north part of the Site with the whole of this northern area now dedicated to industrial usage. Gravel works still exist within this area.

Within the vicinity, the Hilton London Heathrow Hotel was constructed by 2011, just beyond the Site's northern boundary line and extensive industrial development has taken place along Poyle Road, mainly to serve Heathrow Airport. Two proximate reservoirs have also been developed.



1869 Map of Poyle Park Estate

1935 Aerial Photograph

2004 Aerial Photograph

2017 Aerial Photograph

2.3 Listed Buildings

There are two listed buildings that are located near the site. These include:

“The Hollies”

The late 16th century and 17th century ‘Hollies’ at Poyle Road. The property is now in use as an office for Aviation Recruitment. Historically set within its own gardens and surrounded by agricultural land, The Hollies now lies within a heavily industrialised area. It currently only maintains a strip of grass laid along its front elevation, fronted by a low brick wall and hedging. To rear and north of the property, the area provides hard standing for car parking, whilst to south it is separated from a modern office unit to its south by tree cover.

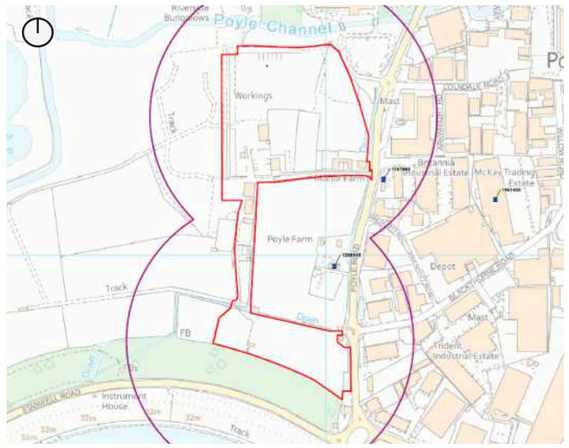
The Site has no known or legible historical or functional relationship with The Hollies. However, due to proximity, there is an open visual relationship between The Hollies and the northern land parcel of the Site.

“Poyle Farmhouse”

The late 17th / early 18th century Poyle Farmhouse situated in Poyle Road (between Blackthorne Road and Prescott Road)

The setting of Poyle Farmhouse relates immediately to its domestic grounds and respective gardens within which the property would be fully experienced. It maintains verdant boundary planting, with a tall hedge to fore and significant vegetation to north and south of the building; to west there is hard standing for car parking. There are some clear public views of the front elevation of the property from Poyle Road, to its east. There are two modern residences located slightly beyond its hedge boundary, to north.

The Site has no known or legible historical or functional relationship with Poyle Farmhouse apart from being indicative as part of its historic wider setting. Currently the northern section of the Site is occupied by the Manor Farm Industrial Estate that maintains minimal intervisibility with Poyle Farmhouse. The southern section of the Site maintains extremely limited intervisibility with the Site when adjacent to the hedge boundary line. The Site is assessed as making no contribution to the significance of Poyle Farmhouse.



Map of the Berkshire Historic Environment Record, with the site in red and nearby listed buildings highlighted (HM England & Berkshire County Council)


View looking south-west to the “The Hollies”


View looking west from the street to the “Poyle Farm House”


View looking south-east to the “The Hollies”


“The Hollies” building roof materiality


Inside “The Hollies”, showing the original brick masonry construction


View looking west from the gate to the “Poyle Farm House”

2.4 Transport

Strategic Highway network

The Site, located on Poyle Road in Colnbrook, Slough, benefits from excellent connectivity to the wider motorway and road network. The estate is situated a short distance from Junction 14 of the M25 which encircles London and provides direct access to the national motorway network. This strategic location facilitates efficient transportation of goods and services.

Additionally, the Site is approximately 2 miles from Terminal 5 at Heathrow International Airport, enhancing its appeal for businesses with need for international connections. The surrounding road network including the A4, Bath Road, the M4 which offers further connectivity into Central London and other major routes that connect to a wider range of business hubs such as Reading, Oxford, Bristol and Birmingham.

This comprehensive network ensures that the Site is well-integrated into the regional infrastructure and benefits the proposed development with efficient transportation and logistics, which in turn supports the operational needs of businesses and contributing to the overall economic vitality of the area.

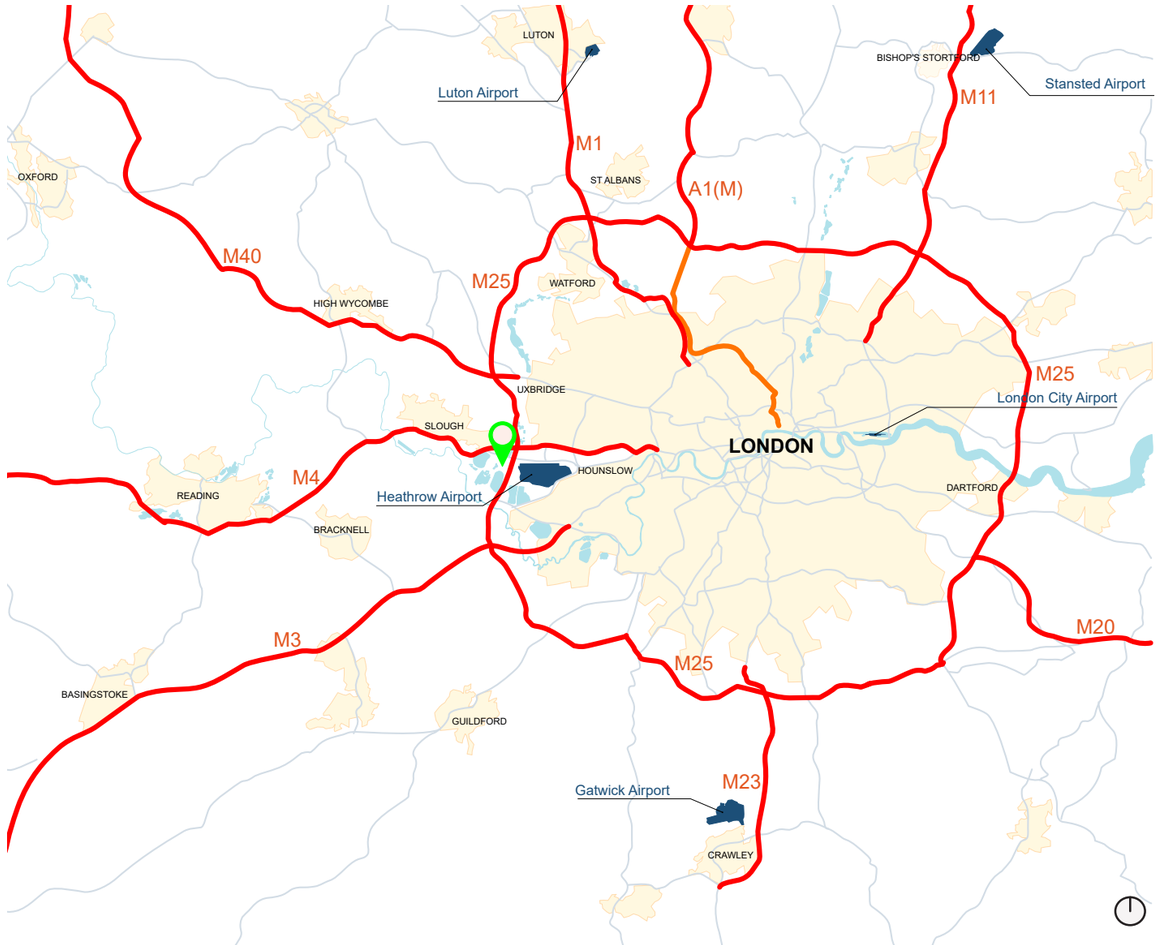
Local Highway Network

- Poyle Road
  Poyle Road runs in a north-south direction to the immediate east of the site. The industrial areas of Poyle are to the east of Poyle Road which is subject to a 30mph speed limit and is a single-lane two-way carriageway, approximately 1km in length. There is street lighting present and a footway along the eastern side of the road. There are bus stops along Poyle Road and several junctions providing access to the industrial area to the east.

- Bath Road
  To the north, Poyle Road routes to the east and as it does so it becomes Bath Road. Bath Road leads towards the Longford Road roundabout (a four arm roundabout comprising Bath Road / Stanwell Moor Road). The first western 550m of Bath Road is subject to a 30mph speed limit, whilst the eastern 800m is subject to the national speed limit.

- Park Street
  Park Street routes westbound from the Poyle Road / Bath Road junction. Access to Park Street is restricted to access and buses only to prevent ‘rat running’ through the Brands Hill and the Colnbrook by-pass.

- Horton Road
  Horton Road is a west-east road which connects to the southernmost extent of Poyle Road. It connects to Horton to the west, and to the east it connects to Poyle Interchange (a five-arm roundabout comprising Horton Road / M25 / Airport Way). Horton Road is subject to a 30mph speed limit.



Trains

Slough sorroundings and the site enjoy good connectivity with several nearby railway stations,enhancing its accessibility for both commuters and businesses:

- Slough Railway Station – 4.5 miles
  This is the principal station in Slough, located on the Great Western Main Line. It offers frequent services to London Paddington, Reading, and other major destinations. The station is also served by the Elizabeth Line, providing fast connections to central London and Heathrow Airport.

- Langley Railway Station – 3.3 Miles
  Situated a few miles from Slough, Langley station is on the Great Western Railway line. It offers services to London Paddington and Reading, making it a convenient option for those traveling to and from the Site.

- Wraysbury Railway Station – 2.0 miles
  Located to the south of Slough, Wraysbury station is on the Windsor line which run between Windsor & Eton Riverside to London Waterloo. This station provides an alternative route between the Site and London, particularly useful for those heading to the south and southwest parts of the city.

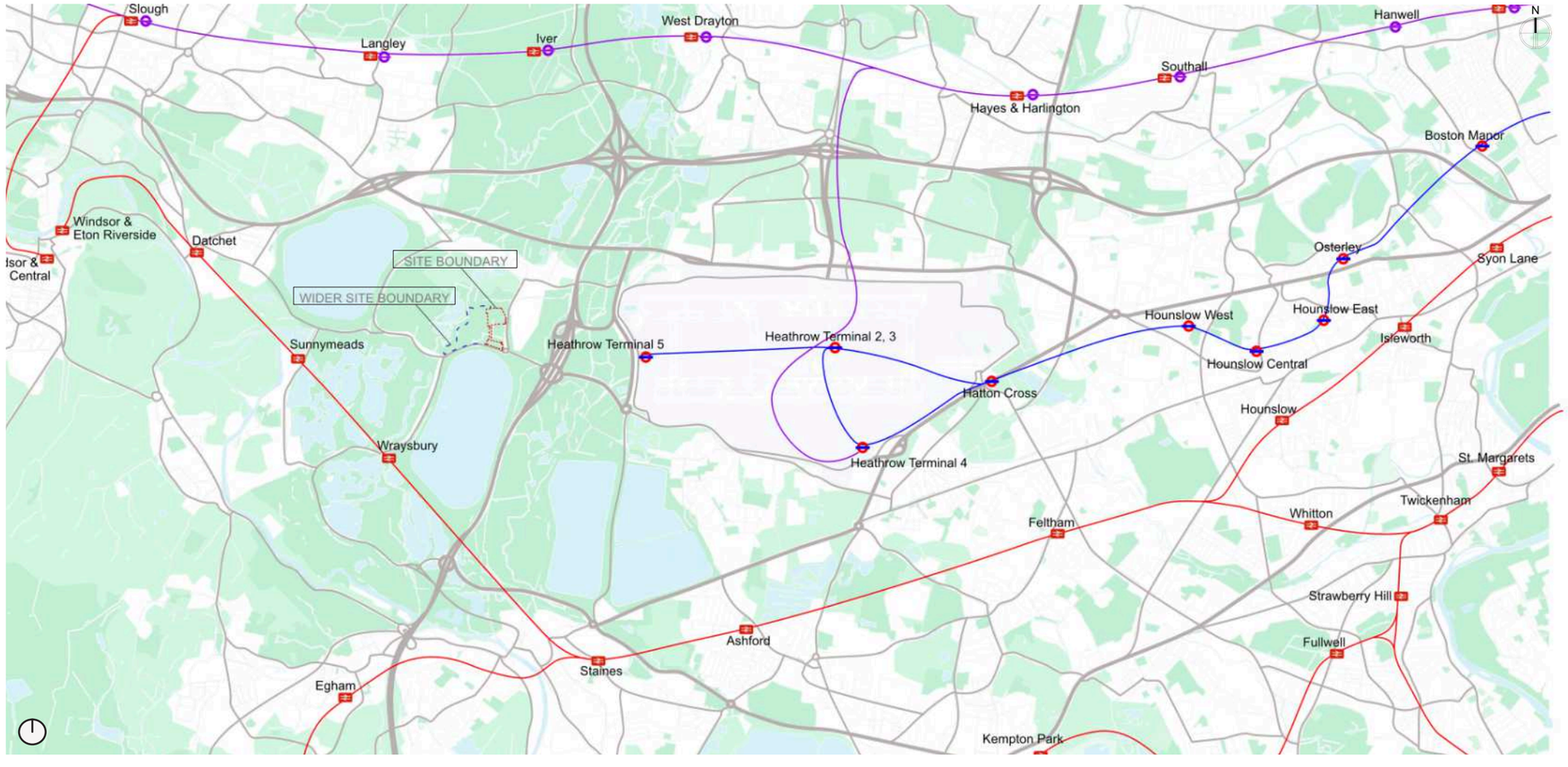
- Sunnymeads Station – 2.4 miles
  Also on the Windsor & Eton Riverside to London Waterloo railway line, Sunnymeads station is a smaller station but still offers valuable connectivity for local commuters. It provides access to the same routes as Wraysbury, enhancing the overall rail network accessibility

- Elizabeth Line (Crossrail)
  The site is also in close proximity to the Elizabeth Line stations at nearby Heathrow Airport. Following it's introduction in 2022, this line has drastically reduced travel times east to west across the city, making it possible to reach central London from Heathrow in just 22 minutes. The direct connection to major business hubs like Paddington, Bond Street, and Liverpool Street enhances business operations by facilitating smoother client and partner engagements. The

Site's proximity to a premier international airport like Heathrow and streamlined connectivity to central London makes it a very attractive location for companies with global operations.

This improved connectivity not only boosts economic prospects but also enhances the quality of life for employees, offering a more comfortable and efficient commute.

These stations collectively ensure that the Site is well-connected by rail, facilitating efficient travel for employees and business operations.



Bus

Poyle Road in Slough is well-connected to the borough through an efficient bus network. Several bus routes, including the 5, 81, 305, H5H and 703, pass through and near Poyle Road, providing residents and commuters with convenient access to various parts of Slough and beyond.

The nearest bus stops to the site are the northbound and southbound ‘Colndale Road’ bus stops along Poyle Road, these are located 100m to the north of the site access. There is a bus stop adjacent to the nearby Hilton which benefits from a half hourly bus service which is the H5H service or the ‘Hotel Hopper’. These bus services provide links to local residential areas as well as to the nearest railway stations, which could form part of a multi-modal trip for future staff of the site. The introduction of a bus gate and width restriction near the Punch Bowl corner of Bath Road and Poyle Road has improved traffic flow and safety, ensuring that buses can operate smoothly without significant delays. Overall, the bus network on Poyle Road plays a crucial role in maintaining connectivity and accessibility with the proposed Site and within the Slough area.

Cycles

While Poyle Road itself may not have dedicated cycle lanes, it remains accessible for cyclists to travel to the Site enhancing connectivity within the different parts of the borough. Several nearby train stations can also be accessed by bike including Heathrow Terminal 5 by cycling along Poyle Road northbound, then following Bath Road east towards Longford Roundabout.

There is a broader initiative to improve active travel infrastructure, including the A4 cycle route, which offers a segregated, two-way path for cyclists. This infrastructure supports safer and more efficient travel for cyclists, connecting Poyle Road to key areas in Slough and neighbouring regions.

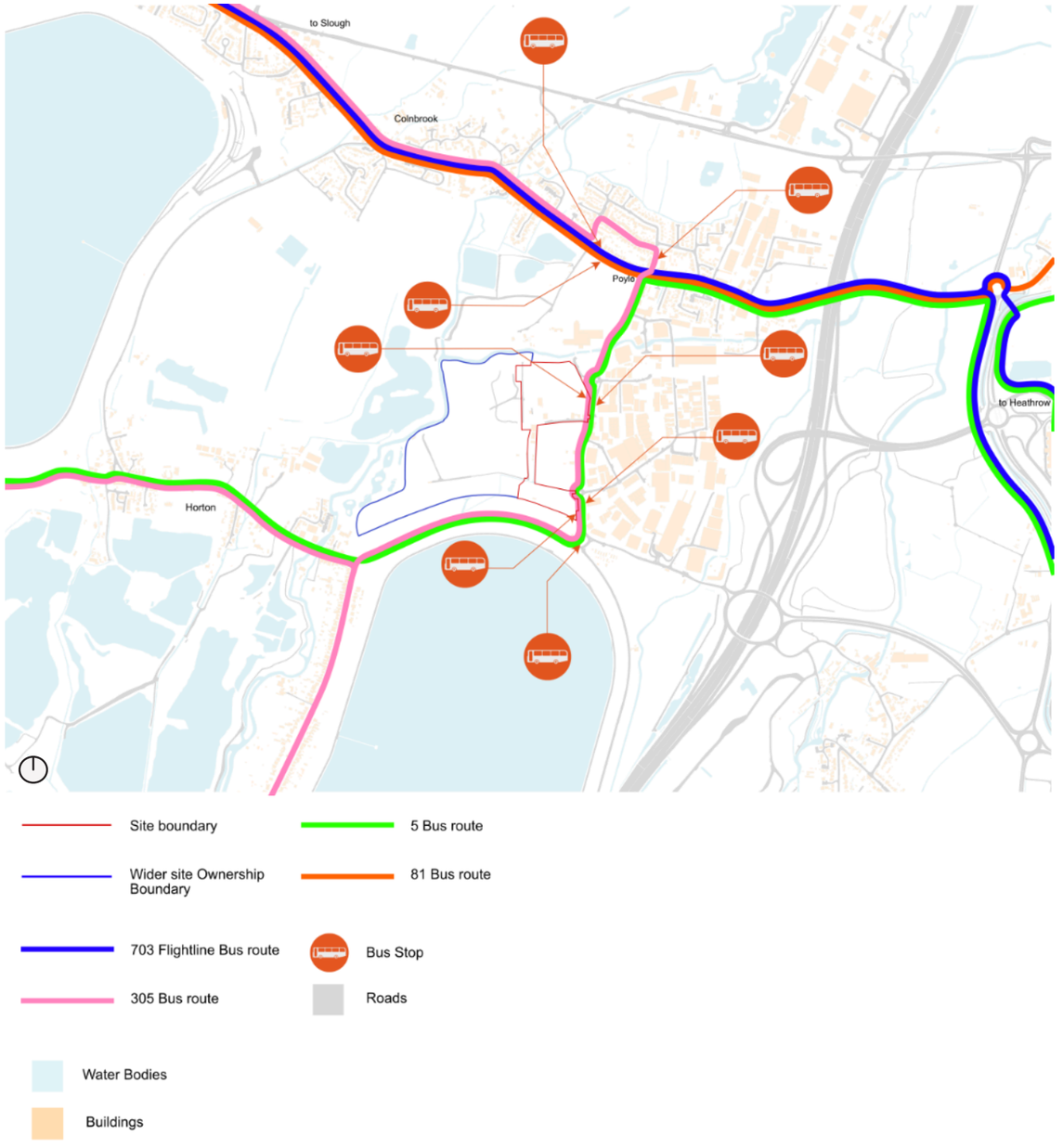
The cycle lanes not only promote sustainable transport but also contribute to reducing congestion and improving air quality. With these provisions, Poyle Road becomes a vital link with accessing the Site, making cycling a more attractive and viable option for commuters.

Pedestrian

The built up area surrounding the site would be considered suitable for pedestrians, though not for the mobility impaired due to the lack of formal crossing points, dropped kerbs and tactile paving leading to the Site. Any visitors or staff traveling by foot would most likely be either staff from the local area or those who have travelled by bus before walking to the Site.

Work force

The robust transportation network enhances the Site’s attractiveness to prospective businesses, leading to increased investment and economic growth in the area. Such growth will create ripple effect on the local job market which helps to drive demand for a diverse range of roles across various sectors. Just within the proposed data centre development, multiple jobs will be created for construction, logistics, security, technology and administration. The resulting job creation fosters a dynamic and resilient local economy, benefiting both residents and the broader community.



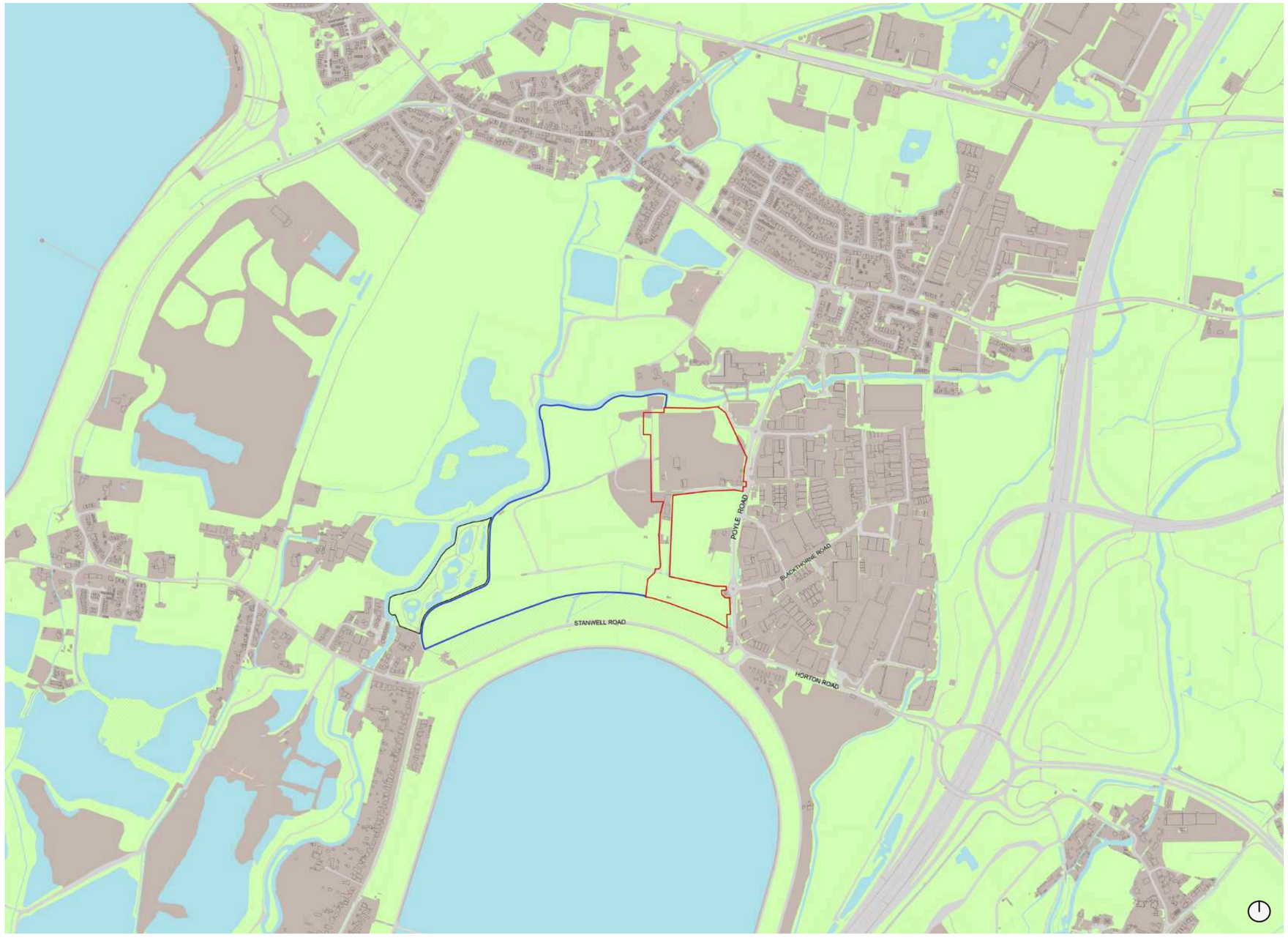
2.5 Land Use

The Site is situated on the western side of Poyle Road, directly across from the Britannia Industrial Estate. This expansive estate extends from Wraysbury Reservoir in the south to the residential area near Bath Road in the north, and is bounded by the Wraysbury River to the east. It accommodates a range of industrial activities, including logistics, metalworking, Heathrow-related services, parking, and offices.

Given the Site's existing use as industrial workshops and long-term parking linked to Heathrow, it can be considered part of the established industrial zone.

To the north lies the Bath Road/High Street residential area, which forms an urban corridor extending from Slough's town center. Along with the Hilton Hotel and its carpark, this residential area establishes a fragmented interface with green spaces to the north.

The land to the west and south of the Site comprises open green and undeveloped areas, bordered by the Wraysbury Reservoir, the Queen Mother Reservoir, and Horton's Stanwell Road. Within this stretch, Arthur Jacob Nature Reserve is located, with access from Stanwell Road.



- Buildings
- Brown Site
- Green Site
- Roads
- Bodies of Water
- Wider Site Ownership Boundary
- Site Boundary
- Nature Reserve


DHL building - Horton Rd


Blackthorne Rd


Montana Bakery - Blackthorne Rd

Arkwright road


Fastway Blackthorne Road


Poyle Rd with Matthisen Way


Colndale road


Colndale road


KPI - Blackthorne Rd


David Rd


David Rd

Willow Rd

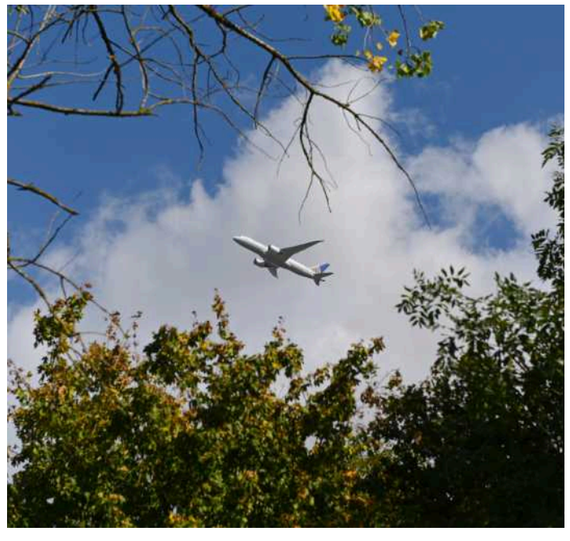
Natural Reserve

The Arthur Jacob Nature Reserve is located approximately 500m to the west of the parcel. The Reserve, located within the Colne Valley Regional Park (CVRP), is a significant wetland area offering a diverse range of habitats that support a variety of wildlife, including bird species such as tufted ducks, pochard, goosander, and goldeneye. The reserve's accessibility and well-maintained paths encourage regular use by the community, contributing to physical and mental well-being which offers a peaceful retreat for local residents and visitors alike. The extensive vegetation in the nature reserve obscures views towards the Site.

Poyle Poplars

Poyle Poplars is a publicly accessible area of woodland approximately 275m south of Parcel A, and forming the southern edge of Parcel B. Consisting primarily of a shaded walking area within the context of the Reserve, Poyle Poplars provides a haven of tranquility close to the bustling Heathrow Airport and wider industrial zone. The serene nature of the walk makes it an ideal location for activities such as walking, birdwatching, and meditation.

The proposed development at the Site will consider the potential impact on the ecological and recreational value of Arthur Jacob Nature Reserve and Poyle Poplars. Measures such as creating buffer zones, implementing sustainable drainage systems, and preserving existing green spaces will help mitigate any impacts. The overall scheme will be designed with careful consideration of the reserve's importance. Priority will be given to minimize disruption to wildlife habitats and preserve its natural beauty and biodiversity for future generations.



The Arthur Jacob Nature Reserve

2.6 Surrounding Building Uses

The character of the surrounding area is largely commercial, with Poyle Trading Estate located on the opposite side of Poyle Road. Hilton London Heathrow Airport Hotel is located to the north of the Site. Residential uses are in the wider area to the north and north-east, with few heritage assets in relative proximity to the site.

Britannia Industrial Estate – Industrial and Commercial

The Industrial Estate is a significant commercial hub located on Poyle Road. It comprises industrial units that are primarily used for warehousing, logistics, and freight operations, benefiting from proximity to Heathrow Airport. The buildings are predominantly built using steel portal frame construction with cladding to the upper parts of the elevations and loading doors to the front. Other buildings across the site have either full masonary treatment or metal cladding treatment.

T5 Hilton Hotel - Leisure

The hotel stands as a mid-rise 5 storey building with a contemporary style. The exterior façade treatment of this building consists of a combination of masonary brick, polish concrete and natural stone with extensive glazing to each façade.
The form of this building is very rational due to the use of vertical and horizontal lines.

North of Britannia Industiral Estate - Residential

The residential area near Bath road in Slough features a mix of housing styles in a series of detached and semi detached building types. The north east properties are generally of 1950-70s build while most dwellings to the North appear to have been built earlier in the 1920-30s period. The façade treatments vary from partial cladding, masonry and rendered finishes

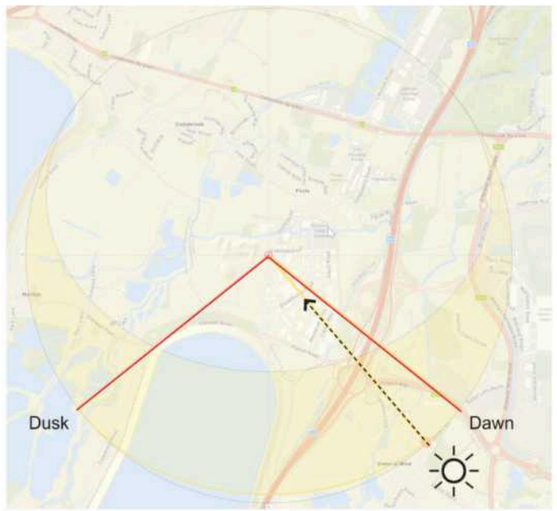
2.7 Solar Analysis

The study of Solar geometry involves the study of the sun's position in the sky at different times of the day and year, which helps in understanding how sunlight enters and interacts with buildings. This knowledge is crucial for optimising natural light, while also identifying opportunities for shading

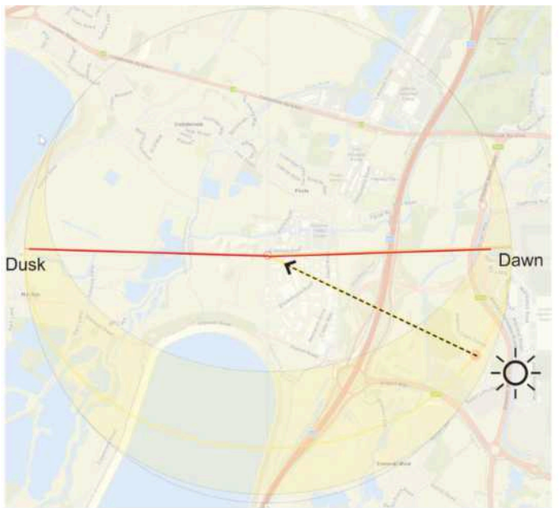
A Solar Geometry analysis was conducted to review the solar exposure throughout the year. A geolocated model was used to track the sun's trajectory and its impact on the site, factoring the presence of bunds and dense tree lines along the north and east and west boundaries. Given that the majority of the site is relatively level, these features significantly influence the distribution of sunlight.

The bunds, which are raised earth structures, create areas of shading particularly noticeable during the early morning and late afternoon when the sun is lower in the sky. The dense tree lines along the north and east boundaries of Parcel A also contribute to shading, especially in the morning hours when the sun rises in the east. These trees can block direct sunlight, reducing solar gain in those areas.

This comprehensive approach ensured that the design that would be proposed promotes energy efficiency and enhances the comfort of the occupants, making the most of the site's natural features for both internal and external environments.

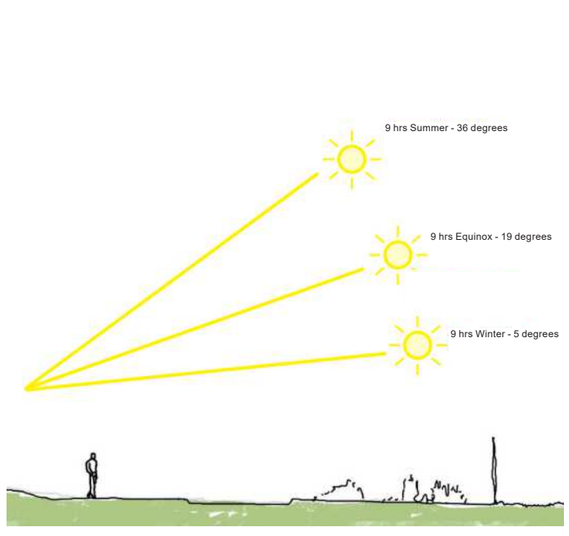


Plan - Winter 9hrs

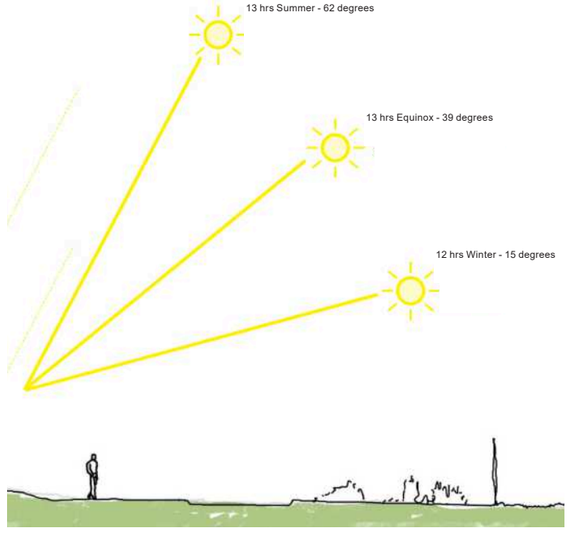


Plan - Equinox 9hrs

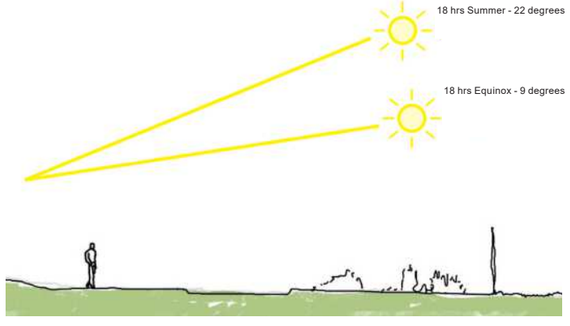
Plan - Summer 9hrs



Elevation - Morning Sun - 9hrs



Elevation - Midday Sun - 12-13hrs



Elevation Sun - 18.00hrs

2.8 Assessment of Urban Character

Data Centres in Slough

Slough has established itself as a key hub for the UK's data industry, thanks to its proximity to financial services and excellent fibre and energy connections domestically and internationally. This has attracted significant investment, with the Slough Trading Estate becoming a focal point for new data centre developments and the expansion of existing facilities.

The rising demand for hyperscale data centres, which offer flexible spaces for future growth, coupled with the operational constraints of this typology, has necessitated increases in both power capacity and building volume. These factors have significantly influenced the design and scale of data centre buildings in the area.

Slough Data Centres and Public Realm

Given their limited footprints within urban areas and high-security requirements, data centres in Slough often position their secure boundaries close to public footpaths, creating a hard urban edge along streets like Buckingham Avenue, Dundee Road, and Malton Avenue. The proximity of these structures to the public realm frequently results in a stark visual impact.

While efforts are sometimes made to soften these edges with trees and planting as visual buffers, these measures are often insufficient to fully mitigate the imposing scale and massing of the buildings within the townscape.

Slough Data Centres Façade Expression

Metal cladding is a dominant material in data centre design, embodying an industrial aesthetic akin to other utilitarian structures such as warehouses, logistics hubs, and aviation-related facilities. Given the primary functions of data centres—housing computing equipment and plant rooms—they are often designed as large, abstract cuboids with minimal detailing or articulation.

This architectural simplicity has become a defining feature of Slough's digital neighbourhoods. It is uncommon for these buildings to express their internal structures or floors in a way that engages with the human scale. Instead, façade treatments often emphasise double or triple-height proportions, resulting in monumental, metal-clad exteriors.

While effective for their operational purpose, these facades can create challenges in integrating harmoniously with Slough's varied urban context, which includes residential areas, commercial zones, and green public spaces.

Images of existing Data Centres and Infrastructure buildings in Slough

Character of the Site Proximity

Parcel A is bounded to the east by Poyle Road and the Britannia Industrial Estate, to the south and west by arable fields, and to the north by the Poyle Channel, associated tree cover and the Heathrow
Terminal 5 Hilton Hotel. Built form in the Britannia Industrial Estate is ‘big box’ in scale and design, reflecting the existing commercial uses.

Parcel B is also bounded by Poyle Road to the east, by Poyle Poplars and Stanwell Road to the south, and to the west and north by arable land. Both parcels fall within the Colne Valley Park.

Much of the Site has been altered by gravel extraction and the construction of reservoirs, resulting in a pattern of large reservoirs and steep reservoir embankments. Due to the proximity of Heathrow airport, planes are often seen and heard across the Site. The immediate vicinity reflects a general lack of management, and - with the addition of regular occurrences of fly tipping - the Site reflects an unkempt character at present.

2.9 Current Site

Parcel A

The Site currently accommodates a number of industrial units containing activities such as a lorry workshop and welding facility. Additionally, portions of the site are used for medium term parking accommodation for Heathrow Airport. The current uses generate noise, dust and traffic movements which are to the detriment of the surrounding area.

Parcel A contains little vegetation, mainly comprising limited areas of ruderal scrub, two groups of poplars within the Site, groups of poplars on the boundaries and hedgerows on the western and southern boundaries.

No landscape designations have been identified which apply to Parcel A, although it falls within the southern extent of the Colne Valley Regional Park. In general, the appearance of the Site is dominated by the road plantings and hard standing materials which gives the Site an overall weathered look.

Parcel B

Parcel B does not contain any built form. It is grassed, contained by mature field hedgerows to the west, north and east and heavily screened by a mature dense tree belt to the south (Poyle Poplars).

This southern parcel of land has no appropriate public access and while it is part of green belt area, it is independent of any wider plot. Despite the dense planting along the edges of Parcel B, a visual connection with the adjacent Britannia Industrial Estate remains due to the visibility of these buildings just above the tree line. Looking west the land is separated by the boundary condition breaking it off from any wider greenbelt area. Throughout the day there is regular noise from planes overhead due to the site being on the flight path.

View looking south from pedestrian access from Colndale Road bus stop at Parcel A.

View looking west from pedestrian main access at Parcel A.

View looking south east from long-stay carkpark.

View looking west from long-stay carpark

View looking north to B07 from main access road (Site Plan Drawing, Appendix)

View looking south to B08 from main access road (Site Plan Drawing, Appendix)

View looking north from main access road / Building B08.

View looking north from main access road (Building B07 would be left of the view)

View looking south from parcel A southern end.

2.10 Site Constraints and Opportunities

Constraints

The following section details the constraints and opportunities presented by the site including summarised technical constraint inputs from a range of specialist consultants in various disciplines. The diagrams opposite demonstrates some of the key constraints and opportunities which were considered and helped shape the design of the proposed development. These are summarised below:

- Hotel
  The Hilton Terminal 5 Heathrow Airport Hotel is to the north of the site development. The development will need to be carefully designed to ensure any noise from operations or plant is attenuated so not to impact the business. As the Site shared the northern boundary with the Hotel, a building offset will be helpful to create a separation and buffer between both buildings.

- Airport
  Due to flight paths and associated operations equipment, building height will be a limiting factor in addition to control of venting and pluming from chillers and generators that are associated with data centres.

  — Noise from plane overhead will need to be mitigated to create comfortable working environments for building occupants.

- Site Access
  While vehicular access will not necessarily be as regular, a robust traffic management plan will need to be implemented to ensure no traffic is spilled back onto Poyle Road. Considerations will need to go towards access strategy to both parcels, to prevent negative impacts on Poyle Road especially south at the roundabout east of parcel B.

- Maintaining the character of neighbouring green areas
  The choice of material and tones for the development must be both suitable and sensitive to the surrounding context.

- Bird Management
  Careful consideration will need to be taken for safeguarding in respect of bird management when developing near airports.

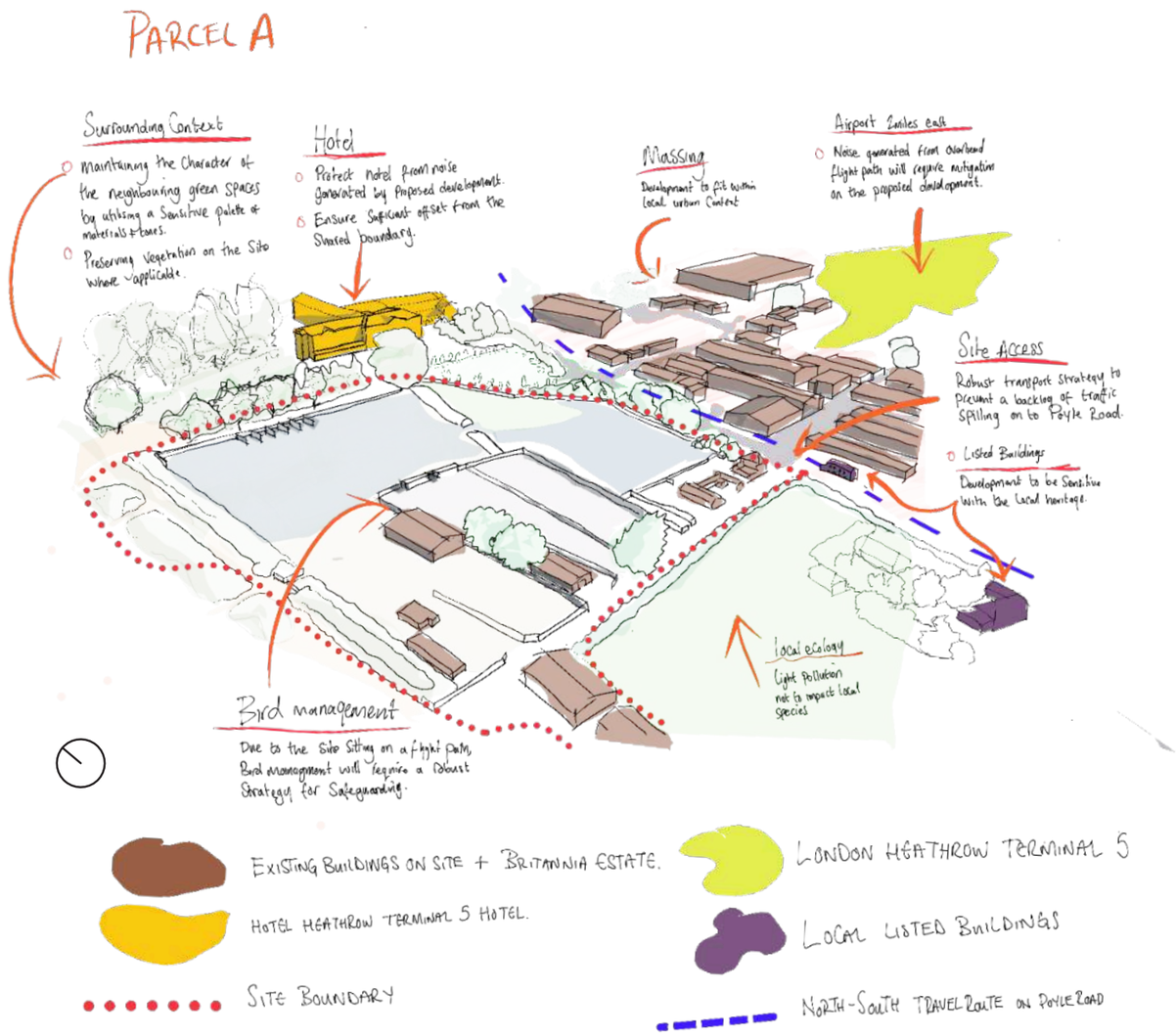
- Ecology
  The development will need to balance the needs of the proposal with environmental preservation to help protect the native biodiversity and species.

- Massing
  Massing will need to be studied thoroughly to ensure it fits appropriately to the surrounding context and blends in with the local typology.

- Poyle Road
  Poyle road is active with pedestrians and vehicular movement, therefore careful consideration will need to be taken on visual impacts of the building from different viewpoints.

  As this road is also a public domain, any development will need to be set back from the eastern boundary which will limit the space available as the site is constrained in length between the east and west boundaries.

- Light Pollution
  Impacts on species can vary however artificial light can affect the daily activities of native species. Working with lighting engineers will be key to understanding of the potential effects on wildlife and how to mitigate these through sensitive lighting schemes.



Opportunities

An opportunity to explore ways to mitigate existing issues:

- Screening and Visual Impact
  There are areas of landscape and planting that run around both the boundaries for Parcel A and B. Parcel A has less landscaping than Parcel B providing an opportunity for new planting to help reduce any visual and environmental impact of the potential development.

- Biodiversity Net Gain
  As a former landfill site Parcel A holds low biodiversity value, largely due to its predominantly developed and hard standing landscape for industrial use. There is an opportunity to improve the ecology and biodiversity on the site with this new development.

- Ecology
  The habitats of ecological significance on Parcel A are limited to a few poplar trees, bramble and mixed scrub, and a small area of modified grassland in poor condition due to currently being utilised as a car park. Parcel B to the south, albeit smaller, holds a higher value of biodiversity with thick hedgerows and tree line along the southern boundary.

- Green belt
  To assist in urban regeneration by encouraging the recycling of derelict and other urban land.

- Community integration
  The Site can act as a bridge providing public benefit in terms of enhanced accessibility across the Green Belt and into the Colne Valley

- Mitigate the byproduct of current land use
  Due to the nature of historical and current activities on this previously developed land, the hotel and residential buildings to the north, and the boundary to the east and west would benefit from a setback and landscape buffer for the following reasons:

  — Unsightliness: The existing industrial use of the land creates an unattractive environment for surrounding buildings.

  — Noise: Current open-air activities generates noise pollution affecting nearby properties. Also noise from airports can cause occupant disturbances in the office

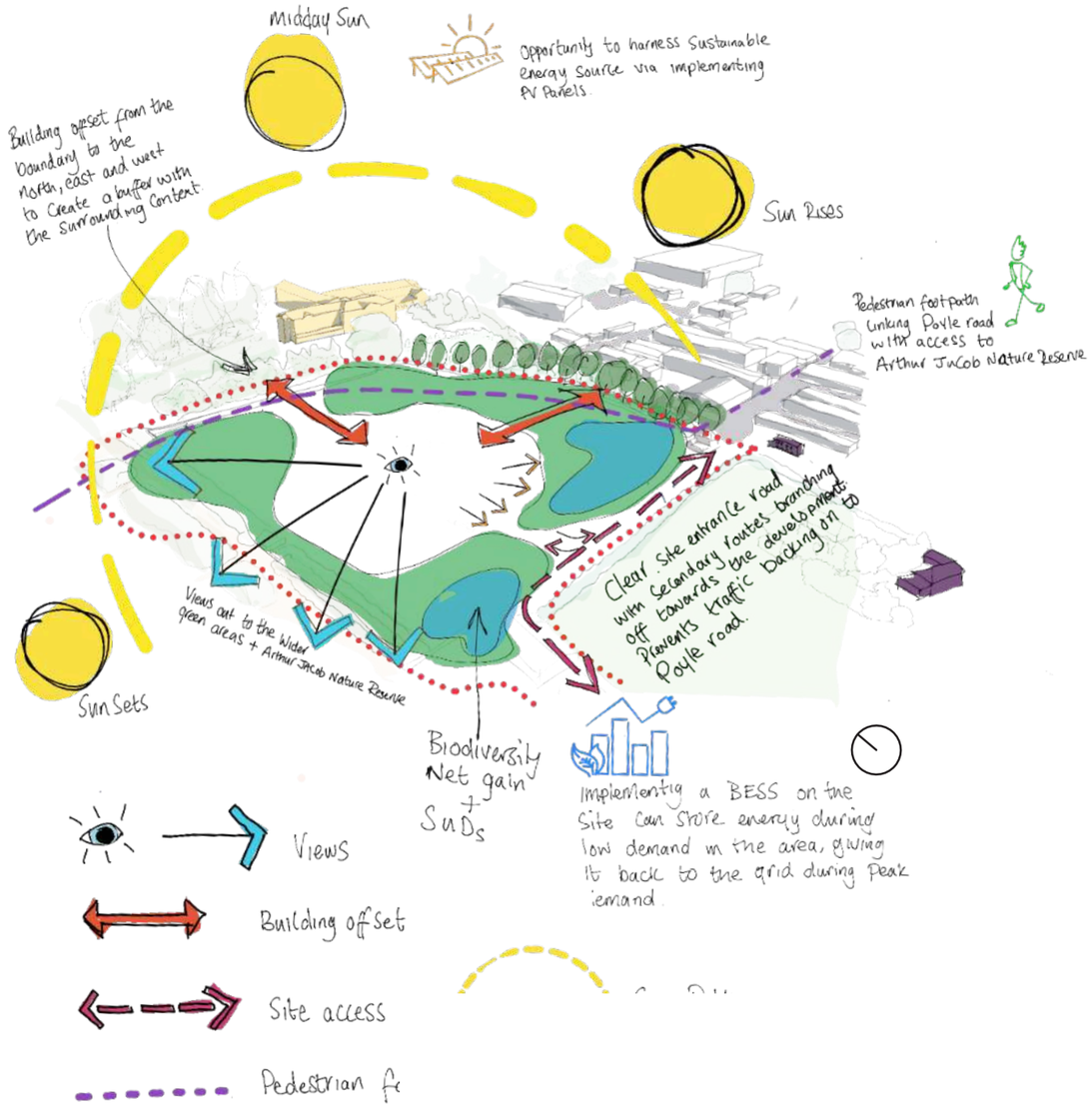
  — Dust: dust generated by the existing industrial activities can impact air quality and neighboring structures.

  — Visual Impact: Mounds and other existing features disrupts the visual harmony of the area.

- Sustainability
  Improve the site drainage with Sustainable Drainage Systems via use of swales, attenuation ponds and rain gardens. This will help further improve the biodiversity net score for the Site.

- There is very limited sustainable measures implemented on site, the proposal can introduce sustainable technologies to help promote high benchmark for sustainable data centres in the area.

- Power Stability
  A Battery Energy Storage System (BESS) can stabilize the grid by storing excess energy during periods of low demand and releasing it during peak demand. This helps to smooth out fluctuations and ensures a steady supply of electricity.



2.11 Aviation Constraints

The site lies approximately 2 km to the west of the western end of the northern runway at London Heathrow Airport, in an area subject to aerodrome safeguarding, the process by which airspace required for safe and efficient take-off and landing at airports is maintained free of new development. The site is also located within the safeguarding area for RAF Northolt.

Given the proximity of the Site to the airport, an Aviation Safeguarding Review has been commissioned by a specialist consultant to ensure the proposed design will not adversely affect the operations at Heathrow Airport in advance of the planning submission. The findings of this report are summarized below.

Heights

A number of distinct height-related limitations apply to the Site, associated with the safeguarding of aerodrome operations:

- General safeguarding criteria, prescribed by the UK Civil Aviation Authority (CAA), and defined by a series of Obstacle Limitation Surfaces (OLS) as captured in the publication CAP 168.
- More specific criteria for the protection of flight procedures undertaken at individual airports, in accordance with ICAO standards and practices, as defined in ICAO PANS OPS. These account for existing obstacles during specific instrument flight procedures at individual airports, and are quite often less restrictive than the OLS above.

The OLS are a set of predominantly planar surfaces arranged about the runway as shown schematically in the image below.

The Site has been determined to lie within the area influenced by the Runway 09L approach surface, the Runway 27R take-off climb surface, and the inner horizontal surface for London Heathrow Airport. Below shows the location of the Site in relation to these OLS. The take-off climb surface (TOCS) is determined to be the most restrictive, and a maximum facility height of 61.5m AOD has been identified as the limiting height parameter at the eastern edge of the Site boundary. A review of the PANS-OPS specific to Heathrow also indicate that the identified OLS restrictions above are sufficient to safeguard operational flight procedures.

The main runway at RAF Northolt Aerodrome is a Code 3 precision approach runway, regulated by the Military Aviation Authority (MAA) which regulates all Defence Aviation activities. Regulatory requirements for aerodrome safeguarding are set out within Regulatory Articles (RA) series 3500 to 3599 of the MAA Regulatory Publications (MRP) which cover aerodrome design and safeguarding. The specification for the obstacle limitation surfaces at military aerodromes are set out in Annex A of RA 3512. As RAF Northolt is approximately 11km from the Site, the height limitation imposed by this OLS is determined to be 184.7m AOD – significantly less restrictive than the Heathrow OLS limits and not considered to be a meaningful influence on the proposed development.

Instrument Safeguarding

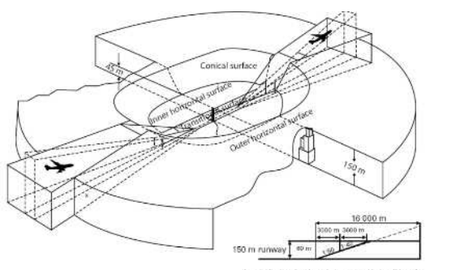
In addition to the physical safeguarding of flight paths, there is a requirement for the technical safeguarding of airport operations to ensure that there are no adverse impacts on navigational aids. In general, it is expected that developments that comply with the limits defined by the OLS will not conflict with the requirements for the technical safeguarding of the relevant navigational aids located at Northolt and London Heathrow.

Other Safeguarding Measures

In addition, the potential for other aspects of the proposed development have been reviewed by the specialist consultant, including bird hazard, lighting, glint and glare:

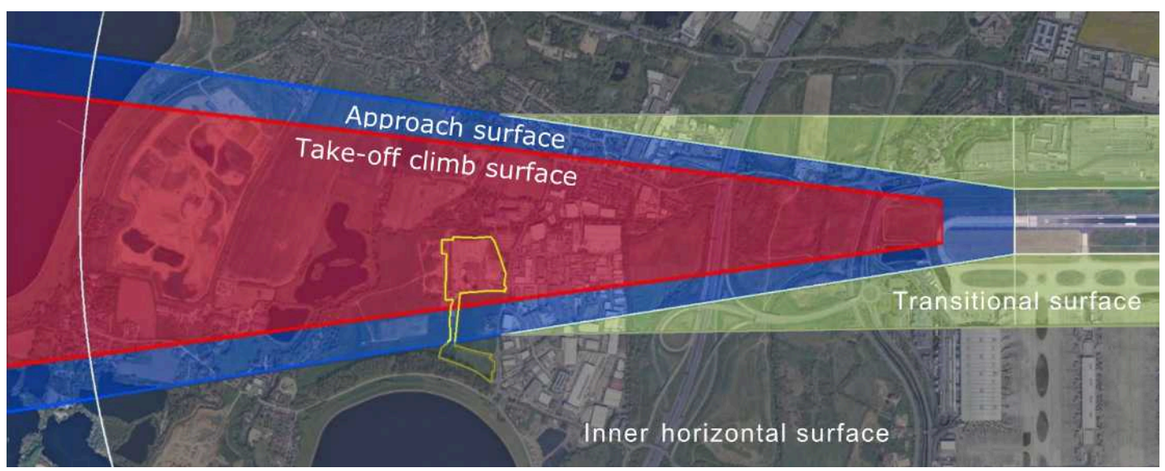
- Preliminary review of the potential bird hazard associated with the proposed development indicate that the proposed development does not present any greater impact to airport operations than the surrounding landscape uses, however if required well established management measures can be implemented.
- Design of external lighting should be mindful of the requirements to ensure that lights are not dangerous, confusing or dazzling to pilots on approach or taking off from aerodromes. In addition to lights, PV panel installations or large glazed areas have the potential to cause glare towards pilots or ATC operators. Therefore roof mounted PV panels will be specified with anti-reflective coatings and be mounted on frames to enable tilt angles to be selected to mitigate any potential impacts on aeronautical targets.

For further details, please refer to the Aviation Safeguarding Assessment for Planning which accompanies this application.



Reference Point	OS Grid Coordinates		OLS Height Limit (m AOD)		Maximum Building Height (m AOD)	Minimum Margin (m)
	Easting	Northing	TOCS	APPS		
Chiller-NE	503002.3	176287.6	62.79	68.96	51.40	11.39
Chiller-SE	503002.3	176231.2	62.82	68.99	51.40	11.42
Chiller-SW	502845.1	176231.2	65.97	72.14	51.40	14.57
Chiller-NW	502845.1	176287.6	65.94	72.11	51.40	14.54
Office-NE	503020.3	176270.0	62.44	68.61	43.14	19.30
Office-SE	503020.3	176210.4	62.48	68.64	43.14	19.34

Obstacle Limitation Surfaces (OLS) Diagram



Plane taking off from London Heathrow Airport.

2.12 Planning Policies

Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that applications are determined in accordance with the development plan unless material considerations indicate otherwise.
The Development Plan applicable to the Site comprises the following documents:

- Saved Policies of the Slough Local Plan (March 2004);
- Core Strategy DPD (December 2008);
- Site Allocation DPD (November 2010);
- Slough Local Development Framework (LDF) Proposals Map (November 2010);
- Slough Local Transport Plan (LTP3) 2011-2026:
- Waste Local Plan for Berkshire (December 1998); and
- Berkshire Joint Minerals Local Plan 2001.

Material Considerations of relevance to the proposals include the National Planning Policy Framework, the Planning Practice Guidance, and Slough's evidence base reports commissioned in connection with the emerging replacement Local Plan.

The Site is located within the Green Belt where planning policy requires proposals for inappropriate development to demonstrate that any harms are outweighed by very special circumstances. The Site also lies within the Strategic Gap and Colne Valley Regional Park where development will only be permitted if it is essential to be in that location.

Consultation on amends to the NPPF is currently underway, which promotes the concept of 'grey belt' land (which is applicable to the Site) and supports the development of national infrastructure, with particular reference to data centres, and zero carbon energy generation, on green belt land.

Paragraph 147 of the NPPF states that planning permission should not be granted for inappropriate development in the Green Belt unless very special circumstances exist, which requires the definitional harm to the Green Belt by reason of inappropriateness, and any another harm caused, to be clearly outweighed by other considerations.

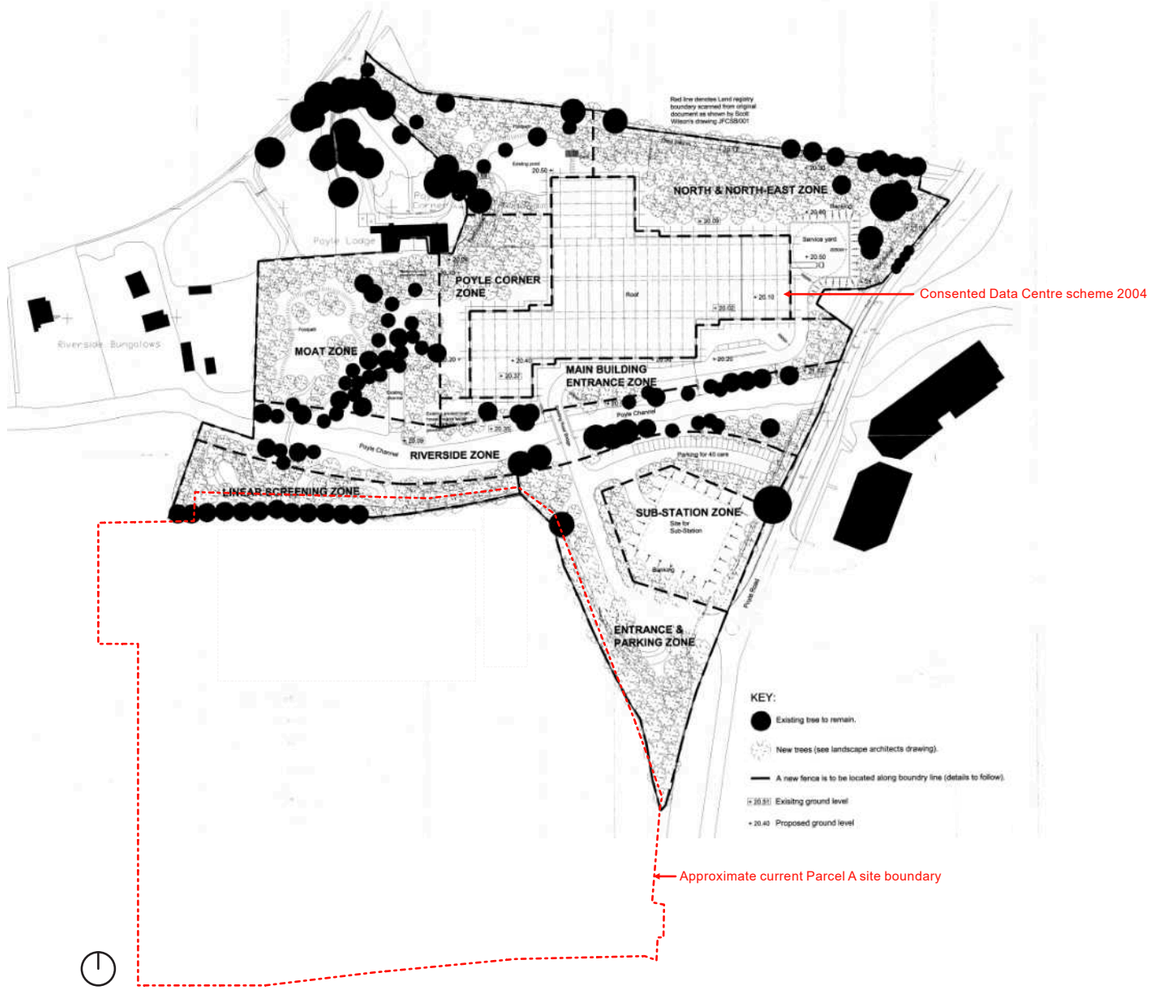
Planning policies are reviewed in further detail in Section 5 of the accompanying Planning Statement.

Nearby Planning History of Interest

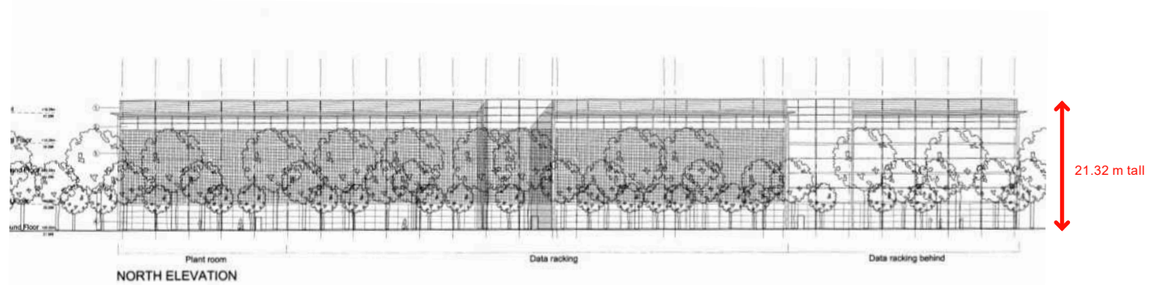
In 2004, an appeal was allowed for a data centre at the now Hilton London Heathrow Airport Hotel site adjacent to the north of the Site. Following call-in, the SoS granted planning permission for the construction of a data centre in the green belt agreeing that very special circumstances existed to justify the development. Although, the proposed building would reduce the openness of the green belt, it did not lie in the open countryside and the character of the area was strongly influenced by the proximity of a large industrial estate and main roads.

The decision noted the poor quality of the Green Belt, that the site was not located within the open countryside and the economic benefits of the Data Centre to meet a requirement for telecommunications storage. The Secretary of State noted that the appearance of the data centre "would not be unlike those of other modern commercial buildings as seen in the nearby."

The adjacent plan and elevation show the scheme submitted.



Plan of the Data Centre scheme, consented in 2004, and located in the current Hilton Hotel site (neighbour to this application site).



Elevation of the Consented 2004 Data Centre scheme, located in the current Hilton Hotel site (neighbour to this application site).

2.13 Site Relevance

The need case for the development of a Data Centre in this site is discussed in further detail in the Planning Statement, Economic Case and Alternative Site Assessment all submitted alongside the application.

Some key features of the proposal:

Space
Manor Farm offers ample space suitable for data centre development and specifically an opportunity to revitalise the previously developed land. These large plots enable operators to build a sufficiently sized facility, ensuring scalability to meet growing data demands. This scalability is crucial as businesses increasingly rely on cloud services and data storage.

Physical Resiliency
The Site is in an area with relatively low flood risk. Data centres in the region benefit from this natural advantage, as well as advanced flood mitigation measures, ensuring the security and continuity of operations even during extreme weather events.

Access to Skilled Workforce
Data centres ground themselves near metropolitan areas for skilled talent and specialized suppliers. Proximity to key markets ensures low latency and compliance with data residency regulations.

Fibre Connectivity
Slough's proximity to London means it can tap into the capital's advanced digital infrastructure, including direct connections to major internet exchanges. This helps making it possible to maintain low latency and high availability, which are essential for modern data centre operations. With such a strong data infrastructure in place, Slough offers an optimal environment for a data centre facility.

Well Connected
Manor Farm is well-connected by key road networks, including the M4 motorway, which provides easy access to London, Heathrow Airport, and the wider UK. Additionally, it has strong public transport links, including frequent bus services and a well-connected train station, making it convenient for staff and clients to travel to data centre facilities.

Design Process

3.

3.1 Vision and Objectives

The proposed development seeks to deliver:

Critically important infrastructure

There is a pressing need for the facility at a national level particularly in terms of London and Slough's Availability Zone role in UK data strategy. Consultation on amends to the NPPF supports the development of nationally important infrastructure, with particular reference to data centres, and zero carbon energy generation, on low quality 'grey belt' land. Reference to the national need of data centres is set out in further detail in the accompanying Planning Statement, Economic Case and Alternative Site Assessment.

Economic Advancement

Contributions towards sustained advancement of the economy at a national level in addition to the local level, as the Data Centre sector is rapidly growing into a premier investment class. In accordance with changes to the current NPPF, the UK government has set out policies with the intentions of supporting economic growth in industrial strategy and future local growth plans such as Data Centres.

Re-develop a Degraded Site

Re-development and remediation of an existing brownfield site – once used for gravel extraction and now hosting a number of industrial uses such as aggregate storage and airport car parking – into a location housing critical digital infrastructure. This re-use of existing degraded or 'grey belt' land is supported by the National Planning Policy Framework (NPPF) 2023 version, and the NPPF 2024 Consultation Version.

Biodiversity 115% improvement

115% improvement in habitat units and a 10.69% increase in hedgerow units. Enhanced landscape features, including a rich landscaped buffer zone along the Poyle Road frontage. Biodiversity across the Site will be increased when compared to the current brownfield industrial usage.

Off-site enhanced public realm

A new walking path connection is proposed from Poyle Road, enhancing connectivity for visitors of the Arthur Jacobs Nature Reserve and extending the trail network currently existing at the Reserve and within Poyle Poplar. Further improvements are proposed for the crossing and bus stops in front of The Hollies.

Employment and Investment

Skilled employment opportunities in a fast-growing market sector - playing a critical role in the local economy of Slough through the creation of direct jobs, indirect employment opportunities, and reinforcing the Slough Availability Zone's status as a preeminent digital infrastructure hub.

3.2 What is a Data Centre?

A data centre is a physical facility that organisations use to house their critical applications and data. It consists of a network of computing and storage resources that are vital for maintaining the digital services and innovations that people and businesses rely on every day.

Digital Infrastructure Backbone
Data centres are the backbone of our digital infrastructure, enabling seamless communication, commerce, and innovation. They support the vast networks that underpin modern society, ensuring that services like email, social media, online banking, and streaming are always available.

Data Storage and Management
They store, manage, and distribute enormous amounts of data. This is crucial for businesses, governments, and individuals who rely on data for decision-making, operations, and personal use.

Cloud Services
Many cloud services, such as Google Cloud, Amazon Web Services (AWS), and Microsoft Azure, operate from data centres. These services provide scalable and flexible computing resources, allowing businesses to innovate and grow without investing heavily in physical infrastructure.

Support for Emerging Technologies
Data centres are essential for supporting emerging technologies like artificial intelligence (AI), machine learning, and big data analytics. These technologies require significant computational power and storage, which data centres provide.

Economic Impact
They contribute to the economy by creating jobs and supporting the digital economy. These facilities are often located in areas with favourable conditions for energy networking infrastructure, contributing to local economies.

Data centres have evolved significantly over time. Initially, they were on-premises facilities owned by individual companies. Today, many data centres are operated by cloud service providers, offering virtualised IT infrastructure for shared use by multiple customers.

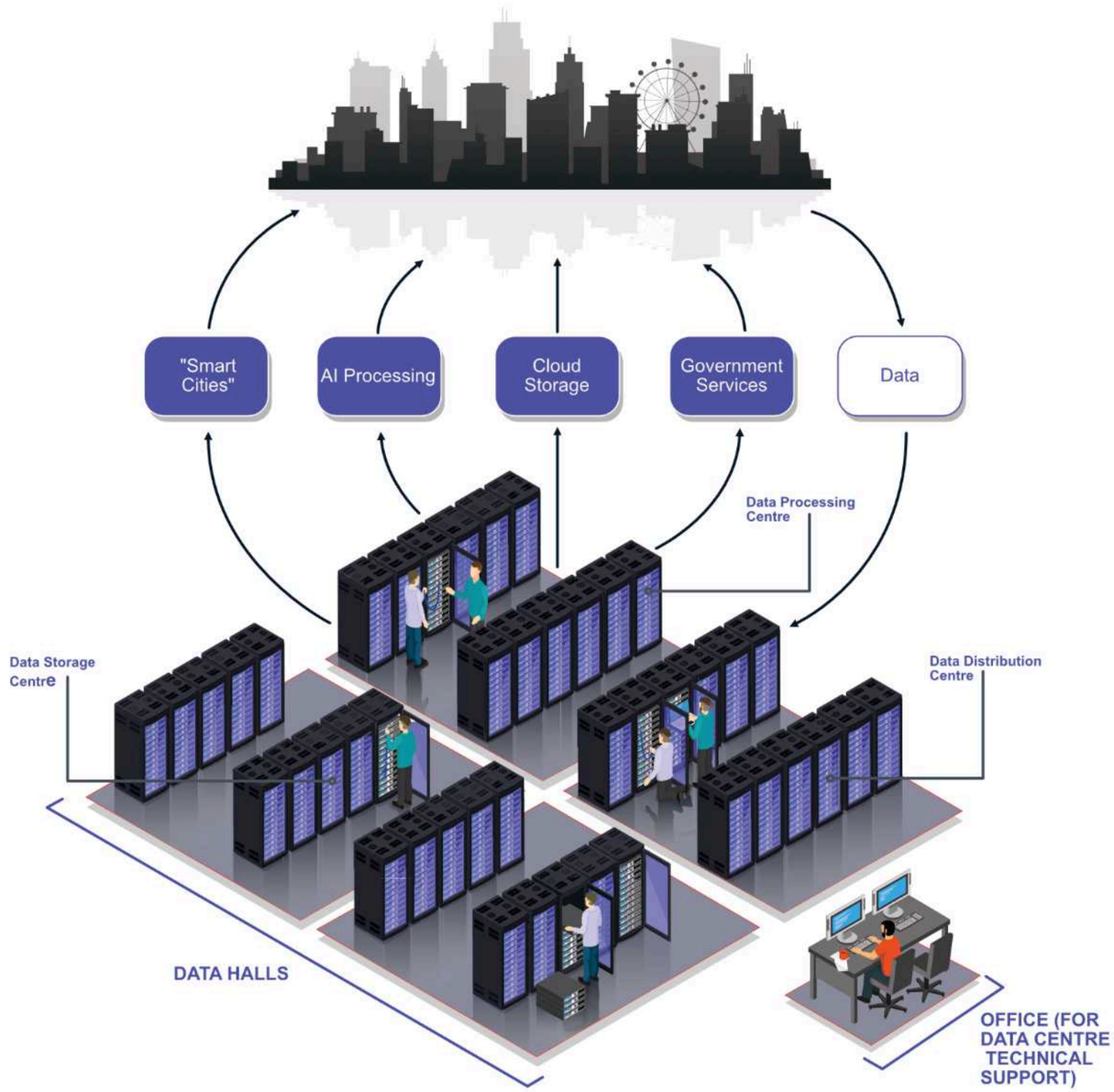


Diagram that represents the internal operations of a typical Data Centre facility.

3.3 What is a Battery Energy Storage System?

Grid-scale energy storage is the large-scale storage of electricity within an energy grid, used to balance supply and demand, increase grid resilience, and support the integration of renewable energy sources. Battery Energy Storage Systems (BESS) are an increasingly important component of the UK energy system. They offer storage for intermittent energy systems, like wind power and solar, where the energy can be stored and then released when the power is needed most, rather than wasted, or not collected at all. It is estimated that Britain will need over 25 GW of battery storage by 2050, 25 times that which currently exists today.

Broadly, energy storage provides the following benefits:

- **Enhances grid reliability and resilience** – provide backup power during outages or disruptions.
- **Facilitates renewable energy integration** - surplus energy, such as that from wind or solar power, can be stored for future use.
- **Reduces need for fossil fuel peaking plant** – supply power during peak periods, reducing emissions.
- **Supports decarbonisation** – reduce the need for fossil fuel power and enhance effectiveness of renewable energy.

The Proposed Development seeks to support the transition over to a zero-carbon energy system, and achieve net zero carbon emissions by 2050, by providing a large-scale BESS on the Site, in addition to the data centre critical infrastructure.

Indicative image of a typical BESS

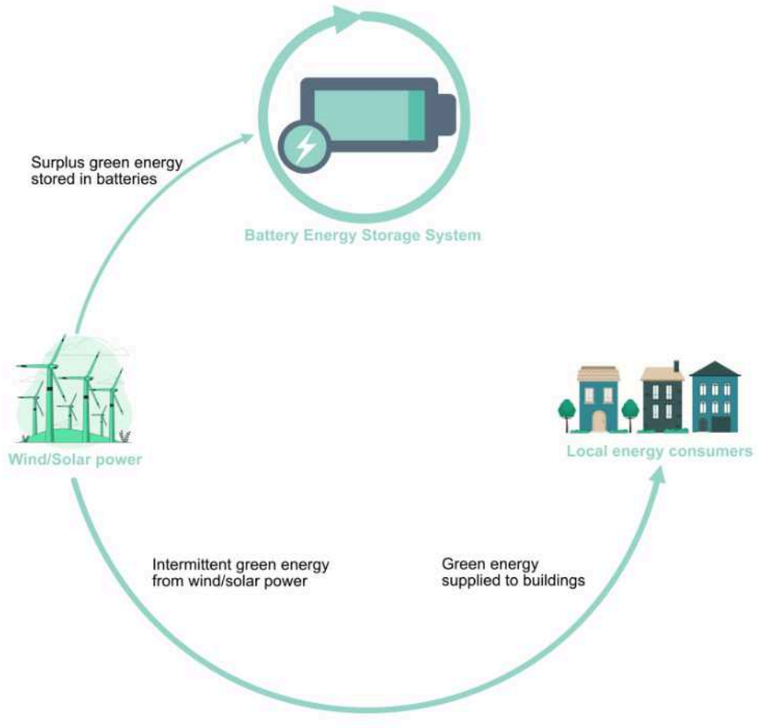


Diagram that represents the typical operations of a typical BESS facility when there is regular provision of renewable power from the grid

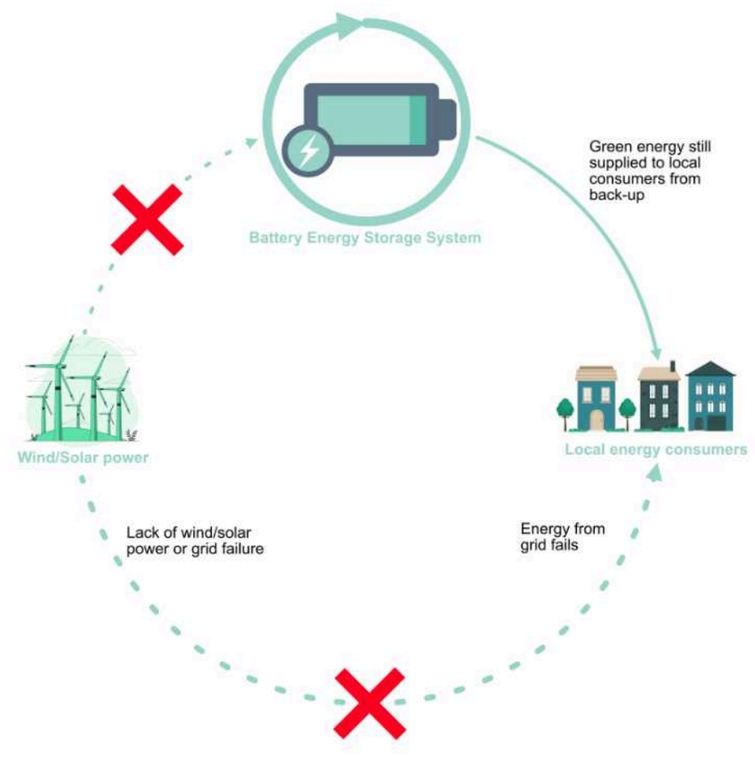


Diagram that represents the typical operations of a typical BESS facility when there is a lack of power from the grid

3.4 Data Centre Scheme Components

A data centre is a high-tech facility with a sophisticated network of systems and services to support efficient, uninterrupted operations. These operational demands create specific spatial requirements that significantly influence the building's massing and layout.
The primary components of this scheme include:

Site security fence and site single point of entry. High-level security is essential for data centres, which is managed through a single, secure entry point at the perimeter. Access to different facility areas is further controlled with additional security protocols to ensure only authorized personnel can reach sensitive areas.

Car park: For visitors and occupiers of the Office accommodation.

Road network that provides vehicular access to all components for maintenance operations.

Data Halls: At the core of the data centre are the data halls, housing the computer racks that secure and manage digital data. These are supported by an advanced network of cooling and electrical systems to maintain optimal performance. Data hall dimensions are driven by the standard modular dimensions of a computing server rack, arranged into specific length “hot and cold” aisles to ensure efficient cooling distribution. An industry standard computing load per square meter tailored to the requirements of the cloud computing market has been adhered to.

Cooling Systems: Given the significant heat generated by computational processes, robust cooling systems are essential with cooling units adjacent to the data halls for efficient temperature control. Heat rejection plant is placed at the roof level to minimize required footprint on a given site.

Electrical Substation: Supporting the power needs of the data halls, the electrical substation converts high-voltage electricity from the grid into the necessary mid- or low-voltage levels. This facility is usually a structure physically separated from the main Data Centre building, with its own access, ad is operated by a utility provider. This component requires high levels of ventilation and secured perimeter.

Emergency Generators and Fuel Storage:
Reliability is critical for data centre operations, necessitating the installation of backup generators to ensure uninterrupted power during outages. In the event of a power failure, these generators automatically activate to maintain continuous data processing. To support their operation, the equipment requires sufficient clearance for good ventilation and a vertical exhaust system for efficient airflow management. The generators are housed in containerised units within prefabricated enclosures, to enable efficient and sustainable off-site manufacturing. Standard unit sizes along with the necessary clearances for ventilation dictate the dimensions of the plant gantry zone.
Fuel for the emergency generators is stored in prefabricated containers, which are easily accessible for refuelling vehicles. Industry standards mandate that fuel storage must provide sufficient capacity to keep the generators running for a minimum of 48 hours, ensuring robust operational resilience in extended power outage scenarios.

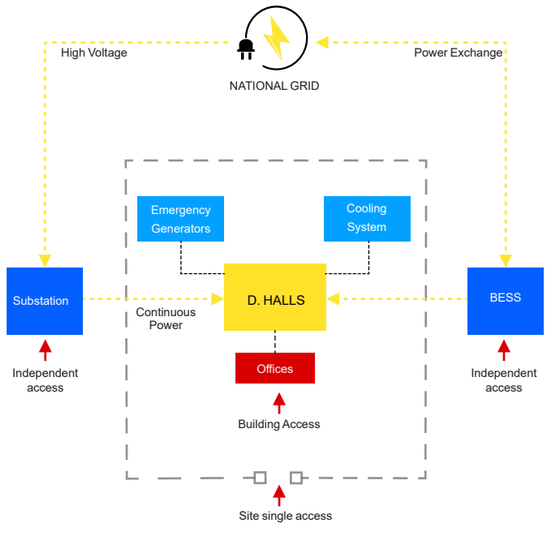
Batteries: Batteries provide a crucial buffer during power transitions, as they deliver immediate power to the data halls while the generators activate. This redundancy guarantees that computing processes are consistently supported by uninterrupted energy.

Loading Bay: A secured loading bay accommodates the data centre’s logistical needs, receiving, cataloguing, and distributing technical equipment to the data halls and plant rooms for ongoing maintenance and upgrades.

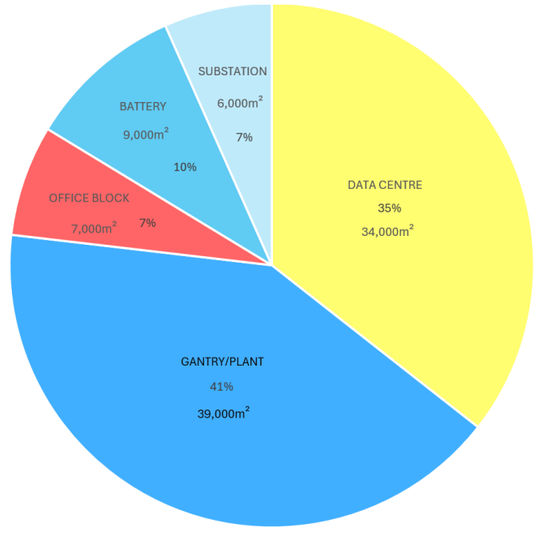
Office Accommodation: Office spaces support essential business functions, housing technicians and administrative staff necessary for the data centre’s 24/7 operations. Positioned near the data halls and emergency generators, these areas facilitate regular maintenance checks and provide the main entry point, which includes a secure check-in at a controlled single access entrance. Tenant requirements from major tech companies prescribe a specific ratio of office area provision per unit of computing power in a data centre facility.

Image of a typical electrical substation. Dimensions vary in each project.

Image of a typical fuel storage facility. Dimensions vary in each project.



Representative diagram of the functional relationships of the different components of the Manor farm Data centre and BESS.



This pie chart represents the amount of new development area that a new Data Centre and BESS require to operate. The design team has uses this as a brief for design development.

3.5 Zoning and Massing Explorations

Zoning And Massing

The multidisciplinary team evaluated several configurations to optimize the arrangement of key components, beginning with the configuration of the computer racks layouts, crucial for ensuring the data centre's operational efficiency. Recognizing the space requirements for the site's power infrastructure, the team aimed to minimize the building footprint seeking to increase the opportunities to keep the scheme within previous developed land, create larger areas of natural soil and enhance biodiversity across the site.

Multiple iterations layouts for data halls and generators were explored, ultimately concluding that a multi-story structure for the Data Halls and generators would minimize the required footprint of the facility while ensuring the required plant could be placed close to the data halls it served – ensuring efficient distribution of services and safe, efficient operation of the facility.

Furthermore, the team analysed options of different orientations and positions of these components across the site, and assessed their relationship with the site perimeter, neighbours and context, especially the relationships with the Colne Valley, heritage assets and residential neighbourhoods. The team used surveys and 3D digital tools to explore and spatially assess the options. The location of the office facility, and generator gantry was an important design decision, as the office accommodation activities could help to activate primary elevations, while the Gantry should preferably be concealed. The diagrams in this page show some of the design explorations undertaken.

Given the distance between Parcel A and Parcel B, the existing vehicular access on Poyle Road, south of Plot A, was identified as the ideal main entrance, offering strong connections to bus stops and the surrounding industrial area.

The next stage involved assessing the visual impact of multi-story structures on the local context and considering other site constraints in the design process.

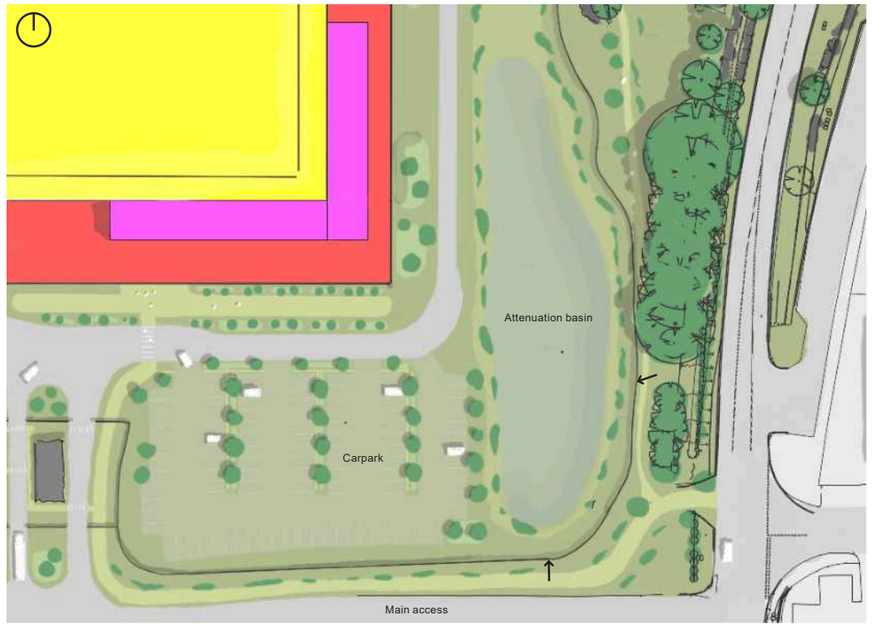
The diagrams in this page show some of the design layouts and 3D massing explorations undertaken during the design process

Urban Realm and Accessibility

The design team explored ways to connect existing public footpaths and bus stops on Poyle Road with the nearby Arthur Jacob Nature Reserve from the earliest design stage, while still accommodating necessary operational elements of the scheme such as vehicular access and parking. Layout options were developed to optimise parking, define tree and landscape zones, and incorporate SUDS features.

The location of the fence was carefully considered to ensure it meets the security requirements of the proposed development while maintaining a generous relationship to the public frontage along Poyle Road. 3D concept visualisation were analysed to explore the various options as can be seen on this page.

These are diagrams in plan and 3D to show some of the massing exploration during the design process.



These plans are design explorations of the landscape configuration for the eastern side of the plot, near the main entrance, including layout changes for the car park, fence and attenuation basin. The fence location is indicated with a black arrow.

Façade Articulation

Throughout the design process, and following the definition of the primary elevations, the team explored various facade articulation options for each building component. Based on feedback from planning officers during pre-app consultation, the team incorporated requirements of the Slough Borough Council's Design Code for the Simplified Planning zone (SPZ) at the Slough Trading Estate. Though it does not apply to the site, key considerations of that documents were implemented, including:

Layering

- Expressed structural elements
- Contrasting colour / material treatments
- Rhythm of fenestration
- Expression of Base / Middle / Top
- Crown expressed

Elevation treatment to add depth, and variation of texture, scale and types of materials.

Entrances expressed with different elevation treatment.

Roof plant should be screened if possible.

For the office accommodation façade, the team tested diverse architectural expressions and textures. Some options highlighted the internal structural grid, while others took a more abstract approach. We experimented with articulation depth, grid spacing, massing variations, solar gain mitigation features, and the architectural treatment of the crown. Additionally, orientation trials for the ventilated plantroom facades and screening were conducted, comparing horizontal versus vertical configurations.

The images are some of the many office façade explorations undertaken and represent a view from the main access (from Poyle Road) looking north-west.

Façade Materiality

The design team conducted an on-site analysis along Poyle Road and the surrounding area to observe the local materials, colours, and tones. While the nearby industrial estate offers a diverse palette of materials and colours—such as metal and painted render—other structures with traditional character feature masonry, brick, and clay. Drawing on these references, the team explored materiality options for the proposed building volumes and façade articulations, employing 3D modeling and visualisations. A range of colour tones and materials, including metal, precast concrete, brick, glass, and acoustic metal louvres were tested.

These are some of the draft early images used during the design process to assess the landscape visual impact of the development. The red dashed line represents a preliminary massing concealed by vegetation or structures.

3.6 Landscape Visual Assessment

A specialised team of consultants collaborated with the design team to evaluate the landscape and visual impact of the massing options, focusing on a 1-km study radius. As outlined in the previous chapter, different camera locations around and beyond this area was tested, identifying visual receptors and landscape value points. Particular attention was given to close and distant views along Poyle Road, the Horton Bridleway, and the Arthur Jacob Nature Reserve, among other areas frequented by local residents and visitors.

The analysis concluded that the character of the Site would change following implementation of the Proposed development, however, no landscape features of value would be lost, and the proposed built form would be experienced within the context of the existing industrial estate. This appraisal concludes that the Proposed Development can be accommodated without resulting in adverse effects on the prevailing landscape character of the wider area. Adverse visual effects are only predicted to be experienced by users of Poyle Road and residents of the two properties between parcel A and Parcel B and these effects are predicted to be minor in scale.

3.7 Consultation Process

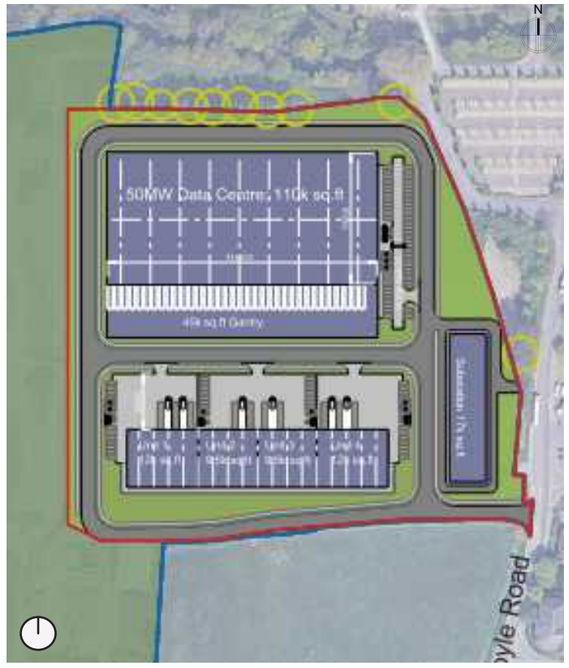
Pre-App Meeting – Dec 2023

Presentation:

- Data Centre and Generator Gantry locatedin the north-east end of Parcel A.
- The substation was positioned along the eastern boundary and screened with trees and landscaping.
- Smaller industrial buildings were placed south of the main data centre volume, separated from Parcel A.
- One of the two existing vehicular entrances on Poyle Road was shifted slightly north to serve as an emergency access point.
- Access to the battery units at Parcel B is planned via a third entry point at the roundabout.

Comments from officers:

- Officers were supportive of the redevelopment of parcel A given its previous uses/activities.
- Officers requested to explore moving the BESS to parcel A, and substation under the Data Centre volume.
- Suggested that the design considers a mini roundabout as part of the access.
- It was requested a thorough alternative site assessment.
- There was support for development that promotes good economic growth to the borough.



Parcel A Plan

Pre-App Meeting – 10th Oct 2024

Presentation:

- Baseline studies for the LVIA and emerging design proposals were presented.
- Vehicular entrance is consolidated with a single point of access using one of the existing entrances. This entrance will connect internally to the Battery Storage at parcel B. An emergency entrance is proposed at the roundabout of Parcel B.
- The substation was repositioned to the southwest area of Parcel A, with the office component facing the northern edge to establish a visual connection with the Hilton Hotel.
- A green buffer was introduced between Poyle Road and a public footpath connecting to the nature reserve to the west.

Comments from Council Officers:

- Suggested rotating the data centre building 180 degrees to position the main entrance toward the primary approach/ viewpoint.
- Indicated that the proposed height and massing were generally acceptable, comparable to the 2004 data centre decision for the land to the north.
- Referred to the SPZ's Mandatory Design Code, specifying requirements for materials and colours.
- Expressed a preference for improved pedestrian crossings and footpath connections to bus stops.
- Noted that the main vehicular access may require a traffic island to minimize right-turn risks.
- Consideration of car parking provision in light of differing from standards for B8 Ligh Industrial Use Class. Car parking provision should reflect jobs.

Parcel B Plan

Parcel A Plan

Consultation with Stakeholders

Alongside the formal pre-application meetings between the applicant and the council, the following non-statutory meetings with key political, local community, environment and business stakeholders took place (or are scheduled to take place) during the design phase of the project to help inform preparation of the planning application:

- Slough Borough Council - June 2023
- Slough Borough Council - July 2024.
- Hilton T5 Hotel - October 2024
- Groundwork South (representing the Colne Valley Regional Park) - October 2024
- Thames Valley Berkshire LEP - November 2024
- Heathrow Airport - November 2024
- Colnbrook with Poyle Parish Council - November 2024
- Thames Valley Chamber of Commerce (TBC) November 2024

Public Consultation

After distributing information flyers to c450 properties in the area, the applicant team held a public consultation event on 6 November 2024 at St Thomas's Church in Colnbrook. The flyer was also posted on the Colnbrook Community Association and St Thomas's Church Facebook pages and on local notice boards. Invitations were also extended to both commercial and residential tenants located on the Manor Farm site itself, and neighbouring properties on the West side of Poyle Road.

Total attendance at the exhibition was 14, consisting of 2 Applicant tenants and 12 residents. Feedback forms were made available to visitors, with six completed and returned. The key themes of the feedback were an appreciation of the significant reduction on traffic generation that the proposed development would bring when compared to the current operations on the site, the value of the data centre as 'technological hub' and source of new jobs, and the scheme's environmental credentials.

Images of the public exhibition set up.

Members of the public engaging with the applicant and design team.

Informative boards presented in the exhibition and available online.