Proposed Design

4.

4.1 Design Principles

The Applicant and the design team have developed an extraordinary and sustainable Data Centre and BESS for the site, emphasizing environmental responsibility and integration into the community. We believe this scheme is raising the bar for the Data Infrastructure in Slough and the UK, following core principles:

Celebration of the Digital Age with exceptional-quality architecture
The Data Centre represents a vital infrastructure that supports the advancement of Slough and the UK's economy in the digital age. This design takes pride in contributing to that progress, embracing an honest visual approach that highlights the internal functions of its various components. Each volume celebrates the specific uses within, creating a cohesive expression of interdependent systems that collectively drive the facility's operations. Further, the office façade is the most prominent element of the scheme and is thoughtfully articulated with high-quality materials that respond to the local context, achieving exceptional architectural standards.

Unique Public Realm Benefit
Typical Data Centre developments often establish secure boundaries along the public realm, creating a hard urban edge. In contrast, the proposed design is providing key strategies:
First, it sets the massing back on the eastern side, creating a 200-meter-long public open space varying from 34 meters at its widest to 10 meters at its narrowest. Maximising opportunities for landscape in other areas of the site, the scheme enhances green space and ecology routes. Secondly, the scheme provides off-site Green Belt enhancements with a new route to the Arthur Jacob Nature Reserve for community use from Poyle road. The internal areas of the building that are regularly occupied have been strategically positioned to help activate the public realm. Finally, the project also extends its benefits beyond the site boundary by proposing upgrades to nearby bus stops and footpaths, addressing their current condition. By integrating these features, the development makes a meaningful contribution to the surrounding public spaces and enhances local biodiversity through a carefully designed landscape intervention.

Stakeholder Input
The team appreciates the valuable insights from planning officers and other stakeholders, which have informed the scheme's development. Specific attention was given to feedback from Slough planning officers during the October 2024 pre-app meeting, leading to the integration of SPZ design guidelines and the relocation of the office accommodation to the southern end of the Data Cluster in Parcel A.

One of the first sketches for the Data Centre massing design proposal in Parcel A, looking northwest from the Hollies building sidewalk. Materiality and tone is indicative only and will be described in the next pages.

Plan view of the proposed development with the DC in Parcel A, BESS in Parcel B, and new connection to Arthur Jacob's Nature Reserve.
Information outside the site boundary is indicative only

4.2 Massing and Building Components

In Parcel A, the proposed design emphasises a green buffer along Poyle Road to enhance screening in areas where the site is most visually exposed.

This approach organises the three primary structures—the Data Centre, Generators, and Office Accommodation—into a cohesive cluster, each rising to three storeys. Positioned as far west as possible, this cluster increases the distance from both the main entrance on Poyle Road and the neighbouring Hollies building. The Generator Gantry and Office buildings, located to the north and southeast of the Data Centre, are designed with lower heights, creating a smooth transition in building elevations across the cluster.

• **Office Building**
Situated at the southeast corner of the Data Cluster, the three-storey office building serves two primary purposes. Firstly, as the site's most prominent structure, facing Poyle Road and The Hollies, it features high-quality architectural detailing, further discussed later in this chapter. Secondly, its habitable spaces are arranged to activate Poyle Road and the new public footpath. The ground and first floors connect internally with the Data Halls, resulting in floor-to-floor heights of 7 metres. To reduce building bulk, the second-floor height is reduced to 5.5 metres. At roof level, a recessed and screened plant room is set back from the cornice to minimise visibility from the site entrance and Poyle Road.

• **Data Halls**
The three-story Data Centre is screened by the office building and appears as an independent structure, with a single access point via the adjoining office. The Data Halls configuration force having a symmetrical layout to enhance efficiency, moreover, the position of the projected cores and raisers have been rationalised in the floor plans to an integral part in the massing and façade expression. These cores are helping to break down the bulk and massing, with a stepped composition in both east and west elevations. The sun path will cast different shadows highlighting the relationship of these volumes. Finally, roof-mounted cooling equipment is recessed from the main cornice to reduce visual impact and consolidate it as a separate crown massing.

• **Loading Bay**
Integrated within the ground floor of the office building at its western end, the loading bay shields maintenance activities from the site entrance and parking area.

• **Generator Gantry**
The generator units are located in a 3-storey gantry structure, and the massing is expressed as a separate, lower-height volume than the Data Centre, contributing to a balanced massing composition.

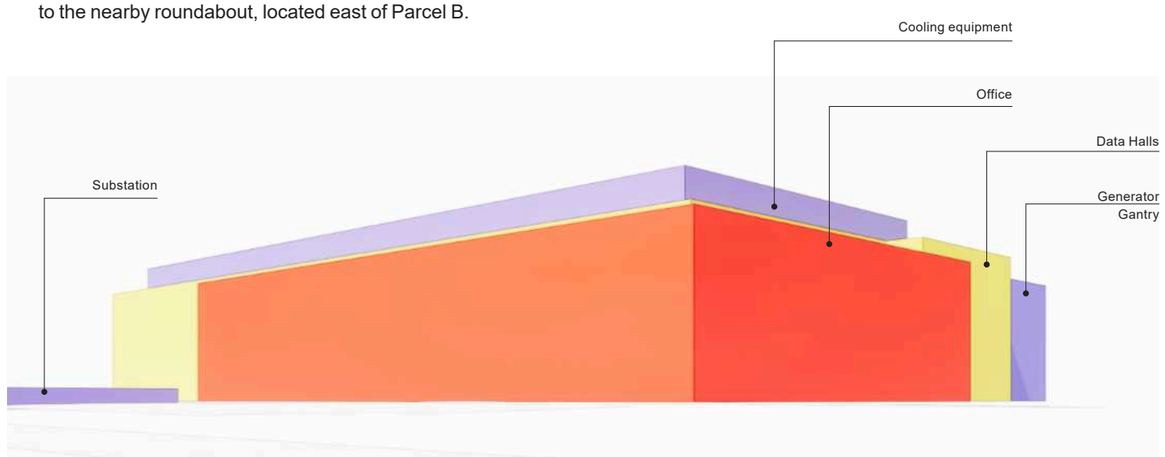
• **Fuel Storage for the Generators**
The fuel storage units are located along the north-west boundary of Parcel A, strategically positioned to be visually screened from the public realm on Poyle Road. These units are accessed via the vehicular circuit surrounding the Data Centre. The Fuel cylinders have been implemented vertically to minimise it's footprint, allowing for the maximisation of on-site biodiversity.

• **Substation**
Located at the southwestern edge of Parcel A, the substation is an independently fenced facility, screened from the carpark and main access points.

• **Parking**
Positioned away from Poyle Road to maintain the green buffer, the parking area minimises visual impact on the surroundings.

• **Battery Energy Storage System (BESS)**
Situated on Parcel B, the BESS facility is visually screened by existing vegetation on all sides. Given the infrequent access and maintenance requirements, it will connect to Parcel A's main access via a link road, serving as the primary point of entry. An additional emergency access point will be provided to the vehicular rotunda to minimise traffic disruptions.

• **Site Security Fence and Access**
Parcel A facilities are protected by an anti-climb perimeter fence, with a 3-meter no-build buffer on each side. A single vehicular access point from Poyle Road reuses the existing entrance near The Hollies building, leading to a security checkpoint adjacent to the screened substation.
The fenced Parcel B equipment includes an emergency exit to the nearby roundabout, located east of Parcel B.



Diagrams representing the visual relationship of the components in the arrival experience from the main access, looking north-west.

Poyle Channel

Indicative future footpath to
Arthur James Nature Reserve

Wider Site Ownership Boundary

Vehicular circuit

Security Fence

Footpath

Hilton Hotel Car Park

Fuel storage

Gantry Equipment

Gantry

Flues

Chillers

Security Fence

Site Boundary

Colndale Road

Equipment

DATA CENTRE

Loading Bay

OFFICE

PVs

Rain Garden

Existing Colndale Rd
Bus Stop (northbound)

Landscaped Office Amenities

Improved Footpath Access

Substation

Landscaped Car Park

Landscaped Bund

Main Entrance for Pedestrians and Cyclists

The Hollies

Main Entrance for Vehicular Access

Exit Gate

Guard House

Entry Gate

Footpath & Cycle Lane

Development Boundary

The Hollies
Listed building

Rain Garden

Parcel B (BESS) Access Road

Poyle Road

DATA CENTRE

Key Plan

LEGEND:

Main Building Entrance

Guard House Entrance

Plan of the Parcel A and Data Centre facilities.

Note: Design and improvements outside of the ownership line are indicative only, and need to be coordinated with stakeholders and the Slough Council.

Link Road to Parcel A

Poyle Farm

Poyle Road

Blackthorne Road

Security Fence

Pumping station

Wider Site Ownership Boundary

Security Fence

BESS

Site boundary

Security Fence

BESS

Bus stop southbound

Bus stop northbound

Site boundary

Key Plan

BESS

Stanwell Rd

Poyle Road

Golden Cross Pub

Horton Rd

LEGEND:

Main Building Entrance

Guard House Entrance

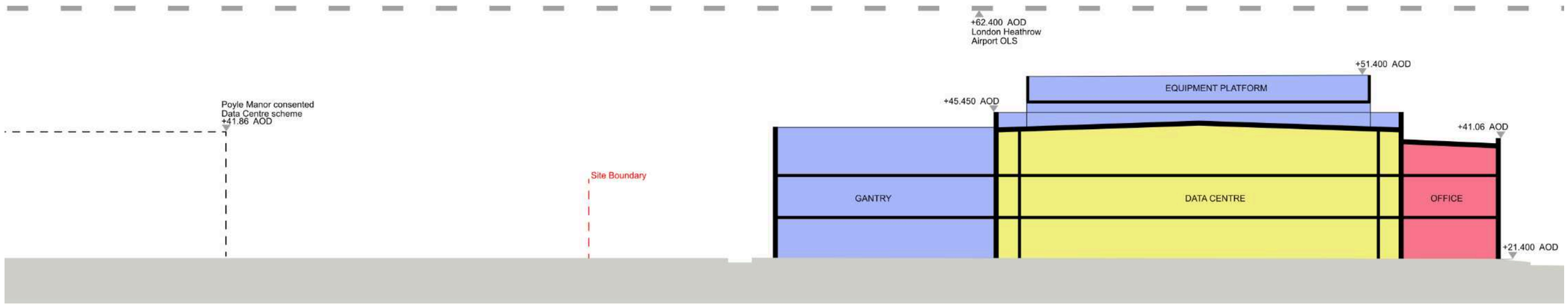
Plan of the Parcel B and BESS facilities.

Note: Design and improvements outside of the ownership line are indicative only, and need to be coordinated with stakeholders and the Slough Council.

4.3 Proposed Heights

The taller elements from the scheme are the Data Centre cooling systems located at the roof level, and the Generator exhaust flues, located at the northern face of the building cluster. Both of these elements have a maximum height of 30 m from the ground floor (AOD +51.4 m AOD). The proposed height will not impact the operations of the nearby airport, as it is below the London Heathrow Airport OLS +62.4

Further, the proposed massing heights are very close to the “Poyle Manor” Data Centre scheme consented by Slough council in 2002 (which had a top parapet datum of +41.86 AOD). While the Proposed Data Hall main cornice is slightly taller (3.59 m higher), the proposed generator gantry and offices are 0.8 m lower in height.



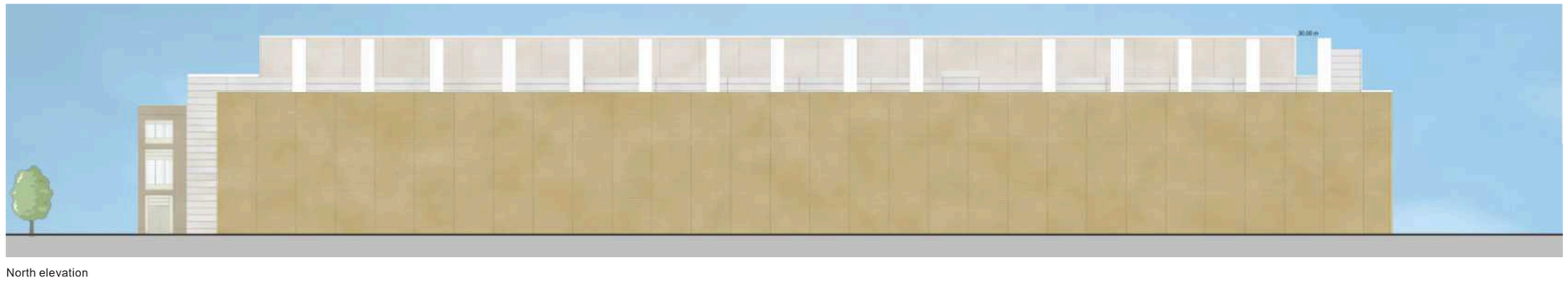
Section diagram looking east. The illustration shows the Data Centre building maximum heights in parcel A and the spatial relationship with the Consented Poyle Manor Data Centre Scheme.

View to the Data Centre building, looking north-west from the main access.

4.4 Facades

Having established the massing principles for the proposed development in the previous section, the following paragraphs describe the façade articulation for each building component. The design seeks to reflect the distinct functions within the Data Centre complex, proposing unique but complementary façade treatments across the three main volumes.

East elevation



North elevation

South elevation

West elevation

Office Building

As the most prominent structure from Poyle Road, the office building's design creates a human-scaled architectural presence with clean, technology-inspired proportions and details that evoke a lab or tech facility for human use. This purpose drove the choice of precast concrete and brick as primary materials, valued for their textured, crafted appearance. The design addresses the unique challenge of tall, 7-meter floor heights required for internal connectivity with the Data Halls through the following articulation and hierarchy:

1.Expressed Structure: The office building's design emphasizes its 5-meter structural grid and floors to create a human scale. To visually break down the building's length, the structure features a projected façade element that establishes a primary hierarchy of 3-window bays, creating a calm and balanced rhythm that emphasizes horizontality (with four bays on the east façade and seven bays on the south façade). Within each bay, two columns are expressed with a smaller projection and are integrated into the same material palette as the façade infill.

2.Base (Ground Floor): The ground floor's internal occupied spaces are positioned along the building's corner and eastern façades, strengthening the activation from Poyle road. Service areas, such as plant rooms, storage, and loading bays, are grouped at both ends of the massing, forming a solid masonry façade base that grounds the building and supports the lighter treatments above. To balance solidity with internal light access for spaces like the bike storage and loading areas, windows are placed behind perforated brick walls. The main building entrance is distinguished by a projected canopy that mitigates solar gain in this area and eliminating the need for louvers.

3.Middle (First Floor): Primarily tenant office space, the first floor features an increased number of windows, creating a lighter facade. A 0.8-meter solid upstand slightly reduces window height compared to the ground floor, following a classic architectural progression that reduces window size on upper floors while also concealing under-desk spaces within.

4.Top (Second Floor): With a reduced massing, the top floor further minimizes window dimensions and emphasizes horizontal proportions in the façade. The roof upstand is designed with a refined pre-cast concrete ribbed texture, accentuating the building's crown.

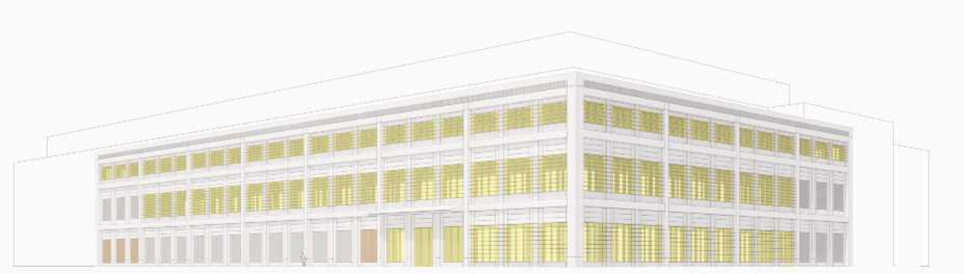
5.Window Louvers: Louvers integrated into the 3-bay cluster windows on the east and south façades provide passive solar control, reducing glare and heat gain in workspaces. The louvers' proportions and depth still allow the windows to contribute to use the internal activities to activate the façade facing Poyle road.

6.Roof Plant Room: The roof plant room is set back from the main cornice and concealed behind louvers, maintaining the building's 3-story silhouette by hiding it from the main elevations.

First Façade Hierarchy: Dark, beige-toned pre-cast deep elements define a 15 x 7 m structural frame on the ground and first floors, (15 x 4.3 m at second floor) establishing a prominent architectural rhythm.

Second Façade Hierarchy: The two columns within each cluster are articulated in brick, integrating seamlessly with the textured infill.

Third Façade Hierarchy: The light beige tone of brick infill introduces a crafted texture, contributing to the façade's solidity and improving solar gain control.



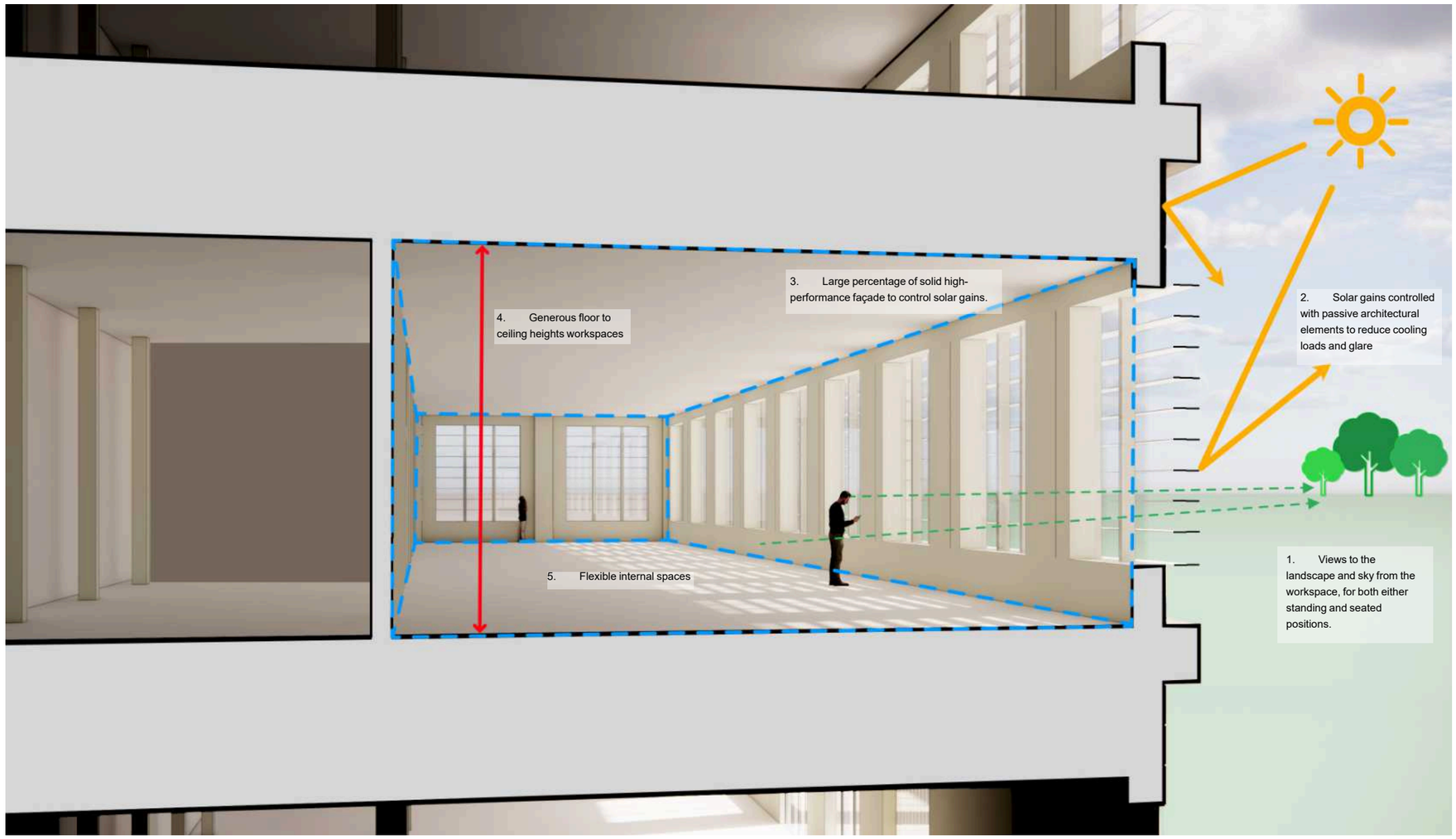
Fourth Façade Hierarchy: The entrance, windows, and internal occupied spaces are strategically oriented towards the eastern façade to engage with the public realm. Louvers and a projecting entrance canopy are incorporated to manage solar gains effectively.

7. Daylight and solar energy

The design team's study of sun path evaluates it's potential for integrating solar energy solutions as part of a sustainable design strategy. The site benefits from favourable solar irradiance levels, with a relatively open setting that minimises shading from surrounding features. The analysis focuses on the building's roof, which will provide optimal surfaces for photovoltaic (PV) panel installation, particularly on south-facing or near-south-facing slopes. This orientation will help maximise solar energy capture throughout the year, supporting the project's environmental objectives.

In addition to solar energy potential, the design will capitalise on natural daylight to improve internal environmental quality and reduce artificial lighting demand. Large, strategically placed windows will enhance daylight penetration, particularly in key habitable spaces. This approach not only supports energy efficiency but also promotes well-being for occupants by creating bright, airy interiors.

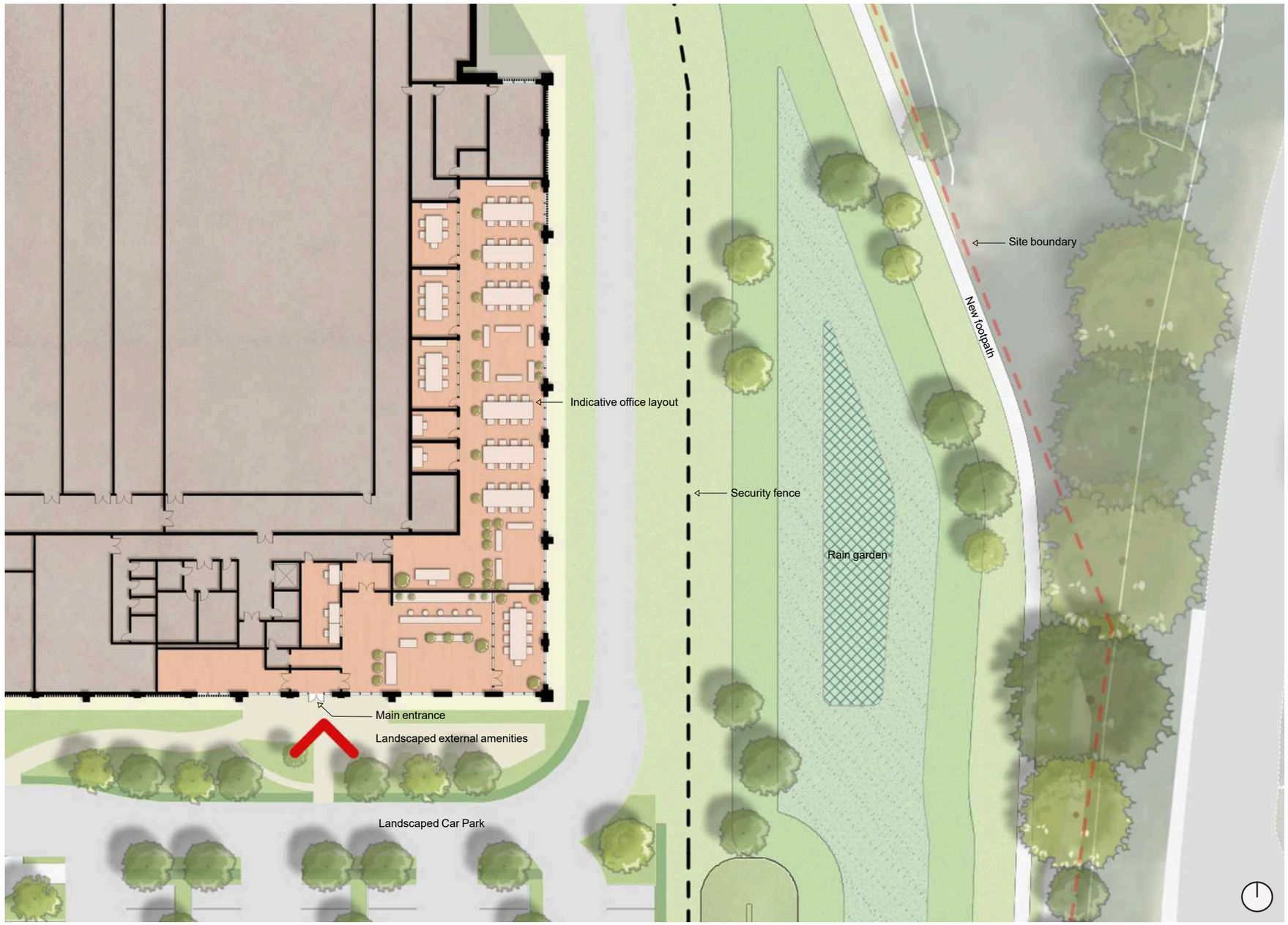
This sustainable approach will reduce the building's reliance on non-renewable energy sources, aligning with environmental objectives and enhancing operational efficiency.



Cutaway diagram of the first-floor workspace of the office, looking east. The façade solidity ratio and sustainability features are integrated into the design.

8.Office connection with the public realm

The office's occupied spaces, including the main access, security checkpoint, lobby, conference room, and tenant workspaces, have been strategically positioned at the eastern end of the building. This arrangement establishes a visual connection with the rain garden and public footpath, actively contributing to the urban activation of the surrounding area.



Ground Floor plan of the eastern side of parcel A, showing the relationship between the workplace internal spaces and the new footpath.

*Note: The internal layout is indicative only. The final layout will be subject to tenant fit-out.

9.Materials and Treatment:

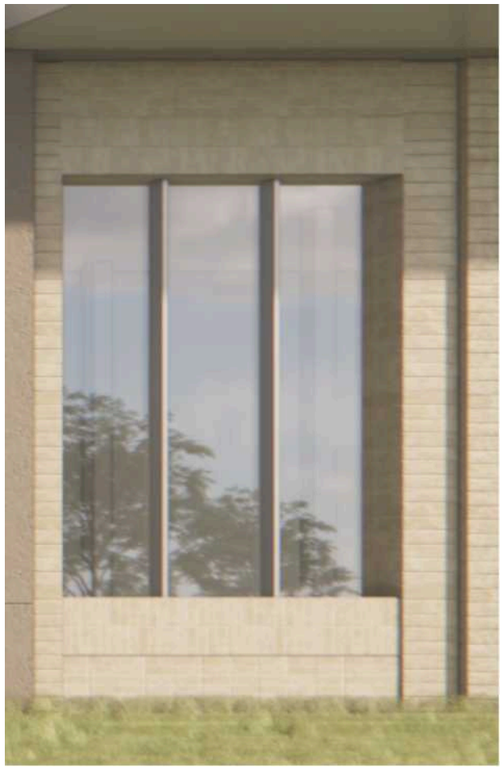
The architectural design seeks to reflect both historical and contemporary influences within the Poyle Road context. To achieve this, the proposal draws inspiration from two notable local landmarks: the rich brick textures of the south wall and north chimney of the Poyle Farm Listed Building, located nearby, and the roof and original structure of The Hollies, a listed building directly opposite the proposed site entrance.

The office façade employs earth-toned masonry, including precast concrete and brick, to create a warm and inviting entrance. As the most visible façade, its material palette prioritises natural textures that harmonise with the surrounding landscape. Brick units are carefully detailed to echo the craftsmanship of traditional construction, contrasting with the more abstract forms of the Data Hall. This thoughtful material selection bridges heritage references with a contemporary architectural language.

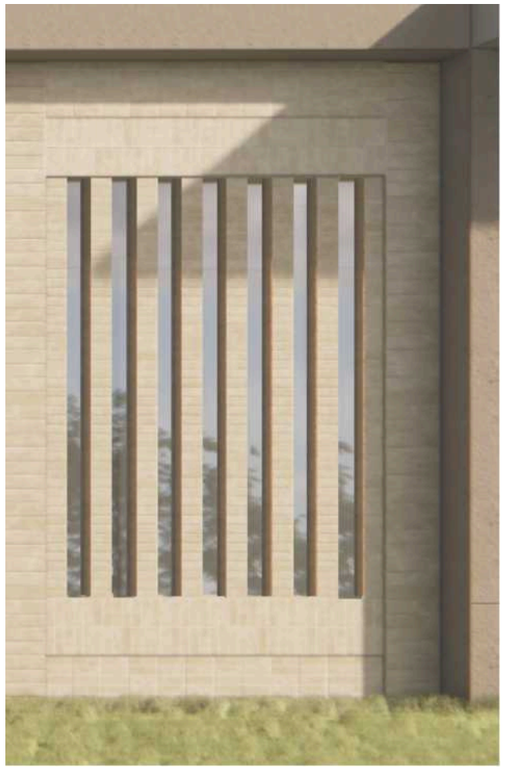
Variations in material colour contribute to a layered and crafted architectural identity, creating a meaningful connection to the surrounding architectural context.

Firstly, the three-window bay is defined by dark beige precast columns, complemented by expressed slab edges and a crowning detail, providing a robust foreground against the lighter tones of the Data Centre and roof louvres.

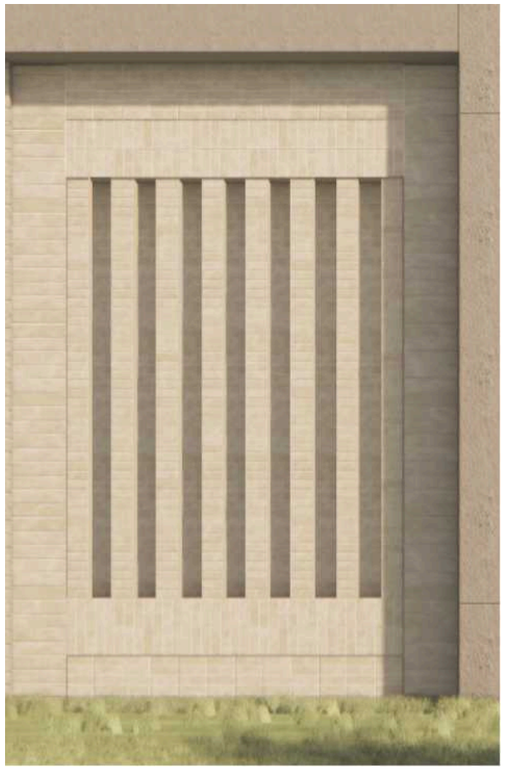
Secondly, the Brick Infill panels are positioned between the 5 m grid brick columns. This light beige brick infill comprises three distinct panel types, each tailored to the internal functions of the building. These infills are a contemporary interpretation of the southern façade of Poyle Farm, combining functional efficiency with crafted detailing.



Window within a brick bay: Frequently occupied areas, such as workspaces, will feature light beige louvres for solar control. Ground-floor windows near the main entrance are shaded by a projecting canopy, negating the need for louvres.



Windows with brick screen: These are used for internal spaces that benefit from daylight, such as cycle storage and loading bays. Externally, they appear as solid brick panels, ensuring continuity in façade expression.



Solid brick infill wall: Designed for non-daylit areas like plant rooms and storage, these walls include recessed brick details and crafted orientations, adding texture and depth.

Modularity and Future Adaptability
The external wall systems are modular, enabling potential reconfiguration to meet future internal functional requirements. This flexibility ensures the building can adapt over time while maintaining a cohesive architectural language.

Poyle Farm brick façade

Indicative material palette for the office façade: Dark beige precast (left) and light toned brick-face façade (right).

Visualisation of the hierarchies and relationships of the elements in the office building façade External landscape is indicative only).

Data Centre
The Data Centre volume is designed as a windowless, smooth, and abstract form, contrasting with the more visibly textured office building. This effect is achieved with a horizontally proportioned aluminium cladding panel system that mirrors the horizontal articulation of the office façade. The panels are arranged in a randomized pattern of subtly varied light earthy tones. Roof equipment is recessed and screened with light-toned metallic reflective louvers, which offer a contrast to the masonry façade of the office building.

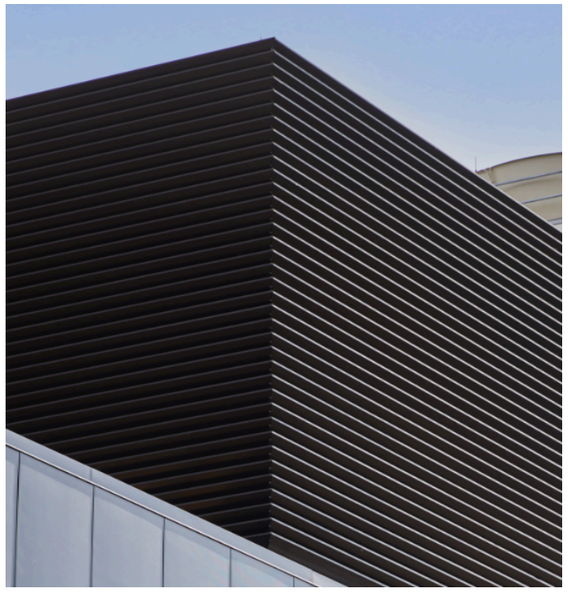
Generator Gantry
The gantry is a structure designed to meet the ventilation requirements of emergency generators located in an external environment. This three-storey structure is clad in acoustic metal louvers that are horizontally oriented, visually aligning with the façades of the Data Centre and office buildings. The louvers are arranged to express the floors, breaking down the gantry's height and emphasising its horizontal alignment. Both the louvers and the visible structure are finished in a dark bronze tone, creating a strong contrast with the lighter tones of the Data Centre. Exhaust flues are metal-clad to integrate seamlessly with the overall colour palette.

Security Guard House
The security guard house features brick cladding and metal trims that have been specifically selected to harmonize visually with the office building, ensuring a cohesive arrival experience.

Substation
The substation is an open-air facility housing electrical equipment. The perimeter will consist of a black-toned security fence designed to provide visual permeability while allowing for adequate equipment ventilation.

Fuel Store
The fuel store is an open facility with standard metal exterior cladding of dark grey recessive colour. Considering its strategic location within the site (concealed from Poyle Rd) no additional screening are needed.

BESS
The Battery Energy Storage System (BESS) will be surrounded by a security fence and heavily screened by existing vegetation. The equipment does not require cladding and will remain open to the elements.


Indicative image of a metal louver façade to be used in the Emergency Generator Gantry.


Indicative image of an insulated metal panel to be used in the façade of the Data Hall volume.

Indicative view looking south along the proposed new public footpath inside Parcel A

4.5 Landscape Design (Pegasus)

Vision

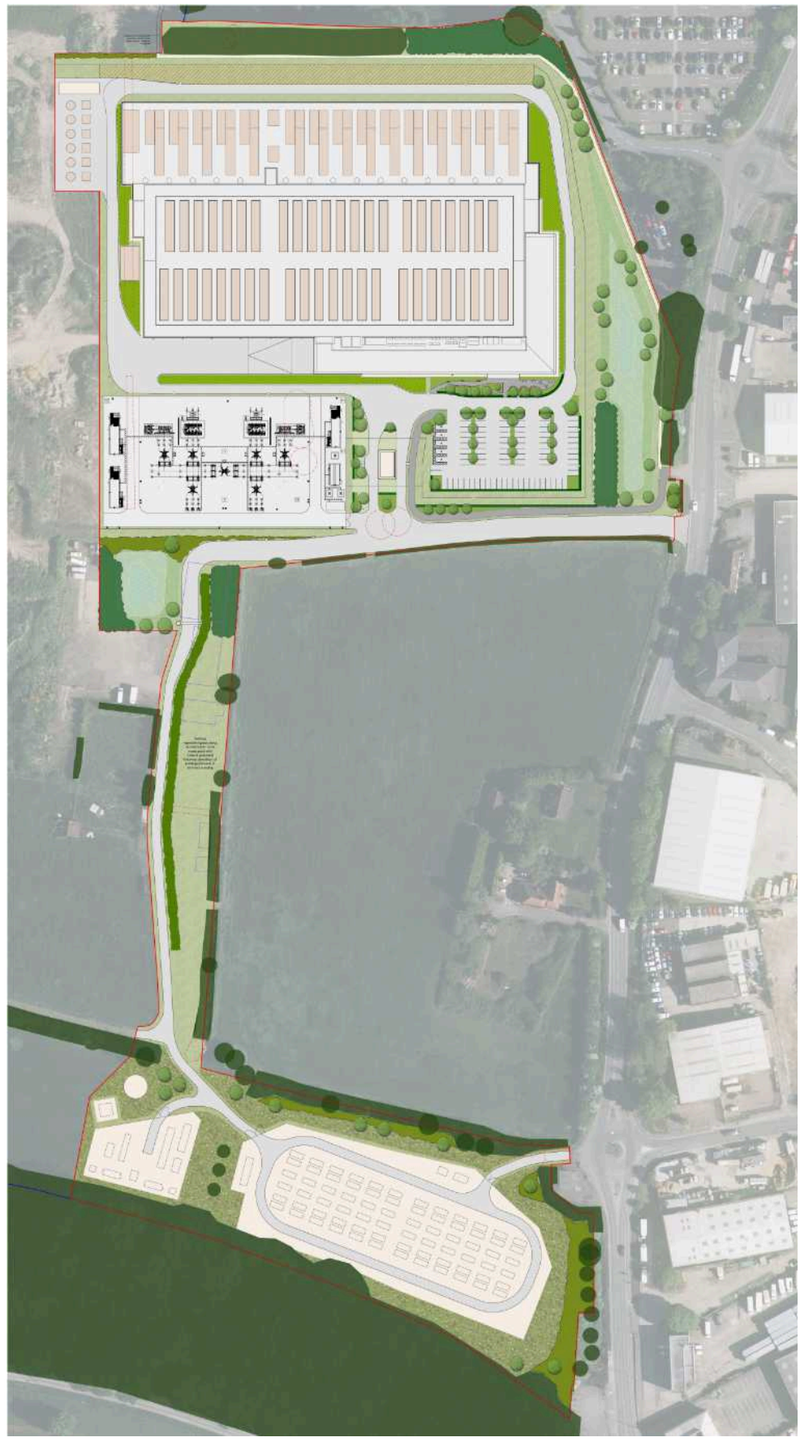
The vision for the landscape proposals at Manor Farm, Poyle is to provide a successful landscaped environment which respects the existing landscape character, supports the biodiversity of the spaces and provides a pleasant space for users.

Key Landscape Principles

- To create a high-quality environment with an attractive green outlook.
- Retain and enhance the natural environment, supporting the existing local landscape character.
- Protect, create and support habitats for biodiversity, allowing species to survive and thrive.
- On-site landscape treatments enhancing the wider green belt context.

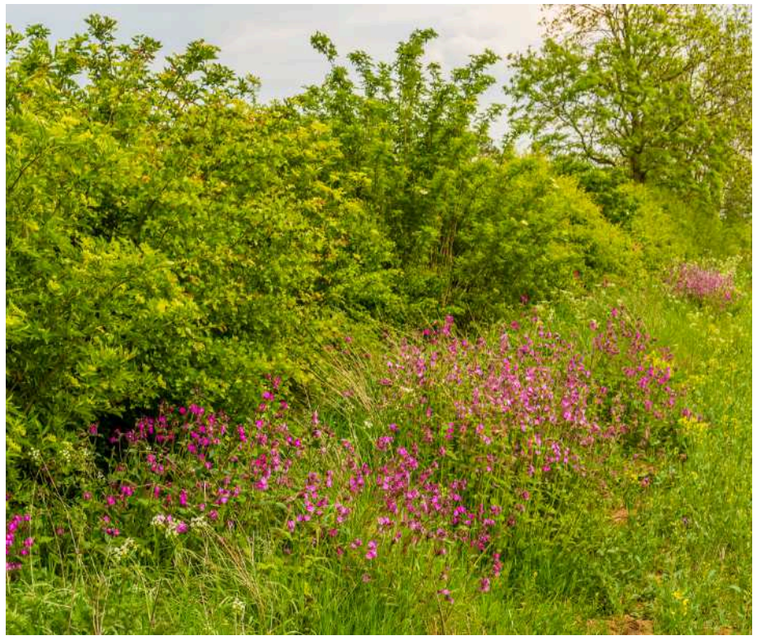
The character of the landscape proposals within the green infrastructure will be broadly informal and naturalistic, with the strong use of design which reflects and enhances the existing landscape character. This will be implemented through the use of native / semi-native plant species. Fronting the main entrance to the building, and the car park, landscaping will take on a semi-formal/formal character, defining the destination space and reflecting the form of the building.

Encompassed within the landscape proposals will be the fulfillment of landscape enhancements which will provide benefits to the landscape character and ecology. This will include providing new habitats and expanding those already existing on site, such as planting new tree groups, shrub areas, long grass / wildflower meadow.



Feature entrance

Ornamental planting



Rural hedgerow with wild flowers

SuDS Basin

Low formal hedge

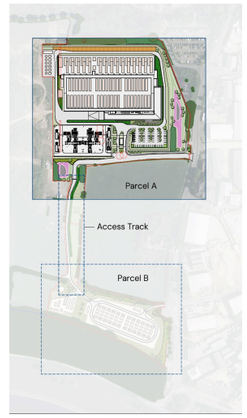
Wildflower meadow with trees

Parcel A Green Infrastructure

To the northern boundary of Parcel A large swathes of existing vegetation will be retained, with additional planting in the north-east corner to filter views and extend the existing habitat. The eastern side of Parcel A is characterised by the inclusion of an attenuation basin forming part of the sustainable urban drainage system of the site, this will be appropriately landscaped with a wildflower meadow which is tolerant of seasonally wet soils, and planted at the edge with trees which can thrive on wet soils. A bund on the south-east portion of Parcel A will provide additional vertical reach to a block of woodland planting, aiding in the screening/softening of the built form from those approaching the entrance.

Within the car parking area and to the entrance space the planting will change in character to become more formal and regular in style. To the car park hedgerows, ornamental planting and regularly spaced trees will relax the formality of the hard landscape and provide seasonal interest. The entrance space which leads into the building itself will be landscaped to provide a visually pleasing and welcoming environment, guiding users to the main door along landscape edged footpath routes. To the east of the entrance raised beds are proposed to bring structure and height to the planting, where users will have the opportunity to enjoy the landscape by using the provided benches, along with seats/tables for group meetings/team lunches.

Around the periphery of the data centre itself, rainwater gardens will provide a verdant feature, forming another part of the Sustainable Urban Drainage System they will collect/absorb the rainwater from the roof, slowly dispersing it. Planting will be with shrub/ornamental species which are tolerant of seasonally wet soils.



Location Plan - Scale 1:5000

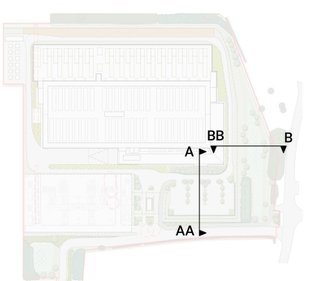
KEY - Parcel A

- Application boundary
- Blue line boundary
- Indicative size and extent of existing vegetation to be retained to BS5837:2012. Dashed line shows RPA.
- Indicative extent of existing vegetation to be removed.
- Existing buildings to be demolished
- Tree planting
- Native woodland planting
- Areas of native scrub planting
- Translocated hedgerow (total length 169 lm within Parcel A and Access Track)
- Ornamental planting
- Singles species native hedgerow
- Ornamental hedgerow - to be retained at max 600mm height
- Wet-tolerant ornamental planting within soft-landscaped rain gardens
- Short mown grass
- Tussock grassland
- Reinforced grass (eg. Bodpave)
- Earth mound (approx. 1.5m max height)
- Attenuation basin / swales - seeded with species rich meadow suitable for seasonally wet soils
- Feature block paving to entrance
- Tarmac footpath
- Self binding gravel footpath/building maintenance route
- Furniture to feature entrance area
- Lighting column locations

View looking east from the office pedestrian entrance looking to the building access and external amenities. The building's masonry texture is visible in the left hand side of the image, and the carpark on the right hand side.

Landscape Sections

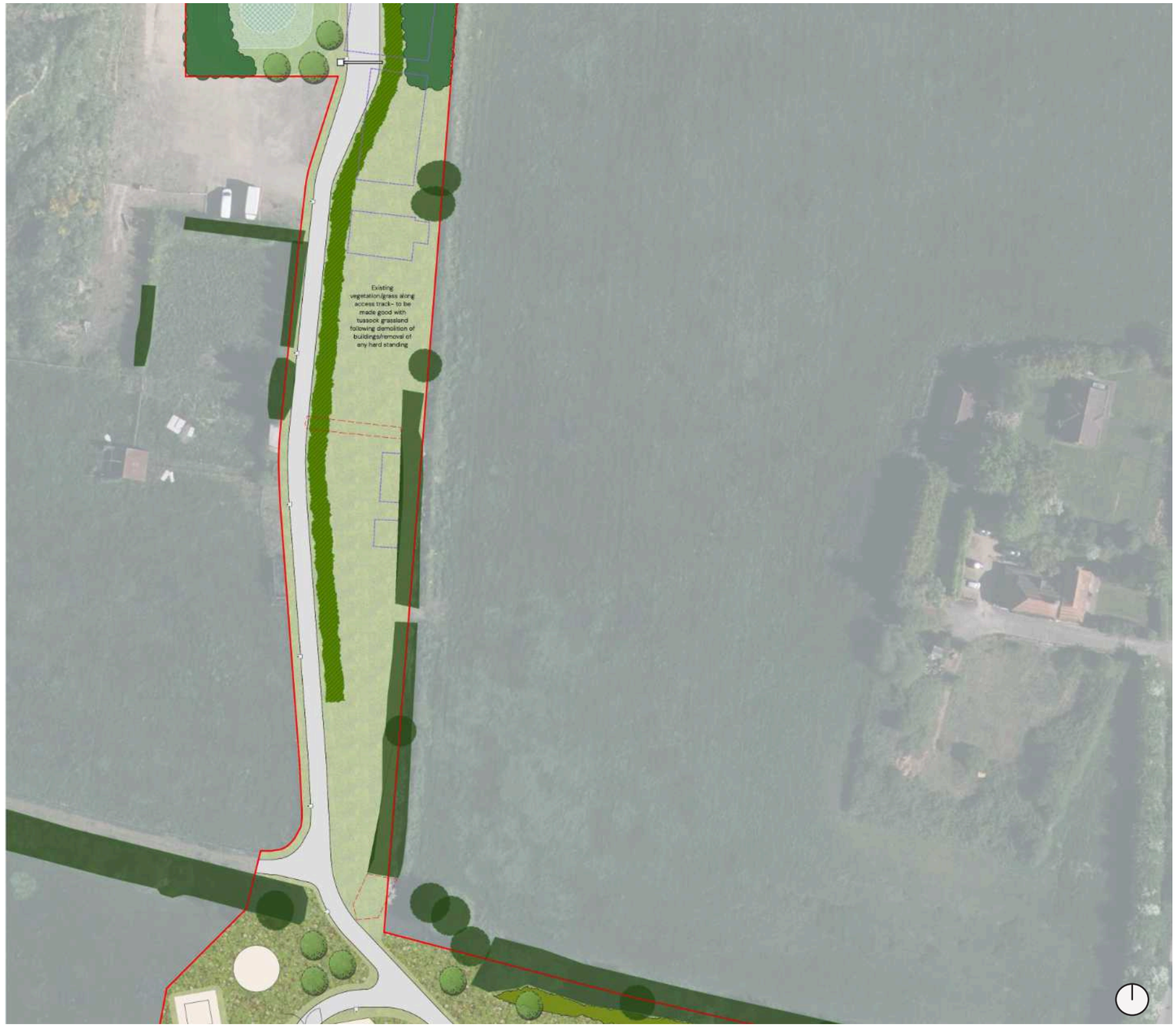
Section AA

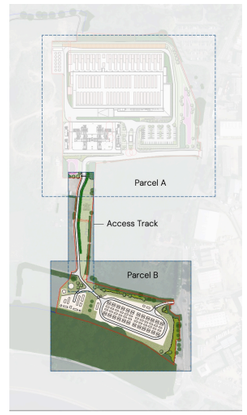


Section BB

Access Track

Two portions of existing hedgerow were identified in the Ecological Impact Assessment as being ‘exact type/description to be confirmed following ecology report’. These two stretches of hedgerow (identified as H50 and H51 on the Arboricultural Assessment) are proposed to be translocated. The large majority of this translocated hedgerow will be located along the Access Track, with additional enhancement planting of suitable native hedgerow species provided along its length.





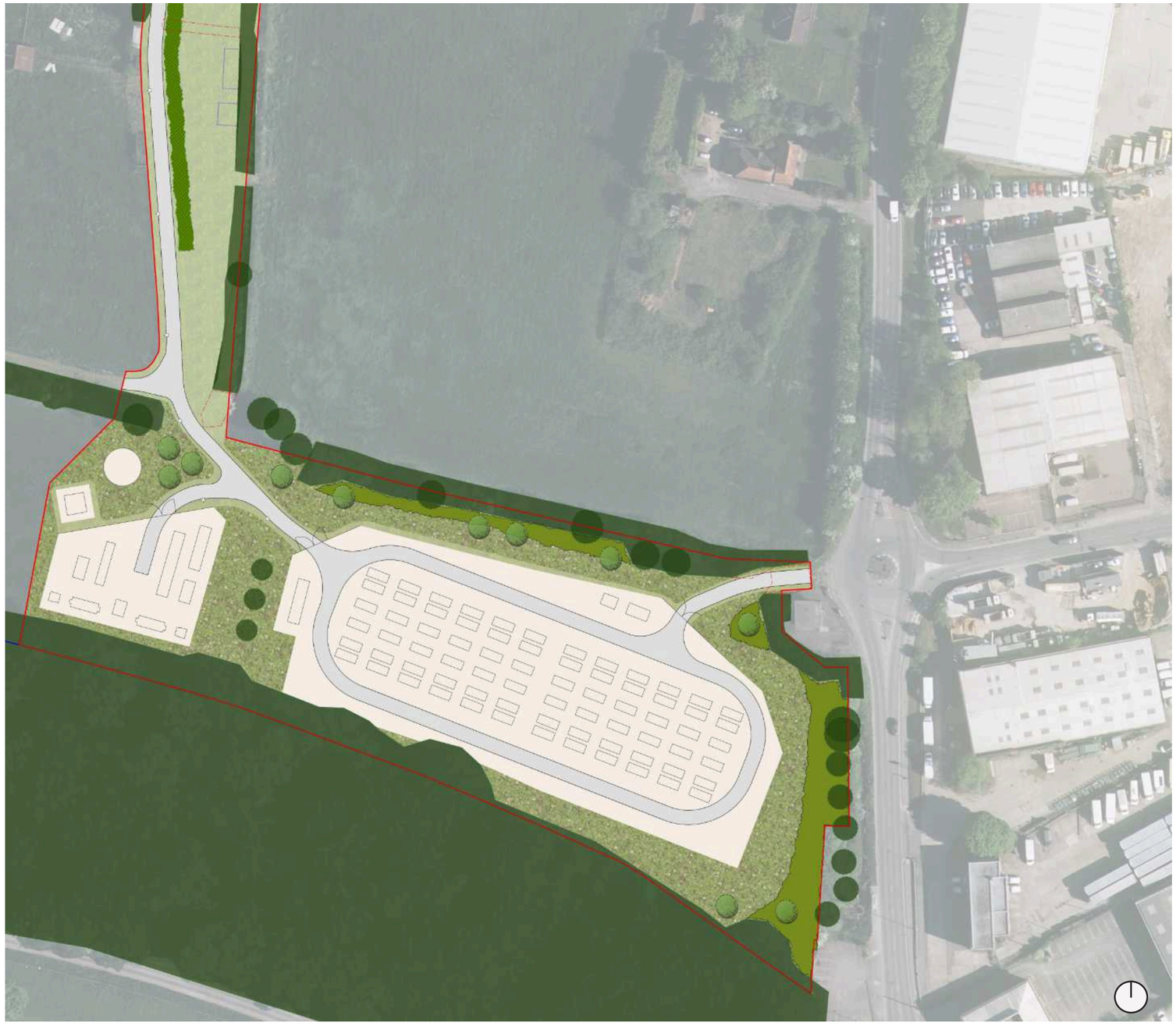
Location Plan - Scale 1:5000

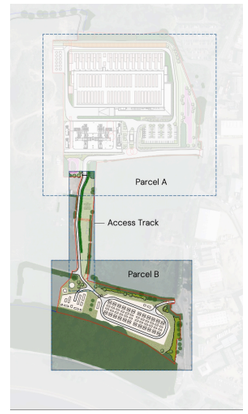
KEY - Access Track

- Application boundary
- Blue line boundary
- Indicative size and extent of existing vegetation to be retained to BS5837:2012. Dashed line shows RPA.
- Indicative extent of existing vegetation to be removed.
- Existing buildings to be demolished (subject to bat survey results)
- Native tree planting
- Areas of native scrub planting
- Tussock grassland (new areas, or enhanced existing grassland)
- Species rich meadow (new areas, or enhanced existing grassland)
- Translocated hedgerow (total length 169 lm within Parcel A and Access Track)
- Lighting column locations

Parcel B Green Infrastructure

The landscape proposals to the green infrastructure within Parcel B will focus on retaining and enhancing the existing natural habitat, this will be through the addition of scattered native tree species, large swathes of native shrub planting (to the northern and eastern boundary) and the production of tussock grassland and wildflower meadows.





Location Plan - Scale 1:5000

Informal Planting

Suggested Plant Species:

INFORMAL/NATURALISTIC AREAS - to be majority native species. There will be no colour constraints and plant shapes will be informal.

Trees:	**Shrubs:**
Alder – Alnus glutinosa	Dogwood – Cornus sanguinea
Black poplar – Populus nigra	Elder – Sambucus nigra
Field maple – Acer campestre	Guelder rose – Viburnum opulus
Hornbeam – Carpinus betulus	Hawthorn – Crataegus monogyna
River birch – Betula nigra	Hazel – Corylus avellana
Small-leaved lime – Tilia cordata	Privet – Ligustrum vulgar
Silver birch – Betula pendula	Spindle – Euonymus europaeus
White willow – Salix alba	

Corylus Avellana

Sambucus Nigra

Alnus Glutinosa

Cornus Sanguinea

Viburnum Opulus

Carpinus Betulus

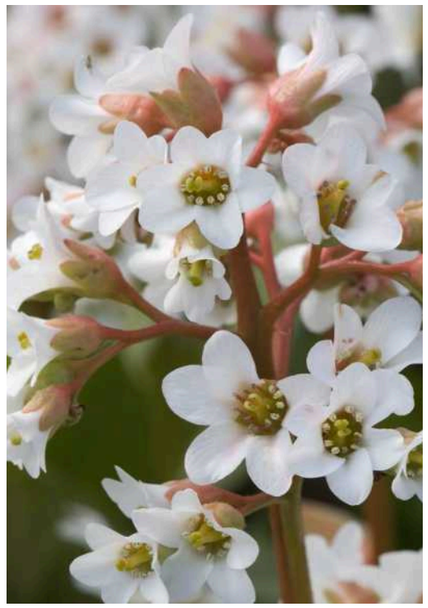
Formal Planting

Suggested Plant Species:

SEMI-FORMAL/FORMAL PLANTING – to be designed with softer shapes interspersed with geometric hedgerows. The design will include balance and symmetry, the colour palette will be wider but not open-ended. Plants will be a balanced mix of shrubs, herbaceous and ornamental grasses. Trees will have a formal shape and typically be ornamental.

Trees:
Grey alder – Alnus incana ‘Aurea’
Common Serviceberry –Amelanchier arborea ‘Robin Hill’
Hornbeam – Carpinus betulus ‘Frans Fontaine’
Red Maple – Acer Rubrum ‘Bowhall’
Spire Cherry – Prunus hillerei Apire
Sweetgum – Liquidambar styraciflua ‘Slender Silhouette’

Shrubs:
Autumn moor-grass – Sesleria autumnalis
Bergenia – Bergenia cordifolia varieties
Bluebeard – Caryopteris × clandonensis ‘Grand Bleu’
Coneflower – Echinacea varieties
Coral bells – Heuchera varieties
Dogwood – Cornus sericea ‘Flaviramea’
English lavender – Lavandula angustifolia
Geranium – Geranium ‘Rozanne’
Hebe – Hebe varieties
Masterwort – Astrantia major varieties
Mexican feather grass – Stipa tenuissima
Perovskia ‘Blue Spire’
Stonecrop – Sedum varieties
Silver grass – Miscanthus sinensis ‘Morning Light’
Verbena – Verbena bonariensis


Bergenia Bressingham White


Verbena bonariensis


Acer Rubrum


Alnus Incana Aurea


Cornus Sanguinea


Perovskia Blue Spire


Liquidambar Styraciflua Slender


Prunus Spire Cherry Tree

Hard Landscape

Hard Landscape Hierarchy (public open space only):

Footpath east of Parcel A and building maintenance paths:

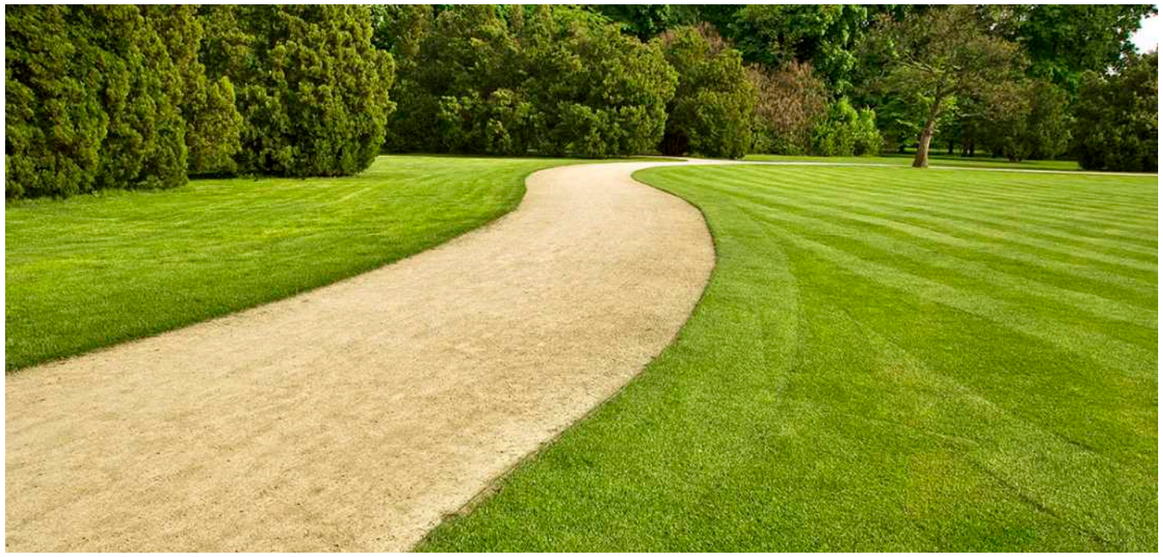
- Self-binding gravel in a buff colour

Main pedestrian route and car parking area:

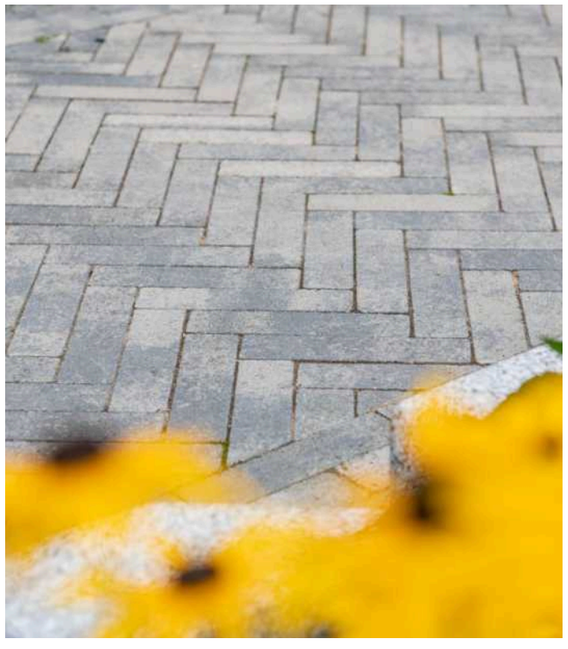
- Tarmacadam (could be permeable)

Feature entrance area:

- Block paving in linear form, laid in herringbone pattern (could be permeable). To be edged with setts of a complementary colour.



Self-binding buff gravel



Paving Tobermore Artro slate

Tarmac footpath

Street Furniture

Curved bench

Outdoor cafe seating

Arboricultural Survey
The tree survey was completed by a suitably qualified Arbicultural Surveyor of Tyler Grange on 18th November 2023. The Survey was completed in accordance with BS5837. A measured topographical survey was used to identify the location of trees and their surrounding context.

Findings for each of the trees surveyed are detailed in the Tree Survey Schedule (See Appendix 3 in the Arboriculture Impact Assessment). This provides a tabulated record of trees surveyed, including reference numbers, species composition, tree dimensions, life stage, physiological and structural condition, and the arboricultural value of each survey entry.

Parcel A – contains a row of Mixed Broadleaves and Hornbeam running along east, south and west boundaries, with Hybrid Poplar trees in sections along the North and south boundary. At the site entrance a group of Ash, Field Maple and Sycamore trees stand on the site boundary.

Parcel B – The east boundary is lined with two Common oak trees and several other trees that are identified as Ash, Hazel and Goat Willow. The south of Parcel B is dense
With Hybrid black Poplar Trees. The west and northwest of this parcel is contained by Mixed Broadleaves.

Biodiversity Net Gain
The design strategy and landscape features play a crucial role in the substantial increase in biodiversity. The scheme achieves a 115% improvement in habitat units and a 10.69% increase in hedgerow units compared to the existing site conditions, which significant exceeds the 10% requirement.

4.6 Offsite public realm enhancements

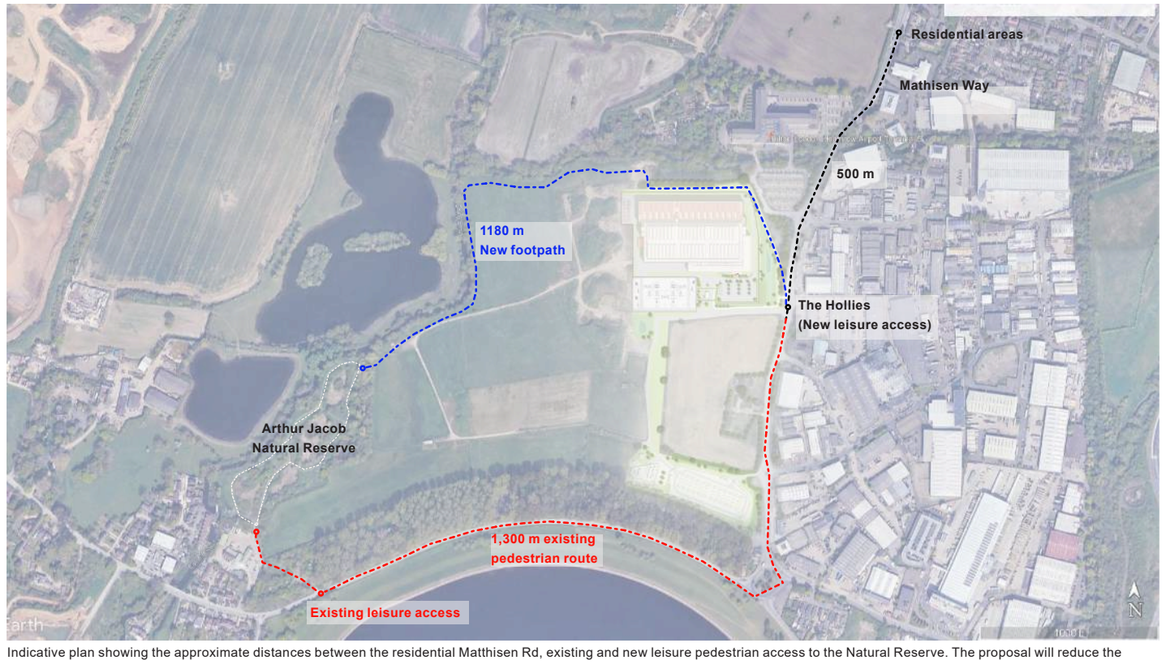
As part of the proposal, the client is committed to delivering three significant community benefits beyond the site boundary:

1. New Access and Footpath to the Arthur Jacob Nature Reserve
Current access to the nature reserve from the eastern neighbourhoods in Poyle Rd and Bath Rd is limited. The nearest pedestrian route from the residential area in Poyle Rd (near Mathisen Way) to the start of the leisure trail in Stanwell Rd leading to the reserve is approximately 1,800 m, following a narrow path along busy roads. The proposed new access to the leisure trail starts near The Hollies, reducing the distance from the residential area to about 500 m. This newly constructed footpath, approximately 1180 m in length, will include biodiversity enhancements and provide a scenic route along the Poyle Channel before connecting to the eastern edge of the nature reserve trail.

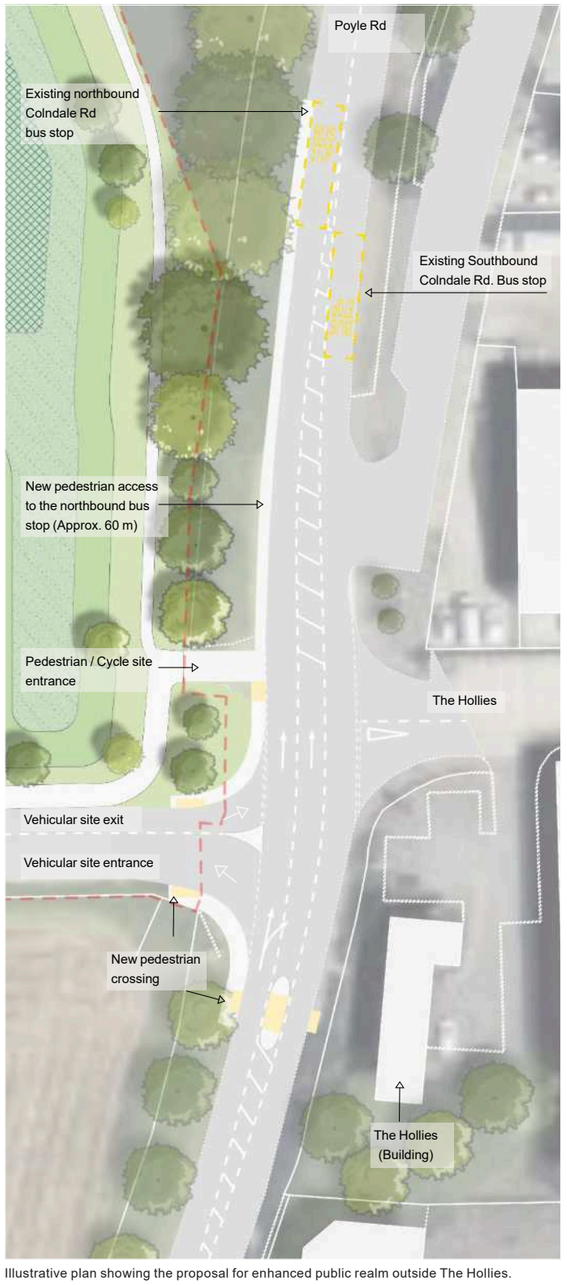
2. Pedestrian Access Improvements to Colndale Road Bus Stop
The scheme proposes upgrades to the pedestrian footpath leading to the northbound Colndale Road bus stop on the west side of Poyle Road. A new 60 m path, 2 m wide and separated from the carriageway by a 0.5 m buffer where feasible, will enhance safety and accessibility for both the local community and industrial estate workers.

3. Enhanced Pedestrian Crossing on Poyle Road
To improve pedestrian safety, a new crossing will be installed on Poyle Road in front of The Hollies. The design features dropped kerbs, tactile paving, and a refuge island within the central reservation, ensuring safer and more accessible navigation for pedestrians in the area.

View looking south to the existing pedestrian access from Colndale Road bus stop northbound



Indicative plan showing the approximate distances between the residential Matthisen Rd, existing and new leisure pedestrian access to the Natural Reserve. The proposal will reduce the distance by approximately 1,300 m.



Illustrative plan showing the proposal for enhanced public realm outside The Hollies.

4.7 Lighting Design (Hoare Lea)

The development aims to provide sufficient lighting for safe and secure operation of the facility at all times, while also ensuring minimal impact of light spillage beyond the development, a sensitive approach to local ecology, and reinforcing the circadian rhythm of employees.
The primary focus for the scheme is to ensure a safe working environment, and adequate task and vertical illumination across the development. These two aspects are described in more detail below:

Task: Lighting levels on the horizontal plane shall be appropriate to the passage of people and goods throughout the site, while taking the sensitive ecological context of the site's surround into consideration. Roads and pavement shall be illuminated to levels deemed suitable for the Environmental Zone as defined in the ILP Guidance Note 01/21', travel speed, and users. The loading bay, car parking, and refuelling station will also be illuminated to the appropriate light levels when in use, and then dim down to a lower level when not in use. We have not prescribed a site-wide minimum horizontal light level at the floor plane as would be common for the type of development, but rather recommend maintaining good cylindrical illumination across the site.

- **Vertical illumination:** Uniform lighting at eye-height is key for surveillance, both by security staff and for CCTV cameras. Security relies on both active and passive surveillance, both of which can be supported by good lighting practice. A well-illuminated site with clear way-finding and routes of passage work to alleviate the emotional aspect of site safety. Being able to recognise faces plays into this as well, and thus recommend that final luminaire locations are determined with this consistency in approach in mind.

Note that the Western site boundary of the site sits nearby an E2 environmental zone, which should be treated considerately, with appropriate levels of spill light. While the initial brief suggested to keep 10lx at the perimeter fence, coordination with the Security and landscape teams managed to keep 0.5lx as minimum light level requirements at eye height (cylindrical illuminance) for camera recognition.

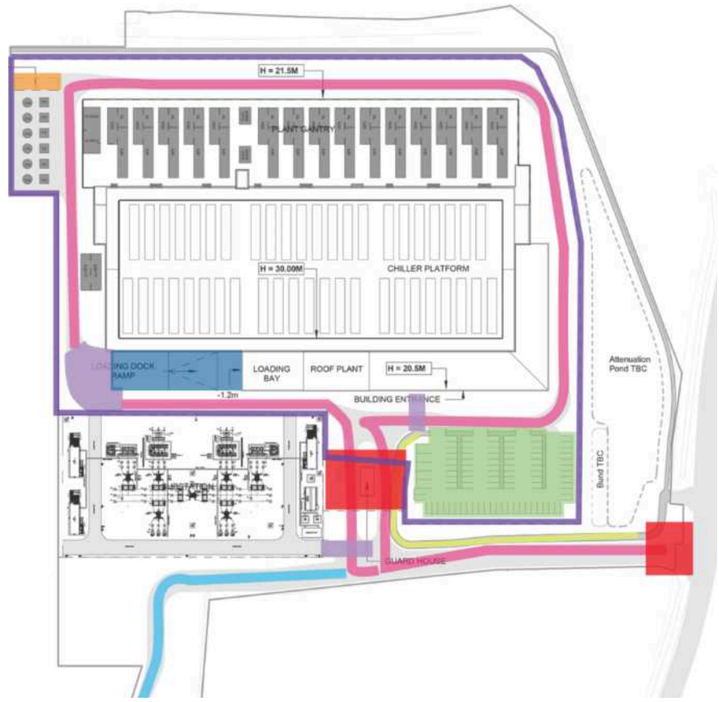
The lighting (lux) levels are considered to ensure a gradual increase or decrease in illuminance with no abrupt changes, while also considering ecologically sensitive areas. This will create a comfortable environment that will allow the users' eyes time to adapt safely and a secure perimeter to be maintained. The lighting report does not detail unique lighting positions, but instead offers guidance for future design development to ensure that the development's requirements are met.

Further to relevant British Standards on required light levels and SLL guidance on the Reduction of Obtrusive Light, the site has its own specific ecology concerns which were discussed with the specialist consultant. Key items of note are as follows:
A balance must be struck between the security needs of the site and the ecology and biodiversity that must be maintained. During the final specification stage, vertical illumination measurements should be taken at the site boundary, protected tree line, and within the developed hardscape; this will need to be compared to the threshold for facial recognition required by CCTV equipment.

- The existing northern protected tree line has the greatest opportunity for various species to thrive. Light spill past the site boundary is to be kept to a minimum to not disturb existing migration or foraging patterns.
- The lighting strategy shall allow for the brightest areas to be dimmed when not in use, particularly at the northwestern refuelling station and loading bay. Internal glare shield accessories will also be specified to minimise any light spill onto the perimeter tree line.
- As this site will be accessed 24/7, luminaires should be chosen with a warmer, more 'amber' colour of light to be the least disruptive to human circadian rhythm. However, different species of plants and animals are variably responsive to different spectral bands of light, and an in-depth conversation with the ecologist should be undertaken to choose a colour range that has the least impact on the resident species.

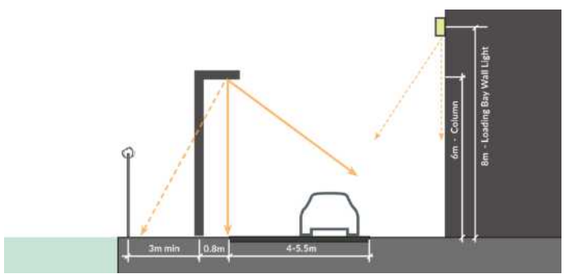
All lighting columns should be 3m from the perimeter fence, as stipulated by the Security Consultant, and also be installed the standard 800mm distance from column base to kerb edge. Column heights should be sensitive to the building massing and kept low (6m or less) to mitigate light spill outside the boundary.

For further information refer to the Lighting Parameter Plan in the Appendix.

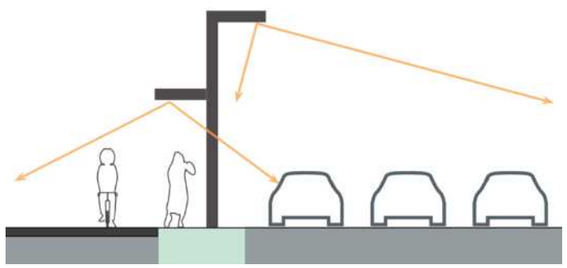


Illumination Criteria

- Primary Road: 7.5lx min horizontal, 2.5lx avg vertical for CCTV
- Secondary Road: 5lx min horizontal, 1.5lx avg vertical for CCTV
- Pedestrian Walkways: 7.5lx min horizontal, 1lx avg vertical for CCTV
- Open Air Car Parking: 10lx avg, 0.25 u0 avg (dim to 5lx when not in use)
- Vehicle Loading: 20lx avg, 0.25 u0 avg (dim to 10lx when not in use)
- Zebra Crossing: 10lx, 0.4 u0 avg (increase on P3 class) Area of Conflict: 25lx, 0.4 u0 avg (3.5x P3 class)
- Perimeter Fence: 5lx maximum on vertical
- Vehicular Entry Points: 30lx at thresholds
- Refueling Station: 100lx 0.4 u0 (dim to 25lx when not in use)



Indicative Section of the south facade



Indicative Section of the western site

4.8 Site Access

Access policies

When designing the site access strategies highlighted within, the below policies were taken into consideration:

- National Planning Policy Framework (December 2023)
- Slough Borough Council Core Strategy Development Plan Document (2008)
- Slough Borough Council Emerging Local Plan, 2016 to 2036
- Slough Borough Council's Third Local Transport Plan
- Slough Borough Council Transport and Highways Guidance
- Transport and Highway Guidance: Developer's Guide Part 3: Interim Document" (November 2008).

Access and Consultation

As mentioned in the section 3.7 of this document, several Pre-application meetings were held with Slough Borough Council where the issue of accessibility was discussed.

The Applicant Team have carefully reviewed pre-application feedback to ensure that the Planning Application clarifies and where appropriate addresses the concerns raised by officers.

A subsequent Highway specific meeting was held with SBC officers. Key topics of discussion and feedback received included:

- Access arrangements – SBC reiterated the request for further measures to enforce the proposed left in, left out junction. Detail of emergency access to be provided as part of the Planning Application. HGV vehicle tracking to be undertaken to review the potential introduction of a splitter island to ensure access arrangements are suitable.

- Proposed improvements to footways, crossing points and bus stop infrastructure near the Site to ensure future users will be able to access the Site using sustainable transport modes.

- Available TRICS data is for data centres much smaller than the application proposals (largest data centre on TRICS is 16,000sqm). It was agreed that a comparison could be made to understand staff numbers by in increases in line with floor area.

- Sufficient parking should be provided for use, noting not too high a provision due to Green Belt impact and the desire to avoid unnecessary parking.

The submitted Transport Assessment and Access Arrangements have been carefully informed by pre-application feedback to address discussion with officers.

Design summary

Key design strategies related to access were implemented as follows:

1. The site will support several methods of sustainable transport which includes:
    - Repurposing of the existing secondary northern vehicular access as a dedicated pedestrian / cycle route.
    - Providing a dedicated pedestrian footpath which enhances connections to the Arthur Jacob Nature Reserve.
    - Enhancement to two nearby bus stops by means of a 2m footway along the western side of Poyle Road, providing a connection northward towards the Colndale Road bus stops. These examples are shown on the public enhancement diagram in section 4.6.

2. Safe and suitable access to the site will be incorporated using buffer zones between pedestrian and vehicular roads. Structured signage, which will include a Left-in / Left-Out arrangement and an island separating inbound and outbound vehicles. This will reduce the number of conflicting turning movements when compared to the existing arrangement allowing safer vehicular movement on site.

3. No specific parking ratio metrics are available for a Data Centre use. Therefore a parking accumulation assessment was undertaken to base a parking standard and refined to reflect site specific characteristics and travel planning measures. 20% of parking bays will be provided with active EV charging infrastructure from first occupancy, with additional pathway provisions for future proofing the site. Parking was strategically located to the southern side of Parcel A, with the eastern mound providing screening from Poyle Road, and the building acting as a visual buffer between the parking area and the Hilton hotel to the north. These design decisions were in response to the objectives set out in The Third Local Transport Plan (LTP3).

In summary, the site is well placed to align with the NPPF and local policy in that it:

- Benefits from active travel infrastructure along Poyle Road, and public transport links both near the site access and along Bath Road.

- These public transport connections provide access to a range of local settlements including Horton, Datchet, Slough and Cippenham.

- Promotes sustainable transport modes through the provision of a Travel Plan and active travel access.

- Safe and suitable access to the site can be achieved for all users, both through the main vehicular site access and through the provision of a separate active travel access.

The site plan has been developed to respond to the particular security needs of a data centre use (as defined later in this document) while also catering to a variety of transport types and sustainable modes of travel. As far as reasonably practicable within the constraints of the site, HGV movements have been segregated from pedestrians, cyclists, and cars. Access for all visitors and employees to the site will occur through the main vehicular entry and proceeding to the guardhouse as required for a secure facility such as a data centre.

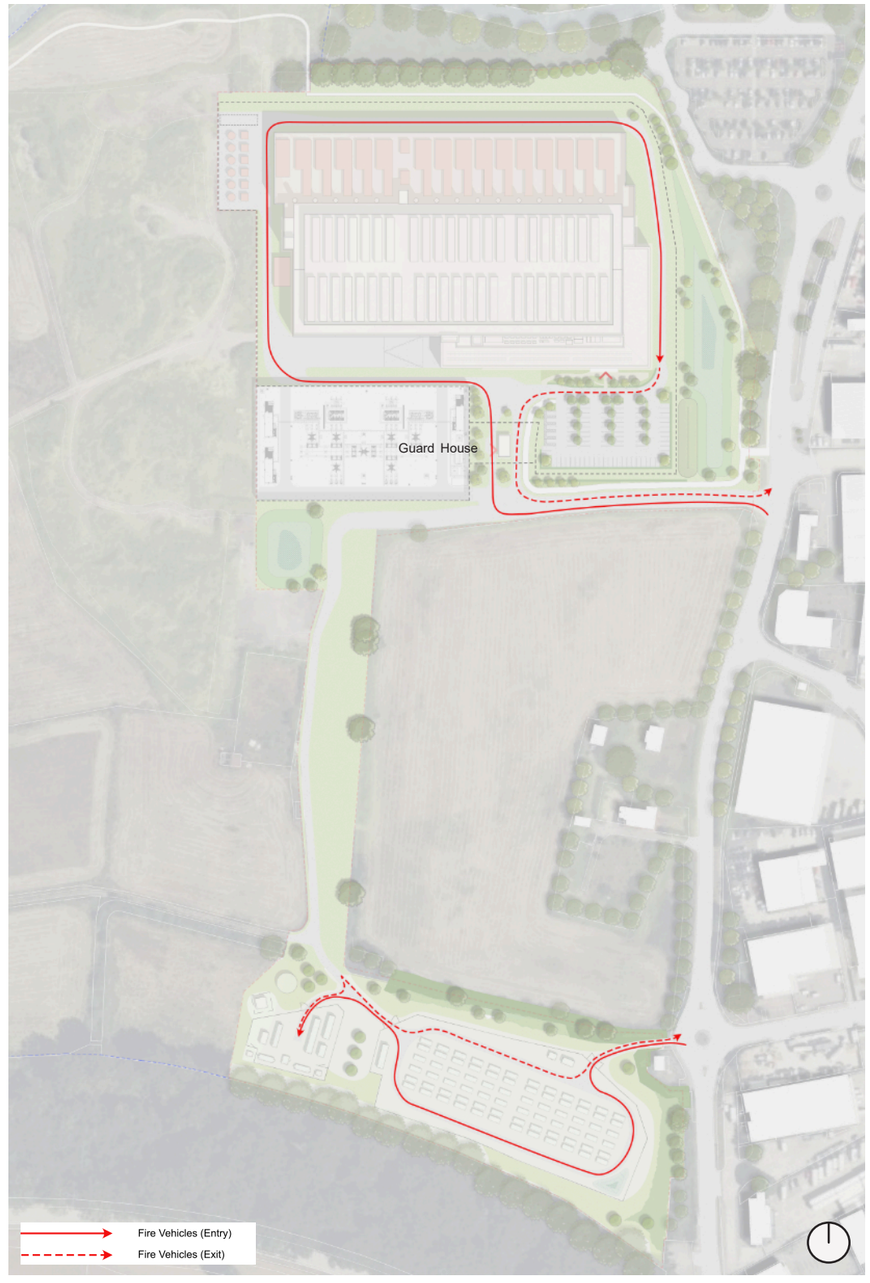
Pedestrian and Cycle Access

Access to the site for pedestrians and cyclists will occur via a dedicated shared path onto Poyle Road, adjacent to the main site access for vehicles. There will be access controlled gated access on this path past the air-lock provided to the guard house and into the secured data centre site. A pedestrian crossing is provided across the main estate road to the main building entrance. Internal parking for 37 cycles has been planned for internal to the building, and adjacent to the main building entrance. Shower and changing facilities (including accessible) are to be provided in the data centre for the benefit of active commuters.
Additional off-site improvements for pedestrians will be provided such as a new footpath connection with the Arthur Jacob's Nature Reserve to the west, and an enhanced access to the "Colndale Road" bus stops, which currently are very deteriorated.

Fire

To ensure compliance with Building Regulations and in coordination with the Fire Consultant, evacuation routes from the building cores will incorporate accessible paths leading to secure external areas.

Pedestrian and Cycle Access diagram



Fire access diagram

Vehicular Access By Car

Vehicles will enter the site by the primary site access road, and proceed through a tiger trap configuration of sequential gates prior to entering the site. Members of staff shall be able to enter the site via credentials, while visitors will require clearance by security personnel at the guard house. There is temporary/short term parking available at the guard house for use during the registration process if required.

Once inside the secured boundary, users will be directed right towards a centralised car park. A total of 86 vehicle spaces are provided, including 5 accessible blue badge spaces located as close as practicable to the main entrance. 20% of the spaces will be provided with active electric charging infrastructure from first occupancy; the remainder of the spaces are to be provided with passive infrastructure (pathway for future cabling) as an allowance for future implementation. To exit the site, cars will proceed back the direction they came.

Delivery and Servicing

The development will also require access by HGVs and other delivery vehicles necessary for the regular operation of the data centre. These larger vehicles will access the site by the primary site access road, and proceed through a tiger trap configuration of sequential gates prior to entering the site. Once admitted to the site by security personnel, they will be directed left towards the loading bay, minimising overlap with pedestrian, cycle and car traffic. From here, HGVs will be able to access the loading bay. A fuel tank storage area to the northwest corner has been provided with a designated lay-by for refueling operations.

Vehicles departing the loading bay will then proceed around the northern link road, which also serves to allow for fire tender access in the event of an emergency per BS 9999 and the Building Regulations. After completing a loop of the building, service vehicles can exit the site via the same route they entered.

Vehicular Access by Car diagram

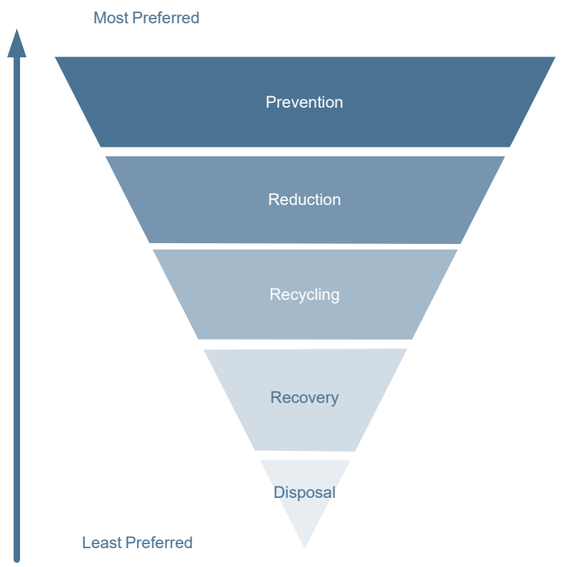
Delivery and Servicing access diagram.

BESS Access - Delivery and Servicing

The BESS portion of the development proposed to the south will be unoccupied and remotely monitored in normal operations, with only occasional access required for purposes of maintenance. An existing estate road linking parcel A with Parcel B is to be improved to allow access for maintenance vehicles when required. Manual swing gates are to be provided to control access. An emergency access point is provided for fire tender access at the existing vehicle crossover point onto the Poyle Road/Blackthorne Road roundabout.

Refuse and Recycling

Data centre tenants will be required to abide by the Applicant's waste management strategy, which is based on the principles of 'waste hierarchy' and aligned with corporate Environmental Policies to minimise the amount of waste generated and improve recycling



Waste management

Waste on site shall be managed by adoption of the following stages:

- Stage 1: Occupier separation
- Stage 2: Occupier deposit and storage
- Stage 3: Collection and bulking
- Stage 4: Removal method
- Stage 5: End destination

Waste Streams

As the development is speculative, a building tenant and end user have yet to be identified. However, having regard to BS5906:2005 and our experience on similar facilities, the following waste streams would be anticipated in a data centre development:

	Description	**Expected Volume**	**Collection Frequency**
General Waste	Waste which is unable to be recycled	2x 1100l bin	2 collections weekly
Mixed Dry Recyclables	It is envisaged that paper waste will predominately be created in the office admin area and other support rooms. The office areas will have separate waste reciprocals in the form of wheelie bins or similar. It is predicted that the bins will need to be emptied on a weekly basis and a rotation of bins will ensure that as one set is being recycled they are replaced with fresh receptacles. Plastic waste is typically generated in the delivery area. Waste will be directly recycled in the delivery area.	2x 1100l bin	2 collections weekly
Compost	Food waste generated in the admin area/break rooms. Smaller 60l bins in break area anticipated, to be collected and stored at loading bay for future collection.	1x 240l bin	1 collections weekly
Cardboard packaging	Cardboard waste is expected to primarily be generated at the loading bay. Floor space for a baler has been allocated to manage this.	Baler provided in Loading Bay	2 collections weekly
Polystyrene packaging bags	Shipping material is to be collected and appropriately recycled when de-boxing and taken directly to the recycling bins.	2x 240l bin	2 collections weekly
Batteries	Replacement batteries associated with UPS equipment and small electronics.	1x 120l bin	Monitor for volume and arrange pickup as required
Waste electrical and electronics	Electronic materials which cannot be locally recycled.	1x 1100l bin	Monitor for volume and arrange pickup as required.
Pallets	TBC?		Store externally for pick-up or reclamation

Waste Deposit and Storage

Office areas will be provided with individual, smaller scale bins appropriate to the finalised office arrangement which will be emptied by contracted cleaning staff. Building occupants are responsible for initial sorting of waste streams. Office waste will be taken to the storage space near the loading bay to await regular collections. Packaging waste is expected to be dealt with at the source, in the Loading Bay and Staging areas.

All waste generated by the site will be collected by a private waste company due to the commercial nature of the building. While a waste collection company has yet to be identified, this will be confirmed once the building tenant is known and the client shall liase with a number of relevant waste storage companies in the next design stage.

Ventilation shall be provided to any refuse storage areas, in keeping with the ventilation requirements of BS 5906:2005 and Approved Document F.

Maintenance and Cleaning

Façade Cleaning

- The south, eastern, and western facades of the facility can be accessed from ground level for cleaning via a waterfed pole, or alternatively reached via a mobile elevated working platform (MEWP) for areas out of reach or inconvenient for reaching from ground level. Façade cleaning along the northern façade would occur directly from the plant gantry levels where required.
- The final shading louver solution for windows on the south and east elevations is still under review, however these shall incorporate a hinged mechanism to facilitate window cleaning.

Roof and Plant Access

Access to the main roof of the building will be achieved via a lift which reaches the roof level. The parapet height has been coordinated to also function as fall protection around the main roof, with a minimum height of 1100mm. The chiller gantry level will be accessed via a stair from the main building roof. Continuous guarding shall be provided at all edges for fall protection.

Access to plant on the office roof shall be from the northeastern stairwell. A fall-restraint system consisting of a horizontal lifeline or similar shall be provided to ensure safety during maintenance access.

4.9 Security (Hoare Lea)

Ensuring the highest levels of security is essential to the data centre's continuous 24/7 operations, protecting against both accidental and intentional disruptions and fostering a secure environment for users. Our experienced team is committed to incorporating best practices that meet the strict security requirements of Data Centre tenants.

Throughout design development, the project team will engage extensively with internal and external stakeholders, including the Metropolitan Police Design Out Crime Officer (DOCO) and the Counter Terrorism Security Advisor (CTSA), to ensure compliance with advanced security standards.

Key security features include:

- **Physical Site Protection**: To prevent unauthorised access, the entire site will be enclosed by a 3-meter-tall black anti-climb security fence surrounding Parcel A and all facilities on Parcel B. For enhanced visibility and surveillance, there will be a 3-meter clear zone on each side of the fence, free of tall structures or plantings that may obstruct views.

- **Site Surveillance Design**: Video surveillance and technology systems will be strategically positioned and coordinated with lighting and landscape design to minimize blind spots and enhance security coverage.

- **Lighting Design**: A uniform lighting strategy will cover all external areas, eliminating dark spots and promoting natural surveillance. Additional surveillance measures, such as infrared lighting and thermal cameras, may be integrated where necessary.

- **Site Access Control**: Both pedestrian and vehicle access to the site will be controlled through a single, 24/7 monitored entry and exit point with a double-gate lock system for efficient access checks.

- **Building Access Control**: The office entrance serves as the primary access point to the Data Centre, with tenants expected to implement further security measures. These may include internal security checkpoints and staff access cards for restricted zones within the facility.

Images with indicative products typically used by the industry security standards

4.10 Inclusivity

Introduction
The approach to inclusive design for the development has been coordinated with the applicable standards, regulations and policies below.

- Approved Document Part M Volume 2
- National Planning Policy Framework (NPPF), Chapter 8
- Slough Borough Council Core Strategy, including Core Policy 8 Core Policy 11
- The Equality Act 2010

Parking
5 accessible parking bays have been provided to the facility, and have been placed as close as practicable to the main building entrance. The accessible parking bays shall meet the requirements of Approved Document M including:

- Accessible car parking bays to be 2400mm (width) x 4800mm (depth), with a 1200mm wide clear access zone between and at the end of the bay.
- Electric vehicle charge points to be accessible (e.g. level thresholds, manual controls within reasonable reach etc).

Access Routes and Surfaces
Firm, slip resistant and reasonably smooth surfaces shall be provided for all access routes through the site. Subject to further development at subsequent design stages, the following requirements of Approved Document M shall be implemented:

- Access routes to be at least 1500mm clear throughout
- Access routes to be no steeper than 1:60, or less steep than 1:20 with level landings introduced for each 500mm rise of the access route.
- Cross-fall gradients should be no steeper than 1:40.
- Level landings, clear of door swings, in front of entrances (1500mm x 1500mm at 1:60 or shallower).
- Different materials along the access route to have similar frictional characteristics, and level thresholds between adjacent surfaces provided.
- Access widths to be maintained up to a 2100mm clear height above ground
- Tactile paving and dropped kerbs

Main Entrance
The facility entrance shall be located on the southern façade of the building, and clearly marked by alternative façade articulation and a distinctive canopy element. Given it's nature as a secure facility, only one entrance is provided. Subject to further development at subsequent design stages, the building entrance shall provide the following to enhance accessibility and inclusion:

- Clear visual identification through visual contrast, framing, lighting, or signage
- Level thresholds of less than 1:60
- Entrance doors of minimum 1000mm clear effective width
- Guarding to the full length of the door when opened

Lighting
A lighting design report (1617773-HLE-XX-XX-RP-LD-Part II) has been prepared to support this application by Hoare Lea, and this report has been submitted along with this planning application. The lighting design – which has been summarized elsewhere in this document – has been prepared with regard to four main design considerations:

- Safety and Orientation
- Light Pollution
- Ecology
- Contrast and Colour

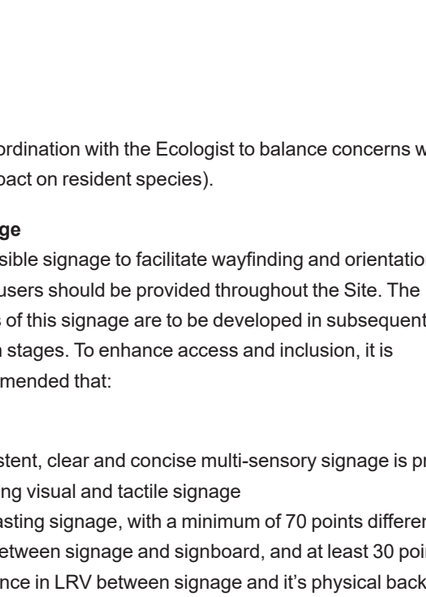
With regard to accessibility within the lighting approach, the following items are worth noting:

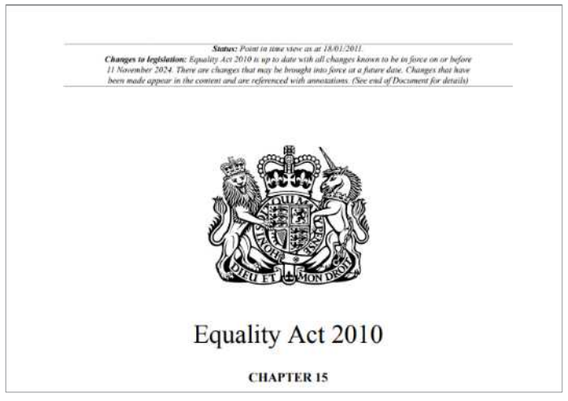
- External lighting will be provided from dusk to dawn to facilitate safety and security, with levels and colour to be appropriate for the location and any ecology concerns
- Illumination levels to meet requirements of BS 5489, BS 12464 and BS 13201 at a minimum, with increased lighting at crossings and in any areas shared by pedestrians and vehicles
- Illumination levels shall be sufficient to reduce feelings of discomfort or alienation in addition to allowing safe passage
- Positioning of luminaires to provide uniform lighting at eye height, avoid pooling of light, and provide good colour rendering
- Warmer external luminaires to be prioritised to minimise disruptions to human circadian rhythm (subject to coordination with the Ecologist to balance concerns with impact on resident species).

Signage
Accessible signage to facilitate wayfinding and orientation for all users should be provided throughout the Site. The details of this signage are to be developed in subsequent design stages. To enhance access and inclusion, it is recommended that:

Consistent, clear and concise multi-sensory signage is provided, including visual and tactile signage
Contrasting signage, with a minimum of 70 points difference in LRV between signage and signboard, and at least 30 points difference in LRV between signage and it's physical background.

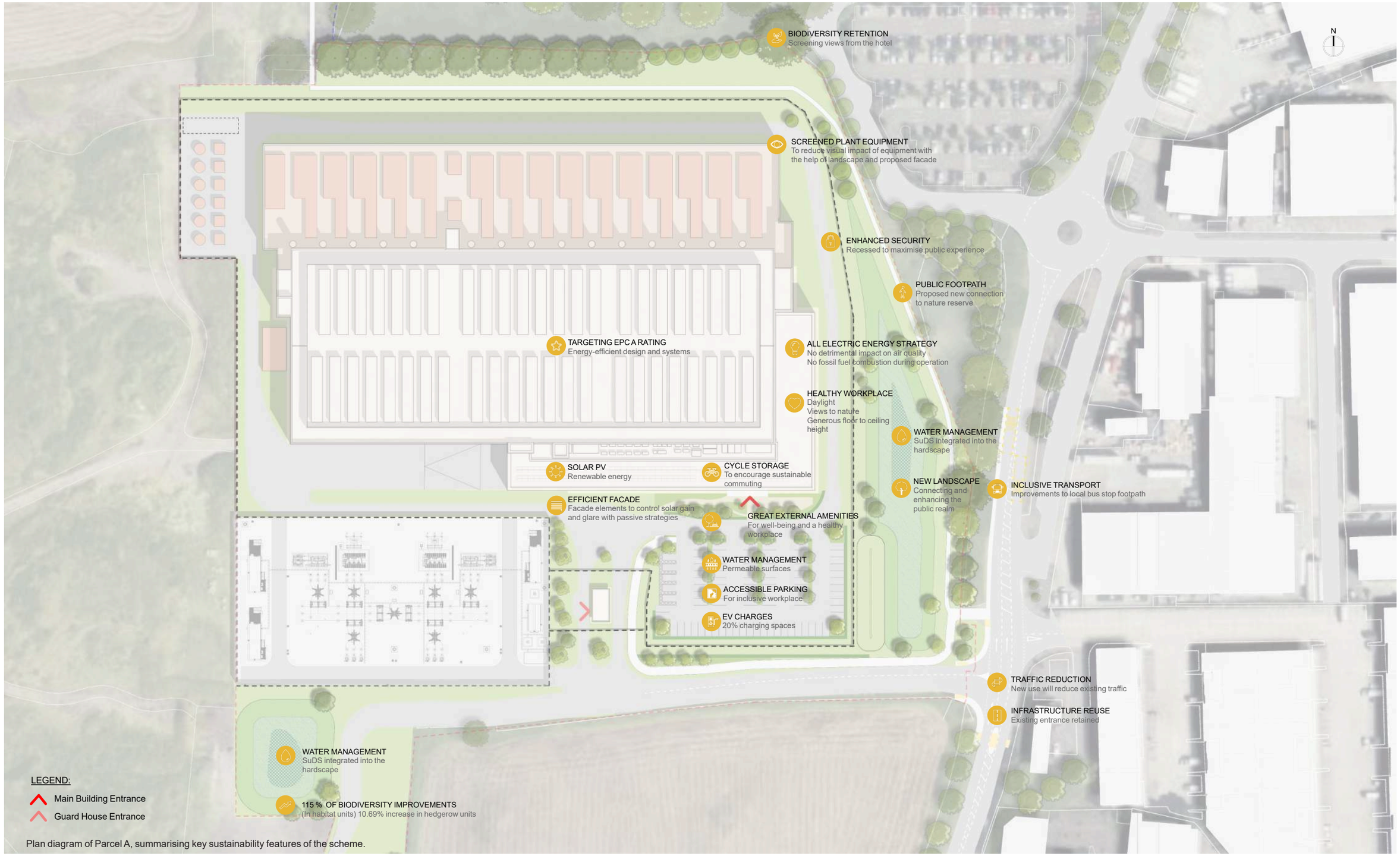
As the design develops further in subsequent design stages, the Applicant shall employ a specialist accessibility consultant to ensure the development offers an equitable experience for all future occupants.





Sustainability

5.



Plan diagram of Parcel A, summarising key sustainability features of the scheme.

*Note: Design and improvements outside of the ownership line are indicative only, and need to be coordinated with stakeholders and the Slough Council.

5.1 Sustainability Strategy

A detailed energy and sustainability strategy has been created for the Site, with key aspirations of the project including:

- Achieving a minimum BREEAM rating of ‘Excellent’.
- Achieving an annual PUE of 1.28 - equivalent to Green Grid Guidelines ‘Gold’.
- Achieving 115% Biodiversity Net Gain in habitat units.
- 16.7% lower emissions than Part L baseline.
- Minimizing undeveloped green belt land take.
- Managing site surface water sustainably, while enhancing and preserving natural habitats.

Envelope Performance

A ‘fabric first’ approach has been taken to reduce the energy demand and CO2 emissions across the Proposed Development. A delicate balance has been struck between optimum daylighting to reduce the need for artificial lighting and an efficient thermal envelope ensuring of heat transfer. These passive measures together help reduce baseline requirements for heating, cooling, and artificial lighting – allowing for energy performance exceeding Part L requirements by 16.7%

Landscape and SuDS

While a majority of data centre developments in Slough create a hard urban edge due to their stringent security requirements, significant space on the Manor Farm site has been allocated for purposes of landscaping, public realm, and Sustainable Urban Drainage (SuDS) systems. The public face along the Poyle Road frontage features significant public realm adjacent to the proposed footpath, softening the integration with the adjacent townscape.For the management of stormwater and runoff, measures high on the SuDS hierarchy such as rain gardens, infiltration basins, and permeable paving have been prioritised to minimize the development’s runoff contribution to the local infrastructure network in addition to providing ecology and biodiversity benefits.

Photovoltaics

A significant area of roof space on the south facing office block has been allocated for solar energy generation. The anticipated yield is approximately 60 MWh/year, contributing significantly to the energy demand of the office accommodation block.

Sustainability and Battery Energy Storage

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, battery energy storage provides the following benefits:

- Enhances grid reliability and resilience – provide back up 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 decarbonization of the energy grid – 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.

For more details on energy and sustainability, please refer to the Hoare Lea Energy and Sustainability Strategy.

Energy and Carbon Reduction

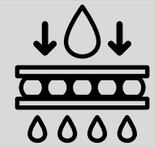
- A BREEAM ‘Excellent’ rating is being targeted for by the Proposed Development.
- The design will include high standards of energy efficiency and include low/zero carbon technologies including a high efficiency heat pumps and PV array.
- Overall, a 16.7% reduction in CO2 emissions will be achieved beyond the Building Regulations Part L2 2021 baseline.
- Integration of up to 60 MWh/yr photovoltaic array on the building roof

Materials

- Façade has been developed to contribute to local character of the area.
- Materials will be specified to be durable, responsibly sourced, have environmental product declarations and locally manufactured where feasible to reduce the embodied carbon of the Proposed Development.
- A Sustainable Procurement Plan will be adopted and inform the building specification and Contractor’s procurement strategy.

Green infrastructure and Ecology

- The development layout has been designed to retain, protect and enhance the most valuable ecological features, namely the boundary hedgerows and wet ditch. Overall, the development is targeting a Biodiversity Net Gain of 115.53% in habitat units and 10.69% in hedgerow units.



Drainage

- Sustainable drainage systems high on the SuDS hierarchy have been incorporated and these include permeable paving, rain gardens and detention basins.

Travel

- 20% of parking spaces will feature EV charging stations – 100% of spaces will feature pathway to allow for future EV charger install.
- Cycle storage with 37 spaces will be provided in secure and sheltered storage. Suitable shower, changing and storage facilities will also be provided.

Lighting

- Provide fenestration which balances the need for passive solar heating and daylighting whilst having regard to the potential implications for overheating.
- All lighting is to be highly efficient and controlled appropriately. External lighting will be selected to reduce light spill while ensuring site security and safety.

Water

- The Proposed Development will install low water consumption sanitary fittings which comply with BREEAM standards.
- Water meter and a ‘Building Management System’ (BMS) for the monitoring of water consumption will be installed.

Waste

- A ‘Site Waste Management Plan’ will be produced for the Proposed Development for each phase of construction and operation. The plans will include targets for minimising waste and diverting waste from landfill.