DESIGN & ACCESS STATEMENT

Bridgewater Retail Park
Hayes

Full Planning Application

Document Prepared for:

OXENWOOD
REAL ESTATE

GRAFTONGATE

UMC Project Ref: 21048
Revision: A
Written/Checked: LBR/AJL
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01 INTRODUCTION

01 INTRODUCTION

Site Location Plan

01.1 STATEMENT OVERVIEW

This Design & Access Statement has been prepared by UMC Architects on behalf of OXW Hayes S.à.r.l., in support of the submission of a Full Planning Application for the development of flexible employment space comprising warehousing, associated parking, pedestrian and vehicular access arrangements, landscaping and associated infrastructure. The building use class is B8 (storage or distribution).

01.2 REPORT CONTENT & STRUCTURE

The purpose of this document is to highlight the evolution of the physical design and identify design responses with respect to access, appearance, landscaping, layout and scale.

The statement contains a summary of the site context, analysis of the surrounding areas and an explanation of the relevant design, exploring the physical characteristics of the scheme that have been informed by the design process.

This document should be read in conjunction with the other technical reports and supporting documents submitted as part of the application.

Key:

Planning Application Boundary

01 INTRODUCTION

Existing Site Layout Plan

Key:

Planning Application Boundary

01.3 BRIEF

The proposal comprises the construction of 14,067m² of B8 (storage or distribution), supported by 2,101m² ancillary E(g) offices, associated parking & servicing, landscaping, access, highways works and infrastructure within the application boundary covering 2.88 Hectares (7.11 Acres).

The units are designed to meet normal institutional standards with service yards sized to provide sufficient lorry parking. The yard features both level entry and dock leveller loading door access, as operationally required by potential occupiers. In addition, the unit is served by integral ancillary offices allied with grade level car parking and cycle storage.

The proposed unit is situated to the South of the plot with the existing access road from the A4020 (Uxbridge Road) providing access to the scheme.

The proposed development will provide much needed employment space, high quality employment space inside and out. The development will also be integrated with the immediate surroundings and landscaping.

The documents contained within the Planning Application provide details of the Proposed Development, whilst this statement describes the design principles including building design, layout, access, scale and landscaping.

02 SITE APPRAISAL

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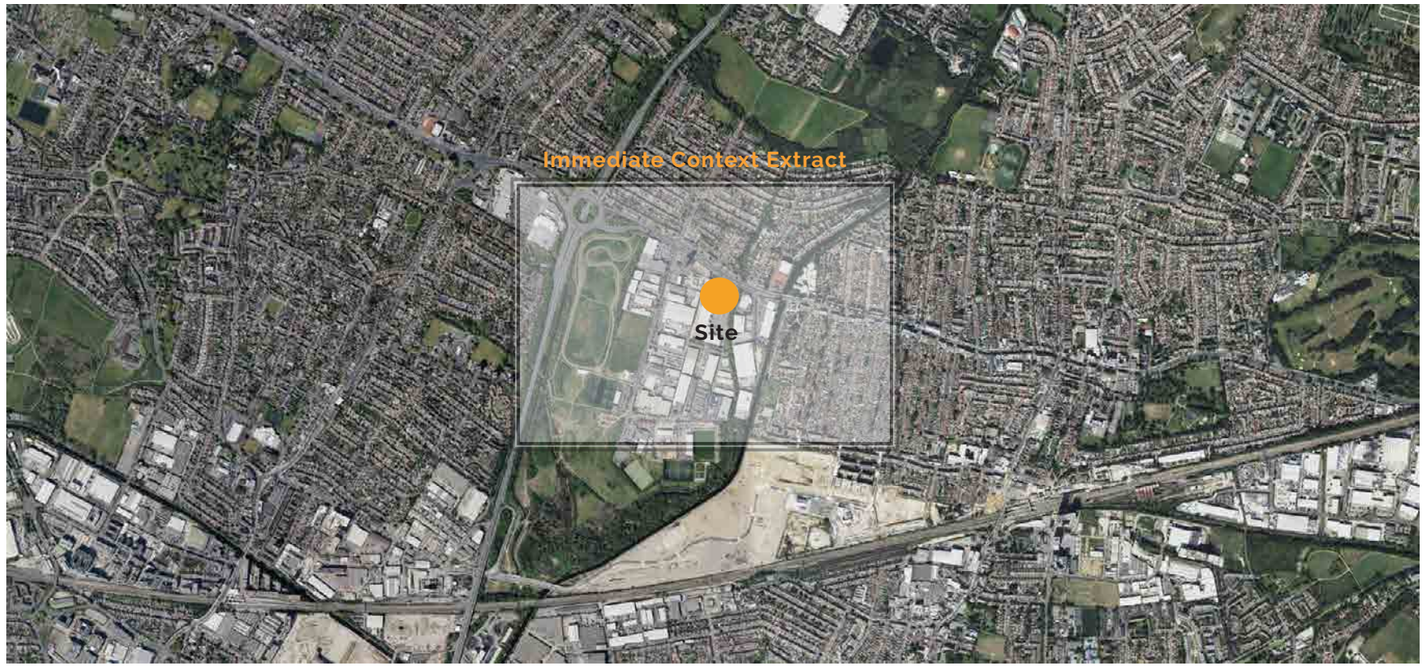


Site Location - Wider Context

Site Location - Immediate Context

Key:

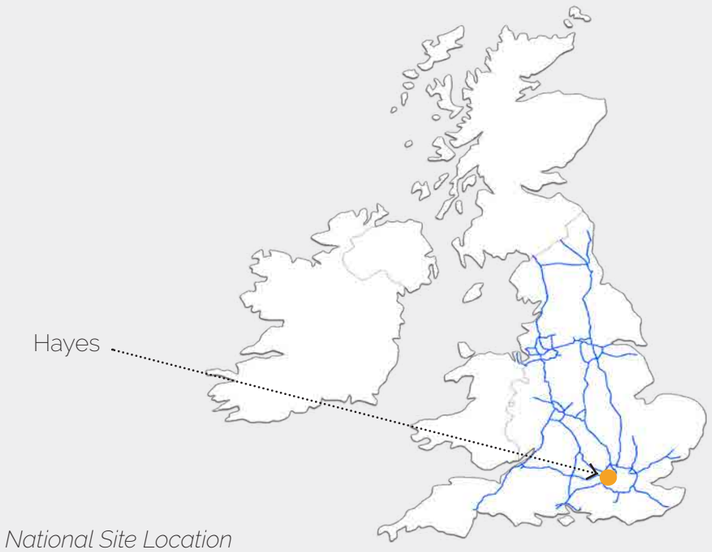
- Planning Application Boundary
- Road
- Watercourse

02.1 SITE LOCATION

The proposed site location is illustrated on UMC Architects Planning drawing 21048_P1010.

The application site is 2.88 Hectares (7.11 Acres), located in the Springfield Road Retail Park to the West of Hayes. The site is bordered to the North by the A4202 'Uxbridge Road', and to the South by Bulbrook Road, to the East by a treeline and West by commercial/ industrial units.

The development site has an established point of vehicular access to the existing commercial estate, which will be used for access.



National Site Location

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02 SITE APPRAISAL

02.2 TRANSPORT LINKS

The site benefits from excellent transport links. With access onto the M4 and M25 this plan depicts how well Hillingdon is placed in terms of transport links to surrounding centres and in particular London. There are opportunities presented also by the proximity of Heathrow airport. Trainlines create direct links to London city centre as well as Heathrow airport. The location provides excellent access onto this strategic highway network, making it a very desirable place for businesses.

M1
M25
M40
M4
M3
A40
A312
A4020
A4
J16
J15
J14
J13
J12
HARROW
HILLINGDON
EALING
HOUNSLOW
RICHMOND
Gerrards Cross
Ruislip
Wembley
Uxbridge
Hayes
Southall
Slough
West Drayton
Windsor
Heathrow Airport
Fulham
Kingston upon Thames
Croydon
London City Centre

Key
- Main Road
- Motorway
- Airport
- Trainline
- Town/ City
- 15min Drive
- 30min Drive
- J# Junction

02 SITE APPRAISAL

Aerial view looking North

1. Site Entrance- Looking West

2. Site Entrance- Looking East

02.3 EXISTING SURROUNDINGS

Establishing a clear understanding of the application site is fundamental and integral part of the design process. These photographs show the existing site features, constraints and opportunities that influenced the design.

The site is currently employment site with a wide range of businesses. The surrounding context is used for a mixture of industrial and residential developments. The existing entarnce is incorporated within the application boundary and provides access to the site from the North. The eastern boundary is bordered by trees and there is scope for integrated landscaping strategies on the northern and eastern edges of the site.

Key:

Planning Application Boundary

Road

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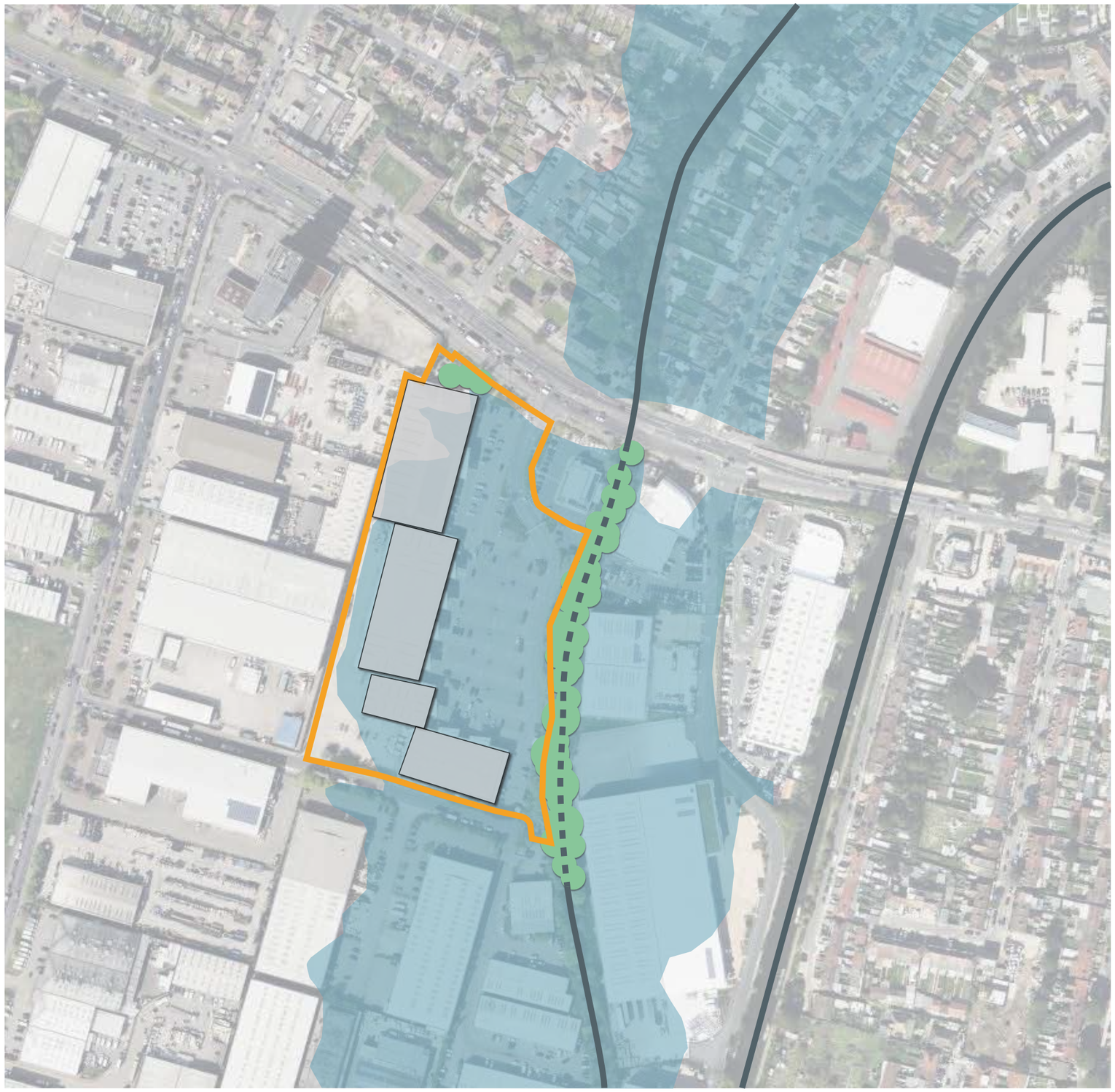
02 SITE APPRAISAL



Site Contraints Plan

02.4 SITE CONSTRAINTS

Key:

- Planning Application Boundary
- Flood Zone 2
- Watercourse
- Existing Treeline
- Existing Building (On-site)

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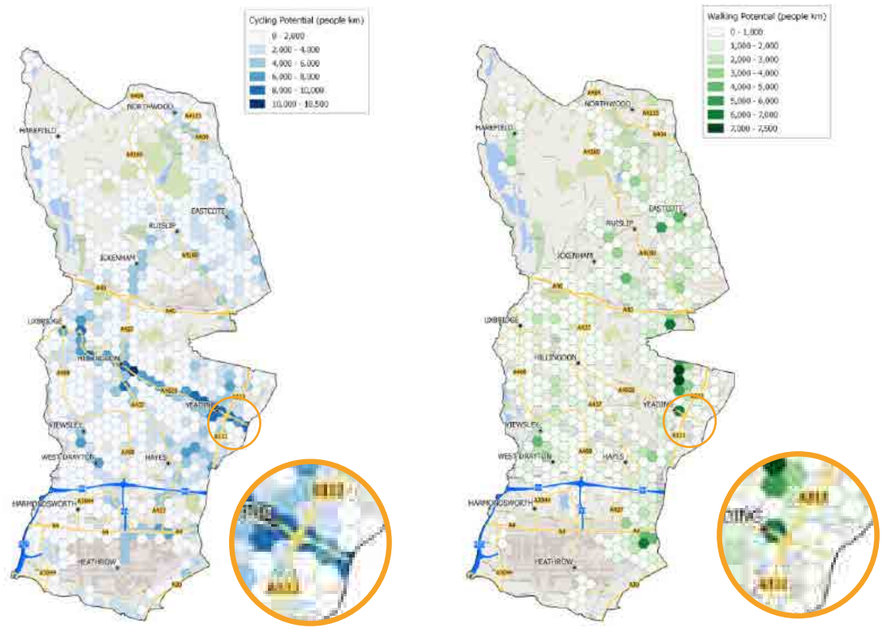
02 SITE APPRAISAL

Existing Site Access Plan



London Borough of Hillingdon 3rd Local Implementiation plan - level of walking and cycling potential derived from the London Travel Demand Survey

02.5 EXISTING VEHICULAR AND PEDRESTRIAN ACCESS

Adjacent Roads and Vehicular Access Points

The site is accessed from the A4020 (Uxbridge Road) which connects Hayes with the B483 (Uxbridge) to North-west and with the A3220 (Shepherd's Bush) to the East. Located 2 miles North of the M4, a short distance from Heathrow Airport and only 6 miles East of the M25, the site has excellent travel links.

Public Transport

The site benefits from easily accessible transport links. There is a bus stop directly at the entrance to the site which has buses to Uxbridge every 10 minutes (6am - 1am) and buses to Hayes every 15 minutes (24h). Southall train station is a 25 minute walk from the site.

Key:

- Planning Application Boundary
- Pedestrian/ Cycle Links
- BS — Existing Bus Stop
- Existing Site Access

Walking and Cycling Potential

As can be seen, potential cycle trips are concentrated along the major road network, whereas potential walking trips are more widely distributed across the Borough. The site is located directly adjacent to this corridor providing excellent access onto this strategic highway network, making it a very desirable place for businesses.

The largest potential for cycling is along the A4020 corridor between Hillingdon and Yeading. Encouraging cycling and sustainable methods of transportation along this stretch would likely give a high return in the potential number of new cycling trips.

03 DEVELOPMENT PROPOSALS

03 DEVELOPMENT PROPOSALS

03.1 KEY DESIGN PRINCIPLES

Taking into account the requirements of the brief, combined with an understanding of the site constraints and opportunities, this allows a number of key principles to be established, as follows:

Design & Character
To create an attractive, self-contained and functional development with clear identity, which relates well within its context. Buildings should be well-designed, with attention to detail and provide clear legibility in the choice of façade material specifications.

Functionality
To provide a development that will meet the long-term needs of occupiers for running an efficient and successful business. Clear thought must be given to optimise functionality and avoid unnecessary routes of travel.

Building Context
To design the building form and elevation treatment taking into account the employment context of the development. The building needs to assimilate with the scale of nearby buildings.

Orientation & Movement
To ensure that the development provides a sense of arrival for visitors arriving by vehicle or on foot. Routes for HGVs, cars, cyclists and pedestrians should be clearly segregated to avoid potential conflicts. Clarity of design and layout should be at the forefront, with signage being a fallback.

Quality of Landscape
To create a development which improves the quality of the surrounding context, utilising the implementation of integrated landscaping strategies accessible to both building occupants and the public. A considered landscaping design focuses on biosecurity to achieve biodiversity gains.

Health & Wellbeing
Understanding the importance of health & wellbeing to create meaningful spaces, and achieve a heathier, happier and engaged workforce.

Proposed Site Entrance View

03 DEVELOPMENT PROPOSALS

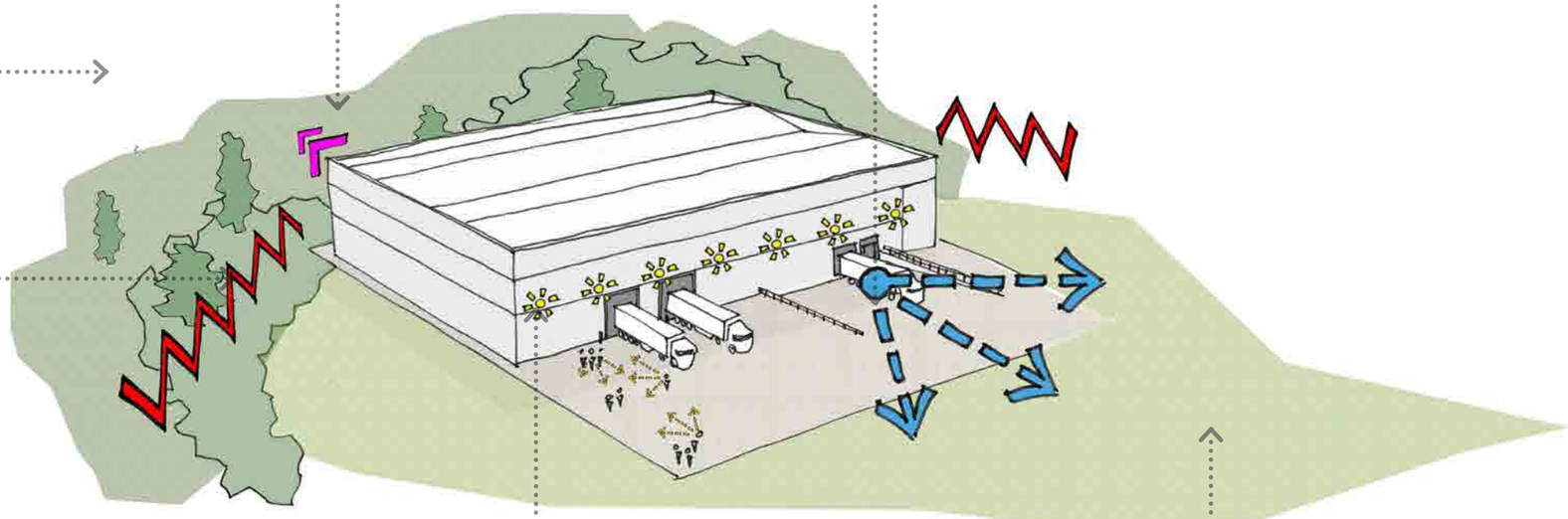
03.2 SCHEMATIC PLOT PRINCIPLES DIAGRAM

Massing
Hard edges towards site boundaries are mitigated by the orientation of each unit, providing feature corners minimises impact in terms of massing to key views.

Noise Control
Site yards are often the area in which most noise from machinery and workers is produced. Inward facing site yards limit noise projected into the surround area.

Notional Views
Key views around the site have directly effected the overall illustrative layout of units across the site.

Green Buffer
Retention of existing trees and bunds provide natural screening and maintain habitat zones.



Key Principles Diagram

Lighting
Lighting to service yards will be designed to minimise light spill beyond plot boundaries.

Amenity
The green space provided within the site is envisaged to enhance existing landscape.

03 DEVELOPMENT PROPOSALS

03.3 ILLUSTRATIVE MASTERPLAN EVOLUTION

Current Masterplan

1

Design Criteria Compliance

- Design & Character
- Functionality
- Building Context
- Orientation & Movement
- Quality of Landscape
- Health & Wellbeing

2

Design Criteria Compliance

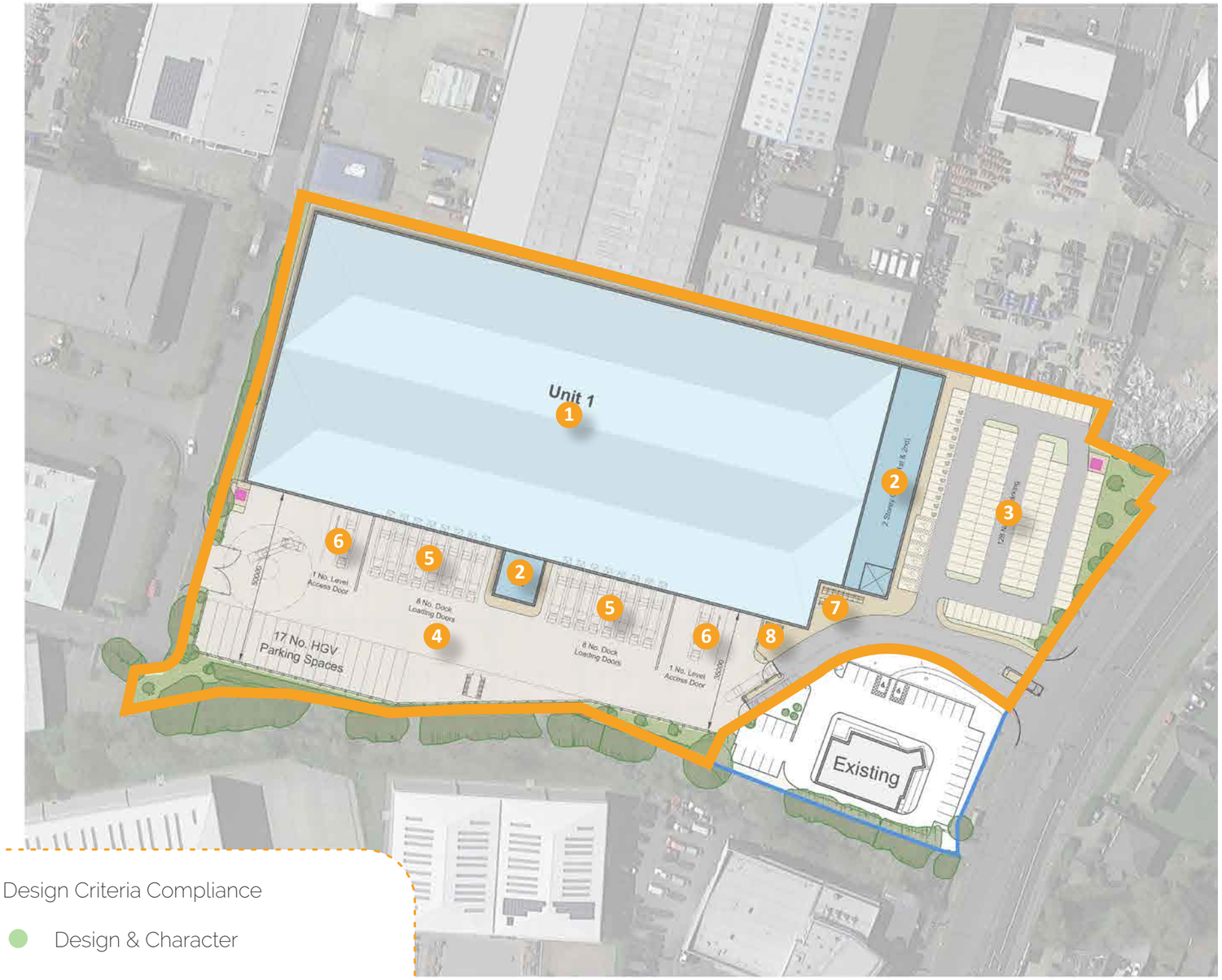
- Design & Character
- Functionality
- Building Context
- Orientation & Movement
- Quality of Landscape
- Health & Wellbeing

3

Design Criteria Compliance

- Design & Character
- Functionality
- Building Context
- Orientation & Movement
- Quality of Landscape
- Health & Wellbeing

03 DEVELOPMENT PROPOSALS



Site Plan Layout

Design Criteria Compliance

- Design & Character
- Functionality
- Building Context
- Orientation & Movement
- Quality of Landscape
- Health & Wellbeing

03.4 LAYOUT & USE

This section describes the process of design and how it has been informed by the identified key design principles, constraints and opportunities for development.

The use classifications applied for within this application are for flexible employment space comprising warehousing and ancillary office. The building use class is B8 (storage or distribution) with supporting E(g) offices. In proposing this, 24-hour operation is required, to provide flexibility and efficiency.

The following ancillary functions will be provided:

- Integral administration offices
- Gated and security controlled service yards
- Grade level car parking
- Cycle storage
- Refuse storage

Key

1. Warehouse
2. Ancillary Offices
3. Car Parking
4. Service Yard
5. HGV Loading Dock Doors
6. Level Access Doors
7. Cycle Shelter
8. Waste Storage

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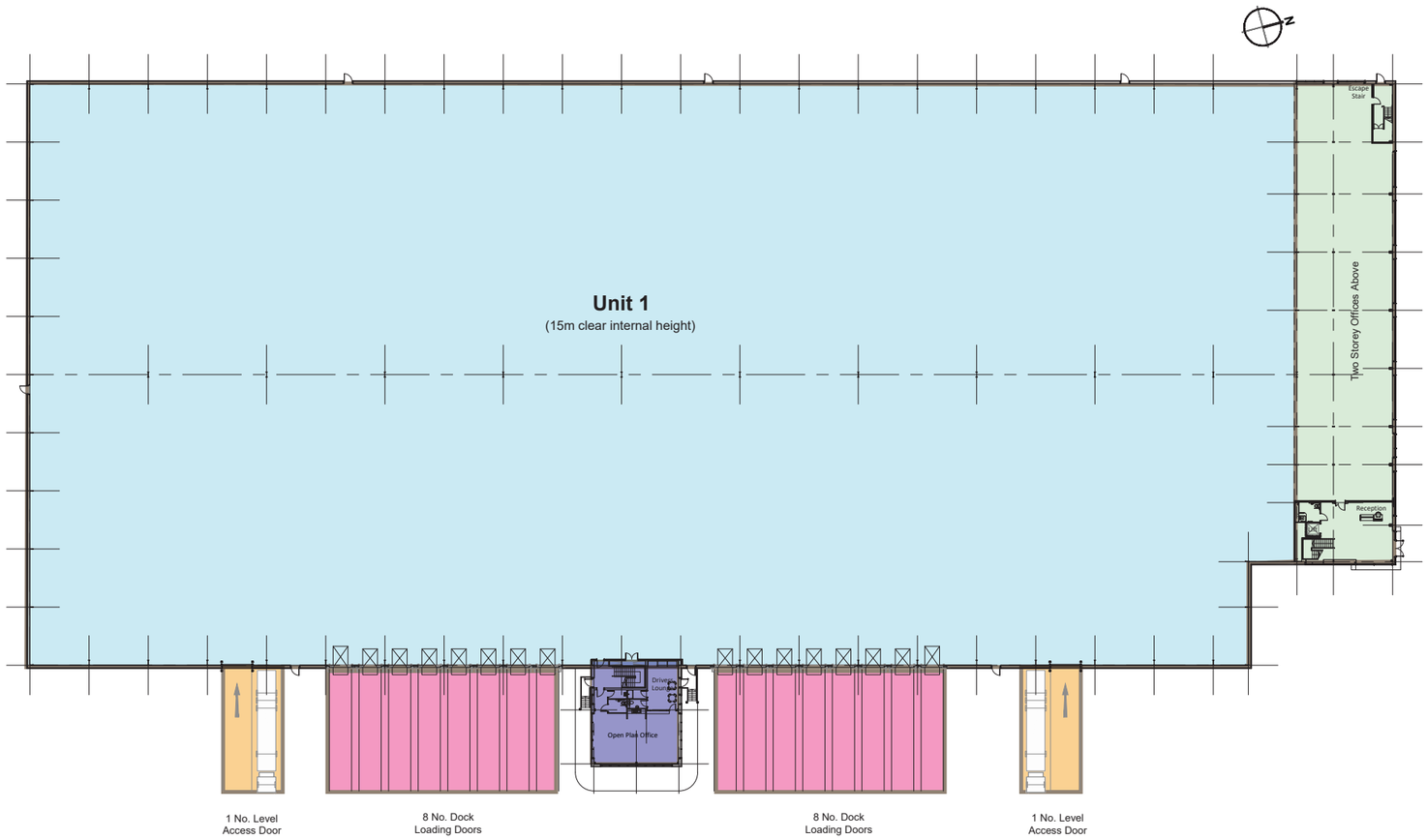
03 DEVELOPMENT PROPOSALS



Building Layout Plan

Internal layouts for information only

03.5 AMOUNT

The proposed unit comprises a steel-framed, single storey warehouse which is sized to suit the operational requirements of the occupier. The application seeks to provide 14,067m² of warehousing internal floor area, in addition to 2,101m² of associated office and welfare accommodation.

Significant space is provided around the building for necessary vehicle loading manoeuvres, with integrated parking, vehicle storage and soft landscaping schemes to be implemented. The sizes of these areas are derived from the needs of the end user. The HGV yard is dimensioned to accommodate modern articulated vehicles and their turning circles.

The proposed site layout submitted as part of this application confirms the proposed floor areas as listed in the schedule of accommodation.

03.6 SCHEDULE OF ACCOMMODATION (GIA)

Warehouse Area	-	151,415 ft² - 14,067 m²
2 Storey Office	-	19,181 ft² - 1,782 m²
Transport Office	-	3,433 ft² - 319 m²
Loading Docks	-	16 (incl. 2 Euro Docks)
Level Access Doors	-	2
Total Building Area (GIA)	-	174,030 ft² (16,168m²)
Plot Area	-	2.88 Ha (7.11 Acres)

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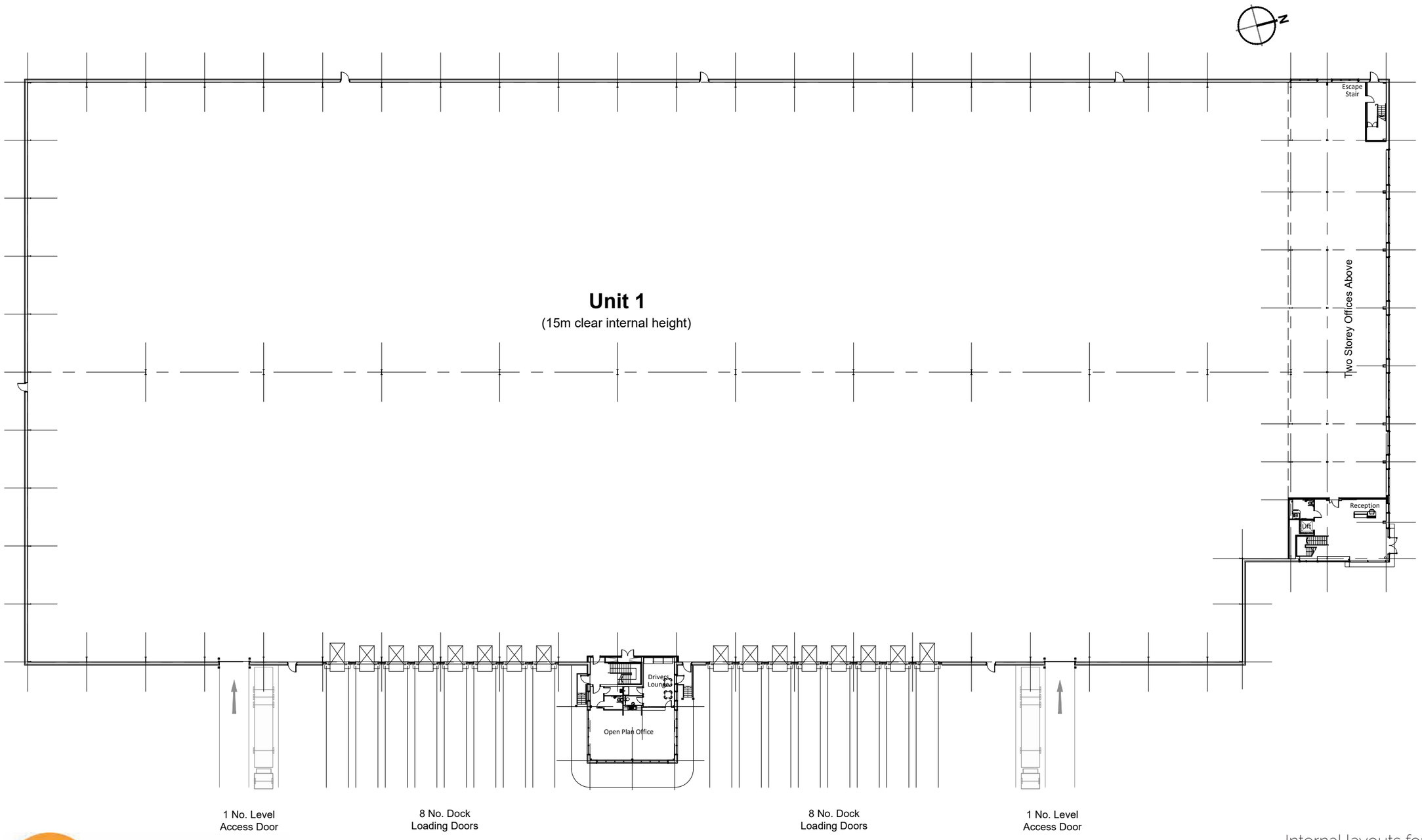
03 DEVELOPMENT PROPOSALS

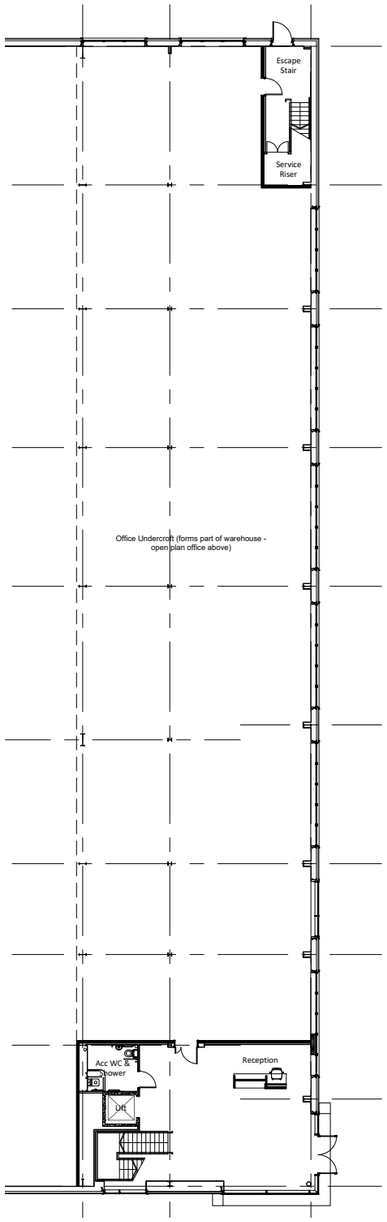
03.7 BUILDING LAYOUT

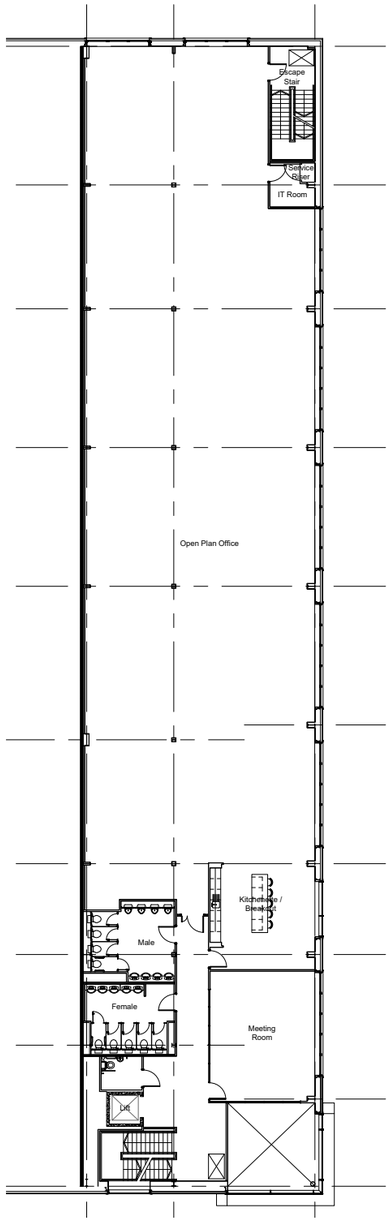


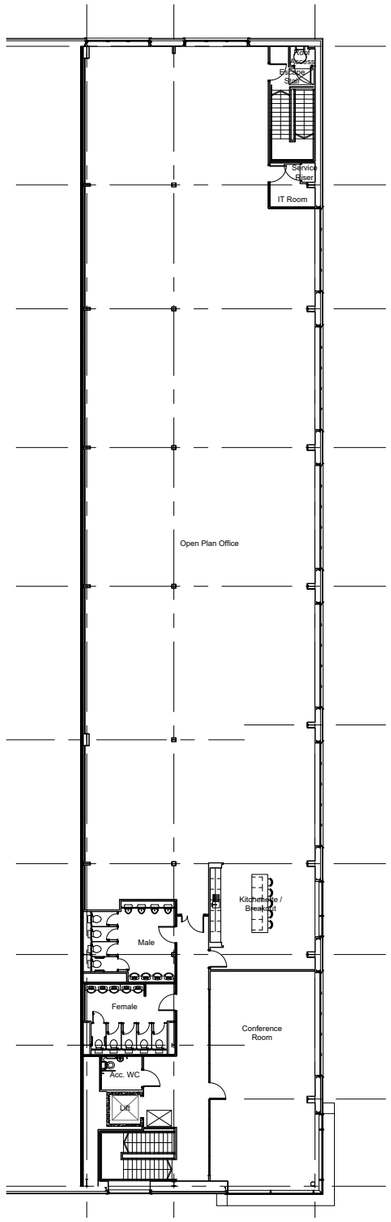
Internal layouts for information only

03 DEVELOPMENT PROPOSALS

03.8 ANCILLARY OFFICE LAYOUTS







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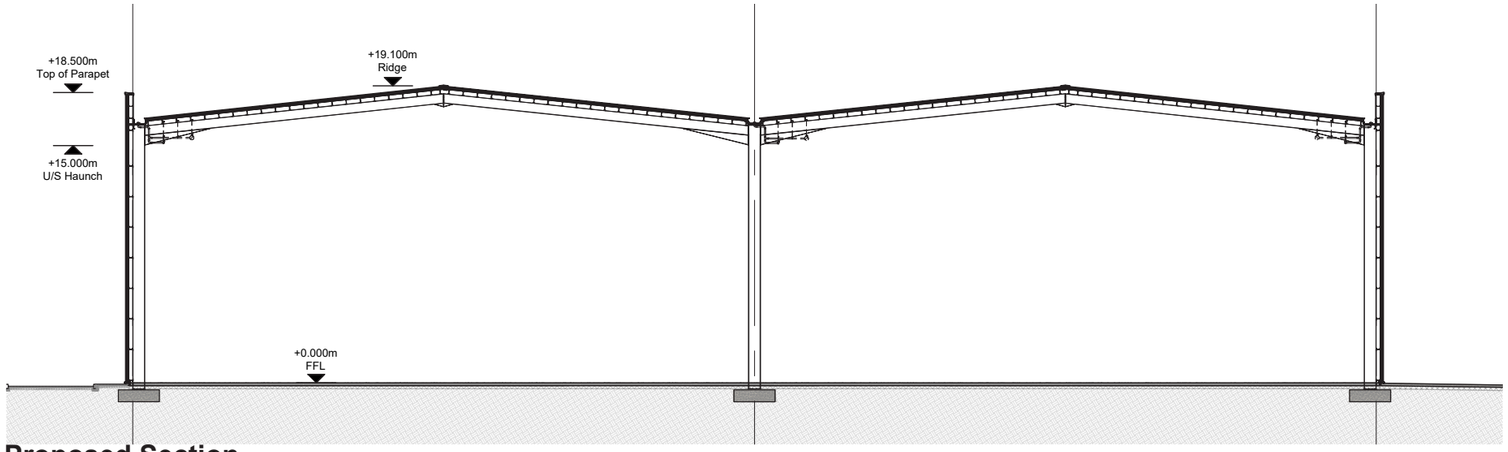
Internal layouts for information only

03 DEVELOPMENT PROPOSALS



Unit Indicative Sections

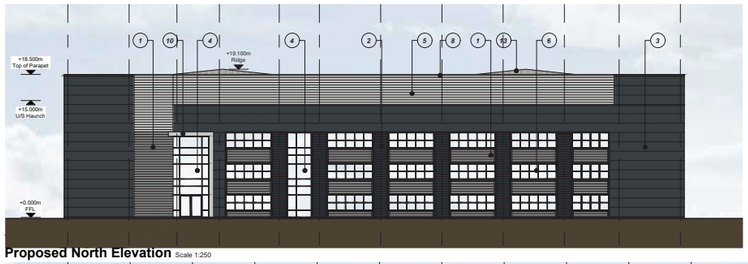
03.9 SCALE, HEIGHT & MASSING

The proposed building is based around the likely operational practicalities required by the future occupier.

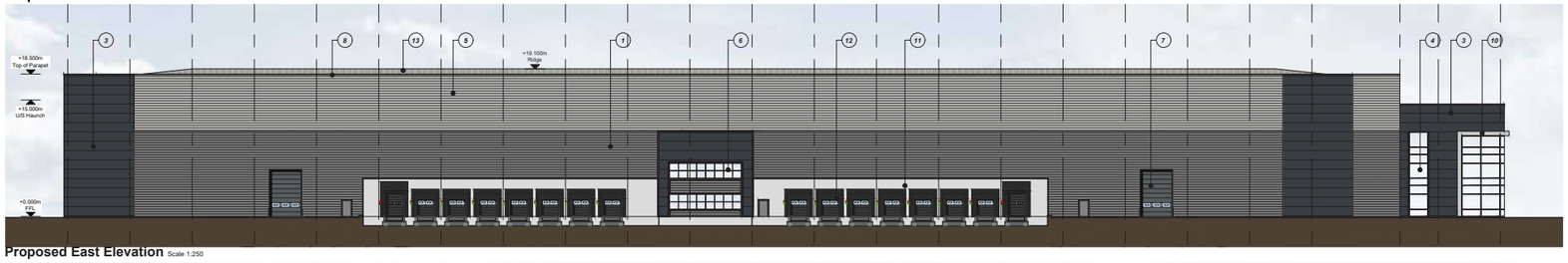
The building is designed as a propped portal to allow maximum flexibility in design for the end users operation, The effective height of buildings such as this is usually defined as the 'clear height to the underside of the haunch'. This is the height to steel haunch that is used between the column and rafter of the portal frame. The zone above this height cannot effectively be used for the end user's operations or racking and is usually reserved for services. The proposed unit incorporates a clear internal haunch of 15.000m above finished floor level (F.F.L) in order to provide sufficient flexibility for the future occupier's internal racking or internal fit out. This maximises its potential for future occupier.

There is also a question of careful attention to detail as to how to deal with these types of buildings. The treatment of rooflines and the use of colour become of paramount importance together with the careful articulation of ancillary office elements. The main warehouse is proposed to be clad in a mixture of vertical and horizontal profiled metal cladding, with lighter colours to higher elements of the building to assist in reducing the perceived height, by fading the building into the skyline.

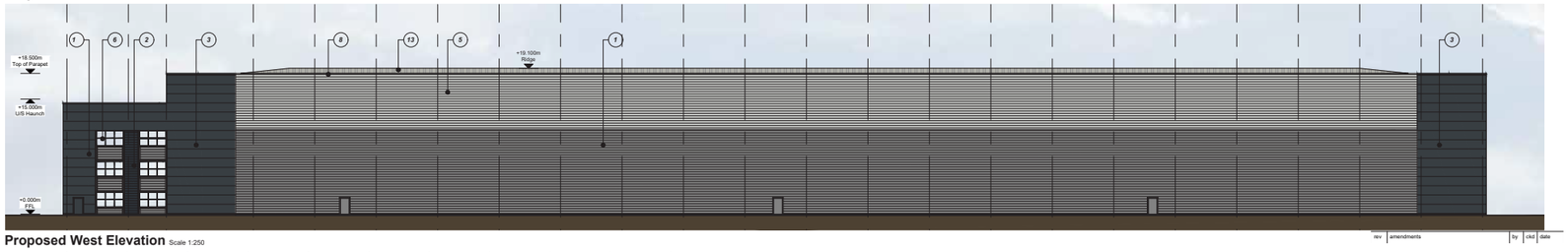
03 DEVELOPMENT PROPOSALS



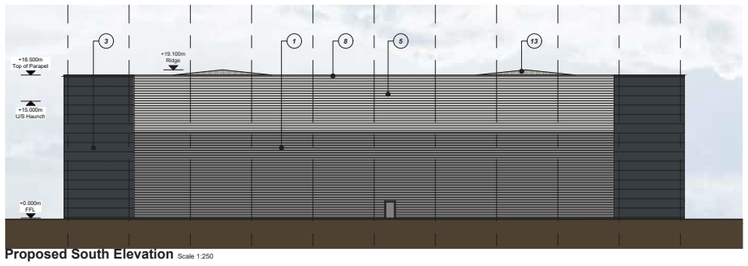
Proposed North Elevation Scale 1:250



Proposed East Elevation Scale 1:250



Proposed West Elevation Scale 1:250



Proposed South Elevation Scale 1:250

Key

1. Horizontally laid trapezoidal built up wall cladding
   Colour: Pure Grey (RAL 000 55 00)
2. Horizontally laid trapezoidal built up wall cladding
   Colour: Slate
3. Horizontally laid colour coated cladding system with microrib finish
   Colour: Anthracite (RAL 7016)
4. Aluminium curtain walling system
   Glazing: Grey tinted
   Frame Colour: Anthracite (RAL 7016)
5. Horizontally laid trapezoidal built up wall cladding
   Colour: Oyster (RAL 7035)
6. Aluminium window/ door system
   Glazing: Grey tinted
   Frame Colour: Anthracite (RAL 7016)
7. Overhead sectional doors with level access
   Colour: Anthracite (RAL 7016)
8. Parapet flashing
   Colour: to match adjacent cladding
9. Security door & frame.
   Colour: to match adjacent cladding
10. Feature Entrance Surround with brise soleil fins
    Colour: Oyster (RAL 7035)
11. Pre-cast insulated dock pro-wall system
12. Overhead sectional doors with dock leveller
    Colour: Anthracite (RAL 7016)
13. Built up roof cladding
    Colour: Goosewing Grey (RAL 7036)

rev	amendments	by	chkd	date

03.10 PROPOSED BUILDING ELEVATIONS

The proposed elevations are illustrated on UMC Architects Planning drawing 21048_P0005.

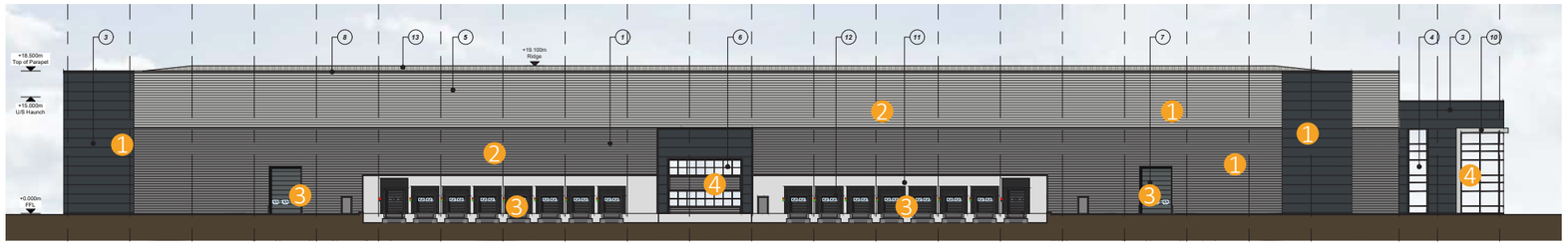
The underlying principle of the proposed design is to provide a building that offers architectural character, while adding quality and aesthetic enhancement to the immediate vicinity. The proposed unit represents a high quality industrial commercial building that integrates well with its surrounding context.

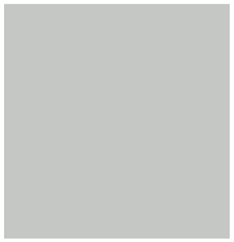
The elevations have been detailed to punctuate key features of the buildings such as bookends to the corners and feature banding to accentuate the office entrance. The use of varying cladding profiles and colours along with full height glazing raise the aesthetic quality and serve to break down the overall uniformity of the design whilst offering excellent longevity and durability.

The elevational treatment has been designed to minimise the visual impact of the buildings but provide a strong form with architectural interest. Cladding panels, in shades of grey have been used to emphasize elements of the structure, with horizontal and vertical forms creating juxtaposition between the different components of the scheme. The main elements of the building have been clad in profiled metal cladding with the lighter colour on the higher elements of the building to assist in reducing the apparent height, by fading the building to its parapet.

Office cladding and massing hierarchy has been carefully considered along the elevation to break down the overall uniformity of the warehouse design. This helps to add human scale to the built form.

03 DEVELOPMENT PROPOSALS





Hamlet
(RAL 9002)

Goosewing Grey
(RAL 7038)

Pure Grey
(RAL 000 55 00)

Slate Grey
(RAL 7012)

Anthracite
(RAL 7016)

03.11 UNIT APPEARANCE

1. Different cladding materials to add visual interest and break up the visual building massing.
2. Use of horizontal cladding to accentuate the linear form of the warehouse to lower the perceived height of the building.
3. Level Access Doors / Loading Dock Doors for distribution.
4. The use of glazing to add transparency to the facade and offer some form of natural surveillance.

The colour chart indicated to the left demonstrates the neutral materials palette chosen for the scheme, to provide a common backdrop for the cladding, windows and roofing. The use of corporate / stronger accent colours will be discouraged to avoid conflict in building appearance although strong signage zones will be encouraged to promote end user identity.

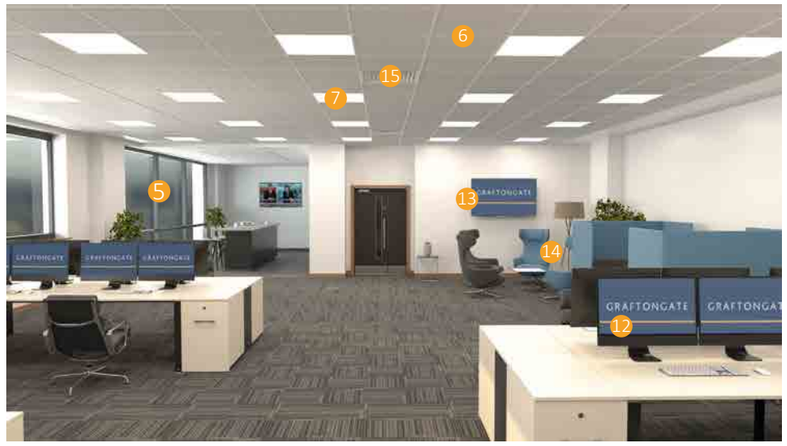
03 DEVELOPMENT PROPOSALS

Internal View - Reception

Internal View - Reception

Internal View - First Floor Circulation

Internal View - Meeting Room



Internal View - Open Plan Office

Internal View - Break Out Area

03.12 INTERNAL APPEARANCE

Ensuring a high design quality and user comfort is extremely importatnt. The internal design elements are demonstrated in the visualisations shown opposite, these include:

1. American Light Oak joinery panelling to reception cupboards.
2. Reception ceramic floor tiling.
3. Precast concrete stair with structural glass handrails
4. Entrance matwell.
5. External Glazing, creates bright internal space and allows views of landscaping space and passive surveillance of the scheme.
6. Acoustic Ceiling Tiles, decrease sound transmission and create a comfortable working environment.
7. Internal Lighting, in addition to daylight create a comfortable internal environment.
8. Reception Furniture, provides generous and welcoming spaces.
9. Structural Glass Handrails, increase sunlight gain.
10. Internal Planting, has a positive effect on health and wellbeing.
11. Brise Soleil fins, filter sunlight creating a comfortable internal environment.
12. Office Fit-Out, to suit end user requirements allows for adaptable space.
13. Display Screens and Adaptable Spaces, encourage interactive and collaborative work.
14. Breakout Areas and Internal Amenity Space, promotes relaxation and positively impacts health and wellbeing.
15. Office ventilation.
16. Kichenette fixtures used in conjunction with the amenity spaces.
17. American Light Oak hardwood splayed skirting.

Note: All images are indicative and are subject to individual scheme specification and design.

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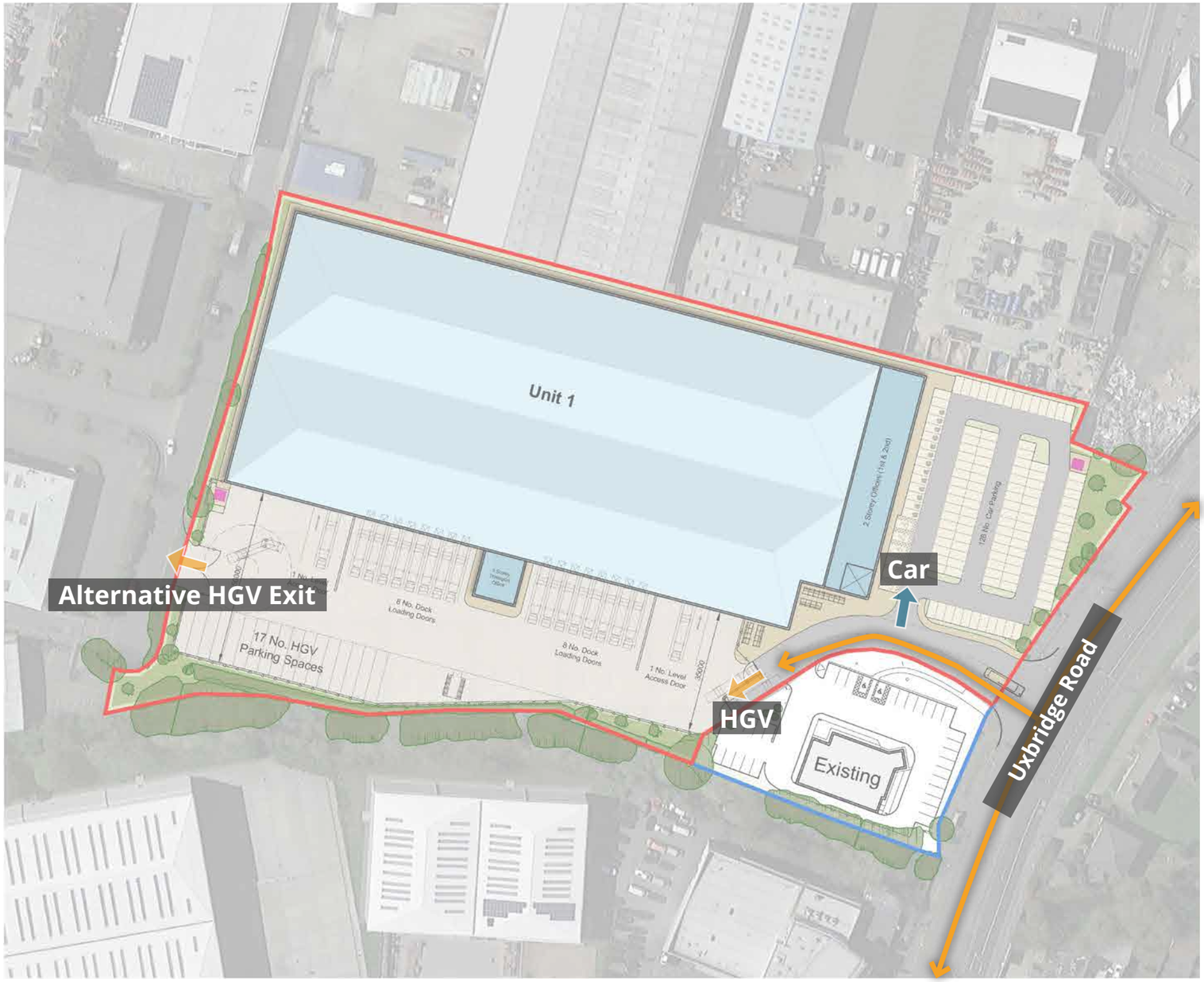
04 ACCESS

04 ACCESS



Site Access Plan - Immediate Context

04.1 VEHICULAR ACCESS

Access to the new unit will be from Uxbridge Road. The entrance to the site will be designed and managed to eliminate vehicle queueing on the public road, particularly at the controlled entrance barriers which are proposed to allow the end user to manage and control the flow of traffic both into the site and back out onto the highway during peak periods.

Separate HGV and car park entrance will eliminate a conflict between delivery vehicles and car traffic. The car park areas will be constructed in dense bitumen tarmacadam (See UMC Architects Proposed External Finishes Plan 21048_P0006) which will form part of a coordinated hard landscaping strategy.

The application seeks approval for 128 car parking spaces (including 6 accessible spaces within proximity of the ancillary office entrance.

Key:

- Application Boundary
- Proposed HGV Yard Access
- Vehicular Access
- Proposed Car Park Access

Indicative Road & Pavement Image

04 ACCESS

Pedestrian Access Plan

04.2 PEDESTRIAN AND CYCLE ACCESS

Pedestrian Access

Pedestrians entering the site will do so via either the car park entrance or from the adjacent pedestrian and cycle path. Tactile paving and dropped kerbs will be provided at all road junctions, with further paving areas extended around the building perimeter.

Inclusive access throughout the site is achieved, where applicable, with minimum 2m wide footpaths leading pedestrians from the car park to the ancillary office.

Cycle Access

The application proposes covered cycle parking spaces located adjacent to the main office block to encourage sustainable travel to and from site. Cyclist access can be achieved via the combined pedestrian/ cycle access routes shown in the adjacent diagram.

Yard Access

Gated access between the office and the yard will be provided behind the office core. Personnel access to the operational areas will be provided from the yard.

Key:

- Application Boundary
- Pedestrian/ Cycle Links
- Existing Footpath
- Proposed Footpath

04 ACCESS

04.3 PEDESTRIAN ACCESS - INTERNAL

Reception

The reception area to the main offices will be suitably sized to accommodate wheelchair users, including appropriate space and waiting zones. All floor finishes will be suitable for wheelchair access.

Horizontal Circulation

Internal corridors will be a minimum of 1500mm wide at the pinch point. All doors will have a minimum clear opening of 800mm and an opening force below the recommended maximum. Door furniture will contrast with the background colour of the door leaf, and be of either lever type, at 1000mm above floor level, or pull handles, commencing at 1000mm above floor level. Doors in corridors will be fitted with vision panels, commencing at 500mm above floor level.

Vertical Circulation

Stairs will provide vertical access around the offices, and a passenger lift will provide access to all floor levels. All staircases and lifts will be designed in accordance with Approved Document M, with recommendations including contrasting nosings, and treads/risers suitable for ambulant disabled members of staff or visitors. Any member of staff, or visitor, with a visual handicap would be actively managed within the building.

Industrial Space

The warehouse space is to be level throughout with clearly defined pedestrian routes, with fire exits clearly defined between the main offices and operational areas. External stairs leading to the yards will be provided where necessary with minimum 900mm wide x 1400mm long refuge bays. Landings will be level with the finished floor levels at these exits.

Toilets

Toilets and shower facilities will be provided that are suitable for ambulant disabled staff, subject to detailed design development to suit future tenant occupancy requirements. In the offices, toilets will be provided for male, female and disabled users – these are to be found on each floor. A WC will be provided for ambulant disabled users.

Finishes

All floor finishes are to be of a non-slip type, with carpets being of a shallow dense pile, allowing easy passage for wheelchair users. The walls, wall coverings and paint finishes are to be suitably contrasting with the joinery of the doors and low surrounds. Where wall tiles are to be used, they are to have a satin finish to reduce glare.

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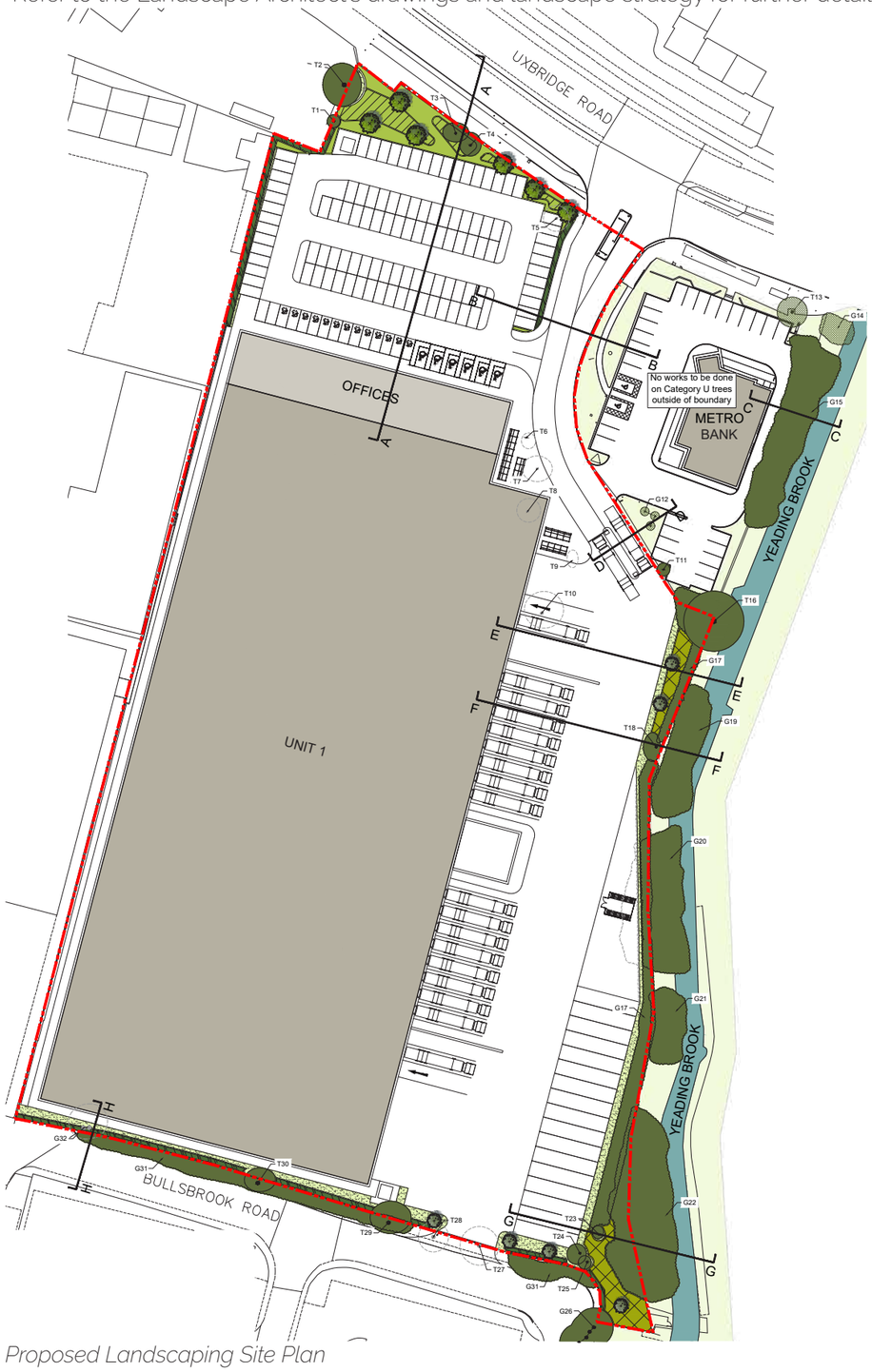
05 LANDSCAPING

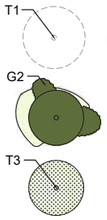
05 LANDSCAPING

05.1 PROPOSED LANDSCAPING DESIGN STATEMENT

Refer to the Landscape Architect's drawings and landscape strategy for further detail.



Proposed Landscaping Site Plan



EXISTING VEGETATION TO BE REMOVED

EXISTING VEGETATION TO BE RETAINED

CATEGORY U TREES OUT OF SITE BOUNDARY

LARGE STATURE TREES
(Tree pit size: 1500x1500x900mm backfilled with topsoil)
18-20cm stem girth

Species
Betula pubescens
Pyrus calleryana 'Chanticleer'
Salix caprea

SMALL STATURE TREES
(Tree pit size: 1000x1000x750mm backfilled with topsoil)
12-14cm stem girth

Species
Alnus glutinosa
Populus canescens

SPECIMEN SHRUBS
(300mm depth of topsoil, 300mm depth subsoil)

Species	Supply size	Pot size
Amelanchier lamarckii	1200-1500mm	15L
Miscanthus sinensis 'Purpurascens'	600-800mm	15L
Ribes sanguineum 'King Edward V11'	800-1000mm	15L

THICKET (WOODLAND EDGE) MIX PLANTING
(*300mm depth of topsoil + minimum 600mm depth subsoil*)

PROPOSED WOODLAND EDGE PLANTING
(*300mm depth of topsoil*)

Where woodland or thicket is planted next to a hard surface/kerb/fence, it should be positioned 1m from the edge.

Transplants planted in groups of 7-15 of the same species on a 1.0m grid.

%	Species	Common Name	Size	Age	Root/Pot Size
10%	Corylus avellana	Hazel	400-600mm	1+1	OG
5%	Crataegus monogyna	Hawthorn	400-600mm	1+1	OG
5%	Cornus sanguinea	Common Dogwood	400-600mm	1+1	OG
10%	Euonymus europaeus	Common Spindle	400-600mm	1+1	OG
5%	Ilex aquifolium	Common Holly	400-600mm	1+1	2L
5%	Ligustrum vulgare	Privet	400-600mm	1+1	OG
10%	Prunus padus	Bird Cherry	400-600mm	1+1	OG
10%	Rhamnus cathartica	Common Buckthorn	400-600mm	1+1	OG
5%	Rosa canina	Dog Rose	400-600mm	1+1	OG
15%	Salix caprea	Goat Willow	600-800mm	1+0	OG

MIXED SPECIES NATIVE HEDGEROW
(*300mm depth of topsoil + minimum 600mm depth subsoil*)

PROPOSED INDIGENOUS HEDGEROW
(*300mm depth of topsoil*)
Planted at 450mm centres in a double staggered row. Rows to be 500mm apart.

%	Species	Common Name	Size	Age	Root
10%	Corylus avellana	Hazel	400-600mm	1+1	OG
20%	Crataegus monogyna	Hawthorn	400-600mm	1+1	OG
20%	Cornus sanguinea	Common Dogwood	400-600mm	1+1	OG
15%	Ilex aquifolium	Common Holly	400-600mm		2L
15%	Rosa arvensis	Field Rose	400-600mm	1+1	OG
20%	Viburnum opulus	Guelder Rose	400-600mm	1+1	OG
100%					

TALL TRANSITIONAL SHRUB PLANTING
(*300mm depth of topsoil + minimum 300mm depth subsoil*)
Ultimate plant height is above 1m.

Aucuba japonica 'Varigata'	300-400mm	3L	500c/s
Berberis thunbergii	400-600mm	3L	500c/s
Buddleia davidii 'Royal Red'	400-600mm	3L	600c/s
Cornus sanguinea	400-600mm	2L	600c/s
Cotoneaster franchetii	400-600mm	3L	600c/s
Elaeagnus x ebbingei	400-600mm	3L	600c/s
Euonymus europaeus	600-800mm	3L	600c/s
Rhamnus frangula	400-600mm	2L	500c/s
Symphoricarpos albus	400-600mm	3L	500c/s

ORNAMENTAL GROUND COVER SHRUB/HERBACEOUS PLANTING
(*300mm depth of topsoil + minimum 300mm depth subsoil*)
Ultimate plant height is below 1m.

Bergenia 'Silver Light'	300-400mm	2L	450c/s
Chaenomeles superba 'Jet Trail'	300-400mm	3L	500c/s
Geranium macrorrhizum 'Alba'	200-300mm	2L	450c/s
Hebe albicans	200-300mm	3L	500c/s
Lonicera nitida 'Silver Beauty'	300-400mm	3L	500c/s
Persicaria affinis 'Darjeeling Red'	200-300mm	2L	450c/s
Philadelphus 'Manteau d' Hermine'	300-400mm	3L	600c/s
Rosa 'Bingo Meidiland'	250-300mm	2L	500c/s
Sarcococca hookeriana var.digyna	200-300mm	2L	500c/s
Skimmia japonica 'Rubella'	200-300mm	3L	500c/s
Spiraea japonica 'Firelight'	300-400mm	3L	500c/s

SPECIES RICH GRASSLAND AREAS
(150mm depth of topsoil + minimum 150mm depth subsoil)

EM1 Basic General Purpose Meadow mixture sown at 4g/m2 supplied by Emosgate Seeds

SITE BOUNDARY

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06 SUSTAINABILITY

06 SUSTAINABILITY

06.1 SUSTAINABILITY

With the current emphasis placed on energy conservation and the use of LZC technologies, the applicant is keen to enhance the developments sustainable credentials. In order to deliver an environmentally responsible building, an approach based on low energy design principles is proposed. This approach involves energy demand minimisation through effective building form and orientation, good envelope design and proficient use of services. Long term energy benefits are best realised by reducing the inherent energy demand of the building in the first instance. Therefore, the building envelope will be designed to ensure that the fabric and form of the office and employment spaces encompass low energy sustainability principles as follows:

Air Tightness
In accordance with the requirements of a low energy building, the air tightness characteristics will be addressed. Through robust design and detailing the building will achieve high airtight standards to mitigate air leakage, far in excess of current Building Regulation minimum requirements.

Natural Daylight/Rooflights
High levels of natural daylight will be provided, wherever possible, through effective window design.

Lighting Strategy
It is imperative that the lighting design philosophy provides the correct quality of lighting with minimum energy input and hence reduce internal heat gains. Throughout the office, lighting will be appropriately zoned to allow control of luminaries via switches/absence detection and daylight sensors.

EPC
The applicant will also implement the requirements of the Energy Performance of Buildings Directive and assess the operational energy performance of the building, targeting an 'A' rated Energy Performance Certificate (EPC).

Water Saving
The proposed Unit will minimise the use of potable water and reuse water where feasible. This will be implemented through the use of water efficient fittings, leak detection and prevention measures and the measuring of water use. The specification of water efficient appliances such as spray taps and low volume WC's will assist.

Cycle Store and Showers
To encourage staff to cycle to work, lockable cycle stores and showers are proposed.

Waste Strategy
Dedicated areas for refuse will be provided to allow for adequate bin storage / compactors to suit the occupier's operations. The refuse area will not exceed 10m from the main footpath and sufficient turning areas will be provided for refuse vehicles.

Waste Management
The proposed development can provide for the careful and sustainable disposal of waste during and post construction. Modern methods of design and construction using pre-fabricated units will help to keep waste arisings to a minimum. Post construction, the buildings will be provided with a dedicated area within the building for the provision of refuse and recycling facilities, tailored to operational requirements with an external waste management platform provided. Consideration has been given to the layout of the development to ensure personal safety. This relates not only to ensuring that the layout of the development does not create an environment conducive to crime, but also to how occupiers and visitors to the site can move freely without risk of injury

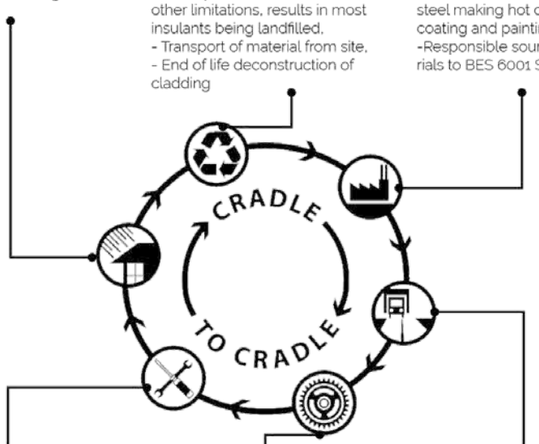
BREEAM
In order to benchmark the environmental performance of the building, the applicant will carry out an assessment against the Building Research Establishment (BRE) Environmental Assessment Method (BREEAM). This is a voluntary scheme that aims to quantify and reduce the environmental burdens of buildings by rewarding those designs that take positive steps to minimise their environmental impacts. Projects are assessed using a system of credits which results in a formal certification giving a rating on a sliding scale. The proposed building will target a BREEAM rating of Excellent.

Material management

Use
More durable pre-finished steel products, such as Colorcoat HPS200 Ultra and Colorcoat Prisma reduce maintenance and lengthen the useful life before system replacement,reducing the overa;ll environmental emissions over the buildings lifetime.

End of Life
Includes impacts from:
- Built-up system and composite panel steel content 79% recycled, 15% reused, 6% landfill.
- All insulation to landfill (foam and mineral wool). Although they have the potential to be recycled, current practice for demolition, and other limitations, results in most insulants being landfilled,
- Transport of material from site,
- End of life deconstruction of cladding

Production of System Components
Includes impacts from:
- Production of pre-finished steel and spacer bars.
- Production of insulation.
- Production of fixings and plastic components.
- Production of raw material steel making hot dip metallic coating and painting.
-Responsible sourcing of materials to BES 6001 Standard.



System Installation
Includes impacts from:
Allowances made for cladding side and end laps.
Installation process and use.

System Manufacture
Includes impacts from:
- Profiling of pre-finished steel for cladding both liner and outersheet.
- Composite Panel manufacture (foam and mineral wool) and allowances made for different U-value requirements for each system.
- 6% of foam filled composite panel blowing agent lost in manufacture.

Transport
Includes impacts from:
- Delivery from TATA steel of system manufacturer.
- Delivery to site.
- Delivery of insulation and other system components to site.
- Full allowance for lorry capacity.

Confidex SUSTAIN

Born and bred in the UK for a lower carbon footprint

SYSTEM CERTIFICATION ISO 14001 SGS

UKAS ENVIRONMENTAL MANAGEMENT 005

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07 SUSTAINABILITY

07 FIRE SAFETY AND PREVENTION MEASURES

The building includes warehouse floor space and necessary office accommodation for permanent staff. All permanent building users are anticipated to have had a full induction and be trained to carry out specific operations and be made aware of fire escape and fire related procedures.

07.1 HORIZONTAL ESCAPE

Warehouse Escape

Extended horizontal escape distances are commonly inherent in distribution centres of this kind, due the proportions of the building and location of personnel escape doors there are instances where escape in two directions is not possible within the permissible 45m.

These escape distances within the warehouses are negated by a combination of the following;

- Clear signage.
- Detection / alarm (provided at fit out).
- Emergency lighting (provided at fit out).
- Induction / familiarity or workers - in an awake state.
- Large number and good spacing of escape doors.

The warehouse incorporates 7 N° direct personnel escape doors, split to give good coverage of the warehouse space. These doors have a minimum clear opening of approximately 850mm, which according to Table 4 of Part B2 of the Building Regulations, should cater for 110 escaping people, if one of these is discounted the remaining 6 N° escape doors could theoretically allow 660 persons to escape which is excessive of the warehouse occupancy.

Office Escape

All main office accommodation has been designed to comply with the horizontal escape recommendations within Part B2, in terms of escape widths (1200mm min), escape routes, escape distances (30m two way escape) and compartmentation (60 minutes integrity and insulation).

07.2 VERTICAL ESCAPE

Vertical escape is limited on the scheme to the following areas:

Main office

Ancillary offices will be served internally by two stairs which will achieve a minimum clear width of 1200mm and therefore according to Table (Part B2 of the Building Regulations) would individually serve 220 people escaping. The risers to these stairs will be uniform and approximately 166mm.

Stairwell will be compartmented within 30 minutes and have direct external escape door access.

Main roof structure

Roof access will be via two internal CAT ladder stairs designed to comply with BS4211-2005.

Warehouse and office to yard escape (loading bays)

The galvanised metal stairs have an overall minimum tread width of 1200mm and a width clear of handrail of approximately 1000mm, which is wider than the clear opening of the served personnel escape doors, and according to Table 6 (Part B2 of the Building Regulations), would individually serve 150 people escaping. The risers to these stairs will be uniform and approximately 170mm.

07.3 FIRE BOUNDARY CONDITIONS

Fire boundary requirements are based on measurement to the boundary or to the centre of road line if relevant this results in the following fire boundary requirements.

- Eastern Elevation - 0% fire boundary condition
- Northern Elevation - 0% fire boundary condition
- Western Elevation - 100% fire boundary condition
- Southern Elevation - 80% fire boundary condition

07 FIRE SAFETY AND PREVENTION MEASURES

07.4 FIRE ACCESS

With a GIA of 16,168 sq m and a mean height of over 11m this requires a 75% fire access provision this is largely provided by the yard, adjacent highway and car park hard landscaping. A dry riser or similar will also be incorporated.

07.5 FIRE HYDRANTS

Hydrants are to be located within 100m of the building.

07.6 CLADDING MATERIALS

External envelope will consist of a built up cladding system (such as CA 32 1000W or similar, with associated liner sheet) this will provide the following;

Surface spread of flame

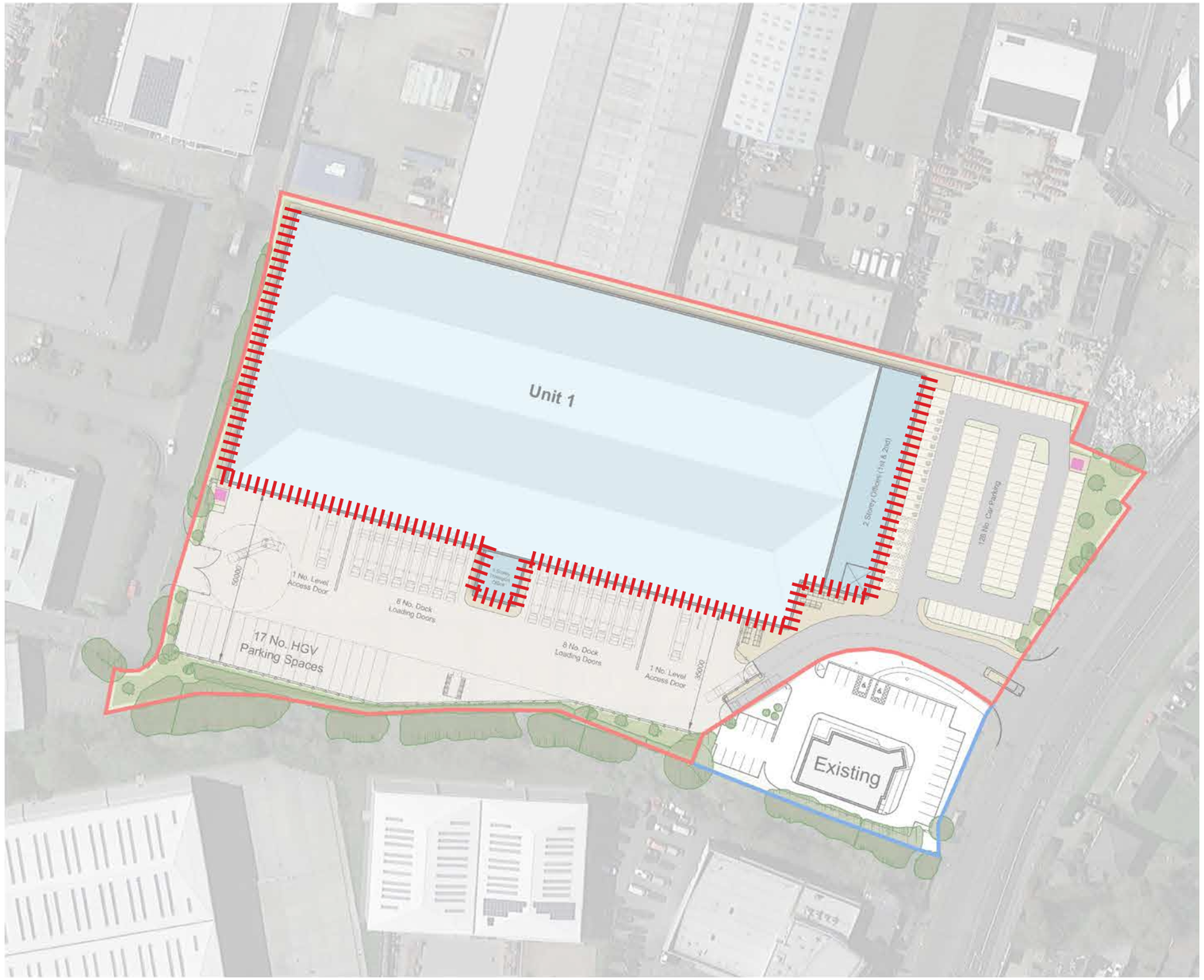
Liner panel and weather sheet: Designed 'AA' to BS 476 Part 3: 2004 class '0' to BS 476: Part 7: 1997.

Reaction to fire

Tested in accordance with LPS 1181 and achieves grade 'EXT-B' certification. Certification N° LPCB 443a.

Insulation

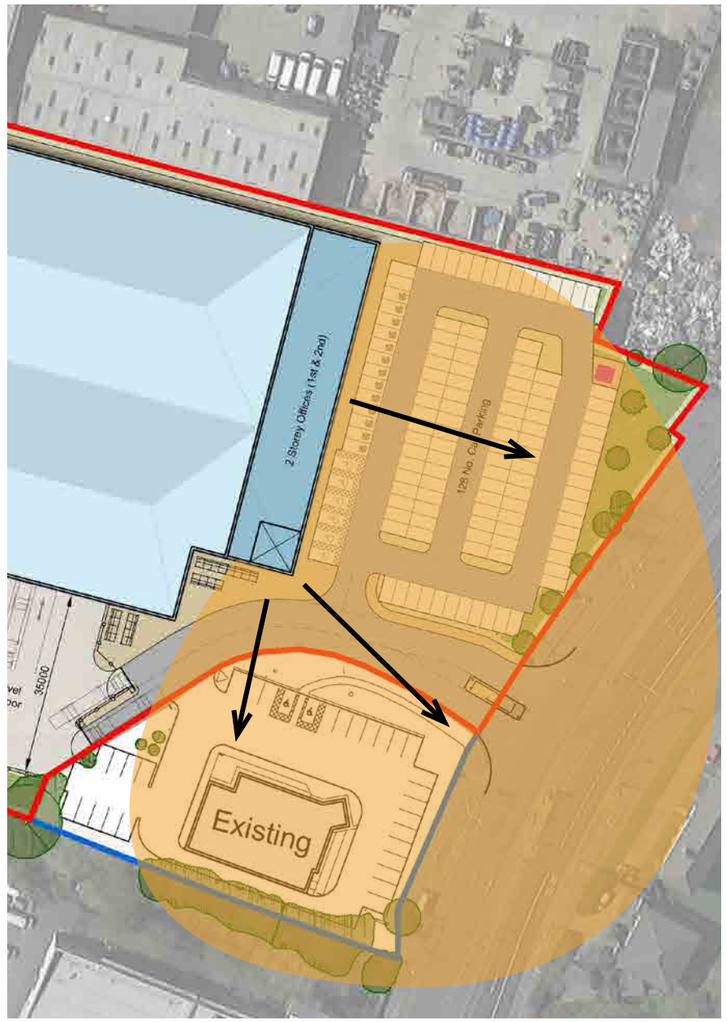
Insulation core of the external envelope to be mineral fibre insulation such as CA's Therma-quilt.



08 CRIME PREVENTION

08 CRIME PREVENTION

Indicative Security Fencing



Indicative Passive Natural Surveillance

08.1 CRIME PREVENTION

Consideration has been given to the layout of the development to ensure personal safety. This relates not only to ensuring that the layout of the development does not create an environment conducive to crime, but also to how occupiers and visitors to the site can move freely without risk of injury.

08.2 ACCESS & MOVEMENT

Spaces and pedestrian routes are currently well defined with easy to recognise entrances; this provides convenient movement without compromising security. Proposed car parking is provided in safe locations.

08.3 SURVEILLANCE

Natural surveillance has been a key factor in the overall design of the site. The positioning of the offices overlooking the proposed car parking offers the occupier a high degree of visual control, whilst the building design and site layout has been considered to minimise visual obstacles. This helps to eliminate places of concealment, with any dark areas to be well lit.

08.4 PHYSICAL PROTECTION

Boundary protection will be a 2.4m high to all service yard and storage areas. Boundaries have been considered to maximise natural surveillance.

09 SUMMARY

09 SUMMARY

09.1 SUMMARY

This statement seeks to demonstrate that the development proposals for this site have given due regard to the existing site, its context and surroundings, to create a carefully sited and appropriately sized building which meets the Client's brief.

The design seeks to assimilate within its surroundings; providing an attractive, contemporary and cohesive design that is fit for purpose and safe for all to use, incorporating flexible access by all modes of transport and encouraging travel by means other than car. The proposals represent a high quality development and a substantial investment to the area which will help to promote and support employment growth and stimulate economic growth to the area.

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