

DESIGN AND ACCESS STATEMENT

Deacon Business Park
Unit 1 Full Planning Application

Document Prepared for:

EQT Exeter Limited
06.02.23

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01 INTRODUCTION



01 INTRODUCTION

01.1 STATEMENT OVERVIEW

This Design and Access Statement has been prepared on behalf of the applicant **EQT Exeter Ltd** as part of a Full application for the approval of a new Class B8 Employment/Industrial Unit with Ancillary Offices on the site known as Deacon Business Park, Moorgate Road, Knowsley, Liverpool.

The purpose of this document is to support the Submitted Planning drawings by providing supplementary details relating to the layout, scale, appearance and landscaping pursuant to the proposed development.

Description of development

This application is for the approval of a new Industrial Unit with Ancillary Offices on the site known as Deacon Business Park, Moorgate Road, Knowsley, Liverpool.

The Proposed Development Site (hereafter called the Site) is located within the Metropolitan Borough of Knowsley; part of the Wider Liverpool City Region.

Access to the Site is possible from Moorgate Road N, to the west of the Site. Two secondary access roads currently exist to the north and south of the Site, which provide access into the Site itself. Further public access to or across the Site is not possible.

The site currently is occupied by dated industrial infrastructure which has developed overtime in a piecemeal fashion, now doing little to reflect the economic aspirations of the area. As such the site represents an ideal candidate for demolition in order to liberate its prime location development opportunity for a new Bespoke Industrial Unit with Ancillary Offices designed to uplift the Architectural aesthetics along the Western boundary of the Industrial Zone.

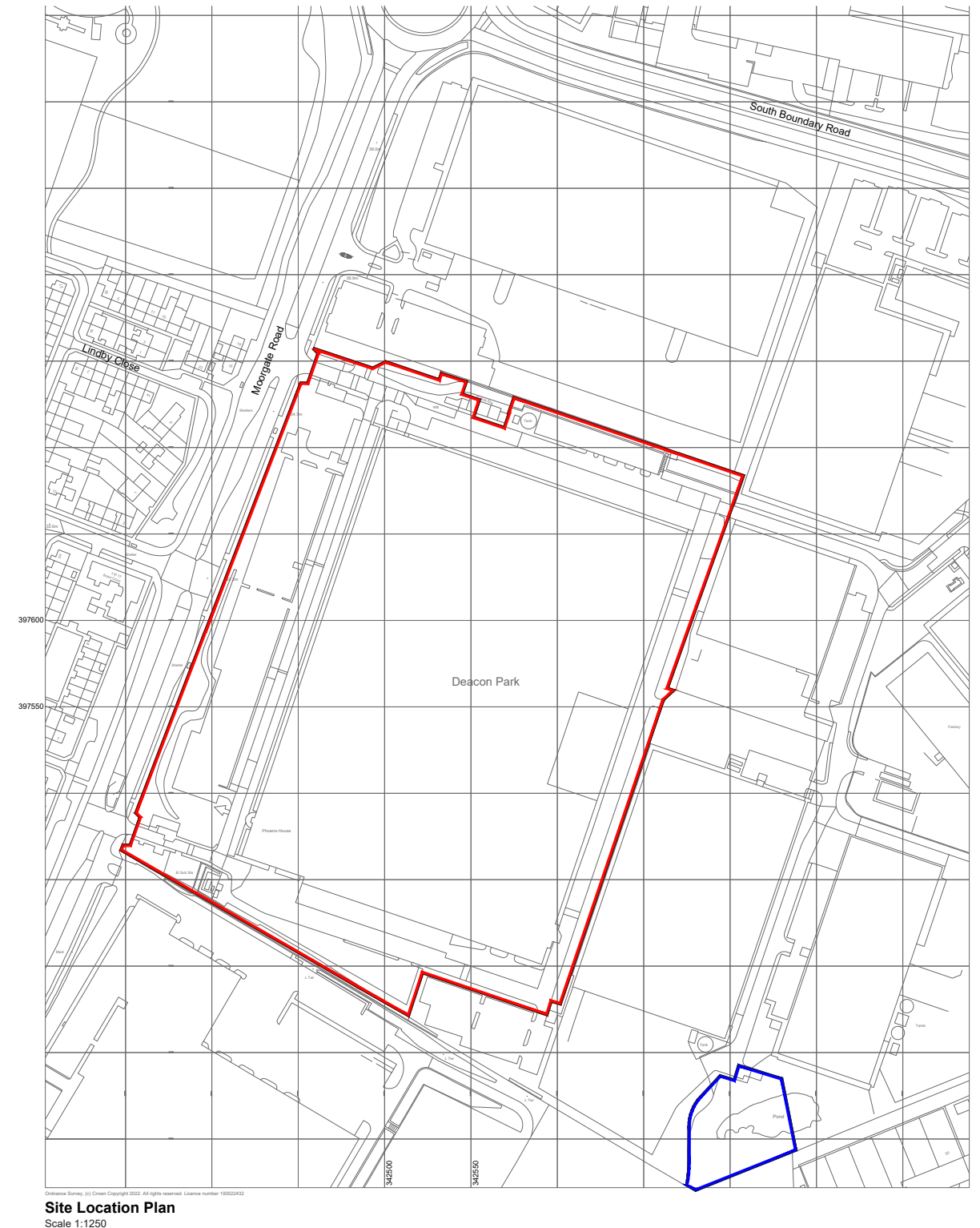
This statement aims to explain how this opportunity has been explored within the design proposals presented, and explains the thought processes behind the design strategy presented in this application.

Beyond the Site boundary is the settlement of Kirkby (Southdene) to the west and further built for associated with the business park to the north, east and south. All of which influence the Site through the presence of residences, warehouse built form and associated infrastructure.

01.2 REPORT CONTENT AND STRUCTURE

This document contains a summary of the site context, analysis of the surrounding areas and an explanation of the design evolution. This document explores how the physical characteristics of the scheme have been informed by the design process and explains the steps taken in the process, culminating in the proposed design solution. This is in accordance with the requirements of the planning application processes. The Town and Country Planning (Development Management Procedure) (England) (Amendment) Order 2013 sets out the requirements for Design and Access Statement. The statement is structured as follows:

- 01.0 - Introduction**
- 02.0 - Site Context**
- 03.0 - Key Design Principals**
- 04.0 - Development Proposals**
 - 04.1 - Unit Appearance**
 - 04.2 - Materials**
 - 04.3 - Colour & Texture**
 - 04.4 - Amount & Layout**
 - 04.5 - Development Scale**
- 05.0 - Landscape Design**
- 06.0 - Visualisations**
- 07.0 - Access**
- 08.0 - Sustainability**
- 09.0 - Crime Prevention**
- 10.0 - Summary**



01 INTRODUCTION

01.3 SCOPE OF APPLICATION

The scope of this application seeks to obtain Full Planning consent for the erection of a new Class B8 Employment/Industrial Unit with associated offices & site infrastructure included within the Development proposed.

This application is for Deacon Business Park, Moorgate Road, Knowsley, Liverpool, L32 6SD.

The application is for 1no. Unit comprising of Warehouse space, Storey offices, Transport Office & Separate Gatehouse, with a total area of 41,114 sqm GIA.

The Unit will be provided together with associated service yards, hard-standings, car parking and both hard and soft landscaping elements for E(g)(i),

B8 uses.

This Design and Access Statement, supported by illustrations of the architectural design, demonstrates a clear vision of the developed design and the multifaceted approach taken to ensure that it enhances the persona of the site and its surroundings.

The site has been designed to provide inherent adaptability in order to ensure longevity by following established sector principals and trends to accommodate the ongoing requirements of the facilities occupiers as their needs may change throughout the buildings lifespan.

• Dimensions are in millimeters, unless stated otherwise.

• It is the recipient's responsibility to print this document to the correct scale.

• All relevant drawings and specifications should be read in conjunction with this drawing.

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SCHEDULE OF ACCOMMODATION

(Gross Internal Area)

Unit 1		
Warehouse Area	-	414,572 sq ft (38,515m²)
Office (2 storey)	-	25,296 sq ft (2,350m²)
Transport Office	-	2,390 sq ft (222m²)
Gatehouse	-	291 sq ft (27m²)
Total Area	-	442,548 sq ft (41,114m²)
Loading Docks	-	40
Level Access	-	3
HGV Parking	-	85
Car Parking	-	385
Plot Area	-	21.89 Acres (8.88 Hectares)
Site Density	-	46.41%

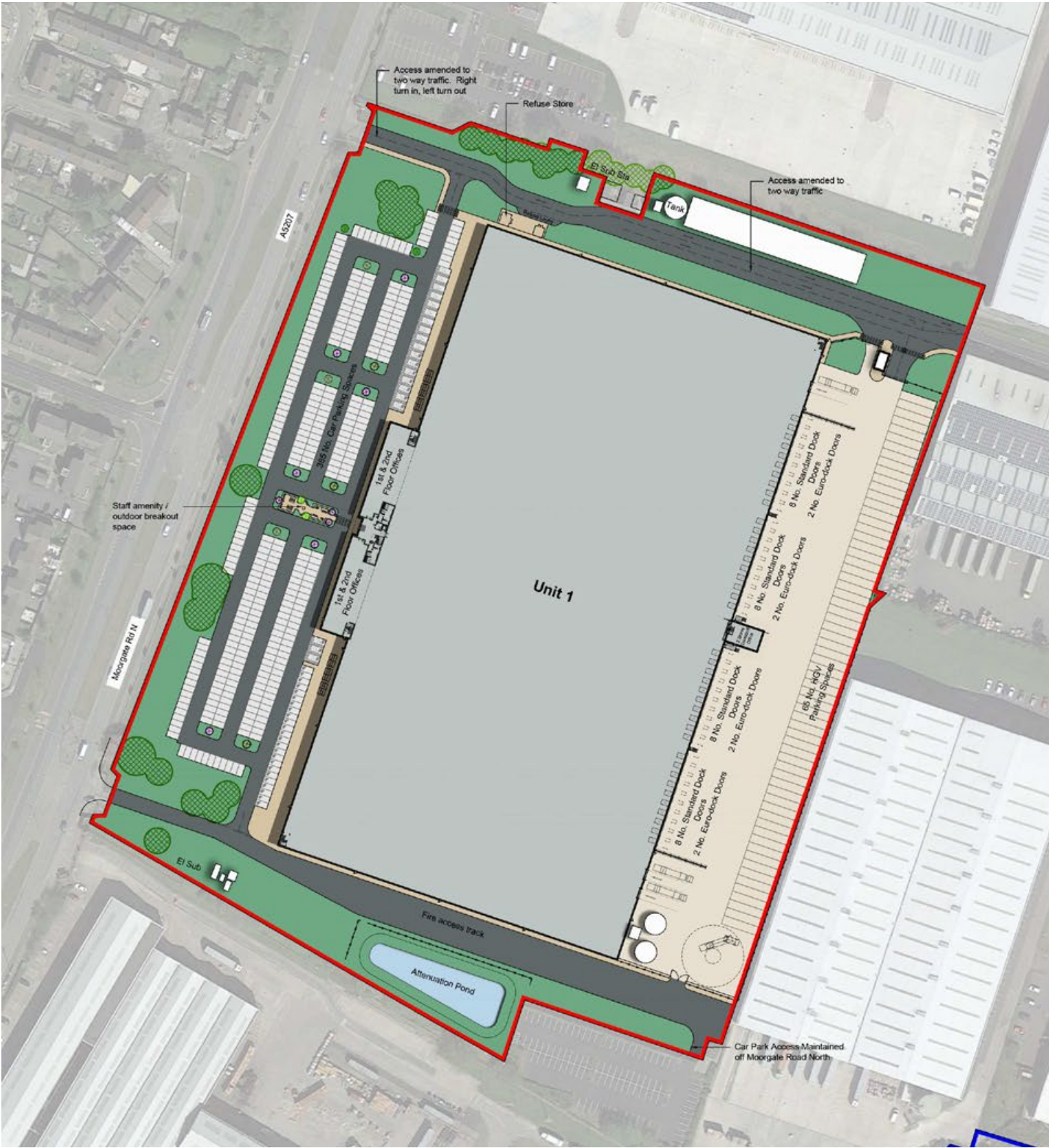
Parking Standards Knowsley Council

Draft Ensuring a Choice of Travel

Supplementary Planning Document (February 2019)

B8- Storage and Distribution (max)

1 space per 100 m² GFA

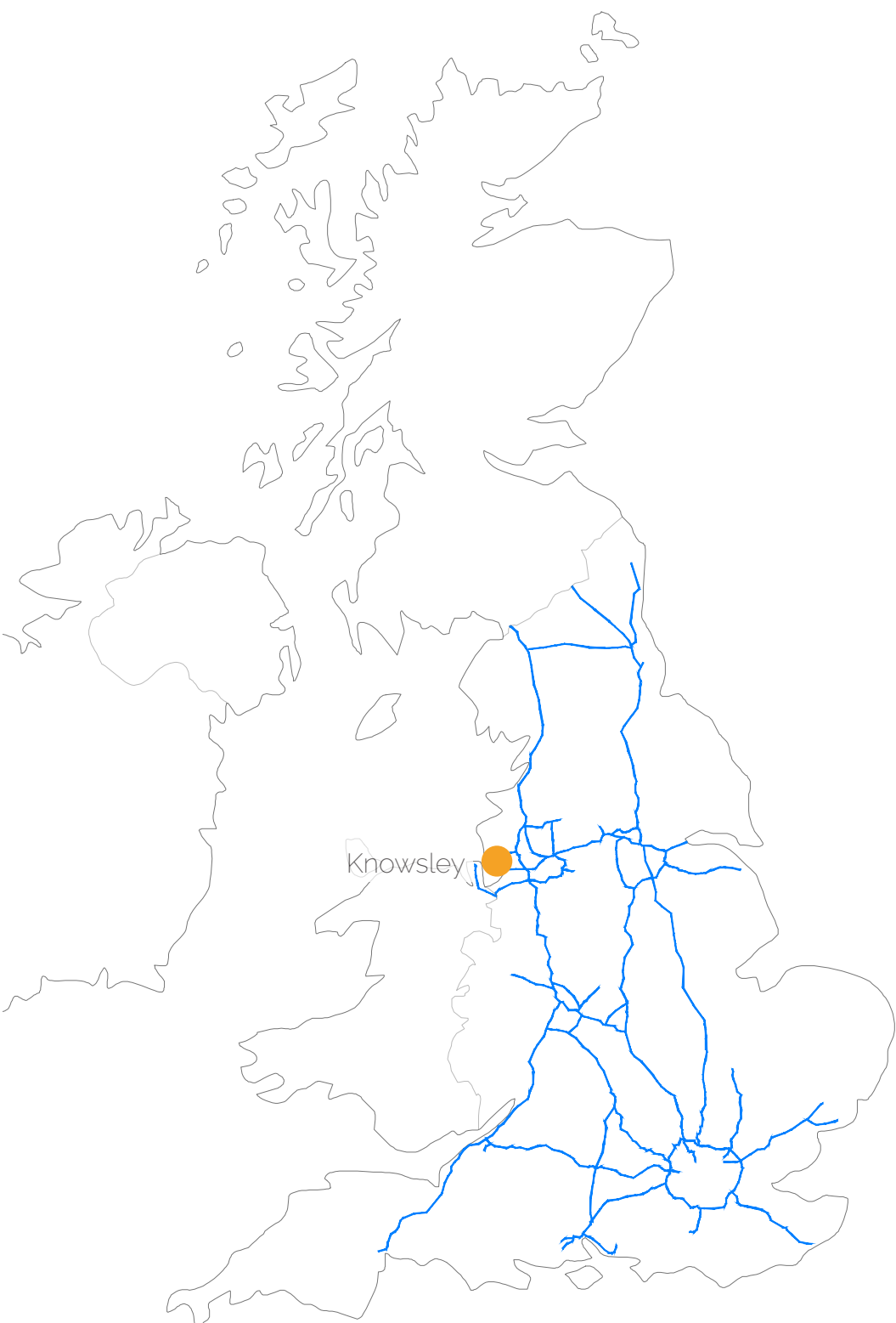


02 SITE CONTEXT



02 SITE CONTEXT

02.1 NATIONAL CONTEXT



Site Location - National

02.2 SITE LOCATION

The development site sits within the Metropolitan Borough of Knowsley approximately 6.5 miles outside Liverpool centre on the Western Boundary of Knowsley Business Park North. This zone is primarily occupied by industrial units of varying scale, age & aesthetics. The Front Western Elevation faces Moorgate Road dual carriageway across from which lays a large portion of the Knowsley residential area which falls within the Wider Liverpool City Region.

The Site covers an area of approximately 8.58 ha and is situated between the settlements of Kirkby and Knowsley. The boundaries of the Site are largely defined by the local road network and adjacent development, with Moorgate Road North forming the western boundary and built form comprising principally logistics to the north (SynergyX Logistics), east (West Coast Corrugated and KAMMAC Juniper) and south (Burnhill DCR Logistics). The Site's boundaries are defined by a combination of palisade security fencing, metal railings, internal road networks and mature boundary trees.

The extent of visibility of the Site is limited to residences in adjoining the western boundary of the Site in addition to views from local roads to the west of the Site also possible. This is due to the presence of mature boundary features; surrounding existing built development and the predominantly even topography found in the wider landscape.

Access to the site is via the Southbound /Eastern side of Moorgate Road, North of the A580 Dual Carriageway.

The site has Transport links being situated 0.75miles from Junction 4 of the M27 Motorway and being less than 10miles from the Liverpool 2 Container Terminals. The site is also less than 14miles via road to the Liverpool John Lennon Airport. As such the site is ideally located for occupiers that are either have an international presence or import/export goods form global markets.



02 SITE CONTEXT

02.3 SURROUNDING CONTEXT

The areas of particular relevance to the context of the development site are as follows:

- Residential Area - Southdene
- Knowsley Business Park North
- Knowsley Business Park South
- Knowsley Industrial Park
- M57 Motorway
- A580 Dual Carriageway

Additional Context for Consideration:

- Kirby Substation
- Spinney Woods
- Residential Area - Spinney, View & Close
- Surrounding Arable Farmland

The locations of the above mentioned areas relative to the development site are shown on the adjacent diagram.

The Site is not located within any published local landscape character areas, however it is located within an areas identified as 'predominantly industrial' within the local plan policies map, reinforcing the townscape character which exists on the Site and the surrounding area.



02 SITE CONTEXT

02.3 SURROUNDING CONTEXT

1 - Residential Area - Southdene

The residential area West of Moorgate Road opposite the front Western Elevation of Site. mixture of medium density semi-detached and terraced housing. 4no. high rise apartment blocks set back in the centre of the district; residents of the upper floors may overlook site from a distance.



Southdene

2 - Knowsley Business Park North

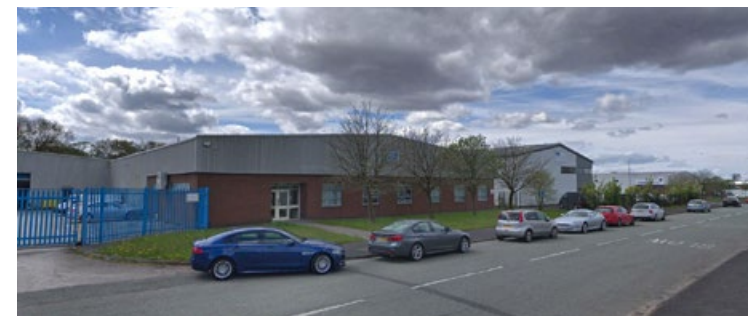
Area bounded by Moorgate Road North, A580 & South Boundary Road. Characterised by large warehouse units interspersed with smaller light industrial premises. Largely these Units are in good order and some have been built with an Architectural uplift on their associated offices. The proposed site sits within this area and currently is therefore should be brought up to standard.



Knowsley Business
Park North

3 - Knowsley Business Park South

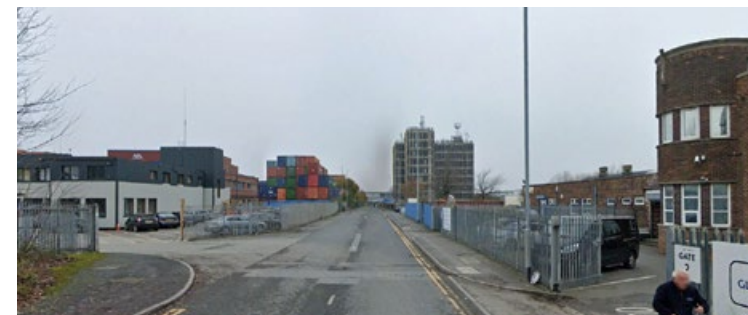
Area bounded by M57, A580 & B5202 Highways. This area is mostly comprised of medium and light industrial units a greater density than the North Business park. There are a couple of larger Units and container storage areas. The south of the site ceases into pocketed farmland. The buildings themselves are generally typical light industrial type in appearance. Designs are very eclectic and representative of their ages, however the area is fairly well presented and uplifted by interspersed planting to many property boundaries.



Knowsley Business
Park South

4 - Knowsley Industrial Park

Area bounded by Perimeter Road, South Boundary Road & Northwood Residential Area. Large industrial zone, very function focused buildings housing a broad spectrum of industrial activity. There is not much space for greenery and wildlife as is typical of such zones. Some areas are showing signs of age, wear and tear. There are a few dilapidated buildings on smaller sites awaiting regeneration or demolition. No fixed style, area mostly comprises of corrugated metal clad steel portal frame buildings. Large new Amazon warehouse to North of Zone seems to signify steps toward regeneration and redefined aspirations.



Knowsley Industrial
Park

03 KEY DESIGN PRINCIPLES



03 KEY DESIGN PRINCIPLES

03.1 KEY DESIGN PRINCIPLES

The design process for the application involved an investigation into a variety of different development configurations and sizes in order to arrange a coherent site layout within the site's constraints. The site layout will be designed in accordance with the key principles set out below:

Character

To create attractive, self-contained and functional building with its own identity, which relates well to the neighbouring context as built.

Quality of External Realm

To create a welcoming environment for staff and visitors alike. Landscaping and integrated footways and road / cycleways will provide a cohesive development.

Scale, Height and Massing

To establish a building with scale and size which relates to its surrounding context and is appropriate for its function. Attention should be given to breaking up large façades and to making references to human scale.

Appearance

To create an attractive appearance through the utilisation of appropriate materials for the locality and building type, which are also robust and will not deteriorate with time. Mid-distant views need to be considered when selecting cladding materials and colours.

Functionality

To provide a building which will meet the long term needs of the occupiers for running an efficient and successful business.

Standards

To meet the appropriate standards of safety, accessibility, energy efficiency and institutional standards.

Orientation

Ensuring that the building provides appropriate frontage to the access and surrounding roads will allow visitors, staff and lorry drivers a clear orientation and reference point on arrival.

Access

Provide a safe and effective access point into the site from the existing infrastructure, allowing segregation of movement between cars, service vehicles, buses, cyclists and pedestrians entering the site.

Movement

Provide a clear, legible and segregated vehicular movement strategy incorporating all road entrances, loading and vehicular parking areas.

View of the Site

Ensure prominent building elevations are suitably treated to include appropriate materials and sensitive landscape treatment.

03.2 KEY PRINCIPALS ANALYSIS

Contribute directly to creating safe, attractive spaces with high quality buildings and landscape.

The proposed unit is sleek and simple in design, with a contemporary colour palette and glazed areas providing a good quality office environment with visitor wayfinding.

Detailed consideration has been given to enhance the Frontwestern Elevation as viewed from Moorgate Road North.

Create sustainable, well designed buildings, which are good places to work.

The unit has been designed to create a contemporary simplistic aesthetic with high quality materials. The limited and modern colour palette, with offices facing the internal road, create an attractive façade and a consistent architectural language throughout the site.

The buildings and site layout should fulfil a required level of security and operational functionality.

The yards are to be securely contained and shielded with fencing and offer secure car parking away from HGV Vehicles where appropriate. The car park is overlooked by the office areas and separate entrances for cars and HGVs have been established.

Ensure inclusive design to allow for a good level of accessibility within the building.

The masterplan is suitable for both able-bodied and accessible use. The appropriate amount of accessible parking has been allocated and is located close to the level building entrance.



04 DEVELOPMENT PROPOSALS



04 DEVELOPMENT PROPOSALS

04.1 UNIT APPEARANCE

The buildings will be broken up vertically with various elements, and broken horizontally with changes in cladding colours. Large curtain walls will be utilised to enhance the office aesthetics. Offices will be constrained by the floor to ceiling levels, with openings throughout to provide adequate lighting. The upper two floors of the offices will be clad in bright red orange colour cladding which steps out from the ground floor; this together with the glazing arrangement is designed to break up the massing of the building and create a modern and visually engaging feature to the main elevation of the building. A thin element of flashing of the same orange is taken across and around the warehouse elevations to make all aspects of the building coherent and read as one.

Each corner of the building includes a feature section of flat panel cladding which consists of five banded shades of grey; light to dark. This feature helps break up the massing of each elevation and also provides opportunities for feature any corporate branded signage as appropriate.

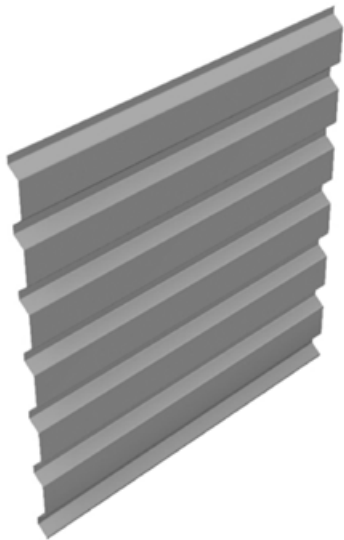


04 DEVELOPMENT PROPOSALS

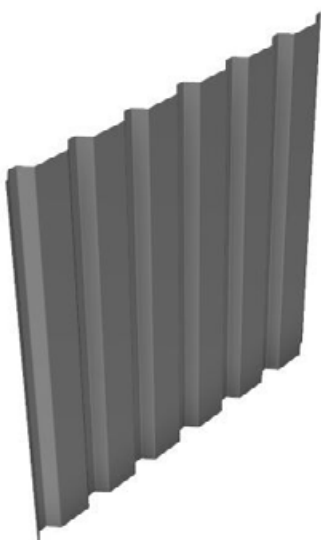
04.2 MATERIALS

All materials are high quality products for business or employment applications:

- Very Light Grey, Light, Pure, Mid and Dark Grey colour cladding to the Warehouse
- Bright Red Orange & Dark Grey colour metal cladding to the Offices
- Profiled or flat metal cladding.
- Large format window and curtain walling systems. With 3 no. Shades of grey infill panels with a randomised pattern to enhance cladding arrangement.
- Feature building elements in strong colours or accent materials.



Horizontal Trapezoidal Cladding



Vertical Trapezoidal Cladding

04.2 COLOUR AND TEXTURE

Monochromatic neutral colours are predominant colours on buildings of this nature and provide a common back drop theme of cladding, windows and roofing. The use of a stronger accent has been incorporated due to the site's prominent location marking the Western boundary of the Knowsley Business Park North zone. The design therefore pursues the idea of using bold colour to communicate the progressive aspirations of the business park. This is hoped to also help identify the park and promote its desirability to future stakeholders.



Bright Red Orange
(RAL 2008)



Anthracite Grey
(RAL 7016)



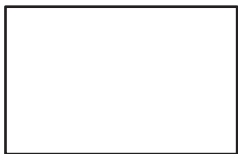
Slate Grey
(RAL 7012)



Alaska Grey
(RAL 7000)



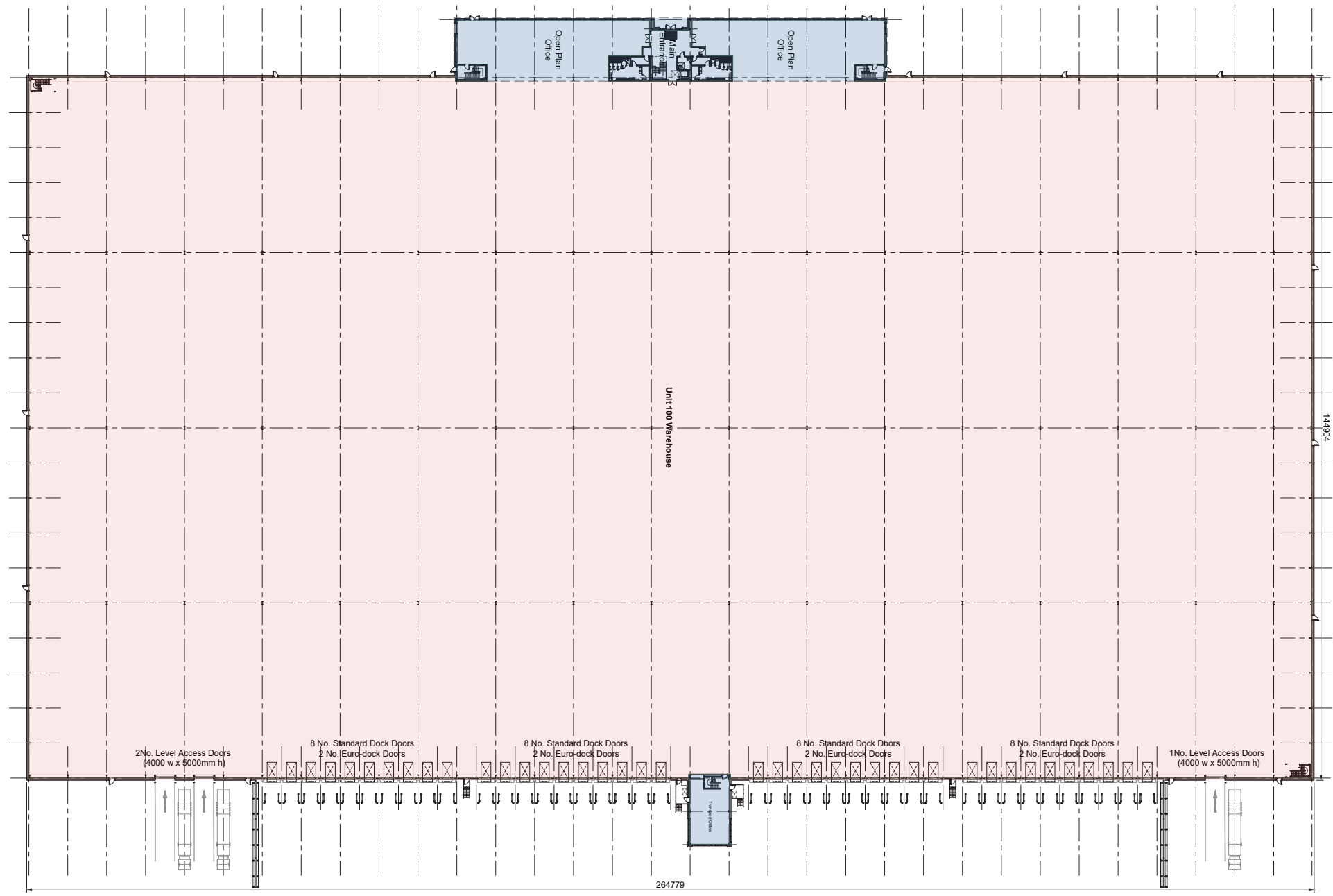
Oyster Grey
(RAL 7035)



White
(RAL 9010)

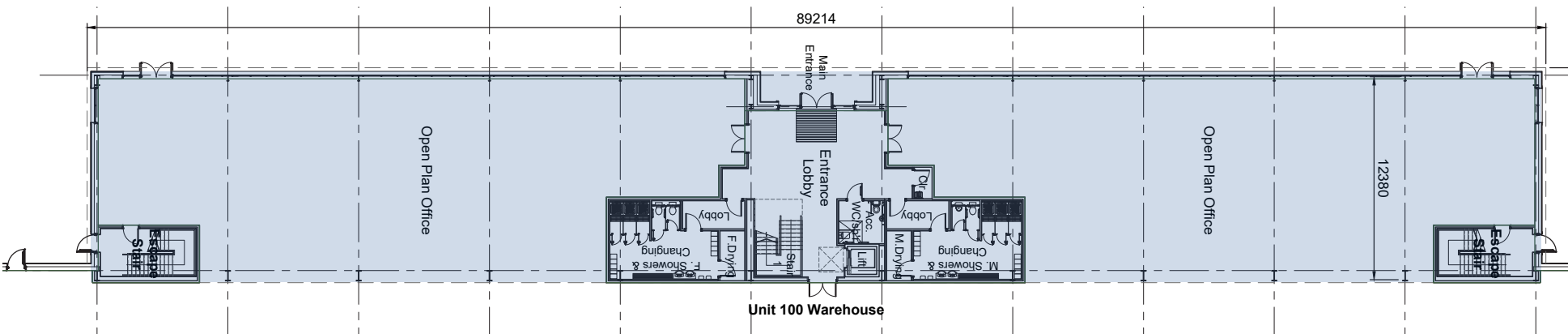
04 DEVELOPMENT PROPOSALS

Unit 1 PROPOSED BUILDING PLAN

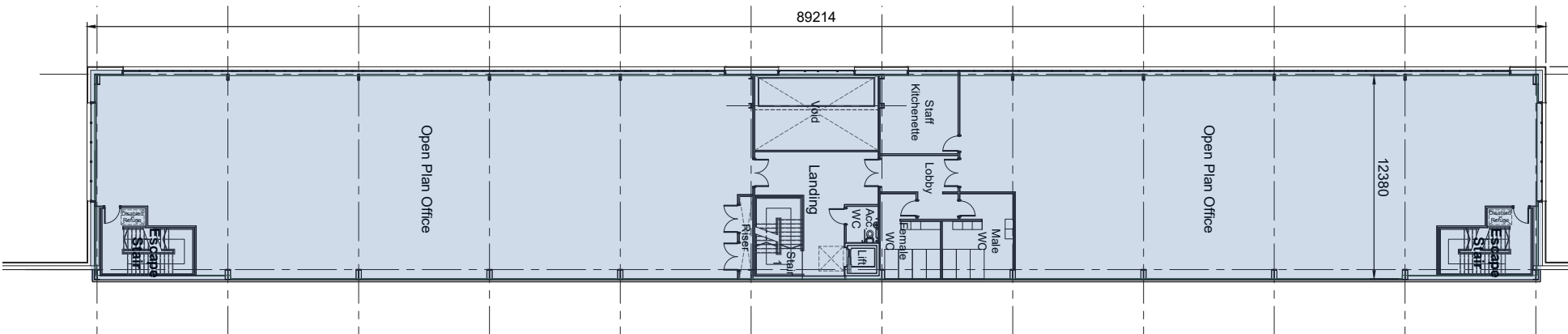


04 DEVELOPMENT PROPOSALS

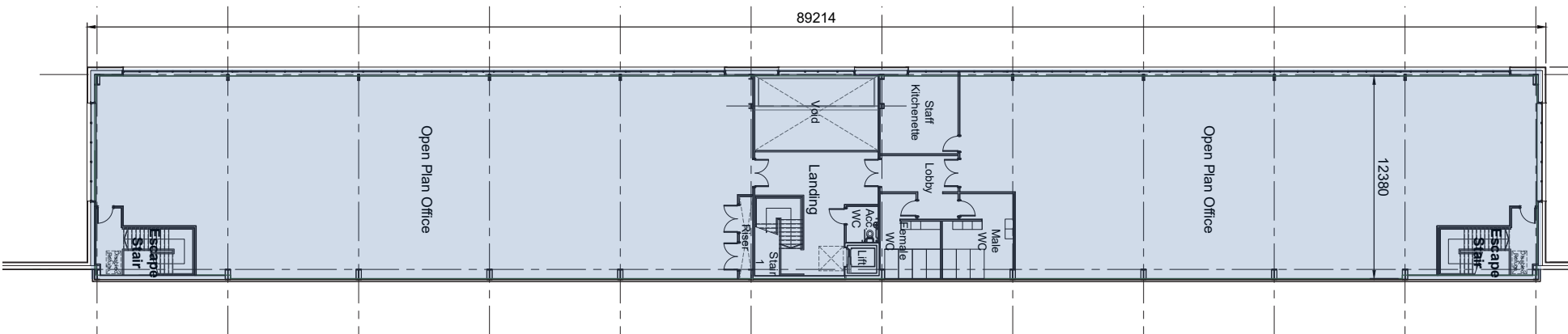
Unit 1 PROPOSED FLOOR PLANS



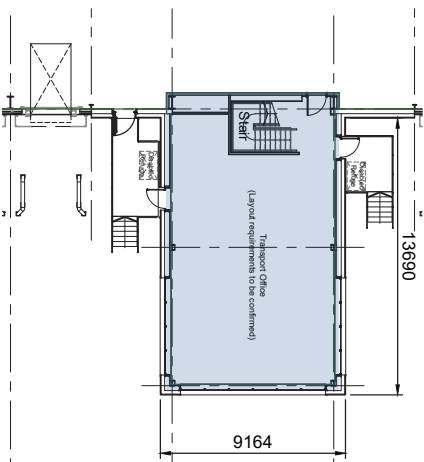
Ground Floor



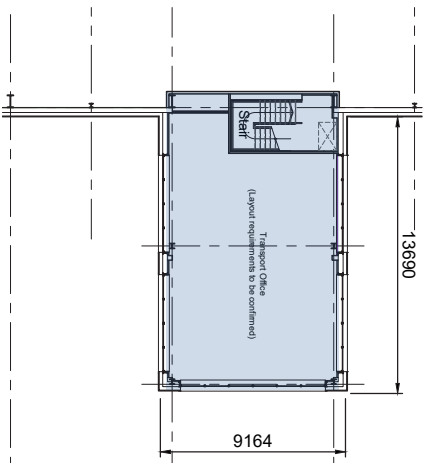
First Floor



Second Floor



Transport Office Ground Floor



Transport Office First Floor

04 DEVELOPMENT PROPOSALS

04.4 AMOUNT & LAYOUT

The total amount of development totals 41,114 sqm GIA arranged within a single Unit to accommodate E(g)(i), B8 uses.

External service yards, and car parking standards are compliant with the local authorities parking standards and sufficient for the building class uses that are being applied for. The development is strategically positioned within the site. So that it maintains the building line in in context when read against other buildings along Moorgate road. The Offices have been positioned along the Western Elevation to provide appropriate visual interest.

The building location minimises its impact on the local area by liberating a site previously used for a similar usage rather than being built on a site that would cause unnecessary growth of one of the 3no. Identified industrial/business areas.

The offices, car parking is located at to the front of the development and The service yard to the rear. The service yard is sized to suit the typical logistic and operational needs required by targeted incoming occupiers of the unit. By locating the yard at the rear of the site there will be no aspect to key visual receptors, such as the residential area. The site is accessed via the existing 2no. Access/egress points to & from Moorgate Road North (Southbound) provided as part of the section 278 works.

Care and consideration has gone into the location of SUDS which will integrate with the landscape development framework for the site. Though the Ownership boundary includes a shared portion of a off-site drainage pond, additional provision has been made to allow for a new attenuation pond subject to Engineers requirements & drainage calculations. Wherever possible throughout the development external hard standing and circulation have been consolidated to maximise the green space opportunities in the design.

SCHEDULE OF ACCOMMODATION (Gross Internal Area)		
Unit 1		
Warehouse Area	-	414,572 sq ft (38,515m²)
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Site Density	-	46.41%

Parking Standards Knowsley Council	
Draft Ensuring a Choice of Travel Supplementary Planning Document (February 2019)	
B8- Storage and Distribution (max)	
1 space per 100 m² GFA	

04.5 DEVELOPMENT SCALE

- Careful consideration has been given to reduce the perceived building mass from close engagement and distant receptors. The colour palette chosen allows the buildings to conform within its context, while also adding an appropriate section of colour to offices to help uplift the visual aspirations of the area. The use of shallow parapets and hipped roofs allow the eaves levels to be reduced an remove any high level shadowing.
- The unit is designed to the minimum effective height for B8 usage class operations. The multi portal roof with hipped ends along each gable behind a notional parapet provides clean horizontal lines of façade and minimise the perception of height.

Unit 1

Ridge Height- 22.000m above ffl

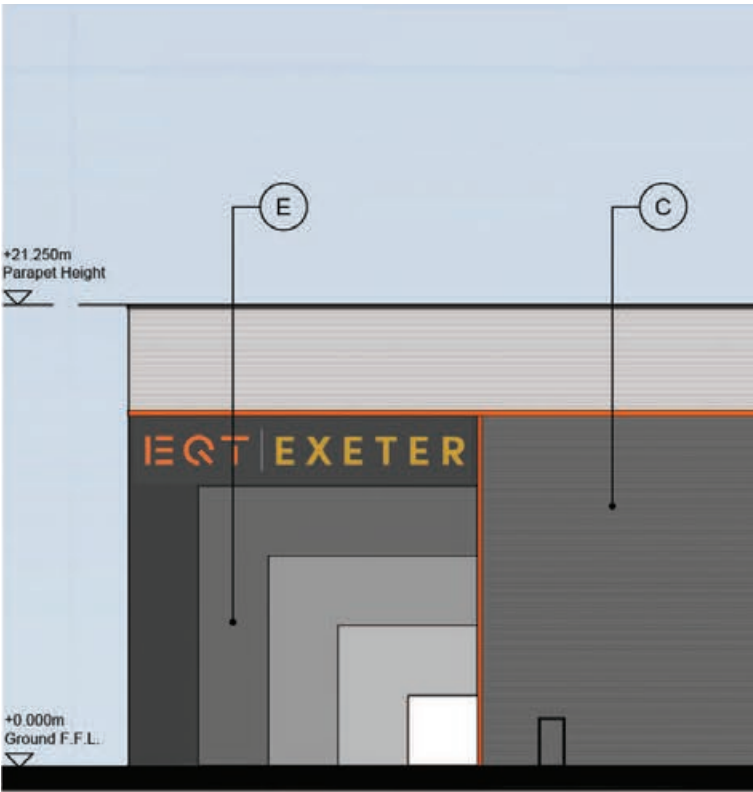
Parapet Height - 21.250m above ffl

Office Parapet Height – 14.000m above ffl

Transport Office Parapet Hight – 9.000m above ffl

Gatehouse

Ridge Height- 5.000m



04 APPEARANCE

04.6 PLOT ARRANGEMENT

The adjoining office Block & Feature Corner Cladding allow for the opportunity to create an Architecturally coherent and aspirational design intended to enhance the appearance of the Knowsley Business Park North zone. This is hoped to have a positive benefit on the area including giving residents of the Southdene residential area a more pleasing visual reference of the site.

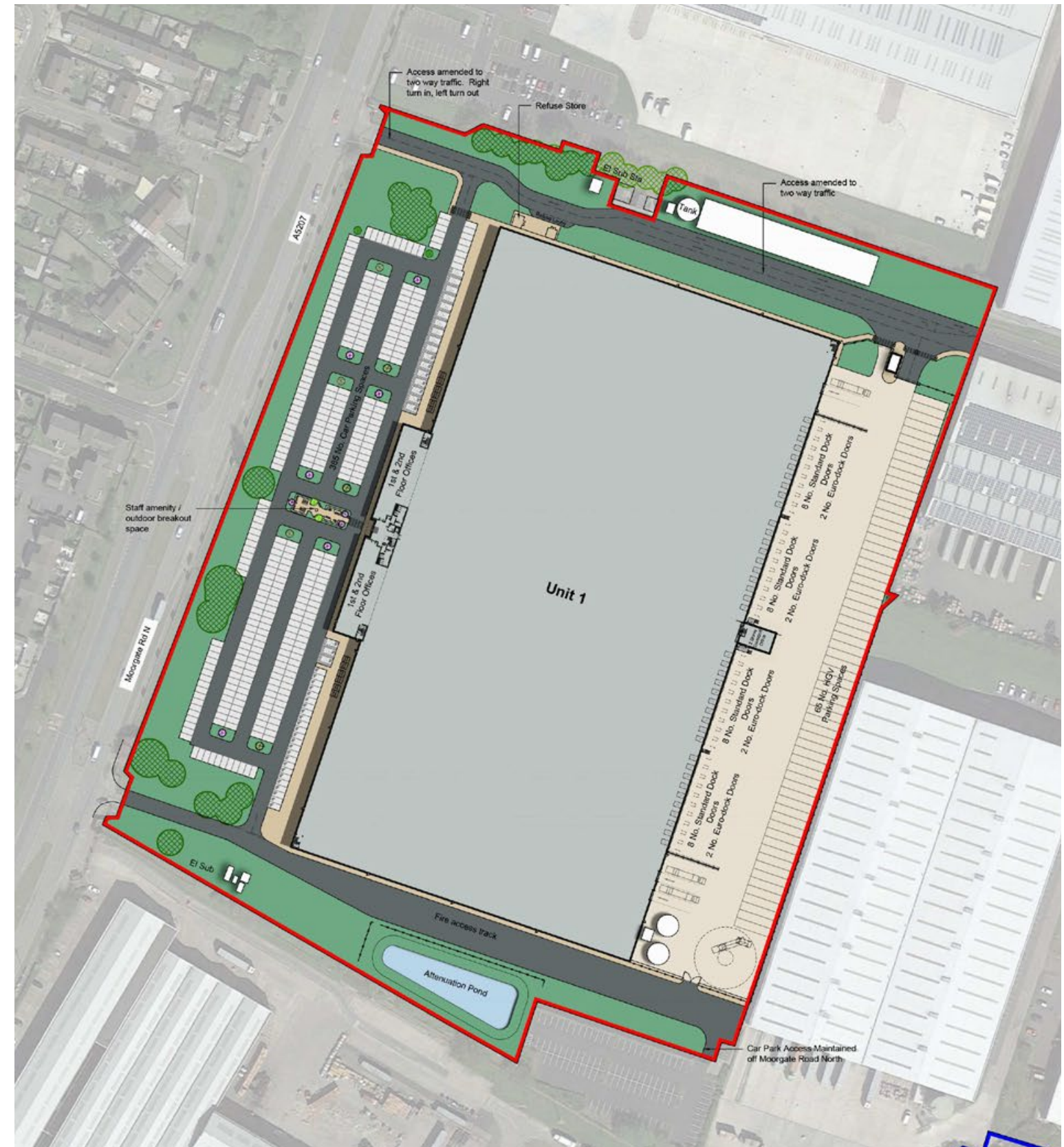
The service yard will be secured by powder coated black Paladin Fencing 2.4m high for local security with other accessible areas remaining fully open. Building plan proportions and service yard depths are determined by industry best practice & architectural experience of ongoing sector trends in order to ensure that the facility remains fit for operational requirements throughout its lifetime, even in the event of change of users or the evolution of user requirements.

Full consideration of DDA compliance, alternative transport modes; Bicycle and Motor cycle parking have been fully considered for the unit within its demise. The need for ancillary substations & transformers have been positioned within the development and the gatehouse, external enclosures, and hardstanding areas are fully detailed in this application. Landscape and gateway signage are coordinated with these locations.

The Office locations is positioned to provide important visual interest within the site and from the principal approach. A high quality façade & fenestration treatment has been chosen to the entrance and frontage of the unit as visible from the car park & approach.

Car parking provision is forward of the main Western elevation including along the length of the offices allowing for optimum inclusive accessibility. The carpark is set back from the Boundary parallel to Moorgate road allowing for the retention of several existing trees deemed by specialists to be of quality. Any trees which require replacing will be offset by new appropriately selected species and every opportunity will be taken to bolster the planting scheme and provide increased amenity for the wellbeing of Staff members.

The overall intention is to provide a design that improves the quality of the urban fabric through coherent Architectural language & considered landscape treatment.



05 LANDSCAPE PROPOSALS



05 LANDSCAPE PROPOSALS

05.1 LANDSCAPING PROPOSALS



- Site Boundary
- Retained mature vegetation
- Proposed meadow grassland (Emorsgate EM1)
- Proposed street trees
- Proposed ornamental trees and shrubs
- Proposed attenuation pond
- Proposed staff amenity / outdoor breakout space

For landscaping assessment and proposals please refer to '15353_R03_LVIA_Draft'



Project

Drawing Title

Scale

Drawing No

Date

Checked

Deacon Business Park, Knowsley

Landscape Strategy Plan

Not to Scale

15353/P09

December 2022

AB/CS



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05 LANDSCAPE PROPOSALS

05.1 LANDSCAPING PROPOSALS

The development proposals are for the erection of a single warehouse (Class B8: Storage or Distribution) along with access and servicing arrangements, car parking, landscaping, attenuation pond and associated works. The proposal includes security fencing to the yard and car park boundaries, with secure gated access points. A new pond and wetland area is included along the southern boundary primarily for drainage control purposes, but also provides the opportunity to introduce some valuable bio-diversity into the site with wetland planting. The external provision has been designed in tandem with the architectural design. Building location, aspect and car parking provision and servicing have driven the design process. The need to provide a welcoming external environment which caters for walking, cycling and vehicular access in a controlled, safe manner has been at the forefront of the design strategy.

05.1 SOFT LANDSCAPING

The landscape proposals include the provision of a soft landscape scheme which aims to enhance the species and biodiversity of the site and also provide identity to the site's Western (Front) boundary as well as soften the expansive areas of car parking and service yard. The proposed planting scheme and further ecological habitats, particularly around the perimeter of the site and the wetland all contribute to the visual and ecological amenity of the proposal. The planting includes feature ornamental shrub species and native tree species planting. The proposed tree planting is supported by flowering groundcover and specimen shrub planting with accent and herbaceous planting providing further seasonal interest, in order to target requirements for increased biodiversity. The proposal is to provide increased planting for ecological diversity and enhancement along the Western Boundary, to reinforce this boundary and to soften the security fencing around the site. Trees planted will provide shade to external areas on sunny days including an outdoor staff amenity space. These trees and shrubs will also screen views into the site from the surrounding environs.

The soft landscape proposals include grassland and wildflower species to the southern boundary and around the attenuation pond. Proposed trees are located around the verges of the car park to encourage ecological enhancement and an increase in site biodiversity.



06 VISUALISATIONS



06 VISUALISATIONS

06.1 CGI VISUALISATIONS



06 VISUALISATIONS

06.1 CGI VISUALISATIONS



06 VISUALISATIONS

06.1 CGI VISUALISATIONS

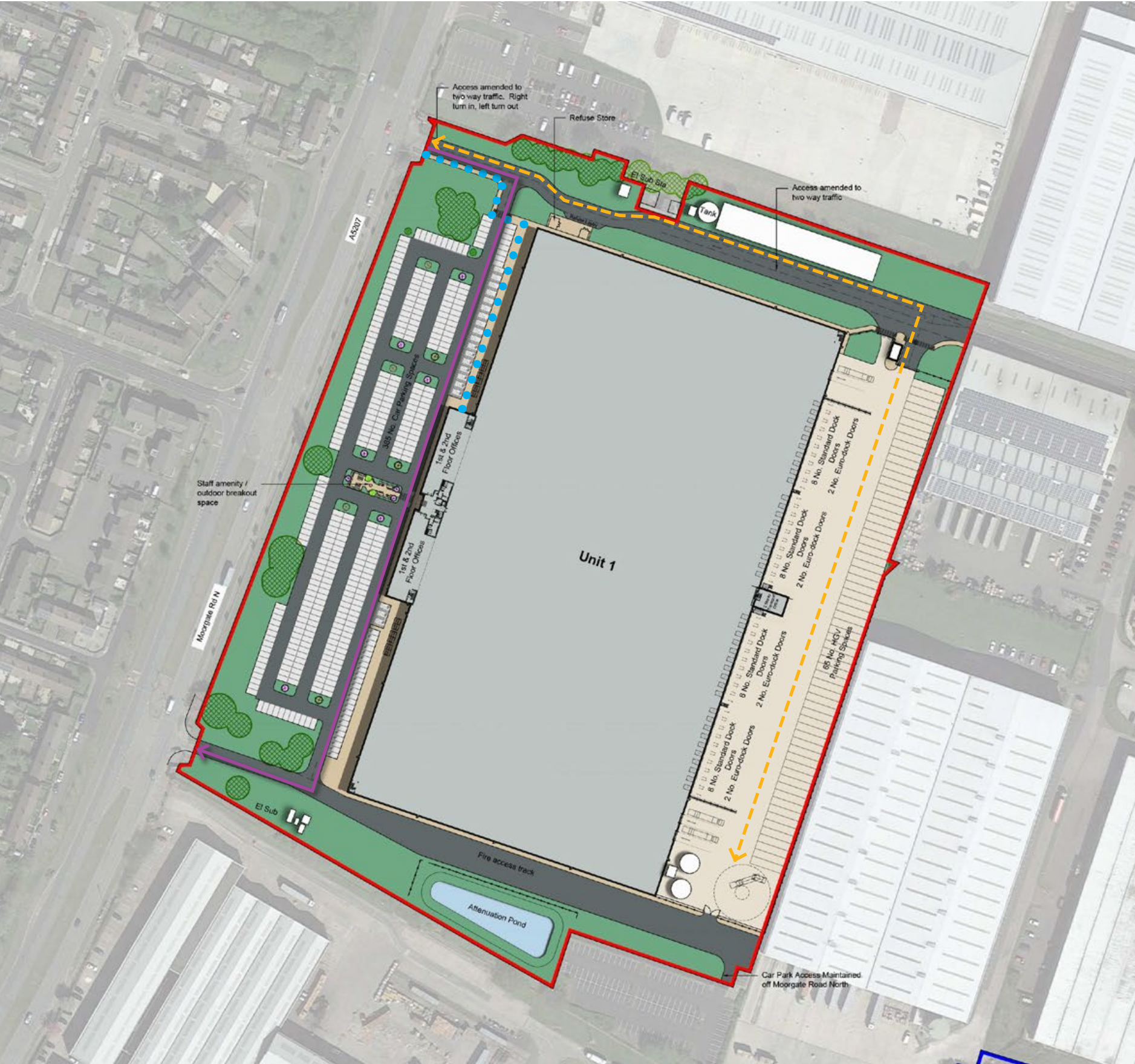


07 ACCESS



07 ACCESS

Unit 1 SITE PLAN



Key	
	Site Boundary
	HGV Access
	Car Access
	Pedestrians

07 ACCESS

07.1 VEHICULAR ACCESS

Vehicular access to the development will be via the improved existing access points from Moorgate Road North (Southbound)

A separate dedicated car park entrance will reduce conflict between goods vehicles and car traffic. The car park area will be constructed in dense bitumen tarmacadam where it is separated from service areas. This will form part of a coordinated hard landscaping strategy. Car parking provision is appropriate for the type and size of the unit proposed.

Provision has been made for covered secure cycle shelters to be located adjacent to the main office blocks. Similar arrangements have been made for the required accessible parking bays. Service yard areas will be formed in concrete surfacing, to provide a robust base for vehicle manoeuvring.

07.2 PEDESTRIAN AND CYCLE ACCESS

Footpaths will lead up to the office main entrances. Tactile paving and dropped kerbs will be provided at all road junctions, with further paving extended around offices and to the building perimeter.

Lighting by street lamps during hours of darkness will help to provide a safe and secure environment for the pedestrian / cyclist. The development will be laid out to achieve accessibility for disabled occupants. All accessible car-parking bays are located as close to the main office entrance as possible, with cycle shelters providing security and protection for bicycles. Safe pedestrian routes from these shelters will meet up with the route between car park and the building. All levels within the car parking areas will have a gradient of less than 1:25, enabling wheelchair access and ambulant disabled to access the site without difficulty.

The main entrance into the unit will be 'wheelchair friendly' level entry, with automatic or manual opening doors. The doors will meet all current Building Regulations Part M requirements, with full height tubular steel handles for ease of opening. The force required to operate the doors will be below the maximum force recommended in the Building Regulations, and the effective opening width of each leaf will be designed to be more than 800mm.

Additional entrances to the operational areas will be provided from the yard areas.

Changing Facilities have been provided at ground floor to facilitate cycling to work. Showering provision has been incorporated as 1 no. shower per 10 cycle spaces in line with BRE guidance. These 6 no. Showers have been split 50/50 Male to Female, with 1 no. additional Inclusive part M compliant WC / shower room. Drying rooms have been included within changing facilities and one locker has been allocated per cycle space.

07.1 PEDESTRIAN ACCESS - INTERNAL

Reception

The reception area to the main office areas will be suitably sized to accommodate wheelchair users.

They will include 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 impairment would be actively managed within the building.

Employment Space

The employment space is to be level throughout with clearly defined pedestrian routes. There will be fire exits within the main employment space between the main offices and the employment space area. External stairs leading to the yards will be provided where necessary with minimum 900mm wide x 1400mm long refuge bays. The landing will be level with

Toilets

Given the manual nature of work undertaken, toilets facilities will be provided in the employment space. In the offices, toilets will be provided for male, female and 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.

08 SUSTAINABILITY



08 SUSTAINABILITY

08.1 SUSTAINABILITY

Sustainability encompasses an assortment of environmental, social and economic issues. The new development aims to consider these issues and translate them into construction with the intention to provide an efficient development with minimal energy demand and low pollution levels. The development at Deacon Park Knowsley is committed to embracing sustainable design and construction, incorporating robust design principles to deliver a high quality development in a sustainable location providing economic, social and environmental benefits to the area. The design will include key measures to reduce energy and carbon emissions, improve water efficiency and employ use of sustainable materials.

This includes:

- The consideration of measures to reduce water use, including fixtures, fittings and equipment;
- Sourcing materials through the BRE Green Guide, targeting the use of A rated materials for major building elements;
- Identifying targets for reducing and managing waste during construction and operation.

A SUSTAINABLE LOCATION FOR DEVELOPMENT

The development is in a sustainable location with access to the national road network, as well as being close to local labour markets. The development will include a range of measures including new footpaths, and crossings to facilitate access and will include measures such as secure cycle storage to further encourage and enable sustainable and active travel.

REDUCED OPERATIONAL CARBON EMISSIONS

The detailed design of the new buildings will follow the principles of the energy hierarchy and aims to achieve a 10% reduction in carbon emissions over Part L 2013 through a range of fabric, and energy efficiency measures, as well as the consideration of low carbon renewable energy. Energy efficiency measures to be incorporated into the detailed design of the buildings include:

- Provision of roof lights to cover 15% of the unit roof spaces to prioritise natural daylighting, minimising artificial lighting and energy requirements;
- Use of materials with low u-values to minimise heat loss;
- The buildings are orientated, where appropriate, to encourage natural daylight penetration.
- The highest levels of air tightness specifications to mitigate thermal loss.
- Appropriate levels of insulation within external walls and roof.

Installation of energy efficient heating and ventilation systems.

CONSIDERATION OF ADDITIONAL LOW CARBON RENEWABLE ENERGY TECHNOLOGIES.

- Provision of roof lights to cover 15% of the unit roof spaces to prioritise natural daylighting, minimising artificial lighting and energy requirements;
- Use of materials with low u-values to minimise heat loss;
- Consideration of additional low carbon renewable energy technologies.
- Installation of Photo Voltaic panels required for a 10% reduction in the energy demand via renewables

ENVIRONMENTAL RESPONSIBILITY AND CLIMATE CHANGE

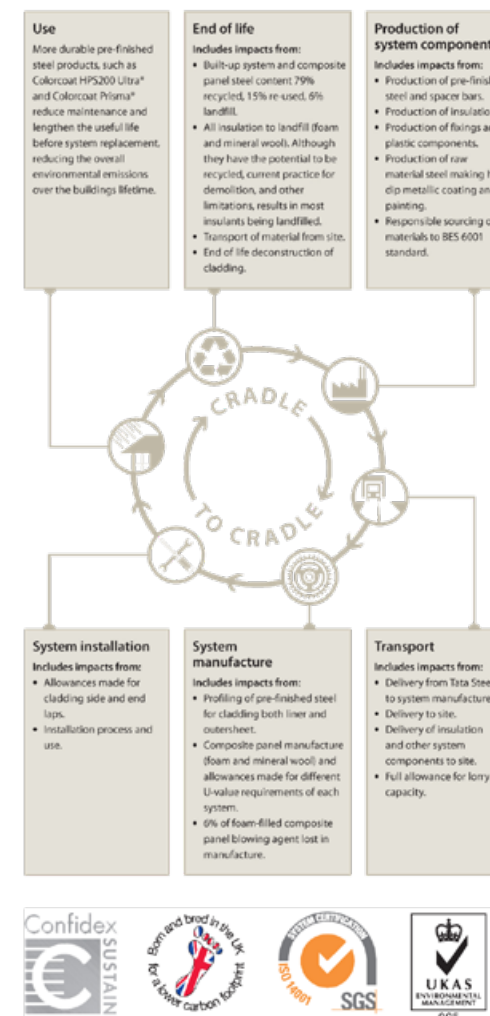
In addition to the above, the development will incorporate wider environmental objectives for new development, ensuring the development is resilient to the future impacts of climate change, through a range of measures including sustainable design and construction, surface water management,

ecological enhancement and sustainable waste management. The site will deliver a high quality, resource efficient development in a sustainable location, fully supportive of National and Local sustainability policy.

WASTE RECYCLE AND STORAGE

All units will be provided with access to a bin store for the sorting and storage of general refuse and recycling of waste materials. Bin stores will be located in discrete and convenient areas as appropriate. The collection from each bin store will be managed by the individual tenant.

For operational requirements, future plant and equipment may need to be located in service yards and will be appropriately screened. Equipment such as compactors, pallet store, gas bottle storage for forklift trucks and fuel tanks should be expected as these are often an integral part of an operator's requirements



08 SUSTAINABILITY

08.1 SUSTAINABILITY

The development is targeting BREEAM 'Excellent' rating. The BRE state that buildings with a BREEAM 'Excellent' rating are within the top 10% of UK non-domestic building stock in terms of sustainability performance. The BREEAM strategy incorporated a number of sustainability measures with the 9 issues including:-

- **Management:** The project team will the adopt a number of sustainable management practices in connection with design, construction, commissioning, handover and aftercare such as the on-site monitoring of water and energy and signing up to the considerate construction scheme.
- **Health & Wellbeing:** The health and wellbeing of occupants will be enhanced via the inclusion of a dedicated outside space for occupants and an adequate view out.
- **Energy:** To meet the minimum standard for Excellent the units will have a good energy performance via energy efficient measures and renewables in the form of photovoltaics and air source heat pumps. Energy monitoring and efficient lighting will further enhance the energy performance.
- **Transport:** 10% of the overall car parking capacity will be EV car charging and 5% of the car parking capacity will be dedicated to car sharing to encourage the use of alternative transport measures.
- **Water:** Low flow rate sanitaryware fittings will be installed in addition to water meters and water leak detection system in order to enhance the water efficient of the project.
- **Materials:** A life cycle assessment of the building materials to be used on the project has been undertaken to reduce the embodied carbon associated with the development. A sustainable procurement plan has been put in place to encourages decisions which reduce the environmental and social impact of construction products.
- **Waste:** Waste reduction and diversion of landfill targets have been set. Consideration has been given to reducing waste from construction and throughout the lifetime of the building.
- **Ecology:** Negative impacts on ecology that result from the construction process have been mitigated as much as possible and a long-term biodiversity management plan will be implemented.
- **Pollution:** Measures will be put in place to reduce noise and light pollution. The drainage strategy has been design to reduce the surface water run-off associated with the development.

In addition, the project will achieve EPC A. To achieve this an number of energy efficient measures and renewable energy in the form of Air Source Heat Pumps and

- **Efficient building envelope with enhanced U-values beyond the Part L2A limiting values (as shown in Table 1 and 2).**
- **Enhanced air permeability to reduce heating demand in the winter months.**
- **Glazed façades and rooflights to provide natural daylighting and reduce reliance on artificial lighting.**
- **Balanced g-values to ensure optimised internal conditions in the winter and summer months.**
- **Dedicated high efficiency mechanical ventilation heat recovery (MVHR) systems to office accommodation.**
- **High efficiency LED lighting to reduce electrical consumption and heat gains from lighting.**
- **Energy sub-metering to BREEAM standards to enable monitoring of energy usage.**
- **Air source heat pumps are proposed to provide heating and cooling to the office areas of the proposed units.**
- **Solar Photovoltaics (PVs) to be installed on the roof.**

The result of the measures outlined above is a 26% reduction in Co2 emission compared to Part L2a Building Regulations.

09 CRIME PREVENTION



09 CRIME PREVENTION

09.1 CRIME PREVENTION

Exterior lighting will be designed taking into account the following standards:

BS 5489-1:2013 Code of Practice for the Design of Road Lighting

BS EN 12464-2:2014 Light and Lighting – Lighting of work places

GN01:2011 Institution of Lighting Professionals (ILP) Guidance Note for the Reduction of Obtrusive Light

Lighting and the Environment – A Guide to Good Urban Lighting, Chartered Institution of Building Services Engineers (CIBSE)

Bat Conservation Trust (2014) Artificial Lighting and Wildlife. Interim Guidance: Recommendations to help minimise the impact of artificial lighting. In addition the following criteria will be utilized as a basis for the scheme:

The estate road, car park and service area will be illuminated during the hours of darkness to an appropriate lighting level for both operation and safety.

The lighting lux levels will be kept to a minimum when adjacent any natural habitats, and will avoid direct light spill into sensitive locations.

Lighting will be a combination of building mounted and column mounted lighting units. The lighting design will utilise good quality, attractive 'dark sky' fittings, directed downwards and with no spillage above the horizontal to avoid light pollution.

The mounting height of lighting units should be no greater than 12 m.

For the access roads and car parking areas all mounting heights will be 8 to 10 m.

Lighting impacts on all receptors will be minimised by careful design. If needed, baffles and shields can be attached to lighting units to further reduce lighting effects.

09.1 CRIME PREVENTION

It is important that any development responds to the issues relating to security, such as criminal and anti-social behaviour, by incorporating such physical design features as listed below:

- Barriers to the service area and car park entrances to provide out of hours security.
- Secure parking for cycles located in highly visible and supervisable locations.
- Buildings of robust construction as illustrated within the submitted documents
- All external doors fitted with secure frames and locks.
- 2.4m high security fencing including access gates to the full perimeter of the service area.

09.1 CRIME PREVENTION

In the absences of any confirmed occupiers, we can offer examples of the management and maintenance that will be put forward as good practice:

- Regular storage of plant, machinery, materials and supplies should not be permitted outside of the confines of the secured service area.
- The CCTV, lighting and alarm system should be regularly maintained and immediately repaired / replaced if faulty to ensure the safety and security of the development and its users.
- Access controls to the external and internal door sets, gates and barriers are essential to the security of this scheme and it is most important that these systems are regularly maintained.
- Cleaning, litter picking, removal of graffiti and repair of damage arising from vandalism should be carried out promptly to maintain a culture of care and respect. A lack of maintenance often attracts further abuse.



Plot Frontages



Security Fencing

10 SUMMARY



10 SUMMARY

10.1 SUMMARY

The design proposal has been developed with due regard to the existing site, its context and surroundings, to create a carefully sited, appropriately sized building which meets the client's brief. The proposals also allow for the best possible access by all modes of transport and encourage travel to the site by means other than car.

The design seeks to minimise the impact on its surroundings; providing an attractive, contemporary and cohesive design that is fit for purpose and safe for all to use.

All design proposals contained within this report have been designed to meet the required design and sustainability policies of Knowsley Metropolitan Borough Council. The proposals represent a high quality development and a substantial investment, which will help to promote and support employment growth and stimulate continued economic investment to the area, cohesive with regional and local aspirations. It is anticipated that the development will act as a catalyst for further development to create additional new jobs and investment for the local community.



