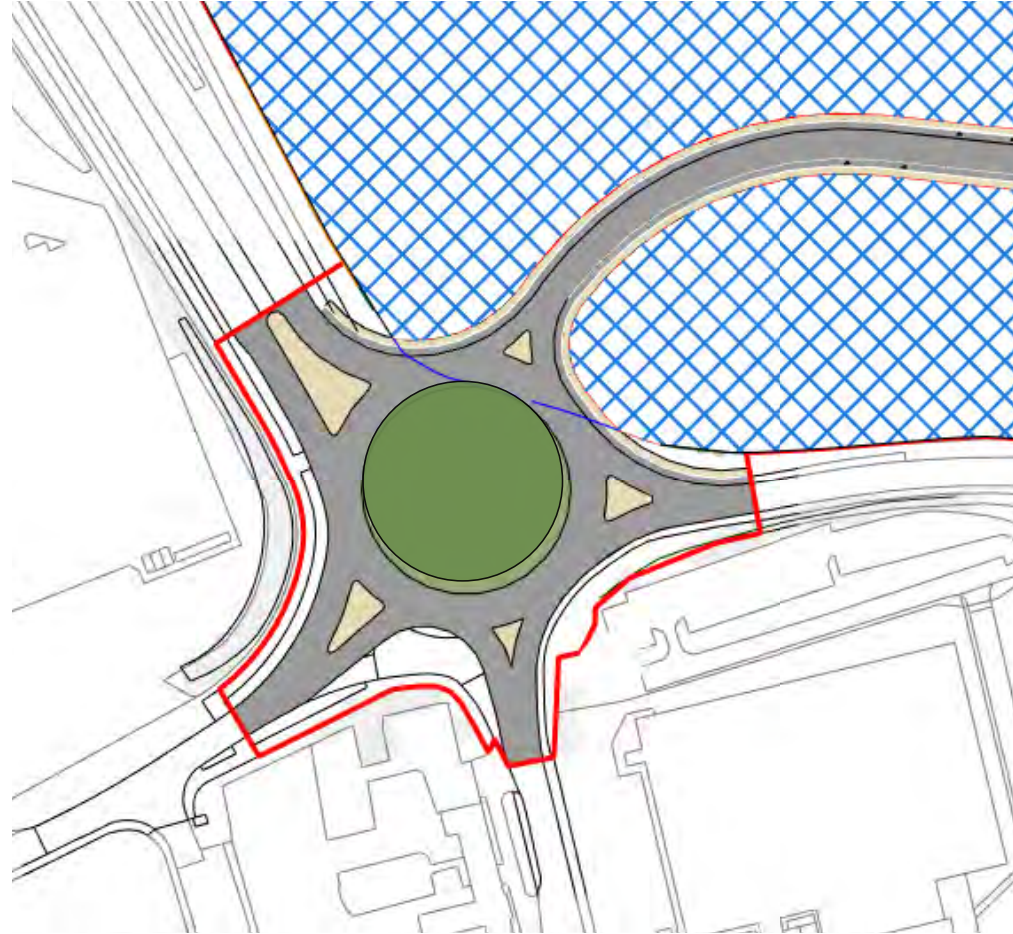
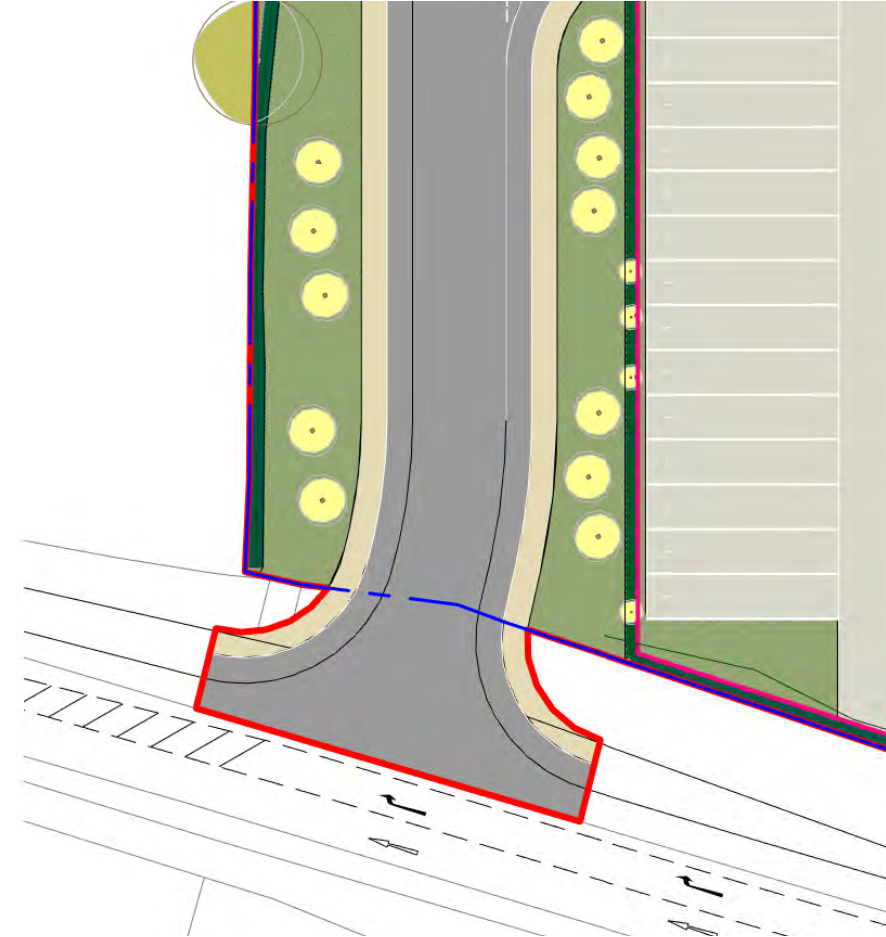




A new access arm off the 4-arm Industrial Estate Road roundabout is proposed. As part of the proposals dropped kerb and tactile crossing are proposed at the new access roundabout.

FIG.28. PROPOSED ACCESS FROM THE ROUNDABOUT



Vehicular access to the detailed component is proposed via a new priority right turn island junction off Bryn Lane. A pedestrian refuge island is proposed to the west of the site access to assist crossing of Bryn Lane.

FIG.29. PROPOSED ACCESS



12. DESIGN APPEARANCE

12.1 MATERIALS

The details of the proposed materials and building design will ultimately be controlled via planning conditions and at reserved matters stage. However, below is an example of what the units and development could be.

Form, sizes and heights of the buildings are informed by the functional parameters of the nature of the proposed usage. Therefore, the warehouse design will reflect a functional design aesthetic, with the design of the offices providing an opportunity for innovation.

The selection, detailing and maintenance of all external materials will be considered at the outset of the design process and only products with proven lifespan and quality will be specified. Particular attention will be given to detailing to ensure continued performance especially at joints and abutments.

The selection of materials will have due regard to the embodied energy for construction, environmental impact and ongoing maintenance. The use of recyclable materials, where appropriate, will be considered.

Contractors will be required to work directly with manufacturers to ensure supplied materials are pre-cut to size to minimise wastage wherever possible. This will also ensure a higher standard of construction which will help to improve detailing. Materials should also be sourced locally, recycled and/or recyclable where practicable.

12.2 BUILDING MATERIALS

The logistics units will include elements of ribbed and flat composite cladding panels and built up profiled cladding systems laid both horizontally and vertically. This will provide variety to the elevation by producing a change in texture.

To reduce the impact of the warehouse building upon the surrounding environment, a selection of recessive and neutral colours will be used. The potential for the controlled use of stronger colours in feature bands, flashings, fascias and glazing at lower levels then becomes acceptable in order to offer contrast and relief, and to create some individuality for occupiers.

The warehouse roof will be a colour coated profiled steel. A muted colour palette will be used to reduce the effect of the mass of the building, while the additional of feature colour flashings help to enhance the aesthetic of the design while providing some corporate branding opportunities for potential occupiers. Offices will use high quality materials. Curtain walling entrance features and aluminium framed glazing/window systems would enhance the pedestrian interface with the building.

For outline areas, the final design will be agreed by conditions and at reserved matters stage.

Built Up Metal Cladding - Horizontally laid Trapezoidal Profile Contrasting with the lighter grey panels on top.

Translucent Sandwich Panel Visible Light Transmission - 30%

Yellow Steel escape doors.

Heavily contrasting inner Feature Band in yellow.

Heavily contrasting inner Feature Band in blue.

Aluminium Feature flashing in blue.

Lighter Silver Grey Composite Microrib Panels that make up the top of the cladding, creating a portal design will act as a way finding architectural feature.

Aluminium double glazed curtain walling with anthracite window frames.

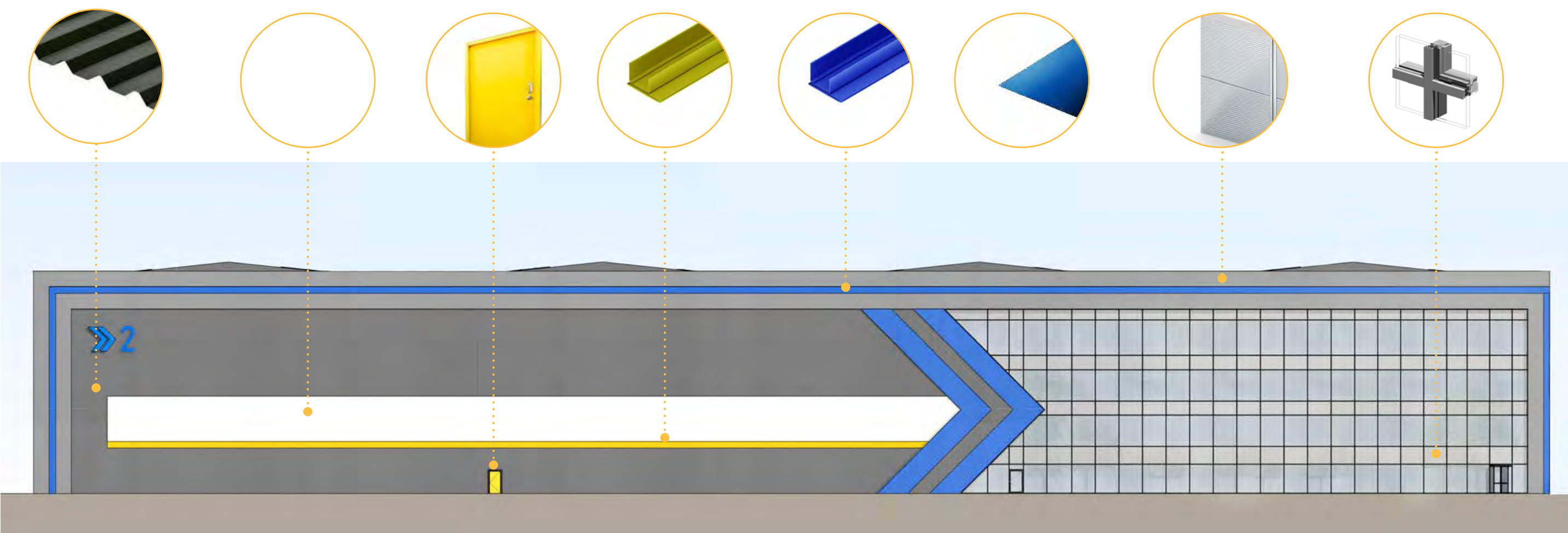
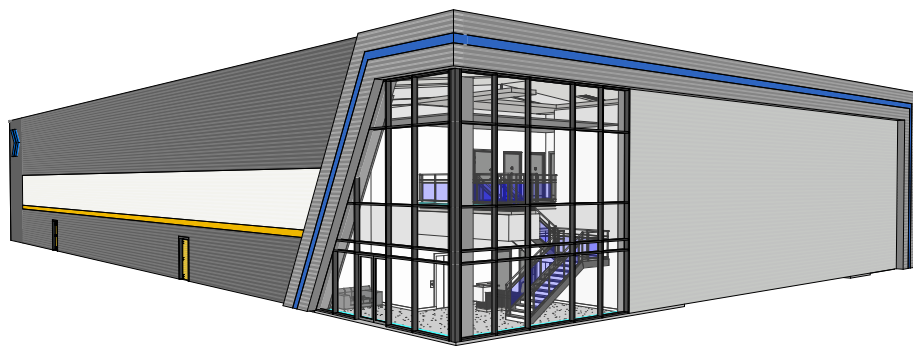


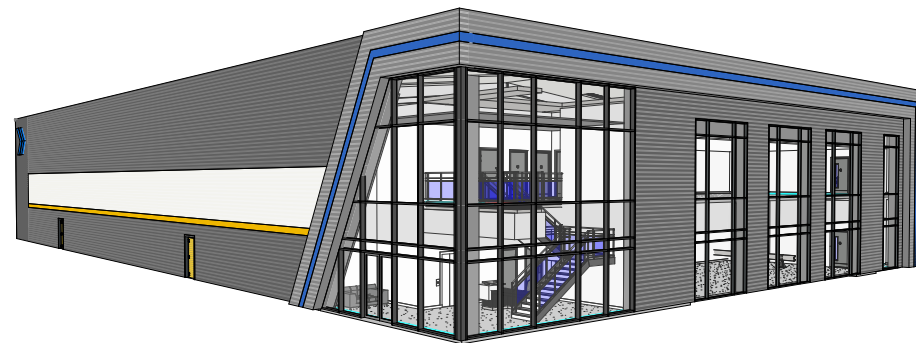
FIG.30.ELEVATION TREATMENT



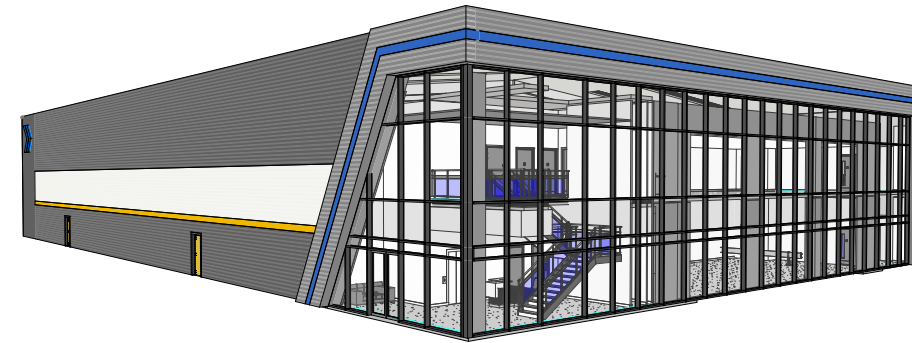
12.3 DESIGN EVOLUTION



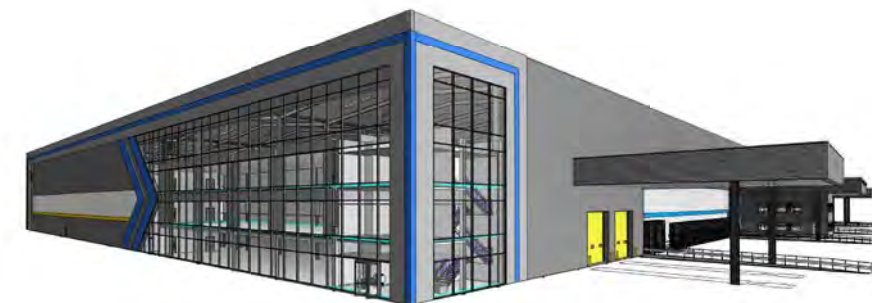
The original design takes inspiration from the adjacent Net World Sports building, located at the corner of Bryn Lane and Ridleywood Road, following the client's corporate livery while keeping the design in line with the aesthetic strategy of the local headquarter building. The reduced glazing strategy considers a future occupier who may not want an office fit out.



For an occupier who will want to fit out their office space, or even provide more natural light for the occupiers of the unit, vertical curtain wall sections provide this opportunity.



As an enhanced version of the scheme, the client is keen to provide Grade A logistics space, of a high aesthetic and functional value. Therefore this fully glazed option provides this.



Using the ethos and lessons learnt from the design of the smaller units, the larger unit was designed to maintain the high quality aesthetic, while also closely following the corporate branding instilled by Net World Sports. The large signage zones allow future occupiers to apply their personal stamps to the scheme.



12.4 UNIT 2

12.4.1 LOCATION

Unit 2 is located within Detailed Zone 1 in the south-east site corner.

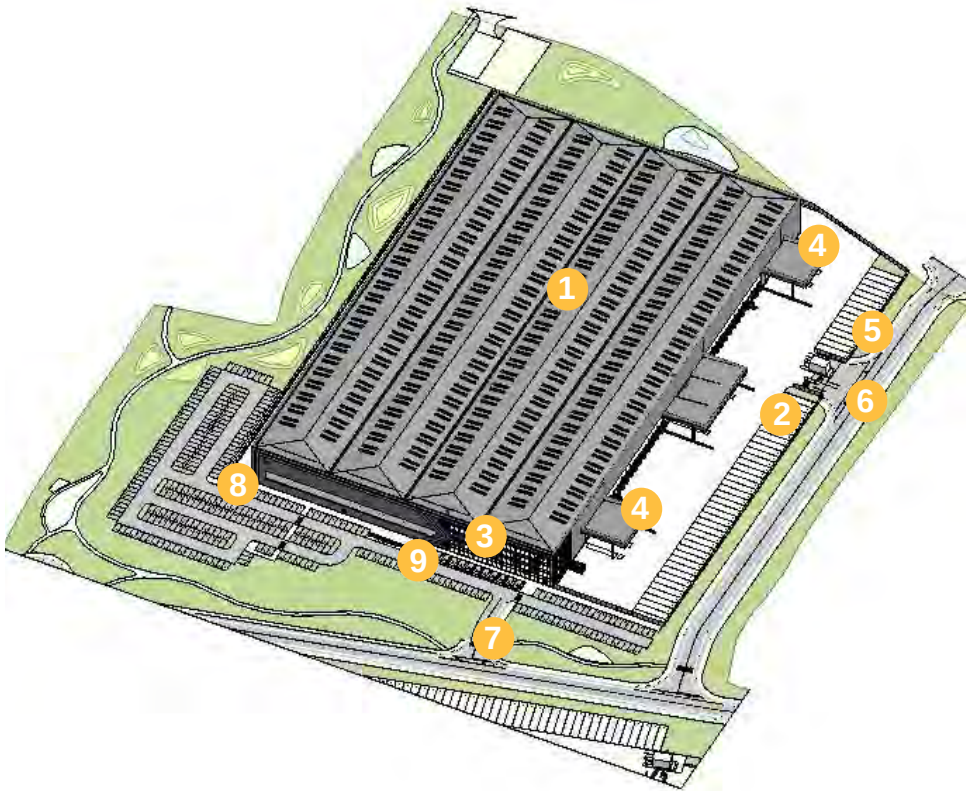
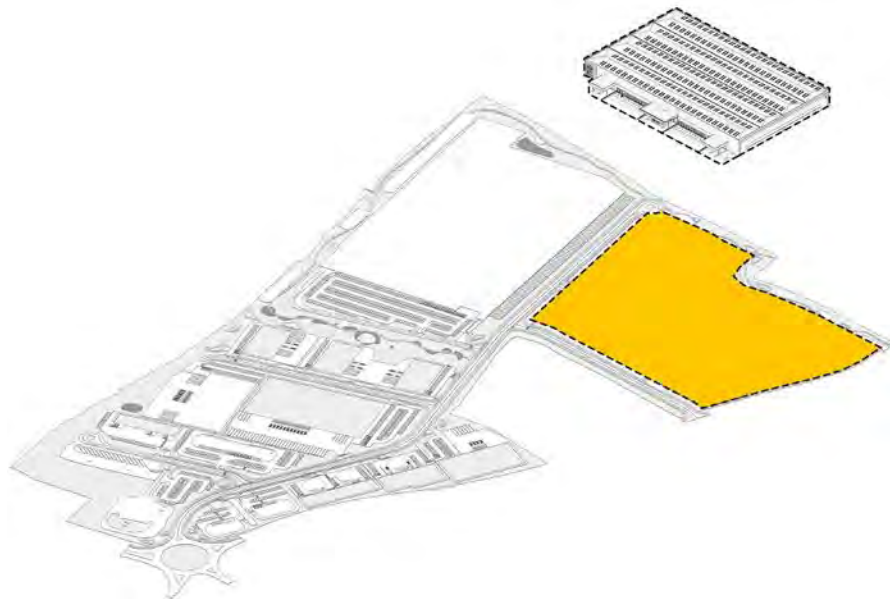
12.4.2 ARCHITECTURAL DESIGN

In addition to the principal two storey office to the north of the warehouse, one smaller two storey hub office will be accessible both from the warehouse floor and also the service yard. These provide good surveillance for the goods-in and goods-out operations within the service yards due to their central position and provide driver amenity facilities.

12.4.3 AMOUNT

The proposed unit is a steel-framed distribution unit. The application seeks to provide 33,177m² of total gross internal area. The sizes of the yard areas are borne out of the dimensions of modern articulated vehicles and their turning circles.

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



- | | |
|-------------------|--------------------------|
| 1 Warehouse | 6 HGV Entrance and Exit |
| 2 Hub Office | 7 Car Entrance |
| 3 2 Storey Office | 8 323 Car Parking Spaces |
| 4 Canopies | 9 40 Cycle Spaces |
| 5 Gatehouse | |

FIG.32.UNIT 2 SITE ARRANGEMENT - 3D VIEW

FIG.31.UNIT 2 LOCATION WITHIN DETAILED ZONE 1



12.4.4 SCALE

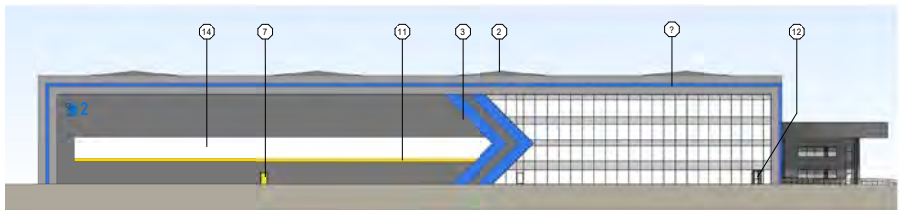
With an overall length of 228m and width of 138m the footprint of this building fills the space of Detailed Zone 1 almost completely. The proposed logistics warehouse building has a maximum haunch height of 18m which is clear internal height above floor level to the underside of eaves.

Warehouse scale is driven primarily by the required floor area for the unit. The the two storey office building to north of the warehouse helps to break up the structure when viewed from the site entrances.

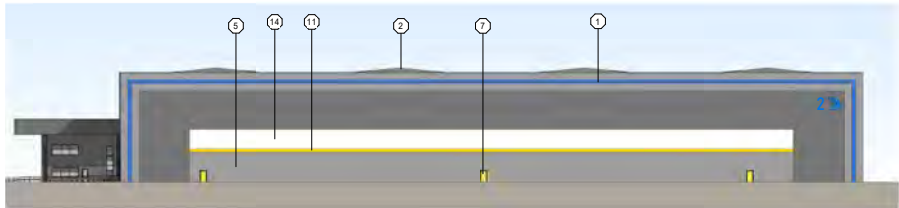
Massing is also broken up horizontally with various cladding elements as well as loading docks plus dock doors at low levels, and canopies above level access doors which create a strong horizontal shadow line along the length of the building.

12.4.5 ELEVATIONS

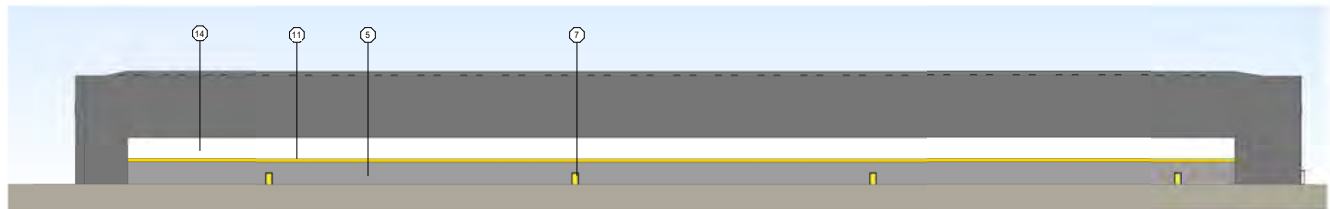
The proposed elevations are shown on the following figure.



North Elevation



South Elevation



East Elevation



West Elevation

FIG.33.UNIT 2 ELEVATIONS



Elevation 3D View



12.4.6 GA PLANS

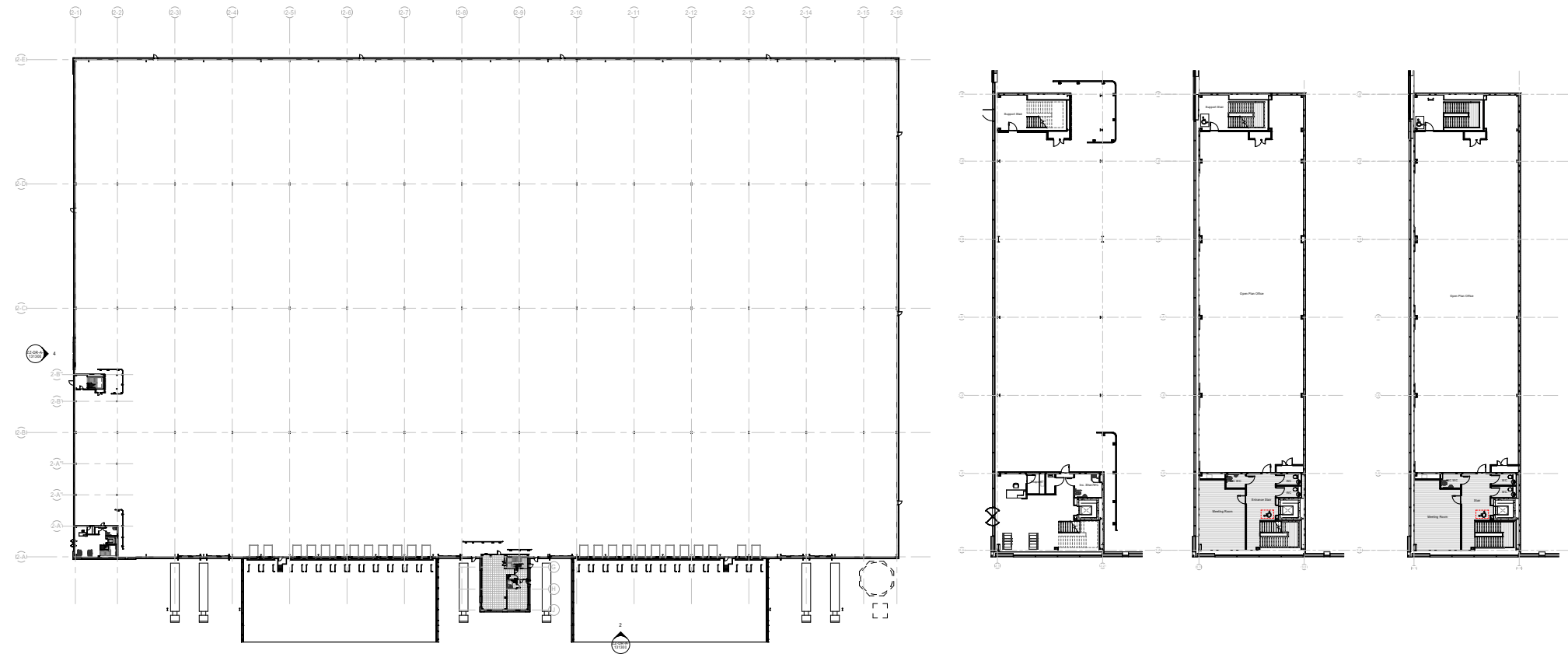


FIG.34.UNIT 2 WAREHOUSE PLAN

FIG.35.UNIT 2 OFFICE PLANS



12.4.7 SITE PLAN



FIG.36.UNIT 2 SITE PLAN

EXTERNAL FURNITURE



BICYCLE SHELTER
Cladon or equal approved
Each shelter has space for 10 bicycles. Shelters to be provided in accordance with the site plan.

HAL 9004 - Black



BOUNDARY SECURITY FENCE
2.4m High Palatin Fence

HAL 9004 - Black



TIMBER BIN STORE
Timber H&M and Mass Fencing

12.5 UNITS 3,4&5

12.5.1 LOCATION

Unit 3, 4 and 5 are located within Detailed Zone 2 in central-western part of the site.

12.5.2 ARCHITECTURAL DESIGN

Units 3,4 and 5 are following the same design principles. Consisting of the principal two storey. Two level access doors for all units enabling access to the warehouse floor and also the service yard. These are located in the centre of the building within service yards.

12.5.3 AMOUNT

The proposed units are a steel-framed distribution units. The application seeks to provide 2,063m² of total gross internal area for each unit.

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

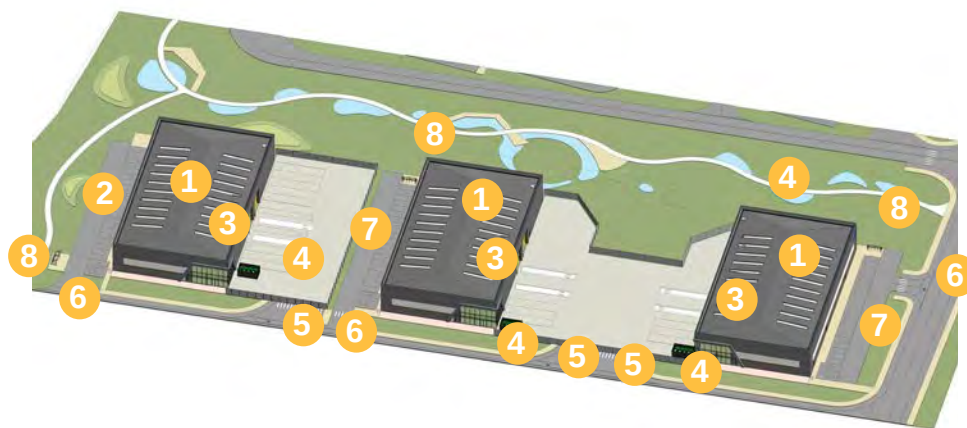


FIG.38.3-4-5 SITE ARRANGEMENT - 3D VIEW

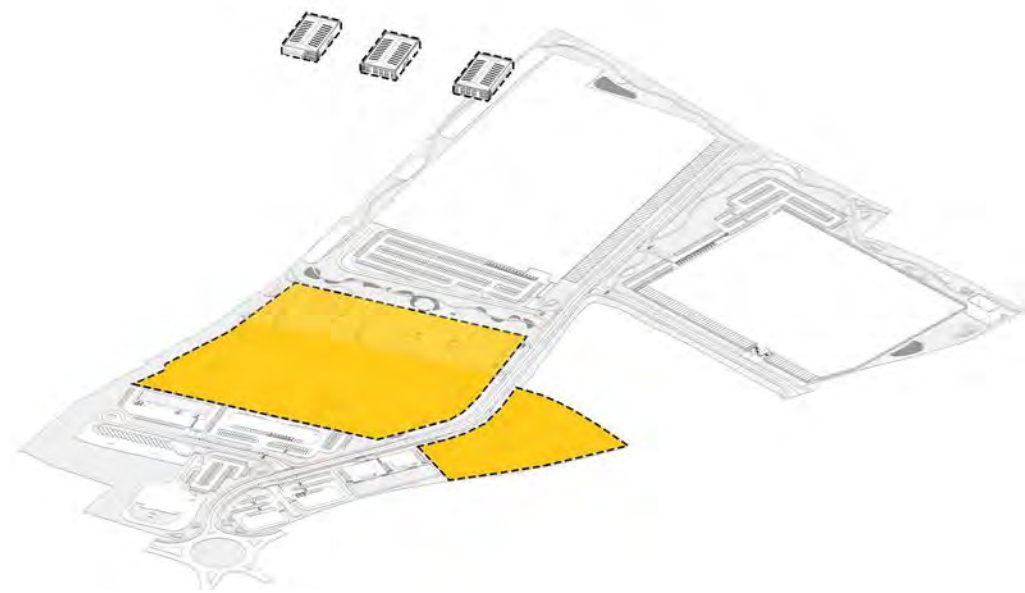


FIG.37. UNIT 3-4-5 LOCATION WITHIN DETAILED ZONE 2

- | | |
|-------------------------|-------------------------|
| 1 Warehouse | 6 Car Entrance |
| 2 23 Car Parking Spaces | 7 22 Car Parking Spaces |
| 3 2 Storey Office | 8 10 Cycle Spaces |
| 4 Bin Stores | |
| 5 HGV Entrance and Exit | |



12.5.4 SCALE

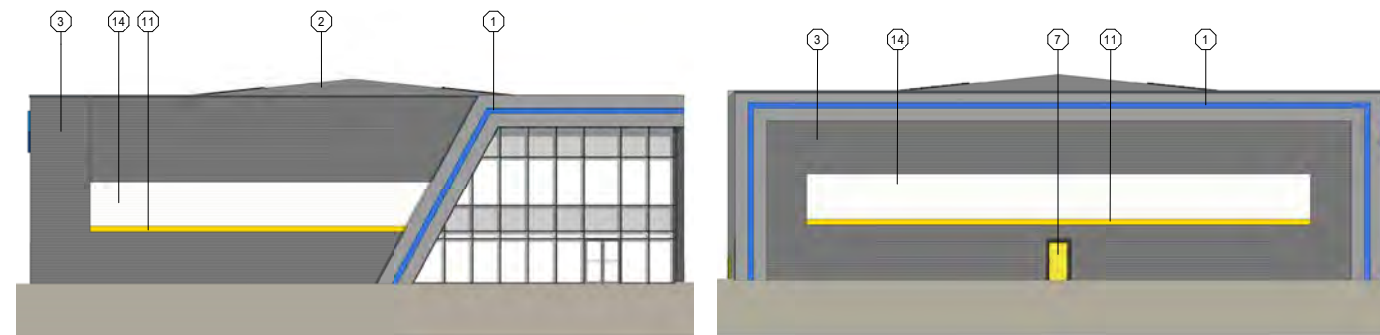
With an overall length of 33.9m and width of 58m the footprint of buildings fills the eastern part of Detailed Zone 2. The proposed logistics warehouse buildings have a maximum haunch height of 10m which is clear internal height above floor level to the underside of eaves.

Warehouse scale is driven primarily by the required floor area for the unit. The Unit is accommodating a one storey mezzanine office with the ground floor core.

Massing is also broken up horizontally with various cladding elements as well as Level Access Doors which create a strong break and pause from long side elevations along the length of the building.

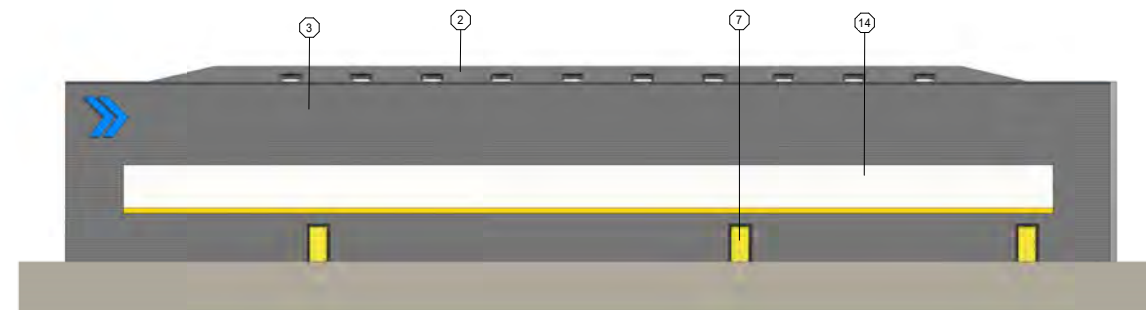
12.5.5 ELEVATIONS

The proposed elevations are shown on the following figure.



Typical Front Elevation

Typical Back Elevation



Typical Side Elevation



Typical Side Elevation

FIG.39.UNIT 3-4-5 TYPICAL ELEVATIONS

12.5.6 GA PLANS

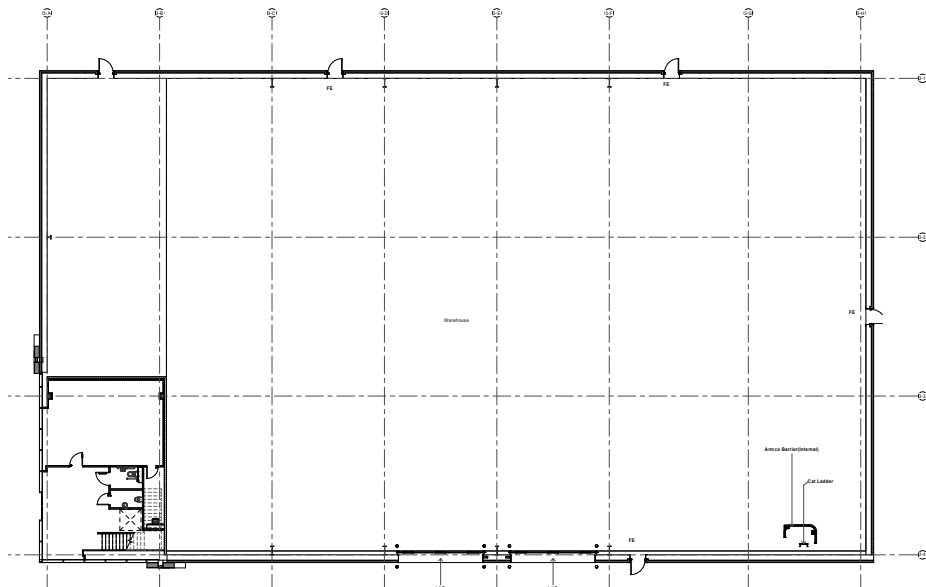


FIG.40.UNIT 3 AND 4 WAREHOUSE PLAN

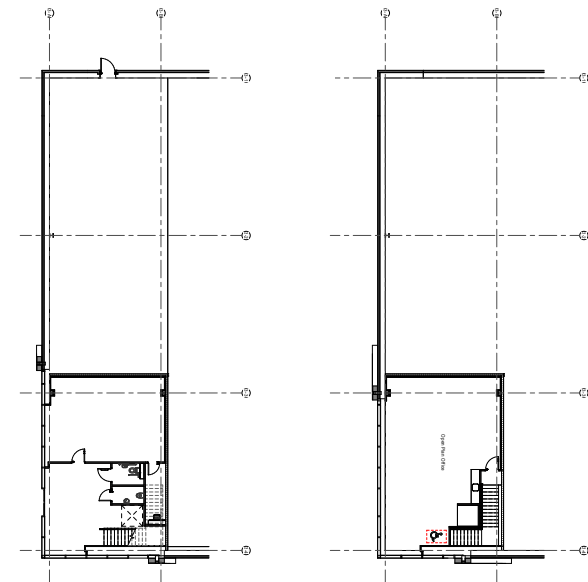


FIG.42.UNIT 3 AND 4 OFFICE PLANS

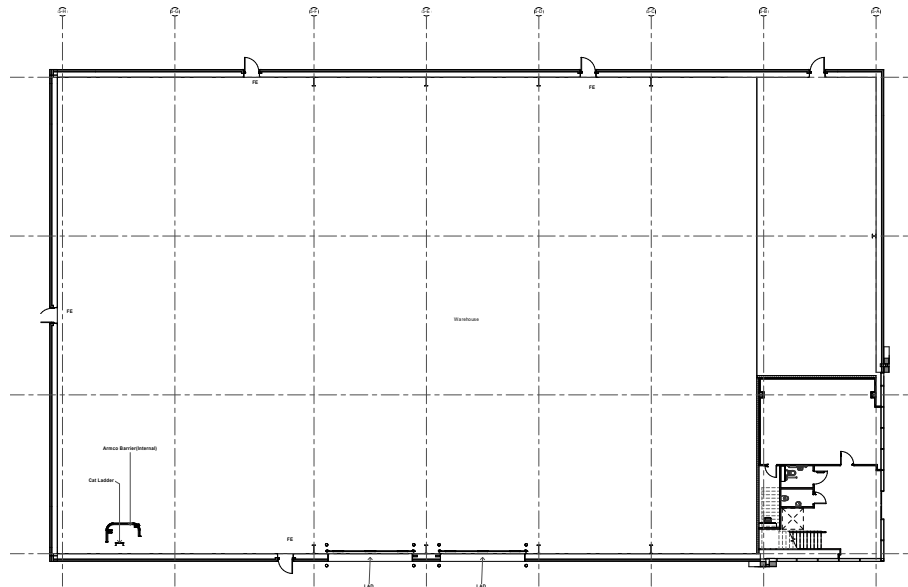


FIG.41.UNIT 5 WAREHOUSE PLAN

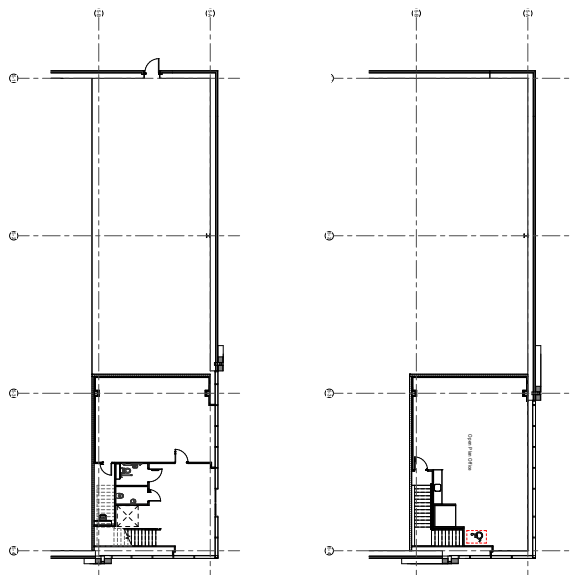


FIG.43.UNIT 5 OFFICE PLANS



12.5.7 SITE PLAN

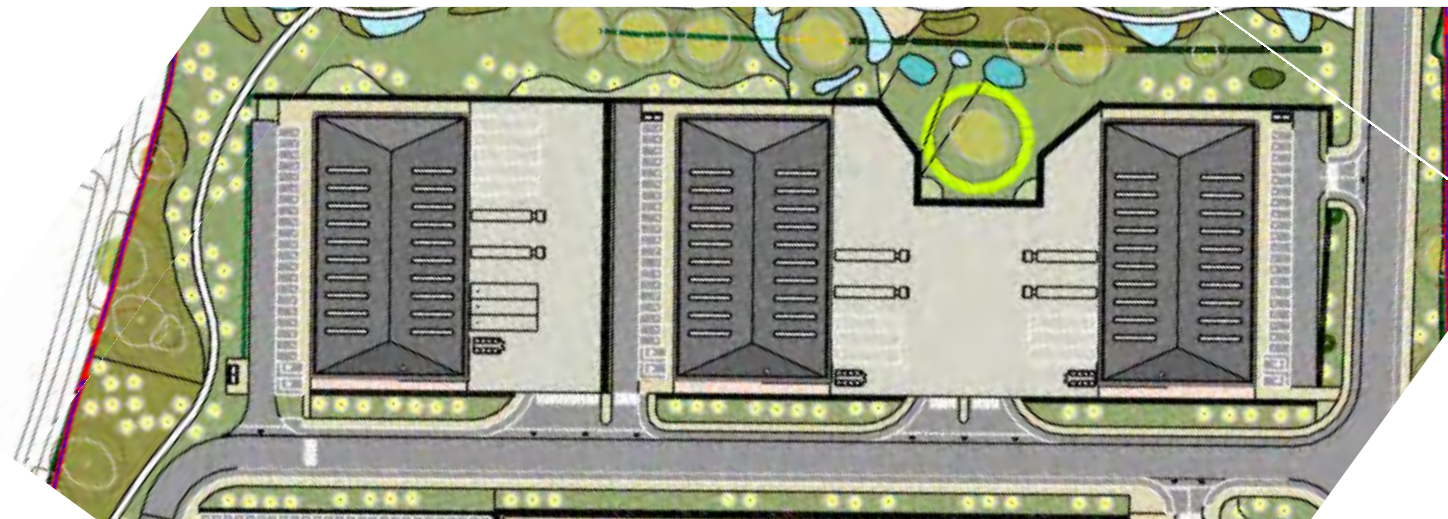


FIG.44.UNIT 3 4 5 SITE PLAN

EXTERNAL FURNITURE



BICYCLE SHELTER
Cladon or equal approved
Each shelter has space for 10 bicycles. Shelters to be provided in accordance with the site plan.

2004 - Black



BOUNDARY SECURITY FENCE
2.4m High Paladin Fence

RAL 9004 - Black



TIMBER BIN STORE
Timber H& Mass Fencing



12.6 UNIT 6

12.6.1 LOCATION

Unit 6 is located within Detailed Zone 2 in Central-Western part of the site.

12.6.2 ARCHITECTURAL DESIGN

Units 6 is also following the same design principles. Consisting of the principal two storey office. Six dock levellers and two level access doors are proposed enabling access to the warehouse floor and also the service yard. These are located towards the centre of the building within service yards.

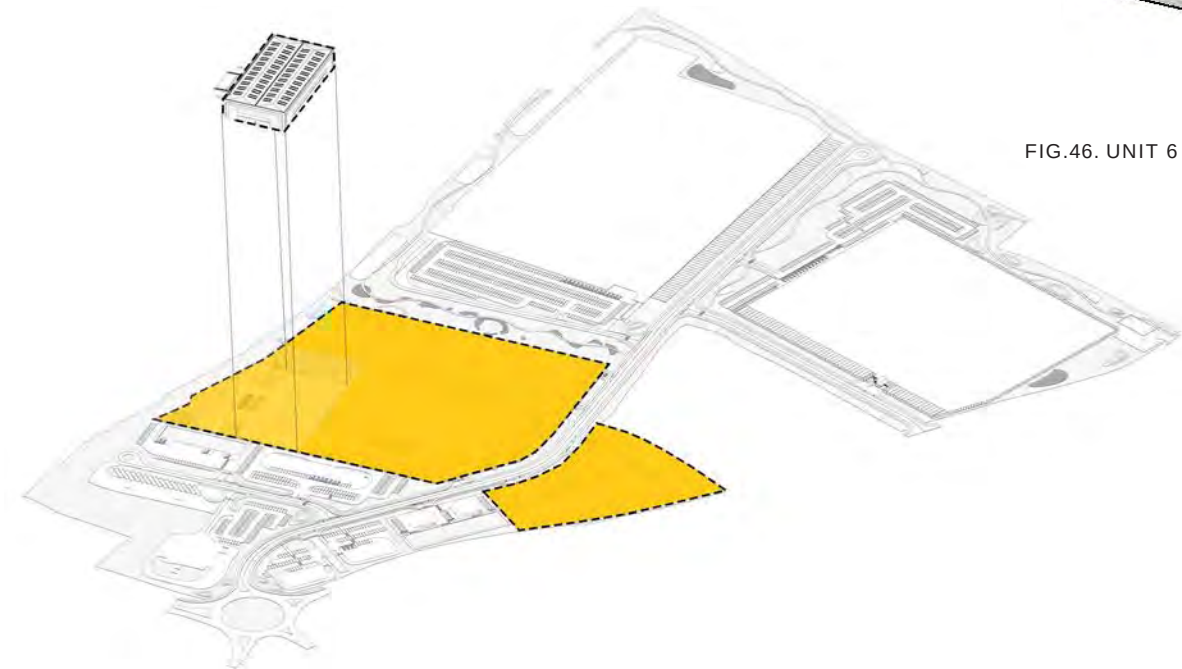


FIG.45.UNIT 6 LOCATION WITHIN DETAILED ZONE 2

12.6.3 AMOUNT

The proposed unit is a steel-framed distribution unit. The application seeks to provide 5,712m² of total gross internal area.

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

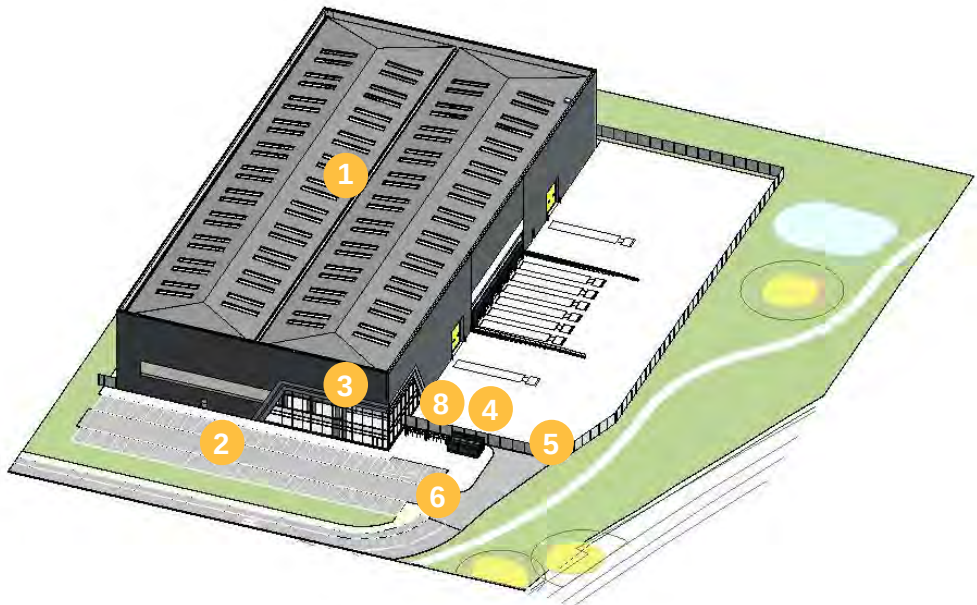


FIG.46. UNIT 6 SITE ARRANGEMENT - 3D VIEW

- | | |
|-------------------------|-------------------|
| 1 Warehouse | 6 Car Entrance |
| 2 52 Car Parking Spaces | 7 10 Cycle Spaces |
| 3 2 Storey Office | |
| 4 Bin Stores | |
| 5 HGV Entrance and Exit | |



12.6.4 SCALE

With an overall length of 103.7m and width of 53m the footprint of buildings fills the north-western part of Detailed Zone 2. The proposed logistics warehouse buildings have a maximum haunch height of 15m which is clear internal height above floor level to the underside of eaves.

Warehouse scale is driven primarily by the required floor area for the unit. The Unit is accommodating a one storey mezzanine office with the ground floor core.

Massing is also broken up horizontally with various cladding elements as well as Dock Levellers and Level Access Doors which create a strong break and pause from long side elevations along the length of the building.

12.7 ELEVATIONS

The proposed elevations are shown on the following figure.

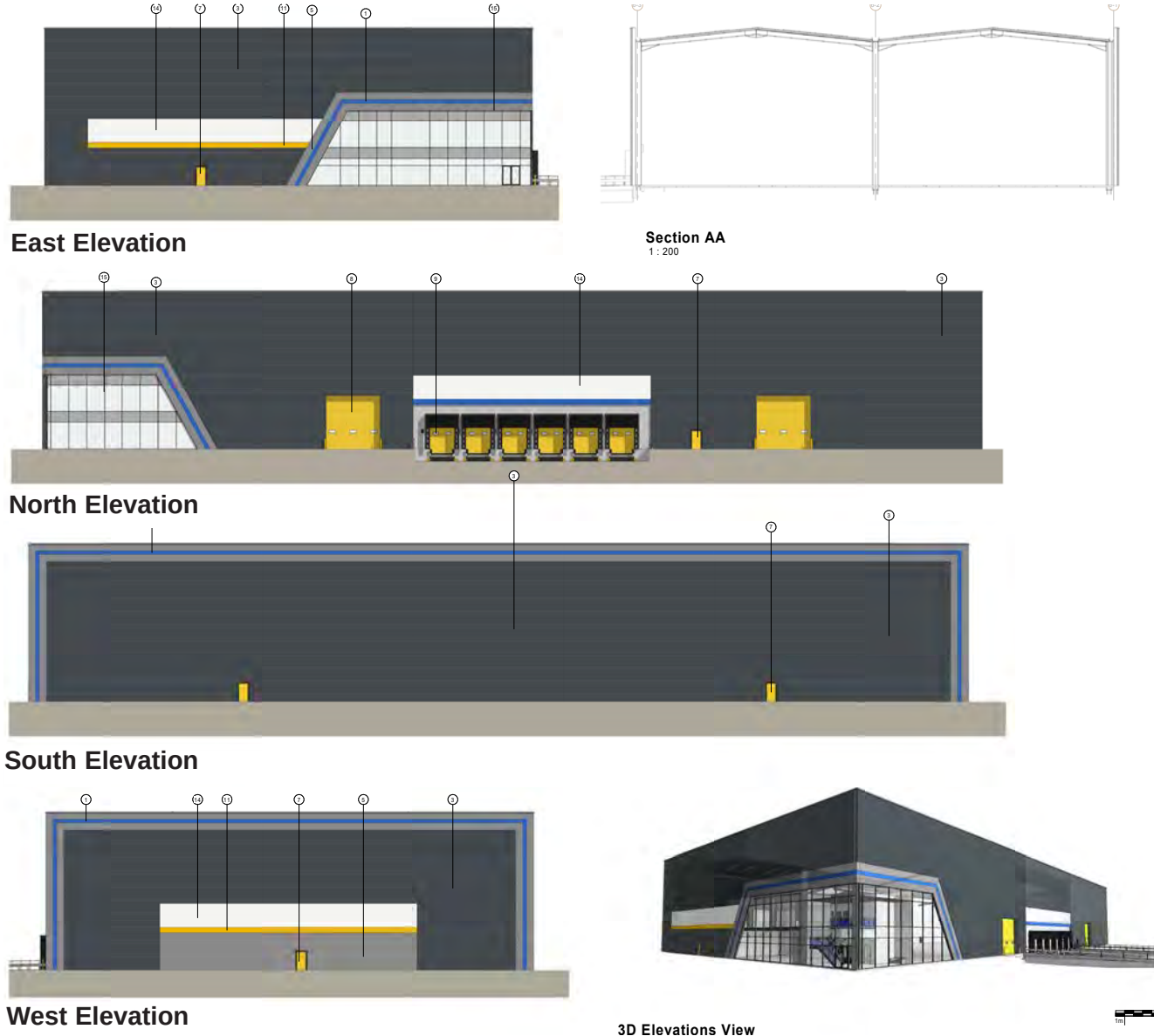


FIG.47.UNIT 6 ELEVATIONS

12.7.1 GENERAL ARRANGEMENT PLANS

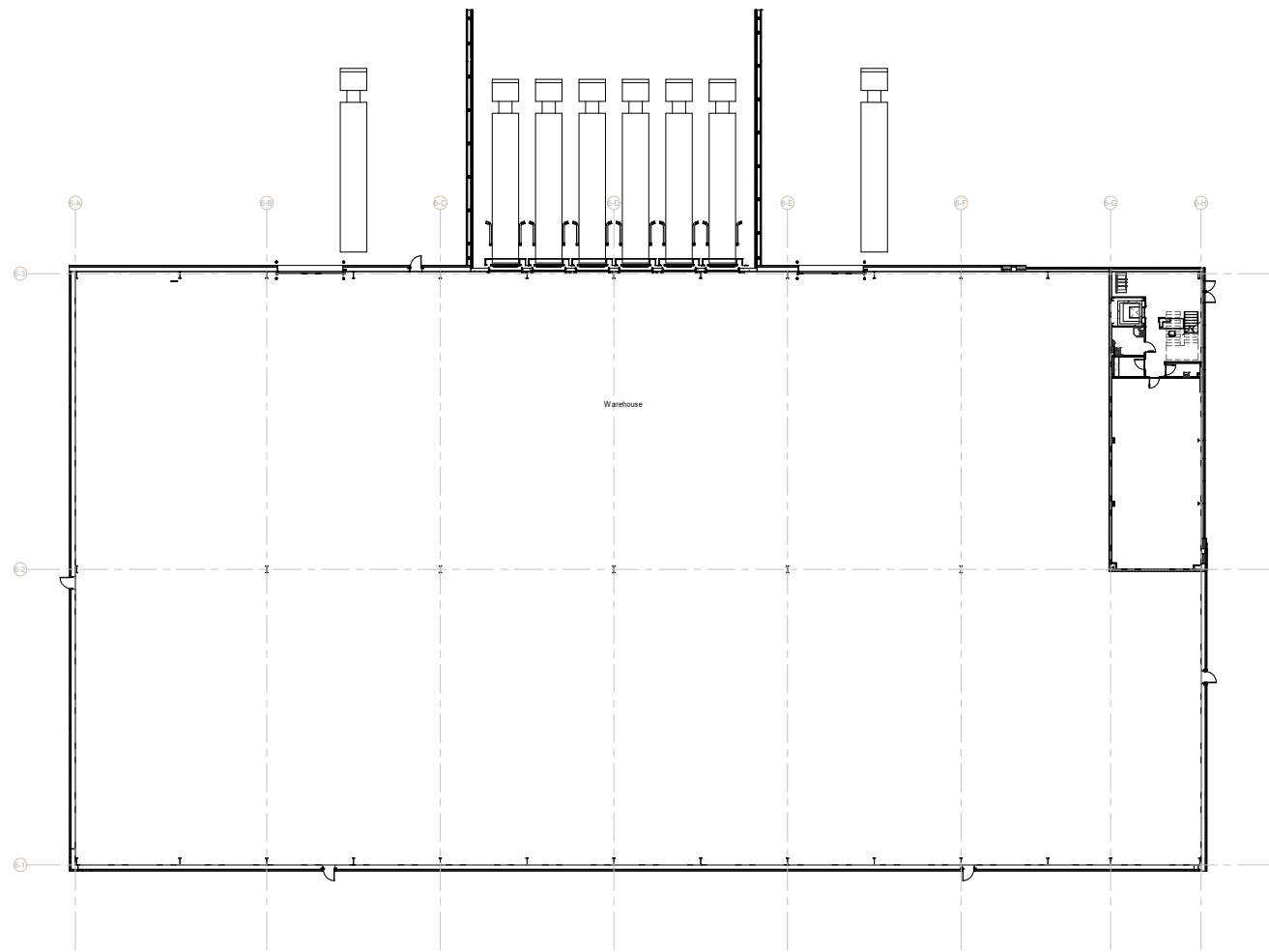


FIG.48.UNIT 6 WAREHOUSE PLAN



FIG.49.UNIT 6 OFFICE PLANS

12.7.2 SITE PLAN

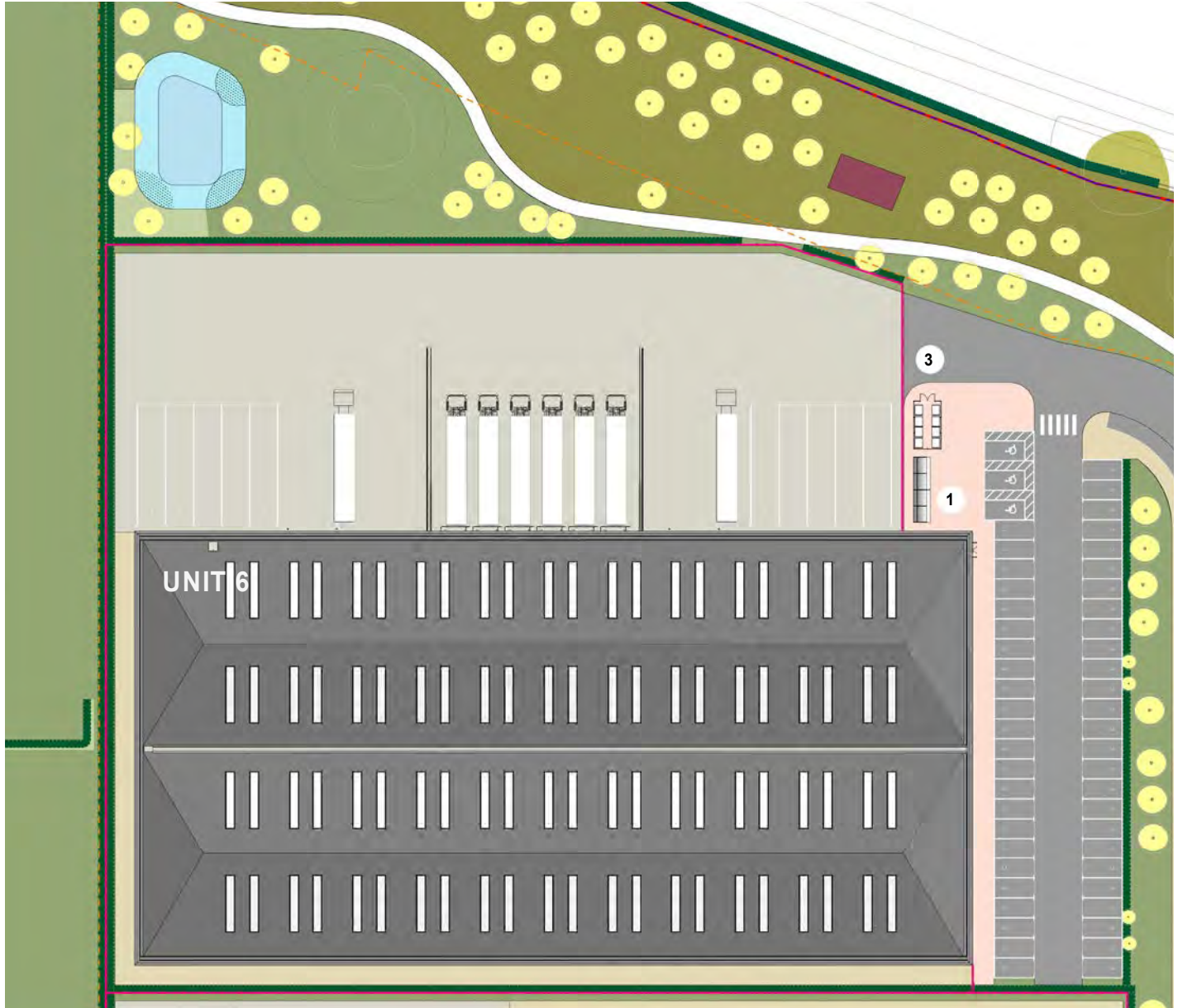


FIG.50. UNIT 6 SITE PLAN

EXTERNAL FURNITURE



BICYCLE SHELTER
Glasdon or equal approved
Each shelter has space for 10 bicycles. Shelters to be provided in accordance with the site plan.

HAL 9004 - Black



BOUNDARY SECURITY FENCE

2.4m High Palatin Fence

HAL 9004 - Black



TIMBER BIN STORE

Timber H&I and M&I Fencing



12.8 UNIT 7

12.8.1 LOCATION

Unit 7 located within Detailed Zone 2 in central-western part of the site.

12.8.2 ARCHITECTURAL DESIGN

In addition to the principal two storey office to the west of the warehouse, 11 dock levellers accessible both from the warehouse floor and also the service yard are located in the centre of the building within the service yard. The service yard also benefits from 2 canopies providing shelter for the 4 level access doors.

12.8.3 AMOUNT

The proposed unit is a steel-framed distribution unit. The application seeks to provide 10,293m² of total gross internal area. The size of the yard area is born out of the dimensions of modern articulated vehicles and their turning circles.

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

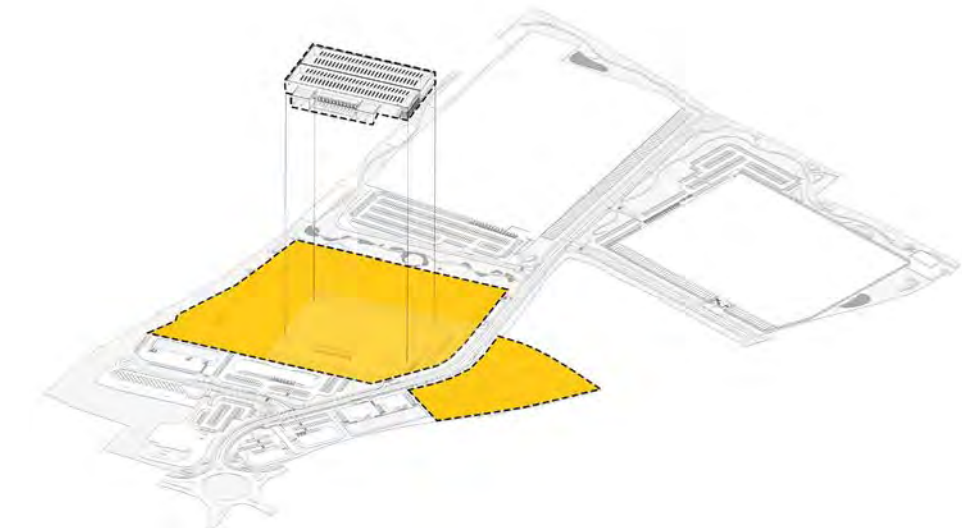


FIG.51. UNIT 7 LOCATION WITHIN DETAILED ZONE 2

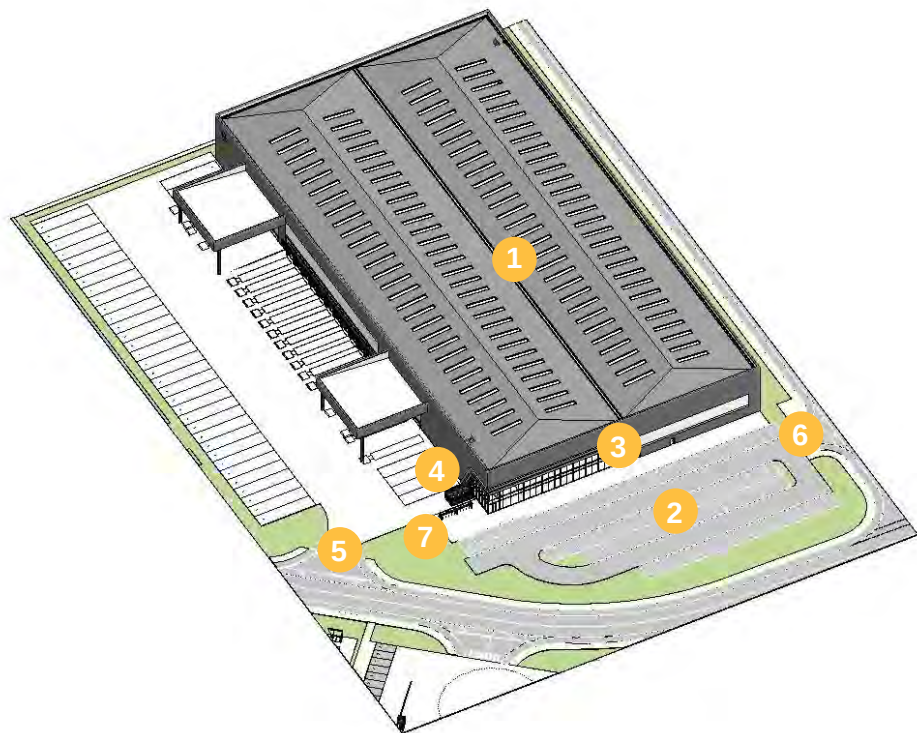


FIG.52.UNIT 7 SITE ARRANGEMENT - 3D VIEW

- 1 Warehouse
- 2 100 Car Parking Spaces
- 3 2 Storey Office
- 4 Bin Stores
- 5 HGV Entrance and Exit
- 6 Car Entrance
- 7 20 Cycle Spaces



12.8.4 SCALE

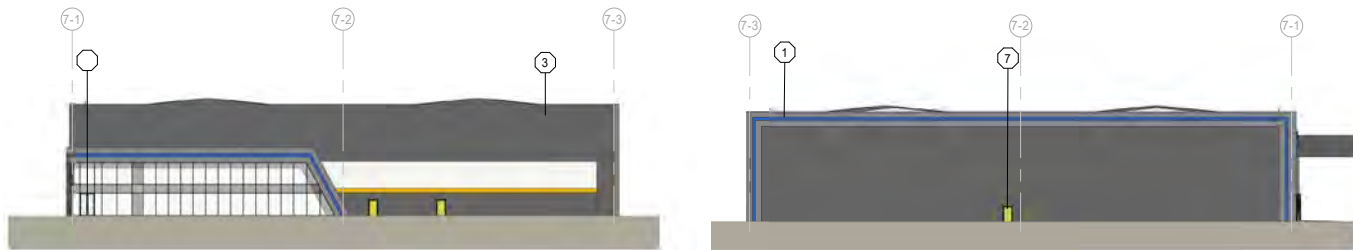
With an overall length of 136m and width of 73m the footprint of this building fills the central part of Detailed Zone 2. The proposed logistics warehouse building has a maximum haunch height of 15m which is clear internal height above floor level to the underside of eaves.

Warehouse scale is driven primarily by the required floor area for the unit. The two storey office building to west of the warehouse helps to break up the structure when viewed from the site entrances.

Massing is also broken up horizontally with various cladding elements as well as loading docks plus dock doors at low levels, and canopies above level access doors which create a strong horizontal shadow line along the length of the building.

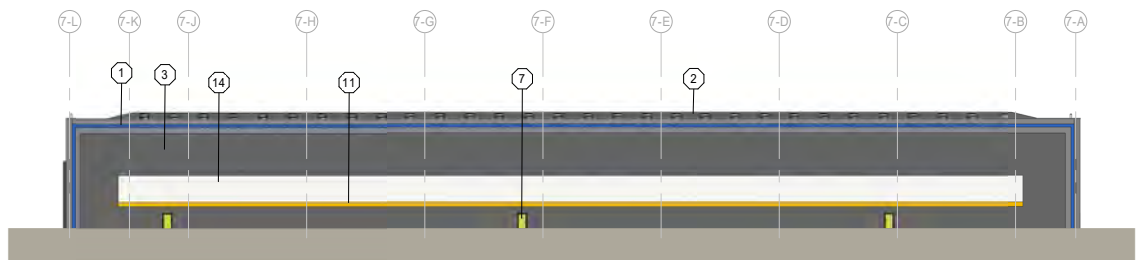
12.8.5 ELEVATIONS

The proposed elevations are shown on the following figure.

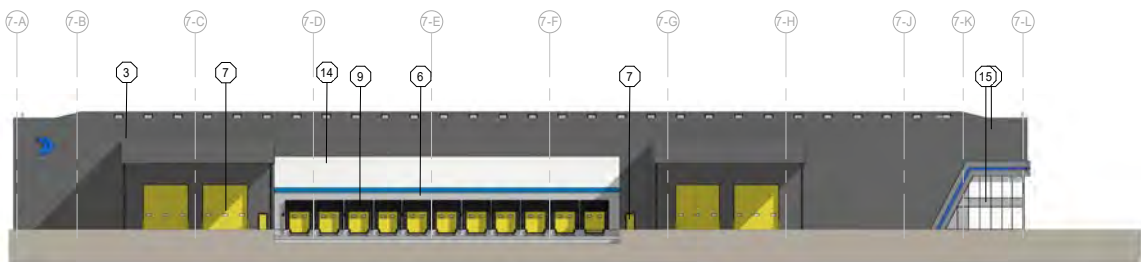


South East Elevation

North West Elevation



North East Elevation



South West Elevation

FIG.53. UNIT 7 ELEVATIONS



12.8.6 GENERAL ARRANGEMENT PLANS

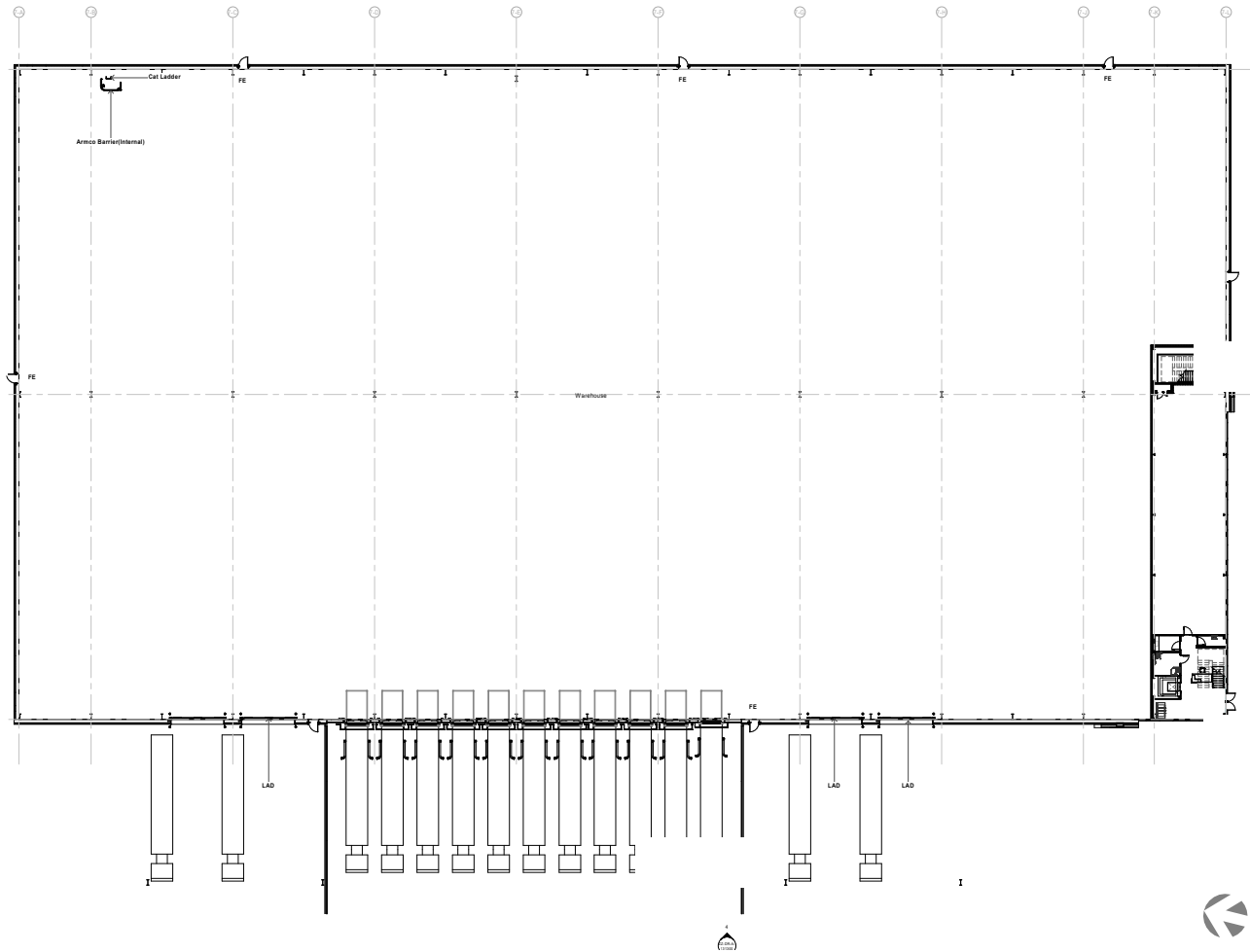


FIG.54.UNIT 7 WAREHOUSE PLAN

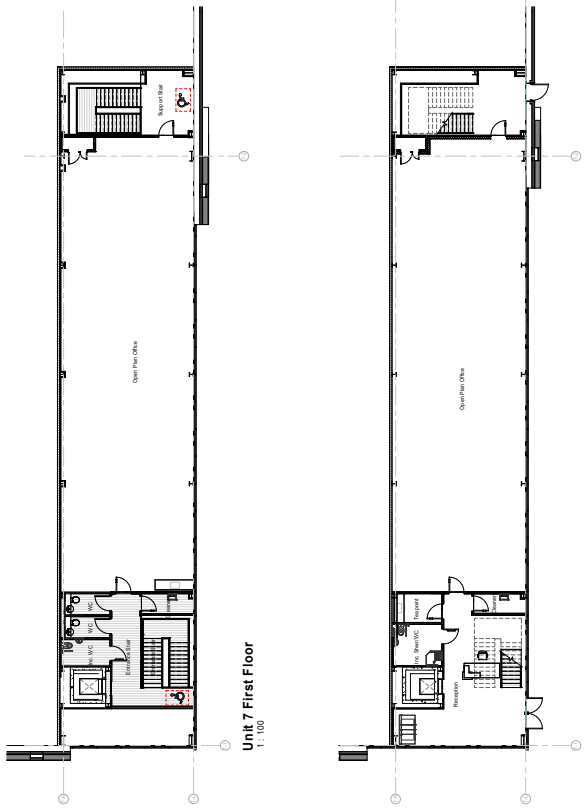


FIG.55. UNIT 7 OFFICE PLANS



12.8.7 UNIT 7 SITE PLAN

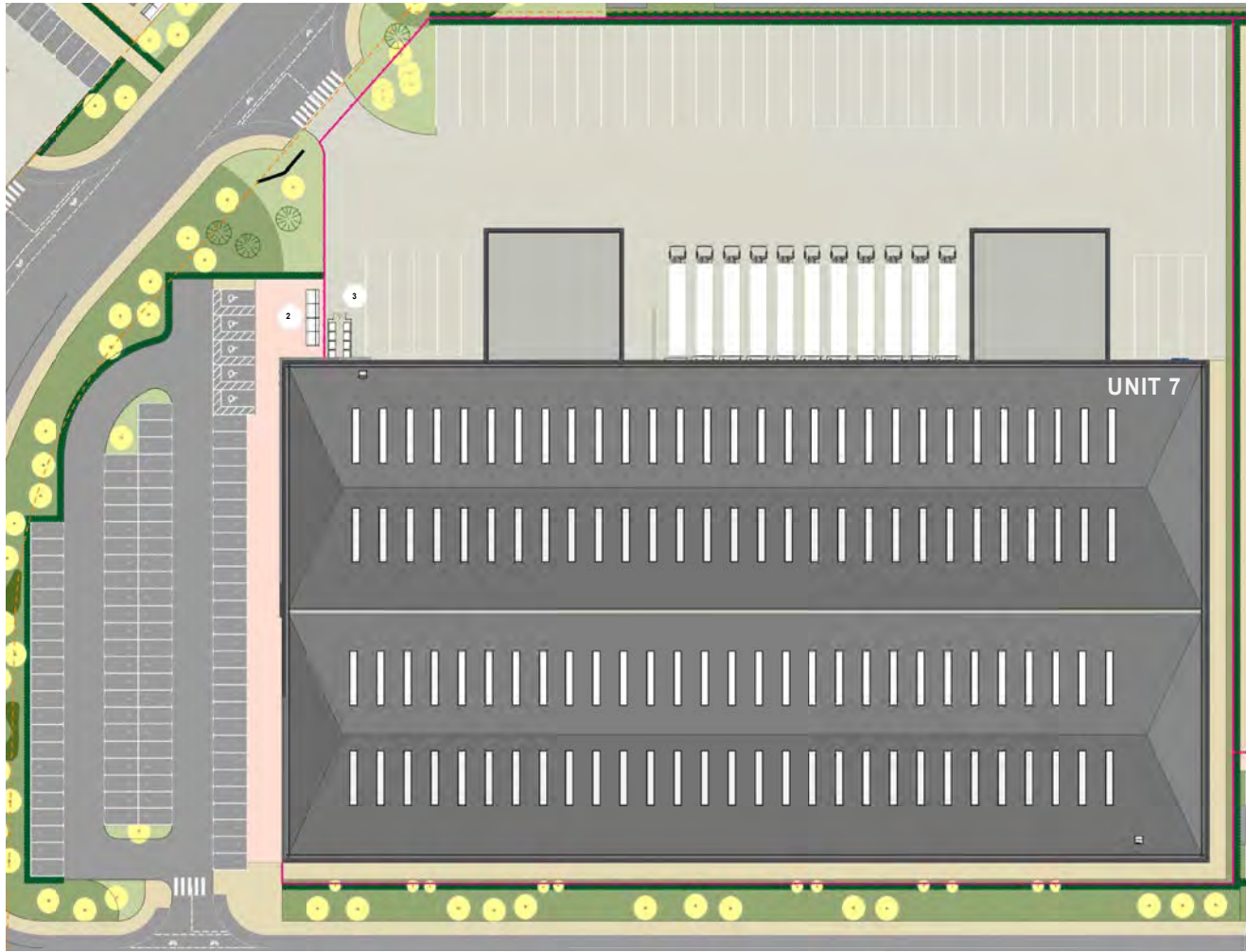


FIG.56. UNIT 7 SITE PLAN

EXTERNAL FURNITURE



BICYCLE SHELTER
Glaxdon or equal approved
Each shelter has space for 10 bicycles. Shelters to be provided in accordance with the site plan.

RAL 9004 - Black



BOUNDARY SECURITY FENCE
2.4m High Paladin Fence

RAL 9004 - Black



TIMBER BIN STORE
Timber Hi and Mass Fencing

12.9 UNIT 14 - 15

12.9.1 LOCATION

Unit 14 and 15 are located within Detailed Zone 2 in central-eastern part of the site.

12.9.2 ARCHITECTURAL DESIGN

Units 14 and 15 are following the same design principles. Consisting of the principal two storey office. One level access door for each unit enabling access to the warehouse floor and also the service yard. These are located in the centre of the building within service yards.

12.9.3 AMOUNT

The proposed unit is a steel-framed distribution unit. The application seeks to provide a total gross internal area of 854m² for Unit 14 and 1,319m² for Unit 15. The sizes of the yard areas are born out of the dimensions of modern articulated vehicles and their turning circles.

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

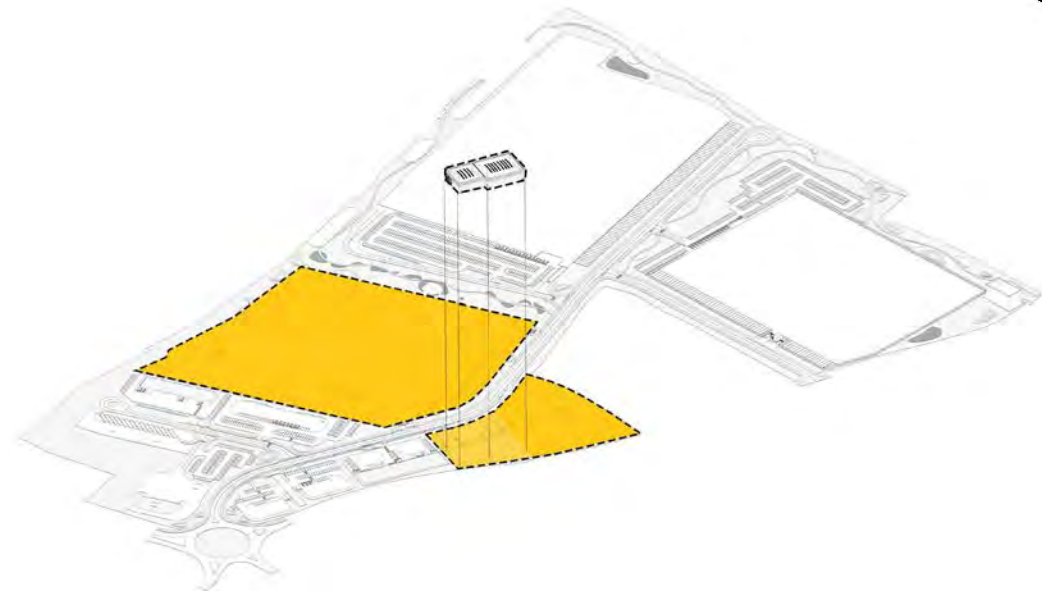


FIG.57. UNIT 14 AND 15 LOCATION WITHIN DETAILED ZONE 2

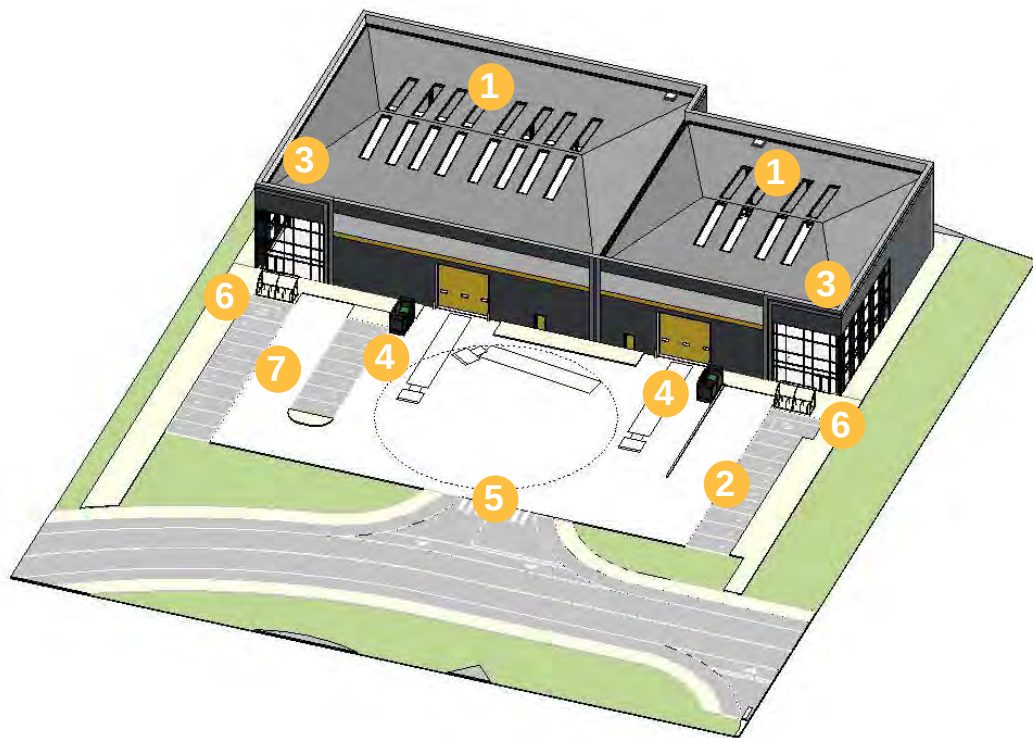


FIG.58. UNIT 14 AND 15 SITE ARRANGEMENT - 3D VIEW

- | | |
|---------------------------------|-------------------------|
| 1 Warehouse | 6 10 Cycle Spaces |
| 2 10 Car Parking Spaces | 7 17 Car Parking Spaces |
| 3 2 Storey Office | |
| 4 Bin Stores | |
| 5 HGV and Car Entrance and Exit | |



12.9.4 SCALE

With an overall length of 65.4m and width of 32m the footprint of these buildings fills the southern part of Detailed Zone 2. The proposed logistics warehouse buildings have a maximum haunch height of 8.5m which is clear internal height above floor level to the underside of eaves.

Warehouse scale is driven primarily by the required floor area for the unit. The two storey office buildings to the west of the warehouse helps to break up the structure when viewed from the site entrances.

Massing is also broken up horizontally with various cladding elements as well as Level Access Doors which create a strong break and pause from long side elevations along the front elevation of the building.

12.9.5 ELEVATIONS

The proposed elevations are shown on the following figure.



FIG.59. UNIT 14-15 ELEVATIONS



12.9.6 GENERAL ARRANGEMENT PLANS

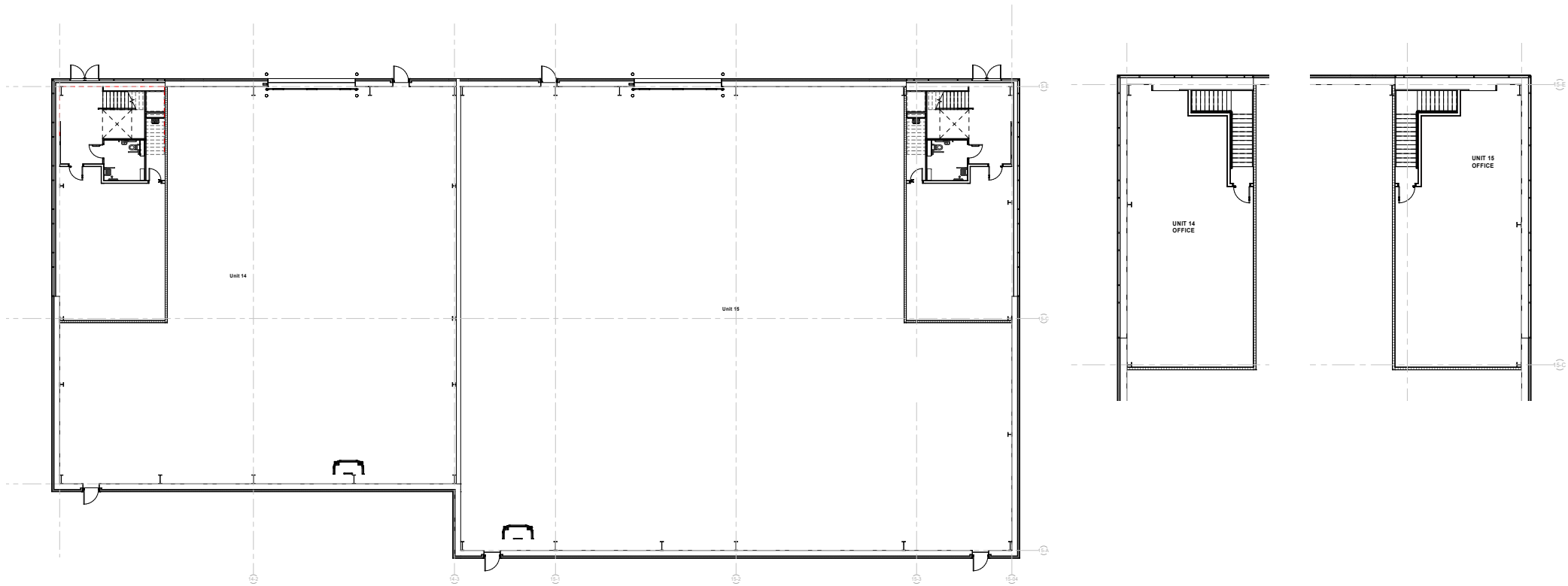


FIG.60. UNIT 14-15 WAREHOUSE PLAN

FIG.61. UNIT 14-15 OFFICE PLANS



12.9.7 SITE PLAN

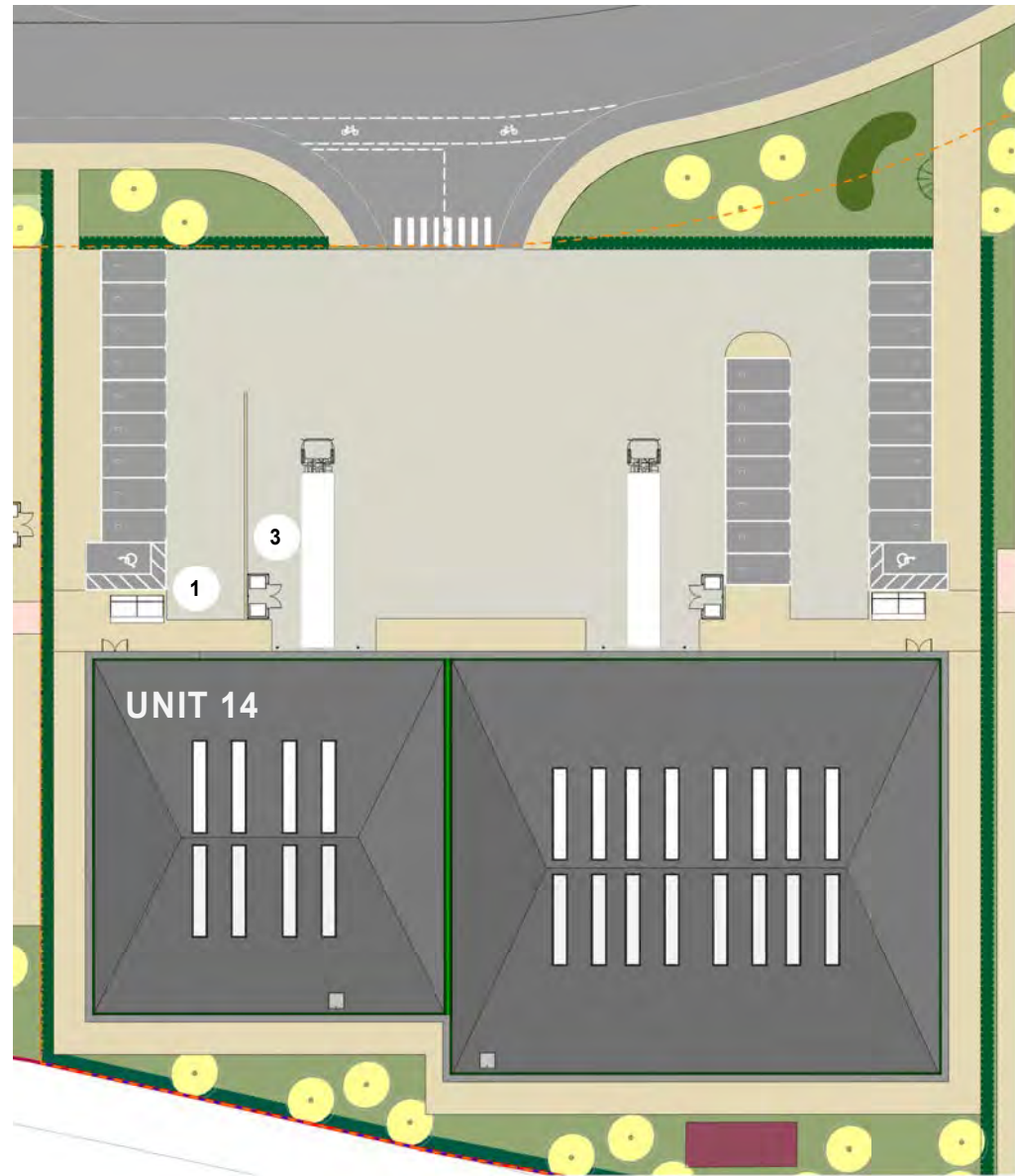


FIG.62. UNIT 14-15 SITE PLAN

EXTERNAL FURNITURE



BICYCLE SHELTER
Clasdon or equal approved
Each shelter has space for 10 bicycles. Shelters to be provided in accordance with the site plan.

RAL 9004 - Black



BOUNDARY SECURITY FENCE
2.4m high Paladin Fence

RAL 9004 - Black



TIMBER BIN STORE
Timber Hi and Max Fencing

12.10 UNIT 16

12.10.1 LOCATION

Unit 16 is located within Detailed Zone 2 in central-eastern part of the site.

12.10.2 ARCHITECTURAL DESIGN

Unit 16 is following the same design principles as Units 14 and 15. Consisting of the principal two storey office to the West of the warehouse. Two level access doors and 4 Dock levellers enabling access to the warehouse floor and also the service yard. These are located in the centre of the building within service yard.

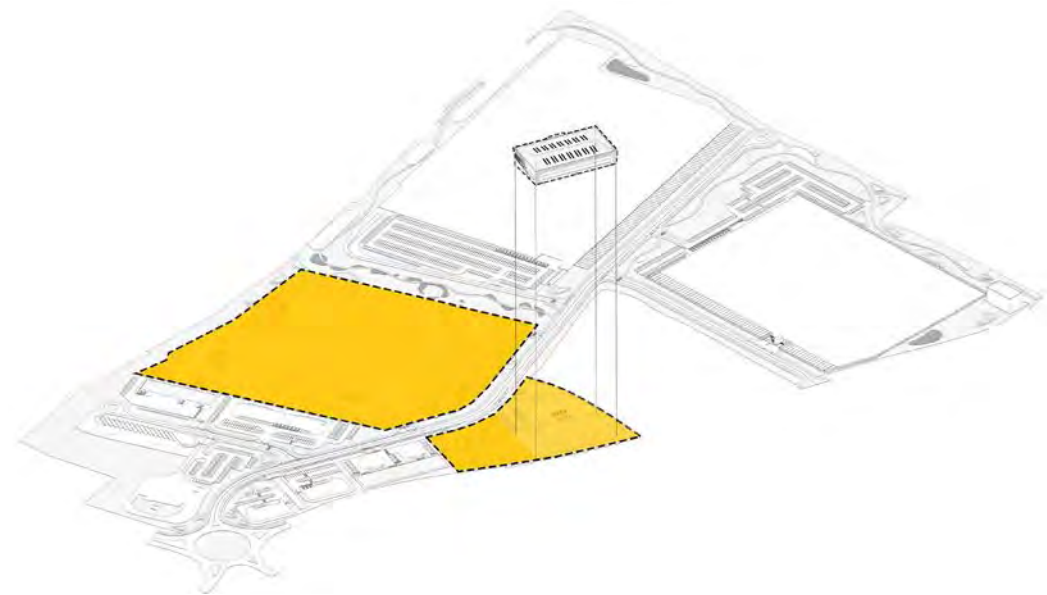


FIG.63. UNIT 16 LOCATION WITHIN DETAILED ZONE 2

12.10.3 AMOUNT

The proposed unit is a steel-framed distribution unit. The application seeks to provide 3,879m² of total gross internal area. The sizes of the yard areas are born out of the dimensions of modern articulated vehicles and their turning circles.

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

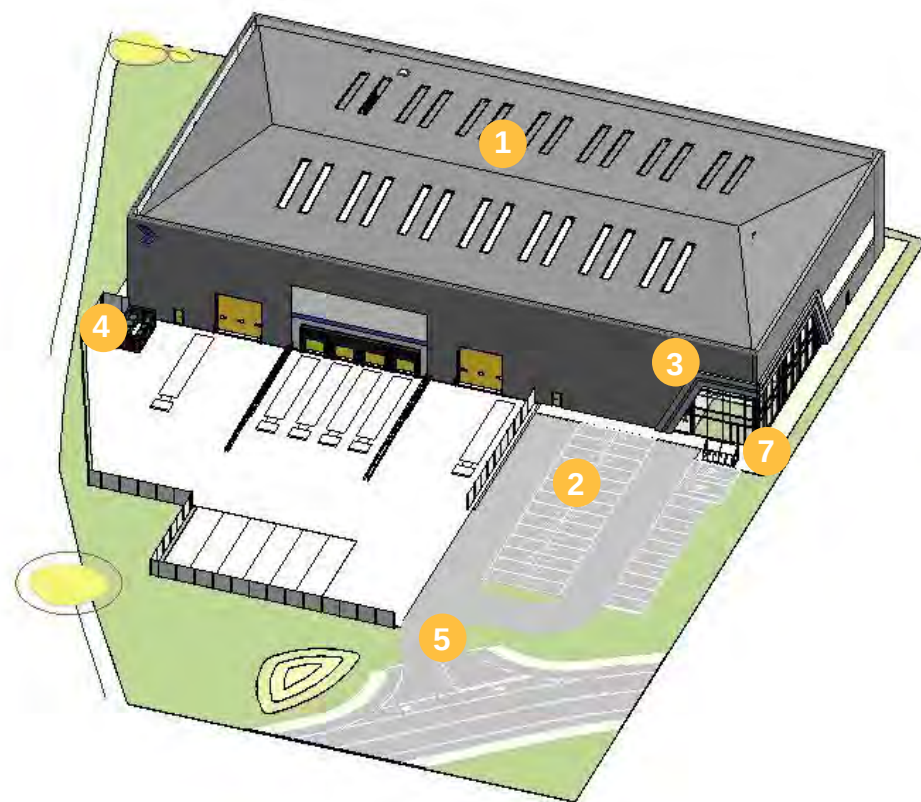


FIG.64. UNIT 16 SITE ARRANGEMENT - 3D VIEW

- 1 Warehouse
- 2 41 Car Parking Spaces
- 3 2 Storey Office
- 4 Bin Stores
- 5 HGV and Car Entrance and Exit
- 6 10 Cycle Spaces

12.10.4 SCALE

With an overall length of 82.4m and width of 44.2m the footprint of these buildings fills the southern part of Detailed Zone 2. The proposed logistics warehouse building has a maximum haunch height of 12.5m which is clear internal height above floor level to the underside of eaves.

Warehouse scale is driven primarily by the required floor area for the unit. The two storey office building to north west of the warehouse helps to break up the structure when viewed from the site entrances.

Massing is also broken up horizontally with various cladding elements as well as Level Access Doors which create a strong break and pause from long side elevations along the front elevation of the building.

12.10.5 ELEVATION

The proposed elevations are shown on the following figure.

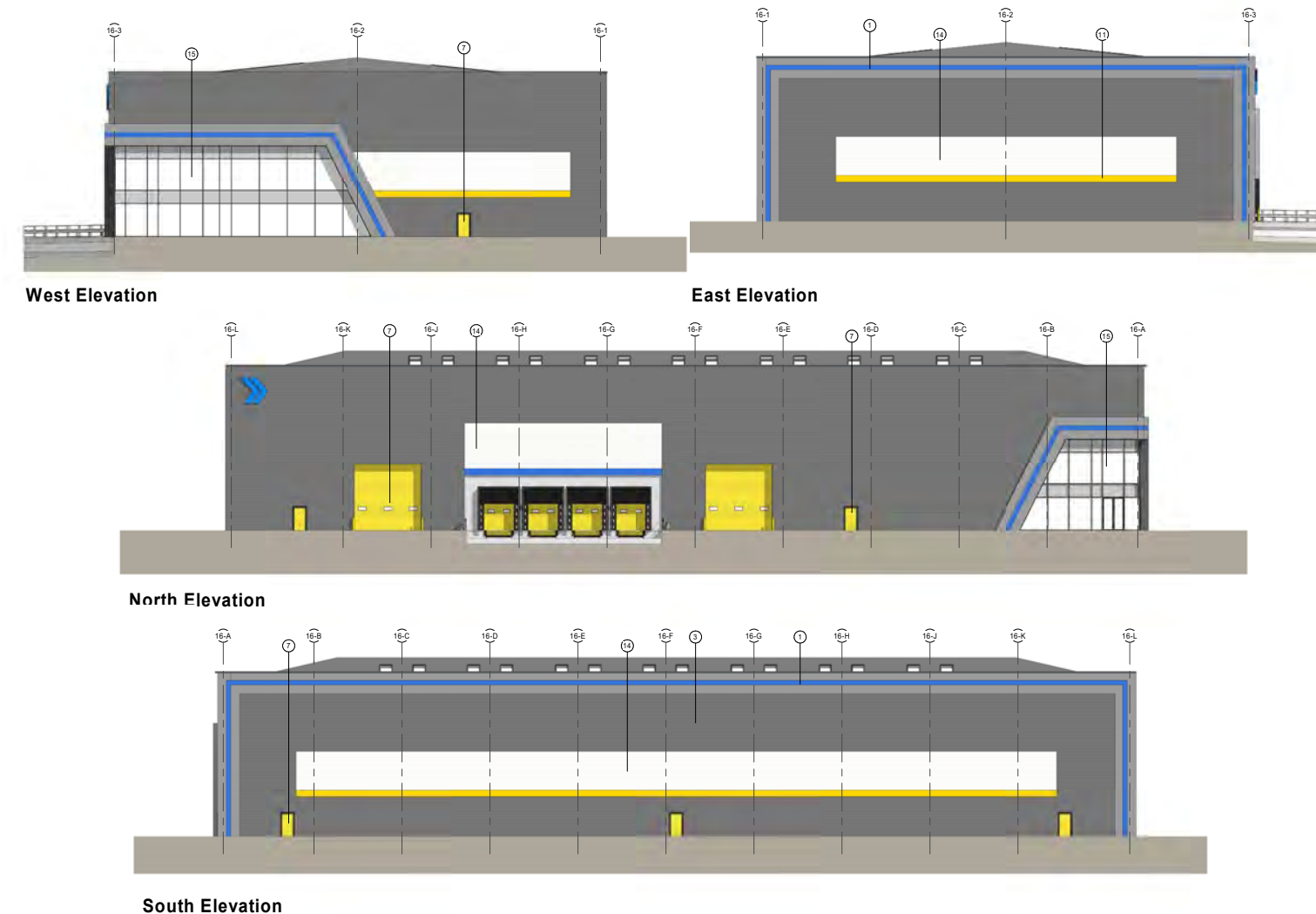


FIG.65. UNIT 16 ELEVATIONS

12.10.6 GENERAL ARRANGEMENT PLANS

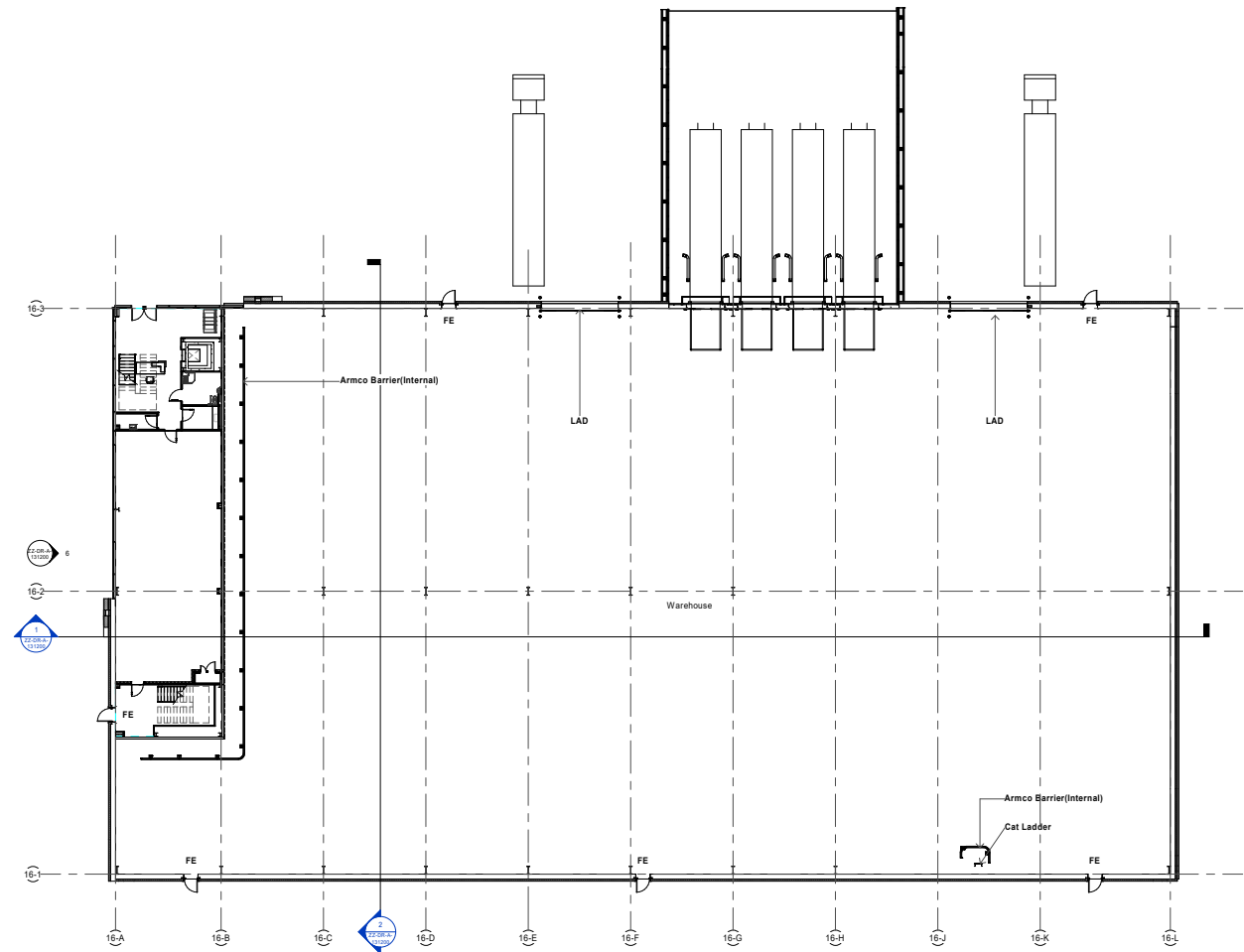


FIG.66. UNIT 16 - WAREHOUSE PLAN

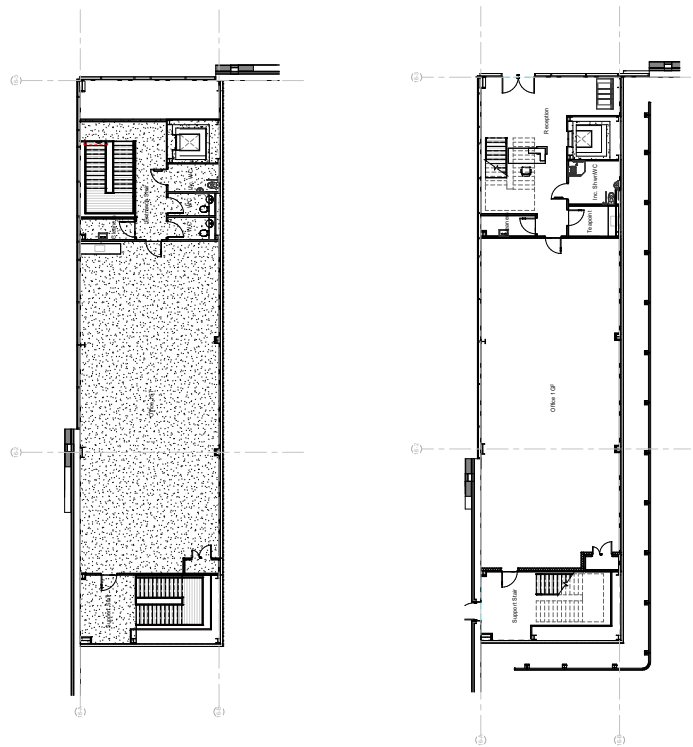


FIG.67. UNIT 16 OFFICE GA PLANS



12.10.7 SITE PLAN

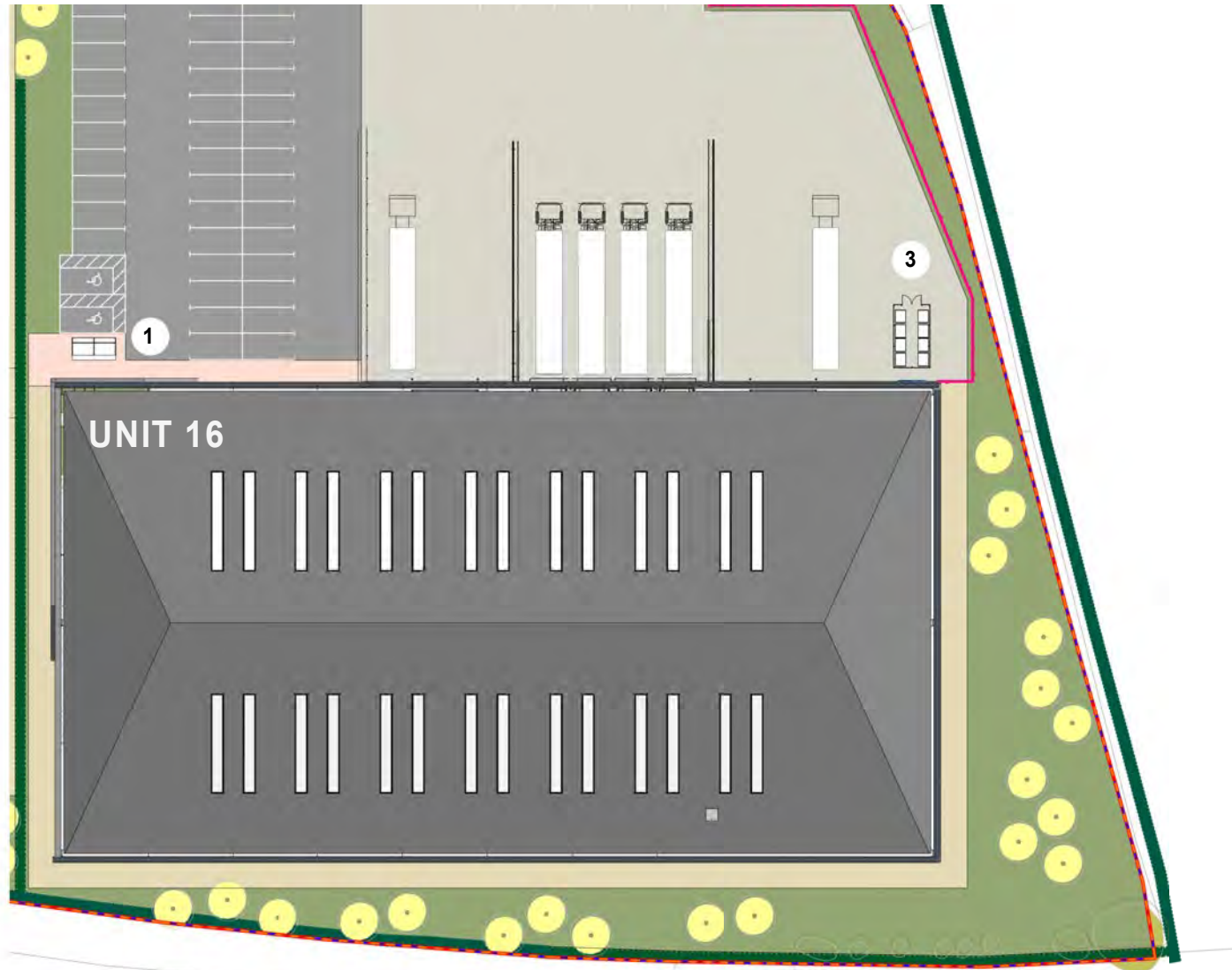


FIG.68. UNIT 16 SITE PLAN

EXTERNAL FURNITURE



BICYCLE SHELTER
Glasdon or equal approved
Each shelter has space for 10 bicycles. Shelters to be provided in accordance with the site plan.

RAL 9004 - Black



BOUNDARY SECURITY FENCE

2.4m High Paladin Fence

RAL 9004 - Black



TIMBER BIN STORE

Timber H& and Mass Fencing

12.11 EXTERNAL WORKS

Car parking access roads and parking bays will be surfaced in a flexible bituminous material. Parking bays will not be surfaced with any material that may be adversely affected by spills from standing vehicles.

Pedestrian links through car park areas will also be picked out in a contrasting material and rumble strips should be introduced at transition points.

The planting proposals in and around areas of car parking is critical, in order to avoid large areas of hard-standing. The runs of parking bays will be capped with tree and shrub planting.

In the interests of safety, the design of car parking areas and other pedestrian areas will ensure that soft landscaping in these areas does not obscure visibility and that there are no hiding places.

Visual cohesion will be enhanced not only by the careful integration of the buildings and planting but also by use of a furniture palette that provides a consistency throughout the Site. The selection of bollards, litter bins and external seating etc. will seek to achieve a high quality development.

Security/boundary fencing will be incorporated into the soft landscape boundary treatment and restrict access to warehouse service areas.

All light fittings will be 'Dark Skies' compliant as described in CIBSE Lighting Guide LG6:1992. The proposed lighting equipment will comply with current standards

and to the greatest extent possible, the luminaries and their settings will be optically set to direct light only to where it is required and to minimise obtrusive effects and if necessary, additional shielding will be considered. The fittings will be chosen from a range offering an appropriate degree of design consistency and quality. The car parks and principal pedestrian areas will be well lit to ensure the safety and convenience of users. Service yard lighting will be designed so as to minimise light pollution.

All luminaries will be selected from those with precise optical control of output and distribution and with consisted zero light output ratio.

12.12 BOUNDARY TREATMENT

In areas of detail, security/boundary fencing will be incorporated into the soft landscape boundary treatment and therefore will be set back from the public side of the landscaping belt.

To ensure Site security around the yard area, a 2.4m high security fence will be provided. Galvanised black steel palisade fencing will be used for concealed/screened areas. Additionally, security/demise fencing will be provided around the car park area.

The boundary treatment details for the outline areas will be agreed and designed at reserved matters stage.

EXTERNAL FURNITURE



BICYCLE SHELTER
Glasdon or equal approved
Each shelter has space for 10 bicycles. Shelters to be provided in accordance with the site plan.
ICAL 9504 - Black



BOUNDARY SECURITY FENCE
2.4m High Palisade Fence
ICAL 9504 - Black



TIMBER BIN STORE
Timber Hi and Miss Fencing

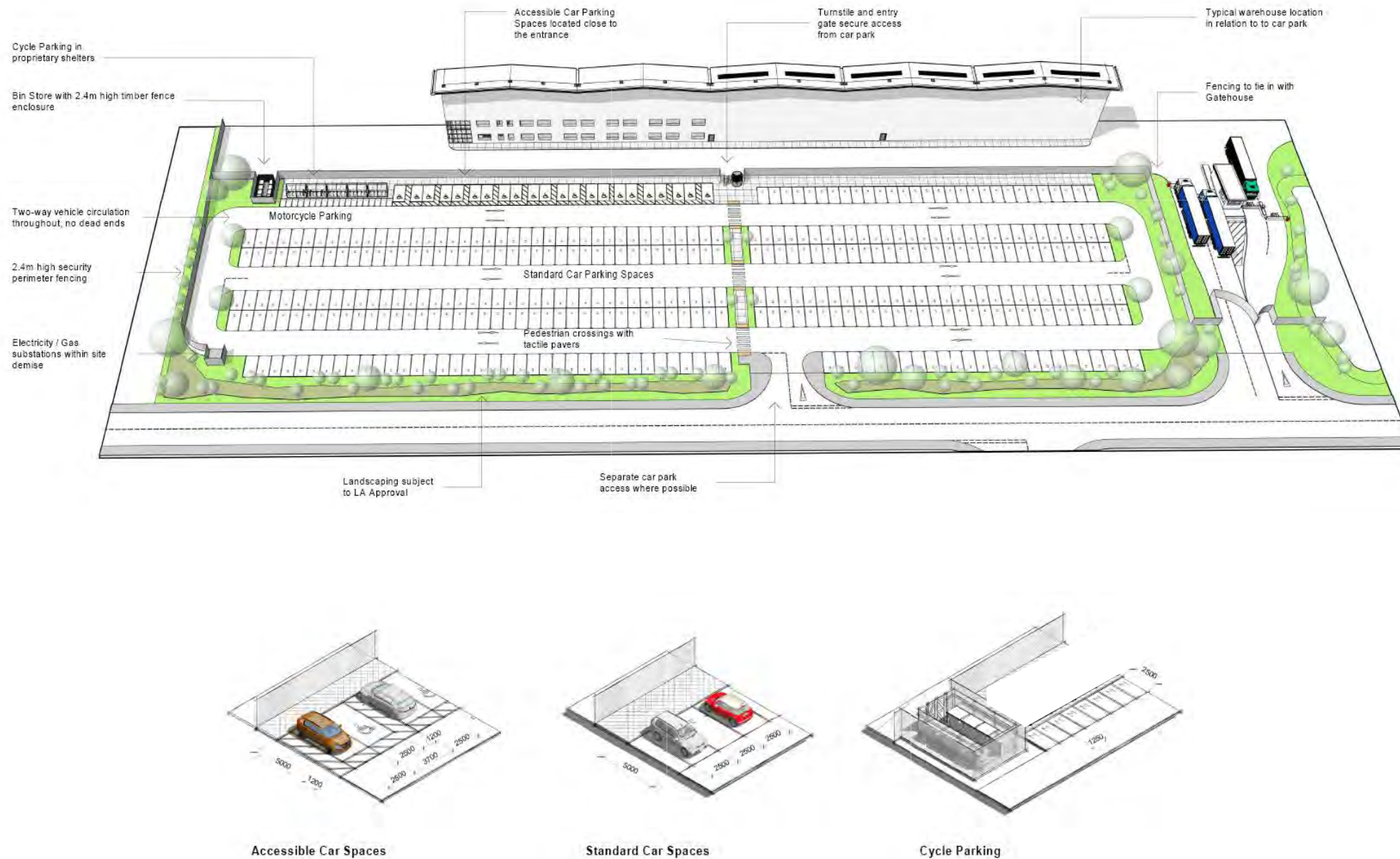


FIG.69. ILLUSTRATIVE CAR PARK ARRANGEMENT



13. LANDSCAPE STRATEGY

13.1 INTRODUCTION

The landscape design occupies a unique position as it involves the integration of the proposed built form into the existing framework of the landscape. The wider site has a baseline of ecological and habitat assets that can be utilized and in the long run, improved upon. This can maximise the sustainable goals of the site and create a positive experience for the landscape users. Creating recognisable design elements such as focal native trees helps establish a character for the area – something distinct and recognizable within the vicinity.

13.2 CONCEPT IDEA

“A Tender Touch – Towards a Living Landscape”

The guidance advocated in ‘**Wrexham Industrial Estate – Towards a Living Landscape**’ illustrates what important ecological assets exist within the wider site context and how the Bryn Lane site can integrate and connect through hedgerows, aquatic corridors, woodland planting, open grasslands and the mosaic of varying habitats for wildlife.

The concept idea is to create a landscape that places water and planting as central features within the development. The scheme combines activity and relaxation spaces within a very soft and tender landscape and brings natural elements in a close proximity with users.

The **Tender Touch** idea is of the hand gently touching water sending relaxing concentric ripples flowing beyond. This can be represented literally and figuratively and aims to integrate seamlessly the built form, reinforcing connections with surrounding assets and features to extend the natural framework.

13.3 BACKGROUND AND BENCHMARKING

Wrexham Industrial Estate is the largest industrial estate in Wales and one of the largest in Europe. From its previous history as a munitions facility, the area has developed its own unique wild network of green spaces among the existing industrial buildings. Many rich pockets of wildlife exist within the overall site and the new plot on Bryn Lane can further increase biodiversity to create habitats for all manner of wildlife as well as providing much needed wellness provisions for users and visitors alike. These wellness trails can link into the existing Public Rights of Way (PRoW) which further ensure connectivity and extension of the Green Infrastructure network.

Wildlife sites of significance within the Industrial Estate include The Oaks, Erilas Black Wood, Big Wood, Bryn Lane Nature Reserve and Redwither Brook. Species of significance include the rare Dingy Skipper and Grizzled Skipper butterflies, Barn Owls, Kestrel, Badgers, Greater Crested Newts, Pole cats, Bats, Hedgehogs and Watervoles.

Ancient semi-natural woodlands, Restored ancient woodland suites (RAWS - spaces that have been wooded for over 400 years) and ‘Woods for People’ are all typologies of important wooded areas in the wider area. A longer term strategy to embrace these spaces is advocated.

13.4 KEY LANDSCAPE DESIGN OBJECTIVES INCLUDE:

•Native Hedgerows – ensure good maintenance of retained hedgerows and creation of new hedgerows within the new layout to link them together to create valuable habitats and wildlife corridors for all form of birds and mammals.

•Woodland – native woodland planting in appropriate areas around the site to further increase the infill woodland character that exists within the wider industrial estate area. These are longer term strategies to increase habitat and biodiversity on site and reinforce the framework. Species recommended include the Pedunculate Oak which are prevalent within the area.

•Strengthening the wildlife corridors – managing waterside vegetation, increasing wildflower potential, mosaic grasslands, rainwater harvesting, pollinator plants in car parks, footpath networks with recreational areas all improve the connectability.

•Fruit trees / heritage orchard species – fruit trees of local provenance are suggested and can include apple, damson, and plum trees and other species found in The Oaks site of Wrexham Industrial Estate. Fruit trees can be incorporated as part of an ‘edible landscape’ approach to local food production.

•Wetland and pond areas – incorporation of water within a site increases biodiversity and extending the existing pond system on site will have great benefits. Species rich ponds with marginal aquatic planting and a series of ‘Stepping Stone’ ponds will allow movement of newts and other aquatic species.



•Wildlife tunnel – an access link from the ecological corridor under the main road to the adjacent field and pond is advocated to further increase breeding potential and will allow movement of breeding and migrating species.

•Grasslands – a range of grassed areas can provide an array of species for habitat creation and foraging. Semi-improved neutral grasslands, wildflower meadow species, improved and amenity grasslands, verges with rough species rich together with perennials and ruderal grasses contribute to a mosaic of habitats.

•Interpretation information – signage and explanation of the areas designed, and the elements contained help educate the public on the environmental credentials of the site and the overall vision.

•Community engagement – allowing access by the public, volunteering groups and inviting schools to participate in study projects is a good way to increase engagement and create a human value to the landscape.

13.5 KEY DESIGN AREAS:

13.5.1 BOUNDARY BUND PLANTING

The mounding to the site boundary provides an opportunity to add screening planting to reduce visual incursions into the site. Native planting using both deciduous and evergreen species can make a long term contribution to the woodland edge character of the site. A layered margin between the boundary hedgerow and mounded planting can contribute to habitat and foraging areas and help encourage bird and bat species amongst others. Grasslands predominate as the main planting along this area with a variation of species mixes ensuring the mosaic planting effect is achieved and biodiversity maximized.

13.5.2 BOUNDARY HEDGEROWS

The hedgerows are a very important component of the site for ecological and framework reasons. Retained hedgerows and trees will be protected in accordance with BS5837:2102 and based on the approved Tree Protection Scheme. Additional hedges around individual plots can increase the linked network with hedgerow trees allowed to develop at intervals. Species to include but not limited to Hawthorn, Blackthorn, Guelder Rose, Black Poplar and Field Maple. The hedgerows provide a great opportunity to reconnect fragmented habitats.

13.5.3 CENTRAL ECOLOGICAL CORRIDOR

This central corridor provides a great opportunity to protect and enhance the existing mature trees and ponds within this area of the site. The wellness trail footpath flows through the area and has various stop off points, timber decks and walkways to appreciate these natural features. Protection and management of the mature trees is essential and additional tree planting would be carried out carefully in terms of position and species to ensure a positive enhancement of the site.

‘Stepping Stone’ water bodies help integrate the existing ponds on site with connecting water bodies to north and south of the site. Shallow margins with deep central sections allow the migration of invertebrates and create habitat opportunities for wildlife in general.

Seating areas and decking walkways flank the flowing path and create opportunities for seating and appreciation points within the Wellness circulation loop. The decking allows close access to the wetland marginal planting and ponds to create a relaxing space for users. Native wildflower grasslands make up the remaining planting typology to improve pollinator credentials.

13.5.4 MAIN AVENUE

The trees along the main avenue respond to the continuous architectural form of the industrial units. Avenue species could be *Pyrus calleryana* 'Chanticleer', *Tilia cordata* 'Green Spire' or *Quercus palustris* which have a good upright form over a long time and would be suitable for the site conditions. Underplanting of bulbs such as native Bluebells, and other wildflower species is advocated to provide a strong pollinating capacity. More informal grasslands with seating can be included on the south side to create a functional space for users.

13.5.5 PUBLIC FOOTPATH LINK AND NORTHERN BOUNDARY HEDGEROWS

The footpath system allows a seamless link to the PRoW to the north. An open seating area can become a focal stop off point at this location. The hedgerow boundaries would also be protected and enhanced with additional native planting with grass margins to aid wildlife habitats and foraging. Patches of bare earth to create Butterfly and Bee Banks which are important breeding and foraging habitats is also advocated on the southern slopes of the landform. Gathering spaces at intervals allow 'break out' and relaxation within the landscape.

13.5.6 WELLNESS AND ACTIVITY TRAIL ON EASTERN BOUNDARY

The Wellness trail is an important feature for users and forms a circuit within the site and outside of the site. There are a mixture of fitness points proposed as part of a Trim Trail interspersed with informal seating spaces along the route. Newly planted hedgerows are proposed for the boundary to the west industrial plots with the existing mature trees. Mounding and grasslands help achieve a comfortable and naturalistic feel to the area which has a calming flow to the general shaping and ambience generated.



FIG.70.ENTRANCE ISLAND SKETCH



FIG.71.ENTRANCE ISLAND 3D CONCEPTN DESIGN



13.6 OTHER SITE AND DESIGN CONSIDERATIONS

- Retained Mature existing trees on site will be protected in accordance with 'BS5837 (2012) Trees in Relation to Design, Demolition and Construction' and based on the approved Tree Protection Scheme for the site.

- Bird and Bat box provision will be included on site using appropriate boxes in locations in line with Ecological recommendations to support the wider bat and bird populations within the Industrial Estate.

- Butterfly and Bee Banks can also be created in identified locations by using sharp sand over soil in a linear or horseshoe shape on South/SW facing areas. A mosaic patchwork arrangement can support a rich diversity of invertebrate including the rare Dingy Skipper and Grizzled Skipper butterflies that are within the wider Industrial estate site.

- Footpaths have been aligned to avoid the Root Protection Areas (RPA) of existing mature tree groups on site to ensure continued health and longevity of species identified in accordance with BS5837(2012) guidelines.

- Native Tree species will be used throughout the scheme and will follow guidance from the North Wales Wildlife Trust and ecological consultants to include suitable local species such as Pedunculate Oak, Field Maple, Alder, Birch and Crack Willow in appropriate locations.

FIG.72.BOUNDARY HEDGEROWS AND ECOLOGICAL



13.7 SUMMARY

The landscape proposals aim to provide a 'delicate touch' approach in order to integrate built form into an existing framework that possesses ecological attributes. By providing links and strengthening connections, the vegetation belts, aquatic corridors and pollinator paths can contribute to a meaningful and usable experience for workers and users alike. Recreational walking routes and fitness trails together with informal relaxation spaces allow users close connections with nature. The wellness benefits of the design and included elements provide the basis for a positive end user experience.



CORRIDOR FEATURES





FIG.73.ECOLOGICAL CORRIDOR



13.8 LANDSCAPE ILLUSTRATIVE MASTERPLAN

This drawing indicates a design proposal for the landscaping proposals around the site, that can be seen in detail in associated NLG drawings.



FIG.74.LANDSCAPE LAYOUT

1. Entry Roundabout
2. Entry Signage
3. Boundary Bunding
4. Screening to PFS
5. Hotel
6. Rejection Loop Island
7. Contoured Mounding
8. Boundary Hedgerows
9. Central Ecological Corridor
10. Stepping Stone Ponds
11. Seating Areas and Decking
12. Informal Tree Avenue
13. Focal Signage
14. Reinforce Hedgeline
15. Protection of Existing Mature Trees
16. Informal Boundary Planting
17. Main Avenue
18. Fitness Stop
19. Gathering Pavilion
20. Informal Seating Space
21. Node of PRoW
22. Informal Seating
23. Avenue Focal Point
24. Informal Relaxation Space

13.9 ILLUSTRATIVE DRAINAGE STRATEGY

Notes

1. Presented surface water drainage strategy is subject to change pending confirmation via hydraulic calculations.
2. Proposed surface water drainage is to discharge into existing ditch.
3. Petrol interceptors to be installed in all service yards. Details to be confirmed in future design stages.

Key:

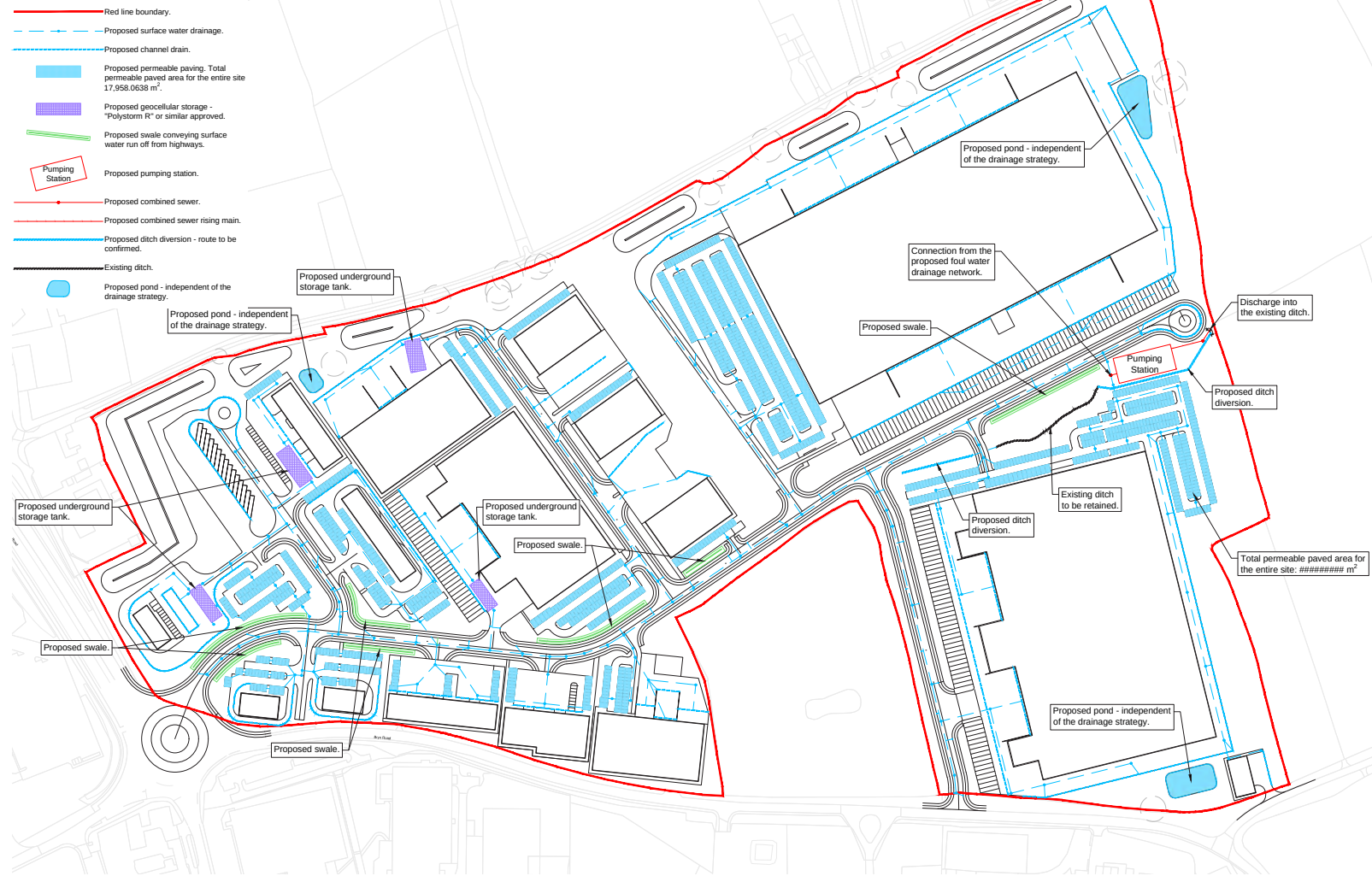


FIG.75.PROPOSED SURFACE WATER DRAINAGE STRATEGY

The considered surface water drainage solution comprises of an attenuated network with a restricted discharge rate by means of a vortex flow control device. The proposed discharge location is to an existing watercourse that is situated on the eastern boundary of the development.

The existing ditch is approximately 600mm deep from existing ground levels and therefore it is likely that the flows are required to be mechanically lifted to achieve the outfall levels of the existing ditch.

The proposed surface water network is designed to accommodate all storm events up to the 1 in 100 year storm plus an additional 40% to cater for climatic change.

As we have been advised that there is no capacity within the surrounding foul sewerage network, the foul water strategy is to incorporate foul treatment units within the development which cater for all proposed units. The treated water is then conveyed to the proposed pump station and discharged to the ditch, together with the surface water discharge.



14. SUSTAINABILITY

14.1 REDUCE DEMAND (PASSIVE MEASURES)

The first level in the hierarchy is to reduce operational energy usage using passive measures included within the design of the development. These will reduce energy use and the associated CO2 emissions and include:

- U values which meet Building Regulation requirements; Engineered facade design; Reduced air permeability.
- U Values: Limiting heat losses across the entire building envelope will future proof the energy efficiency of the development over its whole life. To achieve this, the fabric thermal U-Value requirements as detailed within Approved Document L Volume 2 2021 of the Building Regulations will be met.

The targeted values will be confirmed during the detailed design stage of the buildings in conjunction with finalisation of the energy efficiency measures included.

Engineered Facade Design: Wall glazing and rooflights will maximise the use of natural daylight to offset demand for artificial lighting. This will maximise passive solar gains, and the façade will also be designed to minimise thermal losses through the use of high performance glazing and enhanced insulation levels above the minimum set down by Building Regulations.

Reduced Air Permeability: A significant percentage of heat loss from buildings is due to air infiltration associated with poor air tightness. By improving on the air tightness of the building it is possible to reduce infiltrations rates and thus

reduce the heat losses, energy use and the associated CO2 emissions. The development will be constructed to improved building air tightness criteria beyond the level required to comply with the Building Regulations.

14.2 ENERGY EFFICIENCY

The next level in the energy hierarchy is to maximise energy efficiency. High efficiency systems, plant, controls and equipment will be incorporated into the development as follows:

- Energy efficient LED lighting - Internal lighting within the process and office areas will incorporate energy efficient LED lighting where practicable.
- Enhanced lighting controls - Automatic presence detection will be included in appropriate areas of the building. This form of control will ensure lights are automatically switched off during periods of non-occupancy. External lighting will be designed to incorporate energy efficient luminaries and an automatic lighting control system utilising daylight sensors and time clock control to ensure energy-efficient operation of the lighting.
- Optimised plant controls - Control of heating plant will be optimised, and weather compensated to ensure plant operates as close to demand as possible and not a full capacity.
- Variable speed drives - Variable speed drives will be installed on circulation pumps and ventilation fans to allow the speed of the respective motors to be amended by the automatic controls to suit changing load of the building. This will ensure energy usage matches demand requirements

thus reducing the carbon emissions to a minimum based on end user occupation.

- Inclusion of heat recovery on ventilation systems The ventilation systems installed within the development will incorporate heat recovery within the air handling plant to recover heat from the air exhausted to heat the incoming fresh air and therefore reduce energy usage. The air handling plant will have a low specific fan power to minimise the energy used by the fans.

14.3 RENEWABLE / LOW CARBON TECHNOLOGY

The final level in the energy hierarchy is to incorporate renewable / low carbon technology. It is anticipated that the following will be incorporated:

- Photovoltaics (PVs) - Details of the PV array, including extent, will be secured by way of an appropriately worded planning condition. A minimum of 18% of PV of the array will be installed prior to the use commencing. This will provide the normal base load of electricity to the unit prior to occupier specific requirements.
- Air source heat pumps - These technologies provide the most suitable renewable technology for use to heat and cool the office areas. They are highly energy efficient, do not use fossil fuel and are low carbon emission.

14.4 CLIMATE CHANGE RESILIENCE ASSESSMENT

The following measures should be incorporated into the design of the development to ensure it is climate change resilient:

- The flood risk at the site is to be managed and mitigated by using a number of risk management techniques, and mitigation strategies to manage and reduce the overall flood risk at the site. With regards to pluvial flood risk, the site to be designed with a 40% climate change allowance for rainfall.
- Design of building and roof mitigated against the risk of high winds and all doors to be on restrictive stays to prevent them slamming shut unintentionally from wind.
- Cooling plant selection to be based on projected future temperatures. Facility for cooling capacity increase to be included in infrastructure.
- Heating plant selection to be based on projected temperatures. Adequate preheating to limit thermal lag on occupation
- Include use of waste heat on air-based equipment to raise operating temperatures.
- The whole external fabric to be designed as a weather-tight structure. Roof and external wall materials to be guaranteed to perform for a minimum of 25 years.
- Low flush volume WCs and low flow rate taps to be specified to minimise water demand.
- A major leak detection system to be installed to identify leaks.
- Shut off valves to be installed on the water supply to WC areas which will stop the water supply to these areas when they are not in use, thereby minimising the impact of any minor water leaks in these areas.
- Pulsed output water meters to be installed on the water supply to each building so that occupants can monitor their water usage.
- The roofs to be fully designed for snow loads.
- Selection of hardy plants for the landscaping scheme.



FIG.76.ANOTHER TYPE OF PATH PROPOSED

15. CONCLUSION

This Design and Access Statement (DAS) explains the design proposals for the proposed development, on land to the north of Bryn Lane.

The proposals respond to the increased demands in employment and employment land for Wrexham and Wrexham Industrial Estate that has existing strategic highway links and can accommodate large footprint buildings.

Utopia City, Wrexham meets these operational requirements, and offers the opportunity to create a first class regionally significant extension to Wrexham Industrial Estate

The need for logistics floorspace is embedded throughout the supply chain of goods - and is no longer to be regarded as a place of storage for final products, with few job opportunities. The UK's manufacturing industry requires efficient logistics facilities to serve the manufacturing process.

Recent trends in 'reshoring' - the return of component suppliers back to the UK particularly from the Far East - has accentuated the need for efficient logistics buildings to be developed as a matter of urgency.

For many the trend towards very large-scale logistics buildings is perhaps best appreciated from the phenomenal growth in online retailing. The sophistication of the supply chain, and the efficiency in delivery of goods to customers is only achievable by the location of logistics buildings close to the strategic highway network and close to the customer.

The DAS has explained the constraints and opportunities presented by Utopia City Wrexham to meet this development need which is of significance to the local, regional and national economy. The Site is highly suitable to accommodate this form and scale of built development with minimal environmental and technical impacts as demonstrated through the submitted Environmental Statement.

When complete Utopia City will create new jobs with apprenticeships and skill training opportunities. A significant contribution will be made to the local economy particularly for local businesses.

Another benefit of the proposed development is that it can be brought forward promptly following the grant of planning permission.

The proposed development has evolved to take account of site constraints and opportunities as well as the design principles of Policy SP11, relating to the site's allocation in the emerging Local Development Plan. The proposed design is considered to comply with the principles established in national and local policy. In consequence, hybrid planning permission is requested for this Site.