

HINCKLEY NATIONAL RAIL FREIGHT INTERCHANGE

DESIGN CODE – V4 Rev B

Regulation No. 5 (2) (q)

Document Reference: 13.1B

January 2024



This Draft Design Code has been prepared on behalf of Tritax Symmetry (Hinckley)
Limited by AJA Architects with input from the following consultants:



Environmental Impact Assessment Co-ordinators
Socio-economic Consultants



Legal Advisors



Construction Consultant Project and Cost Managers



Planning Consultants



Strategic Rail Advisors



Highways, Infrastructure, Transportation, Ground, Flood
Risk, Drainage, Air Quality, Noise and Lighting Consultants



Landscape, Ecological, Heritage and Archaeological,
Agricultural land, Arboricultural and PROW Consultants



Rail Engineering Consultants



Utilities Advisors

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1. INTRODUCTION

1.1 General

AJA Architects LLP have been appointed by Tritax Symmetry (Hinckley) Limited (TSH) to act as Architects for the development of the proposed Hinckley National Rail Freight Interchange. (HNRFI)

The HNRFI, will be an exemplar rail connected warehousing development of strategic importance, not only locally, but regionally and nationally. It is therefore critical that the proposals are of the highest quality in terms of materials, finish and landscaping with the site planned so that it maximises the benefits for the occupiers, users and neighbours alike, and also provides amenity opportunities to local residents and users of the Public Rights of Way. Key to this objective will be the consideration given to the design of the access, landscaping, ecology, layout, scale, massing and building form, colour, and material of each part of the development.

The Design Code has been developed in conjunction with the Design and Access Statement.

This Design Code accompanies an application by Tritax Symmetry (Hinckley) Limited to the Secretary of State via the Planning Inspectorate for a Development Consent Order (DCO) under the Planning Act 2008.

TSH seek to be at the forefront of building design and innovation with their developments and wish to be seen as a class leader in this sector. As a consequence of years of ongoing development and refinement, they have prepared their own, highly detailed and thought through specifications and design guides that act as the basis of their portfolio of projects across the country. Their projects continue to be refined, based on the recognition of new technological developments, changes in legislation and occupiers needs, with an inherent ability to adapt and respond to a sites specific locations. The sites and buildings that they now develop nationwide, are a statement to this ongoing philosophy.

1.2 Purpose of the Design Code

The purpose of the Design Code is to ensure the design quality of HNRFI and to enable swift delivery of the development.

This will be achieved by:

- Providing clear design guidance on the character and quality of development;
- Providing coding which both the local planning authority and developers can use to ensure a consistent level of quality is achieved over the entire development;
- Ensuring consistency and co-ordination between the various parts of the development;
- Providing clear guidance for assessing responses to site tenders and guidance for assisting in determination of the detailed planning application.

The Design Code is intended as general guidance for use by the development team and will provide the Local Authority with an approved checklist against which the proposals can be assessed. All proposals are informed by the content of the Code and will be judged according to the interpretation and appliance of its content.

The Design Code covers:

- Sustainability
- Primary and secondary highway infrastructure;
- The Public Realm and Public Rights of Way;
- The Railport
- Building Design principles including building forms, types and frontages to the site boundaries;
- Building materials;
- External plant and equipment;
- Boundary treatment and fencing;
- Lighting;
- Landscape strategy;

This document sets out a series of design guidelines that assists in shaping the development on the site. This will help to ensure consistency in design quality across the site.

1.3 Design Code Informants

Informing the content and format of this Design code, use has been made of nationally available documentation in the form of the National Design Guide (NGD), The National Model Design Code (NMDC) Parts 1 and 2, together with the National Policy Statement for National Networks and its specific references to the need for and assessment of Strategic Rail Freight Interchanges (SRFI).

Whilst the NGD, and both sections of the NMDC, do not make reference specifically to an SRFI, they do offer a template of ten defining characteristics by which the HNRFI can be appraised and delivered against, whilst accepting the very specific requirements of an SRFI.

This in turn, allows the scheme to be coded, in a manner both appropriate to its context and function.

1. INTRODUCTION

1.4 Design Theme

The Design Theme for HNRFI is for a contemporary development, reflecting its location and strategic importance.

As a strategically important site, it is essential that the design of HNRFI is modern and forward looking to fully complement the wider areas as well as looking to attract locally, regionally and nationally important occupiers to the site.

The design principles that will realise this theme are described in this Design Code. These include Building Form, Building Height, Office Design, Materials and Colour Palette.

1.5 The Landscape Vision

The combination of the proposed architecture, built form vernacular and structural landscaping that respects existing vegetation patterns and provides additional planting where appropriate to enhance tree cover and habitat connectivity across the site. This aims to work with the scale of the proposed built form to provide a well-vegetated setting for the scheme, adding to its strong sense of identity.

Key to achieving this will be the realisation of a high-quality environmental setting which provides opportunities for public realm and amenity spaces for site users and attractive publicly accessible routes which are organised around strong design principles.

In combination, the architecture and the landscaping of the site will create a safe and welcoming environment for new employment facilities.

The development has been designed to respond to the arboriculture, ecological, landscape, visual, hydrological, and topographical constraints of the site. Where possible, existing vegetation is retained and new green infrastructure elements are proposed as part of the development proposal.

The proposed landscape will provide considerable new areas of planting which softens the likely effects on surrounding landscape character and local views. A natural separation is proposed between the Main HNRFI Site and Burbage Common and Woods Country Park, which provides an amenity area that enhances tree cover and habitat connectivity.

1.6 Landscape Principles

In creating the new landscape for this development, the following principles have been established to guide the design process and facilitate landscape opportunities throughout the scheme:

- Contain development to the west of the M69;
- Retain as many landscape features as possible given the nature of the development;
- Provide a natural buffer between the development and the SSSI, Local Nature Reserve, Ancient Woodland and Country Park to the south;
- Maintain broad green corridors through the development for amenity and biodiversity purposes;
- Maximise the biodiversity potential of the sustainable urban drainage scheme with tree planting and swales within green corridors. Attenuation basins designed to have some permanently wet areas to allow wet grassland and wet woodland to thrive;
- Use the existing landscape character of the Burbage Common and Woods Country Park as a reference for planting strategies and habitat creation in open spaces;
- Use native species found locally within the landscape as the basis of the planting strategy;
- Planting strategies to aim to maximise biodiversity and reduce maintenance with 'nature' taking precedence over traditional maintenance heavy amenity landscapes; and
- Planting strategies to respond to the clay content of the soil.

The Illustrative Landscape Strategy has been developed iteratively to maximise the potential for betterment at the site.

These principles will ensure that mitigation and enhancement measures are embedded throughout the wider proposal as the scheme progresses through the next stages. The integrity of the landscape principles in the long term will ensure that the landscape fabric and blue and green infrastructure is appropriately designed, and effectively managed, for the longevity of the scheme.

2. THE EXISTING SITE AND ITS CONTEXT

2.1 Site Location

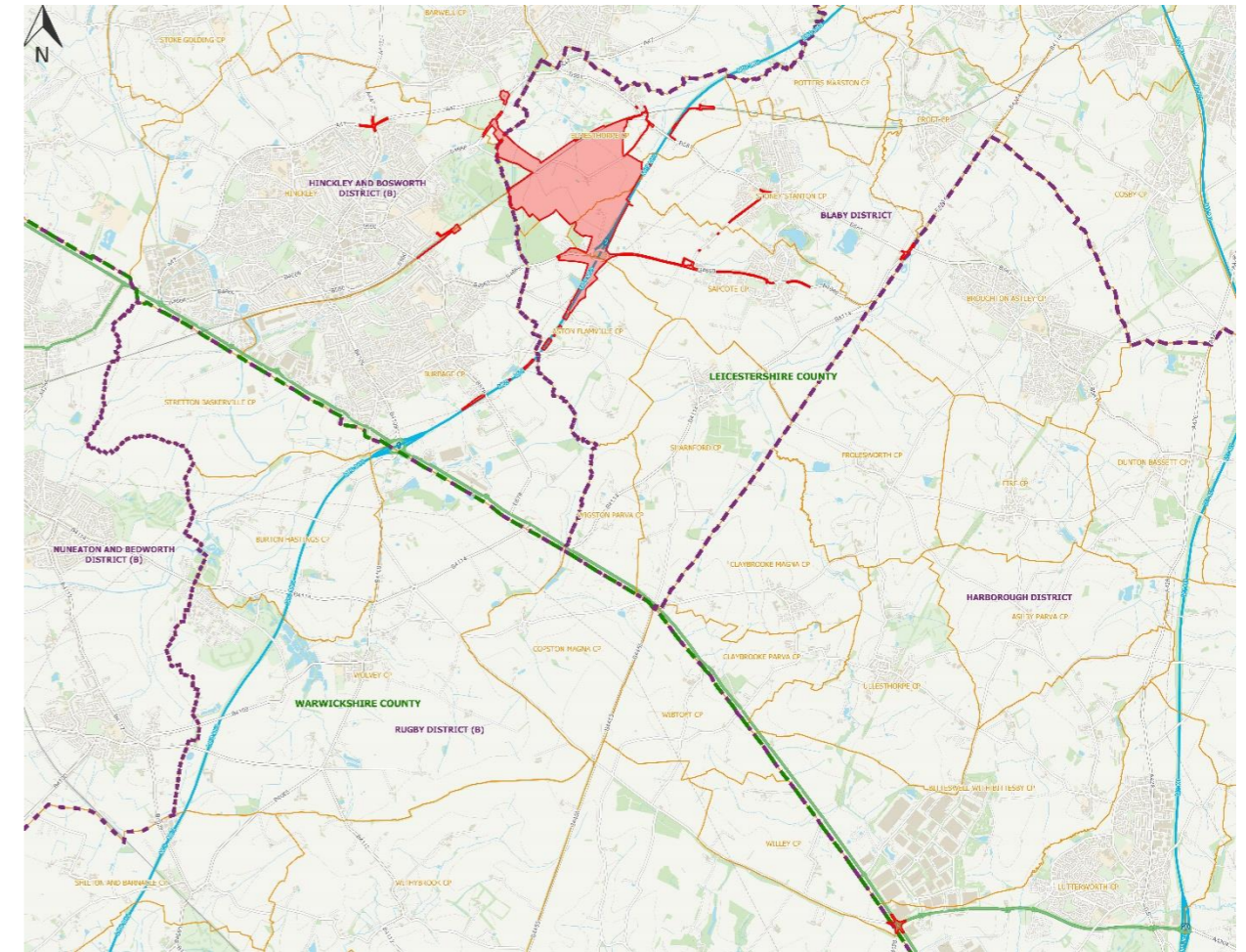
The main site lies within the East Midlands Region and the administrative boundaries of Leicestershire County Council, Blaby District Council, the Borough of Hinckley and Bosworth and the Civil Parishes of Hinckley, Burbage, Elmesthorpe, Barwell, Stoney Stanton, Sapcote and Aston Flamville.

Supporting highway works are proposed in Blaby, Hinckley and Bosworth and Harborough Districts in Leicestershire and in the Borough of Rugby in Warwickshire and the Civil Parishes or Wards of Hinckley de Montfort, Burbage, Cosby, Elmesthorpe, Barwell, Stoney Stanton, Sapcote, Aston Flamville, Broughton Astley, Willey and Lutterworth.

The site is adjacent to the Felixstowe to Nuneaton Freight Line (also known as the Hinckley to Leicester Line) and is located approximately 2km east of Hinckley Town centre, immediately north west of Junction 2 of the M69.

The Order Limits for the Proposed Development comprise approximately 268 hectares of land.

The HNRFI site has the ability to directly link to the M69 and the A47 trunk road, providing easy connections to the M1 and M6, offering opportunities for the delivery of a well-connected and permeable site.



Legend

- Order Limits
- - - District Boundary
- - - County Boundary
- - - County-District Boundary
- - - Parish Boundary

Fig.1 Site Location Plan and Boundary Designations

2. THE EXISTING SITE AND ITS CONTEXT

2.2 Existing Site Features

2.2.1 Railway Infrastructure

The main HNRFI site lies to the south east of the Felixstowe to Nuneaton Freight line, which forms part of Network Rails strategic freight network. The Main Order Limits also include land to its north western side. The land either side of the railway is presently connected by three level crossings serving footpaths and an overbridge on the Burbage Common Road within the scope of the Order Limits.

2.2.2 Highway Infrastructure

The M69 Junction 2 is located to the south east of the HNRFI site and is connected to the M69 via a northbound entry slip lane and southbound exit slip lane and to the east and west with connections to the B4669 Hinckley Road.

Burbage Common Road crosses the main HNRFI site, and is a rural lane that connects the B4668 at Burbage Common with the B581 Station Road in Elmesthorpe as well as providing access to Woodhouse Farm and Langton Farm. The road crosses the railway as a single lane hump-backed bridge.

Access to other residential properties in the Main HNRFI Site, including Freeholt Lodge and Hobbs Hayes to the north of M69 Junction 2, is from a track that extends from Smithy Lane, which branches from the B4669 Hinckley Road.

2.2.3 Landform / Topography

The DCO site lies in National Character Area (NCA) 94 'Leicestershire Vales', which comprises an open landscape of gentle clay ridges and valleys used for a mixture of pasture and arable agriculture, bisected by small watercourses.

Although to casual inspection the Main HNRFI Site appears broadly level, it slopes gently downhill from a high point of 110m Above Ordnance Datum (AOD – i.e. above sea level) adjacent to M69 Junction 2 to a low point of 83m AOD beside the railway at the northern end of the Main Site.

South-west of M69 Junction 2 the M69 motorway falls gently to a height of c. 96m AOD at the southern extremity of the DCO Site.

To the west of the railway the A47 Link Road corridor falls from 99m to c. 93m before rising gently to 96m where it joins the A47 Leicester Road. This gentle valley is associated with an unnamed watercourse.



Fig.2 Aerial image of main HNRFI site with M69 in foreground looking towards Hinckley and Burbage.

2. THE EXISTING SITE AND ITS CONTEXT

2.2.4 Watercourses

The majority of the Proposed Development is located in the Thurlaston Brook catchment. An unnamed tributary of the Thurlaston Brook flows eastwards across the route of the proposed A47 Link Road and immediately beyond the railway line to the north of the Main HNRFI Site. This watercourse has its own two tributaries which flow through Burbage Common and cross the route of the A47 Link Road.

An unnamed watercourse flows north-eastward through the southern portion of the Main HNRFI Site before running alongside the M69 motorway and joining the tributary of the Thurlaston Brook just downstream of the railway line. This 'issues' within the Main HNRFI Site itself, rather than being fed by an upstream catchment. Several field drainages ditches and small ponds in the Main HNRFI Site also discharge into the tributary of Thurlaston Brook.

A tributary of the Soar Brook issues from the south-eastern side Hinckley. This flows beneath the M69, to the south west of Junction 2, and through the DCO Site for a short length, before turning south-east and flowing away from the DCO Site.

2.2.5 Land Use and Landscape

Most of the Main HNRFI Site and the land inside the Main Order Limits to the west comprise a regular pattern of fields used for arable farming and grazing. The fields are defined by hedgerows and interspersed with deciduous trees. Interspersed amongst the fields are a small number of agricultural dwellings and outbuildings with a cluster of buildings at Woodhouse Farm in the centre of the Main HNRFI Site.

Businesses in and immediately adjacent to the Main HNRFI Site include a farm shop at Woodhouse Farm, close to the centre of the Main HNRFI Site, and the Wentworth Livery Stables on Burbage Common Road to the south of Elmeſthorpe. Burbage Common Road serves as an equestrian route to Burbage Common for riders from the stables.

2.2.6 Public Rights of Way

There are a number of public bridleways and public rights of way (PROW) that cross the site within the Main Order Limits. The routes enter and leave the site at various points around the perimeter of the main HNRFI site including a crossing over the M69 via an existing bridge as well as a number that utilise the level crossings on the Felixstowe to Nuneaton Freight line. Two routes also connect into Burbage Common & Woods on the southern boundary.

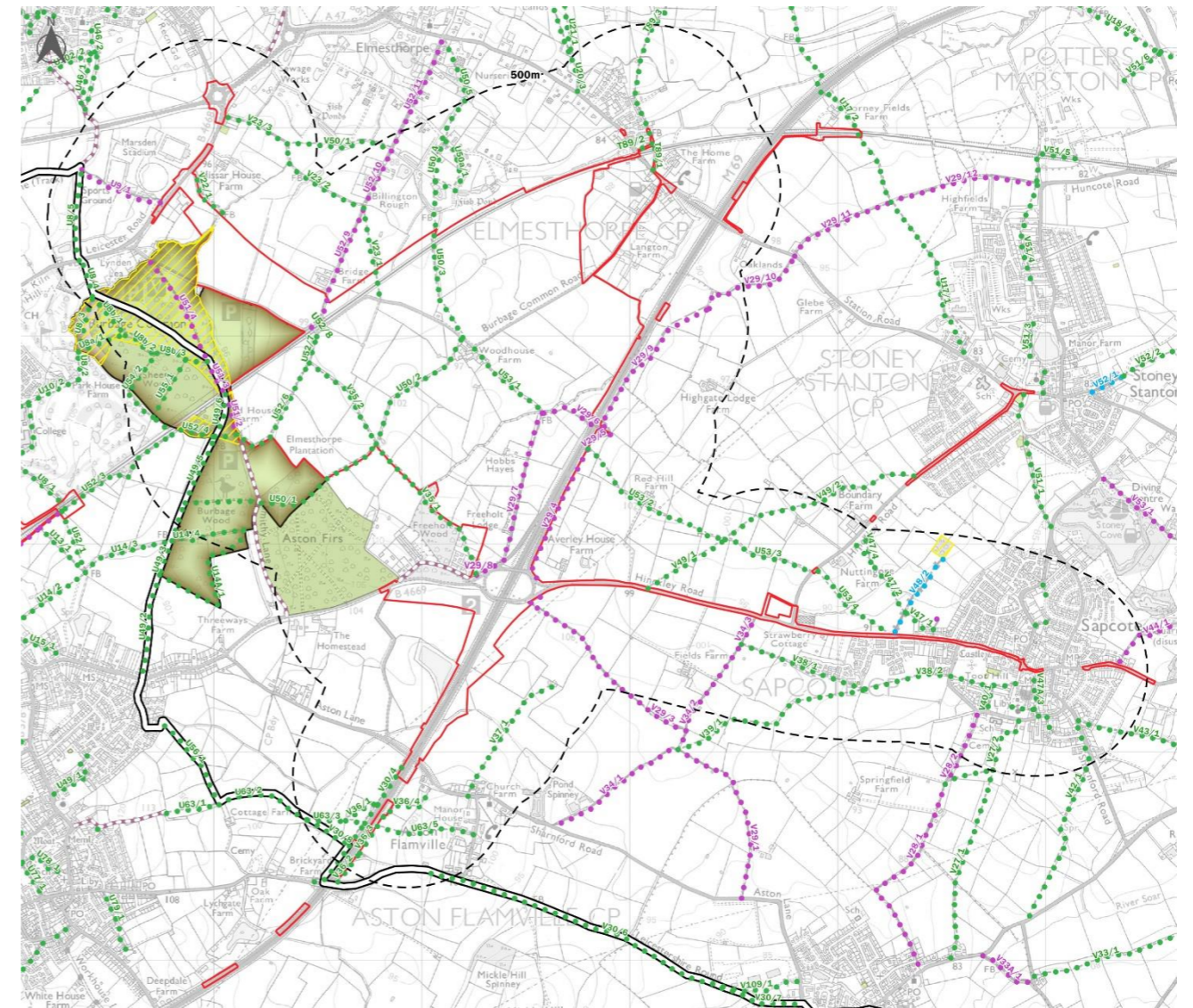
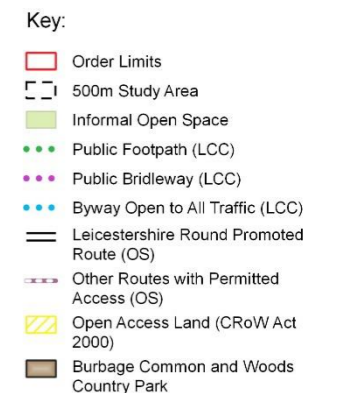


Fig 3. Existing Bridleways and Public Rights of Way



2. THE EXISTING SITE AND ITS CONTEXT

2.3 Surrounding Area

2.3.1 Character

Areas immediately outside of the Main Order Limits are generally similar in character, comprising level or gently undulating farmland interspersed with farmsteads, smallholdings and free-standing dwellings.

2.3.2 Local Settlements

The closest settlements to the Main HNRFI Site are the village of Elmesthorpe along the B581 Station Road to the north and a mobile home park and a separate gypsy and traveller settlement off Smithy Lane to the south-west of M69 Junction 2. In the wider area and generally at a range of 2-3km from the Main HNRFI Site are the settlements of Stoney Stanton and Sapcote to the east, Earl Shilton and Barwell to the north and north-west, Hinckley and Burbage to the west and south-west and the village of Aston Flamville to the south.

Elmesthorpe has been settled since the Roman era and has a population of just over 500. Village landmarks include the 13th century St Mary's Church, partly ruined but restored at a smaller scale. Elmesthorpe railway station closed in the 1960s but the village retains a hotel and a pub.

Off Smithy Lane to the south of the Main HNRFI Site are two residential enclaves in fenced compounds – the Aston Firs Gypsy and Traveller site managed by LCC and the Castle Fields mobile home site, which is privately owned.

The village of Sapcote to the east has a population of c. 2,700. The village is a focus for community activities with a social club, pub and neighbourhood retail facilities. Stoney Stanton to the north of Sapcote has a population of almost 4,000 and includes neighbourhood-level retail, pub and dining facilities. Between Sapcote and Stoney Stanton lies Stoney Cove, a diving adventure centre in a former stone quarry with a waterside pub and restaurant.

2.3.3 Local Amenity

Burbage Common and Burbage Wood to the south-west of the Main HNRFI Site are a popular recreational resource managed by Hinckley and Bosworth Borough Council, providing woodland and open meadows for informal recreation, with car parks and a visitor centre. Hinckley Golf Course lies beyond Burbage Common, on the edge of Hinckley itself.

In the Blaby District Character Assessment (2008) the Main HNRFI Site lies in two Landscape Character Types (LCT). The northern area of the HNRFI Site falls within LCT A 'Floodplain' and the southern area is within LCT G 'Wooded Farmland'. In terms of Landscape Character Areas (LCA), the Main Site falls similarly within two zones. The northern parts of the HNRFI Site lie in LCA E: 'Elmesthorpe Floodplain' and the southern portions are located in LCA A: 'Aston Flamville Wooded Farmland'.

2.4 Flood Risk

The Environment Agency's (EA) Flood Zone map shows the majority of the land inside the Main Order Limits to be in Flood Zone 1. This indicates that the land is largely at low risk of flooding (a less than 1 in 1,000 annual probability of river flooding). Limited areas around the Thurlaston Brook Tributary, which crosses the corridor of the proposed A47 Link Road to the west of the Felixstowe to Nuneaton Freight line and then flows through the extreme northern corner of the Main HNRFI Site, are in Flood Zone 2 (between a 1 in 100 and 1 in 1,000 annual probability of flooding) and Flood Zone 3 (a 1 in 100 or greater annual probability of river flooding).

2.5 Cultural Heritage

There are no designated World Heritage Sites, scheduled monuments, listed buildings, registered parks and gardens, battlefields, or conservation areas inside the DCO Site.

In general terms, the majority of designated heritage assets in the wider area comprise listed buildings clustered in the historic cores of local settlements. Within 5km of the Main HNRFI Site are six scheduled monuments, 98 listed buildings and nine conservation areas. There are several groups of listed buildings in the settlements of Stoney Stanton to the east, including the Grade II* listed Church of St Michael, and in Elmesthorpe to the north is the Grade II listed Church of St Mary. The Church of St Mary in Barwell, 1.8km to the north-west of the Main HNRFI Site and 0.75km from the western end of the proposed A47 Link Road, is a Grade I listed building.

Scheduled monuments closest to the Main HNRFI Site include the ruined church at Elmesthorpe to the north, and Sapcote Castle and Moat on the west edge of Sapcote, 2km to the east-south-east. The Aston Flamville Conservation Area lies 1.3km to the south of the Main Site and lies c. 100m from southern arm of the Main Order Limits that contains the southbound slip road proposed as part of the reconfiguration of M69 Junction 2.

Non-designated heritage assets of local importance have been identified within the Main HNRFI Site. These assets comprise three farm buildings and the Burbage Common Road railway bridge, as well as discrete areas of ridge and furrow earthworks and the buried remains of discrete late prehistoric/Romano-British settlement activity.

2. THE EXISTING SITE AND ITS CONTEXT

2.6 Nature Conservation

The Burbage Wood and Aston Firs Site of Special Scientific Interest (SSSI) lies close to the south-western boundary of the Main HNRFI Site and outside the DCO Site. This SSSI is designated for its mixed ash, oak and maple woodland, one of the best remaining examples in Leicestershire. The SSSI adjoins the Burbage Common and Woods Local Nature Reserve.



Fig 4. Burbage Common

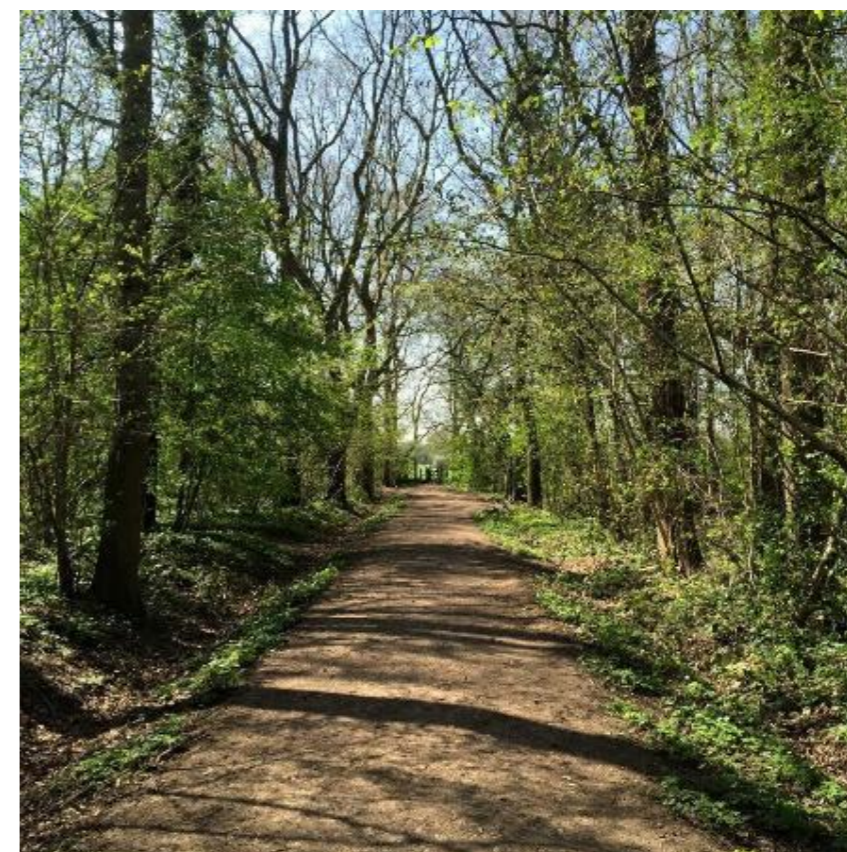


Fig 5. Burbage Common

3. SCHEME PARAMETERS

3.1 General

As well as defining codes for a scheme that responds to the setting within which it sits, and that is described in the previous chapters, the Design Code is also informed by and reflects the development shown in the parameters for the HNRFI.

The parameters for the Proposed Development on the Main HNRFI Site are shown on a parameters plan. The parameters plan was informed by, and evolved as responses, feedback and constraints were fed into the design. Each development zone includes all elements integral to each development plot, including buildings, hardstandings, parking, landscape and planting, utilities and drainage infrastructure.

The parameters plan also sets parameters for the following:

- rail and Railport infrastructure including connections from the existing railway (including rail chord) and sidings, gantry cranes and areas for the temporary stacking of freight containers (contained within zones H and J of the parameters plan);
- highway infrastructure corridors including carriageways, landscaping, footpaths, laybys and cycleways. The parameters plan proposes a ‘limit of deviation’ within which internal roads would be contained;
- external road infrastructure within landscaped corridors, including the proposed upgrades to M69 Junction 2 and the proposed A47 Link Road, including a bridge to replace the existing Burbage Common Road bridge;
- areas for woodland protection, landscape and planting, footpath, bridleway and water course diversions, new ponds and swales and amenity areas for public use;
- a development zone for a site hub containing site management and security offices and a marketing suite, energy centre, with ancillary parking and planting (contained within zone G of the parameters plan); and
- signage for the development.

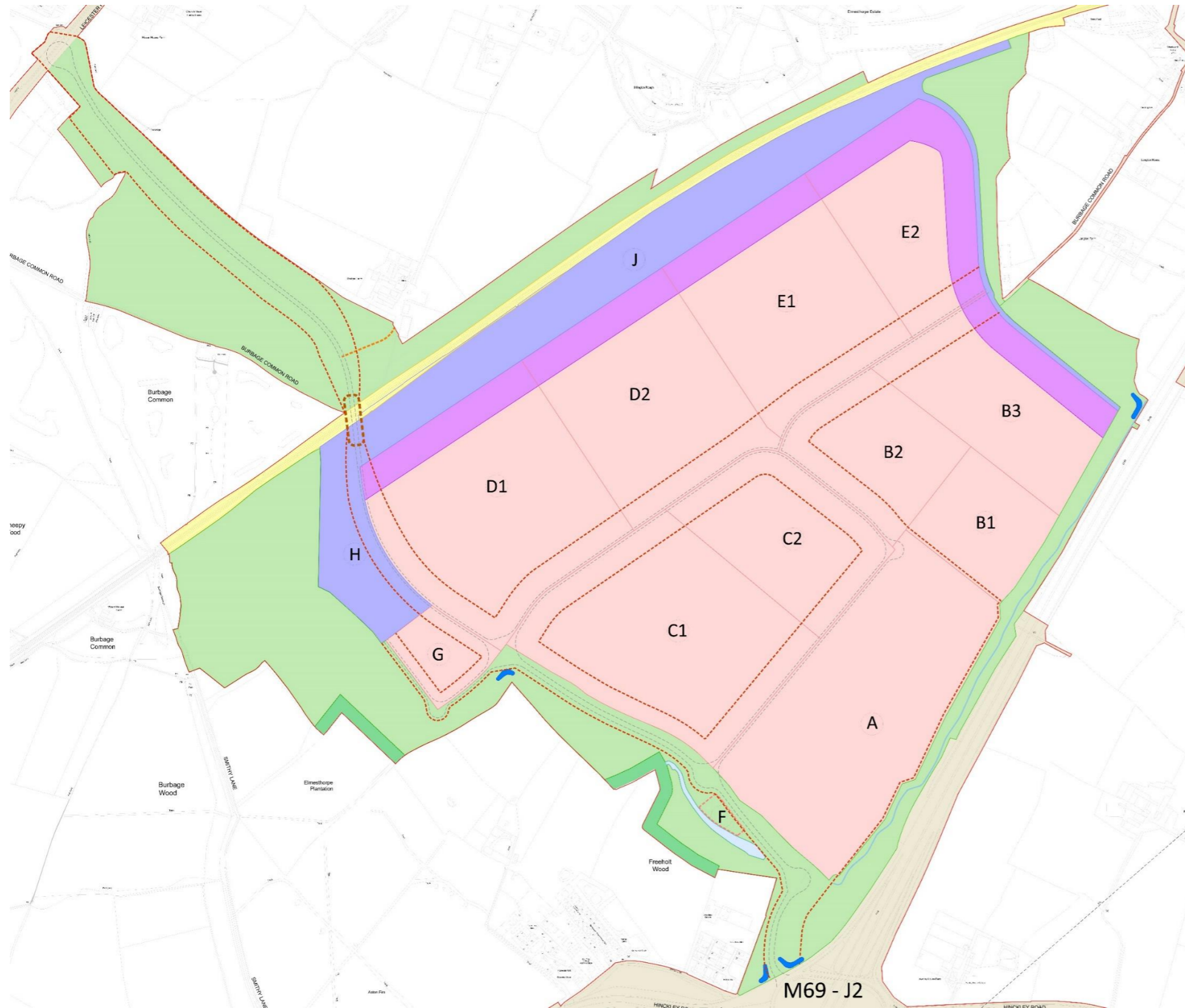
3.2 Parameter Zone Schedule

Schedule of Parameters for Development Zones						
Zone	Number of Warehousing Units / Buildings * ¹	Maximum development floor space per Zone (m ²)	Other Defined Element Within Zone	Maximum building / element height measured to roof ridge / highest point in metres above Ordnance Datum	Equivalent building height relative to FFL	
A	1 to 6 warehousing units	105,000 sq.m.		119.15m	Up to 22m	
B	1 to 5 warehousing units	115,000 sq.m.		B1 115.65m	Up to 22m	
				B2 121.65m	Up to 28m	
				B3 115.65m	Up to 22m	
C	1 to 6 warehousing units	140,000 sq.m.		C1 119.15m	Up to 22m	
				C2 122.15m	Up to 25m	
D	1 to 4 warehousing units	184,000 sq.m.		D1 119.15m	Up to 22m	
				D2 125.15m	Up to 28m	
E	1 to 3 warehousing units	137,000 sq.m.		E1 118.65m	Up to 25m	
				E2 115.65m	Up to 22m	
F	1 to 2 buildings	500 sq.m.		111.50m	Up to 10m	
G	1 to 2 buildings	500 sq.m.		107.15m	Up to 10m	
				Energy Services	112.15m	
H	1 to 2 buildings	750 sq.m.		107.15m	Up to 10m	
				Yard (including container stacks)	112.95m	Up to 14.5m
J	1 to 2 buildings	500 sq.m.		106.50m	Up to 10m	
				Yard (including container stacks)	112.50m	Up to 14.5m
				Gantry Cranes	123.50m	
Total maximum floor space across the development* ²		650,000 sq.m.				

*¹ These are the potential number of main use buildings in each zone and excludes any ancillary buildings or structures.

*² This total floor space is the maximum floor space (excluding mezzanine space) that will be developed across the site notwithstanding that the maximum floor space stated for each Zone combined would exceed this figure i.e. it is the overall floor space cap for each zone excluding mezzanine floor space.

3. SCHEME PARAMETERS



Key

- Open land / landscaping, including bunding, attenuation ponds, public footpaths and bridleways and A47 Link Road and estate road infrastructure
- Historic woodland protection zone
- Area of existing highways and land reserved adjacent to existing and proposed highways for highways and engineering works including construction and laydown of materials compounds.
- Watercourse
- Existing rail corridor
- Rail freight interchange including A47 Link Road and bridge infrastructure
- Rail corridor within development zones
- New bridge over rail line
- Development zone for site hub
- Line of A47 Link Road and estate roads
- Deviation Potential of A47 Link road and estate roads. The boundaries of zones through which a limit of deviation runs will change depending on the final alignment of the infrastructure within the limit of deviation
- Development Signage Locations
- Rerouting of existing linkage from Bridge Farm to new highway infrastructure
- Development Zones

NOTE 1: Development Zones include the existing buildings to be demolished, the A47 Link Road, estate road infrastructure, rail freight interchange link to estate road and elements pertaining to individual development plots including buildings, hardstandings, parking, energy services, landscaping, bunding and storm water attenuation.

NOTE 2: Noise attenuation measures, ranging from 1.8m to 6m in height are to be provided within the landscaped areas, railport and development zones and are illustratively shown on ESR Figure reference no. 10.10

Fig 6. Parameters Plan and Key

4. ILLUSTRATIVE MASTERPLAN AND LANDSCAPE STRATEGY

4.1 Illustrative Masterplan – General

In the preparation of the DCO, an illustrative masterplan was developed, which evolved over time as a consequence of the feedback received, and this final iteration formed part of the application.

At every step of its evolution, the illustrative masterplan, both informed and reflected the parameters of the scheme described in the previous chapter and was developed hand in hand, and in turn, now informs the Design Code.

It is important that the scheme ultimately delivers a place where people want to work, with a strong identity of its own reflecting the requirements of an SRFI, whilst respecting the surrounding uses and context.

Within the main HNRFI site, in order to deliver a successful SRFI, it is not possible to maintain or recreate the existing rural aesthetic, as the development requires large regular building plateaus in order to accommodate the rail terminal and associated buildings and infrastructure.

Outside of these area though, a more naturalistic approach, sensitive to the existing surrounding uses has been applied, especially in the extension to Burbage Common and the other publicly accessible areas.

The component parts of the masterplan which are subject to the coding described in this document are as follows:

- an intermodal freight terminal or ‘Railport’ capable of accommodating up to 16 trains up to 775m in length per day, with hard-surfaced areas for container storage and HGV parking and cranes for the loading and unloading of shipping containers from trains and lorries;
- A new road (‘the A47 Link Road’) from the modified M69 Junction 2 to the B4668 / A47 Leicester Road with a new bridge over the railway, providing vehicular access to the proposed HNRFI from the strategic highway network. The A47 Link Road would be intended for adoption as a public highway;
- up to 850,000 square metres (gross internal area or GIA) of warehousing and ancillary buildings with a total footprint of up to 650,000 square metres and up to 200,000 square metres of mezzanine floorspace, including the potential for some buildings to be directly rail connected if required by occupiers. These buildings might incorporate ancillary data centres to support the requirements of HNRFI occupiers and operators. They will also incorporate roof-mounted photovoltaic arrays with a generation capacity of up to 42.4 megawatts (MW), providing direct electricity supply to the building or exporting power to battery storage in the energy centre;

- an energy centre incorporating an electricity substation connected to the local electricity distribution network, battery storage (adjacent to each unit and at the energy centre) and a gas-fired combined heat and power plant (designed to be ready for 100% hydrogen in the grid gas supply) with an electrical generation capacity of up to 5 megawatts (MW). Total electricity generation capacity at the Main HNRFI Site is therefore 47.4 MW;
- a lorry park with welfare facilities for drivers and HGV fuelling facilities;
- a site hub building providing office, meeting space and marketing suite for use in connection with the management of the HNRFI and ancillary car parking;
- terrain remodelling, hard and soft landscape works, watercourse diversion, amenity water features and planting;
- noise attenuation measures, including acoustic barriers up to six metres in height;
- habitat creation and enhancement, and the provision of publicly accessible amenity open space at the south-western extremity of the HNRFI near Burbage Wood and to the south of the proposed A47 Link Road between the railway and the B4668/A47 Leicester Road;
- pedestrian, equestrian and cycle access routes and infrastructure, including a new dedicated route for pedestrians, cyclists and horse riders from a point south of Elmesthorpe to Burbage Common;
- utility compounds, plant and service infrastructure;
- security and safety provisions inside the HNRFI including gatehouses, fencing and lighting;
- drainage works including surface water retention ponds, underground attenuation tanks and swales;

4. ILLUSTRATIVE MASTERPLAN AND LANDSCAPE STRATEGY



Fig 7. Illustrative Masterplan

4. ILLUSTRATIVE MASTERPLAN AND LANDSCAPE STRATEGY

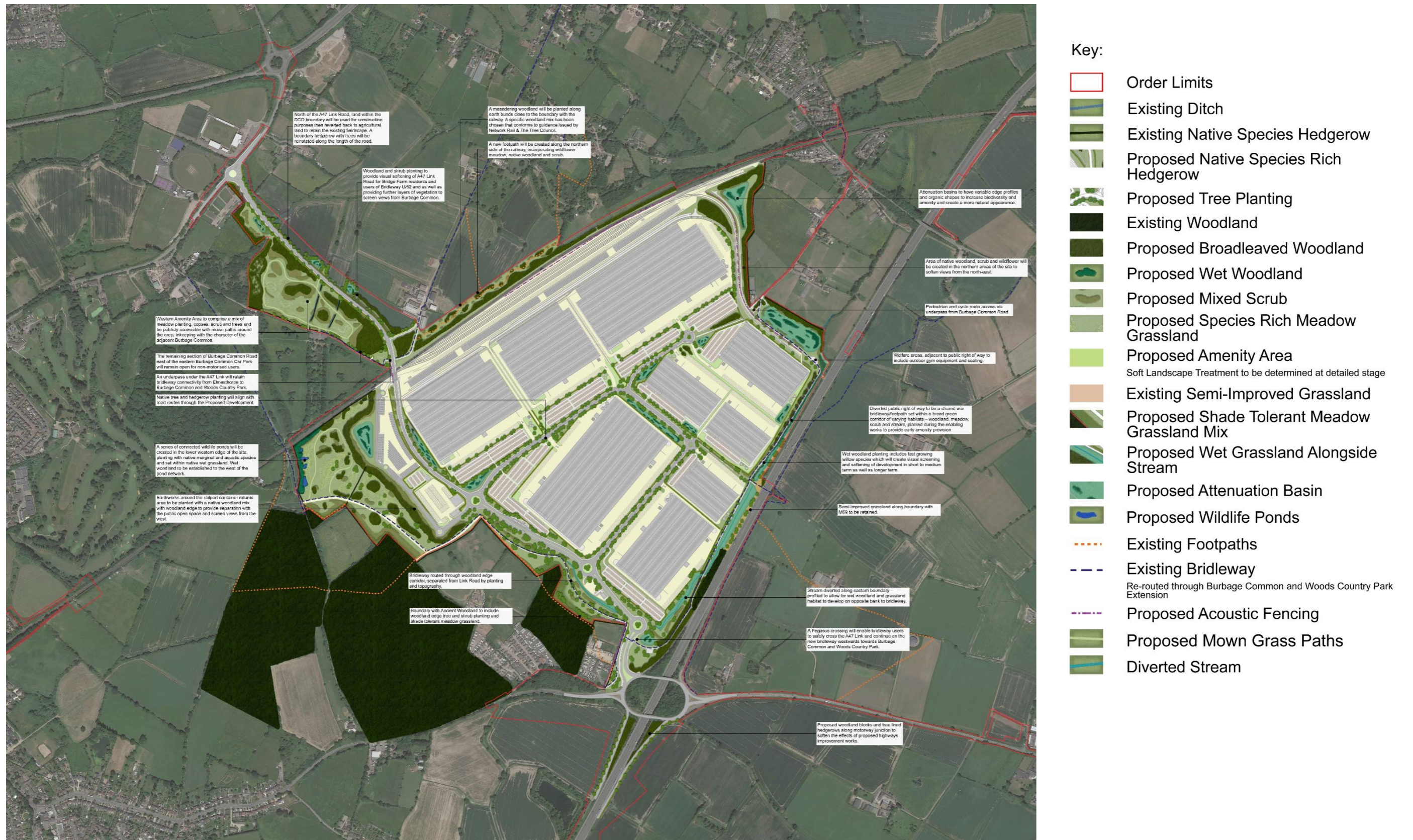


Fig 8. Illustrative Landscape Strategy (Document Reference 6.3.11.20A)

4. ILLUSTRATIVE MASTERPLAN AND LANDSCAPE STRATEGY

4.2 Key Elements of The Illustrative Landscape Strategy

Creation of the Western Amenity Area

- The establishment of the Western Amenity Area has the following aims:
- Increase the area of natural recreational green space associated with Burbage Common and Woods Country Park in line with policy requirements;
- Provide increased biodiversity across an area that is currently arable farmland;
- Extend the landscape character of Burbage Common and Woods across a more extensive area to the north of Burbage Common Road; and
- Provide layers of visual screening through the creation of woodland and copse planting such that the Proposed Development is screened from view within the Country Park.

Sections to illustrate the Western Amenity Area are contained are below:



Fig 9. A47 Link Road and Western Amenity Area (Document Reference 6.3.11.17A)



Fig 10. Railport Returns Area and Western Amenity Area (Document Reference 6.3.11.17A)

Woodland Creation

A variety of woodland habitats will be created on site to increase diversity. Species mixes take reference from the existing native species in the local landscape but without inclusion of Ash which is subject to Chalara dieback. Oak is therefore proposed as the principal climax species but supported by a mix of other climax species to increase resilience – namely Field Maple and Lime. Birch and Aspen are also included in the mix to facilitate fast early growth and reduce visual impact in the early years of the development with smaller tree species for diversity – Wild Service Tree, Wild Cherry and Crab Apple.

Two Suggested Species Mixes are Listed below –

General Woodland Mix - for new woodland and copses within the Western Amenity, on the north eastern boundaries and south eastern boundaries and within the logistics 'estate'.

Tree Species

- *Acer campestre* – Field Maple;
- *Betula pendula* – Silver Birch;
- *Malus sylvestris* – Crab Apple;
- *Populus Tremula* – Aspen;
- *Prunus Avium* – Wild Cherry;
- *Quercus robur* – Common Oak;
- *Sorbus torminalis* – Wild Service Tree; and
- *Tilia Cordata* – Small- leaved Lime.

Understorey and Woodland Edge Species

- *Cornus sanguinea* – Dogwood;
- *Corylus avellana* – Hazel;
- *Crataegus monogyna* – Hawthorn;
- *Euonymus europaeus* – Spindle;
- *Prunus spinosa* – Blackthorn;
- *Rosa canina* – Dog Rose;
- *Sambucus Nigra* – Elder; and
- *Viburnum opulus* – Guelder Rose.

Network Rail Woodland Species Mix - for woodland adjacent to/North of Railway Line

Avoids species on Network Rail 'List of Species Not to be Used' (Recommended Planting Species – Network Rail July 2015)

Woodland Edge/Hedge species to be planted >5 from Network Rail Boundary

- *Cornus sanguinea* – Dogwood;
- *Corylus avellana* – Hazel;
- *Crataegus monogyna* – Hawthorn;
- *Prunus spinosa* – Blackthorn; and
- *Sambucus Nigra* – Elder.

Additional Tree Species To be Planted >10m from Network Rail Boundary

- *Acer campestre* – Field Maple;
- *Carpinus betulus* – Hornbeam;
- *Pinus Sylvestris* – Scots Pine;
- *Populus tremula* – Aspen; and
- *Quercus robur* – Common Oak.

4. ILLUSTRATIVE MASTERPLAN AND LANDSCAPE STRATEGY

Wet Woodland

The introduction of wet woodland into the landscape strategy will further diversify the habitats on site with Alder and Willow as key species. Similar to birch and aspen, willow trees are fast growing in the first 5-10 years of growth, which will speed up the visual amenity benefits of the woodland in the medium-term. Wet woodland is proposed alongside the diverted watercourse on the eastern boundary with the M69 as illustrated in Section below and in the low south western corner of the site, adjacent to Burbage Common. It is also anticipated that the attenuation ponds will be designed to remain sufficiently wet in areas to allow wet woodland to establish.

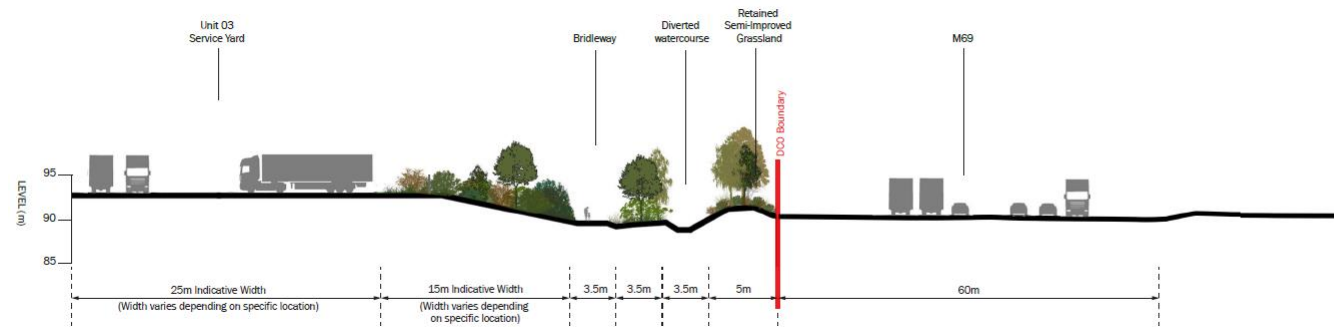


Fig 11. South Eastern Boundary with M69 (North) (Document Reference 6.3.11.17A)

Suggested Wet Woodland Species Mix

Tree Species

- *Alnus glutinosa* – Common Alder;
- *Betula pubescens* – Downy Birch;
- *Salix Alba* – White Willow; and
- *Salix Fragilis* - Crack Willow.

Understorey and Woodland Edge Species

- *Crataegus monogyna* – Hawthorn;
- *Frangula Alnus* – Alder Buckthorn;
- *Salix caprea* – Goat willow;
- *Salix cinerifera* – Grey Willow;
- *Salix Viminalis* – Osier;
- *Sambucus nigra* – Elder; and
- *Viburnum opulus* – Guelder Rose.

Woodland Ecotone

The edge structure of new woodland is often an area that is overlooked when traditionally woodlands had a rich ecotone around the boundaries, where greater light levels allow a greater variety of species to flourish and boundary ditches and hedgerows further diversify the habitat.

In this case, the landscape strategy and illustrative planting designs have been a true collaboration between the landscape architects and ecologists allowing the development of numerous ecotones at woodland and copse edges as well as specification of shade tolerant meadow mixes to maximise the biodiversity potential of the grassland.



Fig 12. Southern Boundary with Castlewood Grassland (Document Reference 6.3.11.17A)

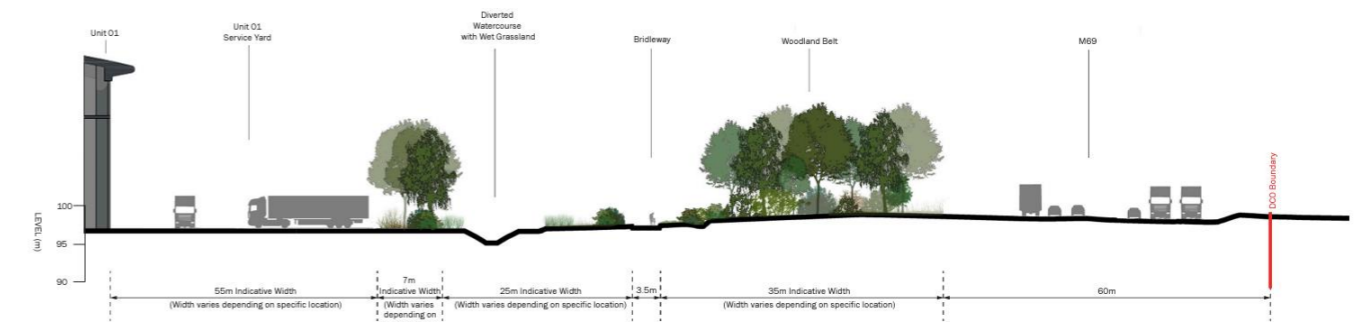


Fig 13. South Eastern Boundary with M69 (South) (Document Reference 6.3.11.17A)

4. ILLUSTRATIVE MASTERPLAN AND LANDSCAPE STRATEGY

Hedgerows

Native hedgerows are proposed as part of woodland ecotones or as biodiverse boundary features. Native hedgerows are proposed as boundaries to all Units. It is envisaged that native boundary hedgerows with trees will replace security fencing along road frontages or double up to soften the security fencing where necessary. Natural boundaries allow a more open and green approach to the estate road network, particularly adjacent to footpaths and cycleways. If security fencing is required, it is suggested that this be placed around the unit and yard leaving the car parks and green open spaces to be a part of the more open green routes through the site.

Native hedgerows with specimen native trees are also proposed alongside the A47 link road, creating a traditional natural boundary which will help to screen views of moving traffic.

Native Hedgerow Mix

- *Acer campestre* – Field Maple;
- *Cornus sanguinea* – Dogwood;
- *Corylus avellana* – Hazel;
- *Crataegus monogyna* – Hawthorn;
- *Euonymus europaeus* – Spindle;
- *Ilex aquifolium* – Holly;
- *Ligustrum vulgare* – Wild Privet;
- *Prunus spinosa* – Blackthorn;
- *Rosa canina* – Wild Rose; and
- *Ulmus glabra* – Wych Elm.

Meadow Planting

Understanding the variables that lead to successful grassland and meadow planting is critical to the establishment and maintenance of species rich grassland. Preparing the soil is key, with two years of regular cutting required on former enriched soil to reduce nutrient levels and allow a more diverse sward to establish. Given the amount of excess topsoil that is likely to be generated by the earthworks, it will not be practical/sustainable to retain just the subsoil across areas of meadow as it would otherwise need to be removed from site. Therefore, reducing the nutrient content of the soil prior to stripping is advised (by ensuring a cereal or seed crop is cut in advance).

Different meadow mixes will be used across the site depending on varying conditions in terms of shade/sunlight and waterlogging. In the first instance the applicant will endeavour to obtain locally sourced meadow seed from the adjacent Country Park or local landowners as appropriate. Where seed mixes are required – the following would be considered depending on location:

Meadow Seed Mixes - Emorsgate or Equivalent

- Meadow Mixture for Wetlands – EM8 – for wet meadow areas – attenuation;
- Pond Edge Mixture – EP1;
- Standard Meadow mixture – EM2 – for open meadow areas;
- Wildflowers for Clay Soil – EM4F; and
- Hedgerow Mixture – EH1 – Shade/Semi-Shade Tolerant for sowing alongside hedgerows and woodland edge.

Sustainable Drainage, Ponds and Watercourses

The starting pond for most sustainable urban drainage systems (SuDs) is run-off and discharge rate calculations which are converted into attenuation volume requirements as part of a surface water drainage layout. The calculations for the Proposed Development can be found in ES Appendix 14.2 (document reference 6.2.14.2) which has informed the Proposed Development Parameters (Figures 17-22).

A range of SuDs features are considered appropriate for the development as set out in the Sustainable Drainage Statement (document reference 6.2.14.2). As many of these features as possible will be incorporated at the detailed design stage as part of the fully detailed drainage strategy which will be a requirement of the DCO.

- Silt Traps;
- Sump outfall units/gullies;
- Permeable paving – walkways and car parks;
- Proprietary vortex separators;
- Filter Strips;
- Geocellular attenuation crates;
- Swales – roadside;
- Detention/Attenuation basins; and
- Oil separators.

In addition to the above, as a key element of the Illustrative Landscape Strategy as much tree and shrub planting as possible has been incorporated within the development to further reduce run-off rates.

It is the role of the landscape architect and ecologist to explore the design of the sustainable drainage system to maximise benefits for amenity and biodiversity. The detailed design of the SuDs will be a requirement of the DCO, ensuring all features perform to serve the water management role as well as achieving biodiversity and amenity functions as set out below. The Illustrative landscape strategy highlights the principles that the attenuation basins should be based on as set out below:

4. ILLUSTRATIVE MASTERPLAN AND LANDSCAPE STRATEGY

Amenity Areas

A mix of habitats and planting is proposed within the Green Infrastructure of the HNRFI Site along the following principles:

- Estate roads to be lined with trees and hedgerows to create a green corridors through the Proposed Development;
- Trees to be large species planted as Extra Heavy Standards or Semi-Mature Specimens so they have an instant impact and create a well treed amenity route, particularly for pedestrians and cyclists travelling through the site;
- Attenuation basins to be organic in shape with varying edge profiles to create diversity;
- Swales to be incorporated into roadside amenity edge planting to further diversify habitat and slow run-off;
- Shrub planting to provide low maintenance habitat in amenity open spaces;
- Amenity grassland to be predominantly ‘meadow’ grassland with bulbs; and
- Only grass edges to be mown to maintain paths and prevent encroachment.

Specimen Tree Planting

Within natural areas such as the Western Amenity Area, within native hedgerows and on the edge of woodlands, specimen trees should be large native species such as listed below. There is an opportunity to plant Black Poplar as a specimen within wetter areas, a species that has declined markedly over the past century with the draining of wetlands.

Natural Area Specimen Trees

- Acer Campestre – Field Maple;
- Alnus glutinosa – Common Alder;
- Castanea satvia – Sweet Chestnut;
- Juglans Regia – Walnut;
- Populus nigra – Black Poplar;
- Prunus avium – Wild Cherry;
- Quercus Ilex – Holm Oak;
- Quercus Robur – Common Oak;
- Salix alba – White Willow;
- Salix fragilis – Crack Willow; and
- Tilia Cordata – Small-leaved Lime.

Estate Road Tree Species

- Betula pendula – Silver Birch;
- Quercus Robur – Common Oak;
- Quercus Palustris – Pin Oak; and
- Tilia Cordata – Small Leaved Lime.

Hard Landscaping

Surfacing

To an extent, surface materials are dictated by the required functionality given the load bearing requirements of the yards and estate roads.

However, there are some opportunities for variations to meet the aspirations of the SuDs Strategy and the Energy and Climate Change Strategy in particular. These are set out below:

- Permeable paving in the unit car parking areas;
- Permeable paving of the footpaths within the unit areas;
- Recycled or low carbon concrete in the service yards to reduce carbon footprint; and
- Low carbon tarmac on estate roads.

Fencing

It is accepted that a certain amount of security fencing will be required for health and safety and security purposes. However, rather than fencing being automatically applied to the full extents of all boundaries around units, consideration will be given at the detailed design stage to appropriate alignments. For example, where practical, positioning fencing tightly to service yards and the railport would enable the car parks and landscaped areas to remain within more open ‘frontage’ areas creating a greater level of amenity along estate roads/footpath/cycle routes. This would be particularly desirable along the length of the main footpath/cycleway route through the site.

Fencing principles for detailed design:

- Low carbon security fencing where required around the rail port and yards areas;
- Native hedgerow boundaries to define spaces and create a sense of ownership along unit frontages where security can be more relaxed; and
- Where security fencing is required, also plant native boundary hedging where practical to soften the appearance and increase biodiversity.

5. DESIGN CODE 01 – SUSTAINABILITY

5.1 General

Having regard to policy, environmental and economic matters, it is the intention that this new development will pay high regard to energy efficiency and sustainability, seeking to meet, and exceed where possible, current legislation on the efficient use of materials and energy. To that end the following specific codes are proposed in order to achieve that aspiration:

5.2 Specific codes:

- Tritax Symmetry are a Gold Leaf Member of UKGBC and aim to meet UKGBC’s definition for net zero carbon in construction and aim to deliver these new buildings at net zero carbon in construction paying high regard to energy efficiency, sustainability, and carbon offsetting. Evidence associated with each phase of the development, will be collated into a Green House Gas reduction Report;
- Energy efficiency and suitability measures will be assessed for technical review, installation and running costs, payback periods and plant space availability prior to implementation;
- The design of the buildings aim to maximise the amount of natural lighting available and make use of energy efficient products throughout. The heating and ventilation systems will be designed to minimise the energy consumption wherever possible;
- Materials will be locally sourced wherever practicable and the use of non-recyclable plastics will be avoided;
- The building will be designed to major on the thermal performance and air tightness from the outset. If a need arises for greater energy requirements the principle would be for this to be provided from renewable sources where practicable;
- The development will target BREEAM – Excellent and an EPC A rating as is standard for Tritax Symmetry buildings;
- External lighting will be designed to ensure no lighting is installed facing towards the perimeter boundaries and all lighting will be installed with non-translucent covers;
- Waste and recycling provisions will be provided within the scheme based upon discussions with prospective operators regarding the operations of the proposed units;
- Water requirements for the scheme will provide a drainage scheme which will be compliant with the requirements of CIRIA guidance on SUDS, including the use of permeable paving in the car parking areas and on-plot footpaths.

- Each individual development site will incorporate the provision of EV charging facilities to 20% of the total parking bays with provision designed in to connect the balance of the parking in the future as take up of electric vehicles increases. In addition, ductwork within the service areas of each development will be provided to allow for the future installation of electric HGV charging points as the technology develops in this sector.



6. DESIGN CODE 02 – A47 LINK ROAD

6.1 General

The A47 Link Road will be the only non-emergency road access to the HNRFI. The design of the A47 Link Road will be subject to detailed design approval post-consent, in accordance with DCO Requirements 4 and 5 and LCC Design Guidance. The A47 Link Road will create the entrance way into the development, establishing a high-quality designed scheme, with an emphasis on placemaking, legibility and green infrastructure. Specific codes relating to the design of the road are set out below.

The section of the proposed A47 Link Road inside the Main HNRFI Site shown on the illustrative master plan (Figure 7) has a sequence of roundabouts to provide access to service roads and reduce traffic speeds. These roundabouts and the design of the A47 Link Road will be subject to detailed design approval post-consent, in accordance with a proposed DCO Requirement. As shown in the illustrative masterplan, from the M69 Junction 2 the first two sections of the road will be dualled, reducing to a single carriageway as the road proceeds further westward.

The A47 Link Road crosses the main railway line by means of a new bridge. The bridge will pass over the Railport access road at the southern end of the Railport, the proposed railway sidings, the existing railway and the existing bridleway beyond. It will replace the existing hump-back bridge over the railway, which will be demolished. The new bridge will include a pedestrian walkway and cycleway and will include sufficient height and width clearance to enable a future electrification of the railway.

From the proposed railway bridge the A47 Link Road will ramp down to local ground level and proceed north-westwards at grade towards a new roundabout junction on the B4668 / A47 Leicester Road.

6.2 Accessibility – Walking and Cycling

The development will follow national guidance in relation to accessibility as follows:

National Planning Policy Framework, paragraph 116:

- Give priority first to pedestrian and cycle movements, both within the scheme and within neighbouring areas; and second – so far as possible – facilitate access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
- Address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- Create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards.

Circular 01/22 from National Highways, paragraph 12:

“New development should be facilitating a reduction in the need to travel by private car and focused on locations that are or can be made sustainable.”

National Policy Statement for National Networks (2014) also makes the following points:

- Paragraph 3.16 includes the Government's commitment to sustainable travel “it is investing in developing a high-quality cycling and walking environment to bring about a step change in cycling and walking across the country.”
- Paragraph 3.17 stresses the importance of accommodating pedestrians and cyclists; noting “there is a direct role for the national road network to play in helping pedestrians and cyclists. The Government expects applicants to use reasonable endeavours to address the needs of cyclists and pedestrians in the design of new schemes. The Government also expects applicants to identify opportunities to invest in infrastructure in locations where the national road network severs communities and acts as a barrier to cycling and walking, by correcting historic problems, retrofitting the latest solutions and ensuring that it is easy and safe for cyclists to use junctions”.

Taking these principles onboard, the proposed development will include a new network of segregated pedestrian footpaths and cycleways within the development itself and which form an integral part of the estate infrastructure.

These provisions will link into the new A47 Link Road and run along the full length of the highway before linking with the wider network. Additional infrastructure is proposed on the surrounding highway network to provide amenity for pedestrians and cyclists alike.

6. DESIGN CODE 02 – A47 LINK ROAD

6.3 A47 Link Road Design codes:

- Direct access to the site will be taken from the M69 Junction 2 in the south and the B4668/A47 in the north, at the points shown on the masterplan. This will provide a direct connection for both the vehicular entrances and footpath / cycleways;
- From the M69 Junction 2 access point, the A47 link road will be set in a landscaped road corridor. This will comprise a dual carriageway of two 7.3m wide carriageways separated by a 3m wide central reservation up to the third internal roundabout, where thereafter it will continue as a single 7.3m wide carriageway, over the railway via a new bridge and onto a new roundabout junction on the B4668 / A47 Leicester Road;
- From the M69 Junction 2 access point, a 3m wide combined footpath/cycleway will be provided to the eastern side that connects with the proposed bridleway close to the first internal roundabout and then continues alongside the eastern carriageway, around the internal roundabouts and provide connectivity to the main development with spurs onto the internal estate roads.
- Between the second and third internal roundabouts, a 2m wide footpath will be introduced along the western side of the carriageway to provide pedestrian access.
- After the third internal roundabout, and where the road reduces to a single carriageway until it reaches the junction with the B4668, footpath and cycleway provision will be segregated, with detail to be agreed at as part of Requirement 4 and 21;
- All carriageways, including the footpath / cycleways are to be surfaced in bituminous macadam, being the most appropriate and robust road surface for a large-scale commercial development;

Carriageways and footpath/cycleways to the south of the railway only to be lit using lighting designed to minimise light pollution, designed in accordance with the Lighting Strategy and secured by DCO Requirement 30

A dedicated bus-layby complete with shelters and standing for buses off the main carriageway will be provided between the second and third internal roundabouts on the northern side of the road, to mitigate the need for users to have to cross the A47 link road in order to access the network of footpaths that lead to the buildings within the main distribution park

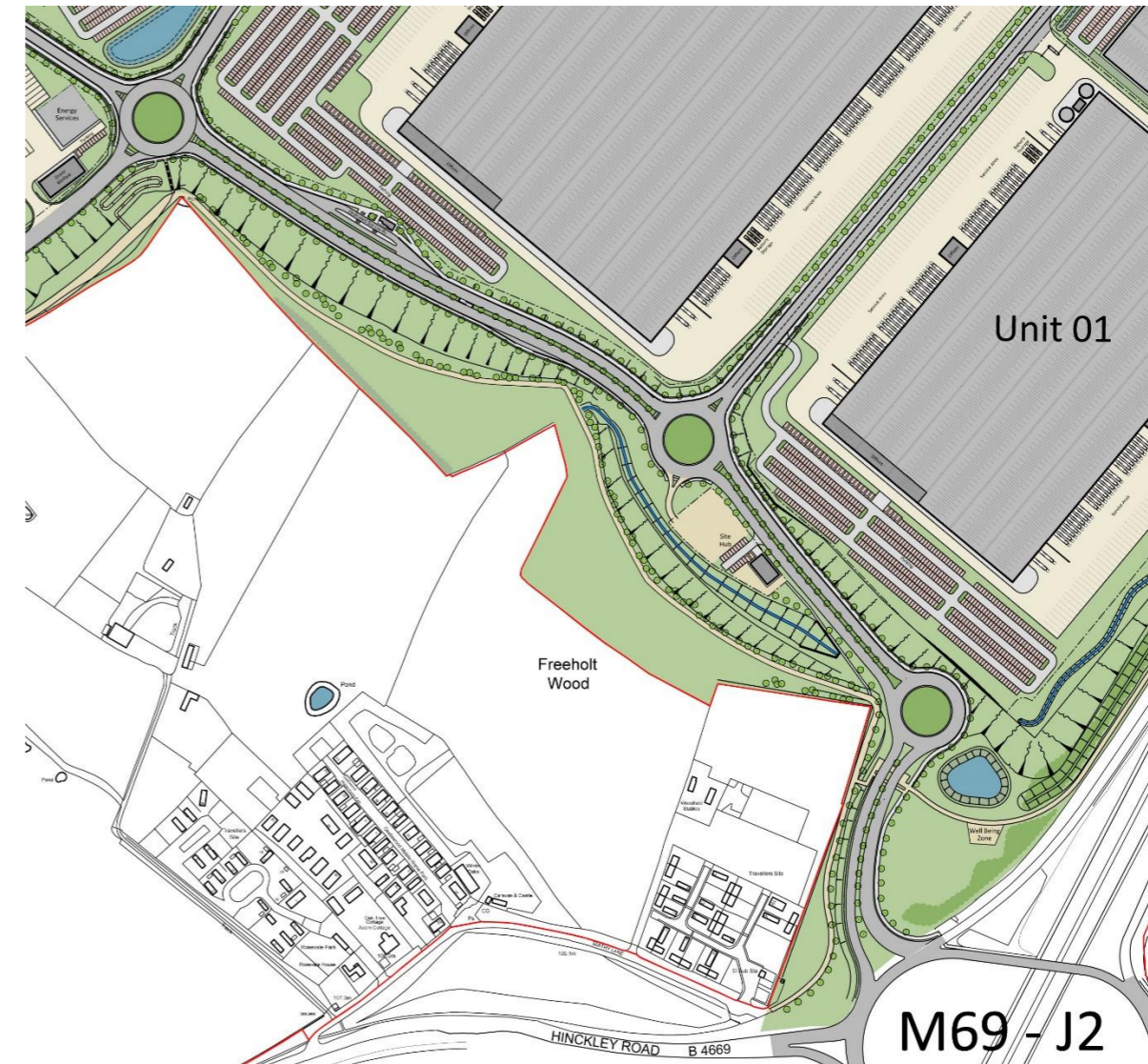


Fig 14. Part A47 Link Road plan from M69 J2

6. DESIGN CODE 02 – A47 LINK ROAD

6.4 A47 Link Road Landscape Design Codes



Fig 14. Typical Sections through A47 Link road (1 of 2) – Numbers relate to Design Code Text below

6. DESIGN CODE 02 – A47 LINK ROAD

Fig 15. Typical Sections through A47 Link road (2 of 2) – Numbers relate to Design Code Text below

6. DESIGN CODE 02 – A47 LINK ROAD

6.4 A47 Link Road Landscape Design Codes

Numbered notes relate to illustrations above.

1. Planting beyond the footpaths and cycleways, whether it be up to the site boundary, or a development plot to include species rich grassland, native hedgerows with trees and native structural planting;
2. Avenue tree planting will be provided within the verge and within hedgerows and planting along the edge of the road infrastructure to define the route and create an attractive green corridor for pedestrians and cyclists;
3. Species rich grass verges to be maintained with cutting limited to 1-3 times per year;
4. Footpaths and cycleways to be segregated with a 3m cycleway on one side of the road and a 2m footpath on the other where feasible;
5. Footpaths and cycleways to be separated from the carriageway where feasible by a planted or grass verge of 2m or more in width to facilitate avenue tree planting, noting there may be some restriction on verges on the bridge over the railway line;
6. Road lighting to be located within the landscaped verge, and designed so not to constrain the arrangement of native structure planting including tree planting;
7. Trees to be maintained with an appropriate clear stem height as they mature to avoid obstructing /conflict with vehicles;
8. Where SuDs features and the diverted stream are located within the road corridor, bank profiling, planting and run-off to be designed to maximise biodiversity opportunities;
9. A planted central reservation of 3m in width to be provided along the dual carriageway sections of the road with avenue tree planting within the central reservation to green the route;

Further codes related to the A47 link road but not covered by the illustrations are as follows:

- Tree planting to be designed and maintained in accordance with advice in the Trees and Design Action Group 'Trees in Hard Landscapes A Guide for Delivery' to ensure the long-term success of the trees in terms of water and soil management;
- Species selection to provide seasonal interest. Similar species of a larger scale to be used along the A47 Link Road to define the route;

- Crossing points to be highlighted by feature planting to create attractive pedestrian and cycle routes between the Main HNRFI Site and the Western Amenity Area/Burbage Common and Woods Country Park;

7. DESIGN CODE 03 – INTERNAL DISTRIBUTOR ROADS

7.1 General

Within the Main HNRFI Site, internal distributor roads will branch from the A47 Link Road to serve buildings and other areas across the site. These internal distributor roads will be single carriageway roads set in landscaped corridors with an emphasis on place making and legibility. The landscaping will establish new planting, incorporating native species of local importance, which creates new green infrastructure links across the site.

These internal roads are not intended for adoption as public highways under the Highways Act 1980 but will be private roads available for public use. These roads will be maintained by the appointed management company. The Railport will have a lit, private, dedicated access off the A47 Link Road.

7.2 Internal Distributor Road Specific Designcodes:

- Direct access from the internal roundabouts on the A47 Link Road will be taken at the points shown on the illustrative masterplan. This will provide a direct connection for both the vehicular entrances and footpath / cycleways;
- The main internal distributor roads off the A47 Link Road will comprise a minimum 10.5m wide carriageway, which provides two way directional flow of traffic and a central dedicated turning lane, thereby allowing continuous movement of vehicles when other vehicles need to turn into a development plot;
- Further internal distributor roads that provide dedicated access to development plots and aren't part of the main circulatory loop can be 7.3m wide without the requirement for a dedicated turning lane;
- Segregated footpaths and cycleways will be provided to both sides of the internal distributor roads on the eastern side of the A47 Link Road. The one western internal distributor road that serves the Railport, will have a 3m wide combined internal footpath / cycleway on its northern side.
- All carriageways, including the footpath / cycleways are to be surfaced in bituminous macadam, being the most appropriate and robust road surface for a large-scale commercial development;
- The main carriageways, footpaths and cycleways will comprise a clearly marked, and well illuminated route along their length, thereby increasing site permeability and connectivity with its surroundings;
- Main carriageway, footpaths and cycleways to be lit using lighting designed to minimise light pollution, designed in accordance with the Lighting Strategy and secured by DCO Requirement 30.



Fig 16. Internal Distributor Road, extract from illustrative landscape strategy plan

7. DESIGN CODE 03 – INTERNAL DISTRIBUTOR ROADS

7.3 Internal Distributor Roads Landscape Design Codes



Fig 17. Typical Sections through Internal Distributor Roads (sheet 1 of 2) – Numbers relate to Design Code Text below

7. DESIGN CODE 03 – INTERNAL DISTRIBUTOR ROADS



Fig 18. Typical Sections through Internal Distributor Roads (sheet 2 of 2) – Numbers relate to Design Code Text below

7. DESIGN CODE 03 – INTERNAL DISTRIBUTOR ROADS

7.3 Internal Distributor Roads Landscape Design Codes

1. Planting beyond the footpaths and cycleways, up to the development plot boundaries to include species rich grassland, native hedgerows with trees and native structural planting;
2. Footpaths and cycleways to be segregated with a 3m cycleway on one side of the road and a 2m footpath on the other;
3. Footpaths and cycleways to be separated from the carriageway by a planted or grass verge of around 3m in width to facilitate avenue tree planting with a minimum width of 1m between the kerb and the edge of the path where there are pinch points;
4. Avenue tree planting will be provided along the internal distributor roads both within the 3m verge and within hedgerows and planting along the edge of the road infrastructure to define the route and create an attractive green corridor for pedestrians and cyclists;
5. Species selection to provide seasonal interest. Similar species of a larger scale to be used around the main circulatory loop to define road hierarchy and enhance legibility;
6. For legibility, tree planting alongside the internal distributor roads and within the native structure planting to be to a larger scale;
7. Trees to be maintained with an appropriate clear stem height as they mature to avoid obstructing /conflict with vehicles;
8. Tree planting to be designed and maintained in accordance with advice in the Trees and Design Action Group ‘Trees in Hard Landscapes A Guide for Delivery’ to ensure the long term success of the trees;
9. Species and seed mix selection to be agreed at the detailed design stage drawing on selected species and seed mix lists contained within the DAS and LEMP. Species rich grass verges to be maintained with cutting limited to 1-3 times per year;
10. Road lighting to be located within the landscaped verge, and designed so not to constrain the arrangement of native structure planting including tree planting.

Fig 19. Typical Street tree Planting Detail

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY

8.1 Public Realm - General

The Public Realm comprises informal open space, green corridors containing public rights of way, footways, cycleways, SuDs and structural planting and public amenity areas including welfare areas. The design of the Public Realm will be subject to detailed design approval in accordance with DCO Requirement 21.

8.2 Public Realm - General Design Codes

- Provision of publicly accessible informal natural green space along the southern edge of the Main HNRFI Site and south of the A47 Link Road as an extension to Burbage Common and Woods Country Park in line with Green Infrastructure Policy Aspirations.
- A minimum of three well-being and amenity areas are proposed around the site, which are publicly accessible and benefit users of and visitors to the site.
- Creation of biodiversity corridors through and around the boundaries of the Main HNRFI Site;
- Creation of a realigned and upgraded on-site PRow network across the Main HNRFI Site, creating shared use routes through traffic free green corridors and providing onwards connections to recreational destinations such as Burbage Common and the Leicestershire Round, consistent with guidelines set out within the Aston Flamville and Elmesthorpe Floodplain LCA guidelines;
- In consideration of the wetland habitats located across the Elmesthorpe Floodplain LCA, multifunctional SuDS will be designed into and throughout the Proposed Development (not just confined to areas of public open space) to address any changes in hydrology, whilst also providing ecological benefit and separate off-line ponds created as wetland habitat;
- Delivery of a net gain tree planting across the site to increase canopy cover and enhance resilience to climate change through appropriate species selection;
- Provision of a sensitive lighting strategy which follows key parameters designed to limit light spill such as maximum heights, directional units, and specific light sources.
- Species selection to reflect existing, local species within the landscape context to enhance local distinctiveness;

- Landscape strategy to be developed in conjunction with ecological strategy to maximise biodiversity and provide appropriate mitigation for protected species;
- Landscaping within the public realm to be developed as connected habitats using the existing patterns of woodland and copse planting and wetland features within the local landscape;
- Planting across the public realm to be planted in accordance with an overall 'site plan' to be developed at the detailed design stage ensuring areas of public realm planting connect to 'on-plot' planting and off-site habitats to ensure interconnected habitats are established across the site;
- Woodland, copse and specimen tree planting to be designed and located to screen and filter views of lighting, new buildings and external yards;
- Native species hedgerows to be planted where natural separation or boundary treatments are required, linking to on-plot and off-site hedgerows where appropriate;
- Tree and shrub planting to be designed to provide amenity areas for users as well as connective habitat, open spaces created for well-being areas with some tree planting for shade and amenity;
- Woodland and copses to follow the principles of woodland edge planting with species grading through smaller trees and shrubs to meadow planting along the edges

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY



Fig 20. Public amenity area extension to Burbage Common and Woods.

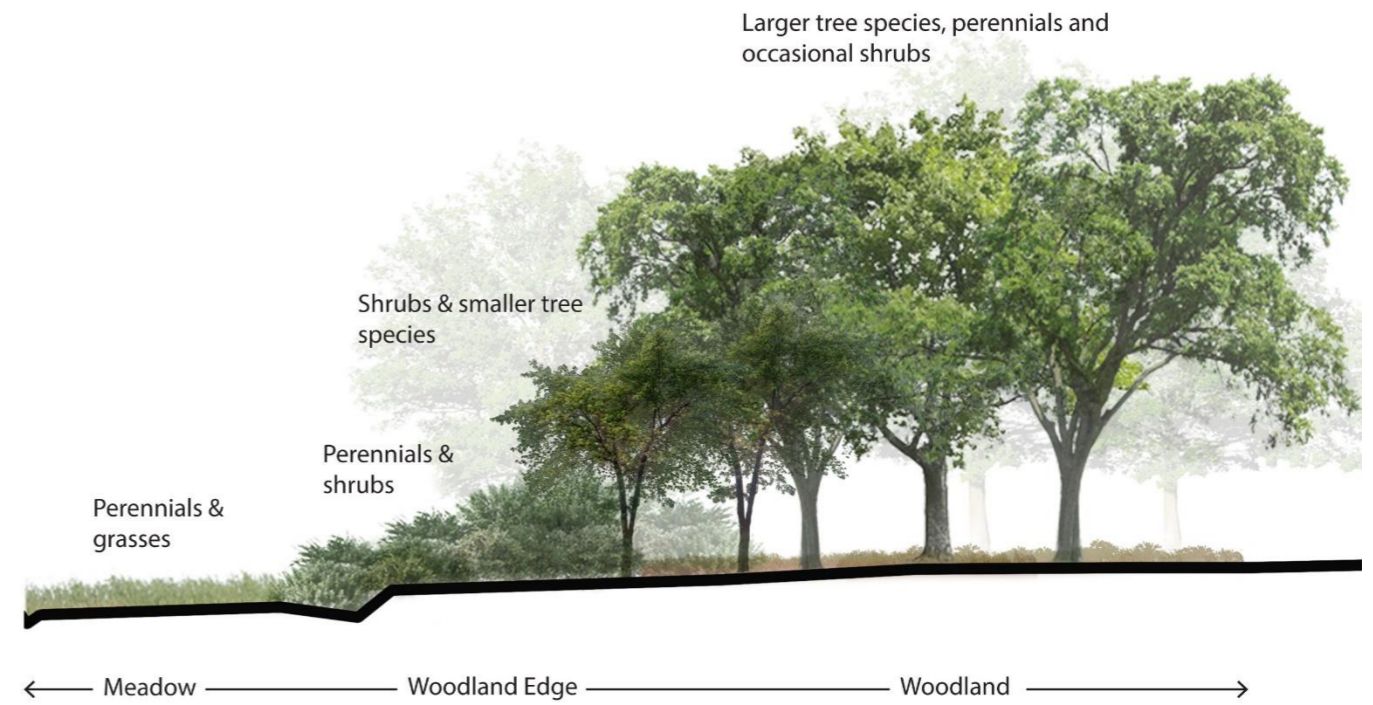


Fig 21. Typical Woodland Edge detail.



Fig 22. Example of Woodland Edge planting.

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY

8.3 Public Realm – Park Trail and Well Being Zone Specific Codes

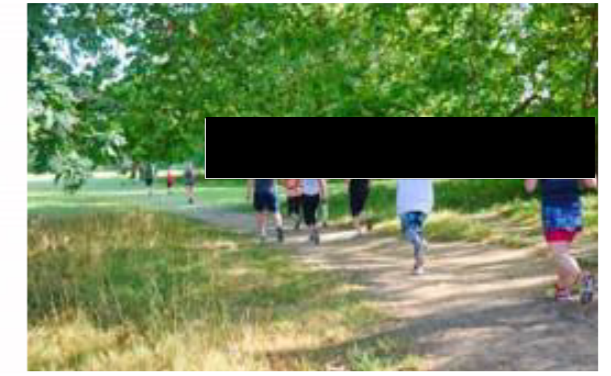
- In addition to the combined footpaths and cycleways and making use of the proposed footpaths and bridleways through the perimeter landscaping, it is proposed that there will be a park trail, and as it meanders around the development plots and into the soft areas these will be formed in a hard compacted gravel finish appropriate for use by all users;
- The park trail will break out into well-being zones located around the whole site and be for the benefit of the public and employees alike. These well-being zones will include activity / exercise equipment and amenity seating areas and be set on localised hardstanding areas to ensure both safe use and access;
- Proposed well-being zones to be planted with appropriate tree and shrub species to provide shade during the summer months. Species selection to include native and climate resilient specimens, which provide seasonal interest



Fig 23 Illustration of example public welfare area..



Source: <http://lakegenevaadventures.com>



Source: <http://proludic.co.uk>



Source: <http://adobestockphotos.com>

Fig 24. Example images of public welfare and well-being areas, gym equipment and park trail.

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY

8.4 Public Realm - SuDs and Wildlife Ponds – General

In consideration of the wetland habitats located across the Elmhurst Floodplain LCA, multifunctional SuDS will be designed into and throughout the Proposed Development (not just confined to areas of public open space) to address any changes in hydrology, whilst also providing ecological benefit and separate off-line ponds created as wetland habitat.

8.4.1 SuDs and Wildlife Ponds – Landscape Specific Codes

- The Drainage Strategy includes SuDS features such as attenuation basins and swales which will be expanded upon in the detailed design and agreed as part of Requirement 13 and 21;
- Key landscape principles for these features would follow advice given in 'The SuDS Manual' published by Ciria and the Department for Environment and Rural Affairs;

Attenuation Basin Features:

- Curved edge/organic shape, avoiding 'uniform ovals or lozenges';
- Embankment profiles around each feature to vary in width from 4 to 30m to avoid regular forms and create varying profiles for habitats;
- Bank slope sides not to be greater than 1:3 to allow easy egress and movement of wildlife;
- Features to be designed with varying edge profiles and sizes to allow larger, shallower depressions to develop in some areas and more distinct 'pond features in others';
- Shelving to be introduced as appropriate where deeper profiles are required; and
- Incorporation of areas of reed bed for water quality improvement.

Diverted Stream Corridor

The following design principles are to be included in the stream diversion:

- Re-profiling of banks following redirection to create a more naturalistic channel, suitable for a range of riparian species;
- The addition of riffles and lags in order to create a variety of niches suitable for a range of invertebrate and fish species; and
- Planting of riparian vegetation along the stream corridor.

Specific principles on feature profiling are set out below:

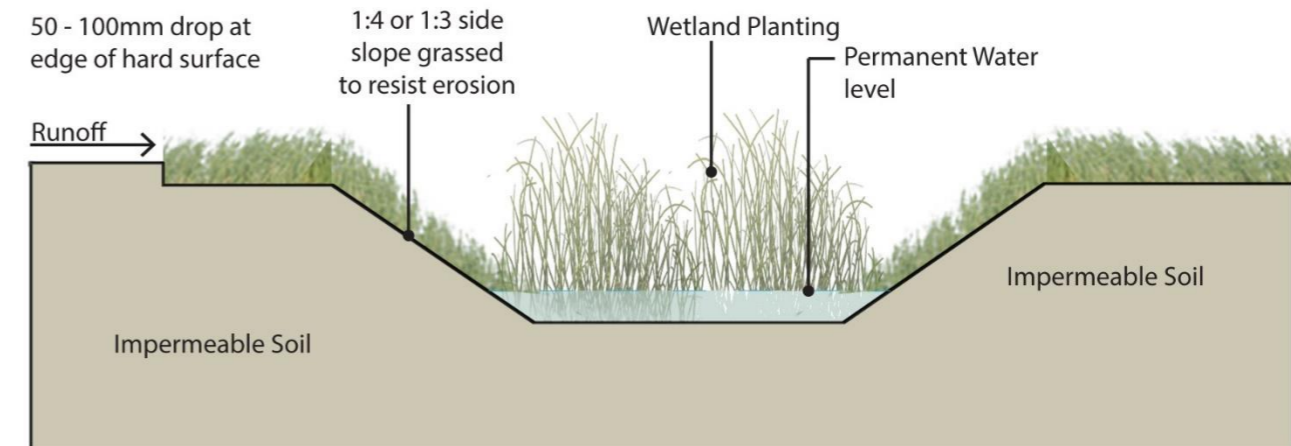


Fig 25. Typical Wet Swale.

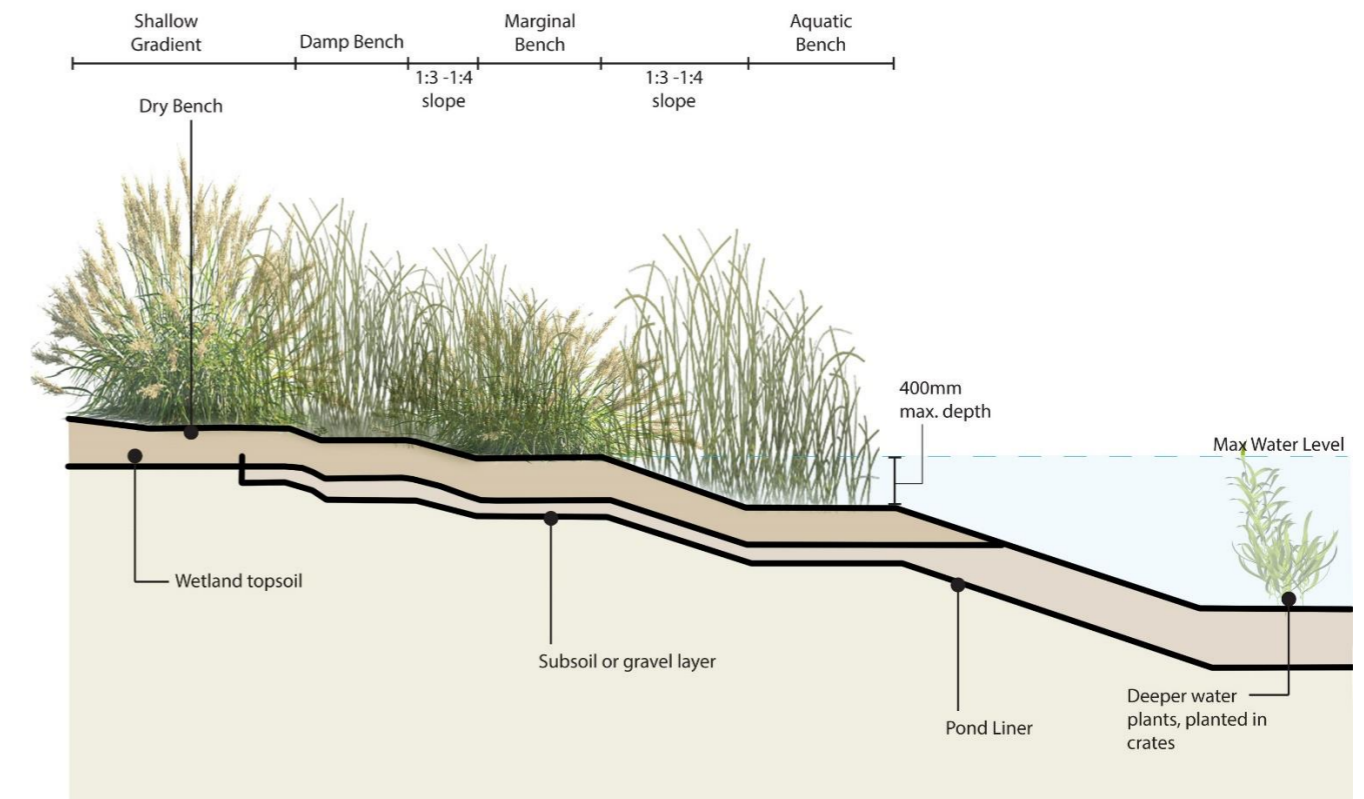


Fig 26. Typical Wildlife Pond edge profile.

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY

8.5 Public Rights of Way - General

Throughout the design evolution of the Project, the routing and rerouting of PRoW across the Main HNRFI Site has been explored and consulted with Leicestershire County Council (LCC) in which a Public Rights of Way Strategy has been developed. Clear direction and signage will be provided to direct users towards and along the new PRoW.

8.5.1 Public Rights of Way – Specific Codes

- Enhance access to Burbage Common and Wood Country Park with upgraded PRoW connections in terms of surfacing and accessibility;
- Provide a link southward from Footpath U50/4 along the northern edge of the railway, passing Footpath V23/1 and linking with Bridleway U52/9 and Footpath U52/8 which provide a safer route via a new bridge over the railway. The proposal at the third crossing point at the Outwoods is to upgrade to a pedestrian bridge, improving safety for footpath users;
- Shared paths will be provided adjacent to all roads through the site, allowing continued pedestrian access north, east, south and west through the site;
- Create a new traffic free link, routing a bridleway around the eastern edge of the Main HNRFI Site to connect with Bridleway V29;
- Incorporate footpaths and cycle routes along internal distributor roads to provide connectivity across the site and enhanced access to Burbage Common and Woods Community Park;
- Proposed routes will be tree-lined and/or within green corridors where appropriate to create attractive walking and cycling routes across the site;
- Surfacing to footpaths and cycle routes to follow LCC Highways Design Guidance;
- Signage to be provided to enhance wayfinding across the site.

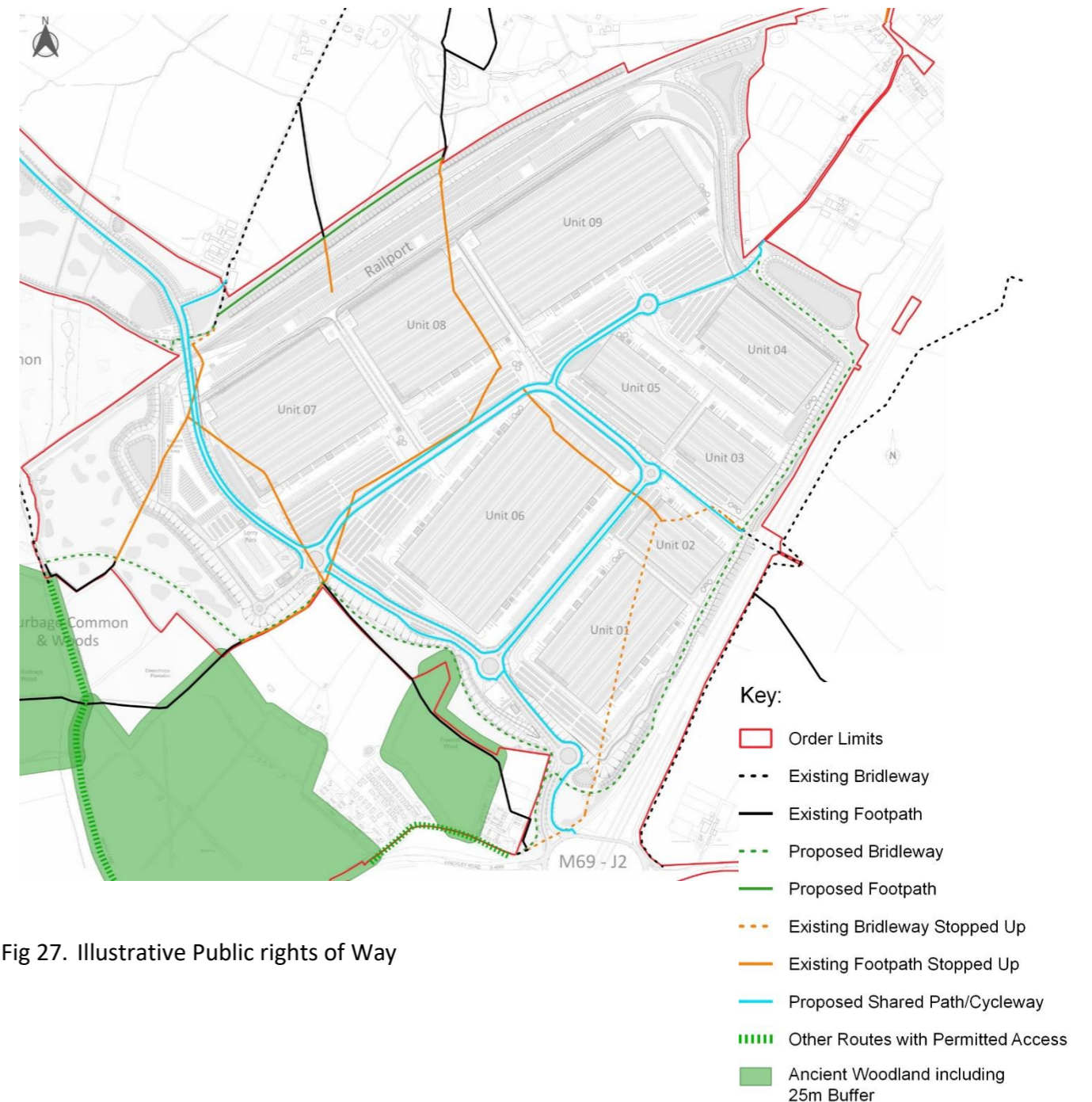


Fig 27. Illustrative Public rights of Way

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY



Fig 28. Typical Section through green corridor with Public Right of Way

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY

8.5.2 Public Rights of Way – Landscape Design Codes

1. Proposed routes to be tree-lined and/or within green corridors where appropriate to create additional visual and physical separation from vehicles, buildings and infrastructure;
2. Amenity of new bridleway and footpath routes to be created by varied habitats along the route including, woodland, scrubs, meadow grassland and ponds as well as streamside wet woodland and grassland on the eastern boundary bridleway route;
3. Geometry and surfacing to footpaths, bridleways and cycle routes to follow LCC Highways Design Guidance: - 2m pedestrian or cycle only routes (with 1.2m minimum for footpaths where they encounter an obstacle) and 3m for shared footpath/cycleways. Longitudinal gradients to be a minimum of 1:100 and a maximum of 1:20;

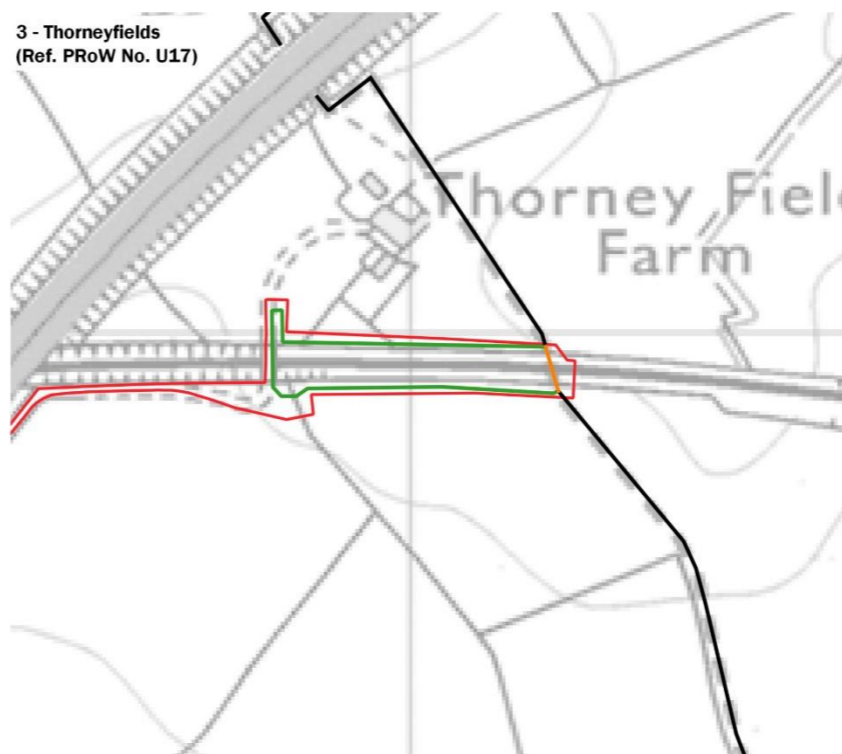
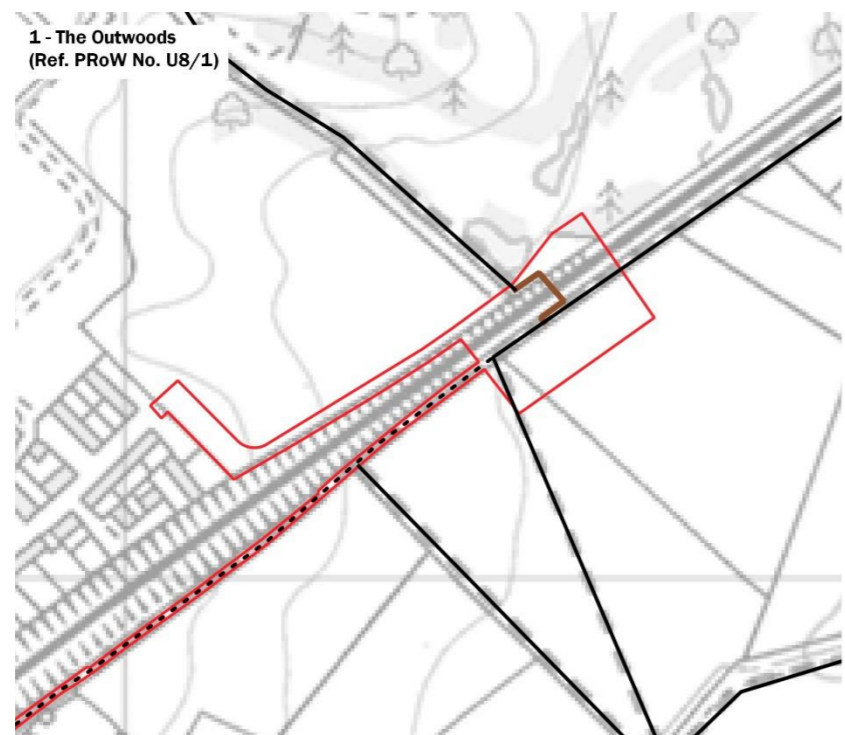
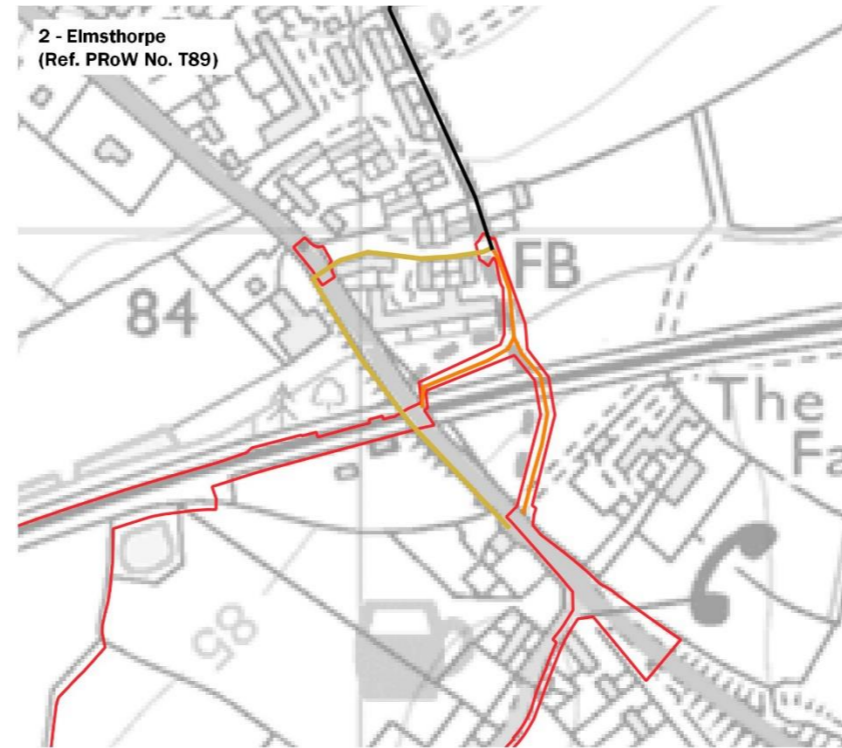
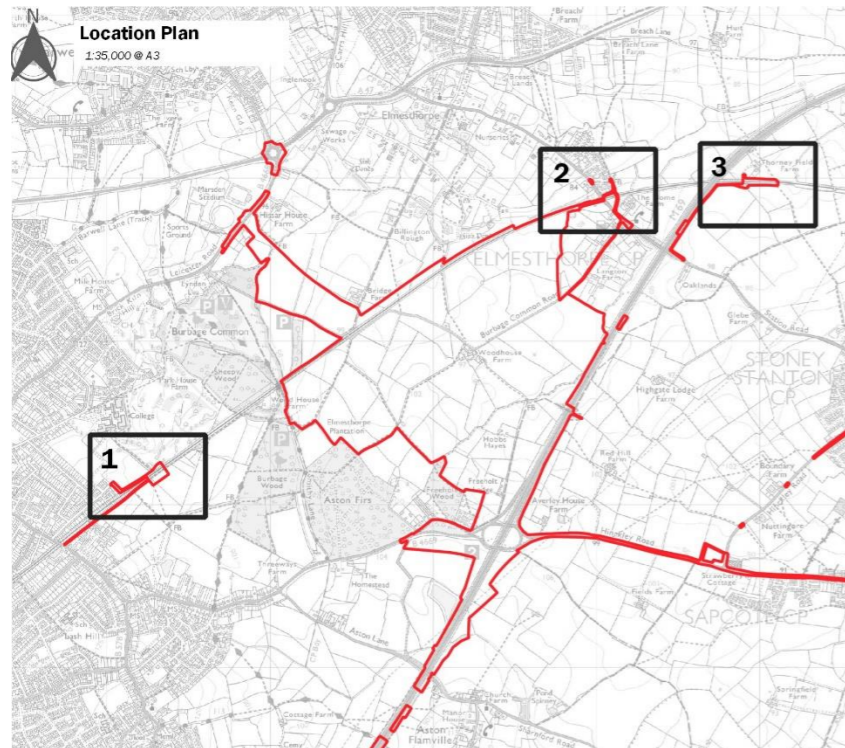
Further codes related to the Public Rights of Way but not covered by the illustrations are as follows:

- Routes, access points and junctions to include signage and way markers with clear directional and distance information to aid users;
- Pegasus Crossing on A47 Link Road to follow British Horse Society 'Advice on Road Crossings for Equestrians'. Design to include a user control 'set-back' from the roadside within a 'coral' at a height suitable for riders with waiting times between pressing the control and traffic lights changing as short as possible.



Fig 29. Example Pegasus Crossing.

8. DESIGN CODE 04 – THE PUBLIC REALM AND PUBLIC RIGHTS OF WAY



- Key:**
- Order Limits
 - Existing Bridleway
 - Existing Footpath
 - Proposed Footpath
 - Existing Footpath Stopped Up
 - Alternative Route
 - Proposed Bridge

Fig 30. Illustrative Public rights of Way at Level Crossing Points

9. DESIGN CODE 05 – DEVELOPMENT PLOTS

9.1 General

It is proposed that the design of the HNRFI will comprise defined development plots, accessible from the internal distributor roads and consist of units of varying sizes & site layout arrangements, to appeal to the requirements of individual occupiers. Whilst individual occupiers may have some exacting requirements that will have to be specifically addressed, the design codes set out below will provide the starting point for all developments to be considered against.

9.2 Specific Codes

- Building layouts will be configured such that the active office frontages will address the internal distributor roads or the main A47 Link Road to enhance the public realm;
- Car parking will be readily accessible & visible from both the internal distributor roads and the active office frontage to provide natural surveillance. Primarily, the parking will be provided at surface level with multi-storey car parks only being provided to address occupier specific needs.
- The amount of car parking on each plot will be determined by the Local Authority standards with a need to support the Framework Travel Plan;
- This will include a minimum 5% disabled parking provision
- Where possible, there will be a minimum of 2m of on-plot landscaping between the development & the plot boundary with the internal distributor road / A47 Link Road infrastructure;
- Segregation of car and service vehicle access will be provided for each of the individual plots;
- This segregation should be in the form of separate access positions;
- Covered cycle parking will be provided in accordance with the approved ratios and will be positioned close to each building entrance in a secure, visible & well-lit location;
- Service areas will be a minimum depth to allow for a 25m diameter turning circle;
- Where security is required to service yards and the building perimeter, this will be in the form of green coated paladin fencing, minimum 2.4m high;
- Visual screening will be provided to the perimeter of the site by on plot landscaping;
- All car parking and frontage landscaping areas to be open and un-fenced to 'face on' to the frontage and include landscaping in car parking areas where practicable;

- Boundaries between buildings to be security fencing within grassland.



Fig 31. Illustrative development plot



Fig 32. Illustrative development plot

9. DESIGN CODE 05 – DEVELOPMENT PLOTS

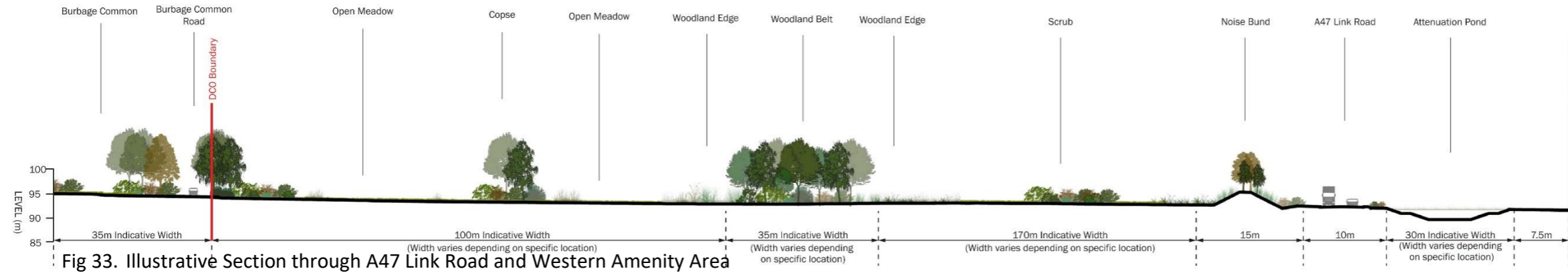


Fig 33. Illustrative Section through A47 Link Road and Western Amenity Area



Fig 34. Illustrative Section through Southern Boundary with Castlewood Grassland



Fig 35. Illustrative Section through South Eastern Boundary with M69 (South)

9. DESIGN CODE 05 – DEVELOPMENT PLOTS

9.3 Development Plot Landscaping

The landscape treatment of each Development Plot will be appropriate to the function of the buildings insofar as it will reflect the scale and land uses common to developments of this type, and will help to establish the overall development as a prime business destination. It will also link in with the main park landscaping proposals to produce a cohesive development.

9.3.1 Development Plot Landscape Design Codes

- Landscaping within the development plots to be developed as connected tree and shrub zones, using a mixture of specimens and species both native and non-native, selected to provide resilience to climate and disease as well as amenity interest;
- Planting across the site to be planted in accordance with an overall 'site plan' to be developed at the detailed design stage ensuring areas of planting within the plots connect to areas of planting on adjacent plots where feasible as well as connect to 'off-plot' structural, hedge and tree planting to ensure interconnected habitats are established across the site;
- Tree planting to be arranged within informal groupings, and designed to provide a long-term solution to filter views of, and lighting from, new buildings and external yards;
- Hedgerows to be designed as ownership and plot boundaries wherever possible either as stand-alone features around car parks or in combination with fencing where a more secure boundary is required;
- Hedgerows to be linked to establish green connections across the site connecting to the green infrastructure at the core of the development along the internal distributor roads and A47 Link Road. Hedgerows to be predominantly native species planted in double staggered rows;
- Tree and shrub planting to be designed to provide onsite amenity areas for users as well as connective habitat;
- Planting to be designed so entranceways are clearly identifiable from the access routes of the development, respecting visibility splays and signage;
 - The landscaping of each development plot will be established and maintained for longevity with an appropriate management plan.
 - As part of the commitment to BREEAM Excellent, an onsite amenity area made up of hard and soft landscaping will be provided on each individual plot, for use by the occupants.

Fig 36. Illustrative On plot landscaping



Fig 37. Illustrative On plot landscaping

10. DESIGN CODE 06 – RAILPORT

10.1 General

It is proposed that the design of the HNRFI will include an intermodal freight terminal or 'Railport' capable of accommodating up to 16 trains up to 775m in length per day, with hard-surfaced areas for container storage and HGV parking and cranes for the loading and unloading of shipping containers from trains and lorries. The Railport is connected to the Felixstowe to Nuneaton Freight line and is designed with an 'in and out' arrangement with two connections onto the main line to minimise shunting within the Railport itself.

Empty containers will be stacked in a separate 'Railport returns area' located to the south of the proposed A47 Link Road adjacent to the south-western end of the Railport. The Railport will be subject to detailed design approval post-consent, in accordance with DCO Requirement 4 and relevant Design Guidance.

10.2 Specific Codes

- The Railport and returns area will both be screened visually through the use of landscaped bunds to the south and west to minimise its impact on the wider area and amenity space.
- Vehicular access will be taken from its own dedicated internal distributor road from the A47 Link road to avoid interaction with the wider development.
- A dedicated link road from the Railport to the internal distributor road within the Main Site will be provided to allow for the use of HGV's or tugmaster trailers to move containers to the non-directly rail connected buildings, and allow the whole park to be rail-served.
- The Railport will also be provided with dedicated ancillary office and welfare accommodation as well as parking facilities for the employees. The accommodation will match the design aesthetic of the rest of the development.



Fig 38. Freight train and reach stacker loading

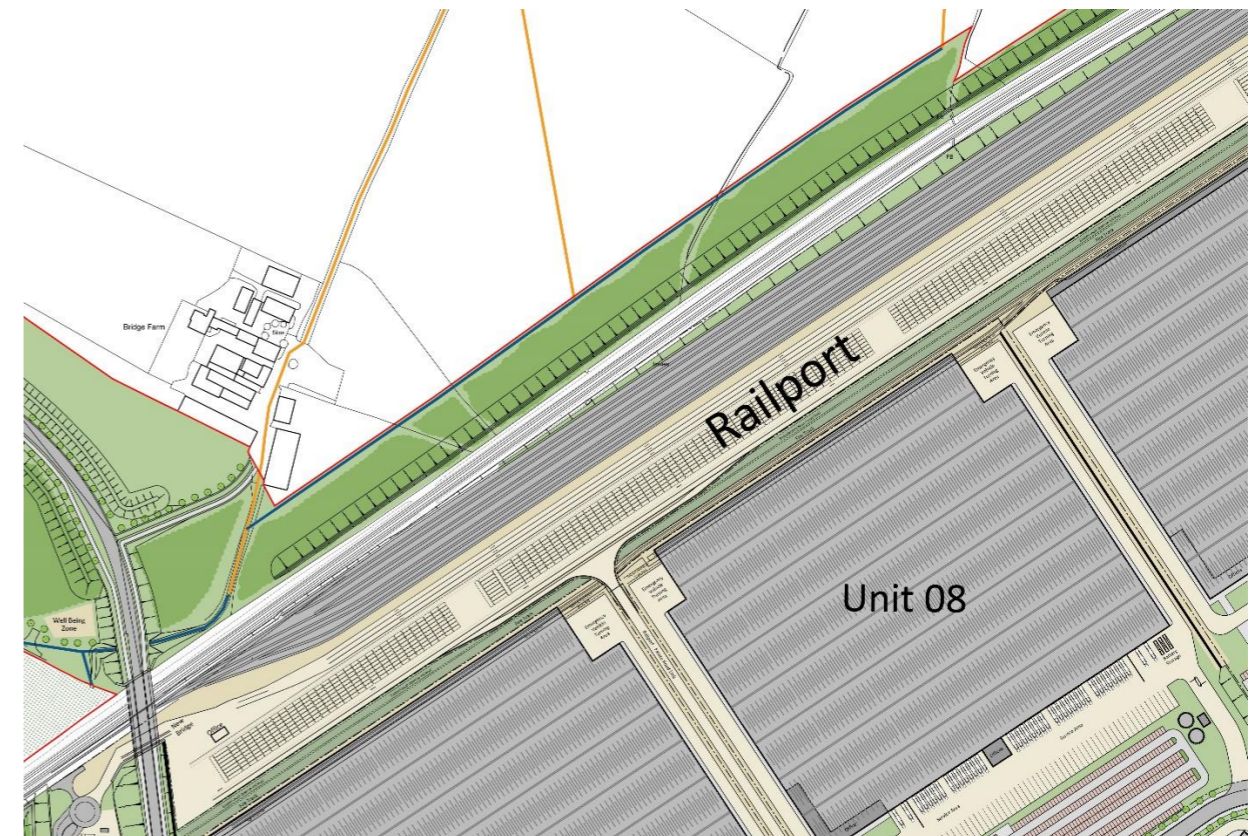


Fig 39. Extract from illustrative masterplan of Railport.

11. DESIGN CODE 07 – BUILDING DESIGN, COLOUR PALETTE & EXTERNAL LIGHTING

11.1 General

Reference has already been made, as to how the development should ultimately deliver a place where people want to work, with a strong identity of its own, reflecting the requirements of an SRFI, whilst respecting the surrounding uses and context.

To that end, the form of the distribution buildings will need to address the following two primary drivers, as well as addressing the brief of the client to sit alongside their own portfolio of developments but be a clearly identifiable scheme that responds to the individual needs of the wider marketplace.

- To sit harmoniously within the site setting when seen from key long views.
- To present an attractive, well considered, and high-quality design when seen from shorter views and avoiding a monolithic appearance.

From the long views, the site will generally be seen against the agricultural landscape and adjacent Burbage Common and Woods as well as between the major infrastructure corridors of the M69 and the railway. Therefore, its impact can be mitigated using a subtle banding from a suitable colour palette, balanced with sensitively designed vertical elements, in order to break up the long elevational expanses. The roof scape was also a key consideration in order to assist in assimilating the built forms within their immediate context.

The buildings will be subject to detailed design approval post-consent, in accordance with DCO Requirement 4 and relevant Design Guidance. Whilst individual occupiers may have some exacting requirements that will have to be specifically addressed, the design codes below set the overall design principles

11.2 Specific Codes - Building Form

- To sit harmoniously when seen from long views, building facades will include horizontal elements to assist in anchoring the building into their setting. This can be achieved with combinations of horizontal cladding and/or bands ribbon glazing;
- Curved roof forms to be used to soften the profile of the building;
- To present an attractive and well considered design when seen from shorter views within the public realm, buildings will use a combination of horizontal and vertical elements to avoid a monolithic appearance.

11.3 Specific Codes - Building Height

- The development plots, as illustrated upon the parameters plan are designed to differing criteria with regard to building height in order to provide the maximum flexibility the occupiers demand, as well as respecting the impact upon the wider landscape. As such the maximum heights of the buildings have been set between 22m and 28m above FFL, and all relative to their own building plateaus. This in turn has dictated 'glass ceilings' beyond which the buildings won't protrude.



Fig 40. Illustrative building form



Fig.41. Illustrative example of application of design principles roof form.

11. DESIGN CODE 07 – BUILDING DESIGN, COLOUR PALETTE & EXTERNAL LIGHTING

11.4 Specific Codes - Office Design

- Office accommodation will be located to overlook the car parking areas and entrance spaces;
- Different cladding types will be used on the office elevations to assist in creating an active and well-designed frontage which is readily distinguished from the rest of the building;
- Large areas of glazing will be used to create prominent entrance areas;
- Entrance areas are to be emphasised with the use of external porticos so that they are clearly visible from the approach to the building as with other units throughout the park meaning entrances will be easily identified for each building;



Fig. 42. Illustrative example of office design and main entrance arrangement.

- Office windows, including the main entrance portico will comprise full height glazing modules, incorporating brise soleil, at each level to maximise the enhancement of these components, whilst sitting in a contrasting colour cladding to differentiate them from the rest of the building whilst sitting harmoniously within the facades.



Fig. 43. Illustrative example of office design.

11. DESIGN CODE 07 – BUILDING DESIGN, COLOUR PALETTE & EXTERNAL LIGHTING

11.5 Specific Codes – Materials

The correct choice of materials is key to the successful integration of the development into the existing landscape. The existing buildings within the application site, consist of traditional, domestic scale buildings and associated farm outbuildings. The material pallet is one of traditional brick and tile appropriate to scale of the properties and when they were constructed. Large format rendering of commercial distribution buildings with such material types presents difficulties in scale and application, as well as not being appropriate to the functionality or future adaptability of the buildings.

Other materials such as render and timber were also considered, but again they were dismissed on the same grounds, as well as the ongoing maintenance and replacement they require affecting their sustainability credentials.

The use of green walls was also considered, but the ability for them to grow successfully, in an operational environment was questioned given their susceptibility to impact and also the areas required to make a meaningful statement made them very cost prohibitive.

On that basis, the use of metal cladding systems, combined with the integration of feature glazing panels, with alternative panelling systems and curtain walling for the office elements was deemed to be the most appropriate range of materials for the buildings within the SRFI, and their application can be defined as follows:

- The building designs will include the use of different cladding profiles, to create subtle variations in texture and provide relief to large elevations;
- Office elevations will use either flat or micro-rib profile panels;
- Where the offices are inset into the body of the main building, then the band of cladding below the building eaves will be consistent around the whole building;
- Warehouse elevations will use profiled cladding types in a combination of both vertical and horizontal orientations.
- Coatings to building cladding will be a non-glossy matt material, to ensure the new buildings are visually recessive;
- The roofs will be finished in Anthracite (RAL 7012) with a non-glossy matt coating to be recessive and so that glare is avoided when viewed from the wider landscape, PV panels will be fixed directly to the roof, following the curve, and coloured Anthracite or a similar dark grey to minimise the differentiation between the panels and the main roof, together with a non-reflective coating to minimise any glint or glare;

- As part of each application pursuant to Requirement 4 (Detailed Design Approval) a Glint and Glare study will be undertaken and submitted, and the PV arrangement on the roofs will ensure that the effects are adequately reduced on any affected receptors identified as well as introducing any additional screening where appropriate;



Fig. 44 Application of material and colour



Fig 45. Illustrative example of a PV installation on the roof.

11. DESIGN CODE 07 – BUILDING DESIGN, COLOUR PALETTE & EXTERNAL LIGHTING



Fig.46 Application of material and colour

11.6 Specific Codes - Colour Palette

- The colours have been chosen to reflect those of other, established Tritax Symmetry developments and identify themselves as a continuation of their developments, creating a subtle yet contemporary appearance, and one that doesn't mimic surrounding developments to create its own sense of place.

The colour palette is as follows:

Warehouse Roof, Eaves and Fascia:

- Anthracite (RAL 7016)

Warehouse Walls (including corner feature areas):

- Albatross (RAL 240 80 05)
- Alaska Grey (RAL 7000)
- Hamlet (RAL 9002)
- Oyster (RAL 7035)
- Slate Grey (RAL 7012)

Offices:

- Hamlet (RAL 9002)

Hub Offices

- Slate Grey (RAL 7012)
- Elevations will be composed using colours from this palette in broad bands, both horizontally and vertically, to achieve the stated codes for Building Form above.

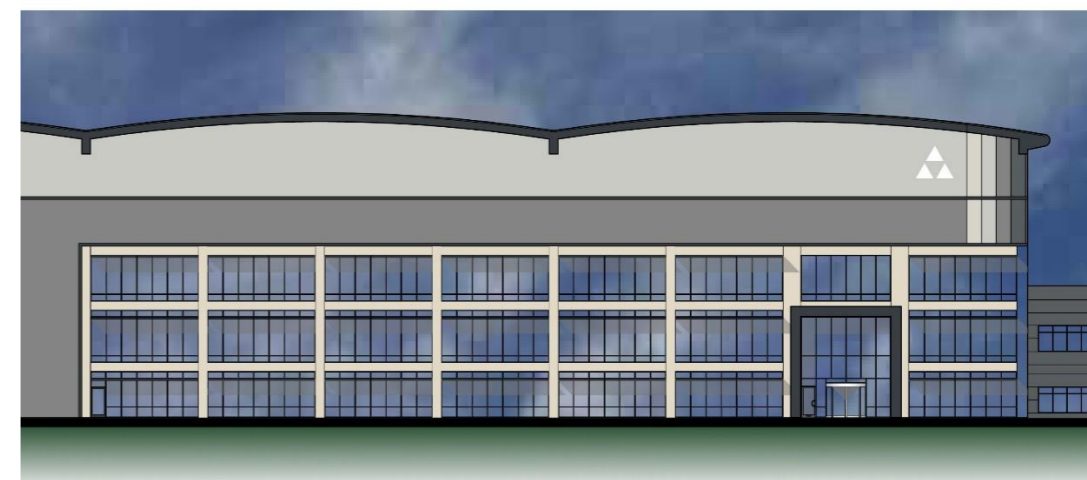


Fig. 47 – Typical Office Material Application

11. DESIGN CODE 07 – BUILDING DESIGN, COLOUR PALETTE & EXTERNAL LIGHTING

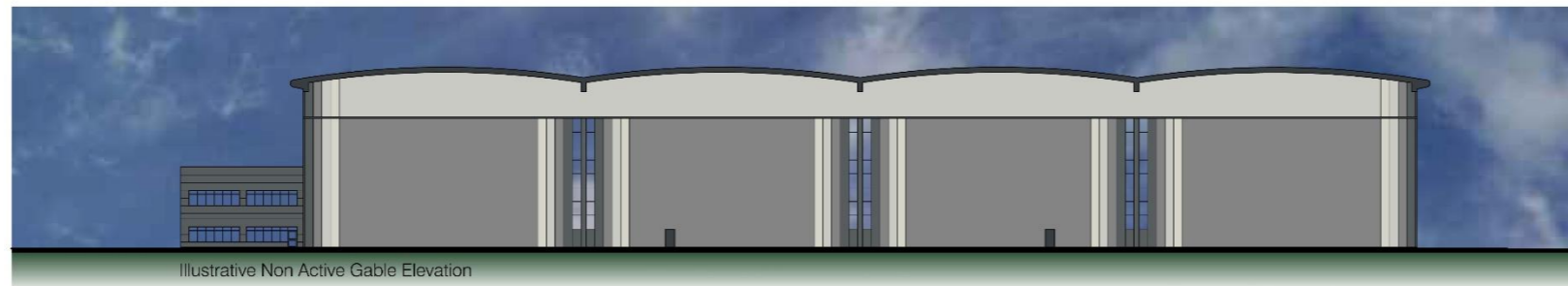
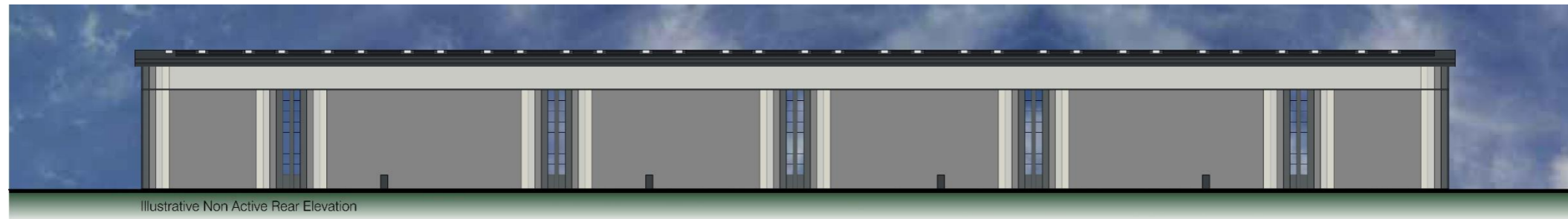


Fig. 48 – Typical Elevation Material Application

11. DESIGN CODE 07 – BUILDING DESIGN, COLOUR PALETTE & EXTERNAL LIGHTING

11.7 Specific Codes - External Lighting

- 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;
- Lighting should be Dark Skies Compliant (in-line with guidance from the international Dark Sky Association (IDA), described in CIBSE Lighting Guide LG6:1992) and take into account requirements for air safety (as set out in the Airport Operators Association Advice Note 2) along with any ecological requirements;
- A lighting strategy setting out the location and type of lighting proposed, will accompany all Reserved Matters applications;
- 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 will be no greater than 12 m within the building development plots themselves, the use of high-mast lighting will be limited to the Railport itself;
- For the access roads and car parking areas all mounting heights will be 8 to 10 m. For the HGV loading / Access / Docking areas all mounting heights will be 10 to 12m. All units will have flat glass and mounted horizontally;
- Lighting impacts on all receptors will be minimised by careful design. If needed, baffles and shields will be attached to lighting units to further reduce lighting effects especially adjacent to dark corridors;
- Any proposed lighting will not have the potential for glare or to dazzle pilots or be confused with aeronautical ground lighting;
- Public realm lighting should have a uniformity e.g. street lighting would need to be the same columns with a uniform lighting palette;
- External lighting will be provided wherever necessary to provide a safe and secure environment for staff and other users after dark. 'Secured by Design' principles will be adopted and emphasis will be placed on achieving good uniformity of light distribution.
- The lighting lux levels will be kept to a minimum when adjacent to any natural habitats and will avoid direct light spill into sensitive locations.



Fig 49. Column mounted and building mounted, light fittings for the development plots and highways.

12. DESIGN CODE 08 - SECURITY, ACCESSIBILITY, PLANT, BOUNDARIES AND SIGNAGE

12.1 General

The purpose of the design code is to control the detail of future Reserved Matters applications, and as such there are a number of component parts that make up the ultimate finished development that specific codes can be applied but don't fall under generic headings and this chapter is set up to capture those elements.



Fig 51. Examples of a secure and covered cycle shelter.

12.2 Specific Codes – Security

- Barriers will be provided to the individual site entrances to provide out of hours security;
- Gatehouses will be provided at the entrance to the service areas to monitor and control the flow and access to the individual buildings;



Fig 50. Example of gatehouse at entrance to service areas.

- External lighting will be designed to BS 5489 to achieve appropriate levels of illumination in all areas;
- Good natural surveillance will be provided for parking and pedestrian areas, including footpaths and cycleways;
- All external doors fitted with secure frames and locks.

- Secure parking will be provided for cycles located in highly visible and supervisable locations;

12. DESIGN CODE 08 - SECURITY, ACCESSIBILITY, PLANT, BOUNDARIES AND SIGNAGE

12.3 Specific Codes - Energy Efficiency and Sustainability

- Tritax Symmetry are a Gold Leaf Member of UKGBC and aim to meet UKGBC's definition for net zero carbon in construction and aim to deliver these new buildings at net zero carbon in construction paying high regard to energy efficiency, sustainability, and carbon offsetting. Evidence associated with each phase of the development, will be collated into a Green House Gas reduction Report;
- A proportion of the energy requirements for the development will be addressed through the provision of onsite generation of renewable energy with PV arrays mounted on the roofs;
- Energy consumption will be minimised by making maximum use of natural heating and cooling processes;
- Each individual development site will incorporate the provision of EV charging facilities to 20% of the total parking bays with provision designed in to connect the balance of the parking in the future as take up of electric vehicles increases. In addition, ductwork within the service areas of each development will be provided to allow for the future installation of electric HGV charging points as the technology develops in this sector.

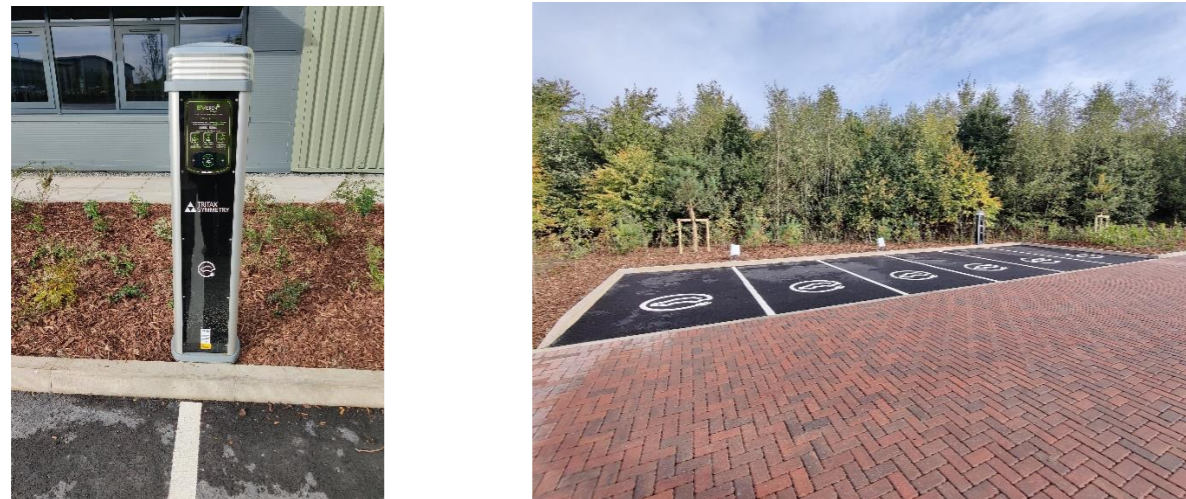


Fig 52. Examples of EV charging posts and bays within car park.

- Energy conservation will be maximised through the use of efficient building fabric;
- Natural daylighting will be maximised within office elements with areas of glazing. Excessive solar gain will be avoided by considering aspect, glass specification and external shading features such as brise soleil;

- The percentage of rooflights within the distribution buildings has been set at 10% of the floor area, which in combination with feature glazing withing the wall maximises natural daylighting, whilst minimising heat gain;
- Office elements will seek to make best use of natural ventilation by considering office depth and dual aspect planning, where the requirement permits;
- Buildings will be designed to incorporate Building Energy Management Systems to control heating, lighting, ventilation, hot water supply and renewable energy interfaces;
- All materials will be selected for their robustness, recyclability, value and availability from local and sustainable sources, which can be verified by data sheets provided by the relevant manufacturer/supplier;
- The use of non-recyclable plastics will be avoided, and alternative materials requested to be put forward for consideration;
- The availability of a material from a local source, whether that be the raw material or manufacturing facility will be given full consideration;
- The use of materials and surface treatments which produce harmful emissions will be avoided;
- Each of the plots within the development will be designed to achieve a cut and fill balance, removing the need to export large quantities of material off site.

12. DESIGN CODE 08 - SECURITY, ACCESSIBILITY, PLANT, BOUNDARIES AND SIGNAGE

12.4 Specific Codes – Accessibility

The new development will be fully Equality Act compliant with all areas being fully accessible.

- All crossings within the development will comprise dropped kerbs and tactile paving;
- All entrances and exits will be designed with level thresholds;
- Vertical access will be provided to all levels;
- Accessible parking areas will be located as close as possible to the main vertical circulation points to minimise travel distance.

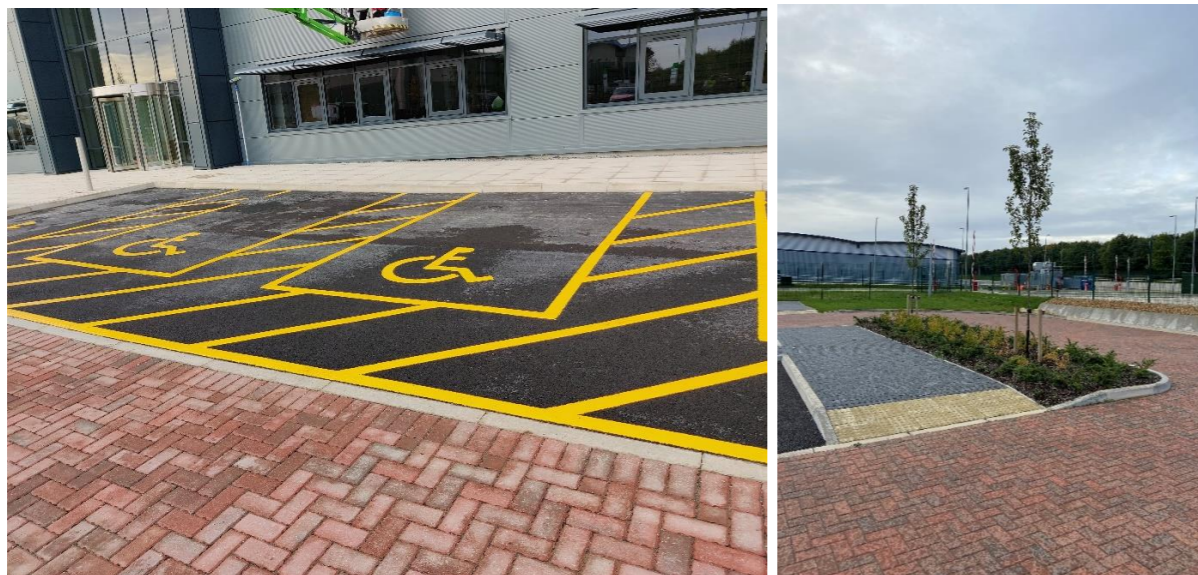


Fig 53. Accessible parking adjacent to main entrance, and crossing detail within car park.

12.5 Specific Codes - Waste and Recycling

- Where external waste management areas are required by occupiers, these will comprise covered bins to separate out recyclable materials effectively screened within a gated enclosure;
- Enclosures to be timber hit and miss construction and 2.4m high.



Fig 54. Secure waste and recycling enclosures.

12.6 Specific Codes - External Plant and Equipment

- All external plant and equipment will be effectively screened within a gated enclosure;
- Enclosures to be timber hit and miss construction and 2.4m high;
- Any roof mounted plant should be minimised and incorporated into the design of the building.

12. DESIGN CODE 08 - SECURITY, ACCESSIBILITY, PLANT, BOUNDARIES AND SIGNAGE

12.7 Specific Codes - Boundary Treatment and Fencing

It is accepted that a certain amount of security fencing will be required for health and safety and security purposes. However, rather than fencing being automatically applied to the full extents of all boundaries around units, consideration will be given at the detailed design stage to appropriate alignments. For example, where practical, positioning fencing tightly to service yards and the railport would enable the car parks and landscaped areas to remain within more open 'frontage' areas creating a greater level of amenity along estate roads/footpath/cycle routes.

- Where service yards and operational areas require enclosure, this will be between 2.4m and 3.0m high green coated steel paladin fencing, with appropriate gates and barriers;
- Where security fencing is required, also plant native boundary hedging where practical to soften the appearance and increase biodiversity.;
- Where possible, car parking areas will remain open with barriers to control out of hours vehicle access if required by the occupiers;
- Native hedgerow boundaries to define spaces and create a sense of ownership along unit frontages where security can be more relaxed.



Fig 55. Typical boundary security fencing.

12. DESIGN CODE 08 - SECURITY, ACCESSIBILITY, PLANT, BOUNDARIES AND SIGNAGE

12.8 Specific Codes - Estate Signage

- Estate signage will be provided at the entrance to the development. This will be prominent and designed to reflect the character of the development and the Tritax symmetry branding.

These will create a gateway into the site. Directional signage will be provided within the development site identifying individual occupiers. A modular system will be used which permits adaption and expansion as functional needs require, whilst establishing a family of signs to create a cohesive approach to estate signage. Directional signage will be illuminated where required.



Fig 56. Typical estate signage totem.

12.9 Specific Codes - Building Signage

- The application clearly identifies signage locations on both the facades and roofs of the building for the developers signage and individual occupier signage will be subject to their own Advertisement Consent applications.



Fig 57. Illustrative building signage.