



## DESIGN AND ACCESS STATEMENT

### DOCUMENT 6.9 REV S2

The Northampton Gateway Rail Freight Interchange Order 201X

Regulation No: 5 (2) (q)

DESIGN AND ACCESS STATEMENT | MAY 2018

PHP ARCHITECTS

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Ground Conditions



Landscape and Ecology



Sustainability



Highways, Drainage and Earthworks



Rail



Highways



Construction Management



Transport and Highways Advice



Agricultural Land



Public Transport





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## SCOPE AND CONTENT

- 1.01 This Design and Access Statement has been prepared in support of an Application for a Strategic Rail Freight Interchange and associated infrastructure, on land adjacent to Junction 15 of the M1 Motorway and the Northampton loop line of the West Coast Main Line Railway.
- 1.02 This Statement seeks to explain the design approach that underpins the proposals. It begins with reference to the assessment work that has informed the preparation of the proposal and goes on to explain how the site has evolved in response to this work and to consultation. It then explains the key components and main structure of the scheme in terms of the scheme parameters and illustrative masterplan. It outlines the key design requirements that will form part of the detailed design proposals and explains the broad approach to the transport infrastructure that is proposed as part of the scheme. It concludes by outlining the approach to the phasing and delivery of the scheme.
- 1.03 The purpose of the Design and Access Statement is to provide supporting information to the application. It draws heavily on and should be read in conjunction with the other technical and supporting documents that are submitted with the application.

## SITE LOCATION AND CONTEXT

- 1.04 The application site consists of the land necessary to deliver a Strategic Rail Freight Interchange (SRFI) together with the landscaping and highway works associated with the SRFI. The Main (SRFI site is located 6.5km (4 miles) to the South of Northampton Town Centre (railway Station), on land to the west of the M1 Motorway, Junction 15. The village of Collingtree is located directly to the North, on the opposite side of the Motorway. The Northampton Loop to the West Coast Main Line Railway line lies adjacent to the western boundary with the villages of Milton Malsor and Blisworth beyond.

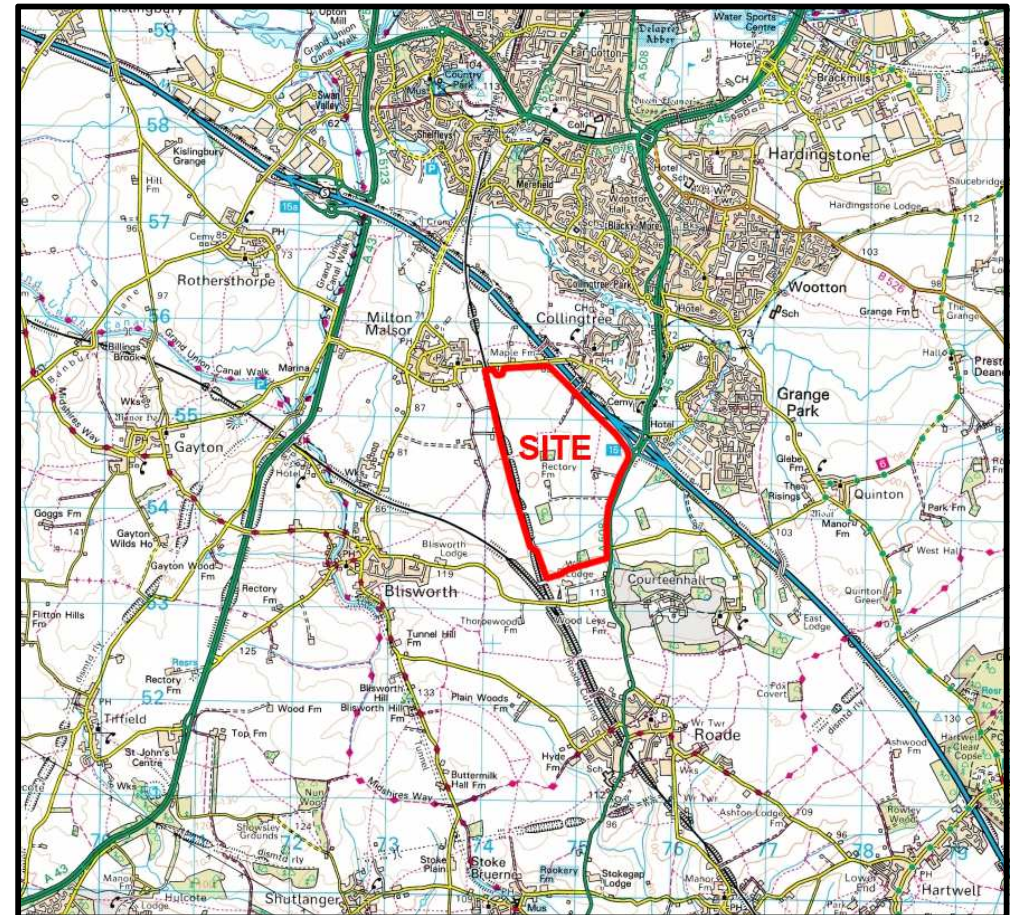


Figure 1: Main Site Location Plan

## 1.0 INTRODUCTION

- 1.05 The village of Roade is situated approximately 2 miles to the south of the main site along the A508 trunk road. The Grange Park Business / Industrial Estate, which includes large scale Warehouse and Distribution units as well as retail and hotel developments, lies beyond the Eastern boundary, diagonally opposite the J15 Motorway junction to the East.
- 1.06 The main site is physically contained by existing features on the ground, including the M1 to the north east, and the railway to the west, with the A508 providing the eastern boundary and the proposed point of access to the main site. This location is well related to the built-up area, close to major existing and planned residential developments on the southern side of Northampton, including Grange Park and is only a few miles from the existing Industrial Estates of Grange Park, Brackmills, Swan Valley and Pineham.
- 1.07 The A508 forms the boundary to the South East side of the main site and provides a direct link to the M1 motorway, and to the A45 via the M1 Junction 15. The main site is bounded to the Northern edge by Collingtree Road.
- 1.08 The existing ground levels on the main site rise by approximately 10 metres from the SE boundary to the NW boundary and approximately 3m from the eastern boundary with the Motorway and the western boundary adjacent to the railway line.
- 1.09 The total application 'Order Limits' site area shown in Fig 02 equates to a total of 290 hectares. This includes all of the land areas required for the development; i.e. for; buildings, hardstanding's, car parks, and plot landscaping as well as; earth screen bunding, storm water attenuation ponds, perimeter landscaping and all areas required for the proposed infrastructure improvement works to the A508, A45 (north of the motorway), and to Junction 15 of the M1 Motorway.

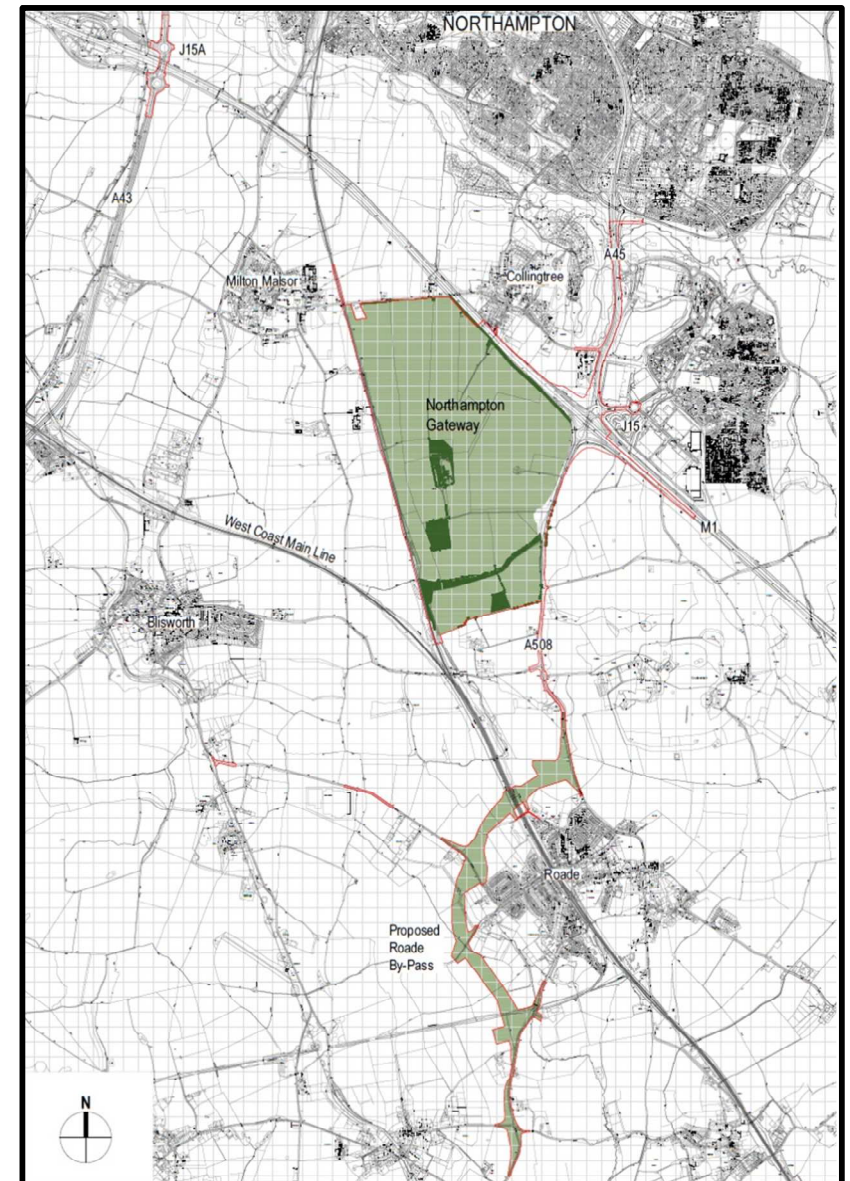


Figure 2: Application Order Limits and immediate site context

## DEVELOPMENT PROPOSALS

### 1.10 The proposed development comprises:

- An intermodal freight terminal including container storage and HGV parking, rail sidings to serve individual warehouses, and the provision of an aggregates facility as part of the intermodal freight terminal, with the capability to also provide a 'rapid rail freight' facility
- Up to 468,000 sq m (approximately 5 million sq ft) (gross internal area) of warehousing and ancillary buildings, with additional floorspace provided in the form of mezzanines;
- A secure, dedicated, HGV parking area of approximately 120 spaces including driver welfare facilities to meet the needs of HGVs visiting the site or intermodal terminal;
- New road infrastructure and works to the existing road network, including the provision of a new access and associated works to the A508, a new bypass to the village of Roade, improvements to Junction 15 and to J15A of the M1 motorway, the A45, other highway improvements at junctions on the local highway network and related traffic management measures;
- Strategic landscaping and tree planting, including diverted public rights of way;
- Earthworks and demolition of existing structures on the SRFI site.









## POLICY CONTEXT

- 2.01 The planning policy context for the development and the scheme response to policy will be set out in detail in the Planning Statement. The main conclusions particularly where they relate to design will be outlined here for ease of reference.
- 2.02 The National Planning Policy Statement for National Networks sets out the policy criteria for Strategic rail Freight Interchanges. It concludes that there is a compelling need for a network of SRFI's and establishes criteria with which new SRFI's should accord. This includes the need to have good access to the strategic road and rail network, ideally as a minimum a rail route with a minimum gauge capability of W8 or more. Sites which are located relative to the markets they will serve and in locations where the environmental effects of the scheme can be appropriately mitigated. The NPS recognises that countryside locations may be required for SRFI's. In terms of scale and design the NPS requires SRFI's to provide for a number of rail connected or rail accessible buildings and rail infrastructure to allow for more extensive connections in the longer term. The initial stages of the scheme should provide a rail link, intermodal handling and container storage. SRFI's should be capable of handling 4 trains per day and where possible capable of increasing the number. It should also be capable of accommodating 775m trains, minimise shunting and allow main line access from either direction.
- 2.03 The NPS includes design criteria for national networks. It confirms that visual appearance should be a key factor in considering the design of new infrastructure, as well as functionality, fitness for purpose, sustainability and cost. Good design should produce sustainable infrastructure sensitive to place and matched by an appearance that demonstrates good aesthetics as far as possible. It goes on to state that good design should meet the objectives of the scheme by eliminating or substantially mitigating identified problems by improving operational conditions and minimising adverse impacts.
- 2.04 Networks should also be as aesthetically sensitive, durable, adaptable and resilient as they can reasonably be.

## ENVIRONMENT

- 2.05 The NPS recognises that applicants may only have a limited choice in the physical appearance of some network infrastructure but that there may be opportunities for good design in terms of siting and design measures relative to existing landscape and historical character and function, landscape permeability, landform and vegetation.
- 2.06 The location of Northampton SRFI has been identified in response to the policy and evidence base. The approach to defining the application site, its boundaries, scale, form and structure and ultimately the design of the proposed scheme, have responded to this policy base but also to the assessment of the area and to market demand and commercial considerations.
- 2.07 The application is supported by an Environmental Impact Assessment (EIA) providing comprehensive information across the full range of technical studies and assessments including:
- Ecology and Tree surveys;
  - Landscape
  - Drainage and Flood Risk Assessment;
  - Heritage and Archaeology;
  - Air Quality and Noise Assessments
  - Lighting
  - Ground conditions and soil assessments
  - Social-Economic assessments
  - Transport
  - Waste
- 2.08 Details of and the conclusions reached by the environmental assessment work is set out in the Environmental Statement and not repeated here. Other supporting studies will set out the details of matters which have informed the approach to the design of the scheme including in relation to rail, market demand, sustainability, construction management. The assessment and design process has been iterative, with the design of the scheme having responded directly to the assessment work and then ultimately the final Environmental Statement assessing the effects of the defined application scheme.

## 2.0 SITE ANALYSIS

### OPPORTUNITY AND CONSTRAINTS

2.09 Having regard to the policy, environmental and economic matters, key opportunities and constraints can be identified that have informed the design of the application proposal. These are listed below and illustrated on the plans at figures 4 and 5.

#### Opportunities:

- Direct rail access to freight network – North and South facing connections deliverable;
- Direct access to strategic road network;
- To accommodate 775m long trains and large intermodal freight terminal with extensive storage and 16 trains per day;
- Large area of warehousing, with potential for flexible building sizes including large individual buildings, with a significant number directly rail connected.
- Extensive landscaping to screen the site and contribute to open space network and biodiversity enhancement. Retaining existing woodland cover and other established planting
- Enhanced road and transport design for the A508, A45 and Junction 15 of the M1 Motorway improving traffic flow rates and reducing congestion and queueing associated with Junction 15 of the M1
- Bring about major benefits to the strategic road network and deliver a Roade bypass;
- Deliver an SRFI strategically placed in relation to rail and road access, and the national focus of the distribution sector.
- Maximise the opportunities from the existing site topography to help contain and screen the development from surrounding areas, and limit any noise, and light effects;
- Site physically well contained by existing features on the ground, including the railway to the south and west, and the road network to the north.

#### 2.10 Constraints (without mitigation)

- Environmental effects on existing properties – limits location of built development and operational activity and determines the design of proposed scheme;
- Visual, noise, and lighting effects without appropriate screening;
- The need to respond appropriately to ecological features and landscape condition;
- Traffic congestion. Consideration of traffic generation to and from the site and potential impact upon local villages and communities.
- Potential environmental effects on existing nearby properties and open countryside which limits the location of built development, and determines key design characteristics;
- Effects on air quality management
- Public footpaths and rights of way cross the site.
- Access from existing A508 trunk road which experiences existing high traffic flows and congestion due to the restricted capacity of the M1 Junction 15.
- Topography of the site with approximately 10.0m differences in ground levels across the site (this also represents opportunities).
- Existing trees and hedgerows that are present on the site and adjacent areas.
- Existing wildlife and habitat areas within the site



## ATTRIBUTES OF NORTHAMPTON GATEWAY SITE

### Accessibility to the trunk road network;

To; M1 motorway  
A5, A43, A45, A14, A428

### Accessibility to strategic rail network;

Access to West Coast Main Line via the Northampton Loop

'W10' gauge cleared to major sea ports

### Accessibility to local markets;

Northampton and Milton Keynes and capable of serving national markets including London. Can expand the network of SRFI's.

### Accessibility to labour supply;

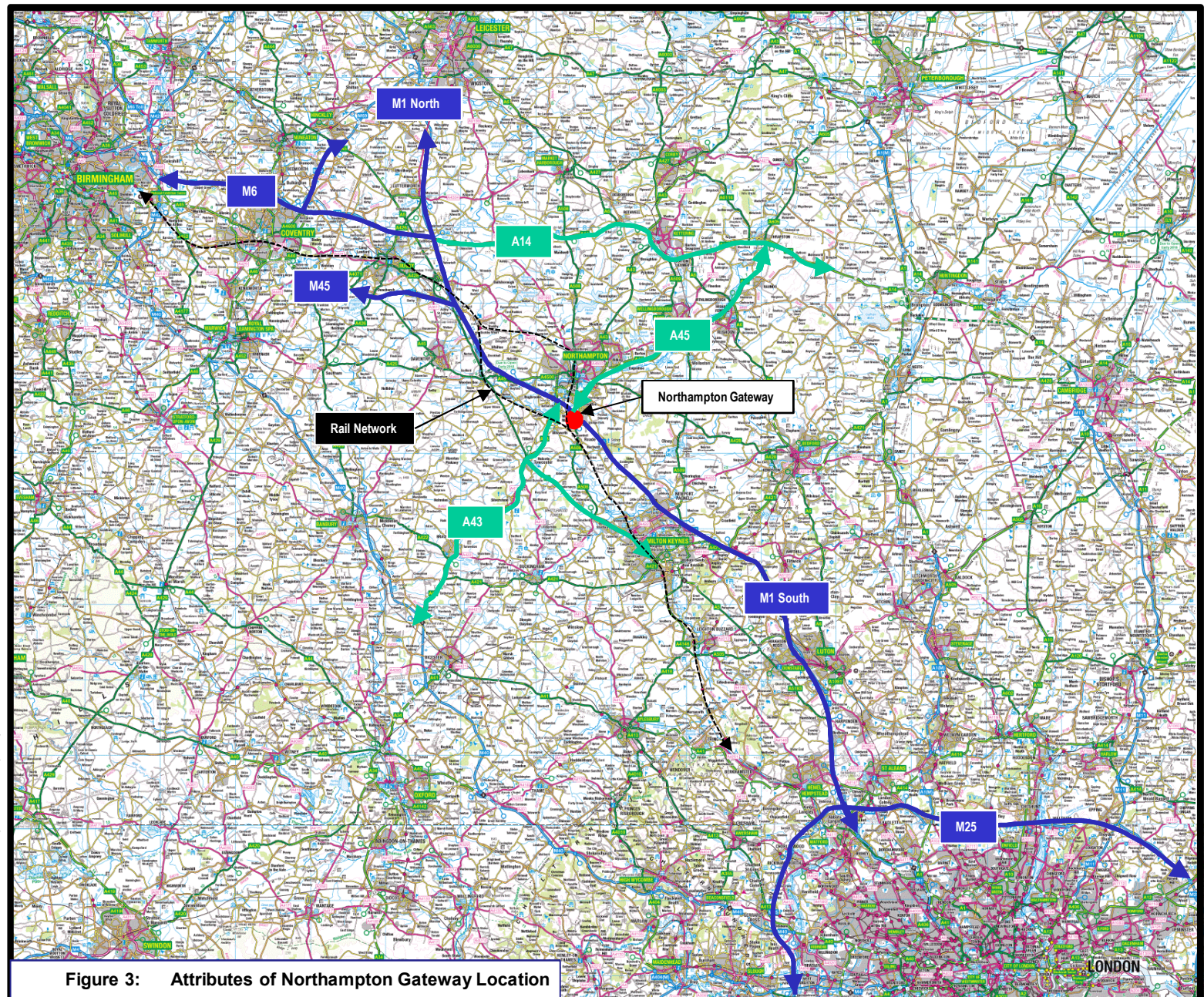
To employees in; Northampton, Wellingborough, Milton Keynes.

### Environment;

Through landform and cut and fill ground modelling, buildings would be substantially screened from view from nearby villages and open countryside

### Site Context;

Site is well contained by existing built features and landform. It is strongly influenced and formed by major infrastructure including the M1, main line railway and A508. The features physically separate the site from nearby villages



## 2.0 SITE ANALYSIS

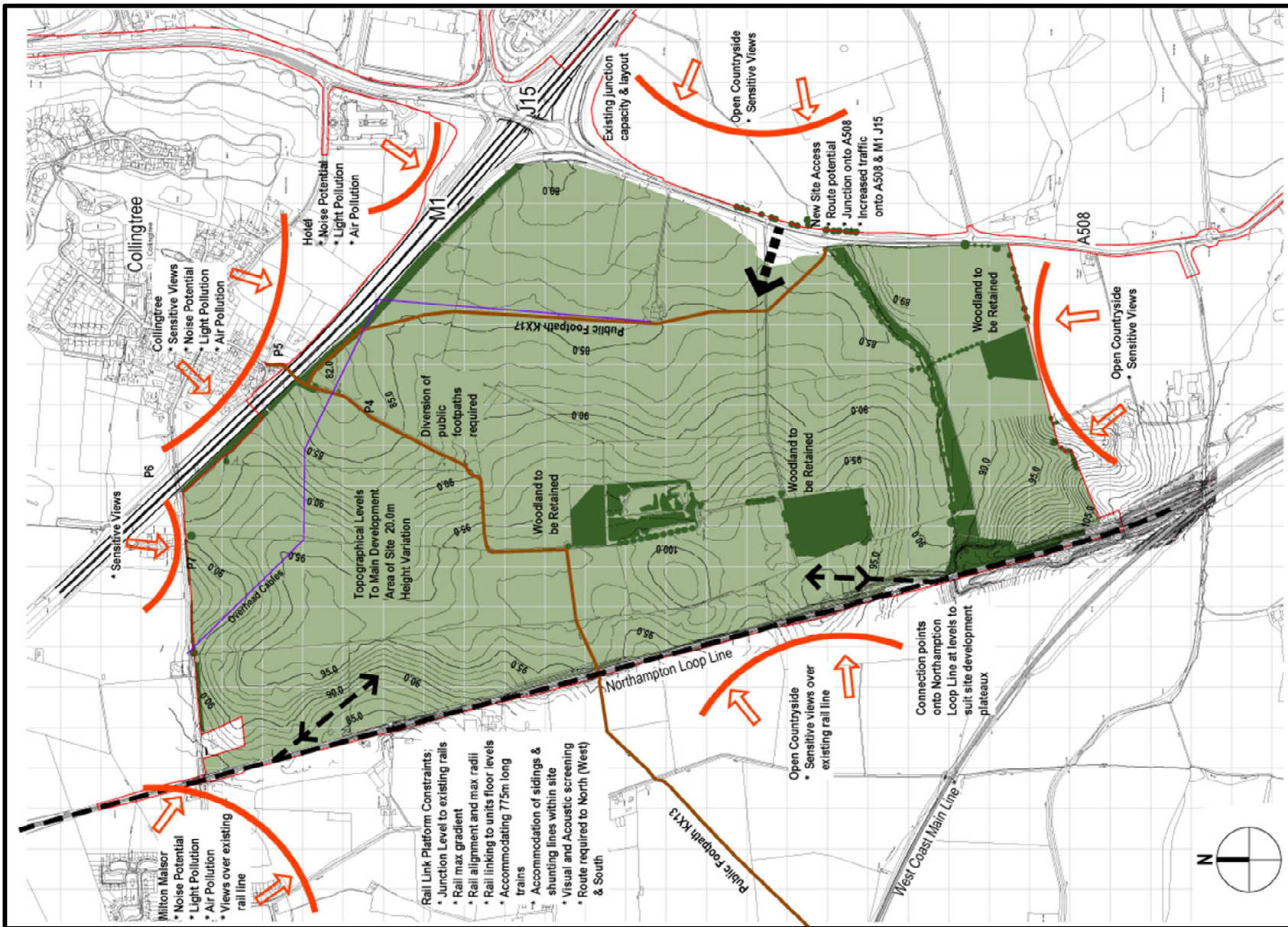


Figure 4: Constraints Plan



## 2.0 SITE ANALYSIS

2.11 A key part of the design approach responds to the existing site topography utilising a 'cut and fill' approach and the use of onsite remediated materials to form level ground plateaux areas for development, as well as areas of raised landscape mound screening to provide visual and acoustic screening of the development areas and rail link route.

The approach will also create an overall balance of materials and levels avoiding the need to import or export large quantities of overburden and fill materials.

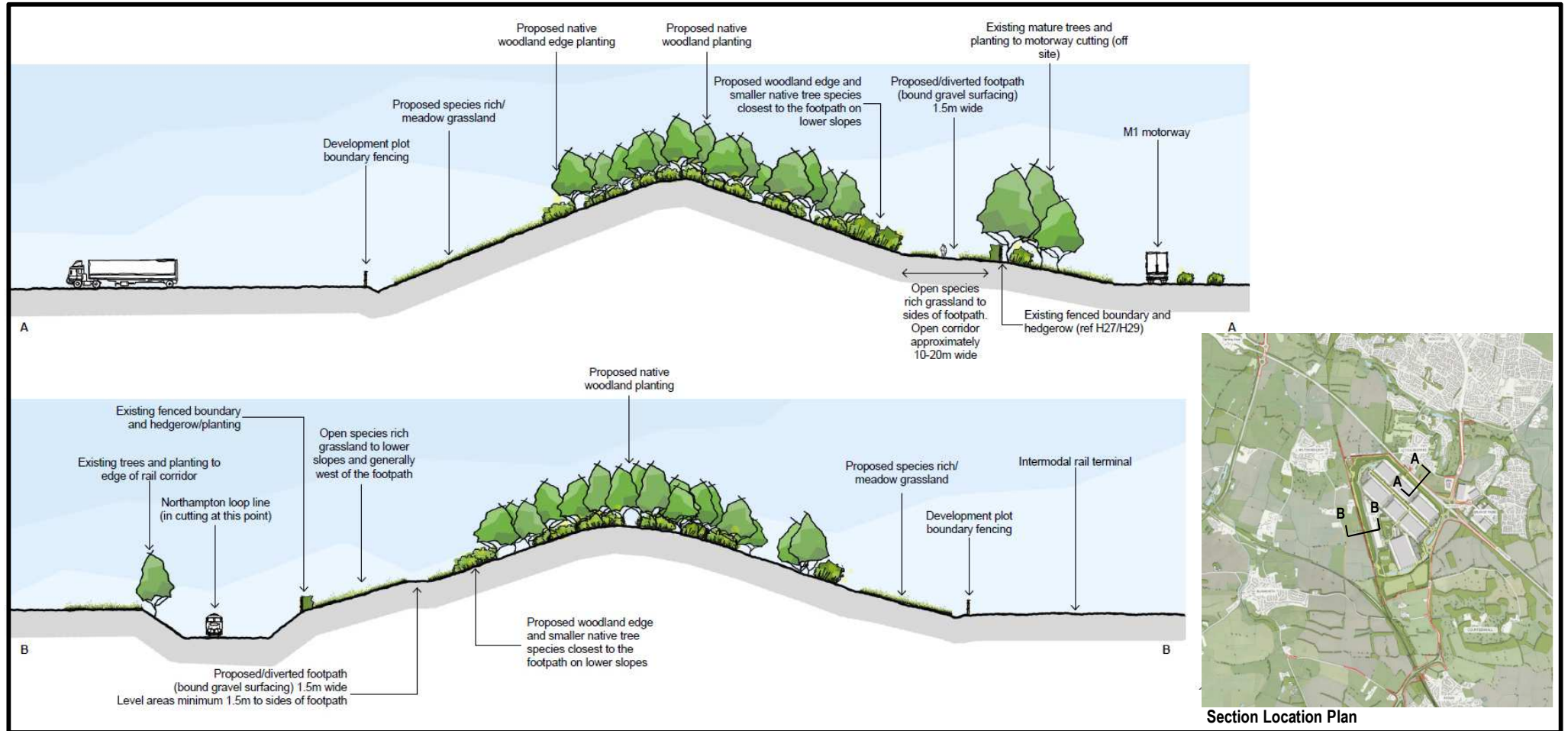


Figure 6: Main Site Illustrative Perimeter Sections

- 2.12 Concept design layouts have been developed responding to the constraints as described above and from guidance policies. From these conceptual schematic layouts the design has evolved to establish the parameters for development at the site, identifying the site potential and establishing the extent of suitable and sustainable development for the site.

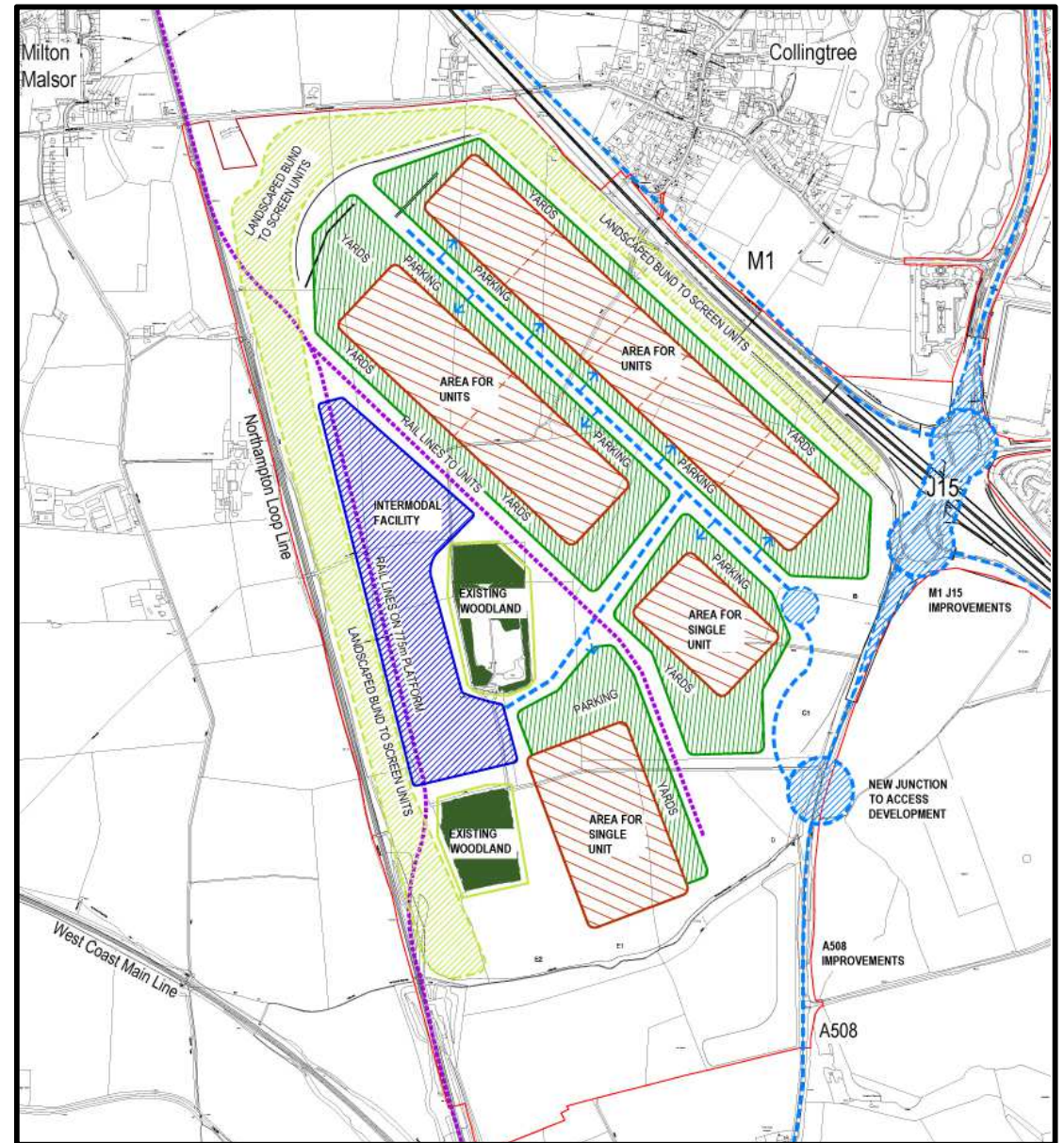


Figure 7: Concept Plan



## 3.0 SCHEME EVOLUTION





### 3.00 SCHEME EVOLUTION

3.01 This section sets out how the Northampton Gateway scheme has evolved from its initial identification through scheme development to public consultation and scheme finalisation.

#### SITE IDENTIFICATION

3.02 The Northampton Gateway proposal seeks to respond to the increasing market demand for rail freight interchanges in the UK, and to the nationally significant strength of the distribution and logistics sector in and around Northamptonshire. The proposals respond directly to national policy which recognises there is a need for a network of SRFIs across the UK to support economic and environmental objectives.

3.03 The site of the proposed Northampton Gateway is a strategically important location on the national road and rail network: the site is adjacent to the M1, the main north-south motorway in England, and also sits adjacent to the strategic rail network.

3.04 The site is located to the immediate south of Northampton which forms part of a nationally renowned area for national and regional distribution and logistics activity due in large part to the central location with excellent access to national markets, and also connectivity to (and distance from) the Ports. Northampton has long been associated with the distribution and logistics sector, and is well represented by National Distribution Centre's (NDCs) or Regional Distribution Centre's (RDCs) operated by international and national companies.

3.05 It is therefore an obvious and viable location for an SRFI, with a strong and growing market for distribution space, and with optimal access to the national transport infrastructure networks. These conditions create significant opportunity and potential for encouraging significant flows of rail freight traffic to and from NDCs and RDCs both on site and in, and around Northampton.

3.06 Roxhill became involved in the Northampton scheme in 2013 and began more detailed site assessment and masterplanning work.

3.07 The initial proposal was a stand alone application for Howdens Joinery. This included improvements to J15 of the M1 and Highways works but did not include the intermodal facility. Due to occupier time table pressures this proposal was not pursued

## 3.0 SCHEME EVOLUTION

### SCHEME DEVELOPMENT

3.08 The masterplan scheme proposal evolved in response to the conclusions of the assessments and analysis. Widespread consultation with key statutory bodies such as Network Rail and the Highway Agency, together with consultation with the District and Parish Councils helped to inform the emerging proposals. The scheme masterplan went through various iterations.

3.09 The initial assessment and masterplanning for a potential strategic rail freight interchange was undertaken in early 2016.



Figure 8: Illustrative Masterplan 2014

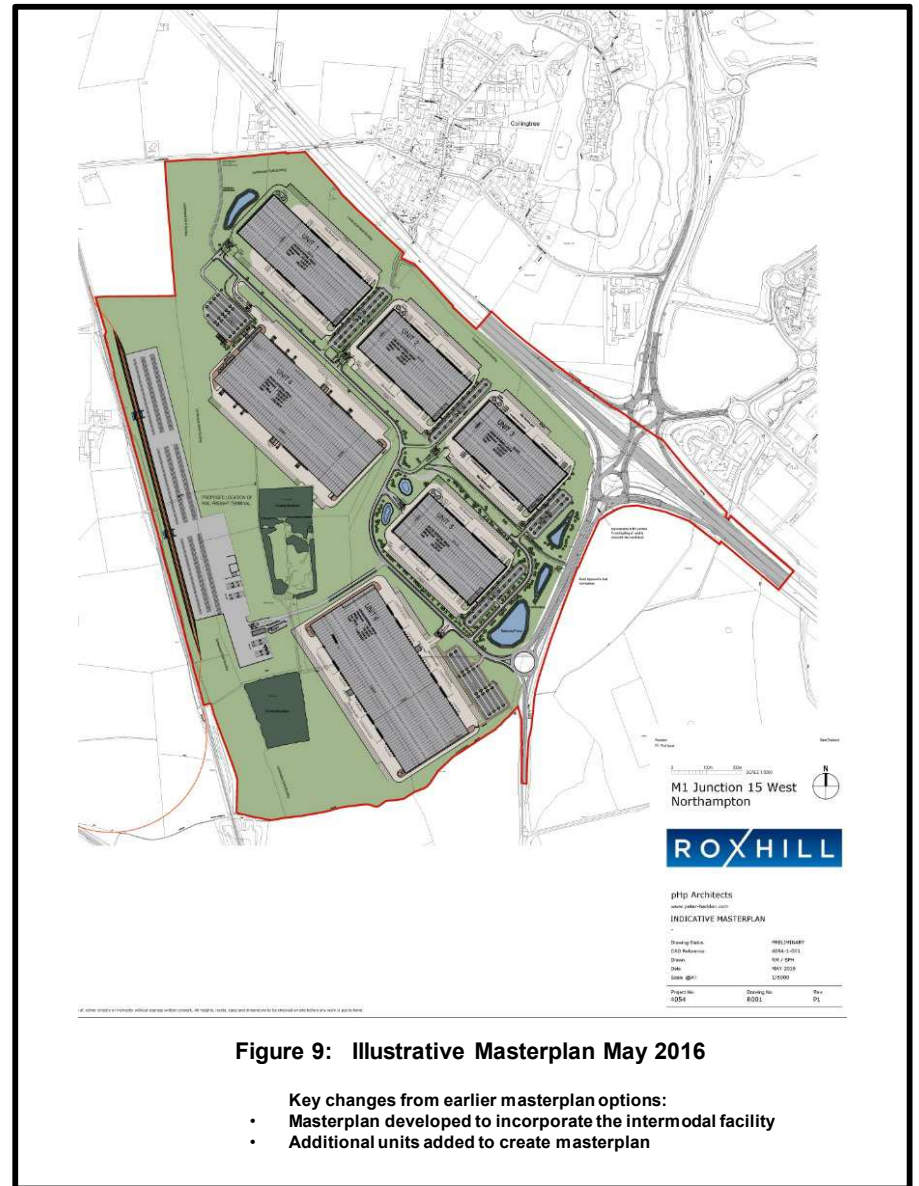


Figure 9: Illustrative Masterplan May 2016

- Key changes from earlier masterplan options:
- Masterplan developed to incorporate the intermodal facility
- Additional units added to create masterplan



**Figure 10: Illustrative Masterplan June 2016**

- Key changes from earlier masterplan options:
- Development land area increased
- Unit sizes increased & building layout modified
- Earth screen bunding introduced and intermodal terminal repositioned
- Direct rail link introduced to units 1, 2, 3, 4a, 4b & 6



**Figure 11: Illustrative Masterplan July 2016**

- Key changes from earlier masterplan options:
- Rail connectivity omitted to units 1, 2 & 3 due to levels
- Rail link added to unit 7
- Additional site area for bund screening & landscape buffer to southern boundary





Figure 14: Illustrative Masterplan April 2017

- Key changes from earlier masterplan options:
- Lorry waiting lay-bys added to site access road
  - Woodland planting detail evolved and extended
  - Water balancing ponds / SuDS features developed
  - Landscape screening evolved
  - Lorry parking areas added to intermodal facility



Figure 15: Illustrative Masterplan September 2017

- Key changes from earlier masterplan options:
- Masterplan refined
  - Additional pedestrian and cycle paths with links to existing pathways beyond development site

## 3.0 SCHEME EVOLUTION



Figure 16: Illustrative Masterplan March 2018

- Key changes from earlier masterplan options:
- Masterplan refined
- Aggregate terminal specifically defined
- Dedicated HGV parking added
- Landscape planting areas and layout amended
- Amendments to routes of pedestrian and cycle paths

### PUBLIC CONSULTATION

- 3.10 The Consultation Report provides details of the consultation processes, methods and outcomes, and of how they have influenced and informed the proposals.
- 3.11 The extensive pre-application consultation undertaken over a 2 year period has ensured that the local communities, statutory bodies and other interested parties have been aware of and able to actively engage in the evolution of the proposals for Northampton Gateway site. This process has, in combination with the conclusions of the environmental assessment work, informed the evolution of the scheme. For example by ensuring:
- an early focus on landscape and visual screening through the creation of landscaped mounding;
  - the strategy for drainage to where possible, improve existing flood risk conditions and;
  - the introduction of the Road by-pass and other changes to the proposed road improvements to maximise the benefits of the scheme in terms of the efficient operation of the road network.





4.0 DEVELOPMENT FRAMEWORK



### 4.00 DEVELOPMENT FRAMEWORK

4.01 The Development Framework for the site has evolved from the identification of key policy requirements and commercial demand, the conclusions of the extensive analysis of the site and the evolution of the scheme in response to public consultation and wider stakeholder engagement. The Core Framework principles are outlined in this section. These key development principles are fixed through the Parameters Plan and illustrated through the illustrative Masterplan, the details of which are outlined here.

### POLICY AND COMMERCIAL OBJECTIVES

4.02 The key design requirements for SRFIs are driven by national policy and commercial requirements. National policy requires sites to be of a sufficient size, capable of handling trains of 775m in length and providing appropriate access to the main trunk rail routes and close to the motorway and trunk road network. These are key commercial requirements too and therefore the access to and operation of the site in terms of rail and road has driven the form and layout of the scheme. The need for flexible building plots, including very large scale warehouses is also a key commercial requirement and an important factor recognised by Government policy. In this regard the site size and overarching structure has been informed by the need to ensure that new buildings can be provided which meet the requirements of potential occupiers and that overall the scheme is of a sufficient scale to create the value necessary to deliver the rail and road infrastructure needed to serve an SRFI.

4.03 Section 2 of this Statement outlines the key environmental factors that have informed the boundaries of and scale, form, layout and design of the application proposals. The key issues are outlined as main opportunities and constraints, which when combined with the policy and commercial considerations outline above and together with the iterative process of design, assessment and consultation has helped to fix the parameters of the scheme.

# 4.0 DEVELOPMENT FRAMEWORK

## DEVELOPMENT PARAMETERS

4.04 The parameters for the development are set out on the Parameters Plan (see Figure 17 below) and in the detailed description of development, set out below. This is drawn together by the detailed environmental assessment work, policy consideration and commercial requirements. The components of the scheme are described below.

SCHEDULE OF PARAMETERS					
Zone	Number of Units	Maximum development floor space per Zone in m <sup>2</sup>	Minimum finished floor level (in m above ordnance datum)	Maximum building height measured to roof ridge / highest point (in metres above ordnance datum)	
Zone A1 (a, b & c)	1 to 8	180,000	Zone A1a	81.50	104.00
			Zone A1b	83.50	104.00
			Zone A1c	84.00	104.00
Zone A2 (a & b)	1 to 4	152,000	Zone A2a	90.00	109.50
			Zone A2b	89.50	109.50
Zone A3	1 to 4	55,000		89.00	109.50
Zone A4	1 to 4	126,000		88.50	109.00
<b>Maximum Total Floor Space Zone A*</b>					
Total	1 to 20	468,000			

Zone	Number of Units	Maximum development floor space per Zone in m <sup>2</sup>	Minimum finished ground level (in m above ordnance datum)	Maximum height measured to roof ridge / highest point (in metres above ordnance datum)
Zone B (Buildings) (Yard) (Cranes)	1 to 4	1858		Buildings 103.00
				Yard 105.00
				Gantry Cranes 110.50

\* this total floor space is the maximum floor space (excluding mezzanine space) that will be developed across Zone A notwithstanding that the maximum floor space stated for each Zone A1 to A4 combined would exceed this figure i.e. it is the overall floor space cap for Zone A excluding mezzanine floor space. In addition to this total floor space figure, up to 155,000 sqm (1,688,420 sqft) of floor space can be provided in the form of mezzanine floor space to units within Zone A

**Parameters Note:**  
A key objective of the scheme parameters for the Northampton Gateway SRFI is to establish principles which control the visual effects of the warehouse buildings and freight terminal operations. This is determined by fixed parameters for finished floor levels and the height of built form together with establishing principles for the relationship between the height of built form and the height of landscape screen bunds.

The approach to the parameters therefore allows for some flexibility in the maximum height of buildings depending on the finished floor levels, but with fixed upper limits for the height of built form when measured as a height above ordnance datum (AOD Level). In turn there is a degree of flexibility in the height of the bunds which could vary depending on final building heights measured at AOD levels. The parameters established for the landscape bunds is that their height, relative to the buildings they screen, will be in accordance with the principles shown on and established by the landscape cross sections which are in:  
Landscape Cross Section drawings contained in ES Chapter 4.0 (Landscape and Visual)

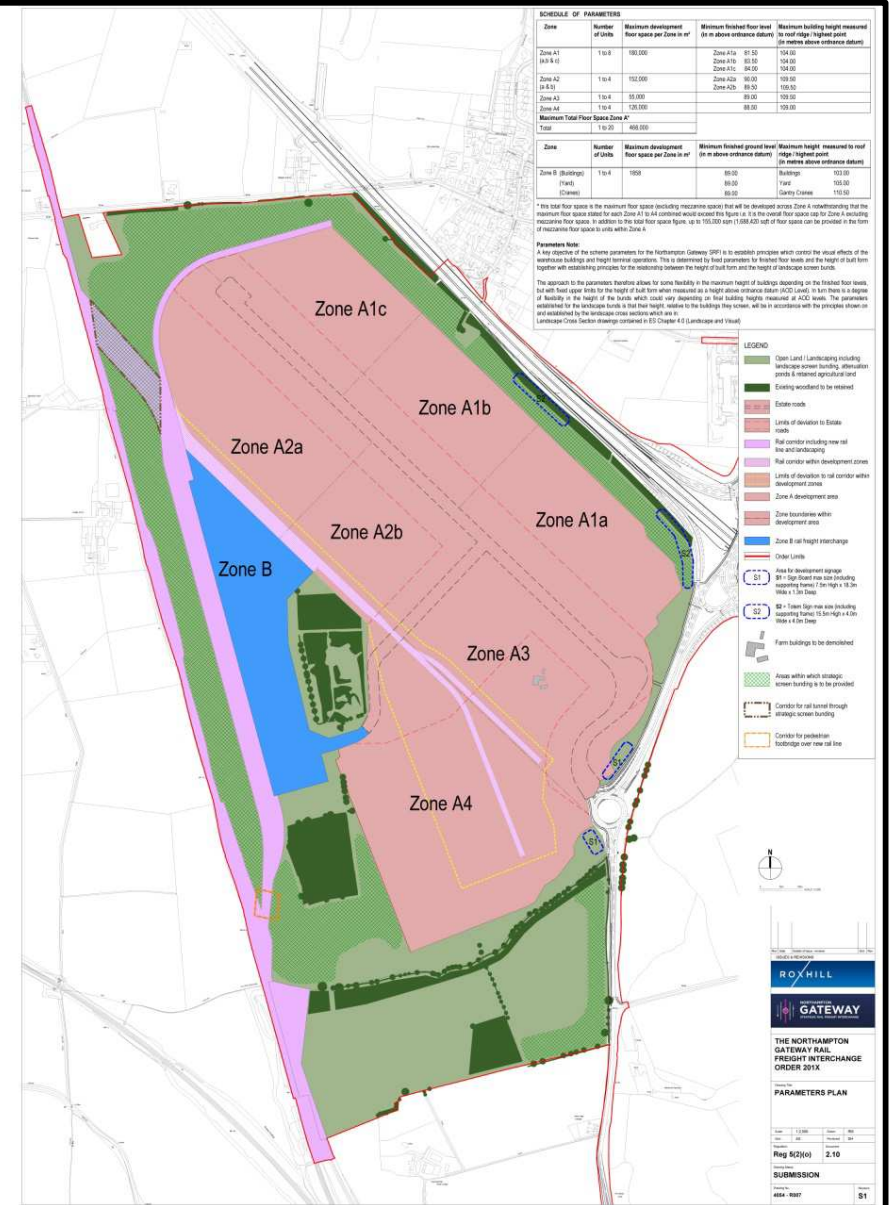


Figure 17: Parameters Plan

### INTERMODAL FREIGHT TERMINAL (ZONE B)

- 4.05 The terminal is identified as Zone B on the Parameter Plan and is designed to accommodate trains of up to 775m length (standard freight train length), and to accommodate up to 16 trains per day once fully operational over the longer-term(excluding the potential rapid rail freight facility). In the initial period after opening the terminal is expected to handle at least 4 trains per day before increasing over time.
- 4.06 The terminal would enable the transfer of freight from road to rail (and vice versa), as well as the storage of containers or other freight at the terminal itself. An aggregates terminal area will be delivered within Zone B (for the storage and transfer of aggregates), with provision also made for a 'rapid rail freight' terminal as part of the longer-term future-proofing of the site to ensure it is able to meet a wide range of rail market requirements as the site is developed and occupied.
- 4.07 The terminal area will also include HGV parking relating to the terminal use, and associated ancillary built accommodation such as gatehouses, and estate management offices.
- 4.08 As part of the construction of the terminal, rail infrastructure, connecting directly to warehouse plots, will be put in place. These will provide the opportunity, from day one, for warehouse units to have direct rail connections.
- 4.09 The terminal area will comprise:
- Main line connections to the Network Rail WCML Northampton Loop (with new north and south facing connections)
  - A set of three 775 meter Reception Sidings
  - A 775 metre headshunt and run round loop to permit shunting moves around the site
  - A three track intermodal terminal, again of 775m capability
  - An extensive container and other freight storage area
  - HGV parking
  - Management offices and welfare areas, including buildings associated with the aggregates facilities and potential rapid rail freight facilities;
  - Gatehouses
  - Rail connections directly to over half the warehousing

### WAREHOUSING AND ANCILLARY BUILDINGS (ZONE A)

- 4.10 The application is for buildings within Zone A (see the Parameters Plan) with an internal floorspace of up to 468,000 sq. m. In addition to this floorspace figure, up to 155,000 sq. m of floorspace is also proposed in the form of mezzanine floorspace to units within Zone A as part of the flexibility provided by the scheme and based on experience of the common requirements of occupiers (who often require mezzanine space for a range of uses to increase the productivity or capacity of the building).
- 4.11 The height and broad layout of development zones on the site are fixed via the Parameters Plan. The layout of the site allows for flexibility in the scale and the design of individual units so that it can meet a wide range of market requirements. This includes the ability of the site to accommodate very large floorspace units to respond to the needs for National Distribution Centres.
- 4.12 Much of the built floorspace would be located on development plots sunk into the site following a proposed earthworks strategy (see below) to not only create flat plateau, but to also enable creation of substantial bunds around the site to form part of the visual screening (mitigation) and landscaping.
- 4.13 A small amount of ancillary floorspace is also proposed such as gatehouses, estate management offices, and other small ancillary buildings.
- 4.14 Zone A will also include an area of secure, dedicated, HGV parking. This provision will ensure that HGVs arriving early at the site are able to wait in a safe, suitable location.
- 4.15 In addition to the 'built' development described above, Zone A will include:
- Rail lines to serve buildings (in Zones A2, A3 and A4);
  - Service roads including road access to the rail terminal;
  - On-plot landscaping and planting;
  - Sub-stations and other utilities infrastructure;
  - Bus turning-head (associated with public transport access to the site).

## 4.0 DEVELOPMENT FRAMEWORK

### NEW ROAD INFRASTRUCTURE AND WORKS TO THE EXISTING NETWORK

- 4.16 A package of highway works is proposed as part of the proposed development. These include substantial improvements to Junction 15 of the M1, and a new bypass to the village of Roade to the south of the main site.
- 4.17 In addition, a wider range of more localised works are proposed to mitigate likely transport impacts, and to address existing known bottle-necks or problematic junctions which would otherwise see worsening reliability and/or safety in the future.

### STRUCTURAL EARTHWORKS TO CREATE DEVELOPMENT PLOTS AND LANDSCAPE ZONES

- 4.18 The proposed package of highway mitigation works is :
- Construction of a new roundabout on the A508 Northampton Road to serve as the access to the development, configured to require all departing HGVs to travel north to M1 Junction 15;
  - Dualling of the A508 carriageway between the new site access roundabout and M1 Junction 15;
  - Significant enlargement and reconfiguration of M1 Junction 15, including alterations to and widening of the A45 to the north of M1 Junction 15 and the signalisation of the Watering Lane junction;
  - Alteration of M1 Junction 15A to provide an additional lane and signalised on the A43 northbound approach, signal control on the M1 northbound off-slip, an additional lane on the A5123 southbound approach and circulatory carriageway widening;
  - A financial contribution towards a capacity improvement scheme at the A45 Queen Eleanor Interchange;
  - Construction of a new Bypass west of Roade between the A508 Northampton Road to the north of Roade and the A508 Stratford Road to the south of Roade, including a four arm roundabout connecting the Bypass to Blisworth Road;
  - 7.5T amenity weight restriction (with access permitted for loading):
    - throughout Roade
    - along Knock Lane/Blisworth Road between Roade Bypass and Stoke Road
    - along Courteenhall Road between the A508 and High Street, including parts of Blisworth
    - along the unnamed road between the A508 and Quinton.

- Alterations at key locations along the A508 as part of an 'A508 route upgrade'; comprising:
  - Courteenhall Road junction improvement
  - Rookery Lane/Ashton Road junction improvement
  - Pury Road junction improvement
  - Knock Lane/Stoke Road junction improvement, and targeted widening within the highway of part of Knock Lane itself (associated with the existing bend);
  - Provision of a pedestrian crossing at a bus stop in Grafton Regis.

### EARTHWORKS, AND DEMOLITION OF EXISTING STRUCTURES

- 4.19 To enable development substantial earthworks will be undertaken on the main site, with some areas in the western part of the site being lowered by between 8 and 10 metres from existing ground levels. This change in levels is required to establish the flat plateau required for the buildings, and the 'cut and fill' exercise enables the creation of the bunding referred to in the context of the landscaping strategy. The earthworks strategy is to achieve an overall earthworks balance across the site.

### STRATEGIC LANDSCAPING, PLANTING, AND RIGHTS OF WAY

- 4.20 The proposed development includes provision of landscaping and tree planting as part of the mitigation of visual and landscape effects. The design of the main site incorporates a landscaping strategy which includes retention of existing woodland blocks within the site, as well as around parts of its boundary (such as along the M1).
- 4.21 The landscaping strategy compliments the earthworks strategy which would create substantial landscaped bunds around much of the main site perimeter, and which would form the bulk of the visual mitigation measures to substantially limit or eliminate outside views into the main site.
- 4.22 The strategy would ensure the establishment of a strong and cohesive framework of landscape and environmental areas. These would form one of the main elements of the overall development and would be fully integrated with the built development and infrastructure zones. In this respect it has not been designed (or should not be considered) as a separate part of the proposed development.

## 5.0 DESIGN AND ACCESS REQUIREMENTS





### 5.00 DESIGN AND ACCESS REQUIREMENT

5.01 This section helps to explain, using illustrative material, the approach to the design and access of the site. It is based on the application of the principles established in the Parameters Plan with assumptions on the mix of unit sizes and orientation and to detailed landscape design. It is structured as follows:

- Landscape design and biodiversity
- Drainage
- Noise
- Lighting
- Building design and sustainability
- Accessibility
- Rail access.

The overarching Illustrative masterplan is shown at Figure 18



Figure 18: Illustrative Masterplan

## 5.0 DESIGN AND ACCESS REQUIREMENTS

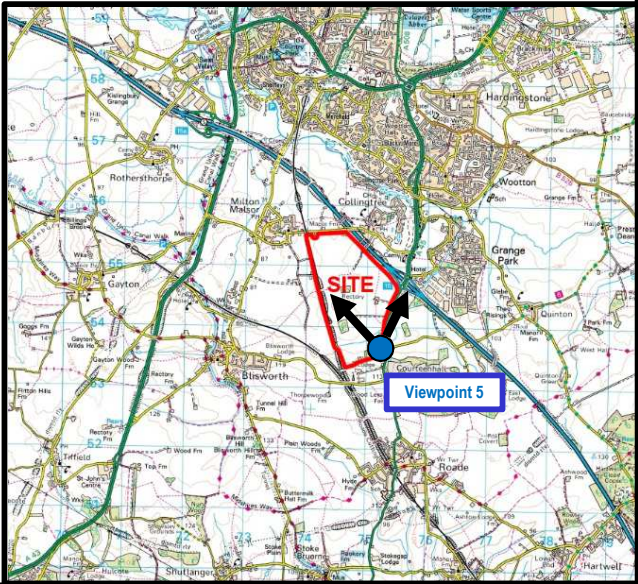
### LANDSCAPE DESIGN AND BIODIVERSITY

- 5.02 The earthworks and landscape strategy is designed to make the views of the Proposed Development as sympathetic as possible. Although it will not be possible to entirely eliminate views of the proposed buildings from all viewpoints, the combination of the existing topography, new earthworks and existing and new woodland planting will establish a very effective visual screen and 'buffer' to even nearby positions. It will be particularly effective in screening the development from the north, north east, west and south of the site.
- 5.03 The existing mature trees and planting along the M1 motorway corridor will be reinforced with new mounding and planting to screen views from this direction.
- 5.04 Existing landform variations across and surrounding the site create an area within which the built development would be sited. The existing established woodland areas within the site will be conserved and significant new mounding with further new woodland and tree planting will extend around the site to form an effective visual screen towards the proposed buildings and other development. This combination of existing and proposed landscape features would substantially screen views towards the built development from surrounding settlements and properties, including at Collingtree, Milton Malsor, Blisworth, and Roade.
- 5.05 The following selection of cross sections and before and after photomontage images help to illustrate how the landscape proposals will help to screen the development.

5.0 DESIGN AND ACCESS REQUIREMENTS



Existing photo viewpoint 5: View North West from A508 Road approaching proposed site entrance



**Viewpoint 5 Location**  
Grid Reference: 475306.846, 253922.512  
Elevation AOD: 85.594m  
Camera Height 1.6m

Figure 19: Photomontages

## 5.0 DESIGN AND ACCESS REQUIREMENTS



**Photomontage viewpoint 5: Development at Completion**



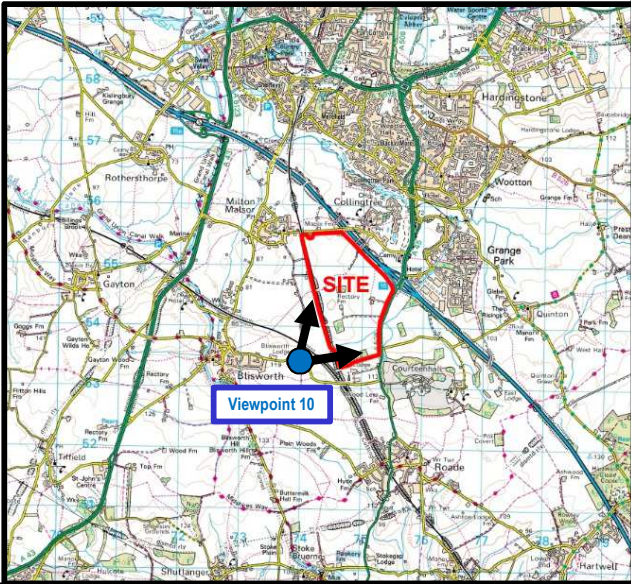
**Photomontage viewpoint 5: Development 15 years after completion**

**Figure 20: Photomontages**

5.0 DESIGN AND ACCESS REQUIREMENTS



Existing photo viewpoint 10: View North East from Courteenhall Road, between Blisworth & rail bridge



**Viewpoint 10 Location**  
Grid Reference: 473998.514, 253417.957  
Elevation AOD: 110.72m  
Camera Height 1.6m

Figure 21: Photomontages

## 5.0 DESIGN AND ACCESS REQUIREMENTS



**Photomontage viewpoint 10: Development at Completion**



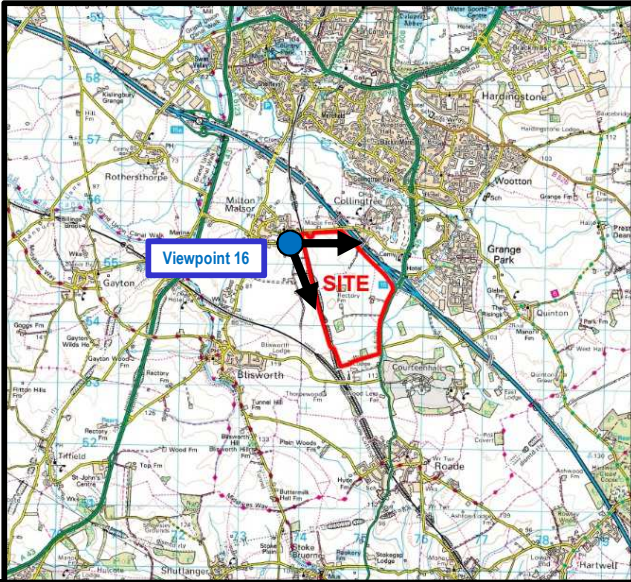
**Photomontage viewpoint 10: Development 15 years after completion**

**Figure 22: Photomontages**

5.0 DESIGN AND ACCESS REQUIREMENTS



Existing photo viewpoint 16: View South West from Watering Lane, Collingtree recreation ground



**Viewpoint 16 Location**  
Grid Reference: 473857.750, 255504.100  
Elevation AOD: 82.251m  
Camera Height 1.6m  
Viewing Distance: 350mm @A1

Figure 23: Photomontages

## 5.0 DESIGN AND ACCESS REQUIREMENTS



**Photomontage viewpoint 16: Development at Completion**



**Photomontage viewpoint 16: Development 15 years after completion**

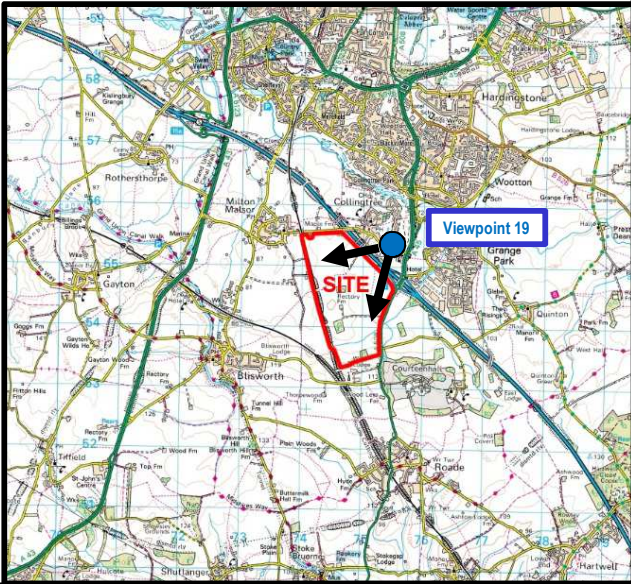
**Figure 24: Photomontages**



5.0 DESIGN AND ACCESS REQUIREMENTS



Existing photo viewpoint 19: View South West from Watering Lane, Collingtree recreation ground



**Viewpoint 19 Location**  
Grid Reference: 475413.906, 255277.578  
Elevation AOD: 81.659m  
Camera Height 1.6m

Figure 25: Photomontages

## 5.0 DESIGN AND ACCESS REQUIREMENTS



**Photomontage viewpoint 19: Development at Completion**



**Photomontage viewpoint 19: Development 15 years after completion**

**Figure 26: Photomontages**

# 5.0 DESIGN AND ACCESS REQUIREMENTS

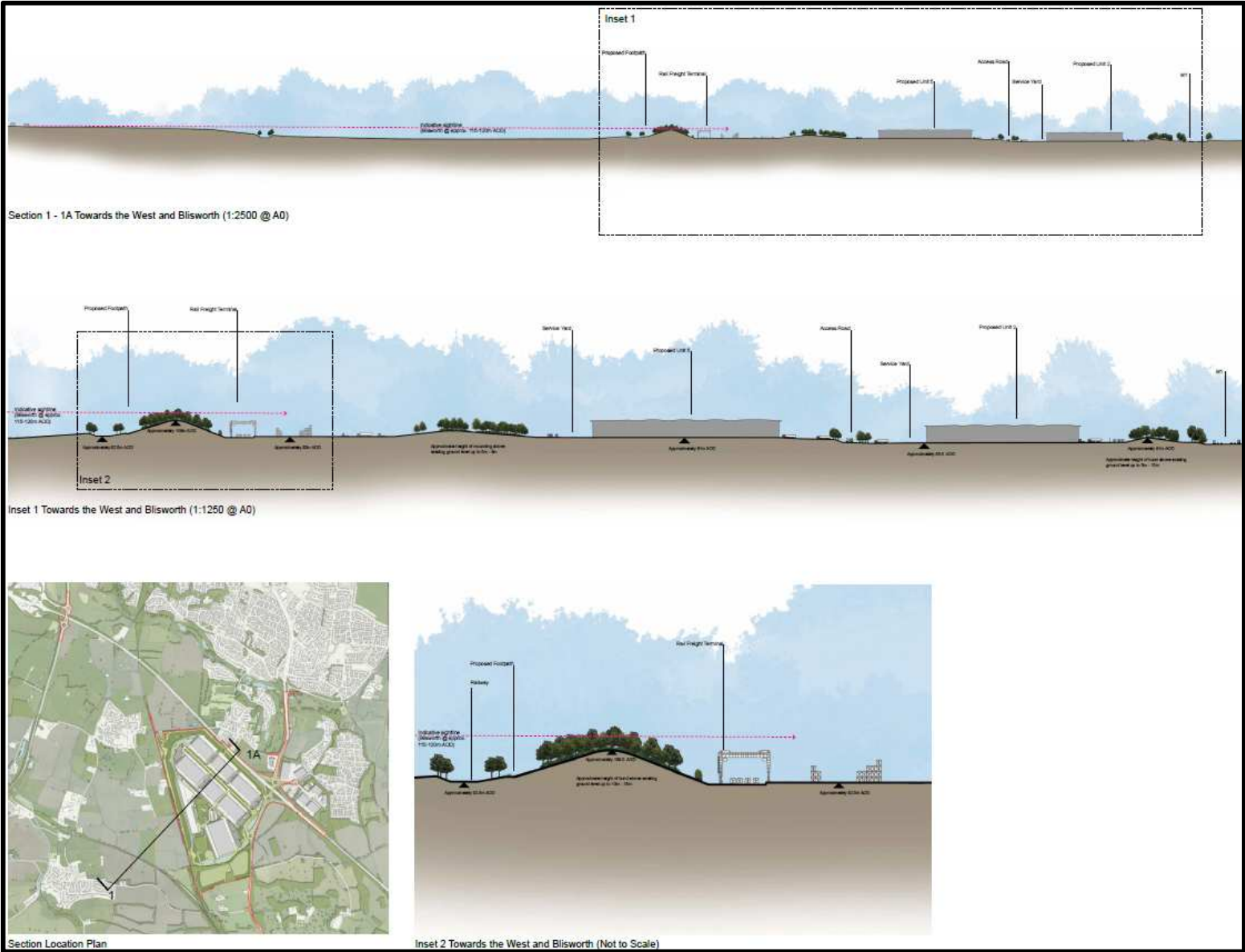


Figure 27: Site Sections

# 5.0 DESIGN AND ACCESS REQUIREMENTS



Figure 28: Site Sections



Figure 29: Site Sections

# 5.0 DESIGN AND ACCESS REQUIREMENTS

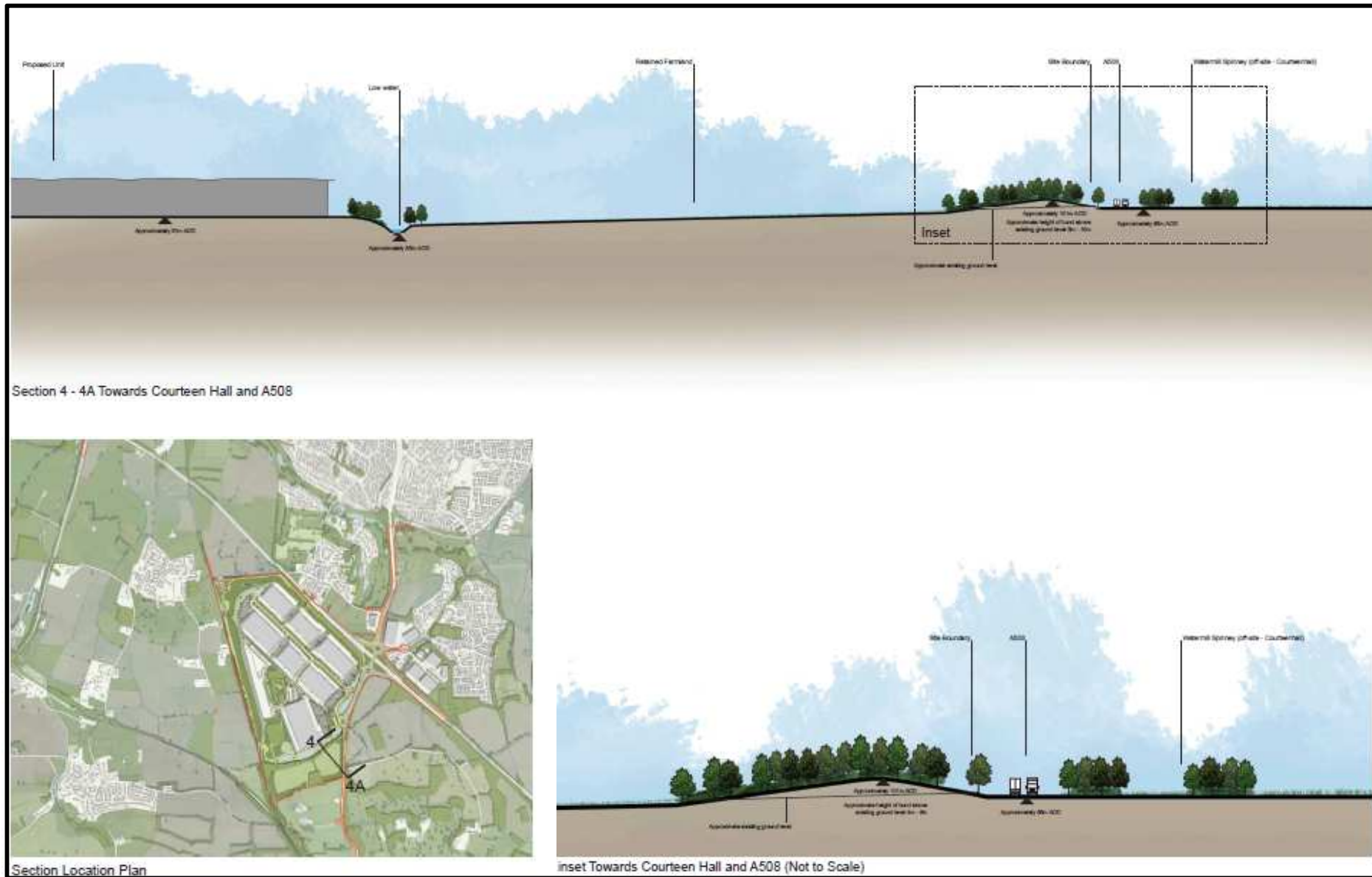


Figure 30: Site Sections

# 5.0 DESIGN AND ACCESS REQUIREMENTS

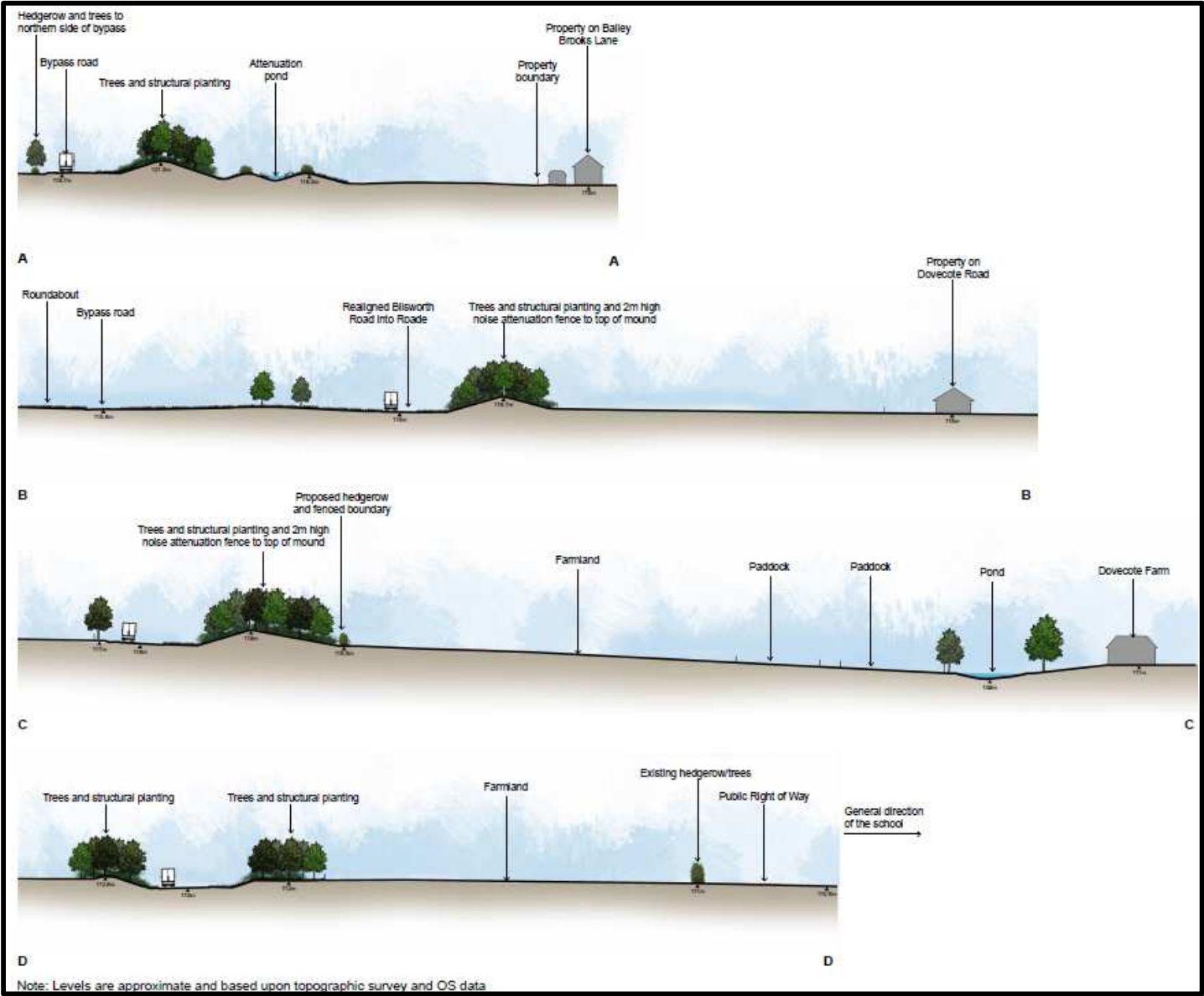


Figure 31: Site Sections Road By-Pass

## 5.0 DESIGN AND ACCESS REQUIREMENTS

- 5.06 The existing landscape resource of the site and its context has been considered by the assessment, masterplanning and design process. This has extended from preliminary landscape and visual appraisals through to the production of the guiding design principles and the Landscape Framework proposals. This iterative process has entailed close collaboration between landscape, architectural, urban design, engineering, ecological, heritage and other professionals, including statutory bodies and the local planning authorities.
- 5.07 A Landscape plan has been prepared. This has been developed to help integrate the development proposals into the setting of the site and will create an attractive and functional working environment.
- 5.08 There are a number of key landscape and related GI design issues to be addressed by the proposals. These can be summarised as follows:
- Positively assimilating the proposed development within the site landscape and topography, including detailed attention to the necessary ground modelling and earthworks proposals and proposed building plateaus;
  - Establishing and strengthening connections and green corridors; both within and around the built development and with the surrounding landscape;
  - Improving accessibility to the green spaces to be conserved or created as part of the proposals; with opportunities to improve health through informal recreation and physical activity eg walking and cycling;
  - Securing and maximising biodiversity interest, through conservation, enhancement and creation of habitats and green spaces;
  - Integrating Sustainable Drainage (SUD`s) features and measures that will deliver valuable biodiversity and amenity benefits wherever practicable;
  - Establishing and managing a significant and robust landscape framework to form an appropriate and cohesive “green structure” to the built development and create a suitable buffer to the neighbouring settlements and uses.
- 5.09 The scale and nature of the proposed development has been an important factor in informing the proposed Landscape Strategy.
- 5.10 Largely native trees and shrubs would be used to reflect those in the existing locality and the design of the wider Landscape Framework. A mix of planting sizes and densities would be adopted to satisfy the differing objectives, principally those of screening and filtering in the short and longer terms and of establishing well balanced woodland and planting habitats.
- 5.11 All of the landscape areas and features will be managed and maintained in the long term. This will be achieved through the implementation of a comprehensive Landscape and Biodiversity Management Plan (LMP), to ensure the successful establishment and continued thriving of the landscape framework proposals.
- 5.12 Two existing public footpaths (Ref: KX13 and KX17) cross the site, providing linkages with the existing built-up area to the north (via an access bridge over the M1), and the wider countryside to the south and south west. These footpaths are to be retained with the diversion of sections which cross the development site itself.
- 5.13 The extensive landscaped areas will offer some significant environmental opportunities. The proposals include:
- Conserved and new landscape and habitat proposals extending to approximately 75.9 hectares;
  - Landscape planting includes; new native woodland, tree and hedgerow planting
  - Other new habitats to increase ecological diversity and connectivity;
  - A network of new and upgraded paths and “greenways” for pedestrians, cyclists and horse riders – enhancing and extending existing routes;
  - Associated and improved signage, interpretation, seating, fencing and gates etc as part of the countryside access proposals;
  - Comprehensive long term management to underpin all of the new and conserved landscape area.
- 5.14 While the proposed development will necessarily result in the removal of large areas of arable land and bounding hedgerows, steps are being taken to retain existing areas of woodland and trees wherever possible.



- 5.15 Significant landscaping works are to be undertaken as part of the proposed development, and this offers the opportunity to provide new habitats of ecological interest, including new woodland, scrub and hedgerows, new wildflower meadows, and new waterbodies designed according to ecological principles to encourage wildlife.
- 5.16 Overall the proposed development provides an opportunity to establish new habitats of nature conservation interest and to deliver net gains for wildlife in the locality

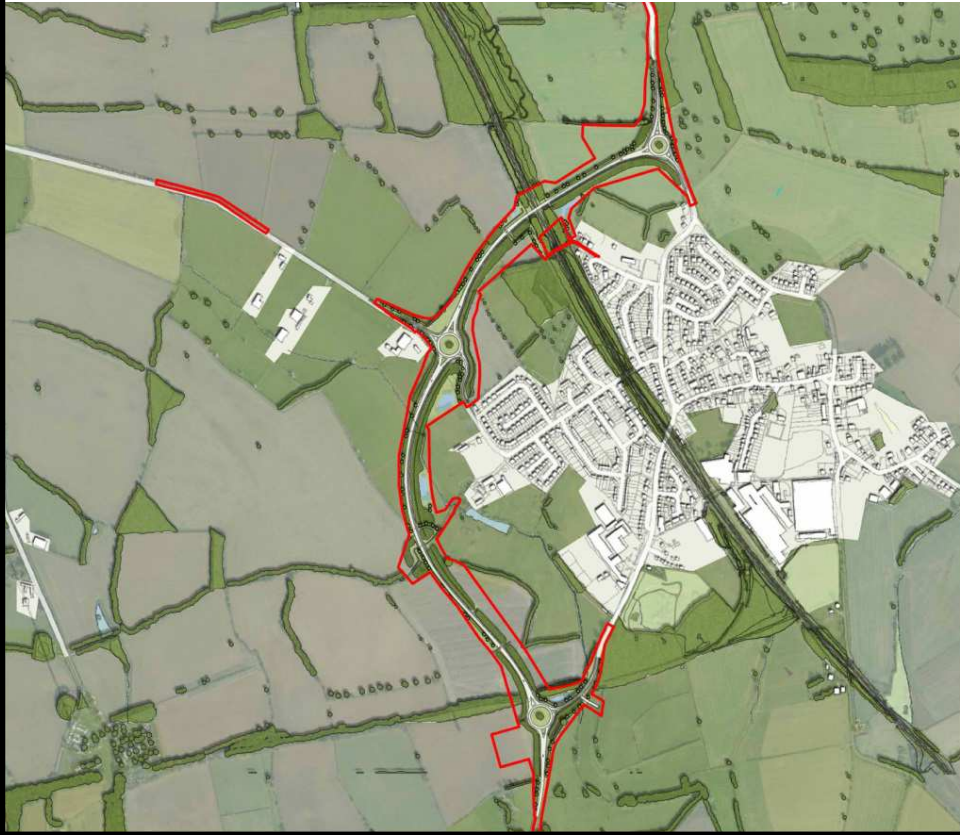


Figure 32: Landscape Plan - Roade By-Pass

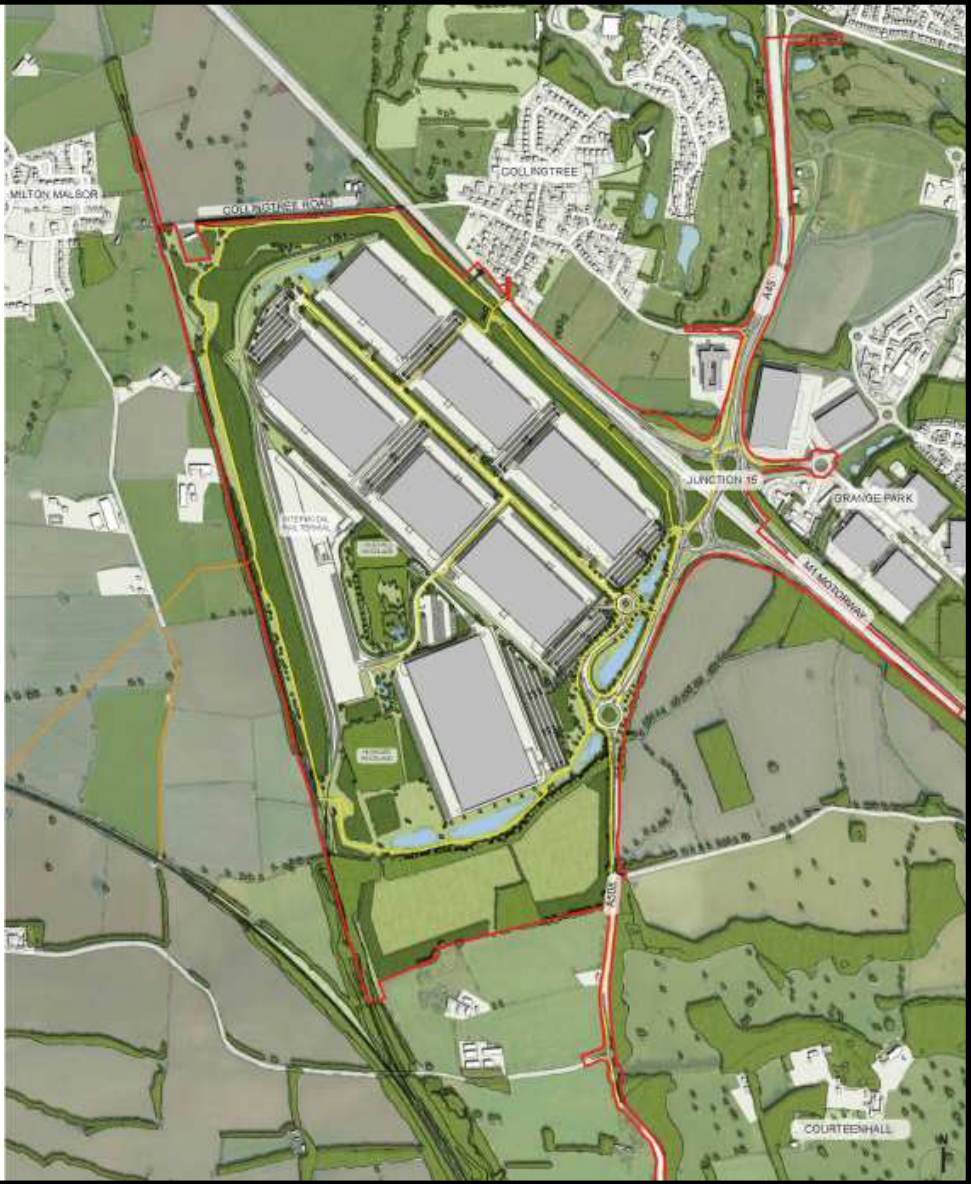


Figure 33: Landscape Plan – Main Site

## 5.0 DESIGN AND ACCESS REQUIREMENTS

### DRAINAGE

- 5.17 Without proper design and management, development can increase surface water “runoff” and cause an impact downstream. However, a sustainable drainage strategy has been designed to ensure that the proposals do not have an adverse effect on the environment. The strategy proposes surface ponds / ‘SuDS’ features, localised reed beds, and shallow grassed swales which provide storage of flow and natural water treatment processes. This has been designed to ensure that the flow passed downstream in big storm events is reduced (from that which currently occurs) and the quality of the water is of a good standard to maintain existing ecology and habitats.
- 5.18 The large scale flood storage features and drainage ‘balancing’ areas described above will reduce the amount of flow during flood event within the local watercourses.
- 5.19 The proposed drainage strategy will capture rain that falls onto the built area of the site, and through a series of pipes transfer it into the above-ground basins which form part of a Sustainable Drainage Systems (or SuDS). Here all the rainfall will be stored in the basins for a period of time. Water will be allowed to leave the basin in a controlled manner.
- 5.20 This means that during a period of intense and/or heavy rainfall the basins will store a volume of water that would otherwise enter the watercourses. By restricting a large proportion of the volume generated by the natural catchment of the watercourses within the site boundary, the development will help to reduce the chances of flooding at other locations downstream of the site.

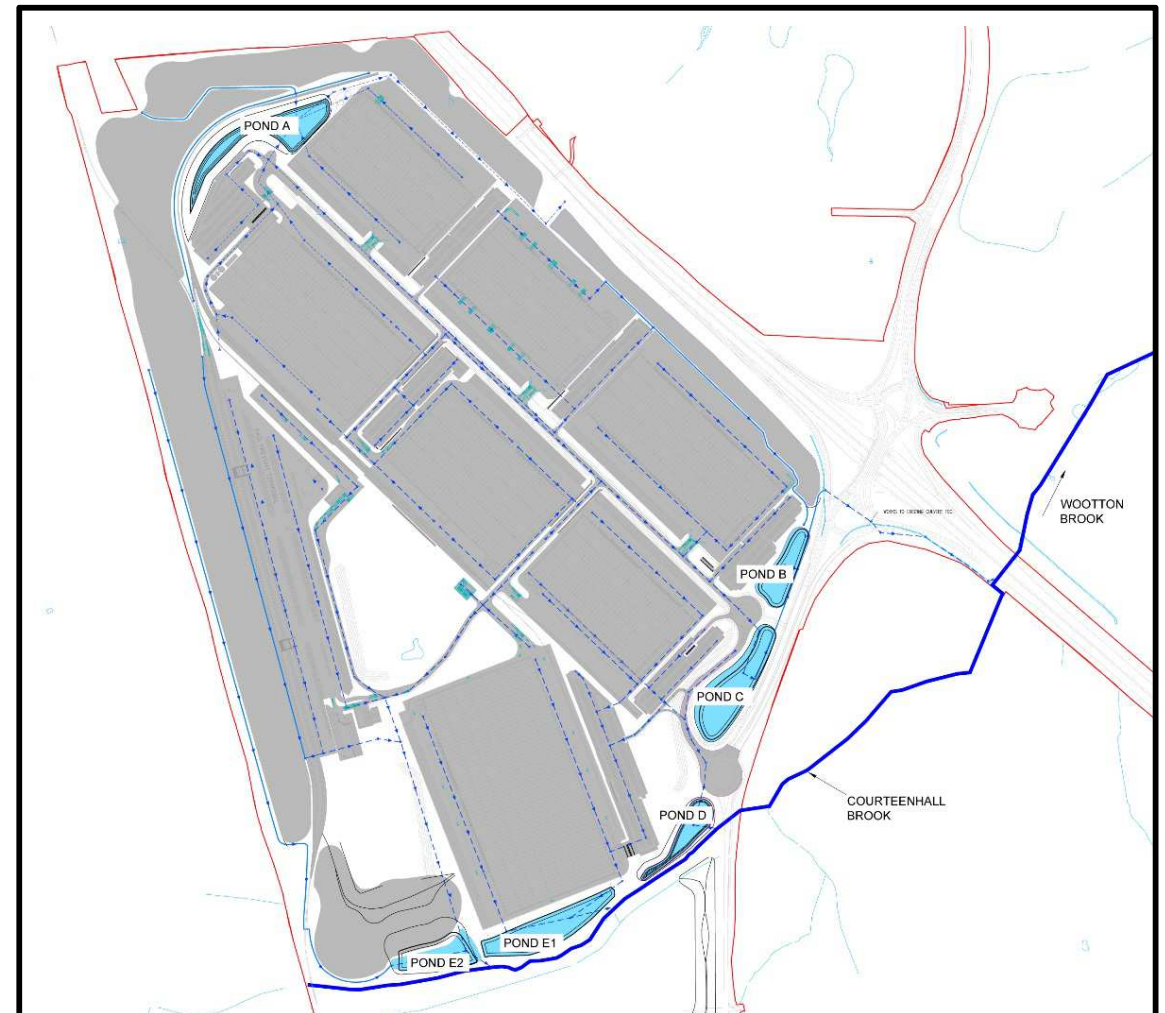


Figure 34: Drainage Plan

### NOISE

- 5.21 Surveys have been undertaken to determine the existing noise and vibration conditions at sensitive receptors around the proposed development. These include locations in Collingtree, the eastern side of Milton Malsor, the eastern edge of Blisworth, around Junction 15 of the M1, and in and around Roade. Road traffic noise from the M1 dominates the noise environment for most of the sensitive receptors. In addition, for receptors near to the Northampton Loop and West Coast Main Line railway lines, the existing noise environment is also punctuated by freight and passenger train movements.
- 5.22 The emerging scheme design includes inherent mitigation measures built into the development. This currently includes substantial earth bunding around the SRFI site. The noise assessment shows that these will assist in minimising adverse noise effects from the main (SRFI) site. For properties to the east of the M1, the anticipated impact of sound from operational activities at the SRFI will be negligible or at worse, minor adverse. This is due to the mitigation provided by the landscaping coupled with the generally higher ambient background noise levels from the M1.
- 5.23 Some properties to the west of the M1 are more likely to experience operational noise from the SRFI due to them being closer to the site boundary. However, the proposed landscaping and bunding around the main site and the earthworks strategy which will have the effect of partially sinking the buildings into the landscape will help to minimise adverse impacts.
- 5.24 There will be an increase in traffic on the local road network associated with vehicles travelling to and from the proposed SRFI site. When added to the existing baseline flows on these roads, these vehicles are anticipated to result in a relatively modest increase in road traffic noise which is unlikely to be particularly noticeable at most nearby receptors. The initial modelling results indicate that most receptors are predicted to experience no more than a negligible impact.
- 5.25 The proposed bypass will reduce the volume of traffic on the A508 through the centre of Roade, noticeably reducing the traffic noise such that some receptors in close proximity to that part of the A508 will have as much as a major beneficial impact. Creation of the bypass will increase the traffic noise experienced on the outskirts of Roade near the Bypass, an area currently with relatively low ambient noise levels. Measures are proposed in the form of bunding and fencing to help mitigate the effects of noise.

- 5.26 There is likely to be increased railway noise at receptors near to the Northampton Loop railway line due to the additional freight train movements. The extent of this impact has been assessed and is not anticipated to be significant, with no more than negligible impacts expected at the affected receptors.

### LIGHTING

- 5.27 A lighting assessment and strategy has been undertaken as part of the Environment Statement and site design work. The Lighting Strategy will determine the final and detailed lighting installed on the site once the position and number of buildings are known, and as the rail terminal is operated and expanded over time. The Lighting Strategy will inform decisions about the placing and type of lighting features installed to ensure that the proposed development will have minimal direct effects on neighbouring communities.
- 5.28 Part of the assessment process has included an assessment of the existing lighting context and any light pollution evident in views from the surrounding area. This shows that many nearby communities already experience 'sky-glow' and other lighting effects from the existing urban area of Northampton, from the M1, and from the villages themselves. From many receptors to the south and west the SRFI site will be viewed against the backdrop of existing lighting from Grange Park and the Northampton conurbation.
- 5.29 In accordance with industry standards and recommended best practice the Lighting Strategy is designed to prevent glare and light spill to locations off-site, including upward light that can contribute to sky glow. Furthermore, the landscaping and earthworks strategy will screen much of the lighting on the site from being directly visible from outside the site and so will form part of the mitigation for lighting as well as other potential visual effects.

## 5.0 DESIGN AND ACCESS REQUIREMENTS

### BUILDING DESIGN

- 5.30 The significant landscaping and bunding proposed form a key element of the landscape and design approach to the development of this site, and aim to largely screen the built development from surrounding views and limit the effects of the development on the surrounding landscape. The approach to the landscaping within the development plots on the site will also aim to establish a high quality environment with new buildings set within a structured landscape.
- 5.31 In addition, the SRFI buildings will be designed to high environmental and quality standards. They will comply with existing and emerging policies and national standards with regard to building design and appearance, but also environmental and energy efficiency performance and an exemplar approach is being proposed based on low energy design principles. The SRFI buildings will be designed to achieve a Very Good rating under the 'Building Research Establishment Environmental Assessment Method' (BREEAM) criteria, incorporating measures to reduce energy demand and carbon dioxide emissions.
- 5.32 The underlying principle of this design approach is to provide buildings that offer architectural character, quality and enhancement to the immediate vicinity, whilst understanding that buildings of this type cannot be fully concealed.
- 5.33 The elevational treatment will be designed to minimise the visual impact of the buildings toward sensitive views, while allowing for interest and activity at the entrances to the development. A range of external materials and colour palettes are available to enhance building elevations and to soften the appearance and break up the visual proportions of larger building elevations.
- 5.34 The ground levels have been carefully considered within the design process to provide natural screening and enabling the buildings to be set into the site, and surrounding topography, limiting their visibility when viewed from the open countryside and from the villages of Collingtree and Milton Malsor. As illustrated by the site section drawings and photo montages included above.
- 5.35 Materials such as profiled and flat metal cladding panels, timber rainscreen cladding, glass curtain walling, a variety of design feature panelling such as copper, zinc, aluminium, terracotta tiles and polished stone can be used to emphasise elements of the structure and create a high quality of design. Materials will be selected to offer high-quality finishes with a low environmental impact utilising the Building Research Establishment Environmental Impact Assessment rating system where possible, to include materials of excellent longevity and durability, in addition to being recyclable.
- 5.36 The design of the buildings will respond to the relevant market sector user/occupiers operational business needs and requirements. The size and height of the buildings, set within these parameters, are designed to accommodate current market requirements, whilst building in flexibility for future changing needs.
- 5.37 The appearance of large warehouse buildings can visually be broken down further into smaller sections in a number of ways with the use of different textured cladding/facing materials colours and textures, which are complementary but provide visually contrasting areas to sub-divide the massing of the elements into smaller areas.
- 5.38 Design standards and guidance for good practice have been adopted to address specific sustainability aspects of the design and construction including:
- BRE Green Guide to Specification: Provides guidance on the relative environmental impact of specifications for construction components and materials;
  - Modern Methods of Construction: The manufacture and prefabrication of structural building parts off-site;



## 5.0 DESIGN AND ACCESS REQUIREMENTS

- Secured by design: Police principles and standards for safety and security, addressing the layout and design of the development and requirements for physical security;
- WRAP: Good practice guidance for various construction and demolition waste streams, including methodologies for maximising recycled content in new buildings.
- The cladding materials specified are high-quality components suitable for large commercial buildings of this type. They provide an attractive finish, whilst offering excellent longevity and durability, in addition to being recyclable and are classified as A rated under the BRE green building materials assessment

5.39 The building will be designed in accordance with current building regulations Part L2A, 'The Conservation of Fuel and Power'. iSBEM calculations will be carried out in order to demonstrate compliance, in terms of Target Carbon Dioxide Emissions Rating (TER) and Building Carbon Dioxide Emissions Rating (BER), where BER must be lower than TER

### SUSTAINABILITY

5.40 The design approach for Northampton Gateway is based on low energy design principles. In summary, this approach involves energy demand minimisation through effective building form and orientation, good envelope design and proficient use of building services.

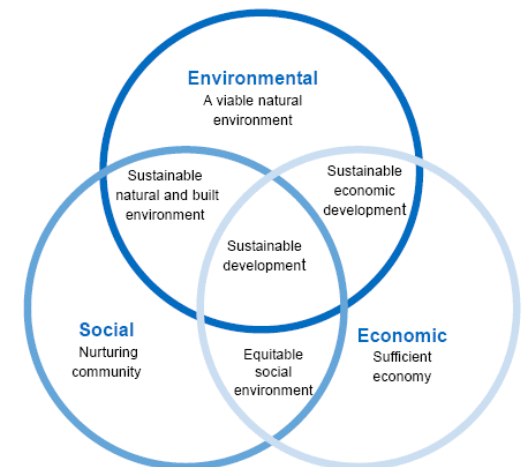
5.41 A range of measures are being explored to both reduce the inherent energy demand of the development, and to seek to ensure that a proportion of the energy needs are met from sustainable sources. Details are set out in the Sustainability Statement, submitted as part of the Environment Statement. This approach the building envelope will be designed to ensure that the fabric and form of the office and warehouse spaces encompass the low energy sustainability principles necessary to achieve a BREEAM 'Very Good' rating.

5.42 In addition, Roxhill is seeking to future-proof the site through measures to encourage and enable energy generation and storage on-site. This could include energy generated from roof mounted Photovoltaic Panels in on-site batteries.

This could be used to help power electric vehicles (employee cars and other vehicles used on-site), as well as meeting other energy requirements on-site. Such an approach would help with 'load levelling', for example to make power generated and stored during the day available to power lights at night. However large-scale battery storage remains relatively new, and work to explore this strategy is ongoing.

5.43 Efficient building services and lighting systems will be supplemented, where possible, by the following key sustainable construction and environmental features:

- Solar Thermal Evacuated Tubes to contribute towards hot water requirements
- Air Source Heat Pumps (ASHP) for space heating/cooling in the office areas
- Solar Photovoltaic Panels to provide a large proportion of the electrical demand of the buildings, and to support electric vehicle charging.
- Reduction in Carbon Dioxide (CO<sub>2</sub>) emissions over Part L 2013 Building Regulations Standards through improved envelope and services provision
- Energy Performance Certificate (EPC) A-rating
- BREEAM rating of 'Very Good'
- Use of A and A+ rated construction materials, wherever possible, with associated low Embodied Carbon impact (Green Guide to Specification)



## 5.0 DESIGN AND ACCESS REQUIREMENTS

### ACCESSIBILITY

#### RAIL ACCESS CONNECTIVITY TO THE NATIONAL RAIL NETWORK

- 5.44 The Northampton Gateway rail terminal will connect into Network Rail's Northampton Loop Branch of the West Coast main Line, which is already appropriately gauge cleared.
- 5.45 West and East connections onto the network will give direct loading gauge cleared access to the ports at Southampton, Felixstowe, London Gateway plus other smaller UK container ports, the Channel Tunnel and many of the key UK regional distribution cluster locations. As such the terminal is exceptionally well placed to support freight mode shift from HGV to rail.

#### 5.46 Benefits Of Rail Over Road

- At start up and based on equivalent UK terminal operations Northampton Gateway will handle 1-2 trains/day rising over time to a maximum of 16 trains/day, excluding trains relating to the potential rapid rail freight facility.
- Freight mode shift from road to rail is a key element of Government strategy where rail delivers significant benefits in terms of reduced carbon emissions (rail freight operations typically generate only 23% of the emissions of an HGV/ tonne km); and a reduction in road congestion.
- Intermodal is the biggest element of rail freight growth in the UK and is important to the efficiency of supply chain logistics for many of the UK's major companies.
- The movement of construction materials by rail is also expanding greatly and the terminal is designed to accommodate the relocation of GRS' Northampton aggregates terminal.

#### 5.47 Terminal

- New junction off the West Coast / Northampton Loop line
  - Three reception sidings capable of receiving 775m long trains from Northampton and from the South .
  - Three track rail terminal area capable of taking 775m trains.
  - An aggregates terminal.
  - Rail connections to 60% of warehouse space.
  - Provision of a rapid railfreight facility to be delivered in the future.
  - Gatehouses
  - HGV parking
  - Extensive container storage
  - Management office and welfare areas.
- 
- The terminal is cut into the existing ground levels and substantially screened by a series of large earth bunds which will be landscaped with trees.
  - In key areas screening barriers are also being provided to minimise the visual and noise effects of rail traffic on adjacent areas. Lighting for safe walking routes on the Reception Sidings will be 1.2m high bollard type lamps to minimise light spill.

Figure 35 shows the proposed configuration of the rail terminal and its phased delivery

# 5.0 DESIGN AND ACCESS REQUIREMENTS

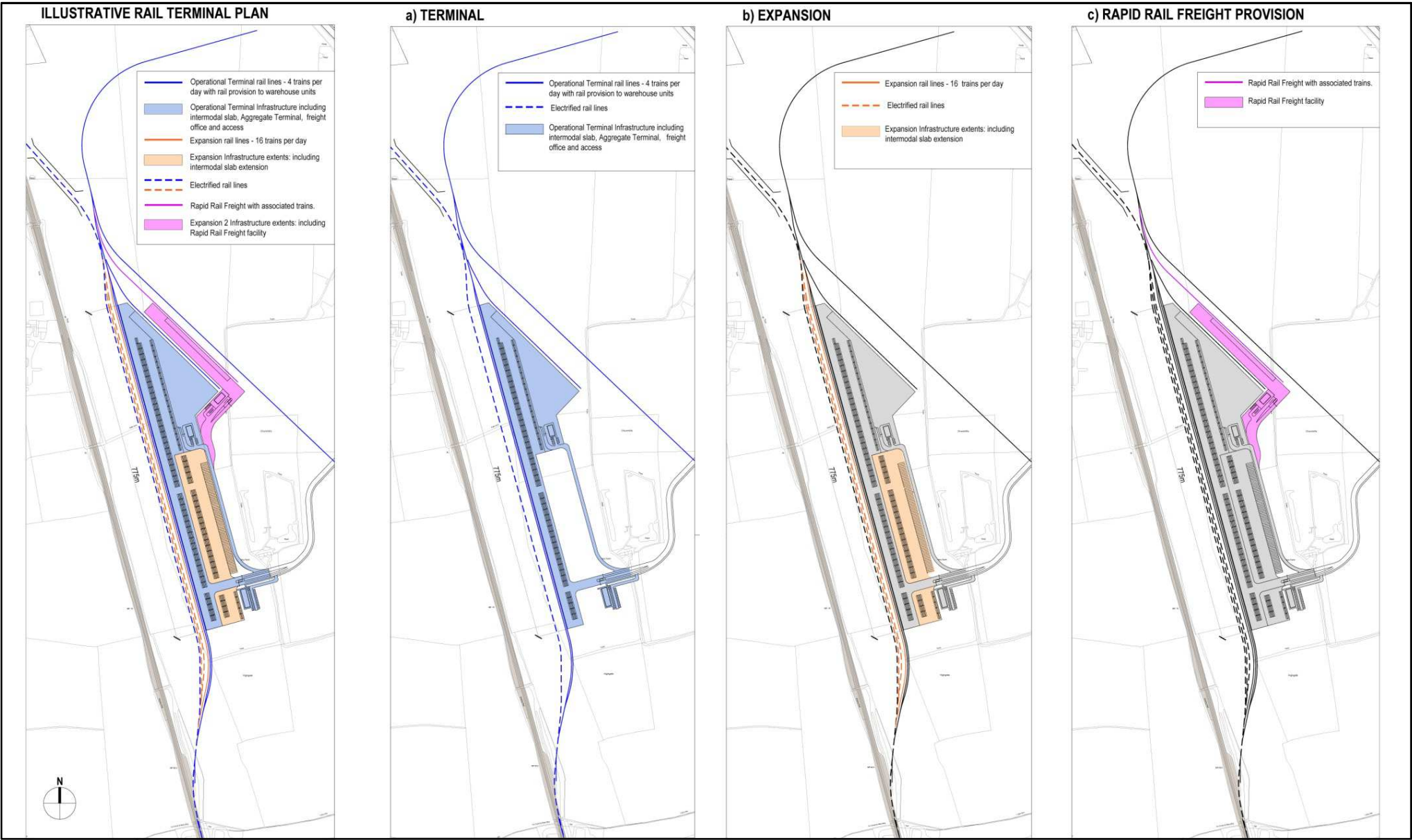


Figure 35: Rail Plan

## 5.0 DESIGN AND ACCESS REQUIREMENTS

### ACCESSIBILITY - HIGHWAY CAPACITY

- 5.48 The site is located within a few hundred meters of existing major employment and new and further proposed residential development on the southern side of Northampton, including Grange Park, and a new substantial urban extension to Collingtree. In addition to the A508 highways access, the site's proximity to the existing urban area provides opportunities to ensure good access for pedestrians, cyclists and public transport users from the nearby residential areas. This will include the provision of new walking & cycling links to and within the site, including within the landscaped areas, and new and enhanced bus services.
- 5.49 Transport modelling has informed a package of highways mitigation measures to minimise or remove potential traffic impacts in the future. These range from works at Junction 15 and 15A of the M1, and a new Roade Bypass, to improvements at existing bottlenecks and problematic local junctions, and extended HGV weight restrictions. This package of works will ensure a more reliable and efficient local highway network, with reduced traffic in villages, and more traffic on the most appropriate routes.

### ACCESSIBILITY – STRATEGIC ROAD IMPROVEMENTS

- 5.50 The overarching highway mitigation strategy is shown at Figure 38 and, described in the subsequent annotated drawings, comprises the following package of highway improvement that would be provided as part of the proposed development;
- Construction of a new roundabout on the A508 Northampton Road to serve as the access to the development, configured to require all departing HGVs to travel north to M1 Junction 15;
  - Dualling of the A508 carriageway between the new site access roundabout and M1 Junction 15;
  - Significant enlargement and reconfiguration of M1 Junction 15;
  - Widening of the A45 to the north of M1 Junction 15 and the signalisation of the Watering Lane junction;

- Enhancements to M1 Junction 15A to provide an additional lane and signalised on the A43 northbound approach, signal control and additional flared lane on the A43 eastbound approach, an additional lane on the A5123 southbound approach and circulatory carriageway widening;
- Construction of a new Bypass west of Roade between the A508 Northampton Road to the north of Roade and the A508 Stratford Road to the south of Roade, including a four arm roundabout
- 7.5T environmental weight restriction (with access permitted for loading through the villages): throughout Roade; along Knock Lane/Blisworth Road between Roade Bypass and Stoke Road; along Courteenhall Road between the A508 and High Street, including parts of Blisworth; along the unnamed road between the A508 and Quinton.
- Alterations at key locations along the A508 as part of an 'A508 route upgrade'; comprising:
  - Blisworth Road junction improvement; Rookery Lane/Ashton Road junction improvement; Pury Road junction improvement; Knock Lane/Stoke Road junction improvement
  - Provision of a pedestrian crossing at a bus stop in Grafton Regis (although not on the A508 this is required as a result of changing traffic volumes on the A508).

- 5.51 The package of highway improvements will provide betterment to the adjacent highway network, providing a reduction in driver delay, improved journey times, and draw existing background traffic onto the strategic and principal road networks. In doing so, traffic flows on many of the surrounding local roads and villages would reduce.



# 5.0 DESIGN AND ACCESS REQUIREMENTS

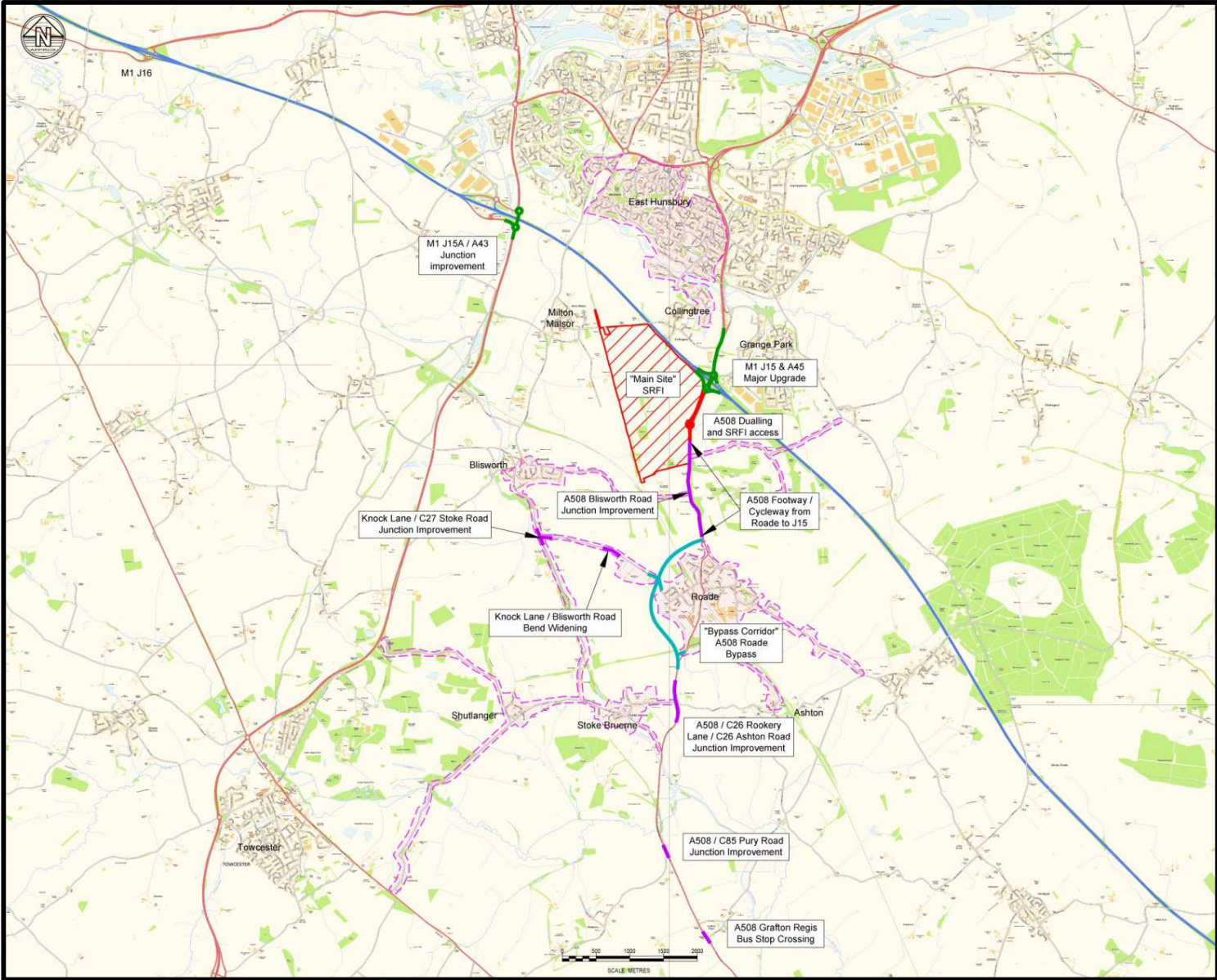


Figure 36: Highway Improvements and mitigation strategy

# 5.0 DESIGN AND ACCESS REQUIREMENTS

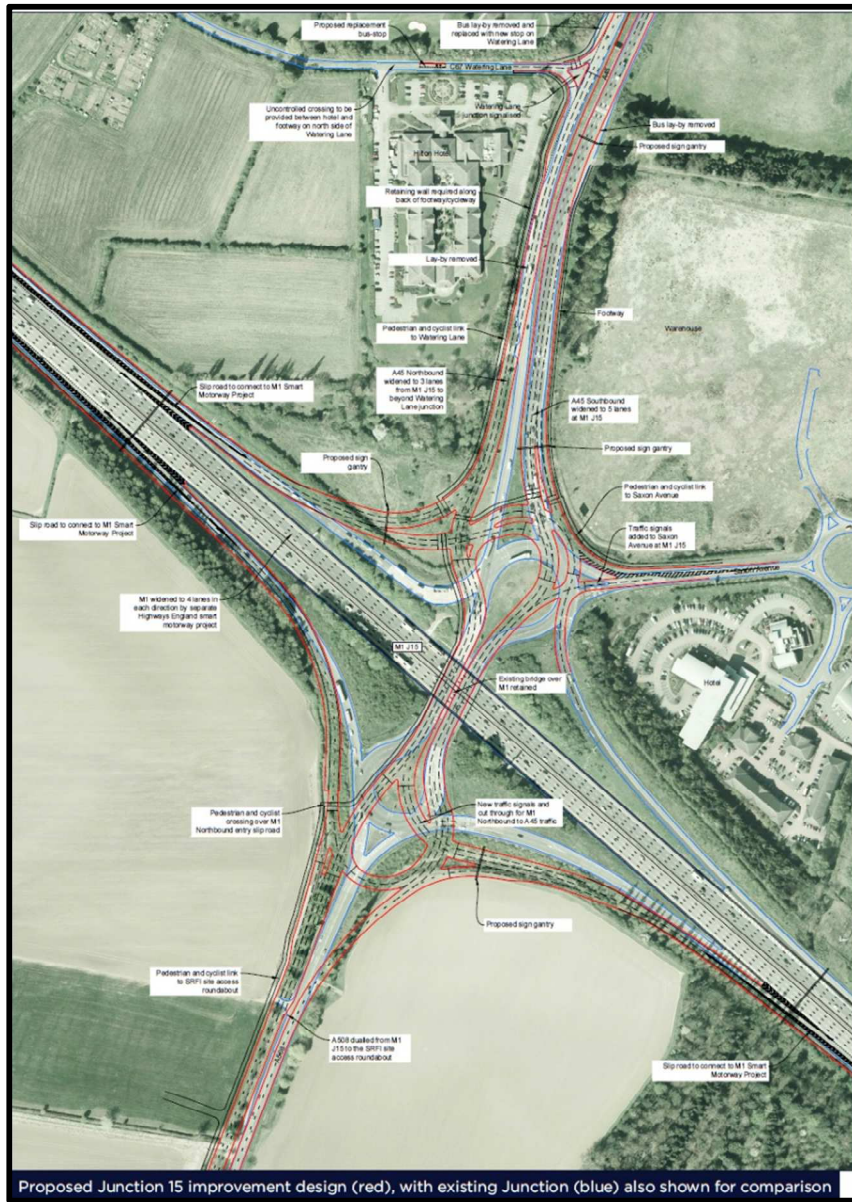
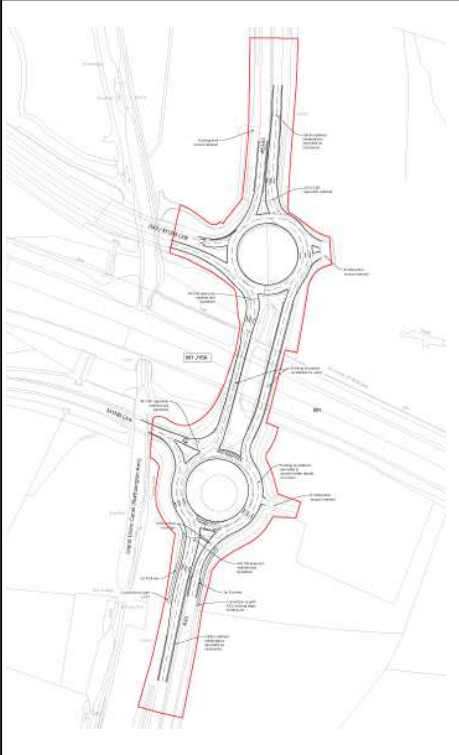


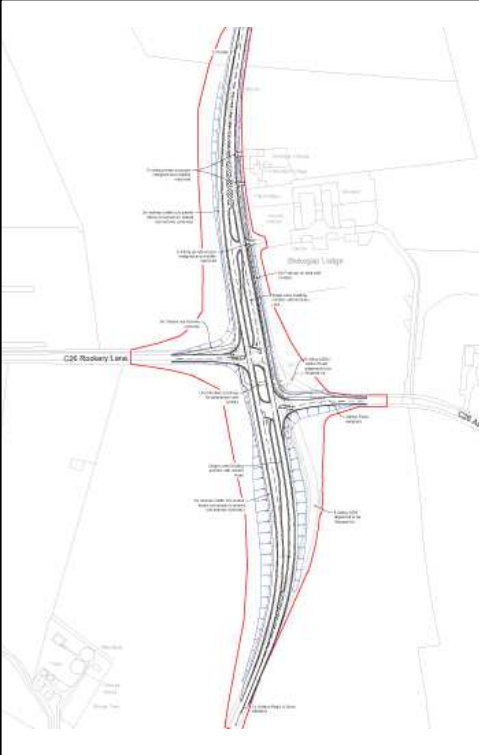
Figure 37: Highway improvements and mitigation

# 5.0 DESIGN AND ACCESS REQUIREMENTS



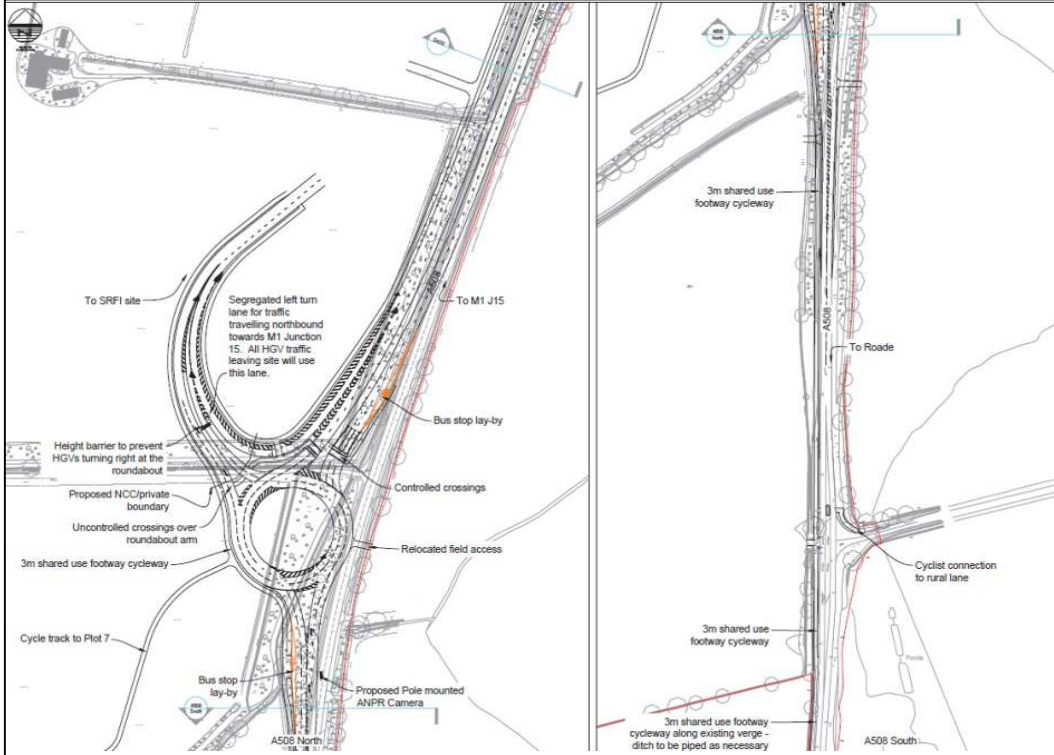
**Proposed improvements to Junction 15A**

Partial signalisation and other changes to significantly improve the junction operation and prevent queuing traffic from impacting upon the free flow of the M1.



**A508 / Rookery Lane / Ashton Road**

Improved to prevent right turning traffic from the A508 blocking ahead traffic, and alignment alterations to address the existing safety issue at the bends to the south.

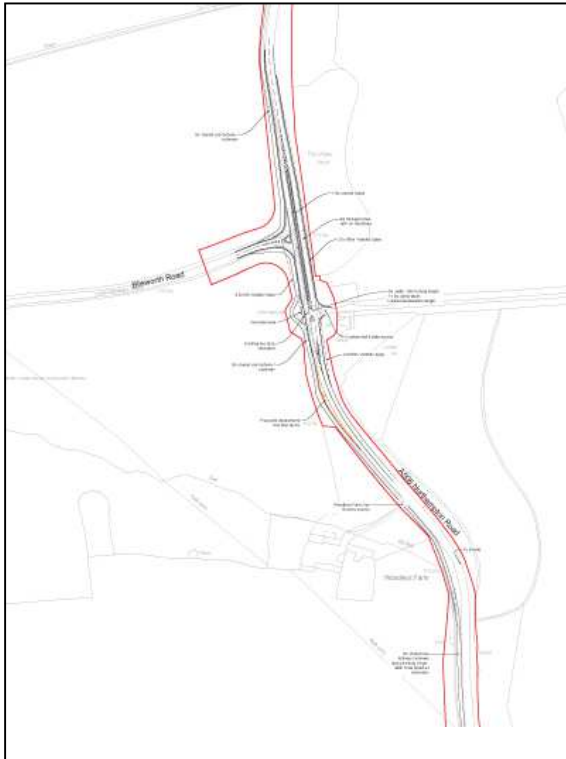


**A508 / Site Access**

Configured to require all HGVs exiting the site to travel north to M1 Junction 15

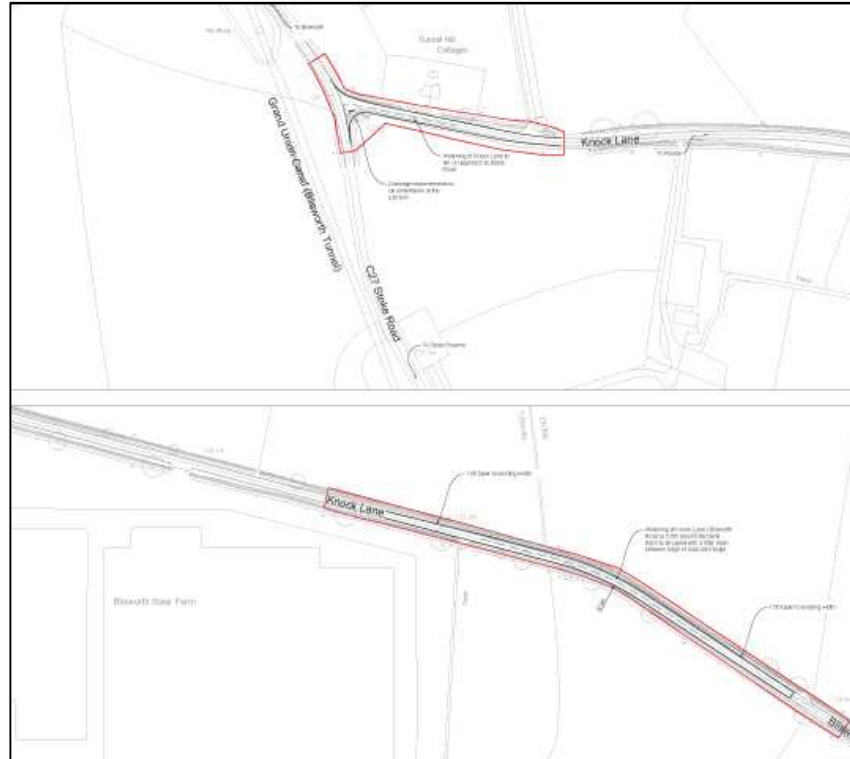
**Figure 38: Highway improvements and mitigation**

## 5.0 DESIGN AND ACCESS REQUIREMENTS



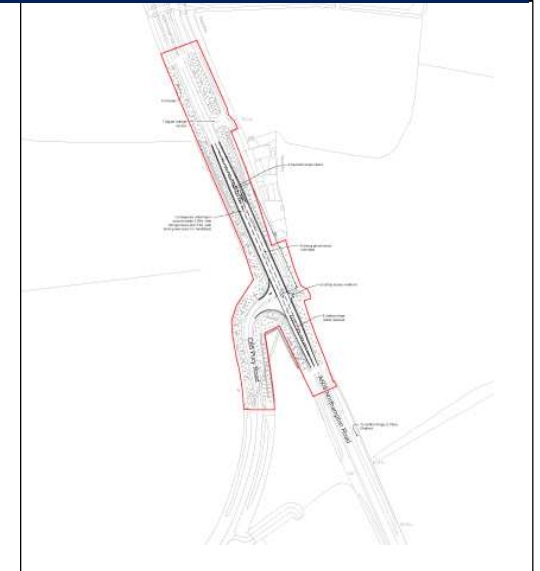
**A508 / Blisworth Road**

Left-in, left-out arrangement to address the congestion caused by right turning traffic both into and out of Blisworth Road.



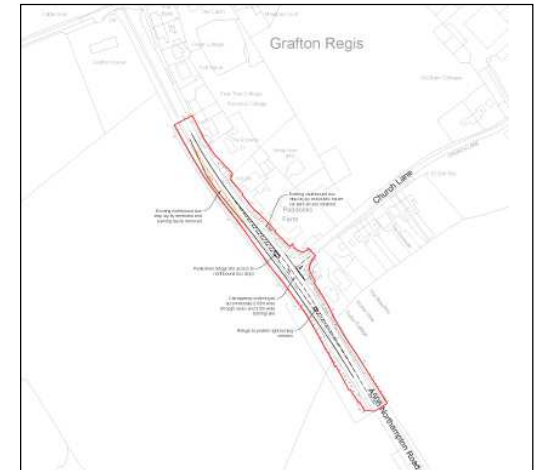
**Stoke Road / Knock Lane**

Existing junction improved and Knock Lane approach widened



**A508 / Pury Road**

Right turn lane from the A508 lengthened to accommodate more traffic and reduce delay for ahead traffic.



**A508 / Grafton Regis**

Pedestrian refuge provided to assist with crossing the A508 to reach bus stop, and provision of a right turn facility on the A508 for Church Lane.

**Figure 38 cont...: Highway improvements and mitigation**

## ACCESSIBILITY - WALKING AND CYCLING

- 5.52 The proposed development will provide new walking and cycling infrastructure connecting the main site with the existing networks in Northampton, to the north. The proposed development will provide a new shared use footway/cycleway set back from the western side of the dualled section of the A508 between the site access roundabout and M1 Junction 15. In addition, a second, more direct pedestrian and cycle access would be provided midway along this section of the A508, providing access to the main development spine road. The new footway/cycleway will connect with existing footway/cycleway facilities at M1 Junction 15, which would be improved, with traffic signal controlled crossings provided at all crossing points.
- 5.53 To the south of the site access roundabout, a new shared footway/cycleway would be provided alongside the east side of the A508 to the junction with the unnamed road to Quinton, from where access to National Cycle Network Route 6 is available.
- 5.54 The existing public footpaths that cross the SRFI site will be diverted. These will be diverted within the site-wide landscaping to provide a route of a sympathetic nature around the perimeter of the site. The footpath network will create a complete route around the site of approximately 5500m. A more formal pedestrian and cycle route will be provided alongside the main development roads. A formal pedestrian and cycle link will also be provided into the site from the existing bridge over the M1 from Collingtree village and around the east side of the development to connect into the development infrastructure.
- 5.55 A shared footway/cycleway will be provided on the eastern side along the length of the Roade Bypass. Existing public footpaths that cross the route of the Bypass will be amended, with informal crossing facilities with central refuges provided at suitable locations. An underpass suitable for equestrians is proposed for the bridleway.
- 5.56 A new pedestrian refuge would be provided on the A508 in Grafton Regis to allow pedestrians crossing the road to access the northbound bus stop to do so in two stages.

## ACCESSIBILITY - LOCAL ACCESS

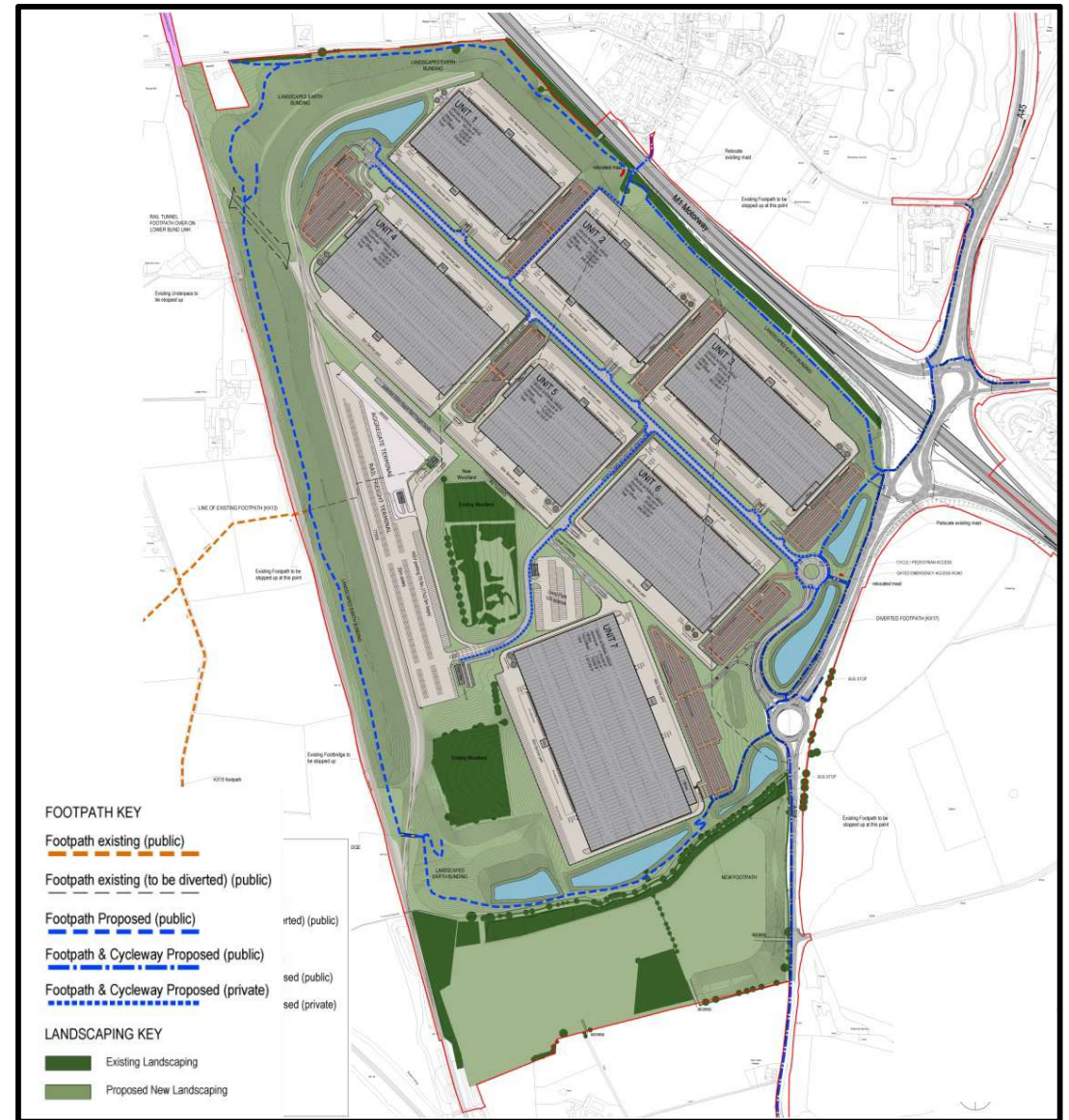


Figure 39: Public access Plan

## 5.0 DESIGN AND ACCESS REQUIREMENTS

### ACCESSIBILITY - TRAVEL PLANNING

5.57 Public transport will play an important role in providing access for staff travelling to and from the SRFI site. The proposed Public Transport Strategy (PTS) includes the introduction of a new bus service specifically to serve the SRFI site, as well as building on the existing local bus network through the extension of a service, provision of additional capacity, and improved infrastructure. The PTS has emerged from discussions with the local bus operator and the public transport officers at Northamptonshire County Council.

The focus of the strategy is threefold;

- The development of a new express service from the main site to Northampton Town Centre, built around key shift-time changes.
- The extension of service 7 from Grange Park to the main site. Service 7 currently operates from Moulton Park in the north of town, through Northampton to Grange Park in the south.
- New bus stops on the A508 for the 33/33a, X4 and X7 Services.
- The strategy has a clear focus on building a long term sustainable network which is not reliant on subsidy.

Figure 40 summarises the existing bus services that operate near the site and the proposed new and enhanced bus routes.

### TRAVEL PLAN

5.58 A Travel Plan will be produced by Occupiers in conjunction with specialist transport consultants.

5.59 Travel Plans represent an opportunity to raise awareness within organisations and their employees and visitors about the consequences of their transport choices and the benefits of choosing sustainable alternatives. The expectation is that a culture of sustainable travel can be cultivated by making people aware of opportunities for travel by sustainable modes.

5.60 The aim of the plan is to minimise the impact of travel on the environment by:

- Reducing the level of unnecessary travel;
- Encouraging those who have to travel to do so in a way that minimises the environmental impact.
- Providing facilities to encourage and help arranging of car sharing, use of public transport, investigating and promoting safe cycling and walking routes to the site
- Car park areas for all units / development plots will include a number of electrical charging stations for electric and hybrid fuel vehicles
- Secure cycle storage facilities will be provided within the car park areas with direct links to footpath/cycleways leading to the site.

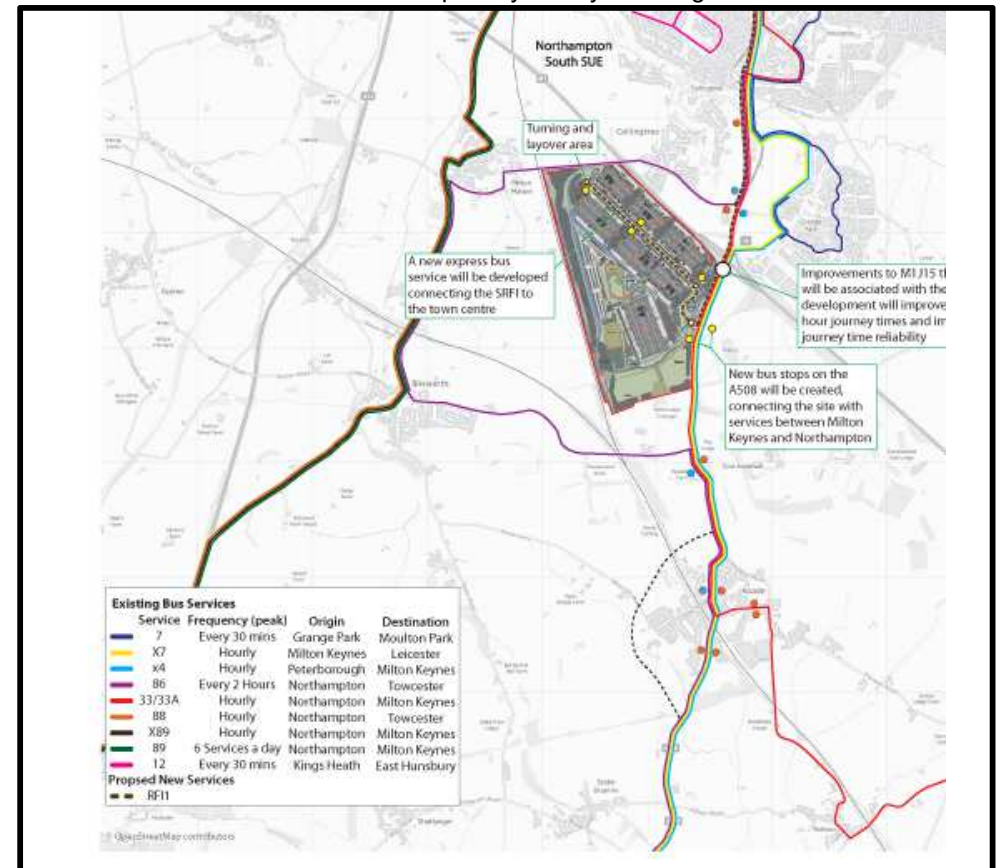


Figure : 40 Public Transport Plan

# 6.0 CONSTRUCTION COMPONENTS AND IMPLEMENTATION





## 6.0 CONSTRUCTION COMPONENTS AND IMPLEMENTATION

### 6.00 CONSTRUCTION COMPONENTS AND IMPLEMENTATION

6.01 It is anticipated that the general construction programme will broadly be broken down into four key components, as listed below:

- Off-site highway improvements;
  - M1 J15 & A45 improvements and link to site access
  - M1 J15A improvements
  - Roade Bypass and A508 improvements.
- On-site;
  - Bulk earthworks
  - Landscaping
  - Road.
  - Rail Terminal; and
  - Buildings.

### HIGHWAY WORKS

6.02 There are a number of components to the highway works, as described within section 5 of this statement which are committed as part of the development including; New road infrastructure and works to the existing road network, including the provision of a new access and associated works to the A508, a new bypass to the village of Roade, improvements to J15 and to J15A of the M1 motorway, the A45, and other highway improvements at junctions on the local highway network

### EARTHWORKS, DRAINAGE, ROAD AND LANDSCAPING

6.03 The earthworks can be undertaken in a phased manner to allow development plateaux to be created simultaneously with the creation of landscape mounding. This will then enable the development of buildings to commence once appropriate landscaping is in place. The earthworks are likely to commence adjacent to the access point and work away from the access. See Figure 41

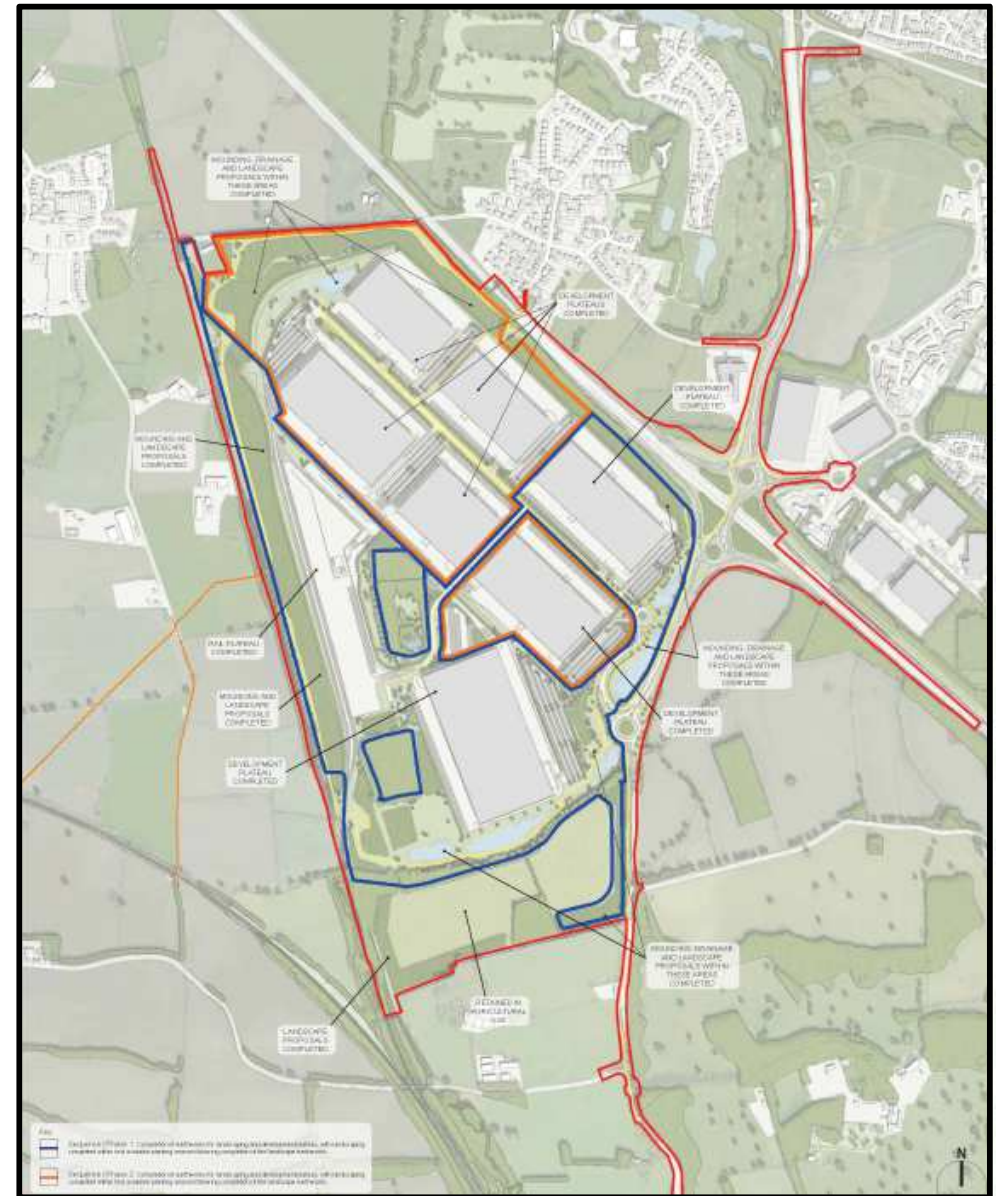


Figure 41: Landscape Phasing

## 6.0 CONSTRUCTION COMPONENTS AND IMPLEMENTATION

### RAIL LINE AND SIDINGS

- 6.04 Construction of the rail line will commence early in the overall construction process. The rail sidings will be implemented in phases with the first phase providing 2 sidings appropriate to the initial operation of the site.

### WAREHOUSE BUILDINGS

- 6.05 The warehouse building will be constructed on plots once the plateau and appropriate screening, bunding and landscaping associated with the building have been progressed, with building occupation restricted via condition.
- 6.06 A Construction Environmental Management Plan (CEMP) has been prepared and is appended to Chapter 2 of the Environmental Statement. It sets out the systems and controls that will be adapted during the construction of the scheme to minimise any adverse environmental effects in accordance with the conclusions of the Environmental Statement and Construction Good Practice



