

The West Midlands Rail Freight Interchange Order 201X  
ES - Vol 1 - Chapter 3: Alternatives and Design Evolution  
Regulation 5(2)(a)  
Ramboll - July 2018

# 3 ALTERNATIVES AND DESIGN EVOLUTION

## Introduction

- 3.1 The EIA Regulations require the ES to report on the main alternatives considered by the Applicant and to give an indication of the main reasons for their choice, taking into account the environmental effects. This chapter of the ES explores the objectives of the Proposed Development and describes how the development proposals have evolved in response to the environmental and DCO context within which they are being brought forward. This chapter also addresses a number of scenarios comprising:
- Alternative sites; and
  - Alternative designs.
- 3.2 This chapter should be read in conjunction with the Planning Statement (Document 7.1) and the Alternative Sites Assessment (Document 7.2) prepared by Quod.

## Development Objectives

- 3.3 The Proposed Development aims to realise the comprehensive redevelopment of the Site in order to deliver the construction of:
- An intermodal rail freight terminal with connections to the West Coast Main Line ('WCML'), accommodating up to 10 trains per day with the capability to receive trains of up to 775m long and including container storage and associated Heavy Goods Vehicles ('HGV') parking;
  - Around 743,200 square metres (gross internal area) of rail served warehousing, ancillary service buildings and parking;
  - New road infrastructure and works to the existing road infrastructure;
  - Demolition and alterations to existing structures and earthworks to create development plots and landscape zones;
  - Reconfiguring and burying of electricity pylons and cables; and
  - Strategic landscaping and open space, including alterations to public rights of way and the creation of new ecological enhancement areas and publicly accessible open areas.
- 3.4 The SRFI will fill the significant gap in the rail freight network to the north and west of the West Midlands area, thus contributing to the future prosperity of the region.

## Development Considerations

### Land Use

- 3.5 As described in ES Chapter 1: Introduction, the Site primarily comprises arable farmland, with the Canal and West Coast Mainline both intersecting the Site from north to south. The Site is also characterised by a significant area of sand and gravel mineral extraction, known as Calf Heath Quarry. There is a small area of mixed woodland known as Calf Heath Wood near the middle of the Site. The area south of Vicarage Road is made up of agricultural fields with trees and hedgerows.
- 3.6 A number of planning permissions have been granted by SCC relating to a sand and gravel extraction quarry which is currently operational on a large area of the Site. The current permission (SS. 12/08/681) allows the phased extraction of sand and gravel to a depth of 4

metres and subsequent restoration of approximately 40 hectares of land in the north-east of the Site.

- 3.7 In determining the mix of land uses for the Proposed Development a number of factors were considered, including:
- The primary function of the Proposed Development as an intermodal SRFI;
  - Current planning policy relevant to the Site; and
  - Market demand.

## Environmental Considerations

- 3.8 The design and alternatives process has been undertaken alongside early environmental assessment of the Proposed Development, and where necessary the proposals have been amended in response to environmental constraints and opportunities. The development proposals are therefore the result of an iterative process to eliminate and/or reduce environmental effects through design. These are explained in further detail in the sections below.

## Alternatives

### Do-Nothing Alternative

- 3.9 As set out in the Planning Statement (Document 7.1), national policy clearly establishes the "compelling need for an expanded network of SRFIs" (NPS paragraph 2.56).
- 3.10 The NPS explains the drivers of the need for development of the national rail network and acknowledges the role that rail transport has in reducing pollution and congestion: "Rail transport has a crucial role to play in delivering significant reductions in pollution and congestion. Tonne for tonne, rail freight produces 70% less CO<sub>2</sub> than road freight, up to fifteen times lower NO<sub>x</sub> emissions and nearly 90% lower PM<sub>10</sub> emissions. It also has de-congestion benefits – depending on its load, each freight train can remove between 43 and 77 HGVs from the road" (NPS paragraph 2.35).
- 3.11 The NPS notes that industry, working with Network Rail, has produced unconstrained rail freight forecasts to 2023 and 2033. "These forecasts, and the method used to produce them, are considered robust and the Government has accepted them for planning purposes" (NPS paragraph 2.49).
- 3.12 The NPS notes that, while the forecasts in themselves do not provide sufficient granularity to allow site specific need cases to be demonstrated, they confirm the need for an expanded network of large SRFIs across the regions to accommodate the long-term growth in rail freight. They also indicate that new rail freight interchanges, especially in areas poorly served by such facilities at present, are likely to attract substantial business, generally new to rail (NPS paragraph 2.50). For the Government's forecasts of rail freight growth to be achieved, "SRFI capacity needs to be provided at a wide range of locations" (NPS paragraph 2.58).
- 3.13 Network Rail forecasts for rail freight growth rely on the assumed development of new SRFI and WMI<sup>1</sup> is included in the list of sites on which the forecast is based. It is these forecasts which form the basis of the NPS and which the NPS advises should be accepted for planning purposes (paragraph 2.49). As the NPS explains at paragraph 2.58, without a SRFI in the

<sup>1</sup> Rail Freight forecasts to 2023/4, 2033/4 and 2043/4 (April 2013). "Four Ashes/F'stone" is the broad location in the vicinity of the WMI Site.

general locations assumed in the Network Rail forecast model, the NPS forecasts will not be met and government policy will be frustrated.

- 3.14 The regional evidence base further identifies the need for a new regional logistics site / SRFI in the West Midlands as far back as 2004, when, the West Midlands Regional Logistics Study Stage One (2004) identified the "North Black Country/South Staffordshire"<sup>2</sup> area as one of the best sub-regional locations for a Regional Logistics Site<sup>3</sup> ('RLS') in the West Midlands.
- 3.15 Section 5 of the Planning Statement summarises the urgent and consistent identified need for large scale rail served distribution sites in the West Midlands. However, no policy progress has been made to secure the needed development and, as of DCO submission, there are no new known, proposed or planned SRFIs in the West Midlands or southern Staffordshire, apart from WMI.
- 3.16 The Market Assessment (Document 7.4) notes that there is "a shortage of premises in the region, with less than 1.2 years of supply as at November 2017."
- 3.17 In summary, the national policy objective for a network of SRFI will not be satisfied until the outstanding need is addressed and the Network Rail forecast model will not be met without a SRFI in the general location of the Site. However, employment and logistic sites of strategic size are rarely delivered through the traditional planning activities of local planning authorities and the recognised need for a SRFI facility in the West Midlands has gone unmet since 2004. On this basis, a do-nothing alternative is not considered appropriate and has not been considered further.

## Alternative Sites

- 3.18 An Alternative Sites Assessment ('the ASA') (Document 7.2) accompanies the suite of documentation submitted with the DCO application. The ASA considered other sites and possible locations, exploring the extent to which these could meet the identified need. The ASA also explored whether or not this identified need could be met without the use of Green Belt land. The ASA considered both the general location of the greatest need and then revisited the availability of alternative sites.
- 3.19 The ASA assesses potential alternative sites for the Proposed Development, including the selected site. For clarity the ASA considers all short-listed sites, however for consistency the WMI Site is referenced, although it is noted that the project site could have determined as an alternative site if the ASA had identified a preferable alternative site. Use of the term 'WMI Site' is to avoid confusion by introducing a differing location name, although the naming does not alter the weight of consideration of all sites in the ASA.
- 3.20 The ASA concludes that the WMI Site represents the only suitable site to meet the need for a SRFI within the identified search area. Full detail is set out in the ASA itself, but a summary is provided below.
- 3.21 Whilst the NPS establishes several location and search criteria for a SRFI, there is no formally prescribed process or methodology for undertaking an ASA. The methodology of the ASA reflects the planning policy requirements set out in the Planning Statement; the specific operational and locational needs of a SRFI; and the precedent and best-practice which has developed in previous SRFI applications.
- 3.22 Drawing on policy, precedent (other ASAs) and market signals, a geographic area was established within which it is appropriate to search for alternative sites that could potentially accommodate a SRFI which meets the identified need.
- 3.23 The search area was then refined using a series of key criteria which help identify the more appropriate locations and discount areas which are fundamentally unsuitable, narrowing the search area to just those areas which are both at least within 5km of a rail line of gauge W8 or above (or planned to be upgraded to W8 or above by Network Rail) and at least within 5km of a motorway junction or road of near-motorway standard. Additionally, those areas with

environmental constraints which the NPS identified as unlikely to be suitable for consideration as potential alternative sites were then discounted.

- 3.24 Having refined the broad ASA search area, a series of more detailed criteria was established based on policy, precedent and market signals to help identify and assess potential alternative sites.
- 3.25 A comprehensive and detailed approach was taken in searching for and identifying potential SRFI sites. Potential alternative sites were found through a comprehensive review of all relevant existing and emerging planning literature within the region, as well as a close examination of the search area. All specific sites suggested as potential alternatives during the consultation process were also considered. Having regard to the search criteria, a long-list of 8 potential alternative sites were identified, as below.

Ref	Site	Source
1	Meaford Power Station	Policy Documents Search
2	Mid Cannock Colliery/Poplars Landfill Site	Policy Documents Search
3	ROF Featherstone	Policy Documents Search
4	Rugeley Power Station	Policy Documents Search
5	Dunston	Map Search
6	Creswell	Map Search
7	Stafford West	Map Search
8	WMI	Proposed Development site

- 3.26 The final stage of the ASA was to assess the alternative sites to determine whether they provide locations which could meet the need for a SRFI. The assessment of the alternative sites involved a two-stage process.
- 3.27 The initial assessment involved considering the Long-List of potential alternative sites in detail against the search criteria identified above, to appraise their suitability in principle for the development and successful operation of a SRFI. This first stage 'filtered out' sites which would be prohibitively constrained to the extent that they are fundamentally unsuitable as a SRFI development site. The sites that passed through the first filter were then shortlisted and evaluated to determine the most appropriate site.
- 3.28 The outcome of the initial assessment was that three sites failed to meet one or more of the essential criteria leaving five sites to be assessed in more detail (as listed in Table 3.2).

Ref	Site
6	ROF Featherstone
7	Rugeley Power Station
8	Dunston

<sup>2</sup> Page 15, Regional Logistics Study – June 2004

<sup>3</sup> A RLS is a concentrated development of warehousing and distribution uses, generally being 50ha or more and with existing or potential dedicated access to the regional rail and highway networks, allowing for intermodal handling (WM RSS Revision, Policy 9A).

<b>Table 3.2: Short-listed alternative sites</b>	
<b>Ref</b>	<b>Site</b>
9	Creswell
11	WMI

- 3.29 The long-listed sites underwent an initial assessment against key criteria to appraise their suitability in principle for the development and successful operation of a SRFI. This first stage 'filtered out' sites which would be prohibitively constrained to the extent that they are fundamentally unsuitable as a SRFI development site.
- 3.30 ROF Featherstone, Rugeley Power Station, Dunston, Creswell and the WMI Site passed through the first filter were then shortlisted and evaluated to determine the most appropriate site.
- 3.31 The shortlisted sites were then compared in a comprehensive assessment of both market and sustainability constraints.
- 3.32 In terms of potential transport impacts, the WMI Site performs much better than Creswell, Rugeley Power Station and ROF Featherstone, which each have difficult highways issues. These sites would require large scale highway improvements or reliance on existing routes to the strategic road network which pass through built up residential areas. In comparison, at WMI access to the M6 can be achieved in less than 850m and only passes a small number of residential properties, mostly set back from the A5.
- 3.33 Like all the Short-List sites (apart from Rugeley Power Station), WMI is located adjacent to the West Coast Main Line branch via Penkridge. However, Featherstone and Creswell have significant site constraints which would result in complex and unsuitable rail connections.
- 3.34 The WMI Site represents a strong location where the strategic freight network for rail come together with the strategic road network and the Site can be developed to accommodate the necessary infrastructure and associate warehousing. Featherstone, Creswell and Rugeley Power Station are simply not considered to represent suitable alternatives in the context of an SRFI's fundamental requirement to facilitate efficient modal shift from road to rail. Furthermore, the Creswell site was considered particularly constrained by environmental and engineering factors, with the site situated across the River Sow floodplain, immediately adjacent to a SSSI and with numerous archaeological features both on-site and within the surrounding area. The combination of the river which is situated adjacent to the WCML, and the higher ground to the east would have been prohibitive to the construction of an SRFI, without significant engineering and resultant environmental effects on the river corridor in particular.
- 3.35 When compared to Dunston, the WMI Site is considered to be a much more suitable site for a large SRFI development. Despite the long-established need for further SRFI/RFI development in the West Midlands, the Dunston site has never been genuinely promoted, privately or through the numerous policy documents or reports, for large-scale commercial development. It has only been identified in the ASA through a map search undertaken by the WMI project team.
- 3.36 Dunston is protected as Open Countryside and is an existing open rural landscape that is visually cohesive and well connected with its broader landscape context. A development of the size and scale of an SRFI would be very difficult to successfully assimilate or mitigate in landscape and visual terms and the resultant effects on the landscape character of the site and its context would stretch over a much broader area so that the visual impacts would be greater due to the site's existing openness and rural character and the absence of existing industry, urban influences or woodland from its setting.

- 3.37 The creation of development platforms at the Dunston site would require re-profiling, further disrupting the rural character. In addition, existing watercourses that lie to the west of the WCML at Dunston would need to be realigned or culverted to allow the development of the site and an efficient layout could not be achieved which avoids the existing floodplain in the western section of the site.
- 3.38 Finally, land assembly would be required to achieve a suitable sized development site. The combined impacts on this rural site, as well as the effects on local amenity, make the site unsuitable and is not considered to be an acceptable location for an SRFI or a suitable alternative to WMI.
- 3.39 Whilst the WMI Site is designated Green Belt land, its surrounding context is made up of a mix of uses, features and influences. Areas of agricultural use, mineral workings and woodland (Calf Heath Wood) make up the Site, however, the neighbouring chemical works, the Four Ashes Industrial Area, Veolia energy recovery facility and the Bericote Development influence the landscape and contribute to a more built up and industrial setting in the south-west.
- 3.40 In addition, WMI is located closer to the Wolverhampton/Birmingham conurbation and could more effectively serve that market.

## Alternative Designs and Layout

- 3.41 The Proposed Development is for a SRFI and as such, the scope for considering alternative land uses within the Site is limited. The land uses are derivative to a large degree of the Proposed Development's primary purpose and have been developed to serve that purpose in line with the various criteria discussed under 'Land Use' above.

## Design Development

- 3.42 The Design and Access Statement (the 'DAS') (Document 7.5) describes the design evolution processes undertaken by the Applicant's design team.
- 3.43 The Proposed Development has been subject to an iterative design process and a variety of options have been considered in response to key issues associated with the Site and its surroundings, including environmental constraints and opportunities identified throughout the EIA process.
- 3.44 A wide range of specialist consultants provided input into the evolving scheme and detailed consultation with other stakeholders also served to inform the design process and assist the team in developing the current design. A more detailed explanation of the consultation approach is provided within the Consultation Report (Document 7.10).
- 3.45 Although all technical disciplines considered within this ES and the preceding Scoping Report had some degree of input into the design, the main environmental factors considered during the design development with regard to the masterplan were noise, visual and landscape effects, heritage, ecology, drainage/water environment, ground conditions, sustainability (including energy, climate change and waste), and transport including road and pedestrian/cycle access.
- 3.46 Measures introduced to the Proposed Development targeted at avoiding, reducing or mitigating environmental effects throughout the design stage are termed 'embedded mitigation'. These measures are described in full in Chapter 4: Proposed Development, of this ES, and introduced where relevant below.
- 3.47 The design development process is summarised below, broadly arranged in chronological order.

## Opportunities and Constraints

- 3.48 The planning policy context and designations, history of the Site, dialogue with statutory and non-statutory consultees including local residents and the environment have all influenced the design and scheme development.

3.49 The scheme design was progressed in order to maximise opportunities presented by the Site and to address as much as possible constraints presented by this site. Constraints identified at an early stage in the design development included the following:

- Partial Site contamination relating to the adjacent industrial land uses, and ground conditions relating to the existing quarry;
- Heritage aspects including the Staffordshire and Worcestershire Canal and nearby Listed Buildings and Scheduled Monuments, as well as the archaeological context of the surrounding area;
- The adjacent existing Bericote Development, under construction;
- Presence of existing residential properties on and adjacent to the Site;
- The presence of existing arable farmland and habitats including a large expanse of woodland on Site; and
- Existing traffic congestion at certain locations within the surrounding road network.

### 2015 Initial Rail Terminal Options

3.50 Prior to Stage 1 Consultation and beginning in early 2015, four potential options for the rail terminal were drawn up and appraised by the project team:

- 350m rail terminal west of the WCML and south of Gravelly Way;
- 350m rail terminal east of the WCML and north of Gravelly Way;
- 750m rail terminal east of the WCML and the Canal with access north and south; and
- 750m rail terminal east of the WCML and the Canal with access north.

3.51 From the four options, two preferred options were identified in April 2016, namely options A and D above, to be developed further into masterplan options for Stage 1 consultation. Option B was dropped due to difficulties in forming the development plateau for the rail terminal, as well as difficulties in screening the terminal from nearby residents. Option C was dropped due to the topographic levels which would have necessitated high levels of disturbance to the canal in order to facilitate the rail crossing, and further issues with the levels in the eastern part of the Site which may have interfered with the high water table in this area.

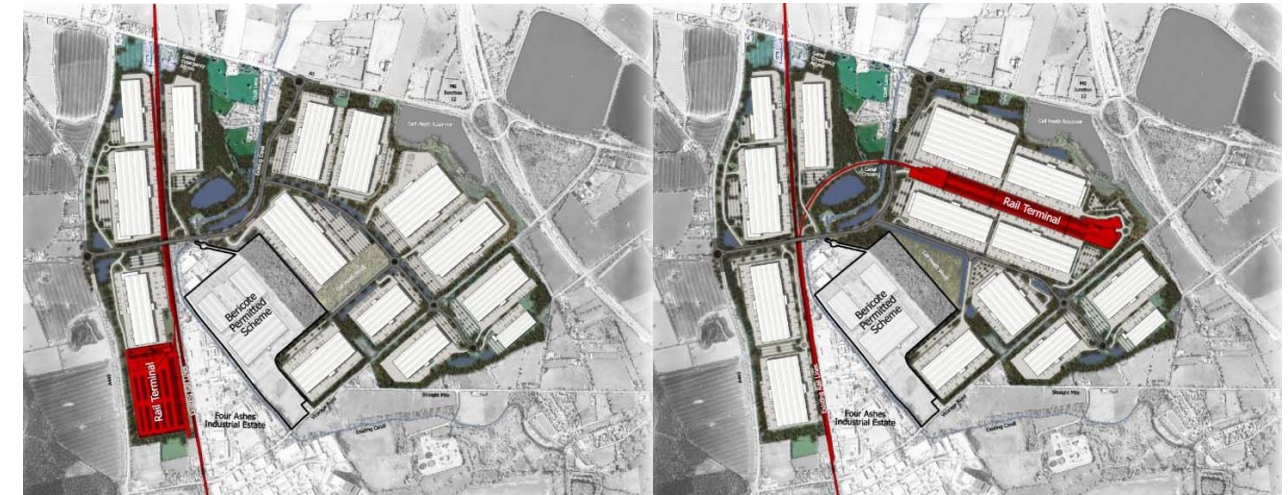
3.52 The four options and their reasons for selection/de-selection are considered in more detail in the DAS (Document 7.5).

3.53 Following the decision of the project team to take forward Options A & D to Stage 1 Consultation, the team begun undertaking further assessment of the options to ensure the optimal proposed parameters and layouts were brought forward.

3.54 It was decided that in bringing two masterplan options forward to Stage 1 Consultation, a more comprehensive consultation could be undertaken prior to any elements of the layout being 'fixed'.

3.55 The two preferred options are shown in Figure 3.1 below.

**Figure 3.1 Illustrative Rail Terminal Options**



3.56 The two options focused on whether the SRFI terminal was situated on either the west or east side of the WCML, and the warehouses and other associated infrastructure amended to suit. It should be noted that the Site boundary had not been fixed at this stage, so variations on the scheme extent, particularly to the south of Vicarage Road, were still being explored. Both options contained similar infrastructure, and utilised similar access points to the road network, namely via the A5, with access from the A449 and Vicarage Road as secondary and tertiary access points respectively.

3.57 The 'West Terminal Option' placed all of the rail facilities to the west of the WCML including container facilities and would facilitate 775m trains in the reception sidings, and 395m sections in the rail terminal area. The East Terminal Option placed the terminal facilities to the east of the WCML as well as the Staffordshire and Worcestershire Canal, necessitating a new rail crossing of the latter, which would present some degree of constraint in terms of environmental impacts and engineering. With regards to the latter, the WCML and Staffordshire and Worcester Canal are at similar elevations at this location, hence achieving the uplift in height for the railway to cross the canal with sufficient clearance would have been a significant challenge. The East Terminal Option would accommodate 750m trains, and had the advantage that full train lengths could be accepted without splitting into sidings. The position of the overhead lines was an additional constraint for the East Terminal Option, as the cables, whether buried or overhead, would need to cross or circumnavigate the rail terminal which would have been a significant engineering challenge.

### Stage 1 Consultation, June/July 2016

3.58 While the development of the scheme was still evolving in response to its surroundings and the requirements of a SRFI, the Applicant undertook a Stage 1 'non-statutory' consultation exercise. Whilst this was an informal, and early, consultation exercise, it was conducted in the manner of a statutory consultation.

3.59 Stage 1 Consultation allowed for early feedback on the scheme design from a range of key stakeholders, full details of which are provided in the Consultation Report (Document 7.10), which accompanies the DCO application. The consultation exercise enabled the project team to engage with the public and with stakeholders over the principles of the Proposed Development, as well as the relative merits and issues of the two options being considered at that time.

3.60 Key feedback received during the Stage 1 consultation relevant to the design is summarised as follows:

- Questions on the scale of the scheme and its justification;
- Concerns expressed regarding transport effects on the local road network and further detail requested on proposed junctions;

- Environment Agency (EA) expressed a preference for the 'west option' with regard to potential impacts on watercourses;
  - Concerns expressed by SCC over the losses to Calf Heath Wood, impacts to the users of the canal towpath, parking provision and the need for information on phasing;
  - SCC requested that biodiversity, flood risk and the inclusion of community facilities be included in the design; and
  - Issues around traffic, noise, development of Green Belt and biodiversity expressed as the greatest concerns.
- 3.61 Taking into account the environmental and engineering constraints identified, plus the feedback received during the Stage 1 Consultation, it was decided to proceed with the West Terminal Option for further consideration. The chief factors in this decision were:
- Limited impacts on the Staffordshire and Worcestershire Canal Conservation Area, as well as reduced engineering constraints associated with avoiding a canal/railway crossing;
  - Allowance for the retention of a greater area of the more biodiverse parts of Calf Heath Wood;
  - Improved (rail) access and operational efficiency from the WCML; and
  - Occupier / Operator preference.
- 3.62 Due primarily to their early stage of development the two options differed little in terms of significant environmental effects, except with regards to the canal and Calf Heath Wood as outlined above, therefore, environmental factors were less prominent in this choice. Environmental factors, utilising feedback from the Stage 1 Consultation and from the project team, were considered as an integral part of the subsequent design development of the parameters plans, as presented in the following section.

### Parameters and Illustrative Masterplan Evolution

- 3.63 The following principal changes were made to the Illustrative Masterplan as a result of the first stage of consultation and further assessment undertaken between Stage 1 and Stage 2 Consultation:
- The rail terminal layout was improved to allow the rail terminal to accept full-length 775m trains without splitting. This required the reconfiguration of Gravelly Way and the introduction of an improved bridge to that proposed at Stage 1 Consultation. At the same time, the rail terminal footprint was reconfigured and reduced, to allow additional landscape screening to the A449, and to enable the rail terminal to be moved further away from residents on Station Drive;
  - Internal roads and the A5 roundabout moved 30m east to reduce the potential impact on the Staffordshire and Worcestershire Canal Conservation Area and the two listed buildings at this location (see Chapter 9: Cultural Heritage of this ES for more information on these features) on the advice of heritage consultants, following engagement with Historic England;
  - A 20m landscape buffer was introduced to enhance ecological connectivity through the central part of the Site;
  - Development of a comprehensive surface water drainage design with a strong focus on Sustainable Drainage Systems (SuDS) including surface water swales, attenuation ponds and permeable surfaces. These proposals include the retention, use and enhancement of existing ponds within the Site to deliver both hydrological and ecological benefits and the creation of several new ponds, particularly within the community parks where they would also provide amenity value;
  - The size and layout of the buildings to the south of Vicarage Road was altered to retain the existing ecological features including veteran trees, hedgerows and a pond, and to reduce the impact on Calf Heath Village;
  - Addition of an extensive set of landscape embankments around the perimeter of the scheme to reduce impacts to neighbouring properties from noise. These are described in more detail in Chapter 4: Proposed Development, of this ES;

- Creation of Calf Heath Community Park and Croft Lane Community Park, located to the south and the north of the Site respectively, the former of which necessitated an increase in the Site area to the south bordering the Staffordshire and Worcestershire Canal;
- To reduce the impact on Calf Heath village further landscaping was added and the building orientation altered such that HGV yards would only be present on one side of the building and generally away from properties; and
- The overall floor space was reduced to increase the amount of green space across the scheme, and to allow enhanced ecological and pedestrian connectivity.

- 3.64 As a result of the above, the Proposed Development that was submitted for Stage 2 Consultation contained a significant body of environmental design and embedded mitigation including green infrastructure comprising approximately 32% of the Site by area.

### Stage 2 Consultation, July-August 2017

- 3.65 Draft development proposals including a draft ES and other associated documents were submitted for formal consultation in July 2017. The submitted information included the draft parameter plans, as well as draft versions of key documents.
- 3.66 Five public exhibition events were held during the consultation period, at four different venues, with 830 attendees signing in.
- 3.67 The key changes made in response to comments received during Stage 2 Consultation are as follows:
1. Green infrastructure along main Site access roads increased;
  2. Plot 4030 reduced in size to provide an increased green infrastructure corridor between Calf Heath wood and the reservoir;
  3. Green infrastructure corridors between plots 5010, 5020 and 5030 increased in size;
  4. Order Limits boundary increased around the existing pylons to the north and south of the Site to facilitate the required working areas to install the new pylons and cable grounding works;
  5. Additional mitigation land brought into the scheme on Straight Mile Road to provide extra green infrastructure screening (to the canal corridor) and to better link and improve the function and cohesiveness of the two separate sections of Calf Heath community park; and
  6. Improvements to the canal towpaths, and removal of the existing pipe bridges.
- 3.68 In addition to the key changes noted above, which focus around the green infrastructure corridors and the pylons, the Canal & River Trust commented that access for maintenance of the dam and stream for the adjacent Calf Heath reservoir would need to be maintained (from the A5), and that this would need to be reflected in the placement of the earth bund in the north-east corner of the Site. This level of change is too small to reflect in the Masterplan and Parameters drawings.

### Staffordshire and Worcestershire Canal Corridor

- 3.69 During the design development and in response to consultation and assessment as part of the EIA, a number of changes have been made in relation to the Staffordshire and Worcestershire Canal Conservation Area. Some of these changes are detailed in the sections above, and summarised as follows:
- The proposed A5 roundabout was moved further eastwards away from the canal corridor;
  - Increased landscape mounding was introduced between the link road and the canal corridor;
  - The new link road canal bridge was moved north away from the existing Bridge 78a and the bridge design amended to include brick slips with the aim of creating a more sympathetic appearance to the canal setting;
  - Community parks integrated with the canal, including car parking for canal use and linking of the Community parks paths with the canal towpath;

- Removal of the existing pipe bridges over the canal; and
- Addition of improvements to the canal towpath throughout the length of the canal within the Site boundary – this includes the towpath to be surfaced with a suitable bound/compacted gravel surface (e.g. Breedon gravel type) to provide an appropriate surface capable of dealing with an increased level of use where needed for connectivity to the footpath routes.

### 2018 Scheme Amendments / Stage 2a Consultation

3.70 During early to mid 2018 and in order to bring the design development to a close for final preparation of the DCO Application, the focus was on final consultation with key stakeholders to agree on land take, design/mitigation and to finalise the Order Limits boundary. The changes implemented as part of this process are summarised as follows:

- Changes to the road layout, bridge designs and junctions at Gravelly Way 'Hoppe Roundabout' in order to better meet the requirements of stakeholders including SI Group, the Bericote Development and private landowners, including a change in height of the link road which has necessitated lengthening of the proposed canal bridge, localised widening of the embankments and creation of a new highway underpass to facilitate access to SI Group. These features are described in more detail in Chapter 4: Proposed Development;
- Omission of the proposed footpath/cycle track along the north of Vicarage Road, between the canal bridge and Development Zone A6;
- Minor amendments to the Order Limits to accommodate the above changes; avoid small parcels of unnecessary land/substations; omit a stretch of canal south of Vicarage Road; allow vehicular access to the proposed Community Park car parks; remove a parcel of unnecessary agricultural land to the south-east of the Gailey Roundabout; and remove a section of Woodlands Lane at the very eastern edge of the Site where no works are proposed; and
- Final minor changes to the Order Limits boundary were made in June 2018 around Gravelly Way to adjust to the land ownership and third party agreements in this area.

### Summary

3.71 Since the Proposed Development was unveiled at Stage 1 Consultation, the following principal changes (inter alia) have been made to refine and improve the scheme, in response to feedback and engagement with the public and stakeholders:

- A western rail terminal location was preferred, with an improved terminal layout brought forward at Stage 2, following engagement with Network Rail;
- The link road between the A5 and A449 is to be adopted for public use following completion, significantly improving the permeability of the local area, with this recognised as a major benefit of the Proposed Development by Highways England;
- The ecological connectivity throughout the Site has been significantly improved, with extra land brought in at Stage 2 and 2a to form Calf Heath Community Park to the south and the layout reconfigured to provide a 100m wide and 1km long ecological corridor between Calf Heath Reservoir and Calf Heath Wood;
- The total green infrastructure within the Order Limits has increased from approximately 30% up to approximately 36%, resulting in over 105ha of green space being provided by the Proposed Development;
- The warehouse units to the south of Vicarage Road have been reconfigured to ensure all active uses are facing away from Calf Heath; and
- The maximum heights of buildings has been reduced from 18 – 36m across the Scheme, down to 18 – 30m.